

The Effectiveness of Tele Mental Health

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Abstract: Background: The emergence of 2019 novel coronavirus (2019-nCoV) in Wuhan, China in December 2019 has caused coronavirus disease (COVID-19) and created a confusing situation. COVID-19 is considered responsible for an increase in psychological problems including anxiety, depression, and even mass hysteria. However, along with these conditions, orders to minimize direct contact and time spent in public were implemented to prevent the spread COVI-19, so many psychiatrists turned face-to-face care to tele mental health. This paper will provide the effectiveness of tele mental health compared with face-to-face care in regards to psychiatric services in a setting of quarantine or isolation. A manual search was conducted to select articles published between 2005 and 2020 using the PubMed database. We included full-text articles published in English that reported the effectiveness of telepsychiatry in a setting of quarantine or isolation. Among 557 articles, only 5 studies met all criteria and were included in the review. These articles reported the effectiveness of tele mental health for those who are in a setting of quarantine or isolation. Tele mental health helps those who need psychiatric services, but are not able to have a face-to-face consultation. This review shows equivalent overall effects between tele mental health or face-to-face care in psychiatric services. While the results are equivalent, few studies were obtained. Thus, more research is needed to establish equivalence.

1 INTRODUCTION

The emergence of 2019 novel Coronavirus (2019-nCoV) in Wuhan and the pandemic COVID-19 announcement from the World Health Organization (WHO) in March 2020, has changed the world rapidly and evoking multiple responses. (Coronavirus disease, 2019; Chen JA,et al.2020; Moring JC, et al.2020) It has infected more than 100 nations around the world and had been declared as public health emergency.(Health UDo,2019) As part of spreading mitigation, the Centers for Disease Control and Prevention (CDC) recommend limiting outdoor movement and practicing social distancing.(Mark É,et al.2020) This restriction may provoke stress and in the end worsen mental health condition over time. (Whaibeh E,et al 2020) This can be seen from the elevating of anxiety, depression, mass hysteria, posttraumatic stress disorder (PTSD) and negative societal behaviors rates.(Ćosić K,et al.2020; Duan L and Zhu G,2020)

There are the hindrance in mental health treatment, and the consequences are lost work

productivity, unemployment, homelessness, marital and parenting problems, domestic violence, drug and alcohol abuse, suicides and others.(Ćosić K,et al.2020; Tanielian TL,et al.2008) The increasing demand for mental health services become a potential risk of creating a global public mental health crisis.(Ćosić K,et al.2020)

A survey conducted by Centers for Disease Control and Prevention (CDC) shown that in June 2020, 40% of Americans reported struggling with mental health or substance abuse problems.(Mark É.,et al 2020) Quarantine, isolation, trauma experienced by frontline workers, victims and their family also create a challenges for healthcare providers, including mental health provider.(Whaibeh E,et al 2020)

Despite the adverse repercussions that have occurred, mental health services must still be done.6 To meet the needs, many mental health center had to adopt new strategies to ensure continuity of treatment.(Moring JC,et al.2020) Tele mental Health has a potential in addressing the psychological problems of this condition. (Whaibeh E,et al 2020)

Tele mental health is promising approach to reducing the treatment gap for isolated patients to access mental health provider.(Hubley S,2020) Tele mental health may be an ideal solution to reduce the risk of clinicians or patients being infected while still providing the treatment.6 Tele mental health is the provision of mental and behavioral health care at distance, including psychiatric evaluations, therapy (individual, group, family), psychoeducation and medication management.(Whaibeh E,2020) The objective of the current review was to provide an overview of scientific publication on the effectiveness of tele mental health compared to face to face intervention for those who are in a setting of quarantine or isolation.

2 METHODS

2.1 Search Strategy

A multi-step literature search was performed. First, systematic searches were conducted in the PubMed, which published between 2005 and 2020. The search was done using the following combinations of key terms: tele mental health effectiveness OR psychiatric telemedicine effectiveness OR telepsychiatry effectiveness. We searched the reference lists of retrieved articles. Then, abstracts identified by this process were then screened and full-text articles were inspected against the inclusion and exclusion criteria.

Studies were eligible for inclusion when the following criteria were fulfilled.

1. Full-text articles published in English
2. Full-text articles reporting the effectiveness of tele mental health.

The exclusion criteria were:

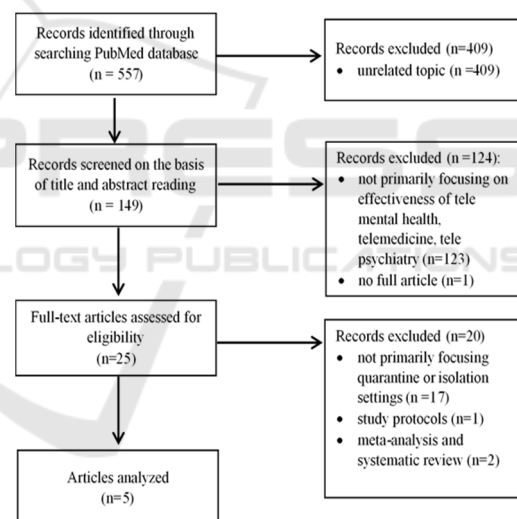
1. Reviews, meta-analyses, study protocols, abstracts and any other non-original data;
2. Lacking a clear primary focus on the effectiveness of tele mental health in quarantine/isolation setting.

The level of evidence of each study was determined using the Oxford Centre for Evidence-Based Medicine 2011 definition.(Group OLoEW,2011)

3 RESULTS

We reviewed 5 studies that met our inclusion and exclusion criteria. For brevity and conciseness, as extracted from the 5 reviewed articles as follows:

Namkee G. Choi et al (2014): Objectives is to report both depression and disability outcomes of telehealth problem-solving therapy (tele- psychotherapy via Skype video call) for low-income homebound older adults over 6 months post intervention. Tele mental Health Domain: Tele psychotherapy via Skype video call and phone call. N Sample: 158 participants (56 in tele-PST, 63 in in-person PST, and 39 in care call). Study Design: (i) Randomized control trial. Outcome Evaluation: Hamilton Rating Scale for Depression (HAMD), (ii) WHO Disability Assessment Schedule (WHODAS). Conclusion: Both tele psychotherapy and in-person psychotherapy were efficacious treatments for low-income homebound older adults; however the effects of tele- psychotherapy on both depression and disability outcomes were sustained significantly longer than those of in-person psychotherapy. Limitations of Study: The sample was small and limited to those who were willing to be randomized to tele-psychotherapy and to those without cognitive deficits and other mental health conditions. Level of Evidence is 2.



Namkee G. Choi et al (2014): Objectives is To evaluate clinical effectiveness of a brief, aging service-integrated, videoconferenced behavioral activation (tele-BA) treatment delivered by lay counselors compared with videoconferenced problem-solving therapy (tele-PST) delivered by licensed clinicians and attention control (AC; telephone support calls). Tele mental Health Domain: Videoconferencing for tele-BA and tele-PST Telephone for attention control (AC). N Sample: 277 participants. Study Design: Randomized Clinical Trial. Outcome Evaluation: Hamilton Rating Scale for Depression (HAMD). Conclusion: Compared

with participants in the AC group, participants in the tele-BA and tele-PST groups had significantly higher response and remission rates and medium to large effect sizes. Limitations of Study: (i) All participants resided in a single, large metropolitan area, which may limit generalizability of the findings to non-metropolitan areas. (ii) The lack of a longer (ie, beyond 9 months) follow-up period. Level of Evidence is 2.

Michelle Lampman et al (2019): Objectives is to examine if self-reported access to primary care is associated with actual patient wait times and use of telephone visits, and to assess whether this relationship differs by rural residence. Tele mental Health Domain: Telephone visits. N Sample: 160,447 Veterans. Study Design: Cross sectional. Outcome Evaluation: Telephone visits Conclusion: As actual wait time for routine appointments increases, Veterans served by clinics with a higher percent of rural Veterans perceive telephone visits more positively. Limitations of Study: Not stated by authors. Level of Evidence is 3.

Amanda K. Gilmore et al. (2019): Objectives is to test the usability of a mobile health intervention targeting alcohol and drug misuse, suicide prevention, posttraumatic stress symptoms, coping skills, and referral to formal assistance for individuals who have experienced sexual assault. Tele mental Health Domain By application (SC-Safe) Interviews were conducted through teleconferencing. N Sample: 13 participants. Study Design: Qualitative study. Outcome Evaluation: (i) Sexual Experiences Survey. (ii) The Patient Health Questionnaire (iii). Posttraumatic stress disorders Checklist (PCL5) (iv) Alcohol Use Disorders Identification Test (AUDIT-C). (v) SC-Safe questionnaire about application. Conclusion: The participants indicated that SC-Safe would be a helpful resource for individuals who experience sexual assault due to the pervasive barriers that these individuals face to accessing care. Limitations of Study: (i) The current study included a small sample of individuals to assess initial usability of SC-Safe (ii) Future work is needed to understand the post-SAMFE healthcare needs of men, sexual and gender minorities, and different racial/ethnic groups.. Level of Evidence is 3.

Choi et al (2020): Objectives is to evaluate the acceptance and preliminary efficacy of in-home telehealth delivery of problem-solving therapy (tele-PST) among depressed low-income homebound older adults in a pilot randomized control trial designed to test its feasibility and preliminary efficacy. Tele mental Health Domain: Videoconferencing for tele-PST Telephone. N Sample: 121 participants. Study

Design: Randomized control trial. Outcome Evaluation: (i) Hamilton Rating Scale for Depression (HAMD). (ii) Treatment Evaluation Inventory (TEI) Conclusion: Almost all participants had extremely positive attitudes toward tele-PST at the 12-week followup. Tele-PST also appears to be an efficacious treatment modality for depressed homebound older adults and to have significant potential to facilitate their access to treatment. Limitations of Study: (i) The study period was rather short (24 weeks), so not able to examine the relationship between long-term treatment outcome and the treatment modality, as well as cost analysis of tele-PST delivery versus in-person PST delivery. (ii) The sample was limited to older adults without cognitive and sensory deficits. Tele-PST for older adults with cognitive and sensory deficits, especially auditory and visual, may not be feasible as such deficits can impair the ability to interact with a therapist over a videoconference connection. Level of Evidence is 2.

4 DISCUSSION

The COVID-19 has been a global health issue since the number of cases increases throughout out many countries. Patients with COVID-19 should be isolated or quarantined. This condition allows the patients having psychological problems. Since the patients are limited to meet people, a technological revolution in mental health care is approaching. The use of technology to reach populations whom to be quarantined allows the doctor and the patient are able to communicate without face to face.

This systematic review evaluates the effectiveness of tele mental health compared with face-to-face care in regards to psychiatric services in a setting of quarantine or isolation. This review suggests that using tele mental health care and face-to-face care had equivalent overall effects. Almost all of the associated technologies can be effectively used to treat and evaluate mental disorders without compromising the quality of service. This review presents its discussion under the following headings and subheadings.

4.1 Modalities

In conducting tele mental health, there are some technologies that can be used such as:

- Videoconferencing and telephone
Videoconferencing omits presence physically and some physical cues could not be assessed, but overall the examiner was still able to

observe the expressions of the client. Telephone omits visual cues, but examiner was still able to assess their expression by voices. (Mohr D, et al. 2011)

- Application
Application in the study had some limitation in interaction, but strengthened by interview by videoconferencing. (Whaibeh E, et al. 2020)

4.2 Isolation or Quarantine Settings

There are some situations before that resembles the condition caused by COVID-19 like:

- Homebound older
Social isolation is a state in which the individual lacks a sense of belonging socially, lacks engagement with others, has a minimal number of social contacts and they are deficient in fulfilling and quality relationships. (Nicholson Jr NR, 2009)
- Sexual assault
There are several systemic (e.g., access to services), logistical (e.g., financial constraints), and attitudinal (e.g., stigma, confidentiality concerns) barriers to accessing healthcare services immediately after sexual assault. (Gilmore AK, 2019)
- Rurality
Rural residents have identified several barriers to accessing care including distance, access to transportation, and availability of services. (Douthit N, 2015.) COVID-19-related social isolation may be enforced by government restrictions and/or due to an individual's fears of infection. (Kato TA, 2020) Both condition almost similar.

4.3 Effectiveness

The advantages of tele mental health care include improved access, reduced costs, flexibility, and interactive sessions between clients and clinicians. (Farrell SP, et al. 2009; Tillfors M, et al. 2008) Most important things about tele mental health care are skills to use technologies (both clinicians and clients), good quality of equipments (both software and hardware), good quality of internet services, and evaluation of services. (Christensen H, and Hickie IB 2010) Another concerns are about marginalizing clients with physical and cognitive disabilities who are unable to use the equipment properly, making in-person services as the only feasible choice. (Ybarra ML, and Eaton WW 2005).

5 DISCUSSION

Our finding suggests that there were no significant differences between participants receiving telemedicine or face-to-face psychiatric services. Tele mental health can effectively reduce psychiatric symptoms, reduce cost. Therefore, it can be used as an adaptable solution for COVID-19 pandemic situation. Mental health providers providing this service is advised to benefit from feedback collected from clinicians and clients. Considering the potentials of tele mental health care, further research is required to optimize its current applications and to explore its future promises.

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