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## The Effects of Telehealth on Mental Well-Being Compared with In-Office Treatment for Clients with Depression







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**Keywords:** telehealth, in-person care, depression, outcomes, treatment, access

#### ABSTRACT

**Background:** Depression is a major factor that impacts mental and physical well-being. Diagnosis and treatment of mental illnesses have become more mainstream in recent years. Different treatment options are available and certain treatments are more viable than others. The COVID-19 pandemic showed that telehealth can be a beneficial treatment when in-person care is not an option. Currently, in-person care is available, but telehealth is still an option. Purpose: The purpose of this study was to determine and compare if telehealth is as viable as inperson treatment for clients with depression based on client outcomes. Method: The primary question for this literature review was: In clients with depression, what is the effect of telehealth on mental well-being compared with in-person treatment? This review consists of studies from the Cumulative Index of Nursing and Allied Health Literature (CINAHL) and PsycINFO. Findings: Results include the prevalence of depression and necessity of care, accessibility of care, the connection between telehealth and in-person care, the similar effectiveness despite different treatment modalities, and the positive outcomes of telehealth. Conclusion: Telehealth and inperson care can both be viable treatments for depression. They produce similar positive results, but treatment is best when both modalities are used if available.

#### **INTRODUCTION**

Depression is rampant across the globe. The process of discovering this upsurge in depression was mainly in part to the COVID-19 pandemic. The United States Department of Health and Human Services confirms the significant impact of the pandemic perpetuating the negative mental health of adults and children [1]. As the world was on lockdown, people viewed the time at home as beneficial or detrimental. During the lockdown, people encountered loneliness, isolation, hopelessness, and other feelings related to depression. Telehealth was introduced to the healthcare field as a means for accessing care regarding the management and treatment of depression. The National Institute of Mental Health (NIMH) provides potential benefits to telehealth including convenience, broader reach, fewer barriers, and advances in technology [2]. However, the NIMH then provides potential drawbacks including access to technology, quality, issues, cost, privacy, and insurance coverage.

#### Background

The purpose of this study was to determine the effects of telehealth on mental well-being compared with in-office treatment for clients with depression. There are different treatment approaches for mental health. The COVID-19 pandemic manifested the implementation of telehealth in addition to the standard method of in-office treatment [3]. Multiple studies have shown that treatment provided via telehealth can be equivalent to in-person consultation for people with mental health problems. However, despite the great promise of telehealth, it has not been widely implemented in behavioral health [4]. The question for further research was: In clients with depression, what is the effect of telehealth on mental well-being compared with in-person treatment?

#### 1. METHOD

The method for this study was a review of the literature. The CINAHL and PsychINFO were the databases used for gathering information. The keywords in researching the databases were telehealth, depression treatment, in-person care, and mental health services (see Table 1). Using the phrase telehealth and depression treatment, 211 studies were found for the years 2020 to

2023. Of these studies, 15 peer-reviewed studies were used that pertain to the question. Studies excluded from the review were because they were not current or relevant.

Telehealth	Use of telecommunications or videoconferencing technology to provide health services
Depression treatment	Caring for emotions, psychological, and social well-being
In-person care	A physical psychological assessment and intervention
Mental health services	Medications and psychotherapy

Table No. 1: Keywords Used and Their Definitions

The studies used in this review were from different nursing levels of evidence. Schmidt and Brown [5] outline the different levels of evidence ranging from one to seven with one being the top. An attempt was made to select the top four tiers. The studies in this review ranged from level one to level six. Nine of the studies were in the top three levels of evidence showing that the review was backed by credible evidence. The rest of the studies were in level four and level six of the hierarchy.

#### 2. LITERATURE REVIEW

The studies were analyzed and grouped into themes to create a better summary of the literature. The following unified themes were identified in the literature review: the prevalence of depression and the necessity for care, accessibility of care, the connection between telehealth and in-person care, similar effectiveness despite different treatment modalities, and the positive outcomes of telehealth. The team reviewed individual evidence summaries of high-and good quality studies and used subjective and objective reasoning to look for salient themes. The following paragraphs examine the studies in more detail.

#### The Prevalence of Depression and the Necessity for Care

Depression and worsening mental health are becoming a top issue in healthcare. Scott et al. [6] claim, that depressive disorders are one of the leading causes of disability worldwide, with over

260 million adults and children affected. These symptoms can lead to reduced life quality, lost productivity, and increased disability and mortality [6]. Mental illness is common worldwide. Patel et al. [7] emphasize that 46% of mental illnesses impair functioning. Despite this impaired functioning, only one-third of the population with mental health struggles sought and received care in the previous year. Mental health and depression issues have been around for a long time, but symptoms of anxiety disorder and depressive disorder increased considerably in the US during April- June 2020, compared with the same period in 2019 [8].

This uptick in symptoms could have been instigated by the COVID-19 pandemic. Bulkes et al. [9] emphasize, that the heightened acuity in anxiety and depressive symptoms catalyzed by the COVID-19 pandemic presents an urgent need for effective, feasible alternatives to in-person mental health treatment. Soklaridis et al. [10] also emphasize how living through the pandemic was very traumatic for many, especially those who were in the hospital as patients or providers. Living through trauma such as that of the COVID-19 pandemic may lead to symptoms that progress to suicidal thoughts, substance abuse, and lowered quality of life.

Some of the reviewed studies highlight that there is a major trend of worsening mental health. Greenwood et al. [11] emphasize a need for treatment because mental disorders are a big cause of distress and disability. McCord et al. [12] echo them by reiterating how untreated depression has a large negative impact on quality of life, mortality, and morbidity. Swartz et al. [13] also emphasize how major depressive disorder (MDD) is one of the most common psychiatric disorders and it is projected to be among the three leading causes of global disease burden in 2030. This major issue necessitates treatment and Bischoff et al. [3] point to online help. Many are already seeking help and information online and they claim, the internet is a great place to increase knowledge and improve perceptions about mental health care. The health communication literature suggests that an effective digital presence can strengthen the relationship between providers and patients [3]. Reviewed studies were unanimous in asserting that depression is a medical issue needing serious treatment.

#### Accessibility of Care

Throughout the literature, the ability to access treatment is heralded as an important element of care. Accessibility is considered a major benefit of telehealth throughout the articles and studies

examined. Bischoff et al. [3] highlighted how the COVID-19 pandemic disrupted daily life and created distance between friends, family, and face-to-face outpatient visits. This disruption created a necessity for clinicians to offer telehealth care. Telehealth was utilized out of necessity, but it blossomed into a main modality to get treatment to clients. Telehealth services have expanded rapidly in recent years and are heralded by many as one way that treatment providers might reach patients who might otherwise go untreated [3]. Telehealth connects numerous providers to clients, and this is a massive benefit for clients who do not connect with the providers available or rural clients who have difficulty reaching providers.

Lu et al. [14] also established that telehealth provides important access to numerous subgroups. Many of the studies accentuated rural populations. Caminiti et al. [15] state that telemedicine can offer various advantages over traditional in-person care, including overcoming barriers to healthcare access such as distance to hospitals, traveling costs, and time restraints, with less disruption to family life. McCord et al. [12] agree with the majority by claiming rural residents are particularly vulnerable to behavioral health disparities in accessibility and availability of treatment and in treatment outcomes. These disparities are multifactorial including distance and topographical challenges in getting to healthcare facilities, lower rates of insured patients, higher rates of poverty, and lower education and health literacy rates [12]. Disparities and barriers are present everywhere, but telehealth mitigates some of these negative factors for rural clients [7,12].

Barriers to healthcare are widespread but telehealth helps eliminate some of those barriers. Lu et al. [14] add that along with telehealth comes an avenue for more mobile treatment options, mobile health (mHealth) apps offer new opportunities to deliver psychological treatments for mental illness in an accessible, private format. Clients at the University of Colorado appreciate that they can choose their therapists and counselors [17]. The accessibility and variety of telehealth options are very favorable to prospective clients.

#### The Connection between Telehealth and In-Person Care

The COVID-19 pandemic changed healthcare in many ways. One of the biggest positives indicated by the studies is the deeper utilization of telehealth. Bischoff et al. [3] stated, that the COVID-19 pandemic offered an example of how therapists can respond to the needs of the

public and potential clients, by adapting their online presence to communicate their ability to work with potential clients during that time. In their study, the providers still utilized in-office visits, but they also saw major positives of including telehealth. Lin and Yue [18] highlighted that telehealth's proven capacity for convenience, its relative cheapness, and its ability to overcome geographic barriers are advantages.

Caminiti et al. [15] saw clients improve in all considered outcomes and called for more research into which clients would benefit most from telehealth and which still need in-office attention. Telehealth facilitated a deeper connection with clinicians and made clients feel safer when telehealth was utilized alongside in-person visits. Soklaridis et al. [10] also compared psychosocial interventions and found that the best care is offered when providers offer different modalities and use in-person and telehealth interventions. They emphasized that multiple modalities of action are best for a well-rounded treatment. Telehealth is excellent at cultivating opportunities to create social networks that can better the health of health professionals and clients. Telehealth can also create an avenue for clients to take more ownership of their care [10].

Telehealth and outpatient psychotherapy should be utilized together for the best care [6,16]. The use of telehealth as an adjunct therapy has proven effective. Scott et al. [6] added more depth to the connection of telehealth and in-person visits by saying, that telehealth via telephone or video has the potential to increase the accessibility of effective, evidence-based interventions for depressive disorders in patients facing geographical or logistical challenges in attending face-to-face interventions. The review of the literature indicates that telehealth is successfully utilized as an adjunct therapy and as a main treatment.

#### **Similar Effectiveness Despite Different Treatment Modalities**

Most of the studies leaned toward a slight preference for in-person treatment. This makes sense because in-person has been the standard for a long time. The ability to assess a client and create a relationship face-to-face is a definite benefit to in-person care, but most of the studies reviewed emphasized that the result of treatment, whether in-person or online, had similar results.

McCord et al. [12] emphasized the effectiveness of telehealth found in their large comparative study. They found no clinical or statistical differences in improvements in depression or anxiety

symptoms as measured by the PHQ-9 and GAD-7 between treatments delivered via telehealth or in-person [12]. They continued to converse about how the treatment groups in telehealth and those experiencing in-person treatment both improved as expected after mental health care (see Figure 1). Scott et al. [6] discovered similar evidence, psychological interventions delivered via telehealth or delivered face-to-face lead to similar outcomes for depressive symptom severity, quality of life, therapeutic alliance, and treatment satisfaction in both adults and young people. These are both very promising findings for the promotion and progression of telehealth implementation in the care of clients experiencing depression.



# Figure No. 1: In Clients Suffering from Depression, Telehealth, and In-office Visits Offer Positive Outcomes.

Client changes were equivalent to whether they experienced in-person or telehealth care [3,11,13]. It is important to receive high-quality care, but these studies emphasize that the quality does not change based on the numbers in online versus outpatient treatment. Gerton et al. [19] agreed by stating, changes in client's self-reports were generally equivalent across in-person and telehealth services. Both methods are effective treatments, and in many cases, telehealth can be easier to access.

Telehealth produces similar outcomes to in-person care even though they are different treatment modalities [9,17]. Bulkes et al. [9] stated, that these data support remote treatment as a viable alternative to in-person mental health services, specifically as both in-person and remote patients experienced symptom reduction, and both populations reported improvements in quality of life. The studies promote in-person and telehealth equally. Clients experiencing depression must receive some modality of treatment.

#### **Positive Outcomes of Telehealth**

Many themes emerged throughout the literary analysis, but the main continuing theme was the efficacy of telehealth and how it produces positive outcomes. Telehealth grew out of necessity during COVID-19 and now is becoming a main treatment modality chosen out of preference. In Swartz et al. [13] study, in-person treatment was forced online by Covid-19. Client's treatments went online, and their evidence showed that telehealth was effective, and, in some cases, it even improved therapy adherence.

Some providers and patients are worried that telehealth creates distance and might have negative effects, but based on the research, this is an unfounded fear. As health care is increasingly being decentralized with the use of communication technologies, one of the main concerns is the possible negative impact that this may have on patients' psychosocial health [13]. This work responds to this relevant question by showing that telemedicine does not deteriorate but ameliorates quality of life, anxiety, or global distress, although many aspects have yet to be clarified [13]. Some aspects need to be clarified and explored, but overall, telehealth has shown to be a great adequate resource for clients who need treatment for depression.

Implementation of mobile health apps offers different opportunities for accessible treatment [20,21]. Mobile phone interventions can cost less than in-person interventions and this can take away cost as a barrier of care. Lu et al. [21] concluded that participants in the intervention groups showed a significant effect on anxiety.

McCord et al. [12] emphasize that the burden of mental health care is among the greatest of all diseases and that telehealth makes great strides in helping clients and providers experiencing this burden. They state that telehealth is, an important component of the solution to a complex problem [12]. Results of the study indicated that treatments reduced the number of symptoms for clients in both telehealth and in-person care.

Scott et al. [6] did an in-depth review of where clients were at different points of their treatment. They had clients receiving telehealth and in-person care. They found almost no differences and stated, that evidence suggests that for patients with depression or depression symptoms, the provision of care via telehealth may be a viable alternative to the provision of care face-to-face

[6]. Steven et al. [16] agree by saying, that telehealth provides a safe and effective medium for conducting exposure therapy and increases the likelihood of completing treatment amidst treatment barriers. In-person care is still a great treatment, but telehealth can be a better alternative when there are more barriers to care.

Telehealth is a comparable option to in-person treatment for depression, but some sources go as far as to say telehealth is superior. Bischoff et al. [3] claim that telehealth has a high rating of usability and is accepted as a treatment for a wide range of psychological disorders. They go into how telehealth is becoming more widely accepted and utilized because of its feasibility and good outcomes. Patel et al. [7] state that in randomized trials, telemental health is comparable or even superior to in-person care. Telehealth has benefits that in-person care cannot offer, such as easier access and more options. This can make it more attractive to users. Especially users struggling with conditions that make it hard to get out of the house. The University of Colorado [17] counseling center gives their students information about telehealth and its efficacy compared to in-person care. They emphasize that both are beneficial methods of treatment and that it will come down to what the individual chooses. It is the job of the healthcare team to give the client the information and let the client choose which treatment modality is best for them.

#### **Summary of Findings**

### HUMAN

The purpose of this review was to compare telehealth's effectiveness to in-person treatment for clients with depression. The review included 15 studies to evaluate themes connected to telehealth and its effectiveness. Five themes were identified in the studies. Themes included the prevalence of depression and the necessity for care, accessibility of care, the connection between telehealth and in-person care, similar effectiveness despite different treatment modalities, and the positive outcomes of telehealth (see Figure 2).



Figure No. 2: Emerging Themes of Telehealth Effectiveness in Depression Treatment

The purpose of the research was to answer the PICO question: In clients with depression, what is the effect of telehealth on mental well-being compared with in-person treatment? The study revealed the prevalence of depression and the importance of treatment. The review indicated that telehealth is an easily accessible treatment modality for clients seeking treatment and has numerous positive outcomes. The studies also revealed that there is a connection between telehealth and in-person treatment. Both telehealth and in-person treatment have similar outcomes.

#### 3. DISCUSSION

Most of the studies implied that telehealth has positive outcomes or similar outcomes to inperson treatment. Out of the 15 studies, five touched on the prevalence of depression and how there have been increased rates since the beginning of the COVID-19 pandemic. Telehealth allows clients to have easy access to the care they need. Overall, the studies revealed that telehealth is an effective treatment for clients with depression because it is easily accessible and has positive and similar outcomes compared to in-person treatment.

Telehealth could be the potential standard treatment for depression. Telehealth has many benefits and strengths that have not been fully exposed. After the implementation of telehealth in client's treatment, their quality of life improved [6]. Telehealth was also said to continue care throughout the lifespan because it is easier to maintain and afford than in-person care [13,20]. Treatment efficacy should always be continually researched since new treatments are always being discovered.

Weaknesses of telehealth could be a lack of Wi-Fi or electronic devices, but the issue did not prove to be a problem for some people. In the cost-utility analysis study, Bounthavong et al. [22] determined that home-based tele behavioral health care was dominant when patients possessed video-conferencing technology. Not many mentally ill people have video conferencing technology at home, which makes it difficult to engage in this process. Depression is an issue that is plaguing society today, and telehealth can be a part of the solution. No client should be forced to utilize telehealth, but the option should be presented to them because of the positive outcomes that it produces for many.

#### **Strengths and Weaknesses**

One of the strengths of this study lies in the high continuity of the levels of evidence. The broader use of technology in healthcare and the emergence of telehealth is a relatively new element to the healthcare landscape. Because of this, it is difficult to ascertain how telehealth will impact clients long-term.

#### **Implications and Recommendations**

This study investigated the feasibility aspects of telehealth in clinical practice and examined a range of factors associated with the implementation of this modality of treatment within mental health services, especially depression. Telehealth is a beneficial treatment for depression. Future research, patient and staff education, training, and insurance coverage are important elements of the recommendations. Based on the Johns Hopkins Health System [23] decision tree to determine the need for an evidence-based practice project, it is appropriate to incorporate telehealth into behavioral health practice (see Figure 3).

Telehealth is a new modality of treatment that many future patients might not know about. Telehealth should be more advertised to patients. Healthcare professionals should also be taught to become more proficient in the art of telehealth care. There needs to be more patient and staff education surrounding telehealth. Insurance should also cover telehealth as adequately as inperson treatment. Telehealth became more mainstream in 2020 during COVID-19 and so it has not been around long enough to have been adequately researched. More research on telehealth and how to best utilize it for depression and other diseases should be conducted.







The best treatments for any disease are diverse and multi-faceted. Because of this, more research should be done on how to utilize telehealth and in-person care as adjuncts to each other. Based on the research, they complement each other well and both provide options that the other cannot. The best recommendation is to promote, provide, and recommend telehealth. Research should

continue to investigate the best treatments, but based on current reviews, telehealth should be utilized more by healthcare providers and clients.

#### Conclusion

The healthcare system and its clients have numerous beliefs on the efficacy of telehealth, but one belief that providers and clients can agree on is the prevalence and necessity of care for depression. With the variety of treatments available, it is important to investigate which produces the best outcomes. The review identified several themes related to the use of telehealth in aiding the treatment of depression and other mental health disorders. These themes showed that telehealth is a high-quality treatment for depression and mental illnesses and that the outcomes were equivalent to that of in-person care.

In-person treatment and therapy have been the gold standard, but the newest studies show the benefits of telehealth that in-person care cannot provide. Providers and clients enjoy using the vast selection of services and the accessibility of online care. Some clients may benefit more from in-person care, while others may prefer the online modality or only be able to access care online. The review confirms that telehealth and in-person care are comparable in outcomes. Clients suffering from depression need to receive the care that is best tailored to them. The review presents both telehealth and in-person care as viable treatments, so clients should be offered and provided with both options to best promote mental well-being.

#### REFERENCES

1. U.S. Department of Health and Human Services. (2023, September 28). Covid-19 mental health information and resources. National Institutes of Health. https://covid19.nih.gov/covid-19-topics/mental-health.

2. National Institute of Mental Health (2023). What is Telemental Health? https://www.nimh.nih.gov/health/publications/what-is-telemental-health.

3. Bischoff, T., Hynes, K., Tambling, R., & Kingzette, A. (2022) Marriage and family therapists' reporting of telehealth use on practice websites during Covid-19: A linguistic analysis, *The American Journal of Family Therapy*, *50*(2), 159-175, doi:10.1080/01926187.2021.1877209

4. Shaker, A. A., Austin, S. F., Sørensen, J. A., Tarp, K. H., Bechmann, H., & Simonsen, E. (2023). Implementing video consultations in a rural psychiatric outpatient clinic: A feasibility study. *Perspectives in Psychiatric Care*, 1–8. https://doi.org/10.1155/2023/4282468

5. Schmidt, N. A., & Brown, J. M. (2022). Evidence-based practice for nurses: Appraisal and application of research. Jones & Bartlett Learning.

6. Scott, A. M., Clark, J., Greenwood, H., Krzyzaniak, N., Cardona, M., Peiris, R., Sims, R., & Glasziou, P. (2022). Telehealth v face-to-face provision of care to patients with depression: A systematic review and metaanalysis. *Psychological Medicine*, *52*(14), 2852–2860. https://doi.org/10.1017/S0033291722002331

7. Patel, S. Y., Huskamp, H. A., Busch, A. B., & Mehrotra, A. (2020). Telemental health and US rural-urban differences in specialty mental health Use, 2010-2017. *American Journal of Public Health*, *110*(9), 1308–1314. https://doi.org/10.2105/AJPH.2020.305657

8. Czeisler M. É., Lane, R. I., Petrosky, E., Wiley, J. F., Christensen, A., Njai, R., Weaver, M. D., Robbins, R., Facer-Childs, E. R., Barger, L. K., Czeisler, C. A., Howard, M. E. & Rajaratnam, S. M. W. (2020) Mental health, substance use, and suicidal ideation during the COVID-19 pandemic — United States, June 24–30, 2020. *Morbidity and Mortality Weekly Report* 69(32), 1049–1057. DOI: http://dx.doi.org/10.15585/mmwr.mm6932a1external icon

9. Bulkes, N. Z., Davis, K., Kay, B., & Riemann, B. C. (2022). Comparing the efficacy of telehealth to in-person mental health care in intensive-treatment-seeking adults. *Journal of Psychiatric Research*, *145*, 347–352. https://doi.org/10.1016/j.jpsychires.2021.11.003

10. Soklaridis, S., Lin, E., Lalani, Y., Rodak, T., & Sockalingam, S. (2020). Mental health interventions and supports during COVID-19 and other medical pandemics: A rapid systematic review of the evidence. *General Hospital Psychiatry*, *66*, 133–146. https://doi.org/10.1016/j.genhosppsych.2020.08.007

11. Greenwood, H., Krzyzaniak, N., Peiris, R., Clark, J., Scott, A. M., Cardona, M., Griffith, R., & Glasziou, P. (2022). Telehealth versus face-to-face psychotherapy for less common mental health conditions: Systematic review and meta-analysis of randomized controlled trials. *JMIR Mental Health*, *9*(3). https://doi.org/10.2196/31780

12. McCord, C., Ullrich, F., Merchant, K. A., Bhagianadh, D., Carter, K. D., Nelson, E., Marcin, J. P., Law, K. B., Neufeld, J., Giovanetti, A., & Ward, M. M. (2022). Comparison of in-person vs. telebehavioral health outcomes from rural populations across America. *BMC Psychiatry*, *22*(1). https://doi.org/10.1186/s12888-022-04421-0

13. Swartz, H. A., Bylsma, L. M., Fournier, J. C., Girard, J. M., Spotts, C., Cohn, J. F., & Morency, L. P. (2023). Randomized trial of brief interpersonal psychotherapy and cognitive behavioral therapy for depression delivered both in-person and by telehealth. *Journal of Affective Disorders*, *333*, 543–552.

14. https://doi.org/10.1016/j.jad.2023.04.092

15. Lu, M., Liao, X. (2023) Telehealth utilization in U.S. Medicare beneficiaries aged 65 years and older during the COVID-19 pandemic. *BMC Public Health*, 23, 368. https://doi.org/10.1186/s12889-023-15263-0

16. Caminiti, C., Annunziata, M. A., Di Giulio, P., Isa, L., Mosconi, P., Nanni, M. G., Piredda, M., Verusio, C., Diodati, F., Maglietta, G., Passalacqua, R. (2023, March 31). Psychosocial impact of virtual cancer care through technology: A systematic review and meta-analysis of randomized controlled trials. *Cancers*, *15*(7). https://doi.org/10.3390/cancers15072090

17. Stevens, N. R., Miller, M. L., Soibatian, C., Otwell, C., Rufa, A. K., Meyer, D. J. & Shalowitz, M. U. 2020. Exposure therapy for PTSD during pregnancy: A feasibility, acceptability, and case series study of narrative exposure therapy. *BMC Psychology*, *8*(1), https://doi.org/10.1186/s40359-020-00503-4

18. University of Colorado. (2021). Telehealth VS In-Person Therapy [Brochure]. https://www.ucdenver.edu/docs/librariesprovider40/default-document-library/telehealth-vs-inperson.pdf?sfvrsn=be52c1ba 2

19. Lin, B., & Yue, S. (2022). The use of telehealth in depression treatment during the crisis caused by COVID-19. Social Work in Public Health, 37(6), 536–547. https://doi.org/10.1080/19371918.2022.2053631

20. Gerton, J. M., Aoyagi, K., León, G. A., Bludworth, J., Spille, S., & Holzapfel, J. (2023). Outcomes in clients transitioning from in-person counseling to telehealth counseling with trainees. *Counselling & Psychotherapy Research*, 23(1), 188–197. https://doi.org/10.1002/capr.12541

21. Shin, Y., Kim, S. K., Kim, Y., & Go, Y. (2022). Effects of APP-based mobile interventions for dementia family caregivers: A systematic review and meta-analysis. *Dementia and Geriatric Cognitive Disorders*, 51(3), 203–213. https://doi.org/10.1159/000524780

22. Lu, S. C., Xu, M., Wang, M., Hardi, A., Cheng, A. L., Chang, S. H., & Yen, P. Y. (2022). Effectiveness and minimum effective dose of app-based mobile health interventions for anxiety and depression symptom reduction: Systematic review and meta-analysis. JMIR Mental Health, 9(9), e39454. https://doi.org/10.2196/39454

23. Bounthavong, M., Pruitt, L. D., Smolenski, D. J., Gahm, G. A., Bansal, A., & Hansen, R. N. (2018). Economic evaluation of home-based telebehavioural health care compared to in-person treatment delivery for depression. *Journal of telemedicine and telecare*, 24(2), 84–92. https://doi.org/10.1177/1357633X16678147

24. Dang D, & Dearholt S.L., & Bissett K, & Ascenzi J, & Whalen M(Eds.), (2022). *Johns Hopkins evidence-based practice for nurses and healthcare professionals' model and guidelines, 4e*. McGraw Hill.
25. https://apn.mhmedical.com/content.aspx?bookid=3144&sectionid=264686182

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