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THE EFFICACY OF ONLINE THERAPY FOR ANXIETY AND DEPRESSION DURING THE COVID-19 PANDEMIC

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Abstract: Introduction: The Covid-19 pandemic resulted in a significant increase in stress, depression, and anxiety, particularly affecting adolescents and individuals with pre-existing disorders. Public health measures intensified feelings of loneliness and fear, highlighting failures in psychological care systems. In response, online psychotherapy interventions emerged, such as Electronic Cognitive Behavioral Therapy (e-CBT) and Brief Solution-Focused Therapy, which have proven effective in managing symptoms of anxiety and depression. **Objective:** To explore the effectiveness of online psychotherapy approaches for treating Generalized Anxiety Disorder and Major Depressive Disorder during the Covid-19 pandemic. **Methodology:** A systematic review was conducted using the Medline database with the descriptors “Online therapy,” “Covid-19 pandemic,” “Depression,” and “Anxiety.” The search resulted in 552 articles. After applying inclusion criteria, 11 articles were selected for the review. **Results and Discussion:** During the pandemic, there was an increase in online therapies, with interventions such as mindfulness demonstrating reductions in anxiety and effectiveness in improving psychological well-being. Mindfulness-based brief therapy showed lasting benefits, while laughter therapy was effective for depression but less so for anxiety. The studies utilized control groups, showing that online therapies can be as effective as in-person therapies, although some limitations, such as sample size and diversity, were identified. Despite this, online therapies emerge as a valuable tool for mental health support in times of crisis, adapting to the needs of specific groups, such as pregnant women and adolescents. **Conclusion:** Online therapy proved effective during the pandemic, helping to manage psychological symptoms. Individualizing therapeutic approaches is crucial to meet the

needs of different populations. Thus, online therapies emerge as an effective solution for mental health challenges, promoting emotional well-being in difficult times.

Keywords: online therapy, anxiety, depression, Covid-19 pandemic

INTRODUCTION

At the beginning of 2020, the Covid-19 pandemic brought profound changes to the lives of millions of people worldwide. While public health measures to contain the virus were essential, they also fueled feelings of loneliness, fear, and uncertainty, resulting in an increase in cases of stress, depression, and anxiety. The need for quarantine intensified pre-existing problems and developed new disorders. Suicidal ideation among Canadian adults increased from 2.7% to 4.2%. Additionally, half of Canadians reported that their mental health worsened, while 41% experienced elevated levels of anxiety. The number of people suffering from severe anxiety quadrupled, and cases of depression doubled during this period of social isolation. Studies indicated that prolonged mandatory quarantine was directly associated with a fivefold increase in suicidal thoughts and depressive behaviors (Moghimi, et al, 2023).

For adolescents, school closures, social isolation, and uncertainty about the future also increased the risk of depression in this group (Schleider, et al, 2022). Furthermore, studies indicate that youth anxiety symptoms doubled during the pandemic (Chen, et al, 2023).

This mental health crisis triggered by the pandemic exposed significant gaps in care systems. Most countries were unprepared to address the large number of depression and anxiety cases among their citizens. Many patients faced various challenges in accessing adequate treatment, especially those living in remote areas or with financial difficulties, which may have exacerbated

their psychological conditions, as social isolation and quarantine worsened feelings of helplessness and loneliness, further worsening their mental symptoms (Wang, et al, 2023).

Various measures emerged, including electronic psychological interventions, known in some circles as e-therapy. This allowed affected patients to access the necessary mental health care. One example was Electronic Cognitive Behavioral Therapy (e-CBT), an evidence-based form of psychotherapy that has proven highly effective, as it helps modify dysfunctional behaviors and thoughts in a short period. Studies have shown that e-CBT yielded results comparable to traditional in-person CBT, regardless of whether it was self-guided, professionally guided, or asynchronous. It assisted in managing anxious and depressive symptoms, improving resilience and quality of life (Moghimi, et al, 2023).

Another effective model was Brief Solution-Focused Therapy (BSFT), ideal for children and adolescents. This psychotherapy requires fewer cognitive skills from patients, making it easier to apply to younger individuals. It helps adolescents focus on solutions to immediate problems, thereby alleviating the psychological overload faced during specific periods of stress (Chen, et al, 2023).

In addition to these two approaches, another valid intervention was online mindfulness. Although evidence of its effectiveness is still under discussion, some studies suggest benefits of this practice for mental well-being. It teaches patients to pay attention to the present in a receptive manner while avoiding criticism of the moment, which could help reduce symptoms of depression and anxiety (Lee, et al, 2024).

In this sense, early intervention therapies for pregnant women have also proven effective in combating stress and depression. A significant reduction in the symptomatology of these conditions was observed, highlighting

the importance of such approaches during pregnancy, especially in times of great tension, such as during a pandemic (Gomà, et al, 2024) (Puertas-Gonzalez, et al, 2022).

Thus, online psychotherapies offered various advantages compared to in-person alternatives in this pandemic scenario. They were shown to be more accessible and flexible, with costs being lower than usual, in addition to offering independence of time and location.

OBJECTIVE

To explore the literature on the effectiveness of various online psychotherapy approaches for treating Generalized Anxiety Disorder and Major Depressive Disorder during the Covid-19 pandemic.

METHODOLOGY

This is a systematic review study, whose information was obtained from the Medline database, using the MeSH (Medical Subject Headings) descriptors: “Online therapy,” “Covid-19 pandemic,” “Depression,” and “Anxiety,” applying the Boolean operator AND for term combination. Researchers conducted the search on September 26, 2024, totaling 552 articles initially.

The selection process was carried out by 2 researchers, who conducted a second filtering applying the following inclusion criteria: availability of free full text, article type (Clinical Trial), publication date (last 5 years), and language (English). After applying these criteria, 40 articles were selected.

The abstracts of all selected articles were read, excluding Clinical Trials whose main theme did not meet the objective of this review. At the end of the process, 11 publications were deemed eligible and included in this review.

RESULTS

A total of 11 articles were meticulously reviewed according to the selection criteria, all of which were clinical trials. To analyze the results and illustrate the review, tables were created for better visualization of the main topics of each article:

Article	Title
A1	Effects of an eight-week, online mindfulness program on anxiety and depression in university students during COVID- 19
A2	The effect of online laughter therapy on depression, anxiety, stress and loneliness among nursing students during the COVID-19 pandemic
A3	Efficacy of an Electronic cognitive behavioral therapy program delivered via the online psychotherapy tool for depression and anxiety related to the COVID-19 Pandemic
A4	Online cognitive behavioral therapy as a psychological vaccine against stress during the COVID-19 pandemic in pregnant women
A5	A randomized trial of online single-session interventions for adolescent depressions during COVID-19
A6	Effectiveness of online mindfulness platform in improvising anxiety, depression, and stress in adults during the COVID-19 Pandemic
A7	An online Solution focused brief therapy for adolescent anxiety
A8	Internet- based interdisciplinary therapeutic group for perinatal anxiety and depression
A9	Effects of a online brief modified mindfulness-based stress reduction therapy for anxiety among chinese adults
A10	Feasibility, acceptability, and efficacy of a positive emotion regulation intervention to promote resilience for healthcare workers during the COVID-19 pandemic
A11	Effect of an online resourcefulness training in improvising psychological well-being of front line medical staff

Table 1: Contains the title of the articles

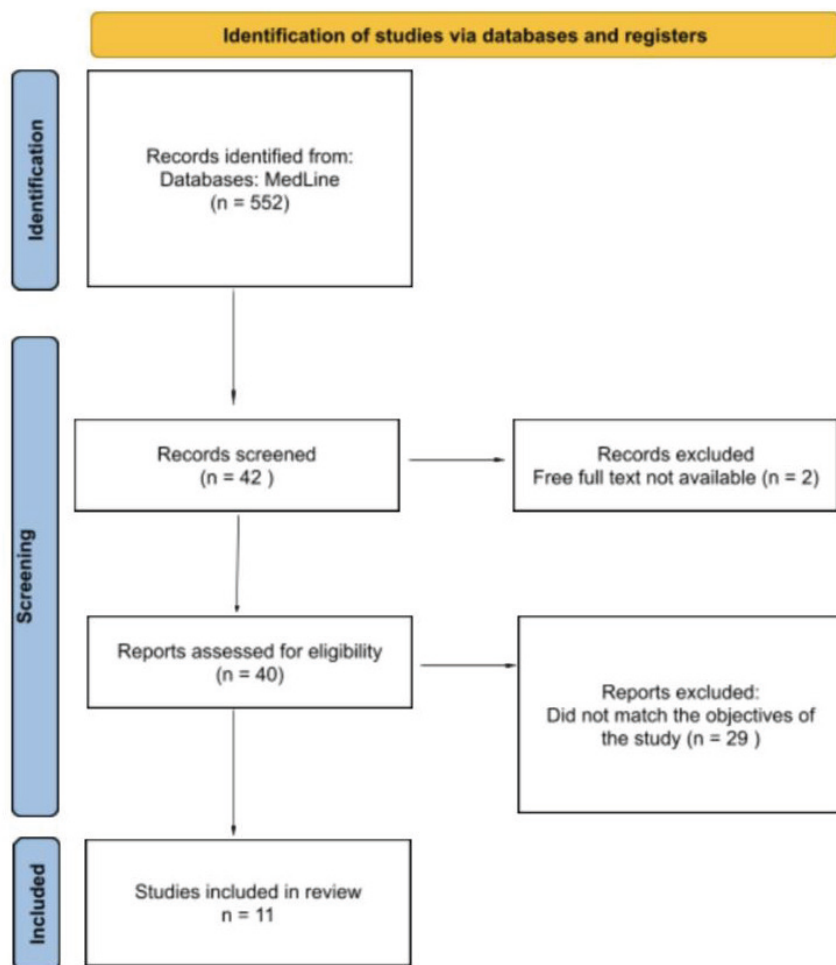


Figure 1: Study selection flowchart.

Source: Prepared by the authors, based on the articles read

Article	Authors	Year	Sample	Objectives
A1	Otto Simonsson, Olivier Bazin, Estêvão D, Simon B. Goldberg	2021	175 students aged 18 years or older	To investigate the effects of a mindfulness-based intervention in university students in the UK
A2	Fatma Ozlem Ozturk, Kader Tekkas- Kerman	2022	213 first-year nursing students from the Faculty of Nursing at Ankara University	To assess the effects of online laughter therapy sessions on levels of depression, anxiety, stress, and loneliness in first-year nursing students
A3	Elnaz Moghimi, Callum Stephenson, Anika Agarwal, Nillofar Nikjoo	2023	59 adults diagnosed with major depressive disorder and generalized anxiety disorder, whose mental health symptoms began or worsened during the COVID-19 pandemic	To investigate the effectiveness of online psychotherapy tailored to depression and anxiety symptoms during the pandemic
A4	Jose A Puertas Gonzales, Carolina Marino- Narvaez, Borja Romero- González, Graciz M Sanchez-Perez	2022	207 pregnant women	To test the effectiveness of an online cognitive-behavioral stress management program in pregnant women during the COVID-19 pandemic in Spain
A5	Jessica L Schleider, Michael C Mullarkey, Kathryn R Raposa, Mallory L Dobias	2022	2452 adolescents aged 13 to 16 years	To test single-session online interventions during COVID-19 in adolescents with elevated depression symptoms
A6	Tso-Ying Lee, Cha-Jung Hsieh, Pi-Hsia Lee	2024	97 patients over 20 years of age	To investigate the effectiveness of an online mindfulness platform in improving mental state

A7	Shitao Chen, Yanwen Zhang, Siyang Qu, Jiafen He, Quan Yuan, Yinzhe Wang, Wenxiu Bi	2023	76 adolescents aged 12 to 18 years who scored 10 or higher on the Generalized Anxiety Disorder test	To investigate the effectiveness of online brief solution-focused therapy for adolescent anxiety symptoms during COVID-19
A8	M Gomá, E Arias-Pujol, E Prims, J Ferrer, S Lara, V Glover, M Martinez, A Llairó, N Nanzer	2024	72 participants	To assess the effects of interdisciplinary online therapy groups for mothers and babies at risk during the COVID-19 pandemic in a disadvantaged neighborhood in Barcelona
A9	Minghuan Wang, Han Zhang, Xiaofan Zhang, Qian Zhao, Jing Chen, Caihoong Hu, Renjie Feng	2023	150 participants aged 18 to 55 years	To develop an online mindfulness-based stress reduction therapy
A10	Judith Tedlie M, Kathryn L, Peter Cummings, Elizabeth L Addington	2024	554 healthcare professionals	To test the feasibility, acceptability, and effectiveness of a self-guided online intervention for positive affect regulation in a sample of healthcare professionals during the COVID-19 pandemic
A11	Dandan Zhang, Yitong Jia, Yongjun Chen, Bom Meng, Xinqi Zhuang, Li Chen	2022	60 participants working in two isolation wards	To examine the effect of an online resilience training program and psychological variables in frontline medical staff working in COVID-19 isolation wards

Table 2: Contains the authors, date of publication, sample and the objectives

Article	Limitations	Results and conclusions
A1	The sample consisted of a single university in the UK, and participants were not asked to report the amount of home practice. Additionally, anxiety and depression scores may have been influenced by social desirability bias	The results suggest that an eight-week mindfulness program delivered online may be an effective approach for UK universities to promote students' mental health during global challenges
A2	The implementation of online laughter therapy did not allow for much interaction, leading to less enthusiasm during the sessions	Online laughter therapy was considered effective in reducing depression among first-year nursing students but was not found to be effective for anxiety, stress, and loneliness
A3	The effectiveness of online psychotherapy programs has already been demonstrated in previous trials	Participants showed significant improvements in anxiety and depression symptoms after the intervention, concluding that behavioral therapy is an effective and accessible treatment option
A4	Variables were measured at two distinct time points, with no follow-up. Furthermore, long-term follow-up could provide data on the progression of changes observed in participants. In addition, the gestational trimester of the participants at the time of study enrollment is significant, as stress levels may vary depending on this	Online cognitive-behavioral intervention during the COVID-19 pandemic yielded positive results for pregnant women: improvements in pregnancy-specific stress and reductions in psychopathological symptoms, with increased resilience. This therapy could prevent the rise of stress and psychopathological symptoms resulting from a pandemic, acting as a 'psychological vaccine'
A5	Eligibility screening relied on adolescents' interest in completing an online study and required internet access	The results suggest that free 20 to 30-minute online interventions can reduce depressive symptoms, hopelessness, and anxiety
A6	No report of limitations was found	Mindfulness intervention can help reduce psychological disorder rates by alleviating anxiety, especially with treatments lasting more than 4 weeks
A7	It is uncertain whether brief solution-focused therapy is the most effective approach under COVID-19 circumstances and whether it can be used in populations with severe anxiety and depression. Additionally, parent-reported data differed from adolescents' self-reports	Significant results in relieving anxiety and depressive symptoms in adolescents, promoting problem-focused coping strategies for the psychological issues at hand
A8	Small sample of patients	Positive outcomes on babies' development, mothers' symptomatology, and the bond established between them through a group parenting intervention. The interdisciplinary online therapeutic group reduced depressive and anxiety symptoms in mothers, improved overall functioning, and enhanced babies' well-being

A9	Small sample size, with an overrepresentation of women and a high educational level among participants	Results suggested that a brief mindfulness-based therapy can quickly alleviate psychological issues, including anxiety and depression, showing effects similar to conventional CBT, with lasting effects for up to 6 months
A10	Lack of racial and ethnic diversity in the sample, and recruitment and follow-up time was insufficient to assess any long-term impact	The implementation of a self-guided online positive psychological therapy in healthcare professionals proved effective for those with high mental health needs
A11	Small sample size, along with difficulties in implementing random cluster sampling. Participants had a wide range of educational levels and specialties	Online resilience training can produce significant improvements in participants' outcomes. One month after the intervention, anxiety and depression scores of both groups gradually decreased. It was concluded that online resilience training would be an effective tool for the psychological adjustment of frontline medical staff in the fight against COVID-19

Table 3: Contains the limitations of the studies plus the results and conclusion

DISCUSSION

EFFICACY OF ONLINE THERAPY IN THE CONTEXT OF COVID-19

The impacts of the COVID-19 pandemic have significantly affected the mental health of the population. In response to this need and the difficulty of accessing in-person services, a major global initiative to intensify online therapy was launched. Consequently, research on the impact of this therapeutic medium has grown substantially. In an eight-week online mindfulness program applied to a group of students at the University of Oxford, a significant reduction in anxiety was observed, even without major changes in depression levels (Simonsson, et al, 2021). Additionally, online mindfulness-based stress reduction (MBSR) demonstrated effectiveness in improving self-reported anxiety and depressive disorders (Wang, et al, 2023). Thus, it can be asserted that even under the extreme uncertainty brought about by the pandemic, the combination of various types of therapy and online interventions successfully improved the patients' presenting issues (Zhang, et al, 2022).

TYPES OF THERAPY

Brief mindfulness-based therapy demonstrates significant potential for rapidly alleviating psychological problems such as anxiety and depression, exhibiting effects similar to those of conventional Cognitive Behavioral Therapy (CBT). The results show that these benefits may persist for up to 6 months, highlighting the lasting efficacy of this low-resource intervention. Furthermore, mindfulness interventions, particularly those extending over more than 4 weeks, can effectively reduce rates of psychological disorders, contributing positively to the mental health of broad populations (Wang, et al, 2023).

Online laughter therapy, while effective in reducing depression among first-year nursing students, proved less effective for anxiety, stress, and loneliness. This underscores the need for a diversified and personalized approach in mental health interventions (Ozturk, et al, 2022). In summary, integrating mindfulness practices and exploring new approaches, such as laughter therapy, may be essential to address the challenges of psychological health on a large scale, especially at a time when the demand for emotional support is increasing.

ANALYZED CONTROL GROUPS

The selected articles address various on-line therapeutic interventions conducted during the COVID-19 pandemic, aiming to mitigate the negative impacts on the mental health of different populations. The choice of clinical trials reinforces the validity of the results, allowing for a solid comparison between groups receiving interventions and control groups.

In the analyzed studies, the control groups played a crucial role in allowing the assessment of the real impact of online therapies. For example, in Study A1, the comparison with participants who did not practice mindfulness showed that the eight-week program was effective in improving the mental health of college students. Meanwhile, Study A3 highlighted that online cognitive behavioral therapy outperformed the absence of treatment, with significant improvements in anxiety and depression symptoms.

Moreover, the results indicate that many online therapies are as effective as in-person approaches. In Study A9, for example, a brief online mindfulness intervention showed effects equivalent to traditional cognitive behavioral therapy in reducing anxiety and depression, with effects lasting over six months. However, some studies faced significant challenges, particularly concerning sample size and participant diversity.

In Study A2, the lack of interaction during online laughter therapy sessions may have compromised its efficacy in treating anxiety and loneliness. Study A10 also pointed out the lack of racial and ethnic diversity as a limitation, restricting the generalization of the findings to other populations. In A11, the absence of long-term follow-up was mentioned as a shortcoming in evaluating the durability of the effects.

Despite the limitations, the results suggest that online therapies can be a powerful tool for improving mental health during global crises, such as the pandemic. Studies like A4 and A7 demonstrated that, even with logistical limitations, these interventions can be adapted to meet the specific needs of groups such as pregnant women and adolescents, promoting significant improvements in emotional well-being.

CONCLUSIONS

Online therapy has demonstrated great efficacy during the Covid-19 pandemic, with interventions such as Electronic Cognitive Behavioral Therapy and Brief Solution-Focused Therapy being useful in managing psychological symptoms. Research indicates that virtual interventions have the potential to mitigate negative impacts on mental health. Approaches such as mindfulness-based therapy and online cognitive behavioral therapy not only reduce symptoms of anxiety and depression but also offer lasting benefits.

It is evident that individualizing therapeutic interventions is crucial to meet the specific needs of different populations. Although some practices may be less effective in certain contexts, combining different approaches and adapting to various scenarios has proven essential for success in mental health care.

Thus, the growing role of online therapies emerges as a relevant solution to the mental health challenges faced during the pandemic. This form of treatment reveals itself as an important tool for promoting emotional well-being, especially in crisis situations, benefiting those in need of psychological support.

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