Digital psychotherapy as an effective and timely treatment option for depression and anxiety disorders: Implications for rural and remote practice

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Abstract

Patients in regional, rural and remote communities experience perennial difficulties accessing mental health treatments in a timely manner, which contributes to inequitable outcomes when compared with their metropolitan counterparts. This situation frequently stems from a shortage of specialised face-to-face psychotherapy services available in local areas. The recent development of digital psychotherapy as an alternative treatment delivery method provides an opportunity to address this healthcare gap and to avoid the challenges related to workforce maldistribution. This article provides a targeted narrative review of the relevant evidence base, and discusses the potential applications within the rural and remote context. Multiple randomised controlled trials and a large meta-analysis demonstrate that digital psychotherapy, particularly cognitive-behavioural therapy, is as effective as face-to-face psychotherapy. Its use has consequently been endorsed across international clinical practice guidelines as an efficacious and practical way to provide mental healthcare. Despite this, the adoption of digital psychotherapeutic options has been limited to date. Increased awareness of the available options may improve access to psychological treatments in rural and remote populations. Digital psychotherapy should be considered an option for patients with depressive or anxiety disorders of mild-to-moderate severity.

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Introduction

The United Nations International Labour Organization has extensively detailed the perennial challenges faced by regional, rural and remote communities worldwide in achieving both equitable access to health services and equivalent clinical outcomes compared with their metropolitan counterparts.[1] Individuals living outside major metropolitan centres have worse outcomes across a broad range of health measures, including psychiatric variables. For example, in Australia, there is a 1.7-fold increased rate of suicide in rural communities;[2] in developing or less urbanised societies, these discrepancies are even more pronounced.[1] An important component of this disparity is likely the reduced availability of, and therefore utilisation of, some healthcare services.

In most rural and remote communities, mental healthcare is predominantly performed by general practitioners (GPs) or other primary health clinicians.[3] Patients frequently have limited access to experienced psychiatrists or psychologists, or face unacceptably long wait times before receiving therapy. The comparative paucity of mental health services in these areas leads to greater expectations for primary care providers to manage complex psychiatric presentations, often without sufficient specialist support.

In 2008, the Kampala Declaration avowed that immediate action was required globally to enhance and rebalance the international healthcare workforce to ensure essential care could be delivered to all people, regardless of where they live.[4] This poses a daunting challenge, but also provides an opportunity for consideration of new treatment approaches to redress this gap. In mental healthcare, advances in digitally delivered psychological interventions are of particular interest.

This novel treatment category has various names (Table 1), but regardless of the terminology used, digital psychotherapy is defined as the delivery of a manualised psychotherapeutic intervention via electronic modules on a website or smartphone application.[5] Essentially, it is the repackaging of a therapy initially validated in a face-to-face setting into a format where the patient actively engages with the material via their device without a therapist present. Therefore, it is distinct from other digital health interventions, such as the delivery of psychotherapy by a human therapist through a televisual link-up or the many useful e-health websites for patients that contain educational material to read.

This short review article considers the current evidence base underlying the use of digital psychotherapy in depression and anxiety disorders, and explores the benefits and challenges of greater digital psychotherapy uptake in a rural and remote context.

Evidence base

The evidence base in this area has rapidly expanded over recent years and multiple

Table 1. List of terminologies in use.

- Digital psychotherapy
- Electronic psychotherapy
- e-psychotherapy
- Computer-assisted psychotherapy
- Internet-based psychotherapy

clinical practice guidelines from both Australia and other countries have endorsed the use of Internet-based psychological therapies for mood and anxiety disorders of mild-to-moderate severity.[6–12] The present narrative review began by examining the reference lists of these guidelines in depth to identify the primary sources on which their recommendations are based. This literature was then supplemented by broader searches of the PubMed and Google Scholar databases.

The results indicated that cognitive-behavioural therapy (CBT) in particular has a wealth of data that supports digital delivery of treatment, with both a Cochrane review[13] and comprehensive meta-analysis[5] demonstrating equivalent outcomes for face-to-face and digital delivery. It should be noted that the Andrews et al.[5] meta-analysis considered 64 randomised controlled trials (RCTs) investigating digital CBT and demonstrated both a strong effect size (0.80) and low number needed to treat (2.34) across major depressive disorder, panic disorder, social anxiety disorder and generalised anxiety disorder. Separate evidence also suggests that digital psychotherapy is effective for relapse prevention.[14]

CBT remains the most commonly used of all evidence-based psychological modalities[15] and, consequently, is the most studied. Data supporting the digital delivery of other psychotherapeutic approaches (such as interpersonal therapy, mindfulness-based cognitive therapy or psychodynamic therapy) are much less extensive because these treatments are less readily available in a digital format. However, digital psychodynamic therapy was demonstrated across two separate RCTs to be effective in the treatment of generalised anxiety disorder[16] and major depressive disorder.[17] Another RCT showed digital interpersonal therapy to be effective for social anxiety

disorder, although not to the same extent as for a comparator digital CBT group.[18]

Unfortunately, despite the robust evidence and subsequent endorsement in clinical practice guidelines, the adoption of these digital therapies by doctors and patients alike has been slow. A recent review found that the uptake of digital psychotherapy is low owing to factors such as clinician reluctance, limited patient awareness and funding gaps.[19] GPs may not recommend digital treatment options for their patients because they either do not know of their availability or lack confidence in the efficacy or effectiveness of these therapies.

Discussion

The data available strongly suggest that digital psychotherapy is an effective way to deliver high-quality therapy to patients. Many different online options exist; Table 2 provides a non-exhaustive list of evidence-based and currently available digital psychotherapy programmes. Most digital psychotherapy available is in the form of CBT, which may be restrictive for patients who do not respond to CBT or who would prefer an alternative approach. To complicate matters, it is important to also note that a wide variety of smartphone applications exist that purport to teach mindfulness or improve mental health, but are not therapeutically designed or tested via peer-reviewed RCTs. Practitioners should be cautious about recommending options that are not evidence-based or vetted by reputable sources because these may not have the intended therapeutic effect.

Digital psychotherapy courses, such as those presented in Table 2, are designed to replicate the content that would traditionally occur with a therapist. As with face-to-face therapy, a typical digital programme would commence by administering symptom scales or diagnostic tools to help

Table 2. Commonly used digital psychotherapy options.

Name	Website	Target group	Cost	Modality	Length	Clinician-guided
BRAVE	https://brave4you.psy.uq.edu.au	AD (ages 8–17)	Free	CBT	10 sessions	No
Mental Health Online	www.mentalhealthonline.org.au	MDD, GAD, OCD, PD, PTSD, SAD	Free	CBT	Weekly modules for 12 weeks	Yes
MindSpot	www.mindspot.org.au	MDD, AD	Free	CBT	Five lessons over 8 weeks	Yes
MoodGYM	www.moodgym.com.au	MDD, AD	Free	CBT, IPT	Five modules	No
This Way Up	www.thiswayup.org.au	MDD, GAD, OCD, PD, PTSD, SAD	AU$59 for 3 months' access	CBT	Six lessons over 3 months	Yes

AD: anxiety disorders; CBT: cognitive-behavioural therapy; GAD: generalised anxiety disorder; OCD: obsessive–compulsive disorder; IPT: interpersonal therapy; MDD: major depressive disorder; PD: panic disorder; PTSD: post-traumatic stress disorder; SAD: social anxiety disorder.

confirm suitability for the course and then provide evidence-based educational information to the patient about their responses. Subsequent modules replicate core CBT components, such as diarising thoughts/behaviours, promoting behavioural activation, challenging negative cognitions, providing assertiveness training and concluding with relapse prevention strategies. Most digital courses are able to tailor the content based on the responses entered by the patient and several options offer email or phone support to users.

Generally, clinical practice guidelines recommend that digital psychotherapy should be delivered with the guidance of a suitably trained clinician to allow for (a) psychoeducation; (b) provision of support where required; and (c) monitoring of clinical response.[7,8] Objective input from an experienced, independent expert is considered important to provide tailored feedback for the patient and to ensure the intervention is being used as intended. However, this recommendation for clinician-guided digital therapy is based on principles of good medical practice rather than concerns that unguided programmes are insufficient. Indeed, there is evidence that unguided digital psychotherapy still achieves good outcomes for patients.[19]

Digital psychotherapy has several inherent advantages. First, delivering psychotherapy online overcomes the barrier of having limited face-to-face practitioners in a local area because the therapy simply requires an Internet connection. This therapy is also more flexible than face-to-face psychotherapy because the patient can work on these modules at home and at any time that is convenient for them. Digital psychotherapy also reduces patient out-of-pocket costs. As indicated in Table 2, many resources are free to access or charge a subscription fee that is lower than the cost of patient-funded psychiatry or psychology appointments. This low

pricing is possible because most digital psychotherapy platforms are funded through government grants or university research budgets. Minimisation of direct cost to the patient is particularly important in the rural and remote context because many patients in these areas come from lower socioeconomic backgrounds and have reduced capacity to self-fund private therapy.[2]

Despite the many opportunities that digital delivery of treatment offers, there are also some potential challenges. Rural and remote communities may have reduced or patchy phone and Internet reception, limiting access to the resources. Even more problematic is that neither Internet connections nor personal devices are ubiquitous. Moreover, basic literacy and information technology skills are required, which may limit the usefulness of this mode of delivery as an intervention for patients without such skills. Another important consideration is that all current digital options are delivered using a predominantly Western paradigm, which may be less suitable for some culturally or linguistically diverse patients and communities. Finally, digital psychotherapy is less structured than face-to-face appointments and therefore requires a degree of self-motivation to regularly access the material and work through the modules. Patients with strong avoidance or avolition may require greater support from family or clinicians to maintain engagement.

Appropriate training for GPs to support their patients while using these therapies is also important. Ideally, this would be produced by the developer of each online course and would be in the form of accredited training modules that contribute to GPs' continuing professional development requirements. Moreover, there is an opportunity for rural and remote mental health services (both private psychologists and clinicians from public community mental health teams) to embrace a hybrid model whereby face-to-face sessions can be used to oversee therapeutic work done at home via online interfaces. Greater uptake of digital psychotherapy has the potential to increase the caseload capacity that an individual practitioner can support owing to the reduced frequency of face-to-face appointments. This may allow a more judicious and cost-effective use of limited resources. Finally, specific future research investigating the application of digital psychotherapy in a rural and remote context would be instructive because much of the extant literature focuses predominantly on metropolitan populations.

Conclusions

Given the challenge of limited access to psychiatrists and psychologists in many rural and remote locations, digital psychotherapy presents an excellent opportunity for the treatment of patients experiencing mood and anxiety disorders. With a rapidly established evidence base to support it, digital psychotherapy has been accepted as an effective and practical way to provide mental healthcare to patients. This is reinforced by multiple international clinical practice guidelines. Clinicians can be confident that digital psychotherapeutic options are not inferior to their face-to-face counterparts, and allow more timely treatment of patients in rural and remote locations. There is potential for this mode of therapy to become a first-line option for many patients in rural and remote areas with a depressive or anxiety disorder of mild-to-moderate severity.

Declaration of conflicting interest

The authors declare that there is no conflict of interest.

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