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Anxiety and depression

Online resources and management tools

Background

There are significant unmet needs for psychological interventions for anxiety and depression in the population. e-health resources complement existing services by providing high quality information, symptom prevention, management interventions and peer support.

Objective

This article discusses e-health anxiety and depression resources offered by Australian providers and the ways in which general practitioners can assist their patients in accessing the diverse range of available resources.

Discussion

After appropriate diagnostic assessment, and as an adjunct to treatment according to best evidence based practice, GPs may consider referring patients to online information, support and assessment sites and/or prevention or treatment programs. People experiencing anxiety and depression are particularly likely to seek information online and may also value peer support online. There is now good evidence that symptom prevention and management programs can be effective in adults. Evaluation of programs for children and adolescents has also been encouraging. Current and future research will clarify the role of delivery factors such as therapist support that may influence effectiveness in clinical settings.

Keywords: anxiety disorders; depressive disorders; therapy, computer-assisted; internet



Case study

Three weeks after his 18th birthday, Jordan consults Dr Grant about his acne. Dr Grant practices in a small country town and has known Jordan for 10 years. Dr Grant provides advice about acne and notices that Jordan seems less talkative than usual. There is a strong family history of depression, so Dr Grant asks Jordan about his general health.

Jordan admits that he is feeling self conscious about his appearance and has been feeling unhappy at times. He has read on the internet that acne and depression are often linked and has been wondering if he might have some symptoms of depression. Dr Grant checks that Jordan is not at risk of self harm, completes a physical examination and arranges blood tests. They agree that Jordan will return in a week and in the meantime will visit the BITEBACK, *reachout* and *youthbeyondblue* websites to learn more about depression.

When Jordan returns the following week, Dr Grant is able to rule out medical illness and clinical depression, but suggests that Jordan might benefit from learning some strategies to prevent depression. Jordan has read about cognitive behaviour therapy and would like to learn some coping strategies. He is not prepared to see the town's only psychologist because she is his best friend's mother, but he is interested in exploring online resources. Dr Grant knows that the local high school counsellor has used MoodGYM in her work with students and Jordan is happy to see her. Dr Grant arranges to see Jordan again in 2 weeks and invites him to make an earlier appointment if he wishes.

There has been increasing interest in the development of mental health interventions over the internet, particularly for undertreated, highly prevalent disorders such as anxiety and depression.¹⁻⁴ The impetus for developing these programs has in part been due to the recognition that existing health infrastructure cannot meet demand and that additional structures are needed.⁵ Program development and research has been largely located in research institutions and the general public has in many



cases been able to access programs independently of their use of traditional treatment services. However, online mental health interventions can also be valuable adjuncts to traditional treatment services and may offer primary care an additional low cost or free evidence based resource.^{6,7}

In Australia, high quality mental health e-health programs for public use currently span health promotion, symptom prevention, early intervention and treatment services. The aim of this article is to outline key e-health anxiety and depression resources and how they can be used in primary care. This article will consider sites offered by Australian providers, although consumers can access online material from around the world. The main areas of mental health e-health of interest to general practitioners and their patients are:

- information, support and assessment sites, and
- symptom prevention and management programs.

Information, support and assessment sites

People experiencing anxiety and depression are particularly likely to seek information online, even more so than people with stigmatised physical conditions (eg. herpes).⁸ Psycho-education for depression and anxiety may have beneficial effects on help-seeking⁸ and symptoms.⁹ However, the quality of psycho-education and information sites can vary widely.¹⁰⁻¹⁵ General practitioners may be familiar with key online resources and can guide users toward quality evidence based information sites. Alternatively, GPs can seek guidance from mental health experts as to which sites are appropriately evidence based. Information is also available from freely accessible databases of websites that have been evaluated against generic criteria for health information quality. These include government sites such as the Australian government's 'HealthInsite' website (see *Resources*) and sites developed by specialist nongovernment organisations such as the 'Health on the Net Foundation', based in Switzerland (see *Resources*). A list of information websites for anxiety and depression provided by key Australian mental health research and service organisations is shown in *Table 1*.

Online peer networks are also a popular source of support and information about lived experience, although research into the effects of using these networks is at an early stage.¹⁶ Many such networks are available on the internet through various formats such as blogs, forums, chatrooms and Facebook pages. Some sites employ moderators to monitor and edit material that does not comply with the site's rules to minimise concerns about privacy and symptom contagion.¹⁷ In Australia, moderated peer networks are available on some information sites and on dedicated forums for depression and anxiety. Some forums encourage anonymous participation by the general public such as 'Blueboard', developed by 'e-hub' at the Australian National University (see *Resources*) and some are provided within closed therapy programs such as 'CRUFAD clinic', developed by St Vincent's Hospital in Sydney, New South Wales (see *Resources*).

Online screening and diagnostic assessments are also available and can be used independently by consumers or integrated into primary care management systems.⁴ Australian providers offer assessments that vary in comprehensiveness, cost and whether the assessment is provided alone or as an entry point to a symptom management program. Some are available to patients of registered clinicians, for example, the 'Mood Assessment Program' developed by the Black Dog Institute (see *Resources*) while others are openly accessible to self referred users, for example the 'e-Pass', developed by the National e-Therapy Centre, and PsychAssess developed by Sentiens Health Clinic in Perth, Western Australia (see *Resources*). Clinicians may access information from these programs through printouts and/or electronic communications and incorporate it into their clinical assessments.

Use of information, support and assessment sites in the general practice setting

In many cases, consumers concerned about anxiety and depression will turn to the internet and other informal sources of information and support before consulting a professional. For these consumers, information and support sites can act as an accessible entry point to formal services and as a source of referral to primary care. In addition, use of these sites has the potential to assist consumers to feel more confident about discussing mental health issues with their GP.

Once in contact with a GP, patients should be offered appropriate diagnostic assessment and treatment according to best evidence based practice. As an adjunct, patients may be referred to online information, support and assessment sites at any point in the process, including assessment, psycho-education, treatment and recovery. In the treatment and recovery phases, use of online resources may help affirm treatment rationales, shape realistic expectations and encourage persistence and hope in people whose first treatment is not fully successful.

Symptom prevention and management programs

Consumers can also access online programs designed to prevent depression and anxiety in people who have not yet developed symptoms or who have subclinical symptoms. There are also treatment programs designed for people who have clinically significant symptoms, including those whose symptoms are sufficient to meet formal diagnostic criteria. In many programs, users initially complete automated questionnaires and receive feedback about their responses and information about other services. They may be prompted to seek professional help, especially if they endorse clinically significant symptoms. Questionnaires may be repeated to provide feedback about progress.

Program content usually involves interactive psycho-education and therapy skills training materials designed to improve coping and symptom management. Content typically draws on therapies that have a good evidence base in face-to-face delivery, such as cognitive behavioural therapy (CBT)¹⁸⁻²⁰ and interpersonal



Table 1. Australian websites providing information about anxiety and/or depression

Provider and hosting organisation	Website
beyondblue The National Depression Initiative	www.beyondblue.org.au/index.aspx www.youthbeyondblue.com (for young people aged 12–25 years)
Black Dog Institute Prince of Wales Hospital, University of New South Wales	www.blackdoginstitute.org.au www.biteback.org.au (for young people aged 12–18 years)
Centre for Clinical Interventions Government of Western Australia, Department of Health	www.cci.health.wa.gov.au
Clinical Research Unit for Anxiety and Depression (CRUFAD) St Vincent's Hospital, Sydney	www.crufad.com
e-hub Australian National University	www.bluepages.anu.edu.au
Inspire Foundation	http://au.reachout.com (for young people aged 14–25 years)
National e-Therapy Centre Swinburne University	www.anxietyonline.org.au

therapy.²¹ For example, programs may include psycho-education; cognitive strategies such as problem solving, self monitoring and cognitive restructuring as well as behavioural strategies such as activity scheduling and exercise. The material contained in online programs can be delivered with varying degrees of support for users including self help, guided self help and as an adjunct to face-to-face therapies.

Self help

Programs that are available as self help tools usually offer basic user support such as an email contact point for technical and clinical queries. Psychologists (and other mental health professionals) who use online self help programs in their practice generally continue to provide ongoing assessment and advice about appropriate treatment options as well as reviewing progress to determine if other interventions are required.²²

Guided self help

In addition to human support provided by clinicians from whom users are already seeking treatment, some programs offer support from in-house clinicians employed by the programs' providers. Human support usually involves monitoring of progress and facilitation of program use and may include reminders, responses to users' queries about the program material, and referrals for other forms of treatment.²³ Some programs also offer automated support such as email reminders.

Adjunct to face-to-face therapies

Some focused psychological strategies may use e-health program material in group²⁴ or individual interventions.²⁵ In the delivery of more complex psychological therapies, an online program may be used as an additional symptom focussed intervention so that face-to-face therapy can focus on issues for which the therapeutic relationship is a primary intervention.

Use of online symptom prevention and management programs in the general practice setting

Following a full assessment and provision of psycho-education, GPs may consider referring a patient to an online prevention or treatment program. This may be particularly useful where people are unable to access other psychological interventions – for example because they live in a remote area with few services or because they cannot afford the time or money to access traditional services. Practitioners who refer to online programs can choose a level of involvement that suits their skills, interests and clinical setting. Those who wish to be actively involved can, depending on the program used, monitor program users' progress through printed material, automated feedback and alerts, or through privacy settings that allow clinicians to access users' data.

Programs vary with respect to cost, whether users can participate anonymously, and whether access is open to the public or is restricted to users who have clinician referrals or who have agreed to participate in a research trial of the program. There are many groups actively developing and researching online mental health programs in Australia and consumers can choose programs offered as ongoing services as well as programs offered within research trials.

Evidence base for online symptom prevention and management programs

Symptom prevention and management programs can be effective in adults^{1–4,26} and evaluations of programs for children and adolescents have also been encouraging.²⁷ In adults, treatment effects can be of similar magnitude to those found with medication and face-to-face therapy^{1–3} and benefits may persist over 6–12 month follow up periods.^{18–20} Adjunctive use of online programs has the potential to improve outcomes of traditionally delivered interventions.^{6,25} Australian programs currently being offered as ongoing services are listed in *Table 2*, along with information regarding the current evidence base for each.



Users and professionals can use the free 'Beacon' website (see *Resources*)²⁸ to investigate online health programs including those for anxiety and depression. It provides effectiveness ratings for programs from around the world based on systematic reviews of the evidence base for each program. The Beacon site also provides program descriptions and information about accessibility and content, and consumers are invited to rate the programs.

While online programs have achieved encouraging research outcomes, debate continues about key aspects of their clinical application and evaluation.^{23,29–32} For example, further research is required to determine the optimum use of various levels and types of human and automated support,^{1,26,31,32} identify the users most likely to benefit from particular programs, and to clarify protocols for their use with more severe conditions.^{23,29–32} Individual programs tend to be used quite flexibly by

public users and clinicians. In research trials, programs designed for one symptom group may assist in reducing other types of symptoms^{19,33} and the same program material may be used with varying levels of human support to provide self help, guided self help and therapy adjunct interventions.^{6,18,25} Currently, online programs are not recommended for users who are acutely suicidal or experiencing psychosis and additional exclusion criteria are specified by some programs.

Conclusion

Australian consumers can access an enormous range of online information, support and programs for symptom management or prevention. General practitioners are well placed to help guide consumers toward the many high quality resources available.

Table 2. Openly accessible Australian based interactive internet programs for anxiety and depression

Hosting organisation	Program name	Symptom prevention (P)/management (M)	Depression (D)/anxiety disorders (A)	Fully automated self help	In-house clinical support	Cost	Clinician feedback
Outcome research published in peer reviewed journals							
CRUFAD clinic programs	Depression, generalised anxiety, panic, mixed depression and anxiety, social phobia https://crufadclinic.org	M	D, A	No	Yes	Costs apply	Automated
e-hub Australian National University	e-hub: MoodGYM www.moodgym.anu.edu.au	P, M	D, A	Yes	No	Free	Printout
HealthSteps Sentiens	Chronic depression program www.healthsteps.net.au	M	D	Yes	No	Costs apply	Privacy settings
Online anxiety project University of Queensland	www2.psy.uq.edu.au/~jkweb	P	A	Yes	No	Free	None
Outcome research not yet published							
Anxiety Online Swinburne University	Generalised anxiety, obsessive compulsive disorder, panic, social anxiety, post-traumatic stress disorder www.anxietyonline.org.au	M	A	Yes	Yes	Self help free, clinical support costs apply	Printout Automated
e-hub Australian National University	e-couch: depression, generalised anxiety, social anxiety www.ecouch.anu.edu.au	M	D, A	Yes	No	Free	Printout
University of Tasmania	Fear Drop graded exposure for phobia www.feardrop.com	M	A	Yes	No	Free	None
HealthSteps Sentiens	All other programs www.healthsteps.net.au	M	D, A	Yes	No	Costs	Privacy settings
Queensland University of Technology	OnTrack programs www.ontrack.org.au	M	D, A	Yes	No	Free	Printout



Resources

- HealthInsite: www.healthinsite.gov.au
- The Health on the Net Foundation: www.hon.ch
- Blueboard: www.blueboard.anu.edu.au
- CRUFAD clinic: <https://crufadclinic.org>
- e-Pass: www.anxietyonline.org.au
- Mood Assessment Program: www.blackdoginstitute.org.au/health-professionals/map
- PsychAssess: www.sentiens.com/HealthSteps/PsychAssess/psychassess.html
- Beacon: www.beacon.anu.edu.au

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