

Embracing technologies to improve well-being for young people

An Australian view of evidence and policy implications

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Introduction

Adolescence and young adulthood are critical periods for the onset of mental health problems (Burns, Davenport et al., 2010) as almost 50 per cent of disorders emerge by age 14, with 75 per cent of disorders having their onset before 24 years of age (Kessler, Berglund et al. 2005). A recent national survey of young Australians' mental health and well-being found that 16 per cent experienced substance use disorders, 7 per cent affective disorders and 11 per cent anxiety disorders (Australian Institute of Health and Welfare, 2007).

Timely and appropriate help-seeking can reduce the enduring impact of many of these mental health problems (Rickwood, Deane et al., 2007); however, only 29 per cent of young people who require clinical care seek help (Slade, Johnston et al., 2009; Burns, Davenport et al., 2010). Of those who do receive care, many do not receive the most suitable evidence-based treatments at the most opportune time (Andrews, Sanderson et al., 2000; Libby, Brent et al., 2007). The reasons for young people's reluctance to seek help are many and varied (Wilson, Bushnell et al., 2011). Factors include the help-negation effect – the theory that higher levels of suicidal ideation (thinking) predict lower intention to seek help from both formal and informal sources, and higher intention to seek no help at all (Wilson and Deane, 2001; Wilson, Deane et al., 2003; Wilson, Deane et al., 2005; Gibb, Fergusson et al., 2010; Wilson, Deane et al., 2010), having no experience of previous professional mental health care (Carlton and Deane, 2000) and negative beliefs about the usefulness of therapy and therapists (Kuhl, Jarkon-Horlick et al., 1997).

If not addressed, the effects of mental ill health can persist over an individual's lifetime (Costello, Foley et al., 2006) and lead to further occupational, economic and interpersonal difficulties. There is growing international recognition of the increasing health burden attributable to mental illnesses, and the significant economic impacts it can have. Economic modelling estimates that in 2009 the direct costs of untreated mental disorders in Australian young people totalled AUD10.6 billion (Access Economics, 2009). The cost of poor mental health among young men is especially significant. Mental illness in young men aged 12 to 25 costs the Australian economy AUD3.27 billion per annum, or AUD387,000 per hour across a year, in lost productivity (Degney, Hopkins et al., 2012).

There is a clear imperative to improve the mental health and well-being of all young people. Doing so will require not only increased investment, but reform, and the development of new and innovative approaches to service delivery. With 99 per cent of 15 to

16-year-olds and 76 per cent of 9 to 16-year-olds using the internet daily or almost daily (Green, Brady et al., 2011), we have unprecedented opportunity to create new systems of e-mental health care – from promotion and prevention through to treatment and recovery – that bridge young people's online and offline worlds, recognise the consumer as an expert, and embrace stepped and collaborative care. Such approaches provide a significant opportunity to mitigate young people's aversions to seeking help as well as overcoming many other geographical, attitudinal and financial barriers. The cost-effectiveness of e-mental health interventions means that they hold considerable potential to alleviate need in an area where demand regularly exceeds governments' capacity to respond.

Young people's use of technologies

At a basic level, the internet can be conceived of as a broker of health information. However, as technology rapidly evolves, and the internet becomes integrated into the everyday lives of young people, its function as a 'virtual environment' or setting in which young people spend time becomes increasingly apparent (Burns, Davenport et al., 2010). The internet of today is an interactive, participatory and collaborative space that encourages self-expression through user-generated content and the building of online communities through social networking services.

Today's young people are most likely to utilise the internet to connect with others and engage in activities such as social networking, messaging, playing online games and emailing (ABS, 2011). Over 95 per cent of Australian young people use the internet (Ewing, Thomas et al., 2008). A total of 3.9 million Australians aged over 14 went online via their mobiles in June 2011 alone, with recent data showing that young men access the internet on their mobiles twice as much than the average adult, and that 48 per cent of young men who own a smartphone download apps at least once a week (Market Research from IPC/Insight, 2010). Around 90 per cent of young people aged 12 to 17 use social media, with 8.6 million Australians aged over 14 found to have accessed social networking sites from home in June 2011 (Australian Communications and Media Authority, 2011). For most Australian young people, the internet is a way of a life.

Working in partnership with young people

Young people have an important role to play in driving change and innovation in the area of youth mental health. Adopting a youth participation approach (Wierenga, 2003; Livingstone, Bober et al.,

2005) is an effective way of ensuring that organisations keep abreast of developments in the technological environment and develop a deep understanding of the ways in which young people engage with technologies. Moreover, in order to encourage and support adolescents and young adults to seek professional help early for emerging mental health problems, services must be informed and guided by the young people they serve (Rickwood, Deane et al., 2007).

Indeed, there is growing evidence that youth participation brings about benefits for the individual young person as well as the service being delivered (Glover, Burns et al., 1998; Wilkinson and Marmot, 2003; VicHealth, 2005; Oliver, 2006).

Taking a participatory design approach to reforming mental health service delivery enables us to make mental health objectives meaningful and relevant to young people so that activities and interventions are more effective. It does this by providing a way for young people to participate meaningfully in the design process regardless of their prior expertise in design or mental health, and empowers them to take an active role in making decisions about their own care. A participatory design approach supports researchers and practitioners to develop empathy for, and connection to, the lives and lived experiences of young people, and then work together to identify and prioritise which issues young people think are most important.

With this understanding, service developers can create an intervention that draws on young people's understanding of how to achieve maximum usability, impact and benefit to them in the context of young people's lives (Hagen, Collin et al., 2012).

The opportunities to use technologies to improve youth mental health

Consistent with the World Health Organization (WHO) and the Victorian Health Promotion Foundation's (VicHealth) health promotion framework, we must engage with young people in environments where they interact – i.e. the internet and new media – (Herrman, Saxena et al., 2005) and use the tools and networks with which they engage, including mobile phones, social networking sites, games and virtual worlds. Good evidence exists that technologies can be used effectively in improving mental health and well-being (Cuijpers, Van Straten et al., 2008; Griffiths, Farrer et al., 2010), especially among young people (Christensen and Hickie, 2010).

The internet can be seen as both a tool and a setting for action in improving the mental health and well-being of young people. The internet can be used as tool by young people to find information or access services, while also acting as a social setting within which young people establish and maintain relationships. The internet has been described as accessible, anonymous, engaging and informative, and as providing a space in which young people can feel empowered and confident to talk about sensitive issues (Gould, Munfakh et al., 2002; Burns, Davenport et al., 2010) such as depression (Oliver, 2007); sexuality or sexually transmitted diseases (Suzuki and Calzo, 2004) and physical activity and nutrition (Spittaels and De Bourdeaudhuij, 2006).

As the technical capacity of the internet grows with new services and Australia's National Broadband platform, it becomes better

able to offer a practical medium for health behaviour interventions. For example, social marketing campaigns can now be disseminated to a large population online via social networking services, at a fraction of the cost. There are a number of significant benefits associated with the use of social networking services, including: delivering educational outcomes; facilitating supportive relationships; identity formation; and promoting a sense of belonging and self-esteem. Furthermore, the strong sense of community and belonging fostered by social networking services has the potential to promote resilience, which helps young people to successfully adapt to change and stressful events (Collin, Rahilly et al., 2011).

Increasing mental health literacy and promoting early help-seeking

The internet is increasingly being used to provide health information and resources, as it offers low-cost, anonymous and 24/7 access for young people (Santor, Poulin et al., 2007). Research evidence indicates that young people use the internet to seek health information (Aspden and Katz, 2001; Gould, Munfakh et al., 2002; Lenhart and Madden, 2005). Importantly, young people report feeling comfortable accessing online information about mental health issues, and the anonymity of online interventions extends access to young people who would otherwise avoid services (Oh, Jorm et al., 2008).

When asked about the sources of information, many young respondents to the 2008 headspace National Youth and Parent Community Survey cited the internet – 21 per cent of 12 to 17-year-olds with a mental health difficulty, and 34 per cent of 18 to 25-year-olds reported that they had specifically searched the internet for information to help themselves. Variables that predicted using the internet as an information source included being female and using the internet after 11 pm (Burns, Davenport et al., 2010).

The same study found that while 78 per cent of young people aged 12 to 25 years felt that the internet had helped a little or a lot with a mental health, alcohol or substance misuse problem, 85 per cent would recommend it to a friend or family member, and 94 per cent felt somewhat satisfied or very satisfied with the information they received. Additionally, 55 per cent of 12 to 17-year-olds and 45 per cent of 18 to 25-year-olds felt the internet provided the kind of information they needed (Burns, Davenport et al., 2010). The study also showed that young people's first step to sourcing information online was consistently a search engine rather than direct access to a website, but once 'Googled', mental health and generalist websites were more popular than forums, bulletin boards and discussion or peer support groups. While general information and question-and-answer forums rated highly, anonymity, the availability of fact sheets, online journals and other people's stories did not (Burns, Davenport et al., 2010).

Technologies in early intervention, treatment and recovery

Australia has been at the forefront of international innovations in its use of e-health platforms to promote better mental health and deliver enhanced mental health care. Given workforce shortages in

mental health, the geographical and cost barriers to effective service provision, and the reluctance of key groups (such as young people and men) to use formal clinical services, e-health innovations will be central to real reforms (Rosenberg, Hickie et al., 2009).

Research indicates that information about depression and interventions that used cognitive behaviour therapy and were delivered via the internet were more effective than a credible control intervention in reducing symptoms of depression in a community sample (Christensen, Griffiths et al., 2004). The result of the study revealed both cognitive behavioural therapy and psychoeducation delivered via the internet are effective in reducing symptoms of depression (Christensen, Griffiths et al., 2004).

Online interventions for a range of mental disorders and problematic health behaviours (for example, depression, anxiety, smoking, weight) have demonstrated efficacy, and the number of programs available is growing rapidly (Mitchell, Vella-Brodrick et al., 2010).

For those experiencing mental ill health, the strategic use of technologies can help to overcome barriers to help-seeking, such as physical access, confidentiality and stigma (Gould, Munfakh et al., 2002). While positive results are seen from the use of self directed e-health interventions, there is some evidence that these are most effective if used as part of a stepped care model (van Straten, Seekles et al., 2010), with the support of a trained professional (Perini, Titov et al., 2009; Titov, Andrews et al., 2009) or as an adjunct to face-to-face treatment (Hickie, Davenport et al., 2010).

Online counselling and support

There are now a number of options for young Australians to access online counselling and support. One of these is eheadspace (www.eheadspace.org.au), which provides an opportunity for young people to access support via the telephone or online from a trained clinician. Lifeline Crisis Chat is for people who prefer to seek help via a real time, one-on-one online conversation with a trained crisis supporter. Lifeline is not a youth-specific service, although their own user data suggests that an increasing number of young people are using the Crisis Chat service. KidsHelpLine also offers the opportunity for young people to engage in counselling via either the telephone or via online chat.

Engaging and supporting the youth health workforce

There is growing optimism in the Australian youth mental health sector regarding the opportunities to utilise technologies as an integral part of a mental health system. Recent Australian research found that a majority of youth health workers surveyed believed that using technologies would allow them to have a greater impact on young people's mental health (Blanchard, Herrman et al., 2012). They believed that technologies play a considerable role in the lives of most young people and that these technologies have the potential to influence mental health and well-being, both positively and negatively. However, participants in the study also felt that these technologies are poorly understood and under-utilised in mental health promotion, as well as in the prevention,

early intervention and treatment of mental ill health (Blanchard, Herrman et al., 2012). The youth health workforce could use technologies more effectively if barriers to their use were overcome. Such barriers include poor infrastructure, lack of guidelines or policies to support safe and constructive use of technologies, and lack of awareness about which technology-based strategies or approaches are most effective and in which contexts (Blanchard, Herrman et al., 2012).

Further investment needs to be made in securing appropriate technological infrastructure in youth mental health services and in training staff members to develop an adequate understanding of young people's technology use and the range of strategies that can be applied to improve and promote young people's well-being (Blanchard, Herrman et al., 2012). Innovation in the online space is occurring rapidly and it is important that the youth health workforce is equipped to respond appropriately.

Using technology to reform national youth mental health systems – policy implications

Given workforce shortages in mental health, the geographical and cost barriers to effective service provision, and the reluctance of key groups (such as young people and men) to use formal clinical services, we posit that e-health innovations will be central to such reforms.

All indications are that technology is close to making it possible to deliver what are in fact 'face-to-face services' to people geographically distant from the service provider. Such services, however, will never be exactly the same as physical presence, and thus the challenge for service providers and policy-makers is to determine how best to gain value from technological developments.

However, as technology use evolves, the divide between the connectivity-rich and the connectivity-disadvantaged grows – both between and within nations. Such a divide cannot be ignored, especially as it is the poor, the already disadvantaged, and the

Help-seeking: ReachOut.com

Lead partner in the Young and Well Cooperative Research Centre (CRC), the Inspire Foundation, have developed ReachOut.com, a national internet-based mental health service developed with and for young people (Burns, 2007). Between its launch in 1998 and 2007, ReachOut.com had over 4 million hits, peaking at an average of 131,613 visitors per month (Burns, 2007). In the 2012 financial year, over 600,000 young people engaged with ReachOut.com – a 27 per cent increase from the previous financial year. Annual evaluations of the service have repeatedly shown that the typical user of ReachOut.com is experiencing high to very high distress and not engaged with other formal support services. ReachOut.com supports early intervention by facilitating help-seeking and connecting young people with services and health professionals. It also provides opportunities for young people to develop the skills and capacity to better understand mental health difficulties and manage adversity, thereby complementing traditional support (Burns, 2007; Burns, 2008).

residents of rural and regional areas who are most likely to experience the digital divide.

Internet access is now recognised as a key way for individuals today to gain social and cultural capital – something that is especially important to marginalised individuals, who can build social networks and develop relationships online in ways that are denied to them face-to-face by mental illness, prejudice, remoteness, residential instability and other factors.

Overcoming the 'digital divide' further involves not only responding to the material barriers that some may face with regard to technological access, but also providing marginalised and disadvantaged people with the cultural competencies and skills to participate fully online and to protect themselves from unscrupulous individuals who target vulnerable groups. Studies suggest that even given reasonable access to the internet and other technologies, the potential to engage in the opportunities for learning, education, social and civic engagement that the internet provides requires a digital literacy that offers the ability to become critically and creatively involved in digital technologies in all areas of life. It is therefore also imperative that consideration be given to the ways in which digital literacy can be grown, including reviewing the skills and competencies taught in schools, and ensuring that targeted support and education is provided to marginalised or culturally diverse groups.

Furthermore, harnessing the potential of emerging technologies to transform mental health service delivery will require significant up-skilling of staff, updating of hardware and revision of policy in many government and other service delivery organisations. Currently, levels of knowledge about, and trust in the internet and associated technologies can be low, while enthusiastic individuals are often hampered by restrictive organisational policies in relation to the use of technology (a problem also faced by many government and corporate employees). Computer hardware and other technology may often be old or inadequate, and organisations generally do not have the resources to upgrade and/or purchase required equipment. Realistically then, it will not be possible to transform mental health service delivery without directing investment towards i) services that are already utilising technology; and ii) the up-skilling and equipping of other organisations and institutions.

With so much work under way already within the community and corporate sectors, the challenge is to integrate those developments found to be effective into a new system of service delivery – one that blends the best of 20th-century models of care with innovative new technology-based approaches to deliver a high standard of mental health care and support to all, regardless of where they may live. Doing so will require considerable work within governments, in collaboration with the community and corporate sectors, to design new service delivery frameworks and ensure that the funding and policy settings are right. This may require strong advocacy for the inclusion of e-mental health approaches within service planning frameworks, and/or further extension of public funding to cover technology-based interventions, including those that are found to be clinically effective but that may not require the involvement of a clinician. Up-skilling and physically equipping all our citizens and institutions will also be vital to maximise the potential benefits of new and emerging technologies.

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Associate Professor Jane Burns is the founder and CEO of the Australian-based Young and Well Cooperative Research Centre. Its establishment is a culmination of Jane's work in suicide and depression prevention and builds on her national and international partnerships with the corporate, philanthropic and not-for-profit sectors. Jane holds a VicHealth Principal Research Fellowship at Orygen Youth Health Research Centre, Centre for Youth Mental Health at the University of Melbourne, and an Honorary Fellowship at the Brain & Mind Research Institute, University of Sydney. She completed her PhD in Medicine as a National Health and Medical Research Council Scholar at the University of Adelaide.

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