

BITE BACK: web-based psychology for young people's well-being

Romi Kaufman and Vijaya Manicavasagar

Introduction

Improving youth mental health has only recently begun to attract the attention of the community and public health policy. According to the World Health Organization (WHO), mental health is a state of well-being in which the individual is able to realise their potential, cope with normal life stresses, and is capable of working and contributing in the community.¹ Significant problems in mental health – termed disorders – are a set of recognisable symptoms that interfere significantly with social, academic or occupational functioning.² Although the mental health of people of all ages is important, the health of young people in Australia has created concern among many mental health professionals in recent years.

Young people suffer disproportionately high rates of mental disorders.³ While 20 per cent of Australians aged 18–85 years are affected by mental illness, 26 per cent of those (the highest percentage) fall within the 18–24-year-old age range.⁴ Further, it has been estimated that 70 per cent of mental health problems have their onset in childhood or early adolescence.⁵ Nearly a quarter (24.3 per cent) of Australian youth (aged 12–25 years) experience anxiety, affective or substance use disorders, and a variety of other mental illnesses,⁶ all of which have been linked to various negative outcomes, such as poor physical health, social and interpersonal difficulties, substance use, future maladjustment and suicidal behaviour.⁷ Youth mental ill health is the leading contributor to the total burden of disease among young Australians, yet only one in four young people with a mental health problem seeks professional help.⁸

Furthermore, it is now recognised that the absence of serious behavioural, psychological and emotional problems in young people does not necessarily equate with 'thriving'⁹ or 'flourishing' (or 'functioning well in life').¹⁰ Around 46 per cent of Australian pre-adolescents (aged 10–14) without diagnosed mental health problems report a lack of self-confidence, 54 per cent are anxious about not fitting in, and 40 per cent feel they are under-performing.¹¹ These figures highlight the need for more holistic, accessible and innovative approaches to youth mental health prevention and intervention, which engage with typical help-seeking behaviours in this population.

Online interventions and the case for positive psychology

The internet has become an increasingly important part of life for Australians, particularly young people. By 2008, over 95 per cent of young Australians were using the internet,¹² and recent statistics reveal young people aged 12–17 years spend up to 3 hours online per day.¹³ Adolescents use the internet to search for health

information, especially on topics that are difficult to discuss face to face.¹⁴ It is a useful tool for young people seeking anonymous help with mental health problems that may carry taboo and shame, and has the advantage of being accessible to rural-based and urban-based recipients, while also being substantially cheaper to administer than face-to-face interventions.¹⁵

Over the past few decades, a significant number of online interventions have been trialed to address youth mental health, with some suggesting that web-based initiatives are equal in effect to brief face-to-face interventions.¹⁶ These trials have shown that a large number of approaches can be adapted for web-based delivery. Cognitive behavioural therapy (CBT) has traditionally been the most common form of psychological intervention adapted to online delivery; however, recent years have seen an explosion of interest in positive psychology as an alternative, or complementary, approach to CBT.

Positive psychology is the study of mental well-being, optimal functioning and what makes life worth living. It seeks to understand what leads a person to feel content, happy and engaged in life.¹⁷ Over the past two decades, researchers have investigated some of the patterns of thinking, feeling and relating that help individuals, communities and organisations to thrive. They have further developed specific techniques and interventions that can help us better understand and adopt these patterns of thought, feeling and behaviour in everyday life.¹⁸

Experts in the field have identified several psychological domains that are important for happiness and mental well-being. These include gratitude, optimism, kindness, hope, goal-setting, social relationships, meaning, mindfulness, a healthy lifestyle, 'flow' and the use of character strengths. Studies have now demonstrated that it is possible to teach young people to develop these domains to improve mental well-being.¹⁹ Positive psychology may have broader public health implications than CBT through its focus on improving mental well-being rather than simply alleviating symptoms of mental disorder. Furthermore, evidence suggests that increasing well-being can have a protective effect, enhancing resilience to future psychopathology. Early attempts have been made to develop specific online positive psychology interventions for adults;²⁰ however, as yet no attempts have made to develop a comprehensive online positive psychology program for young people.

BITE BACK: an online positive psychology program for young people

BITE BACK (<http://www.biteback.org.au>) is the very first online positive psychology program aimed at improving the overall well-being and happiness of young Australians between the ages of 12

Figure 1 BITE BACK interactive tools



Snap That

A scavenger hunt concept. Users are required to pay attention to and savour their everyday surroundings by seeking, finding and photographing items or images that match a specified theme. They can share their submitted photos to create a communal online collage and receive feedback from their peers, or choose to keep their submissions private. This activity supports the positive psychology domains of Mindfulness and Savouring.

- <http://www.biteback.org.au/things-to-do/snap-that>



Power Up

A wide variety of mindfulness audio tracks (meditations) that can be experienced online or downloaded on to MP3 players for use at any time. Users can choose tracks based on their differing interests and goals – increasing performance, relaxation, regulating emotions or amplifying the senses (savouring). They are encouraged to participate in 7, 14 or 21 day challenges to achieve the greatest benefits. Learnings can be shared with the online community through forum-based discussion. This activity supports the positive psychology domains of Mindfulness and Savouring.

- <http://www.biteback.org.au/things-to-do/power-up>



Think Tank

A gratitude journal. Users are encouraged to write three things that they are grateful for each week and lodge them into a communal online 'Think Tank'. Entries can be funny, unusual or serious. Users can share their submitted gratitude with their community or choose to keep their submissions private. This activity supports the positive psychology domain of Gratitude.

- <http://www.biteback.org.au/things-to-do/think-tank>



In the Zone

A series of videos and online discussions that users can watch, read and participate in to learn about the positive psychology concept of Flow and how different people (including celebrities) experience it. Users are encouraged to consider the activities and challenges that enable them to experience this sensation of being in the moment. This activity supports the positive psychology domain of Flow, which relates to character strengths.

- <http://www.biteback.org.au/things-to-do/in-the-zone>



Bookshelf

A collection of factsheets, interviews, Q&As, videos and website links to help users understand more about all of the positive psychology domains and the different ways they can be used to boost well-being.

- <http://www.biteback.org.au/things-to-do/bookshelf/>



Mental Fitness

A series of quick surveys enabling users to assess their mental fitness, level of focus, gratitude and happiness. Users receive a score and tips on how to improve well-being. This enables them to monitor their progress as they engage with the site over time.

- <http://www.biteback.org.au/things-to-do/mental-fitness>



Real Stories

A selection of real life stories posted by users about their positive experiences and overcoming life's challenges. Users can also read and comment on other people's stories, creating a sense of community and understanding. All stories are monitored for risk and responded to by administrators as required.

- <http://www.biteback.org.au/things-to-do/real-stories>

and 18 years, with particular emphasis on 14–16-year-olds. Key objectives of this program are to encourage young people to work to their full potential, become more engaged in all aspects of their lives and, ultimately, to build resilience.

The program contains interactive self-help activities, quizzes, blogs, online forums, stories and videos relating to a range of positive psychology domains (see Figure 1), as well as information about various mental health topics, with particular focus on those based on well-being and flourishing. The site also provides an interactive environment for young people to build community networks and find out more about youth-relevant issues.

Online interactive exercises are designed to encourage relevance to the 'real world', so that young people receive maximum benefit as they implement the central tenets of positive psychology in their daily lives, learning how to adapt and flourish within a range of everyday, potentially stressful, situations. Users are given the tools to monitor their progress and to derive support and encouragement from other users. Through regular engagement, BITE BACK intends to improve the well-being of young users on a range of indices correlated with optimal mental health, including:

- building social connectedness;
- learning to think more optimistically;
- understanding the benefits of a healthy lifestyle;
- becoming more appreciative of what is around them; and
- recognising their character strengths.

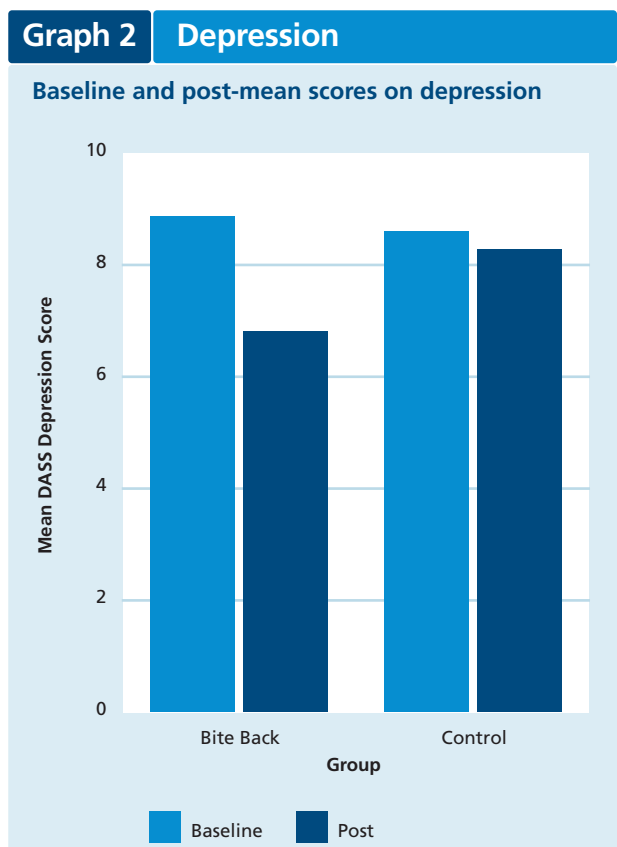
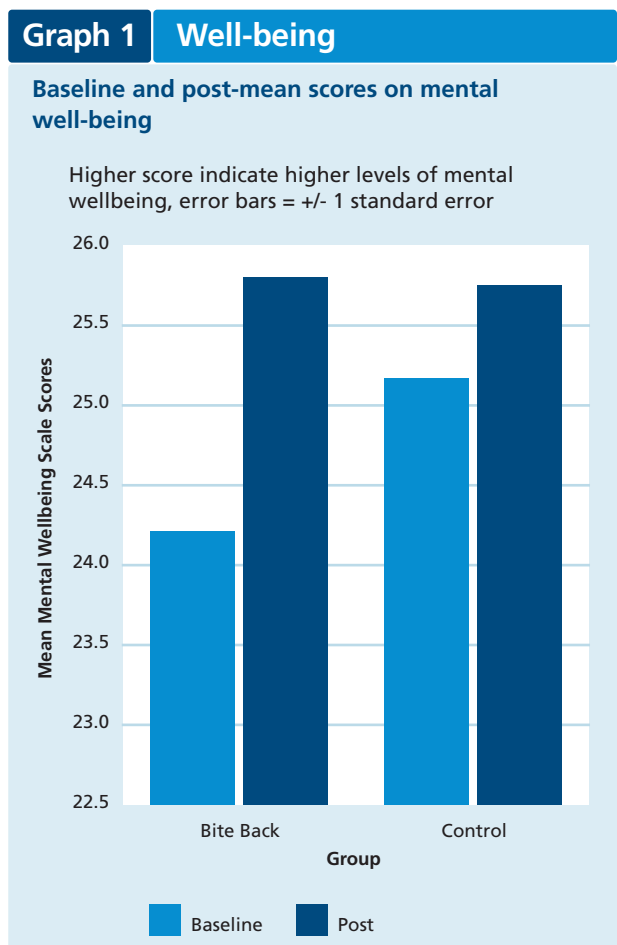
A collaborative team of psychologists, young people and digital media specialists created the online content. Young people were consulted throughout all phases of the project, from conceptualisation through to design and distribution. As this is the first program of its kind, youth ownership and feedback has been integral to the success of BITE BACK.²¹

The development of the pilot program was funded by the Australian Government Department of Health and Ageing in Australia (DoHA). In light of the outcomes presented below, the creators (Black Dog Institute and collaborators) are hoping to source further funding to enable completion of the program.

Evaluation

Following an initial development phase, during which the appeal, usability and desirability of BITE BACK to young people was measured,²² the effectiveness of the site for improving subjective mental well-being was assessed across a range of mental health, well-being and resilience domains. As BITE BACK allows young people to engage with positive psychology domains and share their experiences with others at their own pace in an anonymous and safe online environment, a study was conducted to assess the impact of BITE BACK on young people when used in an open access format.

A randomised controlled trial (RCT) was conducted with participants aged 12–18 who were recruited through selected schools and youth organisations across Australia. Young people who fulfilled the inclusion criteria were randomly assigned to either the BITE BACK or a control condition, which involved use of a website containing no positive psychology or well-being



information. Participants in both conditions were directed to use their assigned websites for at least one hour per week for six consecutive weeks. All participants completed a battery of online questionnaires assessing psychopathology and well-being measures before (baseline) and after the six-week intervention period. Seventy-one percent of participants (n=167) completed both pre- and post-measures at six weeks.

On completion of the trial period, participants in the BITE BACK condition demonstrated a significant improvement in mental well-being, as well as a significant reduction in depression symptoms. While changes in mental well-being and depression were indicated in young people using the control sites, the improvements for this group were not statistically significant (see Graphs 1 and 2). These findings strongly suggest that BITE BACK can specifically improve well-being and reduce depression symptoms in young people.

Furthermore, young people who were identified as having 'high' levels of depression at baseline demonstrated greater improvements in mental well-being following six weeks' use of BITE BACK, compared to those identified as having 'low' levels of depression. This group also demonstrated a significant drop in negative emotions, an increase in positive emotions, and improvements in social relationships, satisfaction with life, self-esteem and general self-efficacy.

Participant feedback

A range of comments from participants who were assigned to the BITE BACK condition indicated that the website has high acceptability among young people:

The site gave me an alternate vision of the world since it is NOTHING like any other site on the internet.

(Male, 17 years old)

I love being myself in a safe environment where people don't know who I am and don't judge me.

(Anonymous, via BITE BACK website)

It let me know that this easily accessible and anonymous support is there should I ever need it.

(Male, 17 years old)

Thank Tank made me realise that every day, there was a reason, if not many, to appreciate life, the present, friends, challenges, etc. 3 x 156 characters is nowhere near enough to vocalise my gratitude for this lucky life I have.

(Female, 17 years old)

It was friendly and vibrant, and made use of a great variety of media for their content.

(Male, 17 years old)

This website is really friendly, the whole place has a really good atmosphere!

(Female, 14 years old)

Program success factors

Based on several evaluation phases and youth consultations, the BITE BACK project team has determined the following items as key success factors in the development of youth positive psychology programs.

- **Community connections.** Receiving and reading feedback from other supportive people on the site is a core strength. This feedback provides a strategy to encourage young people to use the site, but also builds a sense of connection and awareness as to how positive psychology is used in the real world.
- **Enabling anonymity.** Young people frequently comment on the importance of anonymity for this site, allowing them to express themselves openly without fear of other people's reactions.
- **Recognising time constraints and distractions.** Young people have many activities demanding their attention and time – schoolwork, homework, extracurricular activities and facebook. The program design considered this by ensuring that each interaction is short and enjoyable, providing encouragement for repeat visits.
- **Reducing barriers to entries.** Parental or guardian consent can be a significant barrier to entry for many young people. BITE BACK allows young people to self-register, with the safeguard of pre-moderation, anonymity and links to emergency support.
- **Rich media alternatives.** Although there is a strong preference for graphical and video functionality by young people, BITE BACK provides low-bandwidth alternatives as not all young people have access to broadband and some are on restricted internet plans.
- **Targeting the right maturity level.** BITE BACK was initially designed for 14–16-year-olds. The study was extended to 12–18-year-olds to determine its suitability for a broader audience; however, it is likely that 17–18-year-olds expect a more adult-oriented approach.
- **Providing frequent updates.** Young people have expressed the need to provide dynamic content and functionality to encourage repeat visits.
- **Integrating social media.** BITE BACK is not limited to the website itself. Extending the program into social media increases effectiveness and visibility. Providing simple activities within social media to spread awareness and interest in positive psychology has proven to be a simple yet effective strategy.

BITE BACK is now in its third year. Integrating positive psychology into an online format has proven to be engaging, accessible and easily disseminated to young people through the use of social media. Recent evaluation outcomes clearly demonstrate its efficacy in increasing levels of well-being and reducing depressive symptoms in young people, in particular some of the more distressed youth in our society. With further funding, the team is hoping to commence the next phase; extending the project and establishing a sustainable model for this effective program.

Policy recommendations

The success of the BITE BACK pilot program has highlighted a number of insights for health policies in the Commonwealth.

- Positive psychology is an accessible and holistic approach that engages the youth market, aged 14–16 years, in improving their mental health.

- Online positive psychology programs may be effective in reducing the burden of disease in young people caused by mental health disorders. They are effective in increasing well-being and reducing depressive symptoms in young people, in particular those with high levels of depression.
- Greater awareness of positive psychology by community groups and individuals is needed, with supporting frameworks to determine how it can best be applied. This will enable greater impact and effectiveness of positive psychology programs such as BITE BACK.
- The school environment is an effective channel to disseminate evidence-based positive psychology programs and to target young people who may not be help-seeking, but would benefit from assistance.

Endnotes

- 1 World Health Organization (2003). *Investing in Mental Health* (Report WM 30). Retrieved from http://www.who.int/mental_health/media/investing_mnh.pdf
- 2 Australian Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Health Disorders* (4th ed., text revision). Washington, DC: American Psychiatric Association.
- 3 Begg, S., Vos, T., Barker, B., Stevenson, C., Stanley, L. and Lopez, A. D. (2007). *The Burden of Disease and Injury in Australia 2003*. PHE 82. Canberra: Australian Institute of Health and Welfare.
- 4 Australian Bureau of Statistics (2007). *National Survey of Mental Health and Wellbeing: Summary of results* (Report 4326.0). Canberra: Australian Bureau of Statistics.
- 5 Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R. and Walters, E. E. (2007). 'Lifetime Prevalence and Age-of-Onset Distributions of DSM-IV Disorders in the National Comorbidity Survey Replication'. *Archives of General Psychiatry* 62(6):593-602. PMID:15939837
- 6 Access Economics (2009). *The Economic Impact of Youth Mental Illness and the Cost Effectiveness of Early Intervention 2009*.
- 7 Messer, S. C. and Beidel, D. C. (1994). 'Psychosocial Correlates of Childhood Anxiety Disorders. *Journal of the American Academy of Child and Adolescent Psychiatry* 33, 975-983. Lewinsohn, P. M., Rhode, P. and Seley, J. R. (1995). 'The Clinical Consequences of Comorbidity'. *Journal of the American Academy of Child and Adolescent Psychiatry* 34, 510-520.
- 8 Australian Bureau of Statistics (2007). *National Survey of Mental Health and Wellbeing: Summary of results* (Report 4326.0). Canberra: Australian Bureau of Statistics.
- 9 Benson, P. L. and Scales, P. C. (2009). 'The Definition and Preliminary Measurement of Thriving in Adolescence.' *Journal of Positive Psychology*, 4, 85–104.
- 10 Keyes, C. L. M. (2005). 'Mental Illness and/or Mental Health? Investigating the axioms of the complete state model of mental health'. *Journal of Consulting and Clinical Psychology* 73 (3): 539-48.
- 11 Tucci, J., Mitchell, J. and Goddard, C. (2007). *Children's Fears, Hopes and Heroes: Modern childhood in Australia*. Melbourne: Australian Childhood Foundation & National Research Centre for the Prevention of Child Abuse.
- 12 Ewing, S., Thomas, J. and Schiessl, J. (2008). CCI Digital Futures Report: The Internet in Australia. ARC Centre of Excellence for Creative Industries and Innovation Institute for Social Research, Swinburne University of Technology: Melbourne: Australia.
- 13 Burns, J., Davenport, T, Durkin, L., Luscombe, G. and Hickie, I. (2010). 'The Internet as a Setting for Mental Health Service Utilization by Young People'. *Medical Journal of Australia* 192 (11 Suppl.): p S22-6.
- 14 Lenhart, A., Rainie, L. and Lewis, O. (2001). *Teenage Life Online: The rise of the instant-message generation and the internet's impact on friendships and family relationships*. Washington, DC: Pew Internet & American Life Project, 2001. Retrieved from <http://www.immagic.com/eLibrary/ARCHIVES/GENERAL/PEW/PO10620L.pdf>
- 15 Crone, P., Knapp, M., Proudfoot, J., Ryden, C., Cavanagh, K., Shapiro and Tylee, A. (2004). 'Cost-effectiveness of Computerized Cognitive Behavioural Therapy for Anxiety and Depression in Primary Care: Randomised controlled trial'. *The British Journal of Psychiatry* 185, 55-62.
- 16 Tait, R. J. and Christensen, H. (2010). 'Internet-based Interventions for Young People with Problematic Substance Use: A systematic review'. *Medical Journal of Australia* 192, S15-S21.
- 17 Gable, S. L. and Haidt, J. (2005). 'What (and Why) is Positive Psychology?' *Review of General Psychology* 9, 103-110.
- 18 Seligman, M. E. P. and Csikszentmihalyi, M. (2000). 'Positive Psychology: An introduction'. *American Psychologist* 55, 5-14.
- 19 Norrish, J. M. and Vella-Brodrick, D. A. (2009). 'Positive Psychology and Adolescents: Where are we now? Where to from here?' *Australian Psychologist* 44, 270-278.
- 20 www.thetuesdayprogram.com
- 21 For further information regarding this process, please contact the authors for the full report.
- 22 For further information regarding this process, please contact the authors for the full report.

Romi Kaufman is a founding member of the Black Dog Institute (School of Psychiatry, University of New South Wales) and a consultant psychologist specialising in adolescent/youth mental health, development and engagement. She has worked with youth-focused organisations for over 12 years, most notably as Senior Psychologist and Head of Youth Support at the Reach Foundation (email: kaufman.romi@gmail.com).

Vijaya Manicavasagar is a Senior Clinical Psychologist and Associate Professor at the Black Dog Institute. As Director of Psychological Services she is responsible for overseeing professional education programmes and clinical and research initiatives, as well as leading the development of online programmes. She is currently involved in a number of research projects on psychological techniques for mood disorders and resilience building (email: v.manicavasagar@unsw.edu.au).