

Act-Belong-Commit: Lifestyle Medicine for Keeping Mentally Healthy

Abstract: *Lifestyle medicine has generally focused on behaviors related to improving physical health and preventing physical illnesses, with little attention to behaviors related to mental health. This reflects the far greater concern in health systems around the globe for physical health over mental health. The Act-Belong-Commit campaign is the first major attempt to provide a lifestyle framework for promoting mental health that can be applied at a population level, within specific settings, and in the clinic. This article describes the campaign and offers clinicians a guide to implementing the campaign in their practice.*



Keywords: mental health promotion; lifestyle medicine; clinical settings; Act-Belong-Commit

Introduction

Mental health has been defined by the World Health Organization (WHO) as “a state of wellbeing in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her

community.”^{1(p2)} Interestingly, lay people have similar views. mentally healthy individuals are described as being content with who they are and what they have; in control of their lives; socially and mentally competent; emotionally stable; generally happy, enthusiastic, and energetic most of the time; able to cope with problems and crises in life; and alert, interested, and involved in things in their lives.² A key point in

aims to improve the well-being of all people regardless of whether or not they have a mental illness. Mental illness prevention refers to interventions that prevent the development of a disorder by targeting known risk factors, whereas early intervention involves actions that specifically target people displaying the early signs and symptoms of a mental disorder. As for health in general, such interventions need to occur at the policy

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Mental Health Promotion

Mental health promotion can be defined as interventions designed to maximize mental health and well-being by increasing the coping capacity of communities and individuals and by improving environments that affect mental health. Mental health promotion

and structural level (eg, housing, education, employment, physical environment, and discrimination).¹ In this article, we focus on interventions that can be applied at the community, group, and individual levels (see Barry and Jenkins⁴).

Although it is true that mental health promotion (usually followed by prevention and early intervention) was talked about more than a few decades ago, and there have been many commendable documents setting out

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frameworks for mental health promotion (eg, the WHO's "Promoting Mental Health: Concepts, Emerging Evidence, Practice," 2005, and England's "No health without mental health: implementation framework," 2012), the reality is that with the exception of the Act-Belong-Commit program described below, a recent review and a Google search revealed no comprehensive, population-wide mental health promotion programs in the English-speaking world.⁵ Although there are a number of school and worksite interventions aimed at building positive mental health, most community-wide campaigns have aimed at increasing awareness of specific mental illnesses; education about stress reduction and coping strategies; encouraging help-seeking, early detection, and treatment of mental problems; and the destigmatization of mental illness.⁵⁻⁷

One reason why mental health promotion has not been implemented is because health professionals have not had an easily understood and practical framework to facilitate implementation as exists for physical health. Mentally Healthy WA's Act-Belong-Commit campaign was designed to fill this vacuum by providing health professionals and clinicians with a practical framework for actually doing mental health promotion.

Lifestyle Medicine and Mental Health Promotion

Lifestyle medicine, with some exceptions, is dominated by a focus on physical illnesses and chronic disease, with *lifestyle* primarily defined in terms of factors such as physical activity, smoking, alcohol consumption, diet, and obesity, with the occasional inclusion of stress (eg, Rohrer et al⁸ and Duaso and Cheung⁹). For example, a 2009 review of lifestyle medicine by the American Prevention Council focuses overwhelmingly on physical illness with only a few references to depression and anxiety.¹⁰

In practice, interventions targeting people with a mental illness have

generally been limited to looking at the impact of physical activity on illnesses such as depression or anxiety^{11,12} or have focused on improving those individuals' physical health—not their mental health.¹³ Promoting positive mental health through lifestyle changes (such as physical activity and diet) have been proven effective in the treatment of mental health problems and are sometimes preferred for their lack of associated stigma and fewer side effects and complications when compared with psychotherapy and pharmacotherapy.^{14,15} Psychological cognitive decision making and stage-of-change models provide conceptual frameworks within which to begin a counseling intervention,^{16,17} including identifying patients' readiness to change their behavior and how confident they feel about it (eg, Lenz¹⁸). These have generally been applied to specific behaviors such as smoking cessation or adoption of physical activity. However, these models complement, but do not provide, an overall framework for a mental health promotion lifestyle intervention.

This is not to say that lifestyle medicine practitioners are unaware of the need to include mental health issues in clinical practice. For example, 4 of the 26 chapters on lifestyle medicine by Egger et al¹⁹ relate directly to mental health issues. One of these 4 chapters includes an earlier attempt to show how the Act-Belong-Commit framework could be included in the clinical setting but largely in an informal manner.²⁰ The campaign has evolved considerably since that early chapter, and a more structured approach to clinical settings is now available. Although originating as a community-wide program designed to enhance and maintain mental health at a population level, it is now being applied in school and worksite settings to specific at-risk subpopulations and in clinical settings such as pain management and mental illness recovery. This article describes a framework that physicians may find useful for introducing mental health promotion into their clinical practice.

The Act-Belong-Commit Campaign

Act-Belong-Commit was conceived as a comprehensive, community-based health promotion campaign. The campaign messages and strategy were derived from primary research with members of the general population and then confirmed by reviewing the scientific literature. The origins of and rationale for the campaign are described in Donovan et al.^{2,21}

In the tradition of Aristotle's "virtue is cultivated by practice," Act-Belong-Commit is focused on getting people to engage in behaviors known to improve and maintain good mental health. Aristotle claimed that "we become just by doing just acts, temperate by doing temperate acts, brave by doing brave acts" (cited in Sandel²²). The Act-Belong-Commit philosophy similarly states that "we become mentally healthy by engaging in mentally healthy activities."

Act-Belong-Commit is a simple message to act on. The 3 verbs *act*, *belong*, and *commit* were chosen because they not only provide an "ABC" but also represent 3 major domains of activities that according to both the literature and people in general contribute to good mental health.^{2,23}

Act: Keep alert and engaged by keeping mentally, socially, spiritually, and physically active.

Belong: Develop a strong sense of belonging by keeping up friendships, joining groups, and participating in community activities.

Commit: Do things that provide meaning and purpose in life like taking up challenges, supporting causes, and helping others.

There is substantial scientific evidence that these 3 behavioral domains contribute to increasing levels of positive mental health (and, in fact, to physical health). Furthermore, although different groups may articulate the domains differently and place different emphases on each, these 3 domains appear to be universal across different cultures. A

summary of actions and the evidence for each domain is given in what follows.

Act

There is evidence from a variety of sources indicating that individuals with higher levels of physical, mental, spiritual, and social activity have higher levels of well-being and mental health.²⁴⁻²⁸ The mental health benefits of physical activity are well known for improving quality of life and mood²⁹ while reducing depression and anxiety.³⁰⁻³³ Specifically, exercise can reduce chronic pain and neurodegenerative disorders, such as age-related cognitive decline; assist in recovery from stroke; reduce caregiver distress; and reduce the severity and some symptoms of Alzheimer's disease and schizophrenia.³⁴⁻⁴⁰

Staying mentally active in both work and leisure reduces dementia risk^{41,42} and more generally protects against cognitive and functional decline later in life.^{43,44} For many people, religion and spiritual activity is vital to their lifestyle, health, relationships, and deep existential issues.^{45,46} Controlling for baseline health and health behaviors, people who attend religious services at least once a week live 7 years longer than those who do not (Koenig et al cited in Walsh⁴⁷). Other mental health benefits of religious or spiritual involvement include enhanced psychological, relational, and marital well-being; a reduction in rates of disorders such as anxiety, depression, substance abuse, and suicide; improved depressive symptoms; enhanced coping with serious illness; improved addiction-related behaviors; and comfort during end-of-life care.^{47,48} However, the relationship between religion and mental health is complex and of greatest benefit when the religious focus is themed on love and forgiveness, rather than punishment and guilt.⁴⁷ Social activity predicts cognitive performance^{24,49,50} and is associated with higher self-esteem.⁵¹ Finally, engaging in all these activities in natural settings enhances cognitive, attentional, emotional, spiritual, and subjective well-being^{52,53} as the natural environment is a source of healing, calm, and wisdom.⁴⁷

Belong

Belong refers to being a member of a group or organization (whether face-to-face, formal, informal, etc) that strengthens an individual's connectedness with the community and sense of identity. A sense of belonging is fundamental to good mental health.⁵⁴⁻⁵⁷ Regular involvement in social activities results in strong personal support,⁵⁸ and the more social interactions individuals have, the greater the contribution to their mental health and the greater their ability to cope with trauma and the stressors of life that affect our mental health.^{49,59,60} People appear to be hardwired for empathy and relationships⁶¹ and have an innate need to belong. Relationships are not only central to mental well-being, reducing health risks from the common cold to stroke, mortality, and multiple psychopathologies,⁴⁷ but loneliness can increase anxiety, increase depressive symptoms, and reduce optimism and self-esteem.^{62,63} Involvement in local community activities and organizations builds social cohesion.⁶⁴⁻⁶⁸ Furthermore, a sense of belonging or identification with a group helps buffer the negative well-being consequences of change.⁶⁰ Previous campaigns, such as California's Friends are Good Medicine^{69,70} and VicHealth's Together We Do Better⁷¹ have focused on the belong domain.

Commit

Commit refers to the extent to which an individual becomes involved with (or commits to) some activity, cause, or organization. Commitment provides a sense of purpose and meaning in one's life, which some researchers claim is the single most important factor contributing to life satisfaction and well-being.⁷² Taking on and meeting challenges, even small ones, provides feelings of efficacy and a stronger sense of self.^{73,74} Religious belief can provide increased meaning in life.⁴⁸ Volunteering and activities undertaken to benefit the community at large have special returns for feeling good about oneself and others and provide meaning and purpose.⁷⁵⁻⁷⁷ Consistency and diversity of volunteer activity is linked to well-being and

self-reported health,⁷⁸ with volunteers having higher levels of life satisfaction, being psychologically happier and healthier, and living longer when compared with nonvolunteers.^{15,75,79} As well as commitment to a cause or organization that benefits the group or wider community, commit can also refer to the achievement of some personal goal. Goal setting is an important component of taking on personal challenges providing motivation, a sense of accomplishment and growth, self-fulfillment, and happiness.⁸⁰⁻⁸³

While these 3 domains may be viewed as a hierarchy of increasing contribution to an individual's well-being and sense of self, the domains are clearly interrelated. Hence, whereas reading a book (a solo activity) can contribute to positive mental health, joining a book club adds a sense of belonging and mentally stimulating discussion. Reading challenging or "educational" books, such as the Greek philosophers rather than pulp fiction, adds a challenge, greater knowledge acquisition, and greater feelings of achievement. Similarly, being the organizer of the club or creating new clubs and including visually impaired or isolated individuals adds further meaning and purpose.

The Act-Belong-Commit framework also has implications for suicide prevention, in that according to Joiner,⁸⁴ the desire or motivation to suicide is driven by 2 factors: low or "thwarted" belongingness and perceived burdensomeness. Given that Belong is about building and maintaining connections with others, including community and civic organizations and institutions, and that Commit involves doing things that provide meaning and purpose in life, including taking up causes and volunteering that helps society and other individuals, both of these are clearly protective factors against suicide.

Overall, the Act-Belong-Commit program encourages people to be physically, spiritually, socially, and mentally *active*, in ways that increase their sense of *belonging* to the communities in which they live and that

involve *commitments* to causes or challenges that provide meaning and purpose in their lives. Act-Belong-Commit's overarching framework allows for implementation at the population level as well as in specific settings and for targeted groups. The campaign is diffusing throughout Australia and internationally. In Australia, the campaign has a mass and targeted media presence and is implemented through partnerships with local governments, schools, workplaces, health services, state government departments, community organizations, and local sporting and recreational clubs. The campaign has a number of resources, including a self-help guide ("A Great Way to Live Life: the Act-Belong-Commit Guide to Keeping Mentally Healthy"), which provides the basis for implementation in the clinical setting and is described in detail below.

Process and impact evaluations of the campaign are conducted annually among the general population (eg, Anwar McHenry et al⁸⁵) and organizations that partner with the campaign (eg, Jalleh et al⁸⁶). The campaign not only attracts mentally healthy individuals who wish to maintain their mental health but also attracts people experiencing mental health problems who want to improve their mental health. Furthermore, by presenting mental health in a positive rather than illness context, the campaign serves to destigmatize mental illness and encourage openness about mental health issues. These data suggest that patients would readily engage with the campaign in the clinical context.

Act-Belong-Commit in the Clinic

Overall, the physician's main aims should be to

- increase patients' understanding that maintaining good mental health is just as important as maintaining good physical health;
- increase patients' knowledge of activities that they can and should engage in to build and maintain good

mental health (summarized under the Act-Belong-Commit framework); and

- encourage patients to take up mentally healthy activities where they appear to lack sufficient participation.

Because many people associate the term *mental health* with *mental illness*,² we recommend that in dealing with patients, mental health issues be discussed in terms of "keeping mentally healthy." As the self-help guide provides the basis for implementation in the clinical setting, we provide an overview of the guide's contents here. The guide can be downloaded from the Web site for paper-and-pencil completion (actbelongcommit.org.au) or can be completed interactively online (actbelongcommit.org.au). Readers are encouraged to visit the Web site and complete the guide online.

The Self-help Guide: "A Great Way to Live Life! The Act-Belong-Commit Guide to Keeping Mentally Healthy"

The guide's introductory sections define what it means to be mentally healthy; describes what is meant by each of *Act*, *Belong*, and *Commit*; refers to the evidence for these behaviors in building resilience, good mental health, and well-being; and outlines how to use the guide. Users then complete an overall well-being questionnaire (The Warwick-Edinburgh Mental Wellbeing Scale⁸⁷) and are able to compare their score with population scores.

Each of the Act, Belong, and Commit domains are then dealt with in turn in the following format: what the domain means is elaborated, followed by a brief self-assessment questionnaire to measure how much the individual is active in that domain. For Act, separate questions assess levels of physical, social, spiritual, and mental activity; for Belong, the questions assess interactions with friends and family, the local community, specific interest groups, and attendance at large public events; the Commit items measure involvement in activities for personal

challenges and goals, formal roles in organizations and groups, involvement in causes, volunteering, and helping activities. The person's score in each domain is used to provide 3 overall recommendations: "definitely" need to increase participation level, "could do more," or maintain current level.

Where increased activity is recommended in a domain, users are asked to look through the individual questionnaire items to identify where they could increase their activity levels. Each section then contains tips and activities for increasing activity levels in each of the separate areas covered in each questionnaire. Users are finally asked to set goals in each of the Act, Belong, and Commit domains in terms of what they intend to keep on doing and what they intend to try to do and to repeat the self-assessment questionnaires in the future to check their progress.

The guide also contains links to additional information and resources in the 3 domains as well as links to nutrition, sleep, alcohol, illicit drugs, coping strategies, positive psychology, and support services for those with mental health problems or a mental illness. All these links can be readily adapted to local, state, or national areas.

Implementing the Act-Belong-Commit Campaign in the Clinic

At a baseline level, a clinic can simply promote the campaign messages by having posters and pamphlets in the waiting room. The clinic could also provide self-assessment questionnaires, along with an invitation to complete them, and promoting a link to a Web site where patients can download or interact online with the guide. This would necessarily require staff to have a general understanding of the campaign messages and materials, with one or more individuals being able to answer patient queries. It is desirable that all staff become familiar with the guide by working through it themselves.

At a more intensive level, the clinic can adopt a more proactive approach by

actively seeking their patients' involvement. This would involve the clinic deciding whether to target all patients or selected groups—that is, targeting all patients, regardless of their mental health status; only targeting patients identified as at risk for mental illness or experiencing difficulties; and/or only targeting patients with a known diagnosis of mental illness.

All Patients (Primary Prevention)

The clinic may choose to actively target all patients by encouraging them to read an introductory pamphlet (or watch an introductory video) in the waiting room, complete the self-assessment questionnaire (either via paper and pencil or via touch screen kiosk), and visit a Web site and work through the guide. In this mass approach, waiting room posters could also encourage patients to “ask their doctor” (or a designated staff member in the clinic) about “keeping mentally healthy” via the Act-Belong-Commit message.

Selective Targeting (Secondary Prevention)

This approach focuses on identifying patients showing early signs of depression or anxiety disorder, or simply languishing, and where adoption of the Act-Belong-Commit behaviors could improve their quality of life, alleviate current symptoms, or prevent further decline. This would include patients identified as at risk because of recently experienced or ongoing trauma or stress, such as recent job loss, divorce or separation, bereavement, or dealing with a chronic illness or pain. Other indications would be provided by a patient's symptoms—for example, those expressing feelings of excess stress or an inability to relax, those feeling bored or expressing a lack of energy or enthusiasm for general activities, and those lacking social support.

In these cases, the clinician actively encourages (or requests) that the patient do the self-assessment questionnaires, discusses the results with the patient,

and encourages the patient to work through the guide and return for a session to discuss the patient's goals. It would be helpful if, at this level, the clinician was able to provide a directory of organizations and activities in the local area and, where necessary, details of contact persons who could introduce the patient to an organization they would like to join.

Diagnosed Patients (Tertiary Prevention)

In this approach, the clinic includes Act-Belong-Commit as a low-intensity mental illness management treatment/intervention and promotes self-management of mental health and well-being for patients currently being treated for illnesses such as anxiety and depression and for those with a known diagnosis (such as bipolar disorder). In this case, the Act-Belong-Commit intervention becomes a formal lifestyle add-on to any medication or psychotherapy that these patients are receiving. As mentioned above, the clinician discusses the results of the patient's self-assessment questionnaires with the patient and encourages the patient to work through the guide and to return for a session to discuss the patient's goals. However, these cases might require the clinician to work through parts of the guide with the patient. Furthermore, the patient's self-assessment results would be monitored on an ongoing basis as part of their treatment.

Conclusion

The Act-Belong-Commit campaign is based on extensive evidence that engaging in activities within each of these behavioral domains provides positive mental health benefits, builds resilience, and enhances well-being. The Act-Belong-Commit messages are also readily accepted by laypeople. Furthermore, the framework is flexible in its application, from a community-wide population approach to implementation in a clinical setting as described here.

Authors' Note

For information on how a clinic can become involved with the Act-Belong-Commit campaign, contact the first author at r.donovan@curtin.edu.au. AJLM

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References

- Herrman H, Saxena S, Moodie R, eds. *Promoting Mental Health: Concepts, Emerging Evidence, Practice*. Geneva, Switzerland: World Health Organization; 2005.
- Donovan RJ, Watson N, Henley N, et al. *Mental Health Promotion Scoping Project. Perth: Report to Healthway*. Perth, Australia: Centre for Behavioural Research in Cancer Control, Curtin University; 2003.
- Friedli L. *Mental Health, Resilience and Inequalities*. Copenhagen, Denmark: World Health Organisation; 2009.
- Barry MM, Jenkins R, eds. *Implementing Mental Health Promotion*. Philadelphia, PA: Elsevier Health Sciences; 2007.
- Patterson A. *Building the Foundations for Mental Health and Wellbeing: Review of Australian and International Mental Health Promotion, Prevention and Early Intervention Policy*. Hobart, Australia: Department of Health and Human Services; 2009.
- Barry MM, Domitrovich C, Lara MA. The implementation of mental health promotion programmes. *Promot Educ*. 2005;(suppl 2):30-35.
- Saxena S, Garrison PJ. *Mental Health Promotion: Case Studies From Countries*. Geneva, Switzerland: World Health Organisation and World Federation for Mental Health; 2004.
- Rohrer JE, Pierce JR, Blackburn C. Lifestyle and mental health. *Prev Med*. 2005;40:438-443.
- Duaso MJ, Cheung P. Health promotion and lifestyle advice in a general practice: what do patients think? *J Adv Nurs*. 2002;39:472-479.
- American College of Preventive Medicine. Lifestyle medicine: evidence review. <http://www.acpm.org/resource/resmgr/lmi-files/lifestylemedicine-literature.pdf>. Accessed November 12, 2013.

11. O'Connor PJ, Herring MP, Carvalho A. Mental health benefits of strength training in adults. *Am J Lifestyle Med.* 2010;4:377-396.
12. Herring MP, Lindheimer JB, O'Connor PJ. The effects of exercise training on anxiety [published online November 6, 2013]. *Am J Lifestyle Med.* doi:10.1177/1559827613508542.
13. Brown S, Chan K. A randomised controlled trial of a brief health promotion intervention in a population with serious mental illness. *J Ment Health.* 2006;15:543-549.
14. Amminger GP, Schafer MR, Papageorgiou M, et al. Long-chain omega-3 fatty acids for indicated prevention of psychotic disorders: a randomised, placebo-controlled trial. *Arch Gen Psychiatry.* 2010;67:146-154.
15. Borgonovi F. Doing well by doing good: the relationship between formal volunteering and self-reported health and happiness. *Soc Sci Med.* 2008;66:2321-2334.
16. Donovan RJ, Henley N. *Principles and Practice of Social Marketing: An International Perspective.* Cambridge, UK: Cambridge University Press; 2010.
17. Linke SE, Robinson CJ, Pekmezci D. Applying psychological theories to promote healthy lifestyles [published online May 2, 2013]. *Am J Lifestyle Med.* doi:10.1177/1559827613487496.
18. Lenz TL. Developing lifestyle medicine tools from psychological theories [published online October 16, 2013]. *Am J Lifestyle Med.* doi:10.1177/1559827613507038.
19. Egger G, Binns A, Rossner S. *Lifestyle Medicine: Managing Diseases of Lifestyle in the 21st Century.* 2nd ed. Sydney, Australia: McGraw-Hill; 2011.
20. Donovan RJ, Egger G. Happiness and mental health: the flip side of S-AD. In: Egger G, Binns A, Rossner S, eds. *Lifestyle Medicine.* 1st ed. Sydney, Australia: McGraw-Hill; 2008:178-191.
21. Donovan RJ, James R, Jalleh G, Sidebottom C. Implementing mental health promotion: the Act-Belong-Commit Mentally Healthy WA campaign in Western Australia. *Int J Ment Health Promot.* 2006;8:33-42.
22. Sandel MJ. *What Money Can't Buy: The Moral Limits of Markets.* New York, NY: Farrar, Straus, and Giroux; 2012.
23. Donovan RJ, Henley N, Jalleh G, et al. People's beliefs about factors contributing to mental health: implications for mental health promotion. *Health Promot J Austr.* 2007;18:50-56.
24. Buchman AS, Boyle PA, Wilson RS, et al. Association between late-life social activity and motor decline in older adults. *Arch Intern Med.* 2009;169:1139-1146.
25. Dingwall KM, Cairney S. Psychological and cognitive assessment of Indigenous Australians. *Aust N Z J Psychiatry.* 2010;44:20-30.
26. Hamer M, Stamatakis E, Steptoe A. Dose-response relationship between physical activity and mental health: the Scottish Health Survey. *Br J Sports Med.* 2009;43:1111-1114.
27. Kowal E, Gunthorpe W, Bailie RS. Measuring emotional and social wellbeing in Aboriginal and Torres Strait Islander populations: an analysis of a Negative Life Events Scale. *Int J Equity Health.* 2007;6:18.
28. Kwag KH, Martin P, Russell D, Franke W, Kohut M. The impact of perceived stress, social support, and home-based physical activity on mental health among older adults. *Int J Aging Hum Dev.* 2011;72:137-154.
29. Penedo FJ, Dahn JR. Exercise and well-being: a review of mental and physical health benefits associated with physical activity. *Curr Opin Psychiatry.* 2005;18:189-193.
30. Conn VS. Depressive symptom outcomes of physical activity interventions: meta-analysis findings. *Ann Behav Med.* 2010;39:128-138.
31. Graham A. *Strengthening Young People's Social and Emotional Wellbeing.* Lismore, Australia: Centre for Children and Young People, Southern Cross University; 2011. Background Briefing Series, No. 7.
32. Jonsdottir IH, Rödger L, Hadzibajramovic E, Börjesson M, Ahlborg G Jr. A prospective study of leisure-time physical activity and mental health in Swedish health care workers and social insurance officers. *Prev Med.* 2010;51:373-377.
33. Saxena S, Ommeren MV, Tang KC, Armstrong TP. Mental health benefits of physical activity. *J Ment Health.* 2005;14:445-451.
34. Hamer M, Chida Y. Physical activity and risk of neurodegenerative disease: a systematic review of prospective evidence. *Psychol Med.* 2009;39:3-11.
35. Christoforetti G, Oliani MM, Gobbi S, Stella F. Effects of motor intervention in elderly patients with dementia: an analysis of randomized controlled trials. *Top Geriatr Rehabil.* 2007;23:149-154.
36. Colcombe S, Kramer AR. Fitness effects on the cognitive function of older adults: a meta-analytic study. *Psychol Sci.* 2003;14:125-130.
37. Daley AJ. Exercise therapy and mental health in clinical populations: is exercise therapy a worthwhile intervention? *Adv Psychiatr Treat.* 2002;8:262-270.
38. Deslandes A, Moraes H, Ferreira C, et al. Exercise and mental health: many reasons to move. *Neuropsychobiology.* 2009;59:191-198.
39. Quaney BM, Boyd LA, McDowd JM, et al. Aerobic exercise improves cognition and motor function poststroke. *Neurorehabil Neural Repair.* 2009;23:879-885.
40. Stathopoulou G, Powers MB, Berry AC, Smith JAJ, Otto MW. Exercise interventions for mental health: a quantitative and qualitative review. *Clin Psychol Sci Pract.* 2006;13:179-193.
41. Langa KM, Larson EB, Karlawish JH, et al. Trends in the prevalence and mortality of cognitive impairment in the United States: is there evidence of a compression of cognitive morbidity? *Alzheimers Dement.* 2008;4:134-144.
42. Verghese J, Lipton RB, Katz M, et al. Leisure activities and the risk of dementia in the elderly. *N Engl J Med.* 2003;348:2508-2516.
43. Drag LL, Bieliauskas LA. Contemporary review 2009: cognitive aging. *J Geriatr Psychiatry Neurol.* 2010;23:75-93.
44. Valenzuela MJ. Brain reserve and the prevention of dementia. *Curr Opin Psychiatry.* 2008;21:296-302.
45. Koenig HG. Research on religion, spirituality, and mental health: a review. *Can J Psychiatry.* 2009;54:283-291.
46. Fowler JW. *Stages of Faith: The Psychology of Human Development and the Quest for Meaning.* San Francisco, CA: Harper & Row; 1981.
47. Walsh R. Lifestyle and mental health. *Am Psychol.* 2011;66:579-592.
48. Garfield CF, Isacco A, Sahker E. Religion and spirituality as important components of men's health and wellness: an analytic review. *Am J Lifestyle Med.* 2013;7:27-37.
49. Crooks VC, Lubben J, Petitti DB, Little D, Chiu V. Social network, cognitive function, and dementia incidence among elderly women. *Am J Public Health.* 2008;98:1221-1227.
50. Ybarra O, Burnstein E, Winkelman P, et al. Mental exercising through simple socializing: social interaction promotes general cognitive functioning. *Pers Soc Psychol Bull.* 2008;34:248-259.
51. Gailliot MT, Baumeister RF. Self-esteem, belongingness, and worldview validation: does belongingness exert a unique influence upon self-esteem? *J Res Pers.* 2007;41:327-345.

52. Ho C, Payne L, Orsega-Smith E, Godbey G. Parks, recreation, and public health. *Parks Recreation*. 2003;38:18-27.
53. Pryor A, Townsend M, Maller C, Field K. Health and well-being naturally: "contact with nature" in health promotion for targeted individuals, communities, and populations. *Health Promot J Austr*. 2006;17:114-123.
54. Esler DM, Johnston F, Thomas D. The acceptability of a depression screening tool in an urban, Aboriginal community-controlled health service. *Aust N Z J Public Health*. 2007;31:259-263.
55. Paradies YC, Cunningham J. The DRUID study: racism and self-assessed health status in an Indigenous population. *BMC Public Health*. 2012;12:131-142.
56. Tsey K, Whiteside M, Deemal A, Gibson T. Social determinants of health, the "control factor" and the Family Wellbeing Empowerment Program. *Australas Psychiatry*. 2003;11(suppl):S34-S39.
57. Baumeister RF, Leary MR. The need to belong: desire for interpersonal attachment as a fundamental human motivation. *Psychol Bull*. 1995;117:497-529.
58. Kawachi I, Berkman LF. Social ties and mental health. *J Urban Health*. 2001;78:458-467.
59. Cohen S, Janicki-Deverts D. Can we improve our physical health by altering our social networks? *Perspect Psychol Sci*. 2009;4:375-378.
60. Iyer A, Jetten J, Tsvirikos D, Postmes T, Haslam SA. The more (and the more compatible) the merrier: multiple group memberships and identity compatibility as predictors of adjustment after life transitions. *Br J Soc Psychol*. 2009;48:707-733.
61. Cattaneo L, Rizzolatti G. The mirror neuron system. *Arch Neurol*. 2009;66:557-560.
62. Greenberg J. Understanding the vital human quest for self-esteem. *Perspect Psychol Sci*. 2008;3:48-55.
63. Hawkey LC, Cacioppo JT. Loneliness matters: a theoretical and empirical review of consequences and mechanisms. *Ann Behav Med*. 2010;40:218-227.
64. Anae M, Moeqaka Barnes H, McCreanor T, Watson P. Towards promoting youth mental health in Aotearoa/New Zealand: holistic "houses" of health. *Int J Ment Health Promot*. 2002;4:5-14.
65. Berkman LF. Social networks and health: the bonds that heal. In: Tarlov AR, St Peter RF, eds. *The Society and Population Health Reader*. New York, NY: The New Press; 2000:137-173.
66. Wann DL, Waddill PJ, Polk J, Weaver S. The team identification social psychological health model: sport fans gaining connections to others via sport team identification. *Group Dynamics*. 2011;15:75-89.
67. Fullilove MT. Promoting social cohesion to improve health. *J Am Med Womens Assoc*. 1998;53:72-76.
68. Ziersch AM. Health implications of access to social capital: findings from an Australian study. *Soc Sci Med*. 2005;6:2119-2131.
69. Hunter L, Lloyd-Kolkin D. Friends can be good medicine: educating the community about social support and health. Paper presented at: American Educational Research Association Annual Conference; April 11-15, 1983; Montréal, Canada.
70. Taylor RL, Lam DJ, Roppel CE, Barter JT. Friends can be good medicine: an excursion into mental health promotion. *Community Ment Health J*. 1984;20:294-303.
71. Carstarphen MG. Australia's "Together We Do Better" campaign: diversifying mental health benefits for local communities. In: VanSlyke Turk J, Scanlan LH, eds. *The Evolution of Public Relations: Case Studies From Countries in Transition*. 3rd ed. Gainesville, FL: The Institute for Public Relations, University of Florida; 2008:79-92.
72. Heady B, Wearing A. *Understanding Happiness: A Theory of Subjective Well-being*. Melbourne, Australia: Longman Cheshire; 1992.
73. Csikszentmihalyi M. *Flow: The Psychology of Optimal Experience*. New York, NY: Harper Perennial; 1990.
74. Kirmayer LJ, Boothroyd LJ, Laliberté A, Simpson BL. *Suicide Prevention and Mental Health Promotion in First Nations and Inuit Communities*. Montréal, Canada: Culture and Mental Health Research Unit, Institute of Community and Family Psychiatry; 1999. Report No. 9.
75. Meier S, Stutzer A. Is volunteering rewarding in itself? *Economica*. 2008;75:39-59.
76. Waddell EL. Predicting positive well-being in older men and women. *Int J Aging Hum Dev*. 2010;70:181-197.
77. Vaananen A, Buunk BP, Kivimaki M, Pentti J, Vahtera J. When it is better to give than to receive: long-term health effects of perceived reciprocity in support exchange. *J Pers Soc Psychol*. 2005;89:176-193.
78. Piliavin J, Siegl E. Health benefits of volunteering in the Wisconsin longitudinal study. *J Health Soc Behav*. 2007;48:450-464.
79. Grimm R, Spring K, Dietz N. *The Health Benefits of Volunteering: A Review of Recent Research*. Washington, DC: Corporation for National and Community Service, Office of Research and Policy Development; 2007.
80. Locke EA. Setting goals for life and happiness. In: Snyder CR, Lopez SJ, eds. *Handbook of Positive Psychology*. Oxford, UK: Oxford University Press; 2002:299-312.
81. Lyubomirsky S, Sheldon KM, Schkade D. Pursuing happiness: the architecture of sustainable change. *Rev Gen Psychol*. 2005;9:111-131.
82. Noels KA, Pelletier LG, Clément R, Vallerand RJ. Why are you learning a second language? Motivational orientations and self-determination theory. *Language Learning*. 2000;50:57-85.
83. Taylor A. Older amateur keyboard players learning for self-fulfilment. *Psychol Music*. 2011;39:345-363.
84. Joiner TE. *Why People Die by Suicide*. Cambridge, MA: Harvard University Press; 2005.
85. Anwar McHenry J, Donovan RJ, Jalleh G, Laws A. Impact evaluation of the Act-Belong-Commit mental health promotion campaign. *J Public Ment Health*. 2012;11:186-195.
86. Jalleh G, Anwar McHenry J, Donovan R, Laws A. Impact on community organisations that partnered with the Act-Belong-Commit mental health promotion campaign. *Health Promot J Austr*. 2013;24:44-48.
87. NHS Scotland. *The Warwick-Edinburgh Mental Well-being Scale (WEMWBS)*. Edinburgh, UK: NHS Health Scotland, University of Warwick, University of Edinburgh; 2006.