# Chapter 11
# Mental Health as a Complete State: How the Salutogenic Perspective Completes the Picture

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**Abstract** There have been at least three conceptions of health throughout human history. The pathogenic approach views health as the absence of disability, disease, and premature death. The salutogenic approach views health as the presence of positive states of human capacities and functioning in cognition, affect, and behavior. The third approach is the complete state model, which derives from the ancient word for health as being hale, meaning whole. This approach is exemplified in the World Health Organization's definition of health as a complete state, consisting of the presence of positive states of human capacities and functioning as well as the absence disease or infirmity. This chapter reviews evidence supporting the complete state model when applied to mental health and illness. Studies are reviewed making the case for promoting and protecting positive mental health to prevent mental illness and to improve overall psychosocial functioning of individuals and population health.

**Keywords** Mental health • Mental illness • Flourishing • Subjective well-being • Happiness

## 11.1 Introduction

Mental illness is serious but was not serious enough to be considered a major public health issue until the last decade of the twentieth century, when the World Health Organization published the results of the first Global Burden of Disease study

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(Murray & Lopez, 1996). As is now well known, this study estimated the total contribution of 107 acute and chronic medical conditions and illnesses by including disability in the equation to calculate disability-adjusted life years (DALYs). The DALY reflects the total number of years in a population that were either lived with disability or abbreviated prematurely due to death that are attributable to specific physical or mental conditions. Depression was the fourth leading cause of disease burden, accounting for 3.7 % of DALYs in 1990, 4.4 % in 2000, and projected to be 15 % of DALYs by 2020 (Ustun, 1999; Ustun, Ayuso-Mateos, Chatterji, Mathers, & Murray, 2004).

The debate is no longer about whether mental illness is a public health issue as serious as cancer and heart disease – it is, according to the burden of disease research. Rather, the real debate is what workplaces and governments should do to reduce the number of cases of mental illness and those suffering from it. The de facto approach to mental illness and its burden has been treatment (Chisholm, Sanderson, Ayuso-Mateos, & Saxena, 2004) and risk-reduction prevention. But evidence shows that the de facto approach has not reduced the prevalence or burden of mental disorder over the past several decades (Insel & Scolnick, 2006), nor has it prevented early age-of-onsets for mood, anxiety, and substance abuse disorders (Kessler et al., 2005). As such, mental illness – in particular, unipolar depression – is projected to be the leading cause of burden to the world (i.e., in developing and developed nations) by the year 2030 (World Health Organization [WHO], 2008).

Mental health promotion seeks to elevate levels of positive mental health and protect against its loss (Davis, 2002; Keyes, 2007; Secker, 1998). Whereas treatment targets persons with mental illness, and risk reduction prevention targets those vulnerable to mental illness, mental health promotion targets those with good mental health and those with less than optimal mental health – i.e., all members of a population. Mental health promotion is therefore amenable to a public health approach and is a complement rather than an alternative to treatment (Keyes, 2007).

Although it has important consequences for individual functioning and for society, mental illness represents only half of the outcomes that should be of interest to business and governments. The other half that is equally important as mental illness is the measurement and study of positive mental health. Historically, good mental health has been viewed as the absence of mental disorder, despite conceptions that health in general is 'something positive' (Sigerist, 1941) or well-being (WHO, 1948), and not merely the absence of illness. Mental well-being – i.e., positive mental health – is now a focus of policy and science. The WHO (2004) recently highlighted the need to promote good mental health, defined as "… a state of well–being 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" (p. 12).

Mental health has been operationalized salutogenically under the rubric of subjective well-being, or individuals' evaluations of the quality of their lives. The nature of subjective well-being has been divided into two salutogenic streams of research – positive feelings (or emotions) and positive functioning. The first of these equates well-being with happiness or feeling good. The second approach to well-being focuses on human potential that, when cultivated, results in functioning well in life.

*Emotional Well–Being*

*Positive Affect* : Cheerful, interested in life, in good spirits, happy, calm and peaceful, full of life.
*Avowed (i.e., judgments of) Quality of Life:* How one feels about their life (overall or in domains)

*Psychological Well–Being*

*Self Acceptance:* Likes most parts of self, personality.
*Personal Growth:* Is challenged to be or become a better person.
*Purpose in Life:* Has a sense that one's life has direction and meaning.
*Environmental Mastery:* Feels capable of managing responsibilities of life.
*Autonomy:* Feels confident to think and express own ideas, opinions, and values.
*Positive Relations with Others:* Has, or can form, warm and trusting personal relationships.

*Social Well–Being*

*Social Acceptance:* Holds a positive attitudetowardother people.
*Social Growth:* Feels that "we" (groups, institutions, society) are challenged be a better kind of people.
*Social Contribution:* Sees own daily activities a useful to and valued by society and others.
*Social Coherence:* Can make sense of what is happening around or to them (in their community, workplace, society).
*Social Integration:* A sense of belonging to, and derivescomfort and support from, a community.

**Fig. 11.1** Tripartite structure and specific dimensions reflecting positive mental health

These two streams of subjective well-being research grew from two distinct philosophical viewpoints on happiness – one reflecting the hedonic tradition that championed positive emotions, whereas the eudaimonic tradition championed striving toward excellence in functioning as an individual and a citizen. As such, mental health can be operationalized and measured in terms of the presence and absence of positive feelings toward one's life and the presence and absence of positive functioning in various facets of functioning in life.

As Fig. 11.1 shows, the hedonic tradition is reflected in research on emotional well-being, where scholars use measures of avowed satisfaction with life and positive affect (Bradburn, 1969; Diener, 1984; Gurin, Veroff, & Feld, 1960). The tradition of eudaimonia is reflected in research on psychological (Ryff, 1989) and social (Keyes, 1998) well-being. Here, scholars use multidimensional scales that ask individuals to evaluate how well they see themselves functioning in life as they strive to achieve secular standards of purpose, contribution, integration, autonomy, intimacy, acceptance, and mastery in life. When subjective well-being is measured comprehensively, studies support the tripartite model consisting of emotional, psychological, and social well-being in U.S. adults (Gallagher, Lopez, & Preacher, 2009), college students (Robitschek & Keyes, 2009), and adolescents (Keyes, 2005a).

## 11.2 The Two Continua Model of Mental Health

Mental health promotion and protection (MHPP) is premised on the dual continuum model – that mental health and mental illness belong to two separate but correlated dimensions in the population (Downie, Fyfe, & Tannahill, 1990; Health and Welfare Canada, 1988). Recent advances in the scientific measurement of positive mental


**Fig. 11.2** The dual continua model of mental health and mental illness

health (Keyes, 2002) now permit scientific investigation of the long-standing hypothesis that mental health, like health in general, is a complete state – that is, that mental health is more than the absence of mental illness.

Findings from a series of papers based on the Midlife in the United States (MIDUS) study (Keyes, 2005b) as well as other populations using narrower measures (i.e., only hedonic happiness, life satisfaction, or both) of well-being (Greenspoon & Saklofske, 2001; Headey, Kelley, & Wearing, 1993; Huppert & Whittington, 2003; Masse et al., 1998; Suldo & Shaffer, 2008; Veit & Ware, 1983) support the two continuum model: one continuum indicating the presence and absence of positive mental health, the other indicating the presence and absence of mental illness symptoms. For example, the latent factors of mental illness and mental health correlated ($r = -.53$) but only 28.1 % of their variance is shared in the MIDUS data (Keyes, 2005b). Recently, this model has also been replicated in a random sample of U.S. adolescents (ages 12–18) with data from the Panel Study of Income Dynamics's Child Development Supplement (Keyes, 2009), in Dutch adults (Westerhof & Keyes, 2008, 2010) and in Setswana-speaking South-African adults (Keyes et al., 2008).

Based on the dual continua model shown in Fig. 11.2, individuals can be categorized by their recent mental illness status and according to their level of mental health: languishing, moderate, or flourishing. One implication of the dual continua

model is that the absence of mental illness does not imply the presence of mental health. In the American adult population between age 25 and 74, just over 75 % were free of three common mental disorders during the past year (i.e., major depressive episode – MDE, panic attacks – PA, and generalized anxiety disorder – GAD). However, while just over three-quarters were free of mental illness during the past year, only about 20 % of these were flourishing. A second implication of the dual continua is that the presence of mental illness does not imply the absence of mental health. Of the 23 % of adults with any mental illness, 14.5 % had moderate and 1.5 % had flourishing mental health, while only 7 % were languishing and had a mental illness. Thus, about 70 % of adults with mental illness (i.e., MDE, GAD, or PA) had moderate or flourishing mental health (Keyes, 2002, 2005b, 2007). The absence of mental illness does not mean the presence of mental health, but the presence of mental illness does not imply the absence of some level of good mental health.

Another important implication of the dual continua model is that level of mental health should differentiate level of functioning among individuals free of, and those with, a mental illness. Put differently, anything less than flourishing mental health is associated with impairment for persons with a mental illness and persons free of a mental illness. Findings consistently show that adults and adolescents who are diagnosed as anything less than flourishing are doing worse in terms of physical health outcomes, healthcare utilization, missed days of work, and psychosocial functioning (Keyes, 2002, 2005b, 2006, 2007, 2009). Over all outcomes to date, individuals who are flourishing individuals function better (e.g., fewer missed days of work) than those with moderate mental health, who in turn function better than languishing individuals – and this is true for individuals with a recent mental illness and for individuals free of a recent mental illness.

## 11.3 The Dual Continua Is a Product of Our Genes and Environment

In recent papers using the 670 pairs of same-sex twins from the MIDUS (Midlife in the United States Study) sample of U.S. adult twins, we have found strong support for the heritability of positive mental health and strong support for the dual continua model at the genetic level (Kendler, Myers, Maes, & Keyes, 2011; Keyes, Myers, & Kendler, 2010).

First, the common pathway model was the best fitting model to the three phenotypic measures of positive mental health – emotional, psychological, and social well-being. In other words, the three measures of subjective well-being all share a single common source of genetic variance that may be referred to as the latent propensity for good mental health. The latent factor of positive mental health was quite heritable at 72 % among the population. Estimates of genetic effects of latent factors in such models are not, however, directly comparable with estimates obtained from single scales, because latent factor estimates are always higher because errors of

measurement are mostly contained in the trait-specific environmental variance. We also found no evidence that the magnitude of genetic and unique environmental effects on any kind of well being differed for males and females (Keyes, Myers, & Kendler, 2010).

In turn, we investigated whether and how much of the highly heritable construct of positive mental health was shared in common with the genetic variance of the mental disorders measured in the MIDUS. The MIDUS twins received the same measures of subjective well-being and past year mental illness (i.e., MDE, GAD, PA) as the nationally representative sample of MIDUS adults. A common pathway model was the best fitting model to the three MIDUS measures of mental illness, as these measures of mental illness represent internalizing mental disorders. The latent factor for mental illness was also highly heritable with 61 % attributable to additive genetic effects among the population. We found that exactly 50 % of the genetic influences of the common factor of mental health were shared with the common factor of mental illness, which means that half of the genetic influences on mental health and on mental illness are independent of each other. Moreover, less than 10 % of the environmental influences on the common factor of mental health were shared with the common factor of mental illness, which means that the majority of the environmental causes of mental illness and of mental health are independent of each other. In short, the dual continua observed at the phenotypic level in the general population (Keyes, 2005a, 2005b) reflect a dual continua at the genetic as well as the environmental levels.

Because there is some genetic overlap of mental illness and health, our findings suggest it may be somewhat more difficult to reach high levels of well-being if one inherits strong genetic risk factors for depression or an anxiety disorder. However, a strong dose of genetic liability to mental illness does not preordain individuals to low levels of well-being, and inheriting a low level of genetic risk for mental illness by no means guarantees that an individual will flourish in life. Rather than being an artifact, the dual continua arises, because half of the genetic propensity for, and nearly all of the environmental causes of, positive mental health are independent of the genetic liability for, and environmental causes of, common internalizing mental disorders. At the phenotypic level, the absence of mental illness does not mean the presence of mental health (Keyes, 2005b), and this is because the absence of genetic risk for internalizing mental illness does not mean the presence of high genetic potential for flourishing mental health (Kendler et al., 2011).

## 11.4 The Alternative to Treatment: Mental Health Promotion and Protection (MHPP)

Progress has been slow in bringing MHPP into the mainstream of policy debates about how to address the problem of mental illness. Admittedly, there has been a deficit of scientific evidence supporting the “promotion” and the “protection” axioms of MHPP. Central to the argument behind promotion is the hypothesis that gains in

level of mental health should decrease the risk of mental illness over time. Central to the argument behind protection is the hypothesis that losses of mental health increase the risk of mental illness over time, and therefore efforts should be made to prevent and to respond to the loss of good mental health. Findings recently published (Keyes, Dhingra, & Simoes, 2010) using the 10-year follow-up of the MIDUS national sample strongly supported the protection and promotion hypotheses.

In 1995 and in the 2005 follow-up of the MIDUS sample, adults completed the long form of the mental health continuum (MHC-LF) (Keyes, 2002, 2005b) and the Composite International Diagnostic Interview Short Form (CIDI-SF) (Kessler, Andrews, Mroczek, Ustun, & Wittchen, 1998). Studies have shown that the CIDI-SF has excellent diagnostic sensitivity and diagnostic specificity as compared with diagnoses based on the full CIDI in the National Comorbidity Study (Kessler, DuPont, Berglund, & Wittchen, 1999). During the telephone interview, the CIDI-SF was used to assess whether respondents exhibited symptoms indicative of MDE, GAD, or PA during the past 12 months.

## 11.5 The Prevalence and Stability of Levels of Mental Health

The prevalence of mental illness is about the same in 1995 (18.5 %) as in 2005 (17.5 %); approximately 8 out of every 10 adults were free of any mental illness in 1995 and in 2005. The prevalence of any mental illness and the absence of mental illness appear to be stable over time. However, of the 17.5 % with any mental illness in 2005, just over half (52 %) were ‘new cases’ of mental illness insofar as these adults did not have any of the three mental disorders in 1995. Does level of mental health change over time, and do the losses of good mental health – from flourishing to moderate, and from moderate to languishing – result in new cases of mental illness over time?

On the one hand, the prevalence of levels of mental health in 1995 and 2005 appear static, or about the same, over time. The prevalence of flourishing is only 3.2 % higher in 2005, up from 19.2 % in 1995. The prevalence of moderate mental health is 3.7 % lower in 2005, which is down from 64.1 % in 1995. The prevalence of languishing is merely 0.5 % higher in 2005, slightly up from 16.7 % in 1995. Compared with mental illness, level of mental health – particularly moderate mental health and flourishing – appear slightly more dynamic at the level of the population. That is, there is a slight decline in moderate and slight increase in flourishing mental health at the level of the population. Like mental illness, mental health appears to be relatively stable at the level of population prevalence estimates.

However, the apparent stability of prevalence levels of mental health belie a more dynamic story of change of near equal parts of improvement and decline in each category of mental health. Only 45 % of those languishing in 1995 are languishing in 2005; 51 % improved to moderate and 4 % improved to flourishing mental health in 2005. Only half of adults flourishing in 1995 are flourishing in 2005 – 46 % declined to moderate and 3 % declined to languishing mental health in 2005.

Two-thirds of those with moderate mental health in 1995 had moderate mental health in 2005. Of those with moderate mental health in 1995, about 19 % improved to flourishing and 14 % declined to languishing mental health in 2005.

Although the percentage of change emanating from moderate mental health appears small, recall that 64.1 % of the sample had moderate mental health in 1995. Thus, it is almost entirely the 14 % in declines from moderate mental health to languishing that counterbalance the 55 % who improved from languishing to moderate and flourishing mental health that creates the apparent stable population prevalence of languishing in 1995 (16.7 %) as in 2005 (17.2 %). Similarly, it is almost entirely the 19 % of improvement from moderate mental health to flourishing that counterbalances the 49.5 % of decline from flourishing to moderate and languishing mental health that creates the apparent stable but slight rise in population prevalence of flourishing from 19.2 % in 1995 to 22.4 % in 2005.

## 11.6 Testing the Promotion and Protection Hypotheses

Figure 11.3 presents the adjusted odds ratio of any mental illness in 2005 (i.e., whether respondents had either MDE, PA, or GAD) by change in positive mental health. The reference category includes all individuals who were flourishing in 1995 and 2005. The odds ratios at the top of each bar graph are adjusted for respondents' age, sex, race, education, marital status in 2005, employment status in 2005, and whether respondents had any of 25 physical illness conditions in 1995. The proportion of individuals in that category of mental health change is recorded beneath each axis label.

The findings strongly supported the protection hypothesis. Those who declined to moderate mental health were just over three and one-half times (odds ratio [OR] = 3.7) more likely to have a 2005 mental illness than those who stayed flourishing. Thus, the first loss of good mental health – from flourishing to moderate mental health – results in a rise in the risk of future mental illness. Adults whose mental health stayed at moderate were over four times (OR = 4.4) as likely to have a 2005 mental illness as those who stayed flourishing. Compared to those who stayed at moderate mental health, those who declined to languishing – almost all of whom had moderate mental health in 1995 – represented an 86 % increase in the odds ratio of a 2005 mental illness (i.e., 8.2–4.4 = 3.2 ÷ 4.4 = .864). Thus, protection against the loss of moderate mental health can mitigate the risk of future mental illness.

Findings also supported the promotion hypothesis. Individuals who stayed languishing were over 6 times (OR = 6.6) and those who improved to moderate mental health were over three times (OR = 3.4) as likely as those who stayed flourishing to have a 2005 mental illness. Compared to staying languishing, improving to moderate mental health cuts the risk of future mental illness by nearly half (i.e., 6.6–3.4 3.2 ÷ 6.6 = .484). Individuals who improved to flourishing – most of whom had moderate mental health in 1995 – had no high risk of future mental illness than those who stayed flourishing.

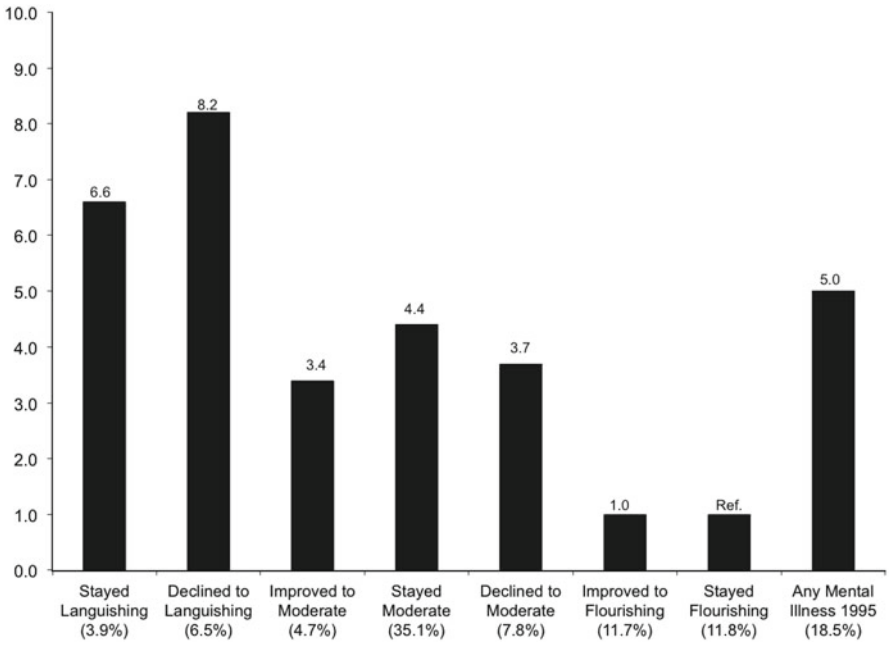


**Fig. 11.3** Adjusted odds ratio of any 2005 mental illness (MDE, GAD or PA) for change and stability in level of mental health compared with adults who stayed flourishing (Keyes, Dhingra, et al., 2010)

Individuals who had any of the three mental illnesses in 1995 were five times more likely than those who stayed flourishing to have one of the same mental illnesses in 2005. Whereas past mental illness is a very good predictor of future mental illness, the findings in Keyes, Dhingra, et al. (2010) illustrate that the absence of flourishing mental health results in a risk of future mental illness that is nearly as high as and sometimes a higher than those who started with one of the mental illness. Almost half of the study sample that was free of any mental illness in 1995 but had moderate mental health in 2005 (i.e., 7.8 % declined to moderate + 35.1 % stayed moderate + 4.7 % improved to moderate = 47.6 %) had nearly as high of an odds of mental illness in 2005 as the 18.5 % that had a mental illness in 1995. Moreover, 1 in 10 was free of any mental illness in 1995 but had languishing mental health in 2005 (i.e., 3.9 % stayed languishing + 6.5 % declined to languishing = 10.4 %) had a higher odds of mental illness in 2005 than the 18.5 % that had a mental illness in 1995. Altogether, almost 6 in 10 American adults (i.e., 47.6 % with moderate + 10.4 % with languishing mental health = 58.0 %) otherwise free of MDE, GAD, or PA have about as high or even higher risk of a future mental illness than individuals who had one of those mental disorders to start with in 1995.

The above analyses suggest that the loss of positive mental health may generate new cases of mental illness. Analysis of the same model reported in Fig. 11.3 after

exclusion of adults with any 1995 mental illness did not change findings of identified relationship between changes in mental health status and mental illness. For example, compared to those who stayed flourishing, individuals who either stayed languishing (OR = 7.5, $p < .001$) or became languishing (OR = 7.0, $p < .001$) had the highest risk of a new case of any 2005 mental illness. In turn, individuals who either stayed at moderate (OR = 3.8, $p < .009$) or improved to moderate mental health (OR = 3.2) were over 3 times as likely as those who stayed flourishing to have a new case of any 2005 mental illness, although the latter was marginally significant at $p = .076$. Adults who declined from flourishing to moderate mental health were about 3 times (OR = 3.2, $p < .043$) as likely as those who stayed flourishing to have a new case of any 2005 mental illness.

## 11.7 Conclusion

The guiding ethos of medicine and public health are embodied in the myth of Asclepius, the birth of whose daughters gave rise to complementary conceptions of and approaches to health – Pathos requires Panacea and Salus requires Hygeia (Hart, 1965). The pathogenic approach is derived from the Greek word pathos, meaning suffering and an emotion-evoking sympathetic response through panaceas (Panacea being one of Ascelpius' daughters). The pathogenic approach views health as the absence of disease or illness. All research that focuses only on pathogenic outcomes is not, by my definition, salutogenic. This is where much unnecessary confusion arises, because many researchers, including Antonovsky (1979), focused solely on illness outcomes but considered their research salutogenic, because they aimed to understand how constructs such as sense of coherence and generalized resistance resources protected against illness in the face of adversity. In my opinion, the aforesaid research, including Antonovsky's, is better understood as the study of resilience, and the constructs the research would call salutogenic are better understood as protective factors. Moreover, Antonovsky spoke merely of a single continuum of disease and health, as he appeared to believe that the outcome was not the important element of salutogenesis. I disagree, because I believe the outcome is the defining feature of whether research is salutogenic or pathogenic. Salutogenic research seeks to elevate levels of health as more than the absence of illness; put differently, salutogenic research aims to promote positive mental or physical health.

The salutogenic approach comes from the Latin word salus, for health, which was considered a positive state. That is, health is monitored by the relative presence of positive states of human capacities and functioning (Strümpfer, 1995) that come from "hygienic" or health promotion and maintenance (Hygeia being another daughter of Asclepius). The strong support for the two continua model, and the research showing that it is encoded in the our DNA, suggests that the absence of mental illness does not mean the presence of mental health (i.e., flourishing) and that the conditions that protect against mental illness do not necessarily promote the presence of positive mental health. Without measuring both outcomes, there is no

possibility of knowing whether the conditions and factors that protect against mental illness also promote positive mental health. It is for this reason that I advocate the use of the complete health approach and see the salutogenic perspective not as an end but as a means toward completing the picture, so that we may begin to study and understand health as a complete state.

That is, a third and complementary conception of health derives from the word hale, which means to be whole. This, of course, is embodied in the WHO's (1948) definition of health, which is supported scientifically by the dual continua model of mental health and illness. This complete approach to the mental healthcare of a nation simultaneously involves treatment (panaceas) and public mental health promotion and protection (MHPP) – an approach that permits nations through public health and organizations through human resources to deftly respond to illness, because more illness will have been avoided through the promotion and protection of good mental health.

Research supports the two fundamental axioms of MHPP for addressing the mental illness and mental health needs of populations and workforces. First, gains in mental health resulted in decreasing odds of mental illness over time, suggesting that promoting mental health could reduce the incidence and prevalence of mental illness. Second, losses of mental health resulted in increasing odds of mental illness over time, suggesting that protecting against loss of mental health could reduce the incidence and prevalence of mental illness. Third, mental health is dynamic over time, although the point prevalence estimates of any mental illness and level of mental health appear stable from 1995 to 2005. The reason for this apparent stability is that approximately half of the mental illness in 2005 represents new cases, whereas half of those flourishing in 2005 are new cases and over half of those languishing in 2005 are new cases.

Further, research suggests that governments and business should invest in MHPP to keep pace with – i.e., prevent – the rise of new cases of mental illness. Whereas having had a mental illness in the past is a good predictor of future mental illness, the absence of mental health is an equally good and in some cases a better predictor of future mental illness. Nearly 60 % of the U.S. adult population free of mental illness but with less than optimal mental health have as high, or higher, risk of a future mental illness as individuals who already have a mental illness. Failure to address the problem of the absence of positive mental health in populations means risking failure in attacking the problem of mental illness.

Government officials and business leaders can no longer blithely announce that they seek to promote the mental health of their population while investing mainly in treatment and the study of mental illness. The two continua model debunks this as a "wanting-doing gap" in policy and practice, where policies pronounce national efforts to seek health but engage in activities directed primarily or solely toward illness. If you want better mental health, you must focus on positive mental health – promoting flourishing and protecting against its loss. Public health and organizations cannot promote mental health by solely reducing mental illness, and no amount of wishful thinking will make this fact disappear. You can ignore the science supporting the two continua model, but this will serve only to sacrifice more

lives to the recurrent, chronic, and currently incurable condition of mental illness. The alternative and complementary approach to treatment is public mental health promotion and protection.

So, the question is no longer whether mental illness is a major public health issue – it is. The question is no longer whether we have any alternative to treatment for reducing mental illness – we do. Research has clarified where citizens and governments should want to be; the debate, then, is not where we want to be – it is flourishing and this is salutogenic. The most important next step for researchers and practitioners is to discover how to get more people to stay or become flourishing. This is the salutogenic challenge, because only by focusing on the outcomes of positive mental health can we learn how to promote and protect good mental health. Persons in public health, persons in governments, and business leaders who expect answers immediately as to how to best promote and protect are not being fair or realistic – it takes time and financial support. The National Institute of Mental Health (NIMH) in the United States was created by an Act of Congress in 1946, and it started its work in earnest in 1949. Today, billions of dollars annually (see http://www.nimh.nih.gov/about/budget/cj2010.shtmt) of taxpayer money are spent by well-intentioned leaders for the study and treatment of mental illness. If they want good mental health in the population, government and business must provide the same realistic timeframe and financial support to MHPP. Take a moment and imagine where we, throughout the world, might be, had we started the so-called war on mental illness years ago by attempting to promote and protect the best in people.

## References

Antonovsky, A. (1979). *Health, stress, and coping*. San Francisco: Jossey-Bass.

Bradburn, N. M. (1969). *The structure of psychological well-being*. Chicago: Aldine.

Chisholm, D., Sanderson, K., Ayuso-Mateos, J. L., & Saxena, S. (2004). Reducing the global burden of depression: Population-level analysis of intervention cost-effectiveness in 14 world regions. *The British Journal of Psychiatry, 184*, 393–403.

Davis, N. J. (2002). The promotion of mental health and the prevention of mental and behavioral disorders: Surely the time is right. *International Journal of Emergency Mental Health, 4*, 3–29.

Diener, E. (1984). Subjective well-being. *Psychological Bulletin, 95*, 542–575.

Downie, R. S., Fyfe, C., & Tannahill, A. (1990). *Health promotion: Models and values*. Oxford, England: Oxford University Press.

Gallagher, M. W., Lopez, S. J., & Preacher, K. J. (2009). The hierarchical structure of well-being. *Journal of Personality, 77*, 1025–1049.

Greenspoon, P. J., & Saklofske, D. H. (2001). Toward an integration of subjective well-being and psychopathology. *Social Indicators Research, 54*, 81–108.

Gurin, G., Veroff, J., & Feld, S. (1960). *Americans view their mental health*. New York, NY: Basic Books.

Hart, G. D. (1965). Asclepius: God of medicine. *Canadian Medical Association Journal, 92*, 232–236.

Headey, B., Kelley, J., & Wearing, A. (1993). Dimensions of mental health: Life satisfaction, positive affect, anxiety, and depression. *Social Indicators Research, 29*, 63–82.

Health and Welfare Canada. (1988). *Mental health for Canadians: Striking a balance*. Ottawa, Canada: Supply and Services Canada.

Huppert, F. A., & Whittington, J. E. (2003). Evidence for the independence of positive and negative well-being: Implications for quality of life assessment. *British Journal of Health Psychology, 8*, 107–122.

Insel, T. R., & Scolnick, E. M. (2006). Cure therapeutics and strategic prevention: Raising the bar for mental health research. *Molecular Psychiatry, 11*, 11–17.

Kendler, K. S., Myers, J. M., Maes, H. H., & Keyes, C. L. M. (2011). The relationship between the genetic and environmental influences on common internalizing psychiatric disorders and mental well-being. *Behavior Genetics, 41*, 641–650.

Kessler, R. C., Andrews, G., Mroczek, D., Ustun, B., & Wittchen, H.–. U. (1998). The World Health Organization Composite International Diagnostic Interview Short Form (CIDI–SF). *International Journal of Methods in Psychiatric Research, 7*, 171–185.

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*, 593–602.

Kessler, R. C., DuPont, R. L., Berglund, P., & Wittchen, H.-U. (1999). Impairment in pure and comorbid generalized anxiety disorder and major depression at 12 months in two national surveys. *The American Journal of Psychiatry, 156*, 1915–1923.

Keyes, C. L. M. (1998). Social well-being. *Social Psychology Quarterly, 61*, 121–140.

Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior, 43*, 207–222.

Keyes, C. L. M. (2005a). The subjective well-being of America's youth: Toward a comprehensive assessment. *Adolescent and Family Health, 4*, 3–11.

Keyes, C. L. M. (2005b). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of Consulting and Clinical Psychology, 73*, 539–548.

Keyes, C. L. M. (2006). Mental health in adolescence: Is America's youth flourishing? *The American Journal of Orthopsychiatry, 76*, 395–402.

Keyes, C. L. M. (2007). Promoting and protecting mental health as flourishing: A complementary strategy for improving national mental health. *American Psychologist, 62*, 95–108.

Keyes, C. L. M. (2009). The nature and importance of positive mental health in America's adolescents. In R. Gilman, E. S. Huebner, & M. J. Furlong (Eds.), *Handbook of positive psychology in schools* (pp. 9–23). New York, NY: Routledge.

Keyes, C. L. M., Dhingra, S. S., & Simoes, E. J. (2010). Change in level of positive mental health as a predictor of future risk of mental illness. *American Journal of Public Health, 100*, 2366–2371.

Keyes, C. L. M., Myers, J. M., & Kendler, K. S. (2010). The structure of the genetic and environmental influences on mental well-being. *American Journal of Public Health, 100*, 2379–2384.

Keyes, C. L. M., Wissing, M., Potgieter, J. P., Temane, M., Kruger, A., & van Rooy, S. (2008). Evaluation of the Mental Health Continuum Short Form (MHC-SF) in Setswana-speaking South Africans. *Clinical Psychology & Psychotherapy, 15*, 181–192.

Masse, R., Poulin, C., Dassa, C., Lambert, J., Belair, S., & Battaglini, A. (1998). The structure of mental health higher-order confirmatory factor analyses of psychological distress and wellbeing measures. *Social Indicators Research, 45*, 475–504.

Murray, C. J. L., & Lopez, A. D. (Eds.). (1996). *The global burden of disease: A comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020*. Cambridge, MA: Harvard School of Public Health.

Robitschek, C., & Keyes, C. L. M. (2009). The structure of Keyes' model of mental health and the role of personal growth initiative as a parsimonious predictor. *Journal of Counseling Psychology, 56*, 321–329.

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well–being. *Journal of Personality and Social Psychology, 57*, 1069–1081.

Secker, J. (1998). Current conceptualizations of mental health and mental health promotion. *Health Education Research, 13*, 57–66.

Sigerist, H. E. (1941). *Medicine and human welfare*. New Haven, CT: Yale University Press.

Strümpfer, D. J. W. (1995). The origins of health and strength: From 'salutogenesis' to 'fortigenesis'. *South African Journal of Psychology, 25*, 81–89.
Suldo, S. M., & Shaffer, E. J. (2008). Looking beyond psychopathology: The dual-factor model of mental health in youth. *School Psychology Review, 37*, 52–68.
Ustun, T. B. (1999). The global burden of mental disorders. *American Journal of Public Health, 89*, 1315–1318.
Ustun, T. B., Ayuso-Mateos, J. L., Chatterji, S., Mathers, C. D., & Murray, C. J. L. (2004). Global burden of depressive disorders in the year 2000. *The British Journal of Psychiatry, 184*, 386–392.
Veit, C. T., & Ware, J. E. (1983). The structure of psychological distress and well-being in general populations. *Journal of Consulting and Clinical Psychology, 51*, 730–742.
Westerhof, G. J., & Keyes, C. L. M. (2008). Geestelijke gezondheid is meer dan de afwezigheid van geestelijke ziekte [Mental health is more than the absence of mental illness]. *Maandblad Geestelijke Volksgezondheid, 63*, 808–820.
Westerhof, G. J., & Keyes, C. L. M. (2010). Mental illness and mental health: The two continua model across the lifespan. *Journal of Adult Development, 17*, 110–119.
World Health Organization. (1948). World Health Organization constitution. In *Basic documents*. Geneva, Switzerland: Author.
World Health Organization. (2004). *Promoting mental health: Concepts, emerging evidence, practice: Summary report*. Geneva, Switzerland: Author.
World Health Organization. (2008). *The global burden of disease: 2004 update*. Geneva, Switzerland: WHO Press.