

Overview of The Mental Health Continuum Short Form (MHC-SF)[™]

© Emory University, 2014, All Rights Reserved.

The short form of the Mental Health Continuum (MHC-SF) is derived from the long form (MHC-LF), which consisted of seven items measuring emotional well-being, six 3-item scales (or 18 items total) that measured Ryff's (1989) model of psychological well-being, and five 3-item scales (or 15 items total) that measured Keyes' (1998) model of social well-being. The MHC-SF is validated for use with individuals aged 12 years or older.

The measure of emotional well-being in the MHC-LF included six items measuring the frequency of positive affect that was derived, in part, from Bradburn's (1969) affect balance scale, and a single item of the quality of life overall based on Cantril's (1965) self-anchoring items. The estimates of internal consistency reliability for each of the three sets of measures—emotional, psychological, and social well-being—in the MHC short and long forms have all been high ($> .80$; see e.g., Keyes, 2005a). The MHC-LF form measures of social and psychological well-being have been validated (see Keyes, 1998; Ryff, 1989, Ryff & Keyes, 1995) and used in hundreds of studies over the past two decades, and their use as a measure of overall positive mental health was first introduced by Keyes (2002) and recently summarized in Keyes (2007).

While the MHC-LF consisted of 40 items, the MHC-SF consists of 14 items that were chosen as the most prototypical items representing the construct definition for each facet of well-being. Three items were chosen (happy, interested in life, and satisfied) to represent emotional well-being, six items (one item from each of the 6 dimensions) were chosen to represent psychological well-being, and five items (one item from each of the 5 dimensions) were chosen to represent social well-being. The response option for the short form was changed to measure the frequency with which respondents experienced each symptom of positive mental health, and thereby provided a clear standard for the assessment and a categorization of levels of positive mental health that was similar to the standard used to assess and diagnosis major depressive episode in the Diagnostic and Statistical Manual of Mental Disorders (see Keyes, 2002, 2005a, 2007). To be diagnosed with *flourishing* mental health, individuals must experience 'every day' or 'almost every day' at least one of the three signs of hedonic well-being and at least six of the eleven signs of positive functioning during the past month. Individuals who exhibit low levels (i.e., 'never' or 'once or twice' during the past month) on at least one measure of hedonic well-being and low levels on at least six measures of positive functioning are diagnosed with *languishing* mental health. Individuals who are neither flourishing nor languishing are diagnosed with *moderate* mental health.

The short form of the MHC has shown excellent internal consistency ($> .80$) and discriminant validity in adolescents (ages 12-18) and adults in the U.S., in the Netherlands, and in South Africa (Keyes, 2005b, 2006; Keyes et al., 2008; Lamers et al., 2011; Westerhof & Keyes, 2009). The 4-week test-retest reliability estimates for the long form scales ranging from .57 for the overall psychological well-being domain, .64 for the overall emotional well-being domain, to .71 for the overall social well-being domain (Robitschek & Keyes, 2006, 2009). The test-retest reliability of the MHC-SF over three successive 3-month periods averaged .68 and the 9 month test-retest was .65 (Lamers et al., 2011). The three factor structure of the long and short forms of the MHC—emotional, psychological, and social well-being—has been confirmed in nationally representative samples of US adults (Gallagher, Lopez & Preacher, 2009), college students (Robitschek & Keyes, 2009), and in a nationally representative sample of adolescents between the ages of 12 and 18 (Keyes, 2005b, 2009) as well as in South Africa (Keyes et al., 2008) and the Netherlands (Lamers et al., 2010).

Lamers et al (2011) published a study that evaluated the measurement invariance of the MHC-SF using data from a representative sample of 1,932 Dutch adults who completed the MHC-SF at four time points over nine months. This study used item response theory and analytic techniques to examine differential item functioning (DIF) across demographics, health indicators, and time points. The results indicated differences in the performance of one item (social well-being) for educational level, one item (social well-being) for sex, and two items (psychological well-being) for age. However, none of the items with differential performance were large enough to affect any mean comparisons. The MHC-SF is highly reliable over time, as there was no DIF on ten of the items across demographics, health indicators, and over several time points. The four items with DIF were low and did not affect mean comparison after appropriate adjustments, and the means and reliabilities of the subscales were consistent over time. The MHC-SF is a highly reliable and valid instrument to measure positive aspects of mental health.

Joshanloo and colleagues (2013) found support for the factor structure (emotional, psychological, and social) and full metric invariance of the MHC-SF across three cultures: Netherlands, South Africa and Iran. Metric invariance means that the strength of the relationships between the MHC-SF items and latent factors are equivalent

across the populations (Rock, Werts, & Flaugher, 1978). Therefore, the relationship between the latent factors of the MHC-SF and other concepts (e.g., physical health) can be reliably compared across groups. Put simply, differences in the MHC-SF score and diagnosis between groups can be attributed to the group rather than the fact that the items function differently (i.e., the items mean different things to different people/groups) across groups. Moreover, differences in how the MHC-SF score and diagnosis predicts outcomes such as physical health by group can be attributed to group differences rather than the fact that the items function differently within each group.

The long and short forms of the MHC have been useful in improving the scientific understanding of the risk of future mental illness (MDE, GAD, and panic attacks; see Keyes, Dhingra, & Simoes, 2010), risk of premature mortality (Keyes & Simoes, 2012), healthcare utilization, missed days of work, disability as measured by limitations of ADL, suicidality (thoughts about, plans to commit, and attempts at suicide among college students), self reported academic impairment among colleges students, and many more outcomes (see Keyes, 2007, Keyes, Eisenberg, Perry, Dube, Kroenke, & Dhingra, 2012).

Please contact Dr. Keyes (ckeyes@emory.edu) if you require the MHC-SF in a language other than English, or would like to translate and validate the MHC-SF in your country and culture. Right now the MHC-SF has been translated and validated into French, Korean, Chinese, Japanese, Hong Kong, Dutch, Norwegian, Swedish, Finnish, and we hope others around the world will test the validity of it and begin using it in their country to build on the movement toward mental health promotion and protection. My only wish is that you first test whether the existing scale works in your culture **before** you add, delete or otherwise modify the scale response categories or items. If the scale retains its validity and reliability in your culture, my wish is only that you identify as by its acronym (MHC-SF-My Country) and then add your country's official acronym to it (e.g., the MHC-SF-NL [Dutch], the MHC-SF-RSA[South Africa]). Only when we proceed scientifically by **building** on existing scientific work do we make progress, and only if we can arrive at a common metric and scale can we engage in comparative research and learn from each other's best practices for promotion and protecting good mental health.

References

- Bradburn, N. M. (1969). *The structure of psychological well-being*. Chicago:Aldine.
- Cantril, H. (1965). *The pattern of human concerns*. New Brunswick, NJ: Rutgers University Press.
- Gallagher, M. W., Lopez, S. J., & Preacher, K. J. (2009). The hierarchical structure of well-being. *Journal of Personality, 77*, 1025-1049.
- Joshanloo, M., Wissing, M. P., Khumalo, I. P., & Lamers, S. M. A. (2013). Measurement invariance of the Mental Health Continuum-Short Form (MHC-SF) across three cultural groups. *Personality and Individual Differences, 55*(7), 755-759.
- 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). 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, Corey L. M. (2005b). The subjective well-being of America's youth: Toward a comprehensive assessment. *Adolescent and Family Health, 4*, 3-11.
- Keyes, C. L. M. (2006). Mental health in adolescence: Is America's youth flourishing? *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., 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 and Psychotherapy, 15*, 181-192.
- Keyes, C. L. M. (2009). The nature and importance of mental health in youth. In R. Gilman, M. Furlong, & E. S. Heubner (Eds.), *Promoting Wellness in Children and Youth: A Handbook of Positive Psychology in the Schools* (pp.9-23). New York: Routledge.
- Keyes, Corey L. M. (2009). The Black-White Paradox in Health: Flourishing in the Face of Inequality. *Journal of Personality, 77*, 1677-1706.
- Keyes, Corey L. M. and Julia Annas. (2009). Feeling Good and Functioning Well: Distinctive Concepts in Ancient Philosophy and Contemporary Science. *Journal of Positive Psychology, 4*, 197-201.

- Keyes, Corey L. M. (2009; reprint of journal article chosen as new entry in history of psychology book). "The Mental Health Continuum" From Languishing to Flourishing in Life." Pp. 601-617 in "Foundations of Psychological Thought: A History of Psychology." Edited by Barbara F. Gentile and Benjamin O. Miller. Los Angeles, CA: Sage.
- 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., Eisenberg, D., Perry, G. S., Dube, S. R., Kroenke, K., & Dhingra, S. S. (2012). The relationship of level of positive mental health with current mental disorders in predicting suicidal behavior and academic impairment in college students. *Journal of American College Health, 60*(2), 126-133.
- Keyes, C. L. M., & Simoes, E. J. (2012.). To flourish or not: Positive mental health and all cause mortality. *American Journal of American Public Health, 102*(11), 2164–2172
- Lamers, S.M.A., Westerhof, G.J., Bohlmeijer, E.T., ten Klooster, P.M., & Keyes, C.L.M. (2010). Evaluating the psychometric properties of the Mental Health Continuum-Short Form (MHC-SF). *Journal of Clinical Psychology, 67*, 99-110.
- Lamers, S. M., Glas, C. A., Westerhof, G. J., & Bohlmeijer, E. T. (2012). Longitudinal Evaluation of the Mental Health Continuum-Short Form (MHC-SF). *European Journal of Psychological Assessment, 28*(4), 290-296.
- Robitschek, C., & Keyes, C. L. M. (2006). [Multidimensional well-being and social desirability]. Unpublished data.
- 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.
- Ryff, C. D. & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology, 69*, 719–727.
- 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.

Place a check mark in the box that best represents experiences and feelings.

During the past month, how often did you feel the following ways ...	NEVER	ONCE OR TWICE	ABOUT ONCE A WEEK	2 OR 3 TIMES A WEEK	ALMOST EVERY DAY	EVERY DAY
1. happy						
2. interested in life						
3. satisfied with life						
4. that you had something important to contribute to society						
5. that you belonged to a community (like a social group, school, neighborhood, etc.)						
6. that our society is a good place, or is becoming a better place, for all people						
7. that people are basically good						
8. that the way our society works made sense to you						
9. that you liked most parts of your personality						
10. good at managing the responsibilities of your daily life						
11. that you had warm and trusting relationships with others						
12. that you had experiences that challenged you to grow and become a better person						
13. confident to think or express your own ideas and opinions						
14. that your life has a sense of direction or meaning to it						

Table 1

Type of Well-Being, DSM-Type Categorical Diagnosis, and Questions in the Mental Health Continuum Short Form.

<p><i>Emotional Well-Being:</i> Flourishing requires “almost every day” or “every day” and languishing requires “never” or “maybe once or twice” during the past month on 1 or more of the 3 symptoms of emotional well-being.</p> <p>“How often during the past month did you feel ...”</p> <ol style="list-style-type: none">1. Happy2. Interested in Life3. Satisfied
<p><i>Positive Functioning:</i> Flourishing requires “almost every day” or “every day” and languishing requires “never” or “maybe once or twice” during the past month on 6 or more of the 11 symptoms of positive functioning.</p> <p>“How often during the past month did you feel ...”</p> <ol style="list-style-type: none">4. that you had something important to contribute to society. (<i>Social contribution</i>)5. that you belonged to a community (like a social group, your school, or your neighborhood). (<i>Social Integration</i>)6. that our society is a good place, or is becoming a better place, for all people. (<i>Social growth</i>)7. that people are basically good. (<i>Social acceptance</i>)8. that the way our society works made sense to you. (<i>Social coherence</i>)9. that you liked most parts of your personality. (<i>Self acceptance</i>)10. good at managing the responsibilities of your daily life. (<i>Environmental mastery</i>)11. that you had warm and trusting relationships with others. (<i>Positive relationships with others</i>)12. that you had experiences that challenged you to grow and become a better person. (<i>Personal growth</i>)13. confident to think or express your own ideas and opinions. (<i>Autonomy</i>)14. that your life has a sense of direction or meaning to it. (<i>Purpose in life</i>)

The Mental Health Continuum-Short Form (MHC-SF) Scoring System™

Continuous Scoring: Sum for each subscale and total MHC.

Categorical Diagnosis: a diagnosis of flourishing is made if someone feels 1 of the 3 hedonic well-being symptoms (items 1-3) "every day" or "almost every day" and feels 6 of the 11 positive functioning symptoms (items 4-14) "every day" or "almost every day" in the past month. Languishing is the diagnosis when someone feels 1 of the 3 hedonic well-being symptoms (items 1-3) "never" or "once or twice" and feels 6 of the 11 positive functioning symptoms (items 4-8 are indicators of Social well-being and 9-14 are indicators of Psychological well-being) "never" or "once or twice" in the past month. Individuals who are neither "languishing" nor "flourishing" are then coded as "moderately mentally healthy."

Symptom Clusters and Dimensions:

Cluster 1; Items 1-3 = *Hedonic*, Emotional Well-Being

Cluster 2; Items 4-8 = *Eudaimonic*, Social Well-Being

Item 4 = Social Contribution

Item 5 = Social Integration

Item 6 = Social Actualization (i.e., Social Growth)

Item 7 = Social Acceptance

Item 8 = Social Coherence (i.e., Social Interest)

Cluster 3; Items 9-14 = *Eudaimonic*, Psychological Well-Being

Item 9 = Self Acceptance

Item 10 = Environmental Mastery

Item 11 = Positive Relations with Others

Item 12 = Personal Growth

Item 13 = Autonomy

Item 14 = Purpose in Life

***SPSS Syntax for creating the categories for the categorical diagnosis**

***Assumes item responses have been coded as follows: never=0, once or twice=1, about once a week=2, about 2 or 3 times a week=3, almost every day=4, every day=5**

****handle any item missing data and imputation within cluster (mhc1-3 for any missing on emotional well-being items; mhc4-8 for any missing on social well-being items; and mhc9-14 for any missing on psychological well-being items).**

count hiaff=mhc1 mhc2 mhc3(4,5).

count loaff=mhc1 mhc2 mhc3(0,1).

count hifunc=mhc4 mhc5 mhc6 mhc7 mhc8 mhc9 mhc10 mhc11 mhc12 mhc13 mhc14(4,5).

count lofunc=mhc4 mhc5 mhc6 mhc7 mhc8 mhc9 mhc10 mhc11 mhc12 mhc13 mhc14(0,1).

recode hiaff (1,2,3=1) (else=0) into hiaffect.

recode hifunc (6,7,8,9,10,11=1) (else=0) into hifunct.

recode loaff (1,2,3=1) (else=0) into loaffect.

recode lofunc (6,7,8,9,10,11=1) (else=0) into lofunct.

if hiaffect=1 and hifunct=1 mhc_dx=2.

if loaffect=1 and lofunct=1 mhc_dx=0.

recode mhc_dx (0=0) (2=2) (else=1) into mhc_dx3.

recode mhc_dx3 (2=1) (else=0) into mhc_dx2.

variable labels mhc_dx3 'MHC-SF Three Category Diagnosis of Positive Mental Health'.

value labels mhc_dx3 0 'Languishing' 1 'Moderate' 2 'Flourishing'.

variable labels mhc_dx2 'MHC-SF Two Category Diagnosis of Positive Mental Health'.

value labels mhc_dx2 0 'Not Flourishing' 1 'Flourishing'.

compute mhc_continuous = (mhc1 + mhc2 + mhc3 + mhc4 + mhc5 + mhc6 + mhc7 + mhc8 + mhc9 + mhc10 + mhc11 + mhc12 + mhc13 + mhc14)/14.

compute ewb_continuous = (mhc1 + mhc2 + mhc3)/3.

compute swb_continuous = (mhc4 + mhc5 + mhc6 + mhc7 + mhc8)/5.

compute pwb_continuous = (mhc9 + mhc10 + mhc11 + mhc12 + mhc13 + mhc14)/6.