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# Chapter 4

## Wellness Measurement

Timothy P. Melchert

### Introduction

Incorporating wellness into considerations of health, healthcare, and social policy has reached an exciting point. Aristotle, Buddha, and other philosophers, sages, and religious leaders throughout history developed great insights into the topic, but only in recent decades has the construct of wellness been examined and clarified through systematic empirical research. There are still major debates regarding several aspects of the topic, but it is now widely considered a measurable construct that should play a role in healthcare and social policy. This volume represents another step forward in bringing wellness into the mainstream of health and healthcare.

Wellness often means different things to different people, and the causes of wellness and the components that comprise well-being continue to be vigorously debated. Philosophical and theological arguments dominated the debate for centuries, with little resolution on important aspects of the subject, and up until recently it was widely believed that too little was known to include considerations of wellness in healthcare practice or policy. Much, of course, still needs to be learned, but empirical research has now clarified several issues, including how wellness can be usefully measured and incorporated into clinical practice, research, and social policy. It is exciting to begin realizing ancient dreams and aspirations of humankind regarding what is most important in life

by systematically incorporating these considerations into healthcare. Doing so has the potential to improve well-being for patients and society in general.

## What to Measure

The most difficult question to answer when considering the measurement of wellness for clinical, research, or policy purposes concerns what to measure. There have been debates about the nature of wellness, well-being, happiness, health, meaning and purpose in life, flourishing, and related concepts probably ever since *Homo sapiens* developed language. However, as a result of more systematic empirical investigation into these concepts in recent years, some clarity is emerging. Though there is no doubt that human wellness is multifaceted and complex, some consensus has emerged regarding several aspects of the topic. (In this chapter, I use the terms “wellness” and “well-being” synonymously.)

The primary question debated across history concerns the nature and meaning of wellness, happiness, and “the good life.” Answers to this question varied markedly across time and place. In Western culture, the ancient debate often focused on the importance of pleasure as the goal of life (hedonia, primarily associated with Epicurus in ancient Greece) versus the pursuit of a virtuous and excellent life in which one is able to achieve one’s full potential (eudaimonia, typically associated with Aristotle). After the rise of Christianity, Christian religious teachings often provided the answers to these types of questions. Following the Scientific Revolution and the Enlightenment, infectious disease gradually became to be understood in scientific terms, and positive, humanistic attitudes began taking hold that emphasized the use of science and reason to solve problems and improve the human condition, both in terms of physical and mental health. The emergence of the disciplines of psychiatry and psychology in the nineteenth century were also reflections of this trend. During the Great Depression, however, concerns about getting basic needs met focused attention on income and employment as foundational for well-being. Following the devastation and horror of World War II, the founders of the World Health Organization<sup>1</sup> advocated for a remarkably positive and modern conceptualization of well-being that they incorporated into the WHO mission statement in 1948, namely, “a state of complete physical, mental, and social well-being and not merely the absence of disease and infirmity.”

Starting in the 1990s, the positive psychology movement gained traction as dissatisfaction grew with the focus on pathology and “what is wrong” rather than “what is right.” Seligman and Csikszentmihalyi in 2000<sup>2</sup> defined positive psychology as “the scientific study of positive human functioning and flourishing on multiple levels that include the biological, personal, relational, institutional, cultural, and global dimensions of life.” Just recently, concern has grown that large numbers of people are sensing that conventional approaches to achieving security and well-being are being threatened by technological and societal changes, and populist political movements in several wealthy countries have been growing as a result.

The evolving conceptualizations of wellness over the centuries reflect the difficulty people have had in identifying the nature of well-being, for individuals or communities. There has been growing consensus, however, on these issues. At the most basic level, there is consensus that the most useful perspective for conceptualizing and measuring wellness involves a biopsychosocial approach. There are, of course, times when one’s biological functioning is the top priority, but at other times one’s psychological, family, or vocational functioning, or even the economic or political functioning of the community, become top considerations. For people in general, however, the measurement of wellness is best accomplished through a comprehensive biopsychosocial perspective. Though Engel<sup>3</sup> argued that the conceptualization of health and healthcare needed to incorporate psychological and social as well as biological perspectives, clearly a person also exists in a fourth dimension of time as well. From conception to death, the biopsychosocial processes that play out across time are critical to understanding virtually any health or developmental outcome. In fact, the three biopsychosocial dimensions plus time are so basic to understanding human development that they are analogous to the three

spatial dimensions plus time that are fundamental to understanding the physical universe<sup>4</sup>. The time dimension is particularly important for understanding wellness, such as when a young person sacrifices pleasant leisure activities (hedonia) so that she/he might develop academic skills to increase chances of later career security and life meaning (eudaimonia), or a person eats healthily and exercises regularly, which may be less pleasant in the moment but helps to ensure stronger physical health over the long term.

A second critical consideration in the measurement of wellness concerns the importance of including both objective and subjective perspectives. For example, it might seem that objective measures showing strong physical health and high income would generally be associated with high levels of life satisfaction and well-being, but of course that frequently is not the case (e.g., elite athletes, individuals with quadriplegia or terminal illness, or those living with little or great wealth fall at many different points with regard to emotional well-being, life satisfaction, meaning, and fulfillment). Correlations between many objective and subjective aspects of well-being are actually surprisingly low. Consequently, both perspectives need to be considered.

For some purposes, objective measures of health and wellness are clearly superior, while subjective perspectives provide little useful information (e.g., measuring blood pressure). But the opposite is true as well. Some very important aspects of life can be assessed only by asking people how they feel. How one feels in terms of mood, the quality of one's social support, or the sense of meaning and purpose in life are frequently considered critical to evaluating wellness, and one's subjective judgment regarding those experiences is typically the important measure. One can objectively observe and rate a person's behaviors or take various physiological measures across situations and time and then make inferences based on that data, but the results will often be inferior and far costlier than those obtained by simply asking a person how they feel about these things.

Research on the association between loneliness and mortality highlights the importance of considering both objective and subjective perspectives on well-being. Meta-analyses have found that loneliness substantially increases the risk of mortality by roughly the same amount as being obese, smoking 15 cigarettes a day, or drinking more than six alcoholic drinks per day<sup>5</sup>. The increase in mortality associated with loneliness was also found to be essentially the same if social isolation was measured objectively (in terms of having infrequent social contact and living alone) or subjectively (in terms of *feeling* lonely, even if one has frequent social contact). Further, and contrary to popular stereotypes, the increased risk for mortality due to loneliness was actually greater for populations younger than 65 years than it was for older individuals. Surveys also suggest widespread problems involving loneliness: one large national 2018 survey by Cigna<sup>6</sup>, a health services company, found that 47 percent of Americans felt alone and 13 percent reported there were zero people who knew them well. Nonetheless, issues such as obesity, cigarette smoking, and alcoholism are widely considered to be major public health concerns, while loneliness is not.

It is also important to note that the relationship between objective and subjective measurements of wellness is often complicated. For example, an objective measure of income is typically considered important to understanding well-being, given the importance of getting basic needs met. In fact, low and moderate levels of income do have reliable and fairly strong positive correlations with emotional well-being and happiness, but that relationship weakens considerably as income rises above the point at which people's basic needs are met<sup>7</sup>. In fact, the correlation between income and emotional well-being is essentially zero at levels above approximately \$75,000 (in the USA; the amount varies depending on the cost of living across countries). The importance of measuring subjective aspects of well-being in addition to objective ones is evident when caring for a variety of medical populations, such as patients with brittle diabetes whose quality of life may be low but whose A1 C counts are reasonably well controlled; patients with medically unexplained pain that causes disability; adolescents and young adults with good physical health but very low life satisfaction; or elderly individuals with terminal disease who nonetheless develop a strong sense of meaning in life and life satisfaction. The health and

well-being of these individuals cannot be captured by focusing on either subjective or objective measurement approaches alone.

There is widespread agreement regarding the importance of a biopsychosocial perspective that incorporates both objective and subjective measures of wellness, but there is less agreement about which particular components to include. Nonetheless, there are examples representing high levels of consensus regarding how the construct can be conceptualized. A very prominent example was developed by the Organization for Economic Cooperation and Development (OECD). The 35-member countries of the OECD reached a consensus on a definition of subjective well-being that encompasses assessments of life evaluation, emotional states, and meaning and purpose. The OECD then developed a set of questionnaire items to measure these variables and evaluated their psychometric reliability and validity, usefulness for informing policy, and their international comparability<sup>8</sup>. They recommend that all member countries use five core questions to assess these elements in national surveys. These items ask individuals to respond on a scale from 0 to 10 in terms of “Overall, how satisfied are you with life as a whole these days?”; “Overall, to what extent do you feel the things you do in your life are worthwhile?”; and, with regard to how they felt yesterday, “How about happy?” “How about worried?” and “How about depressed?” (p. 253). The OECD also recommends additional questions when a more detailed assessment is desired to further assess life satisfaction, affect, meaning and purpose, and how individuals felt during the time they were engaged in particular daily activities, along with satisfaction with specific life domains such as one’s standard of living, health, personal relationships, and personal safety. Outcomes regarding each of these areas across the OECD member states are published annually.

Another influential perspective on measuring wellness focuses on *quality of life* (QOL). This construct is also considered to be multidimensional. The most widely used generic measure of QOL in medical research is the 36-item Short Form Health Survey (often referred to as the SF-36)<sup>9</sup>. This instrument includes eight subscales measuring physical functioning, social functioning, emotional functioning, sexual functioning, cognitive functioning, pain-discomfort, vitality, and overall well-being. This instrument is also available in various shortened forms. Another prominent international effort to assess QOL was undertaken by the World Health Organization<sup>10</sup>. Their WHOQOL instrument included 100 items that covered 10 areas across the biopsychosocial domains and has since been shortened by different research groups.

Meaning in life (eudaimonia) has also been considered an important component of wellness, but was long thought to be too elusive and idiosyncratic to be measured in a reliable or valid manner. Recently, however, there has been major research progress regarding this construct as well. Heintzelman and King<sup>11</sup> asked why meaning in life is widely believed to be both a necessity, something required to make one’s life livable and worthwhile, but also extremely difficult to attain and chronically lacking. They argued that “Nothing that human beings require to survive can be next to impossible to obtain” (p. 561). Their comprehensive review of the research included three conclusions: (1) lonely, socially isolated individuals consistently report lower meaning in life and that “Social relationships are a foundational source of meaning in life” (p. 562); (2) experiencing positive emotion is consistently related to meaning in life; and (3) viewing life as making sense, as having coherence and regularity, is associated with life feeling more meaningful. They also noted that most surveys find that large majorities of individuals report that their lives are meaningful (e.g., the 2007 Gallop Global Poll of 137,678 individuals across 132 nations found 91 percent responded affirmatively). That meaning in life may be a common experience might be objectionable to French existentialists and others attracted to the mystique of the construct, but Heintzelman and King<sup>11</sup> noted that this finding also calls into question the notion of whether meaning in life is a *constructed* experience that individuals must search for and create. Instead, perhaps people do need meaning in life to survive, and that is why it is commonplace<sup>11,12</sup>. Further, even though people may commonly feel that they have meaning and purpose in their lives, they may at the same time also seek to find more meaning and purpose in their lives – the latter pursuit does not negate the former experience.

The two most commonly used measures for assessing meaning in life for research purposes are the Purpose in Life Test and the Meaning in Life Questionnaire. In addition to the OECD measure mentioned above, a very widely used approach to measuring subjective well-being is the five-item Satisfaction with Life Scale, developed by Diener and colleagues<sup>13</sup>. This scale has been widely used in research and commercial surveys (including worldwide through Gallup) and provides a global self-assessment of one's satisfaction with life based on one's personally chosen criteria. Reviews of many more instruments for measuring a variety of aspects of wellness are also available<sup>14, 15</sup>.

## Measurement Accuracy

A critical issue when using any test or measure in clinical practice or research concerns its accuracy. Almost all measures used in clinical practice are imperfect, whether they assess subjective or objective characteristics, and so the main concern becomes whether measures are sufficiently accurate to be useful for particular clinical or other purposes. The accuracy of many medical tests is very good, even though the sensitivity and specificity of other commonly used tests are less than desirable. The accuracy of psychometric measures is typically assessed by examining their reliability (i.e., their precision of measurement or reproducibility and repeatability) and their validity (i.e., whether they actually measure what they purport to measure or whether they are measuring the right thing). Many measurements in medicine and psychology have reasonably high levels of reliability but weaker evidence regarding their validity (e.g., blood pressure, cholesterol, and cardiac rhythms can be measured reliably, but their relation to disease is less clear; several psychiatric disorders can be diagnosed with reasonably high levels of reliability but the exact nature of particular disorders and their relation to neurophysiological dysfunction can be unclear).

Many measures of subjective well-being, affect, and eudaimonic well-being have reasonably strong evidence regarding their reliability. Reliability coefficients for many instruments indicate that they are clearly suitable for research purposes and can reliably be used to inform clinical assessments as well<sup>8</sup>. Establishing validity is generally more challenging than establishing reliability, particularly for measures of subjective psychological constructs. But even when there are no objective measures of QOL, meaning in life, or emotion to which to compare individuals' subjective judgments, these concepts are still critical to assessing health and wellness. Of course, this is true of many other variables in medicine and behavioral health, such as pain, energy, vitality, and many psychiatric symptoms, so this is not a new problem for healthcare providers and researchers. Ongoing research will clarify these issues but there is already ample evidence supporting the validity of these measures for informing our understanding of health and wellness<sup>8, 11, 16</sup>.

## Administration Issues

It is important when measuring complex variables such as health and well-being to adopt a consistent and standardized measurement approach in order to reduce bias and increase the comparability of results across individuals and groups. Particularly when assessing subjective variables, there are a variety of response biases and styles that can introduce error into individuals' responses, including a tendency to agree positively to questions, or to disagree, or to give the socially desirable answer that puts respondents in a favorable light. These response biases can be conscious or unconscious, and can occur whether people are responding to in-person interviews or to printed or computer-administered questionnaires. To minimize the effects of response bias, consistently employing a standardized approach across individuals is recommended. To reduce error further, it is generally important to use multiple-item surveys rather than single-item ones because measurement errors across items tend to cancel each other out.

When asking people about their life satisfaction or feelings, the reference period is another important consideration. Asking a person to rate their life satisfaction at the present time or over their whole life course

can cause measurement problems, so life satisfaction questions typically ask respondents about their lives in the recent past (e.g., “overall these days” is commonly used). When inquiring about one’s emotions, responses may vary significantly if one answers with regard to “right now” versus “yesterday” versus “the past month.” As a result, many emotion questions ask about feelings experienced yesterday or over the last 24 hours. Surveys that inquire about meaning and purpose in life typically include no reference period. Because asking about sensitive topics such as stressful life events may influence subsequent responses, it is generally recommended that questions about life satisfaction, emotion, and meaning and purpose in life are asked first. For some purposes, computerized administration can also be an ideal choice for these questionnaires<sup>8</sup>. The particular purpose of a measure will dictate how items are constructed and how the measure is administered, but in general it is important to remain consistent in one’s approach in order to maximize reliability and interpretability of responses.

An issue of growing importance in behavioral health treatment concerns measurement-based care<sup>17</sup>. This approach obviously has long been critical in the care of chronic medical conditions such as diabetes and hypertension, but consistently monitoring treatment progress to inform treatment planning has not been widely used in behavioral healthcare. The benefits and importance of measurement-based care for behavioral health are rapidly becoming evident, however. The quality, consistency, and accountability of behavioral healthcare can all suffer without consistently gathered patient-outcome data. Negative patient outcomes and deterioration in clinicians’ skills can be missed, as can the ability to demonstrate effectiveness and value to patients, insurers, and taxpayers. Measurement-based care can improve the therapeutic relationship and foster collaboration among care team members. But most importantly, it has the potential to improve treatment effectiveness, reduce symptoms, and improve QOL and well-being for patients. The assessment of symptoms has commonly been included in past measurement-based care approaches, but an important question at this point is the extent to which general functioning, quality of life, and wellness should also be regularly assessed to inform the effectiveness of treatment. This issue should receive more research attention.

Culture also needs to be taken into account when measuring well-being. Well-being can be understood very differently across cultures, and the role of family, religion, spirituality, community, and other factors can vary greatly. Clinicians and researchers need to be culturally sensitive and informed when assessing this construct, just as they must when working with all culturally and socioeconomically diverse populations. When working with older populations, wellness assessment often focuses on quality of life and reducing suffering on a day-to-day basis. At the other end of life, some believe that children as young as 11 can be reliably assessed for subjective well-being, though it is much more common to assess wellness in adolescents age 15 and over<sup>8</sup>.

## Discussion

The conceptualization and measurement of wellness are relatively new areas of empirical investigation, and so clinicians and researchers need to keep current with the evolving literature in this area. For example, resilience, or the ability to “bounce back” to a baseline level of functioning while facing stress, adversity, or trauma is a critical quality, but its relation to wellness is still unclear. For victims of trauma to go further beyond their baseline capacities to find benefit and reach even higher levels of functioning has been referred to as “posttraumatic growth”<sup>18</sup>. The relation of these concepts to wellness needs further investigation, but clearly they can be vitally important to recovery and health maintenance for many physical and mental health conditions.

Clinicians, researchers, and individuals in general are also advised to avoid assuming causation when correlations are found between physical health and subjective well-being. For example, it might be assumed that the correlation commonly found between positive emotion and strong physical health reflects the effect of positive emotions on promoting physical health. But current research has not yet advanced enough to rule-out

the possibility that stronger physical health leads to more positive emotion and well-being. More comprehensive biopsychosocial data and more longitudinal and neuroscience research are needed before causal conclusions can be drawn regarding these questions. It is perhaps likely that causation actually goes in either direction, and is perhaps also reciprocal, depending on individual biopsychosocial characteristics and circumstances. It may be some time before clear conclusions are reached regarding these questions.

Given that empirical research in this area is still in its early stages, it is also important to continue questioning the ways that wellness has been conceptualized. Ever since ancient Greeks debated the nature of wellness and the good life, Western discussions on the topic often revolved around the importance of pursuing pleasure (hedonism) versus a virtuous and excellent life focused on fulfilling one's potential (eudaimonia). But evolutionary theory suggests that both of these perspectives are likely incomplete because the ultimate goal of living organisms is survival and reproduction, not maximizing happiness, virtue, or fulfillment. If organisms with particular characteristics have greater reproductive success, they will leave greater numbers of descendants and their characteristics will eventually come to dominate in a population. At present, research suggests that the achievement of happiness, virtuousness, or fulfilling one's potential do not necessarily result in adaptive advantages and greater reproductive success<sup>18, 19</sup>. Hedonism and eudaimonia have long been central to discussions of the good life, but evolutionary research finds that humans are highly social animals very focused on a variety of social and other survival goals. As with everything else in the organic world, evolutionary theory has advanced our understanding of all the biopsychosocial dimensions of human life and has overturned conventional thinking regarding several aspects of human nature. This could happen with regard to wellness in human life as well.

## References

1. World Health Organization. *Constitution of the World Health Organization*. Geneva, World Health Organization; 1948.
2. MEP Seligman, M Csikszentmihalyi. Positive psychology: an introduction. *Am Psychologist* 2000; 55(1): 5–14.
3. G Engel. The need for a new medical mode: a challenge for biomedicine. *Science* 1977; 196: 129–136.
4. TP Melchert. *Biopsychosocial Practice: A Science-Based Framework for Behavioral Health Care*. Washington, DC: American Psychological Association; 2015.
5. J Holt-Lundstad, TB Smith, M Baker, T Harris, D Stephenson. Loneliness and social isolation as risk factors for mortality: a meta-analytic review. *Perspect Psychol Sci* 2015; 10: 227–237.
6. Cigna. New Cigna study reveals loneliness at epidemic levels in America. 2018. <http://cigna.newshq.business.com/press-release/new-cigna-study-reveals-loneliness-epidemic-levels-america>.
7. D Kahneman, A Deaton. High income improves evaluation of life but not emotional well-being. *PNAS*. 2010; 107: 16489–16493.
8. OECD. *OECD Guidelines on Measuring Subjective Well-Being*. Paris: OECD Publishing; 2013.
9. JE Ware, CD Sherbourne. The MOS 36-item Short-Form Health Survey (SF-36): I. Conceptual framework and item selection. *Med Care* 1992 30(6): 473–483.
10. WHOQOL Group. The World Health Organization Quality of Life Assessment (WHOQOL): development and general psychometric properties. *Soc Sci Med* 1998; 46(12): 1569–1585.
11. SJ Heintzelman, LA King. Life is pretty meaningful. *Am Psychologist* 2014; 69: 561–574.
12. RF Baumeister, MJ Landau. Finding the meaning of meaning: emerging insights on four grand questions. *Rev Gen Psychol* 2018; 22: 1–10.
13. ED Diener, RA Emmons, RJ Larsen, S Griffin. The Satisfaction with Life Scale. *J Personality Assess* 1985; 49(1): 71–75.
14. PJ Cooke, TP Melchert, K Connor. Measuring well-being: a review of instruments. *Counsel Psychologist* 2016; 44 (5): 730–757.

15. M Linton, P Dieppe, A Medina-Lara. Review of 99 self-report measures for assessing well-being in adults: exploring dimensions of well-being and developments over time. *BMJ Open* 2016; 6: 1–16.
16. SA Hooker, KS Masters, CL Park. A meaningful life is a healthy life: a conceptual model linking meaning and meaning salience to health. *Rev Gen Psychol* 2018; 22: 11–24.
17. JC Fortney, J Unützer, G Wrenn, et al. A tipping point for measurement-based care. *Psychiatric Serv* 2017; 68(2): 179–188.
18. W von Hippel. *The Social Leap: The New Evolutionary Science of Who We Are, Where We Come From, and What Makes Us Happy*. New York: Harper Wave; 2018.
19. R Wrangham. *The Good Paradox: The Strange Relationship Between Virtue and Violence in Human Evolution*. New York: Pantheon; 2019.