

Health and Well-being from a Psychological Perspective

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1 Introduction

Health and well-being are concepts of high contemporary interest, locally, nationally and globally (Anderson et al. 2012). Yet, at the same time, their conceptualizations, and related to this, their operationalisation and assessment as well as their relationship to each other remain highly contested in the literature (McAllister 2005). Historically, the Romans equated concepts of health and well-being, while the ancient Greeks distinguished between them, understanding good health to be a necessary, but not in itself sufficient, component of *eudaemonic* well-being. *Eudaemonic* in this context refers to human flourishing and realisation of potential, in contrast to *hedonic* well-being, which refers to pleasure, avoidance of pain and happiness (Ryan and Deci 2001; Carlisle et al. 2009). In 19th century utilitarianism, and in 20th century liberalism and socialism the debate focused on well-being alongside and arguably beyond the economic and material needs of individuals (Bacon et al. 2010).

These considerations are not only of theoretical interest for these concepts, but have practical implications for their operationalisations in terms of assessment methods. It follows from this range of concepts for both health and wellbeing, that there is a similarly wide range of different assessments. In this chapter we provide a description, clarification and integration of these concepts from a Psychology perspective, highlighting areas that need further development and

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outlining complementary assessment approaches. Though overlapping in very many aspects we argue that health and well-being are related but nevertheless distinct concepts, which are operationalised and assessed accordingly.

2 Conceptual Issues

2.1 Health

In 1946 the World Health Organisation defined health as a "complete state of physical, social and mental well-being, and not just the absence of disease or infirmity" (WHO 2009; p. 1), thus establishing a close relationship between the two concepts. This definition has remained almost unchanged over the last 7 decades, but has attracted criticism since, especially in view of the fact that an ever-larger proportion of the world's population reach an age at which multi-morbidity is the rule rather than the exception (Barnett et al. 2012). As a consequence of our aging societies, therefore, fewer and fewer people would be considered "healthy" according to this definition, thereby rendering it diagnostically obsolete and stigmatizing.

In contrast to the WHO definition of 1946 the focus has shifted from health as a state of complete physical, mental and social well-being to one of health as the capacity to adapt and to self-manage when facing physical, mental and social challenges (Huber et al. 2011). This applies to us both as individuals and as members of a community. Health in general is increasingly understood as the ability of an individual or community to adapt and to self-manage, even in the face of adversity, e.g. chronic disease or disability (Huber et al. 2011).

This new conceptualization of health has some important implications. Firstly, it illustrates the limitations of the "diagnose-and-fix" approach that still dominates most health care systems throughout the world, and helps to recognize that such an approach is of value only to a small fraction of people who face acute, curable conditions. Secondly, if health is understood as the ability to adapt and to self-manage, many new interesting possibilities emerge. A key one is that it is possible for health and disease to co-exist. In other words, it is possible to be ill and healthy at the same time.

Support for this view comes from a number of studies suggesting that most people, including seniors living with multiple chronic diseases, consider themselves to be healthy. For example, a Canadian survey of over 3000 people aged 65 years or older (Terner et al. 2011) illustrates this point clearly, as it showed that 86% of those with one chronic disease, 77% of those with two diseases and 51% of those with three or more regarded their health to be good,

very good or excellent. These findings have been replicated several times in quality-of-life studies that include self-assessments of health. In addition, self-rated health seems to be related to mortality: a meta-analysis of 22 cohort studies revealed that individuals who rated their health as "poor" had a two-fold higher mortality risk compared with those who considered their health as "excellent" (DeSalvo et al. 2006). An Australian study goes even further, by showing not only that most people (62%) living with advanced incurable cancer consider their health to be good or better, but also that their self-assessments are the best predictors of their survival (Shadbolt et al. 2002).

A third consequence of this paradigm shift concerns the (re-)organization and (new) focus of health care systems. As a result of the dramatic increase in life expectancy in the 20th century, there is a shift towards chronic, incurable diseases, which now account for most of the morbidity and mortality worldwide. With the rising prevalence of multiple chronic diseases, challenges for health care systems rise that are much more than the sum of the consequences of each of the individual conditions. The needs of those with multiple conditions cannot be met through diagnostic tests, curative interventions, or health care services that are focused on individual organs (e.g., cardiology), systems (e.g., gastroenterology) or diseases (e.g., cancer). Instead, services are required that enable a holistic view of people, that are responsive to the culture context, and that are sensitive to unique individual needs and, therefore, deliver personalized care at the individual level (Phillips and Vögele 2015). Responsible and integrated services are needed that take into account not only physical, but also mental, spiritual and social needs. There is an urgent need for sustainable support systems that enable a full life. The increasing number of people worldwide who live with multimorbid conditions emphasizes the realization that it is not enough to put more years into lives, but that it is essential, and perhaps even more important, to put more life into years.

2.2 Well-being

While individual well-being seems to be included in these conceptualisations of health, it is widely acknowledged that the two constructs are related but distinct. Even if health is conceptualised as the ability to self-manage and adapt, it can be assessed at the physiological, emotional, cognitive and behavioural level. In contrast, well-being emphasises the experiential aspect, which describes a feeling that is often referred to as "subjective well-being" (SWB). SWB is, therefore, primarily a psychological construct as it is concerned with people's evaluation of

their lives; however, it includes a wide range of notions, from momentary moods to global life satisfaction judgments.

Well-being is also of increasing importance as a concept in public health (Dooris et al. 2018; La Plaza and Knight 2014). This perspective not only considers well-being as a matter of individual lifestyle and its subjective experience, but also its wider contextual determinants (Aked and Thompson 2011; Huppert, 2009). McNaught (2011), for example, considers health as only one component of well-being, and proposes a definitional framework comprising individual, family, community and society levels. He defines well-being as a "macro concept concerned with the objective and subjective assessment of how human beings survive, thrive and function" (p. 11).

There is a growing debate on the relationship between individual, collective and ecological well-being (Dooris et al. 2018). One aspect of this debate concerns the question to what degree the pursuit of personal well-being (particularly when defined in hedonic terms) threatens well-being of communities, societies and the ecosystems on which we depend (Carlisle 2009). Jones-Devitt (2011) takes this argument further by raising the question whether a valid commitment to well-being can be entered in a globalised neo-liberal ideology, which prioritises individual self-interest.

The increasing use of well-being as a core concept in public health is related to a number of factors, including the growing acknowledgment of mental health as a key element of health in general (Prince et al. 2007), the shift of public health to local authorities, and the establishment of health and well-being boards (HM Government 2010).

2.3 Health and Well-being: A Proposed Synthesis

Based on the definition proposed by Huber et al. (2011), health could be considered fundamentally as a mental phenomenon that can only be assessed in the presence of a challenge. Because of its reactive nature, the reformulation of health as "the ability to adapt and to self-manage" opens the door for the concept of wellness as its proactive complement, which reflects our ability to fulfil our personal and collective human potential, and to pursue a joyful life.

From this perspective, health and wellness, as complementary entities, would constitute the conceptual building blocks of well-being, which is conceived of as a state, not an ability. Its building blocks, which are already built into the word, contain its meaning: being well.

3 Operationalisation and Assessment

3.1 Health

3.1.1 Mental Health

Self-report health assessments and diagnoses (i.e. excluding medical examinations) are carried out using interviews and questionnaires that determine the presence, severity, frequency, and duration of a broad range of mental and physical symptoms, and health-related behaviours. From a psychological perspective this concerns mainly mental symptoms and conditions, as reflected in a classification system such as the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (American Psychiatric Association 2013), which pre-defines mental health symptoms, and groups them into nosological entities. In contrast to the DSM-5 the International Statistical Classification of Diseases and Related Health Problems (ICD-11) (World Health Organization, 2018) also includes physical symptoms and disorders. Nevertheless, in terms of mental disorders both classification systems have converged ever since their respective inceptions (DSM: 1952; ICD: 1900), so that they are now almost identical concerning diagnostic categories, with very few exceptions.

Assessment tools to explore and quantify mental symptoms range from structured clinician-led interviews typically used to make a formal clinical diagnosis (e.g., SCID) (First et al. 2016), to more quantitatively designed questionnaires (e.g., PHQ-9) (Spitzer et al. 1999) that provide multidimensional assessments of symptom experience and severity to support diagnosis and treatment evaluation in clinical practice and research. Both approaches are, therefore, used in clinical practice and also in the investigation of underlying aetiologies and treatment efficacy and effectiveness in clinical trials and other studies.

A closer inspection of this array of mental health assessment reveals a large range of interviews and questionnaires available for use. This diversity of choice means that there is no shortage of options when searching for assessment tools for clinical use or research. This diversity, however, can also make it difficult to decide which questionnaire(s) or interview(s) to select for clinical diagnosis or evaluation. For example, there have been more than 280 different questionnaires developed over the last century to assess symptoms of depression (Santor et al. 2006), which differ in terms of which version of the DSM they align to, the degree to which they consider co-morbid symptoms, whether they are computer-or paper-based, and whether they are self-rated, parent-rated or clinician-led. Knowing which questionnaire to choose to obtain a suitable assessment of an

individual's mental and physical health is, therefore, not always a straightforward exercise for even the most experienced researcher or clinician. As a consequence, diagnoses may differ dependent on the assessment method used thus introducing variability and inconsistency between clinicians (Wisco et al. 2016). This heterogeneity of assessment options also hampers progress in research, as different assessment methods render study results potentially incomparable.

A recent analysis of the most commonly used assessment tools to diagnose and screen for the most prevalent mental health conditions illustrates this issue (Newson et al. 2020). Altogether 126 different questionnaires and interviews were included in the analysis, which demonstrates substantial inconsistency in the inclusion and emphasis of symptoms assessed within disorders as well as considerable symptom overlap across disorder-specific tools. Furthermore, there were large differences in assessments in terms of emphasising emotional, cognitive, physical or behavioural symptoms, adding to the heterogeneity across assessments. Analysis of other characteristics such as the time period over which symptoms were assessed, as well as whether there was a focus on frequency, severity or duration of symptoms also varied substantially across assessment tools. In summary, this analysis underscores the need for standardized assessment tools that are more disorder agnostic and span the full spectrum of mental health symptoms to aid the understanding of underlying aetiologies and the improvement of treatments for mental disorders.

3.1.2 General Health

Over and beyond self-report measures of mental health, self-report measures of general health play an important role in social, behavioural, and health studies. Results over decades of research suggest that self-rated health is strongly associated with both physical, and mental and cognitive health (Latham and Peek 2013; Mavaddat et al. 2014; Singh-Manoux et al. 2006; Schnittker 2005), and shows a graded relationship with many clinically-relevant biomarkers, even at "subclinical" levels not directly associated with increased health risk (Goldman et al. 2004; Jylhä et al. 2006).

While the precise nature of the processes underlying self-reports of individuals' overall health remains unknown (Jylhä 2009), many researchers justify their use of these measures with the strong predictive validity of self-report health measures for poor health and early mortality across many surveys, populations, and sociodemographic groups, often over and above the potential influences of more "objective" health conditions or diagnoses (Dowd and Zajacova 2007; Franks et al. 2003; Singh-Manoux et al. 2007). In addition, self-report measures of health are easily implemented in large-scale studies and in

clinical practice. Nevertheless, the widespread use of measures of self-reported health is not commensurate with our knowledge of its measurement properties (Grol-Prokopczyk et al. 2011; Hardy et al. 2014; Idler and Cartwright 2018), in particular their validity and reliability. For example, self-report measures of health are subject to self-report bias (e.g. social desirability, self-concept etc.). It could be argued, for example, that answers to questions concerning health behaviours and anthropometric characteristics, for example alcohol consumption and body weight, respectively, reflect the respondent's beliefs about number of drinks per week or weight, rather than their "actual" alcohol intake or body weight (sensu "meta-cognitive beliefs": Lenzo et al. 2020; Wells and Purdon 1999), thus questioning the validity of self-report measures of health. In addition, the reliability of self-reported health measures has received relatively limited attention (Boardman 2006; Zajacova and Dowd 2011), as the majority of studies use such items without considering measurement error. In a recent analysis of data from the National Longitudinal Study of Adolescent to Adult Health Study (Add Health) (Bollen et al. 2021) the authors report estimates for the measurement reliability of self-reported health relative to proxy assessments and respondents' recollections of past health. The best indicators—contemporaneous self-reports—had a modest reliability of only 0.6, with retrospective and proxy assessments being even lower, with reliability less than 0.2. Not correcting for measurement error led to a 20-40% reduction in the correlation of self-reported health with other measures of health. Considering the substantial measurement error of self-reported health assessments is, therefore, crucial for the correct interpretation of results obtained with such measures.

3.1.3 Complementary Assessment Approaches

If there is justified interest, the necessary resources are available, and feasibility is provided, self-report measures of health can be complemented by assessments at other levels such as behavioural observations and psychophysiological assessments, both in experimental and clinical settings. Such direct observations of behaviour and/or physiological responses, mostly to selected and standardized challenging situations and paradigms, can provide data un-affected by social desirability and self-concepts and contribute to a better understanding of underlying mechanisms (Vögele 1998). Based on the definition of health as described previously in this chapter, i.e. as "the ability to adapt and to self-manage", the operationalisation and assessment of health as a response to a defined challenge gains more importance, in contrast to the assessment of health as a more general and stable trait. Nevertheless, non-self-report measures are not

more "objective" than self-report ones, in that there are no true or false responses, but only different observation levels, which ideally complement each other in providing a comprehensive assessment of health.

3.2 Well-being

Subjective well-being (SWB) refers to the various ways in which people experience and evaluate their lives positively (Diener et al. 1999). It includes feelings of pleasant or positive affect (PA), and feelings of unpleasant or negative affect (NA). Together, PA and NA constitute the *affective components* of SWB. In addition to affect, evaluations of life (e.g., life satisfaction) are also important. In contrast to affective experiences evaluations often require reflection on circumstances and standards. Assessment of life satisfaction or life evaluation are, therefore, called the *cognitive component* of SWB. Though the affective and cognitive components are often correlated with each other, they are also associated with different outcomes (Tay and Diener 2011). Thus, the assessment of SWB, ideally involves the measurement of these components separately (Pavot 2008).

SWB is sometimes referred to as hedonic well-being because of its emphasis on a pleasant and satisfying quality of life (Tov 2018). This contrasts with eudaemonic well-being, which includes a variety of constructs like meaning, personal growth, and authenticity (Huta and Waterman 2014; Vittersø 2016). Concepts of eudaemonic well-being focus less on the pleasantness of experience, but more on the needs that people must fulfil to reach their full potential. In contrast, the SWB approach does not specify the "ingredients" required for well-being. The assessment of SWB is subjective in the sense that people report their own happiness and satisfaction without reference to any particular template of life conditions or experiences. Instead, they assess their well-being using whichever standards are personally relevant and important to them. As discussed in the previous section on measures of self-reported health, the distinction between subjective and objective does not imply that one is more true than the other, but simply refers to the level of observation.

As is the case for self-report measures of health, SWB measures are associated with important outcomes, despite a lack of knowledge of the mediating mechanisms or factors. For example, higher levels of life satisfaction and PA predict lower susceptibility to health problems and increased longevity, whereas higher levels of NA tend to predict poorer health outcomes (Diener et al. 2017). Self-reports of well-being provide valuable information beyond objective economic indicators in the evaluation of social and economic policies (Diener and Tov 2012).

There is a range of measures that have been used in the assessment of SWB. Tov et al. (in press) provide a review and meta-analysis of the reliability and validity of the four most commonly used measures of SWB (two cognitive and two affective), based on studies published between 1999 to 2019, and, therefore, with a strong empirical foundation: the Satisfaction with Life Scale (SWLS; Diener et al. 1985), which is a widely used measure of global cognitive well-being; Cantril's ladder or The Self-Anchoring Striving Scale (Cantril 1965; Kilpatrick and Cantril 1960), which requests respondents to evaluate their life according to their own goals, values, and standards; the Positive and Negative Affect Schedule (PANAS; Watson et al. 1988) consisting of two 10-item scales, focusing on positive and negative states; and the Scale of Positive and Negative Experiences (SPANE; Diener et al. 2010), consisting of 12 items with six items each measuring PA (SPANE-P scale) and NA (SPANE-N scale).).

The SWLS, PANAS, and SPANE generally exhibited acceptable levels of reliability (alphas>.80) across most samples, time frame instructions, and age groups. All measures were substantially correlated with each other. However, SWLS was more strongly correlated with SPANE-P than with PANAS-PA.

3.2.1 Complementary Assessment Approaches

Although this analysis (Tov et al., in press) provides a good foundation for the further use of these scales to assess SWB, SWB measures share the same shortcomings with self-report measures of health in that they are open to reporting biases, e.g. recall bias etc. To reduce recall biases, for example, methods for assessing online affect are increasingly popular. For example, the experience sampling method (ESM) makes use of handheld devices (e.g., smartphones) to survey people on how they are feeling at randomly selected or predefined moments during the day (Trull and Ebner-Priemer 2014). Another approach concerns the Day Reconstruction Method (DRM; Kahneman et al. 2004), in which respondents recall the events they experienced the previous day and rate how they felt during these events. These developments have good potential to overcome some of the limitations of traditional questionnaire-based assessments, but they come with their own challenges and complex problems, that require significant advance planning and numerous decisions on the part of the researcher. On the one hand, and as in other studies, power and samplesize calculations are required (although rarely reported; Trull and Ebner-Priemer 2020; van Roekel et al. 2019), but these are made more complex in ESM research because of the multilevel nature of the data (Bolger et al. 2012). In addition, the use of ESM methods raises considerations regarding item selection, psychometrics, and analytic strategy (Wright and Zimmermann 2019).

Furthermore, ESM methods put considerable burden on the respondents as they are prompted several times per day to respond to questions, thus increasing risk of attrition and affecting the very phenomenon under investigation by the method of investigation (sensu Heisenberg's uncertainty principle; Stamm 1985), which can be experienced as intrusive. The DRM, on the other hand, might be less burdensome on respondents than ESM, and might reduce memory biases that are inherent in global recall of feelings. Nevertheless, evidence for the validity and reliability of the DRM is limited and is not entirely supportive (Diener and Tay 2013). For one of the first direct comparisons between ESM and DRM, see Lucas et al. (2021).

4 Summary and Outlook

Concepts of health and well-being have evolved ever since ancient Greek and Roman history. Based on new approaches, which define health as the ability to adapt and manage even in the face of adversity (Huber et al. 2011), the concept of wellness can be understood as its proactive complement, which reflects our ability to fulfil our personal and collective human potential, and to pursue a joyful life. From this perspective, health and wellness, as complementary entities, would constitute the conceptual building blocks of well-being, which is conceived of as a state, not an ability.

These considerations not only have theoretical but also practical implications in terms of the operationalisation and assessment of these concepts. Non-medical assessments of health include interviews and questionnaires that determine the presence, severity, frequency, and duration of a broad range of mental and physical symptoms, and health-related behaviours. Self-reported (also called "subjective") health has been shown over decades of research to be strongly associated with both physical, and mental and cognitive health, although the mechanisms underlying these associations remain elusive. Despite their strong predictive validity for poor health and early mortality, the validity and reliability of measures of self-reported health is only modest, even for the best indicators. The same seems to hold for self-assessments of well-being (also called "subjective well-being", SWB). Similar to self-reported measures of health, SWB measures are associated with important outcomes, despite a lack of knowledge of the mediating mechanisms or factors. In a similar vein, SWB measures share the same shortcomings with self-report measures of health in that they are open to reporting biases, e.g. recall bias etc. Complementary approaches that reflect the reactive nature of the new definition of health include observations at behavioural

and physiological levels to standardized challenges; in terms of well-being these concern methods for assessing online affect such as the experience sampling method (ESM) and the Day Reconstruction Method (DRM), with the advantage that they reduce recollection bias and the risk of assessing meta-cognitive beliefs rather than well-being itself.

It should be noted that both measures of health and well-being are denoted "subjective" in the literature in the sense that assessments are made without reference to any particular template of life conditions or experiences. Instead, respondents are asked to assess their own health and well-being in terms of whichever standards are personally relevant and important to them. As the term "subjective" is not supposed to imply that these measures are less true than "objective" measures, it stands to reason that this distinction is somewhat misleading. Alternatives to "subjective health" or "subjective well-being" that avoid such misinterpretations, could be terms such as "personal health and well-being" or "individual health and well-being", thus emphasising the personal assessment context without implying false notions of "true" (sensu "objective") versus "imagined" (sensu "subjective"). After all, health and well-being should be understood as private experiences, and not as objectifiable states, as purported by a medicalised health system for the last centuries.

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