

SPECIAL COMMUNICATION

Health, Functioning, and Well-being: Individual and Societal



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Abstract

As a society we invest an enormous amount of resources in health because we are convinced that health is linked in some way to a person's well-being, and that population health is linked to overall societal welfare. But the nature of this link, and the evidence for it, are more controversial. After exploring current attempts to operationalize well-being in a manner amenable to measurement, in this article we offer a way for securing the link between the provision of health care and individual well-being, and societal welfare by highlighting what matters to people about their health. We argue that it is the lived experience of health and its effect on daily life that matters. This experience is captured by the notion of *functioning* in the World Health Organization's International Classification of Functioning, Disability and Health. Moreover, viewed as an indicator of health on par with mortality and morbidity, functioning provides the essential bridge that links the provision of health care both to individual well-being and, at the population level, societal welfare.

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Introduction: health and well-being

It is reasonable to believe that a person's state of health plays some role in his/her overall well-being. After all, we spend a huge amount of social resources on the health sector because we are convinced that health makes life and living better, for the individual and for the society at large. The World Health Organization's (WHO) famous 1948 definition of health went much further than this and insisted that health is both a necessary and sufficient condition for well-being.¹ Researchers since then have more cautiously suggested that there is a positive association between a person's state of health and his/her well-being, and that at the population level it is plausible to argue that societal welfare depends on the provision of health care and public health interventions. What is less clear is why this is so, and what evidence we have for it. Since the enormous institutional investment every society makes to provide health care to its population ultimately depends on the assumption that health contributes to individual well-being, not being able to secure this linkage, conceptually and quantitatively, is troubling. In this article we suggest that we have

the conceptual means for making this link and providing the information to quantitatively substantiate it. We argue in particular that information about the lived experience of health—or functioning—captures the link between health and well-being.

In what follows we make the case for the need of an indicator of health that can be used to measure what is important to us about our health, introduce the concept of functioning as that indicator, and, finally, show how functioning can clarify, conceptually and quantitatively, the link between health and well-being. But first, to avoid potential confusion, it is important to separate different uses of the term *well-being* and to distinguish well-being from *welfare* for the purposes of this article.

Well-being and welfare

International and national agencies agree that health is, or is at least, one of several determinants of well-being. The Organization for Economic Co-operation and Development's multiyear Better Life Initiative, for example, conceptualizes well-being in terms of material living conditions, the sustainability of socioeconomic and natural systems, and quality of life. Health shares this last category with 6 other determinants: (1) work and life balance; (2) education; (3) civil engagement; (4) social

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connection; (5) environmental quality; and (6) personal security and subjective well-being.^{2,3} The Human Development Index, often used as a proxy for aggregate population well-being, by contrast conceptualizes well-being as comprised of 3 dimensions: a long and healthy life, knowledge, and a decent standard of living.⁴ At the United Nations, both the Millennium Development Goals⁵ and their successor, the Sustainable Development Goals, identify health as essential for development and human well-being. The Sustainable Development Goals explicitly state this with goal 3: “Ensure healthy lives and promoting well-being for all at all ages.”^{6(para.2)}

Although these are, fundamentally, purely aspirational assertions, they do have a measure of academic and scientific support. Generally speaking, although there is little agreement about the precise composition of individual well-being (or what makes a life go well for an individual⁷) no proposed account fails to include health as a component or determinant. Following a tradition that goes back to Aristotle, academics divide well-being into 3 nonoverlapping dimensions including objective well-being and 2 forms of psychological well-being, namely, subjective well-being and eudemonic well-being (meaningfulness, human flourishing). The currently favored account of subjective well-being identifies 2 related subcomponents, positive affect and cognitive evaluation, or life satisfaction.⁸ Psychologist Carol Ryff has characterized eudemonic well-being in terms of the psychological factors of self-acceptance, personal growth, purpose in life, and autonomy.⁹

Turning to the literature on objective well-being, the most influential theoretical account is the capability theory of Amartya Sen and Martha Nussbaum.¹⁰⁻¹³ A capability, for Sen and Nussbaum, comprises the provision of all preconditional individual abilities and external resources required to provide an individual with a realistically realizable opportunity to achieve a life goal.¹⁰ A capability, in other words, is an objective opportunity that embodies all necessary preconditions for its achievement. For both Sen and Nussbaum, health (and health-related factors such as normal lifespan, good nourishment, emotional resilience, and cognitive abilities) is firmly part of the set of capabilities essential for an objectively good life. Conceptualized as a capability, moreover, health incorporates the societal resources required to optimize or preserve individual health. Other capability theorists go further and claim that health is a *master capability*, in the sense that health is not only itself a human good, but it instrumentally makes it more likely that the individual can achieve other valuable things in life, such as productivity, security, and supportive relationships.^{14,15} In a similar vein, philosopher Norman Daniels has argued that health is an essential component of individual well-being because it is instrumental for any goal or value the individual wishes to pursue in life.¹⁶

As with individual well-being, be it subjective or objective, there is rough agreement that population health is an essential component of the sphere of the public good, or what makes life in a society go well. Although there is no consistent vocabulary here, it is helpful to call this societal welfare to clearly distinguish it from individual well-being. The distinction is implicit in an account recently been enunciated by the Centers for Disease Control.¹⁷ The Centers for Disease Control first characterizes individual well-being in very

broad, subjective terms, “...types of positive experiences of people’s daily lives—the quality of their relationships, their positive emotions, resilience, and realization of their potential.”^{18(p.2)} They then argue that individual well-being in this sense is an appropriate public health outcome in the aggregate, because it contributes to the overall good of the society at large. In other words, the universal provision of health care and public health are a public good that contributes to health, which in turn has an effect on individual well-being across the population thereby enhancing overall societal welfare.

If this distinction between individual well-being—objective and subjective—and societal welfare can be sustained, the literature makes it clear that there is overwhelming agreement that health contributes to, or is a component of, both notions. For our purposes here this agreement is good enough as a place to start. We now turn to the health determinant of individual well-being and societal welfare in the key notion of *functioning*.

Operationalizing health

To explore and provide a sufficiently robust evidence base for whatever associations there may be between health and individual well-being and societal welfare, it is important to operationalize health for measurement purposes. Agreeing beforehand on a single, universal definition of health has proven to be difficult, and, given that the term has a wide variety of different but equally legitimate connotations, probably unnecessary as well.¹⁹ But making sense of associations between health and well-being and welfare require us to set the stage for measuring these associations, and that requires the initial step proposing a workable operationalization of health for measurement purposes.²⁰

To do this sensibly we need to start with biological functions and structures. Fortunately, there are a myriad of clinical tests and instruments for measuring these items. Yet for these functions and structures, health is understood as an intrinsic state of the person’s body and mind. Intuitively, health is also more than that. Our state of health matters to us because it affects our lives and our actions. When we experience pain, anxiety, weakness, tight joints, or skin sores it directly affects how we live our lives. We find it difficult to climb stairs, walk as far as we used to, clean or dress ourselves as quickly as we need to, read a book, make and keep friends, do all our housework or perform our job as expected. When these kinds of limitations are associated with how our bodies and minds function—our biological health, so to speak—health matters to us as a lived experience.

To adequately measure a person’s health, therefore, we need to be able to measure not only our biological state of health, including pathologies and injuries, but also what matters to us about our health— aspects of the lived experience of our health.²¹ But this is no easy matter and indeed many researchers have seen this as the stumbling block to measuring the effects of health on well-being. This assumes that we can capture, with existing instruments, what the WHO helpfully calls the *intrinsic capacity* of the body.²² How can we capture the *lived experience* of health; what is our indicator? What exactly are we measuring here?

Measuring what matters to us about our health

Classical epidemiology tells us that mortality and morbidity are the indicators of health states. However, this is an unsatisfactory

List of abbreviations:

ICF International Classification of Functioning,
Disability, and Health
WHO World Health Organization

solution. Although premature death matters to us, and specific disease symptoms affect our lives, in the end what matters to us about our state of health is how our lives are affected—that is, the lived experience of health. The lived experience is an experience of an objective phenomenon, and that is important. We may not care whether we can walk, it might not bother us at all, we might, in short, appraise that condition neutrally, or even positively. But to operationalize health we need an objective indicator, one that will allow us to disclose the relationship between our health and our well-being.

Traditionally, health practitioners and researchers have turned to the somewhat open-ended and vague notion of *quality of life* to capture the objective phenomenon of health not captured by mortality and morbidity. But, not only is there no consensus about the components or domains of quality of life (that is, what we are measuring), but more fundamentally, quality-of-life instruments invariably get bogged down in a confusion between the objective state of health of an individual and the individual's subjective appraisal of that state. It is time for a different approach. We require a new objective health indicator.

The need for a health indicator that moves beyond mortality and morbidity has become more urgent because of dramatic demographic and epidemiological trends that are changing, or soon will change, the face of health care. As a result of the groundbreaking 1978 Declaration of Alma-Ata, 4 health care strategies are now widely recognized. These include promotion, prevention, cure or treatment, and rehabilitation. The WHO has more recently added palliation to that list.^{23,24} Although each health strategy is essential for an effective working health system, arguably it is rehabilitation that is best suited to meet the challenges created by demographic and epidemiological trends.

Rehabilitation primarily seeks to restore a person's ability to function in day-to-day life. It does this by ameliorating the effect of the reduction in biological capacity, by minimizing further effects of diseases, injuries and aging, and by providing assistive devices and other supports that can replace lost function or enhance residual function in mobility, sensory, communication, and other domains of daily life. The focus of rehabilitation is on living with a health problem, especially one that is chronic, incurable, and progressively debilitating. Because of this, rehabilitation can be seen as the health strategy for the 21st century, one that can meet the societal challenge of population aging and increased prevalence of chronic health problems.²⁵

Coming fully circle, given its primary objective, rehabilitation outcomes are not fully captured by the standard health indicators of mortality and morbidity. To be sure, rehabilitative interventions may well extend a person's life, and reduce disease symptoms, but the primary objective is to improve the person's lived experience of health, not merely adding years to life but life to years. To capture this information, we require an additional health indicator, one that describes the phenomenon of interest both in terms of biological health and lived health. That indicator is functioning.

Functioning, the WHO's third indicator of health

Health information has traditionally been understood as primarily biomedical, since health is a matter of the human body and the biological sciences provide the essential theoretical basis, vocabulary, and evidence base for describing the human body. This is the sort of information that the WHO mandated to collect,

internationally comparable health information, collected in terms of the International Classification of Diseases.²⁶ This information was used to monitor mortality and morbidity internationally, and was the primary input into national reimbursement systems such as diagnostic related groups. In recent decades, the WHO has insisted that, however essential this kind of health information is, there is another body of health information that is equally important across all components of the health system, including public health, and it provides a more complete and realistic understanding of health. This is information about how the state of a person's health plays out in one's daily life—the lived experience of health.

This body of health information was formally acknowledged with the endorsement in 2001 of the WHO's International Classification of Functioning, Disability and Health (ICF) and the introduction of the technical term *functioning* (capturing a notion familiar in rehabilitation literature in phrases such as functional state, gain, loss, or limitation, functional (in)capacity, and functionality).²⁷ In the classification itself—primarily for ease of use and the need to maintain distinctions that are familiar to health practitioners—a *body-person-society* distinction is assumed and the major classification dimensions are labeled, *Body Functions and Structures, Activities, and Participation*. This terminology is primarily heuristic and not conceptually grounded. There is an underlying model of the ICF that is conceptually clearer in its distinctions and preferable for our task here as it provides a coherent understanding of this key term *functioning*.

In this underlying model of the ICF, functioning is understood both biomedically, in terms of the functions and structures of the body and the resulting intrinsic health capacity of a person to perform simple or complex activities, as well as the actual performance of those activities in interaction with features of the person's physical, human-built environment, and social environment. In other words, functioning comprises the domains of both biological health and lived health. Lived health is fully contextualized, in the sense that it is an outcome of interactions between a person's intrinsic capacity and features of the environment. Hence, in the ICF, the experience of lived health is determined both by the intrinsic biological health state and the overall physical and social environment in which that person lives. Information about the level of performance of activities, though more complex and socially constructed, is what needs to be collected to describe, measure, and ultimately explain the interaction between a person's biological health and the environment. Although the ICF is somewhat vague on this point, the notion of disability might best be thought of as some degree of problem or limitation in a person's actual performance of some daily activity, or in the nature or quality of participation in some social activity or role, that results from the person-environment interaction.

Functioning, in this ICF sense, is an indicator of health.²⁸ Although people are concerned about how long they will live and the diseases and other health conditions they have, what really matters to us about our health is what we can and cannot do in our real-life situation—our functioning. If functioning matters to all of us individually, then it stands to reason that epidemiology could profit from an indicator of what matters about the health of each member of a population, taken collectively. As an indicator, functioning summarizes information about biological and lived health in interaction with features of the person's environment. The classifications in the ICF—and the underlying conceptual model—therefore provide us with a complete operationalization of functioning.

The societal challenge of health and information about functioning

The societal challenge posed by the demographic and epidemiological trends described above can be reframed as an investment in health care services that not only reduce mortality and morbidity, but also optimize functioning across the population. The ICF provides us with a conceptually stable and fully operationalized indicator of functioning, in the first instance, this challenge requires the standardized reporting and routine collection of functioning information across the lifespan and at every stage in the continuum of care.²¹

This is a prerequisite for the successful application, not only of the health strategy of rehabilitation but for all the other health strategies. The primary goal of prevention at the population level is to prevent the occurrence of health conditions and premature mortality by targeting risk factors, both environmental and personal behaviors. Although often monitored in terms of years of life saved from premature mortality, when reported in terms of biological health, functioning is also a relevant indicator for prevention. Health promotion aims to improve people's intrinsic health, primarily by targeting risk factors, but its outcome can be best measured in terms of the effect on lived experience. The curative or treatment strategy is most clearly focused on survival, both in the context of acute and chronic health conditions and for this reason the key indicator for cure is mortality. At the same time, cure is also a matter of optimal management of a health condition and the minimization of complications and comorbidities, therefore, information about morbidity is also relevant. Finally, the aim of the palliative strategy is to optimize well-being in the context of dying and functioning contributes to this goal, if not directly, then as a proxy indicator.

The standardized and comparable reporting of data about biological and lived health will improve clinical decision making, clinical quality management toward continuous improvement of health outcomes of individual services, and benchmarking across services and programs. Comparable health data of this sort is basic for continuous improvement of national health systems at all 3 levels of the health system—policy and programming; service delivery and financing; and clinical practice.²⁹

When it comes to measurement of functioning, the issue becomes considerably more complex. The measurement of biological health is no easy task, but it theoretically can be more manageable using agreed-upon clinical and other measurement tools, with metrics that can be validated clinically. By contrast, the lived experience of health is dependent on context, which includes where the person lives and acts, the climate, the way the houses are built, people's values and attitudes, social customs and beliefs, and economic and political structure. Given this, how could there be a universal, context-free, measure of the lived experience, or in ICF terminology, the construct of performance?

Recent work has seen important advances in this area. With sufficient data, there are statistical techniques that can be used to construct metrics of functioning for specific domains or sets of domains (eg, concerning mobility) or specific health conditions, settings and populations. In practice, these metrics can be constructed and used for clinical practice and epidemiology, and, eventually, for policy purposes. There is no doubt that this is an emerging and extremely challenging area of health measurement, and there is a long way to go before we have any confidence in a constructed universal lived health metric that has suitably interval scale characteristics.

Functioning, the health indicator for individual well-being and societal welfare

If we are optimistic about the prospects for the science of measurement of functioning—as we believe we should be—the next step is to make the case for the association between health, conceptualized as functioning, and individual well-being and societal welfare.

As we noted, few of us would need to be convinced that the resources we spend on health care are well spent because health is a component of individual well-being; the challenge has always been to substantiate the association, if not a causal relationship, between health and well-being. Relying on data about mortality and morbidity is not enough since living longer does not mean living better. Indeed, the data suggests just the opposite, living longer means living in worse health. To make the link between health and individual well-being (and societal welfare), we have to turn to the indicator of functioning, and specifically our lived health, regarding how our intrinsic health capacity (operationalized by body functions and structures) plays out in what we do in the actual context in which we live, taking all environmental factors into account.

In the ICF model of functioning and disability, environmental factors either put limits on what we do in our ordinary life (barriers) or improve our performance beyond what would be expected from the level of health capacity we experience would predict (facilitators). Our overall lived experience of health is why we care about our health and it includes the direct effect of our health capacity, especially when that means pain, discomfort, or other direct assault on our well-being. Also, and in the long run, our overall lived experience of health is important as far as how we live our lives. The ICF approach explains why a person with severely limited body functions (eg, a person with lower body paralysis resulting from spinal cord injury) can nonetheless have a high level of work performance because of extensive environmental facilitators (wheelchair, modified work environment, personal supports); while an individual with relatively high levels of intrinsic capacity, facing environmental hurdles (unaccommodating work environment, stigmatizing attitudes of coworkers, unsympathetic employer) will experience just the opposite. When we consider what matters about people's health, including how they live their health in their actual environment, then we have a sense of the relationship between health and individual well-being.

The similar point can be made in the language of capability. Health is indeed a capability, or a realistic opportunity to achieve the good life, not merely because good health entails living longer, but because it means to be able to do and achieve the things one wants to in life. Living longer, but with low levels of functioning, does not enhance our well-being. As Amartya Sen has argued, at the end of the day, well-being is a matter of *doings and beings*. This means having real opportunities to perform all of the activities that one wishes and to sustainably thrive in the social roles one wishes to take on. In the domain of health, it is the ability to do and be what one wishes that contributes to well-being and this is what is captured by functioning.

In summary, the ICF notion of functioning captures conceptual linkage between health and individual well-being. As we advance and perfect our measurement science, functioning will provide the basis for measuring that association across health conditions, along the lifespan, and across societies. This conceptual linkage helps to explain why our health means so much to us and why we believe society's substantial investment in health care is fully

justified. Focusing on functioning shows us that society's commitment to provide the resources and opportunities needed for individual well-being is, in fact, a commitment to ensure both a long life and an active and full life. In the well-being literature, this is often termed *human flourishing* and that metaphor provides a good image for societal welfare. Society thrives when the population flourishes, when people have realistic opportunities to do and be what they choose. Health contributes directly to this by providing not just a long life, but an active and flourishing life, a life of optimal functioning.

Keywords

Health; Rehabilitation

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