The Promotion of Health and Wellness

Redefining Concepts to Reflect Modern Interpretations

Why is it that when we talk about health we nearly always follow it with wellbeing or wellness (e.g., 'committed to overall health and wellbeing', 'Michigan health and wellness')? For the past two decades there have been calls for better clarification regarding how we use the terms health, wellness, and wellbeing as the lack of common definitions cause confusion among consumers and professionals. That confusion makes it more difficult to advance scientific knowledge and enables quackery and misinformation to run rampant.

Topics: Historical Concepts — Modern Concepts — Physical Activity — Physical Fitness — Physical Activity Intensities — Endpoint Perspective of Sedentary Behavior — Sedentary Behavior as an Independent Construct

Prior to 1940, the general perspective on health was that it was simply the absence/avoidance of illness, disease, and debilitating conditions. This led to common question–answer responses such as (q) "How's your health?" (a) "I'm doing well" or (a) "I'm feeling ill". An individual who was not sick, was therefore considered healthy — a binary, yes–no distinction. This perspective of health focused more on physical characteristics related to the extent to which an individual able to perform manual labor, largely pushing aside (or ignoring) mental and social illness/diseases. The more an individual suffered from illness, disease, and debilitating conditions the less likely they were to be considered as healthy. Wellness was considered the state of being in good health. Since this perspective of health was largely binary, it resulted in the concepts of health and wellness being used interchangeably.

Figure: Pre 1940's era perspective of health.

Historical Concepts

Health — A state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity. [as first defined by the World Health Organization (1948)]

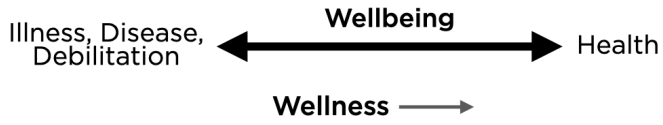
Wellbeing — The condition of existance.

However, in 1948 the formation of World Health Organization revised the concept of health to reflect the positive endpoint of the continuum of wellbeing —with wellbeing simply reflecting the overall condition in which an individual exists. Thus, the continuum of existence ranged from being ill, diseased, and/or debilitated to being healthy. Importantly, this definition was highly progressive for the time in specifically calling attention to the idea of health as also encompassing mental and social aspects, beyond just the physical components.

Wellness — The process by which one attains positive health.

In the 1950s, the concept of wellness was redefined to characterize health promotion efforts through the adoption of lifestyle changes. For a brief period of time, the concepts of health, wellbeing, and wellness coexisted quite well. **Wellbeing described a continuum; health described the positive endpoint of the wellbeing continuum, and wellness characterized the ways in which health could be attained**. So in this conceptualization, **wellness describes a process**.

Figure: 1948 World Health Organization Perspective.



The difficulty, however, was that the term wellness began to be used heavily as a marketing term for a wide assortment of products, spas, and nonmedical treatments which had minimal relationships with the concepts of either health or wellbeing. You can still see this today in the way grocery stores and vendors label various sections of goods they sell with distinct areas for wellness related products. Globally, the wellness industry is approximately 3 times larger than the worldwide pharmaceutical industry; encompassing beauty/anti–aging products, weight loss products, tourism, real estate, and spas. While there may be some benefit associated with aspects of such industry; within the fields of health promotion, exercise science/kinesiology, and medical specialties the term wellness is generally looked down upon. Although a number of groups promote certificates and specialties in wellness, the vast majority of the claims made in these programs are half–truths,

misinformation, or simple misunderstanding of mechanisms related to health. As a result, individuals who promote wellness tend to be viewed as those who are into selling junk to make a profit even if it will not help, or as gullible.

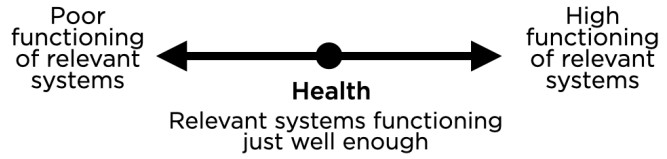
Compounding this, US public health efforts (independent from the World Health Organization) began to use the term wellbeing (the continuum) as a positive endpoint of health; creating an issue of circular logic. Making matters worse, medical groups began to refer to wellness as a state of complete physical, mental, and social wellbeing (using the term wellness in place of the term health), in order to fit the idea of health being the continuum. Thus, in many aspects of modern society the terms health, wellbeing, and wellness are used interchangeably.

Health and Wellness as Independent Constructs – Modern Perspective

Health — A state of adequate functioning of physical, mental, and social processes.

The more modern perspective emerging over the past several years has begun to reframe the idea of health as the ability for physical, mental, and social processes to **adequately function**. An individual whose systems adequately meet the demands placed upon them is therefore considered to be healthy. That is not to say that the individual could not become healthier, such that their systems have greater effective functioning. Rather it conceptualizes health as the point of homeostasis between the demands placed upon an individual and their ability to effectively respond to those demands. This is consistent with the original World Health Organization definition, but removes confusion regarding the use of the term wellbeing that had been coopted for other meanings over the past several decades.

Figure: Modern Perspective of Health.



Health is the Product, not the Process. This conceptualization of health specifically characterizes health as an outcome that reflects a vast array of determinants (causes) including social, economic, and physical environments, and individual characteristics and behaviors. The ability to maintain or improve health, therefore, depends not only on external or environmental factors (including the systems of care), but also on the efforts and lifestyle choices of the individual. Further, there

has been considerable work in the last decade on heritable components of health and the extent to which they are reflective of genetic or environmental influences.

Wellness — A multidimensional construct reflecting an individual's subjective evaluation of their present state of being (e.g., level of contentment, happiness, satisfaction with life, fulfillment).

Wellbeing — An individual's subjective evaluation of their present state of being within a specific dimension of wellness.

Although in some respective fields the terms wellness and wellbeing are still used in the various historical context; more modern perspectives now frame these concepts as reflecting aspects of the individual's subjective evaluation of their present state of being. The National Institutes of Health and CDC denote the perspective that wellness represents an individuals overall subjective evaluation which encompasses ideas such as level of contentment, happiness, satisfaction with life, and sense of fulfillment. While consistently interpreted as having multiple dimensions (i.e., components), there is considerable disagreement over how many dimensions of wellness there are and exactly what those dimensions reflect. The concept of wellbeing refers to a specific dimension of the individual's overall wellness. Wellbeing is thought to reflect the cognitive evaluations and affective response regarding the balance between the effective functioning, the challenges imposed, and the relative importance within the dimension. An individual may have high physical wellbeing, low social wellbeing, but overall exhibit a high level of wellness. Note that in the modern perspective, wellbeing is always preceded by a dimension whereas wellness is not (because wellness is the overall construct).

Wellness is the Product, not the Process. These concepts argue that wellness is a transient outcome where the individual's present state of being is the result of their behaviors and lifestyle. The general claim of models of wellness is that the various dimensions reflect core aspects of a person's life that cannot be neglected without adverse effects manifesting over time. By changing behaviors and lifestyle an individual can alter their wellbeing (wellness within a particular dimension). However, these models argue that it is not necessary to maximize or have equal balance across all of these dimensions. Instead, each individual naturally has their own balance point reflecting their priorities, approaches, and views. But that over the course of a person's life, that balance point will move and adapt across these

various dimensions to inform their sense of wellness.

Similar to work in the area of health, there appears to be heritable components of wellness and wellbeing that can attempt to explain why certain patterns of wellness and wellbeing are more consistent within family members and exhibit varying sensitivity to changes. However, there remains considerable debate as to the nature of the heritability being reflective of genetic or environmental influences, or simply reflecting learned behaviors. Classically wellness and wellbeing have been considered as relatively stable constructs with minimal day to day variability. More recent conceptualizations argue that wellbeing should respond in a state–dependent manner given the particular situations an individual is in or has been recently exposed to. Further, these may also transiently alter how an individual weighs the various dimensions to inform their overall wellness.

Physical Activity — Umbrella term including any bodily movement that requires energy expenditure above the normal physiological demands of the day.

Physical Fitness — A set of health and skill–related attributes a person has in regards to their ability to perform physical activities.

Although often used interchangeably with the term physical activity, physical fitness is a distinct concept specifically representing an attribute that an individual possesses in regards to their ability to perform physical activity. Classically, physical fitness is a construct represented by five health related components and six performance/skill related components. The five health related components are cardiorespiratory endurance (also known as aerobic fitness, reflecting the ability to sustain aerobic physical activities), body composition, muscular strength (reflecting the maximal ability to exert force), muscular endurance (reflecting the ability to exert maximal force repetitively), and flexibility. The six performance/skill related components are agility (reflecting the ability to rapidly change directions), coordination (reflecting the ability to optimizing the sequencing of movements), balance (reflecting the stability of movements), power (reflecting the ability to exert force quickly), reaction time (reflecting the ability to initiate motor outputs), and speed (reflecting the ability to traverse a distance quickly).

It is important to acknowledge that the conceptualization of these components as being either relevant 'for health' or 'for skill' is a carry–over from early work in the field and that despite being in the 'performance/skill' category many such components have substantial relevance for health and wellness. The next time you are shopping for

groceries, consider the movement patterns of the older adult trying to navigate the busy and chaotic store. The decrements in components such as agility and speed that occur as a part of the 'usual aging' process create substantial issues for the effective functioning of the individual in this context (thereby hindering their health) and the situation is likely to alter their subjective evaluation of their present state of being (thereby hindering their wellness; or at least alter some component of their wellbeing).

The basic characterization of physical activity as any form of movement requiring energy expenditure above and beyond that needed to keep the body running renders this term a catch all for a wide assortment of behaviors. Depending upon the particular context it can be useful to have such a catch–all/umbrella term when we are interested in overall energy expenditure — such as in the case of a smart watch; but most times it is useful to specifically look at physical activity behaviors within particular domains of an individual's life. Classically we break this down into physical activities associated with: daily living (e.g., domestic/household work, dishing, vacuuming, mowing lawn), occupational (e.g., lifting and moving items at work, going up and down workplace stairs), transportation (e.g., walking/biking/using a wheelchair to and from school/work/shopping), and leisure–time (e.g., swimming, jogging, hiking, dancing, participating in weight–training regimens). Although we often talk about falling rates of physical activity behaviors, much of the evidence indicates that for most populations leisure–time physical activity has actually increased over the past several decades. By specifically characterizing these domains of physical activity it is apparent that much of our population–level declines in physical activity are attributed to declines in occupational physical activity and to some extent reduced transportation–related physical activity.

Moderate Intensity Physical Activity — Physical Activity corresponding to a heart rate reserve between 40 to 60% or a metabolic equivalent between 3.0 to 6.0. [ACSM]

Vigorous Intensity Physical Activity — Physical Activity corresponding to a heart rate reserve greater than 60% or a metabolic equivalent greater than 6.0. [ACSM]

Despite widespread recognition that excess sedentary behavior is associated with greater health risks, the vast majority of such claims are based upon research that did **not actually measure sedentary behavior**. The Harvard Alumni Study (1986), for example, determined that sedentary men had a 31% higher risk of death than more active men —but included no measure of sedentary behavior in their study.

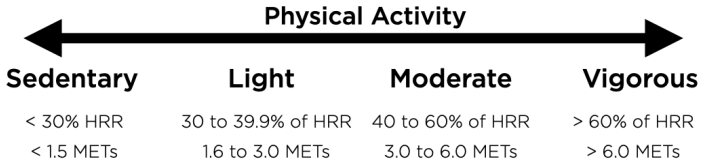
This, in part, is the result of the particular focus within the field on moderate–to –vigorous physical activity; characterizing any physical activity that was below this intensity as reflecting sedentary behavior. Yet there are a wide assortment of physically active behaviors across the various domains of physical activity where heart rate or metabolic measurements would indicate the intensity not being at the level of moderate–to –vigorous. Defining sedentary behavior as the absence (lack of) of moderate–to –vigorous physical activity becomes somewhat problematic then.

Light Intensity Physical Activity — Physical Activity corresponding to a heart rate reserve between 30 to 39.9% or a metabolic equivalent between 1.6 to 3.0. [ACSM]

Sedentary Behavior [Endpoint perspective] — Activity at the lowest end of the physical activity continuum corresponding to a heart rate reserve less than 30% or a metabolic equivalent under 1.5.

The endpoint perspective of sedentary behavior characterizes this construct as representing the absolute inactive endpoint of the physical activity continuum. This perspective evolved not only from recognizing light–intensity physical activities as having relevance for health and aspects of wellbeing but also from studies specifically looking at the effects of detraining — such as following a spinal cord injury preventing the ability to engage in any physical activity. In most instances the benefits of physically active behaviors are lost within a period of only a few weeks. This definition of sedentary behavior conceptually aligns well with various approaches to measuring physical activity through continuous monitoring of heart rate, step counts, or accelerometry.

Figure: Endpoint Perspective of Sedentary Behavior.



Sedentary Behavior [Independent construct perspective] — Prolonged inactive wakeful behaviors while in a sitting or reclining position.

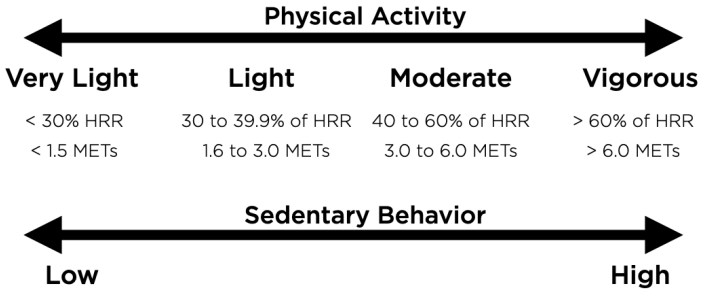
Such ease of measurement, however, highlighted some conceptual issues with thinking about sedentary behavior as an endpoint of physical activity. In particular, we spend a substantial period of our waking (non-asleep) hours in this intensity zone. So how do we classify

the behaviors of someone who gets up and runs 10 to 15 miles every morning, but then sits at a desk for 12 hours at work? During the day they may have been active for 90 minutes, but been sedentary for 720 minutes (12 hours). Do the health and wellbeing benefits of the run counteract the sedentary time? Another issue is the extent to which sedentary behavior should really only apply if the individual is in a seated or reclined position.

The Latin origin 'sedere' means 'to sit'. As some research indicates that adopting standing or squatting positions is associated with lower health risks than sitting or reclining positions, the endpoint perspective lacks sufficient information. The final issue relates to the prolonged nature of this behavior which in many ways is distinct from physical activity. Accordingly, framing sedentary behavior as a distinct class of behavior separate from physical activity enables greater refinement in how this construct is characterized and measured, to better differentiate those types of behaviors that may promote greater health and wellbeing from those that might be problematic.

Using this perspective, the physical activity continuum would range from 'very light physical activity' to 'vigorous physical activity' and sedentary behavior would have its own continuum. The specific endpoints or classifications are still being debated but generally as classified as ranging from 'low levels' to 'very high levels' of sedentary behavior.

Figure: Independent Construct Perspective of Sedentary Behavior.



Additional Resources:

Pate, R. R., O'neill, J. R., & Lobelo, F. (2008). The evolving definition of "sedentary". Exercise and sport sciences reviews, 36(4), 173-178. https://doi.org/10.1097/JES.0b013e3181877d1a

Historical Concepts Regarding
Health

- Prior to the 1940's:

Historical Concepts Regarding
Health

- World Health Organization (1948): "Health refers to a state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity."

Historical Concepts Regarding
Health

An Issue of
Confusion

- US Public Health Efforts also contributed to this by using the term Wellbeing (the continuum of existence) as the positive endpoint of health.
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An Issue of
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- US Public Health Efforts also contributed to this by using the term Wellbeing (the continuum of existence) as the positive endpoint of health.
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  - Wellbeing was the positive endpoint of Health.
- Medical groups began to refer to wellness as a state of complete physical, mental, and social **health** ~~wellbeing~~, in order to fit the idea of health being the continuum.

The terms health, wellbeing, and wellness became interchangeable.

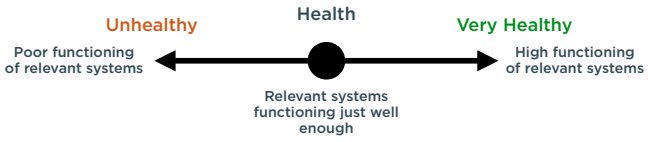
Wellness was both the process and the product (outcome).

If using the product is a way to become healthy, and being healthy is defined by using the product; the product can always be effective.

Modern Perspectives on

Health and Wellbeing

- Health: "Refers to a state of adequate functioning of physical, mental, and social processes and not merely the absence of disease or infirmity."



Pre 1940's Perspective of Health

Absence of illness, disease, debilitation.

Mostly focused on physical abilities.

1948 WHO Perspective of Health

A state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity.

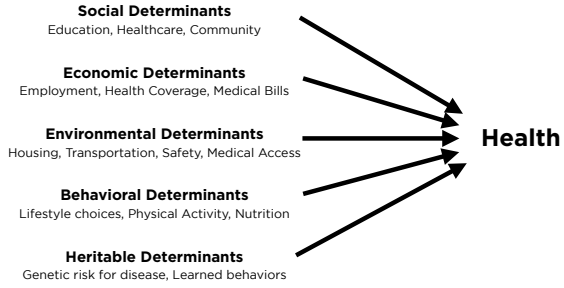
Modern Perspective of Health

A state of adequate functioning of physical, mental, and social processes.

The point of homeostasis between the demands placed upon an individual and their ability to effectively respond to those demands.

Health as a

Product



Wellness reflects an individual's subjective evaluation of their present state of being

(e.g., level of contentment, happiness, satisfaction with life, fulfillment)

Wellbeing reflects an individual's subjective evaluation of their present **state of being within a specific dimension of wellness.**

(NIH, 2017)

Wellness is not the Process

Wellness is the Product

The dimensions of wellness reflect core aspects of an individual's life that cannot be neglected without adverse outcomes.

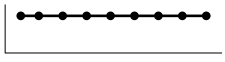
- Frameworks for wellness generally view each person as having their own way of weighing these various dimensions (i.e., 'balance point') reflecting their personal priorities, approaches, and views.
  - An individual with poor physical and emotional wellbeing, but high intellectual and spiritual well being might have an overall high level of wellness.
- The balance point changes over time as a result of maturation, life stage, and life events.

Wellness is the Product

How much does an individual's subjective evaluation of their present state of being change over the course of a day or week?

Historical View

Wellness and wellbeing are relatively stable constructs with little day-to-day variation.



Measurement of wellness has relatively high consistency across repeated assessments.

Modern Perspective

Wellness and wellbeing are not only state-dependent constructs but the balance-point will also shift to reflect particular situations and recent events.

Our way of measuring wellness may lack sufficient sensitivity to capture how these changes occur.

Wellness
Perception of Present State

Health
Adequate Functioning

Wellbeing
Perception of Present State Within a Dimension of Wellness

Components of
Physical Fitness

5 Health-Related Components of Fitness

- Cardiorespiratory Endurance (Aerobic Fitness)
- Body Composition
- Muscular Strength
- Muscular Endurance
- Flexibility

6 Performance-Related Components of Fitness

- Agility
- Coordination
- Balance
- Power
- Reaction Time
- Speed

What is the difference between
Physical Activity and Physical Fitness

Umbrella term including bodily movement that requires energy expenditure above the normal physiological demands of the day.

Process/Behavior

A set of health and skill-related attributes a person has in regards to their ability to perform physical activities.

Product/Outcome/Attribute

Domains of
Physical Activity

Activities of Daily Living
Activities associated with domestic/household work.

Occupational
Activities associated with work-related tasks.

Transportation
Activities associated with moving between home/work/stores.

Leisure-Time
Activities engaged in when free from the demands of domestic and occupational work.

What is
Sedentary Behavior

Endpoint Perspective

Sedentary	Light	Moderate	Vigorous
Less than 30% HRR	30 to 39.9% of HRR	40 to 60% of HRR	Greater than 60% of HRR
Less than 1.5 METs	1.6 to 3.0 METs	3.0 to 6.0 METs	Greater than 6.0 METs

What is
Sedentary Behavior

Independent Construct Perspective

Physical Activity

Very Light	Light	Moderate	Vigorous
Less than 30% HRR	30 to 39.9% of HRR	40 to 60% of HRR	Greater than 60% of HRR
Less than 1.5 METs	1.6 to 3.0 METs	3.0 to 6.0 METs	Greater than 6.0 METs

Sedentary Behavior
Prolonged inactive wakeful behavior while in a sitting or reclining position.

Very Sedentary — **Not Sedentary**