



Positive balance: a hierarchical perspective of positive mental health

M. Joseph Sirgy¹

Accepted: 19 February 2019 / Published online: 3 April 2019
© Springer Nature Switzerland AG 2019

Abstract

An attempt is made in this paper to provide the community of health-related quality-of-life scholars with a hierarchical perspective of positive mental health guided by the concept of positive balance. Specifically, individuals with positive mental health are characterized to experience: (1) a preponderance of neurochemicals related to positive emotions (dopamine, serotonin, etc.) relative to neurochemicals related to negative emotions (cortisol), at a physiological level; (2) a preponderance of positive affect (happiness, joy, etc.) relative to negative affect (anger, sadness, etc.), at an emotional level; (3) a preponderance of domain satisfaction (satisfaction in salient and multiple life domains such as family life and work life) relative to dissatisfaction in other life domains, at a cognitive level; (4) a preponderance of positive evaluations about one's life using certain standards of comparison (satisfaction with one's life compared to one's past life, the life of family members, etc.) relative to negative evaluations about one's life using similar or other standards of comparison, at a meta-cognitive level; (5) a preponderance of positive psychological traits (self-acceptance, personal growth, etc.) relative to negative psychological traits (pessimism, hopelessness, etc.), at a development level; and (6) a preponderance of perceived social resources (social acceptance, social actualization, etc.) relative to perceived social constraints (social exclusion, ostracism, etc.), at a social-ecological level.

Keywords Health-related quality of life · Mental well-being · Subjective well-being · Psychological well-being · Social well-being · Eudaimonia · Hedonic well-being · Mental health · Positive mental health · Positive psychology

Introduction

The literature of subjective well-being has blossomed considerably over the last five or six decades. Subjective well-being is traditionally defined as a broad category of phenomena that involves positive emotions (preponderance of positive over negative affect), domain satisfaction (satisfaction in various life domains such as family life, social life, and work life), and life satisfaction (a global judgment of satisfaction with life overall) (see literature reviews in [1, 11, 16, 19, 42, 75]). Proponents of positive mental health [47] have long argued that much of the research in subjective well-being reflect a hedonic perspective of well-being. That is, the core concept reflects “feeling good about life” in various forms (preponderance of positive emotions, satisfaction with life domains,

and satisfaction with life overall). However, the hedonic research tradition does not take into account a parallel tradition of research involving eudaimonia. The eudaimonic tradition [70] focuses on “functioning well in life.” For example, eudaimonia (or psychological well-being) reflects the quality with which individuals are functioning in their lives (not how positive they feel about their lives). The construct involves at least five dimensions: (1) autonomy, (2) positive relations with others, (3) environmental mastery, (4) personal growth, and (5) purpose in life (cf. [68, 70, 84]). Positive mental health researchers [39, 40, 43, 44, 46–48, 50, 64] have argued that positive mental health has to integrate the hedonic tradition with the eudaimonic tradition. They also explicitly introduced another major dimension of positive mental health, namely social well-being. Social well-being reflects positive social functioning. This construct involves at least five dimensions: (1) social acceptance, (2) social actualization, (3) social contribution, (4) social coherence, and (5) social integration. Hence, the focus of positive mental health in this paper builds on the concept of positive mental health

✉ M. Joseph Sirgy
sirgy@vt.edu

¹ Virginia Polytechnic Institute and State University,
Blacksburg, VA, USA

that incorporates aspects of subjective well-being, eudaimonia, and social well-being.

Although the accepted definition of positive mental health involving the dimensions of hedonic well-being, psychological well-being, and social well-being [39, 40, 43, 44, 46–48, 50, 64] is a good definition of positive mental health, it could be further refined to incorporate aspects of divergent set of concepts related to quality of life/well-being, such as

- stress response system [54, 82] and neurobiology of well-being [38, 63, 81];
- positive versus negative affect [17, 20], broaden-and-build theory [25, 26, 29], and flow [10];
- principle of satisfaction limits [51, 78–80], principle of the full spectrum of human developmental needs [51, 78–80], and principle of diminishing satisfaction [51, 78–80];
- multiple discrepancies theory [57–59], congruity life satisfaction [56, 76], personal strivings [23], basis of life satisfaction judgments [62, 83], social comparisons in life satisfaction [30], and frequency of life satisfaction judgments [18];
- virtue ethics and balance [66], self-determination theory [67–69], hedonic versus eudaimonic happiness [14, 42], personal expressiveness [37, 85] and psychological well-being [70]; and
- social well-being [43, 44, 46, 47], need to belong [4], attachment theory [6], social exclusion and ostracism [86], and social harmony [35, 41].

Based on the aforementioned concepts and related research, I make an attempt to develop a hierarchical definition of positive mental health that can guide future research. This hierarchical definition is also guided by the concept of *positive balance* (a preponderance of a desirable state over an undesirable state specified at each level of analysis), which will be discussed in some detail in the sections below.

Positive mental health as positive balance

Given the preceding discussion, I begin by offering an integrated definition of positive mental health. This definition is shown in Table 1 broken down by each level of analysis: physiological, emotional, cognitive, meta-cognitive, developmental, and social-ecological levels. Common across all levels of analysis is the positive balance, *a preponderance of a desirable state over an undesirable state specified uniquely at each level of analysis*. Each definition of positive mental health, within its respective level of analysis, will be discussed in the sections below.

Positive mental health at a physiological level

Stress is customarily viewed as a state of physiological disharmony triggered by a stressor, psychological or physical threat. A psychological threat is usually a perceived adverse circumstance from the external environment (e.g., a physical attack by a predator) or it can originate internally as an infection or some other disease symptom [54].

The endocrine response during stress involves two parallel responses: the adrenocortical response (involving the sympathetic nervous system) and the adrenomedullary response (involving the hypothalamus and pituitary) [54, pp. 57–62]. The endocrine response during stress is regulated by *cortisol*. As such, homeostasis involves the regulatory action of cortisol, which is fundamental to normal functioning, daily activities, and survival in general. In contrast, allostasis involves repeatedly elevated and greatly prolonged high levels of cortisol (i.e., chronic stress), ultimately affecting mental well-being. This occurs through amygdala sensitization and loss of hippocampal volume, both associated with the formation and consolidation of long-term memory of adverse events [54, p. 132]. Specifically, when the amygdala is exposed to chronic stress it becomes sensitized to aversive or threatening stimuli rendering the entire central nervous system highly reactive to fight-or-flight events. This *amygdala-sensitization effect* is associated with post-traumatic stress disorder [5]. In other words, stress-induced changes in cognition and memory exert a long-term effect on stress reactivity and well-being (both physiological and psychological). Repeatedly elevated and greatly prolonged high levels of cortisol are also associated with *shrinkage of hippocampal volume* [32]. Patients with post-traumatic stress disorder have reduced hippocampal volume. The hippocampus is the primary site of negative feedback for cortisol regulation. Also, it is important to note that disease, frailty, and disability have a direct toll of the stress response in that individuals afflicted with disease, frailty, and/or disability are likely to experience allostasis—continuing force acting against homeostasis causing the individual to continually expend additional resources to maintain homeostasis but at a systemic cost on mental well-being [55, 65].

Much research has demonstrated that positive emotions serve as stress buffers the deleterious effects of stress on the immune system (see literature review in [36]). For example, social stress, especially early in life, produces high levels of cortisol responses during social interactions and long-standing reductions in serotonin levels, underscoring the relationship between neurochemicals associated with positive and negative emotions [81]. In a meta-analytic study, Pressman and Cohen [63] found a negative relationship between dispositional positive affect and cortisol—the higher the dispositional affect, the lower the cortisol.

Table 1 The concept of positive mental health defined at various hierarchical levels: emergence and positive balance

Level of analysis	Characteristics of positive mental health	Supportive theoretical notions
Positive mental health defined at a <i>physiological level</i>	Individuals experiencing a preponderance of neurochemicals related to positive emotions (dopamine, serotonin, endorphins, oxytocin, etc.) relative to neurochemicals related to negative emotions (cortisol, etc.)	Stress response system [52, 82]; neurobiology of happiness [38, 63, 81]
Positive mental health defined at an <i>emotional level</i>	Individuals experiencing a preponderance of positive emotions (happiness, joy, serenity, contentment, etc.) relative to negative emotions (anger, sadness, jealousy, envy, depression, etc.)	Positive versus negative affect [17, 20]; broaden-and-build theory [25, 26, 29]; flow [10]
Positive mental health defined at a <i>cognitive level</i>	Individuals experiencing a having a preponderance of domain satisfaction (satisfaction in salient and multiple life domains such as family life, work life, and social life) relative to dissatisfaction in other life domains	Principle of satisfaction limits [51, 78–80]; principle of the full spectrum of human developmental needs [51, 78–80]; principle of diminishing satisfaction [51, 78–80]
Positive mental health defined at a <i>meta-cognitive level</i>	Individuals experiencing a preponderance of positive evaluations about one's life using certain standards of comparison (satisfaction with one's life compared to one's past life, the life of others in the same social circles, etc.) relative to negative evaluations about one's life using similar or other standards of comparison	Multiple discrepancies theory [57–59]; congruity life satisfaction [56, 76]; personal strivings [23]; basis of life satisfaction judgments [62, 83]; social comparisons in life satisfaction [30]; frequency of life satisfaction judgments [18]
Positive mental health defined at a <i>developmental level</i>	Individuals experiencing a preponderance of positive psychological traits (self-acceptance, personal growth, purpose in life, environmental mastery, autonomy, positive relations with others, etc.) relative to negative psychological traits (pessimism, hopelessness, depressive disorder, neuroticism, impulsiveness, etc.)	Virtue ethics and balance [66]; self-determination theory [67–69]; hedonic versus Eudaimonic happiness [14, 42]; personal expressiveness [37, 85]; psychological well-being [70]
Positive mental health defined at a <i>social-ecological level</i>	Individuals experiencing a preponderance of social resources (social acceptance, social actualization, social contribution, social integration, etc.) relative to social constraints (social exclusion, ostracism, etc.)	Social well-being [43, 44, 46, 47]; need to belong [4]; attachment theory [6]; social exclusion and ostracism [86]; social harmony [35, 40]

Research in neuroscience has identified the major neurotransmitters implicated in positive affect: dopamine, norepinephrine, serotonin, and oxytocin. In contrast, cortisol is associated with negative affect (see literature review by Jackson, Sirgy, & Medley [38]). *Dopamine* plays a significant role in positive affect. It is considered to be the primary neurotransmitter operating in the brain reward system. All pleasurable activities (e.g., engaging in sexual intercourse, listening to music, eating and drinking when feeling hungry) are associated with the influx of dopamine. Lack of *norepinephrine* is associated with lethargy, lack of concentration, irritability, and restlessness. Reduced levels of *serotonin* are associated with negative mood, anxiety, and depression (see Fig. 1 for dopamine and serotonin pathways in the brain). *Oxytocin* is associated with maternal feelings as in childbirth and lactation, mother–infant bonding, and prosocial behavior. As such, I propose that *positive mental health at a physiological level can be construed as the individual experiencing a preponderance neurochemicals associated with positive affect (e.g., dopamine, norepinephrine, serotonin, and oxytocin) relative to neurochemicals associated with negative affect (e.g., cortisol).*

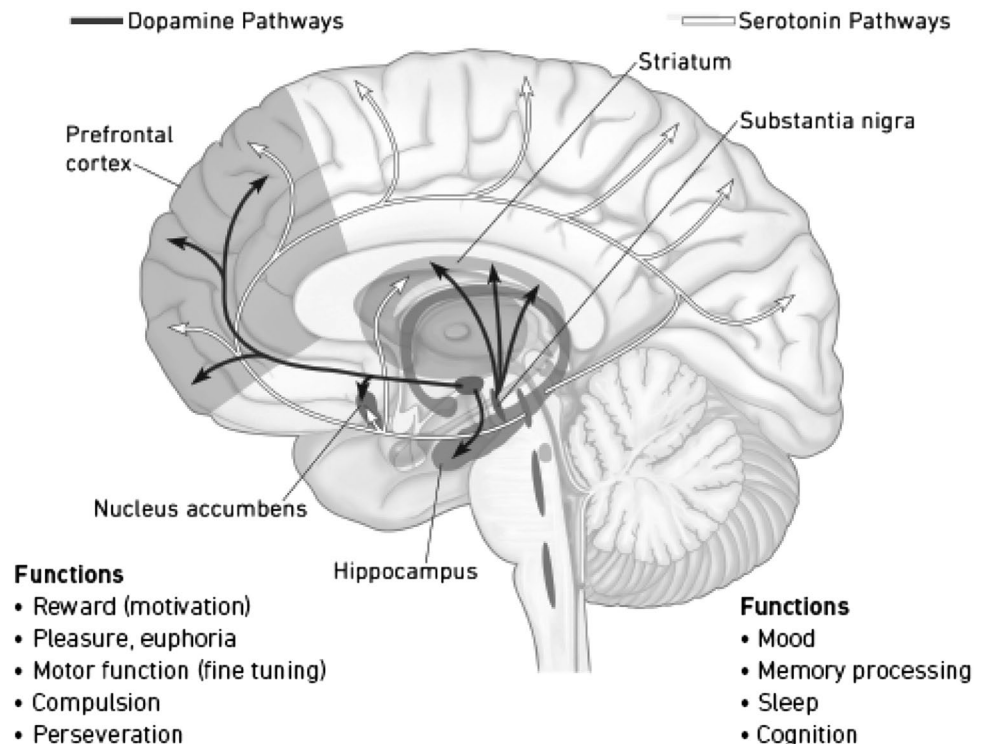
Positive mental health at an emotional level

Well-being scientists [17, 20] tend to view subjective well-being partly as a psychological state involving a preponderance of positive affect (e.g., joy, contentment, pleasure) over negative (e.g., sadness, depression, anxiety, anger).

The *broaden-and-build theory of positive emotions* [25, 26, 29] asserts that positive emotions broaden an individuals' momentary thought-action repertoire. Positive emotions induce playfulness, exploratory behavior, savoring experiences, creativity, close connections and bonding with others, among other positive behavioral outcomes. In contrast, negative emotions (associated with the visceral fight-or-flight response) prompt the individual to contract cognitively and behaviorally. The broadening of the thought-action repertoire through positive emotions allows the individual to build personal resources—physical resources, intellectual resources, social resources, psychological resources, etc. These resources serve the individual in many ways to enhance functioning. Furthermore, these resources serve as reserves that can be drawn on to help deal with adverse events. As such, these resources enhance resilience. There is evidence to suggest that it is not only positive emotions that produce positive behavioral outcomes but the preponderance of positive affect over negative affect [27, 28]. People who “flourish” (those who are psychologically healthy) experience at least three times as many positive emotions as they do negative emotions. In contrast, the ratio is two-to-one for “nonflourishers.”

But then the question is whether positive emotions contribute to positive mental health in a linear fashion. Research has addressed this question, and the answer is a resounding no. Too much positivity is not necessarily good for positive mental health (see discussion of this research question and evidence in [24, 28]). The relationship looks more like an

Fig. 1 Dopamine and serotonin pathways. *Source* National Institutes of Health, U.S. Department of Health and Human Services



inverted-U. Too much positive emotions do not contribute to high levels mental well-being. Fredrickson (2013) argues that increasing positivity contributes to creativity, job performance, health, and other outcomes up to a certain level. After moderate levels of positive emotions, these behavioral outcomes diminish significantly. It has been demonstrated that some degree of negative emotions is necessary to motivate people to take corrective action. Corrective action leads to positive behavioral outcomes [9, 28]. This evidence points to the assertion that positive mental health reflects a preponderance of positive over negative emotions. That is, negative emotions have to be part of this optimal state but significantly in lesser amount than positive emotions.

Besides the research on the broaden-and-build theory, much of the research on *flow* reflects the notion that well-being is associated with both positive and negative emotions [10]. Specifically, certain activities that are challenging and matching one's level of skills induce much positive emotions (positive emotions related to achievement, mastery, and efficacy) juxtaposed with negative emotions (frustration related to task difficulty, pain in the exertion of physical and mental effort, and perseverance in light of failure). Engaging in activities that produce flow contributes significantly to subjective well-being. Note that flow theory emphasizes the notion that the flow experience necessitates elements that call for negative affect (i.e., physical exertion, effort, and learning from failure experiences).

Based on the preceding discussion one can argue that individuals who have positive mental health at an emotional level tend to experience *a preponderance of positive emotions (pleasure, happiness, joy, contentment, vitality, etc.) relative to negative emotions (anger, sadness, jealousy, envy, hatred, grief, isolation, worthlessness, etc.)*.

Positive mental health at the cognitive level

Early quality-of-life researchers [2, 7] have long acknowledged that affect is segmented in life domains such as family life, social life, work life, leisure life, and community life. This is referred to as “domain satisfaction.” That is, individuals can judge the level of satisfaction they have with various life domains—satisfaction with family life, social life, work life, leisure life, etc. Individuals make judgments about their life satisfaction overall based on domain satisfaction (see review of this literature in Sirgy [75]).

I believe that positive mental health is achieved through positive balance in multiple domain satisfaction—that is, the individual experiences moderate-to-high satisfaction not only in one domain but with a range of domains. Positive mental health cannot be achieved from satisfaction in a single domain. Satisfaction has to derive from multiple domains. This assertion is supported by much theory and

research (see [51, 77–80] for extended discussions) and is articulated through three major principles: (1) the principle of satisfaction limits, (2) the principle of satisfaction of the full spectrum of human development needs, and (3) the principle of diminishing satisfaction.

Specifically, the *principle of satisfaction limits* [51, 77–80] asserts that the amount of contribution of domain satisfaction from a single life domain to overall life satisfaction is limited. That is, high role engagement in a single life domain with little or no role engagement in other life domains cannot contribute much to life satisfaction, compared to high role engagement in multiple domains. Individuals who have a high level of role engagement in life domains related to both basic needs (e.g., health, love, family, and material domains) and growth needs (e.g., social, work, leisure, and culture domains) are likely to experience greater satisfaction among life domains contributing to higher life satisfaction than those who have a high level of role engagement in domains related to only basic or growth needs. This effect is explained through the *principle of satisfaction of the full spectrum of human developmental needs* [51, 77–80]. The combined and balanced effects of satisfaction of both basic and growth needs serve to contribute to life satisfaction. That is, satisfaction of the full spectrum of human developmental needs (balance between basic and growth need satisfaction) produces the highest level of life satisfaction.

The *principle of diminishing satisfaction* [51, 77–80] posits that people become engaged in new social roles to mitigate decreases in domain satisfaction and life satisfaction overall. This effect is due to diminishing satisfaction associated with a social role. That is, those who are engaged in social roles experience diminishing satisfaction in a given life domain over time, which in turn detract from life satisfaction. To guard against this diminishing domain satisfaction, people engage in new social roles to generate new satisfaction, thereby compensating for the diminished satisfaction related to the old roles.

The preceding discussion points to the notion that positive mental health is associated with satisfaction in multiple life domains such as family life, work life, and leisure life. To enhance mental well-being, individuals invest much effort and energy in salient and multiple life domains to generate much needed positive affect to meet their human developmental needs, both basic and growth needs. As such, I can now offer a definition of positive mental health at the cognitive level. Positive mental health is a state of mind in which the individual experiences *a preponderance of domain satisfaction (satisfaction in salient and multiple life domains such as family life, work life, and social life) relative to dissatisfaction in other life domains*.

Positive mental health at the meta-cognitive level

Life satisfaction is a concept that has been well documented in the literature of quality-of-life studies and well-being research; see an extensive description of this concept and related research in much of the research by Diener and his colleagues (see literature review [16, 19]). Life satisfaction is one of the four dimensions of subjective well-being. The other three are domain satisfaction, preponderance of positive over negative affect, and the absence of feelings of ill-being. Life satisfaction involves a cognitive evaluation of one's own life. Many large-scale social surveys use the following item to capture life satisfaction: "How satisfied or dissatisfied are you with your life overall? Very dissatisfied (1), Somewhat dissatisfied (2), So/so (3), Somewhat satisfied (4), and Very satisfied (5)." See examples of life satisfaction metrics in Sirgy [75, Chap. 1 and Appendix].

Life satisfaction is essentially an evaluation that an individual makes about his or her life at large, and that this evaluation is a judgment which is strongly influenced by the type of cognitive frame used in decision-making (i.e., standard of comparisons or cognitive referents). That is, the individual judges his or her life against some standard [13]. This standard of comparison is selected and defined by the individual. It may involve a comparison of one's current life circumstance with old circumstances, a comparison of current life experience with prior expectations, etc.

A widely accepted theory related to how individuals make life satisfaction judgments is *multiple discrepancies theory* [57–59]. The theory posits that overall life satisfaction is indirectly proportional to the perceived differences between what one has versus seven different standards of comparisons. These are as follows:

1. What one wants
2. What others have
3. The best one has had in the past
4. What one expected to have three years ago
5. What one expects to have in five years
6. What one deserves
7. What one needs

Congruity life satisfaction theory [56, 76] is similar to multiple discrepancies theory. The central tenet of this theory is that life satisfaction is function of comparison between perceived life accomplishments and a set of standards, namely standards related to derivative sources (accomplishments of relatives, friends, and associates; past accomplishments, average person in a similar occupation, etc.) and different forms (one's view of the ideal life, the deserved life, the minimum tolerable life, etc.).

Research on *personal strivings* [23] has also demonstrated that individuals make life satisfaction judgments

based on their assessment of their own past, present, and future strivings. Other research has shown that the life satisfaction judgment is mostly determined by evaluations of one's life circumstances in relation to different standards of comparisons: one's belief in an ideal life such as one's aspirations of material acquisitions [62], cultural norms such as being wealthy is a sign of happiness in life [83], and social comparisons such as comparing one's life circumstances against the circumstances of one's siblings [30].

The point of this discussion is to underscore the notion that life satisfaction judgments are made using various standards of comparison. Positive mental health is influenced by the frequency and positivity of life satisfaction judgments—the more frequent and positive these judgments are, the more positive the mental health of the individual [18]. As such, I can offer a definition of positive mental health at a meta-cognitive level as follows: Positive mental health is a state of mind in which the individual experiences a *preponderance of positive evaluations about one's life using certain standards of comparison (satisfaction with one's life compared to one's past life, the life of family members, the life of associates at work, the life of others in the same social circles, etc.) relative to negative evaluations about one's life using similar or other standards of comparison.*

Positive mental health at the developmental level

The classic Greek philosopher, Aristotle, in *Nicomachean Ethics*, written in 350 BC, provided guidance about how to live a good life, an ethical life [66]. Happiness is not necessarily about pleasure. It is about virtue, and virtue is essentially life balance—balance applied to many areas of living. For example, balance in material life is balance between material excess and material deficiency. Too much honor leads to vanity and too little turns to undue humility. Too much amusement becomes buffoonery and too little is dullness. The principle of balance as virtue is to choose deliberate action that avoids both excess and deficiency. Virtue also involves activities that have significant life purpose.

Well-being researchers have distinguished between two major dimensions of well-being, namely hedonic and eudaimonic well-being [14, 42]. The hedonic conception of well-being treats well-being in terms of life satisfaction, domain satisfaction, the preponderance of positive over negative affect, as well as the absence of feelings of depression [16, 19]. In contrast, the eudaimonic conception of well-being treats well-being in terms of personal growth and development—cognitive, emotional, social, and moral growth. As such, it is viewed as the cornerstone of positive mental health [15, 21, 61, 67, 68, 72, 73, 84, 85]. As such, eudaimonic well-being can be considered as a concept emergent from subjective well-being and there is much evidence suggesting that the two concepts are correlated but nevertheless

distinct [39]. Ryff's [70] concept of psychological well-being captures the best conceptualization of eudaimonia. Psychological well-being is essentially personal growth and development. The construct of psychological well-being involves self-acceptance, personal growth, purpose in life, environmental mastery, autonomy, and positive relations with others.

The preceding discussion emphasizes the need to take into account psychological traits of the individual to better appreciate the concept of positive mental health. Positive psychological traits, such as personal growth and purpose in life, add substantially to mental well-being. Conversely, negative psychological traits such as pessimism and neuroticism play a significant deleterious role in mental well-being. As such, I now offer a definition of positive mental health at the developmental level. Positive mental health is characterized by individuals who have high levels of eudaimonia. This state of mind is mostly determined by a *preponderance of positive psychological traits (self-acceptance, personal growth, purpose in life, environmental mastery, autonomy, and positive relations with others, etc.) relative to negative psychological traits (pessimism, hopelessness, depressive disorder, neuroticism, impulsiveness, etc.)*.

Positive mental health at the social-ecological level

The most popular definition of positive mental health involves a multidimensional construct with three major constructs: hedonic well-being, psychological well-being, and social well-being [43, 44, 46, 47]. Hedonic well-being involves positive affect, life satisfaction, as well as the absence of negative affect. This construal of hedonic well-being is essentially synonymous with subjective well-being [16, 19]. I discussed these as concepts of well-being at lower levels of analysis (emotional, cognitive, and meta-cognitive levels). As described in the preceding section, psychological well-being focuses on personal growth and development. It involves positive psychological traits such as self-acceptance, personal growth, purpose in life, environmental mastery, autonomy, and positive relations with others. The construct of psychological well-being is essentially based on Ryff's [70] model of psychological well-being. In contrast, *social well-being* reflects positive aspects of human well-being through interaction with other people and the community at large. This construct involves at least five dimensions [43–45, 48, 50, 64]: (1) social acceptance (i.e., a positive view of people and human nature), (2) social actualization (i.e., a positive view of human society and human strivings to elevate civil society), (3) social contribution (i.e., a positive view of the need to contribute to society through good deeds), (4) social coherence (i.e., a positive view of how institutions work to foster societal well-being), and (5)

social integration (i.e., a positive view of social identity and a sense of belonging to a community). Research has demonstrated that subjective well-being, psychological well-being, and social well-being are correlated but also empirically distinct [31, 39, 40, 44, 49, 64, 74].

The concept of social well-being is also consistent with a large literature in cross-cultural psychology on *social harmony* [35, 41]. Social harmony is important in the way the individual adapts to the environment. Social harmony can be described as social quality, which means social-economic security, social inclusion, social cohesion, and empowerment in developing the individual's potential. For example, people in collectivistic societies adapt better to their environment by engaging in behaviors considered "collective" such as team work and sharing credit for successful task completion and blame for task failure. Morling and Fiske [60] viewed social harmony in terms of the individual recognizing that control resides in contextual and social forces. As such, the individual attempts to merge with these forces, accepting his or her role and the social norms that guide his or her performance in these roles. Carlquist et al. [8] were able to show that Norwegians' perceptions of happiness and the good life can be categorized in terms of two key dimensions: internal and external. The external dimension involves a variety of happiness concepts related to social relationships, whereas the internal dimension focuses on the individual own emotional experiences. The effect of age was a key finding. Young people view happiness in relation to an internal conception of happiness, whereas older people view happiness in terms of the external dimension. In other words, as people age, their conception of happiness turns from inward to outward. This finding reinforces the notion that a holistic view of positive mental health should include both self and social dimensions. Bauer [3] also emphasized the distinction between "internalist" and "externalist" beneficiaries of the good. The internalist beneficiary of the good mostly involves hedonic pleasures (i.e., positive and negative affect, life satisfaction, self-esteem, and hedonic motives) and eudaimonic meaning (i.e., psychological well-being, meaning in life, satisfaction of agentic needs, individual authenticity, and self-efficacy). In contrast, the externalist beneficiary of the good involves only eudaimonic meaning in the form of positive relations with others, social well-being, flourishing, satisfaction with communal needs, social authenticity, and identity status commitment.

Much of this discussion hints at a possible imperative, the need to take into account the social resources available in one's environment as well as social constraints. As such, I can define positive mental health at the social-ecological level of analysis as follows: Positive mental health is a state of mind in which the individual experiences a *preponderance of social resources (social acceptance, social actualization, social contribution, social coherence, social*

integration, etc.) relative to social constraints (social exclusion, ostracism, etc.).

Conclusion

The concept of *positive balance* is consistent with much of the discussion of “Second Wave Positive Psychology” [52, 53]. Second Wave Positive Psychology is an emerging movement within positive psychology that acknowledges the problems inherent in treating positive mental health concepts as either “positive” or “negative.” As such, the movement recognizes the dialectical nature of positive mental health—a complex and dynamic interplay of positive and negative mental states. As succinctly captured by Ryff and Singer [71, p. 272], well-being involves “inevitable dialectics between positive and negative aspects of living.”

The concept of positive mental health as extracted from the positive psychology movement has been criticized because of its overemphasis on individualism and positive thinking. For example, Ehrenreich [22] has asserted that positive psychologists preaching the concept of positive mental health, based on individualism and positive thinking and set apart from the larger culture, have overpromised the public. They overpromised to transform people’s lives by merely thinking positively while ignoring what should be changed in the environment to help change people’s lives. The social environment plays a significant role in the make-up of well-being. Of course, if we strictly focus on the individual without understanding how the environment affects positive mental health, then there should be no call to action on the political front. The positive psychology movement implies that life coaches and therapists advise their clients and patients to change themselves by changing their thought pattern. Instead, to enhance positive mental health much can be done to change social institutions. Other critics have voiced similar concerns [1, 12, 33, 34]. The concept of well-being introduced here takes into account many disciplinary aspects of the discourse on mental well-being—aspects from physiology, the study of emotions, cognitive science, human development, and sociology. I hope that our conceptualization of mental well-being can guide future research and public policy.

Acknowledgements I would like to acknowledge the helpful comments and suggestions made by the journal’s editor-in-chief, Jan R. Boehnke, and two anonymous reviewers. I would also like to acknowledge the helpful comments and suggestions made by professors Antonella Delle Fave, Ingrid Bradar, Marie P. Wissing, and Mohsen Joshanloo on a very early draft of this paper. My utmost gratitude goes to Professor Dong-Jin Lee who has labored with me for many years conducting research on work–life balance from which the concept of positive balance first established roots. I also would like to express my thanks to professors Ed Diener, Robert Cummins, and Michael Frisch who have encouraged me to pursue this line of thinking several years ago. Finally, I would

also like to acknowledge the helpful discussion I had with my wife, Pamela A. Jackson, a neuroscientist, about the same concept.

Compliance with ethical standards

Conflict of interest The author declares that he has no conflict of interest.

Informed consent Informed consent is not necessary given that this submission is strictly a conceptual piece.

Research involving human participants and/or animals This study involved no human participants and/or animals.

References

- Allen, J. (2018). *The psychology of happiness in the modern world*. New York: Springer.
- Andrews, F. M., & Withey, S. B. (1976). *Social indicators of well-being: America’s perception of life quality*. New York: Plenum Press.
- Bauer, J. J. (2016). Eudaimonic growth: The development of the goods in personhood (or: cultivating a good life story). In J. Vitterso (Ed.), *Handbook of eudaimonic well-being* (pp. 147–174). Dordrecht: Springer.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*, 497–523.
- Bremner, J. D., Randall, P., Scott, T. M., Bronen, R. A., Seibyl, J. P., Southwick, S. M., ... Innis, R. B. (1995). MRI-based measurement of hippocampal volume in patients with combat-related posttraumatic stress disorder. *American Journal of Psychiatry*, *152*, 973–981.
- Bretherton, I. (1985). Attachment theory: Retrospect and prospect. *Monographs of the Society for Research in Child Development*, *50*(1–2), 3–35.
- Campbell, A., Converse, P. E., & Rodgers, W. L. (1976). *The quality of American life: Perspectives, evaluations, and satisfactions*. New York: Russell Sage Foundation.
- Carlquist, E., Ulleberg, P., Delle Fave, A., Nafstad, H. E., & Blakar, R. M. (2017). Everyday understandings of happiness, good life, and satisfaction: Three different facets of well-being. *Applied Research in Quality of Life*, *12*, 481–505.
- Catalino, L. I., Algoe, S. B., & Fredrickson, B. L. (2011). Prioritizing positivity: An effective approach to pursuing happiness? *Emotion*, *14*, 1155–1161.
- Csikszentmihalyi, M., & LeFevre, J. (1989). Optimal experience in work and leisure. *Journal of Personality and Social Psychology*, *56*, 815–822.
- Dambrun, M., Ricard, M., Despres, G., Drelon, E., Gibelin, E., Gilbelin, M., Loubeyre, M., Py, D., Delpy, A., Garibbo, C., Bray, E., Lac, G., & Michaux, O. (2012). Measuring happiness: From fluctuating happiness to authentic-durable happiness. *Frontiers in Psychology*, *3*, Article 16.
- Davies, W. (2016). *The happiness industry: How the government and big business sold us well-being*. London: Verso.
- Day, R. L. (1987). Relationship between life satisfaction and consumer satisfaction. In A. C. Samli (Ed.), *Marketing and quality-of-life interface* (pp. 289–311). Westport: Greenwood Press.
- Deci, E. L., & Ryan, R. M. (2008). Hedonia, eudaimonia, and well-being: An introduction. *Journal of Happiness Studies*, *9*, 1–11.

15. Delle Fave, A., Brdar, I., Freire, T., Vella-Brodrick, D., & Wissing, M. P. (2011). The eudaimonic and hedonic components of happiness: Qualitative and quantitative findings. *Social Indicators Research, 100*, 185–207.
16. Diener, E. (1984). Subjective well-being. *Psychological Bulletin, 95*, 542–575.
17. Diener, E., & Emmons, R. A. (1984). The independence of positive and negative affect. *Journal of Personality and Social Psychology, 47*, 1105–1117.
18. Diener, E., Fujita, F., Tay, L., & Biswas-Diener, R. (2012). Purpose, mood, and pleasure in predicting satisfaction judgments. *Social Indicators Research, 105*, 333–341.
19. Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin, 125*, 276–302.
20. Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D., Oishi, S., & Biswas-Diener, R. (2010). New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicators Research, 97*, 143–156.
21. Duckworth, A. L., & Gross, J. J. (2014). Self-control and grit: Related but separable determinants of success. *Current Directions in Psychological Science, 23*, 319–325.
22. Ehrenreich, B. (2009). *Bright-sided: How the relentless promotion of positive thinking has undermined America*. New York: Metropolitan Books.
23. Emmons, R. A. (1986). Personal strivings: An approach to personality and subjective well-being. *Journal of Personality and Social Psychology, 51*, 1058–1068.
24. Forgas, J. P. (2014). On the downside of feeling good: Evidence for the motivational, cognitive, and behavioral disadvantages of positive affect. In J. Gruber & J. T. Moskowitz (Eds.), *Positive emotion: Integrating the light sides and the dark sides* (pp. 301–322). New York: Oxford University Press.
25. Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist, 56*, 218–222.
26. Fredrickson, B. L. (2004). The broaden-and-build theory of positive emotions. *Philosophical Transactions of the Royal Society B: Biological Sciences, 359*(1449), 1367–1377.
27. Fredrickson, B. L. (2009). *Positivity: Top-notch research reveals the 3-to-1 ratio that will change your life*. New York: Three Rivers Press.
28. Fredrickson, B. L. (2013). Updated thinking on positivity ratios. *American Psychologist, 68*, 814–822.
29. Fredrickson, B. L., & Joiner, T. (2002). Positive emotions trigger upward spirals toward emotional well-being. *Psychological Science, 13*, 172–175.
30. Frieswijk, N., Buunk, B. P., Steverink, N., & Slaets, J. P. (2004). The effect of social comparison information on the life satisfaction of frail older persons. *Psychology and Aging, 19*, 183–198.
31. Gallagher, M. W., Lopez, S. J., & Preacher, K. J. (2009). The hierarchical structure of well-being. *Journal of Personality, 77*, 1025–1049.
32. Gilbertson, M. W., Shenton, M. E., Ciszewski, A., Kasai, K., Lasko, N. B., Orr, S. P., & Pitman, R. K. (2002). Smaller hippocampal volume predicts pathologic vulnerability to psychological trauma. *Nature Neuroscience, 5*, 1242–1247.
33. Held, B. S. (2002). The tyranny of the positive attitude in America: Observation and speculation. *Journal of Clinical Psychology, 58*, 965–992.
34. Held, B. S. (2005). The “virtues” of positive psychology. *Journal of Theoretical and Philosophical Psychology, 25*, 1–34.
35. Ho, S. S. M., & Chan, R. S. Y. (2009). Social harmony in Hong Kong: Level, determinants, and policy implications. *Social Indicators Research, 91*, 37–58.
36. Hostinar, C. E., & Gunnar, M. R. (2013). Future directions in the study of social relationships as regulators of the HPA axis across development. *Journal of Clinical Child and Adolescent Psychology, 42*, 564–575.
37. Huta, V., & Waterman, A. S. (2014). Eudaimonia and its distinction from hedonia: Developing a classification and terminology for understanding conceptual and operational definitions. *Journal of Happiness Studies, 15*, 1425–1456.
38. Jackson, P. A., Sirgy, M. J., & Medley, G. D. (2018). The neurobiology of well-being. In N. R. Siltan (Ed.), *Scientific concepts behind happiness, kindness and empathy in contemporary society* (pp. 135–155). Hershey: IGI Global.
39. Joshanloo, M. (2016). Revisiting the empirical distinction between hedonic and eudaimonic aspects of well-being using exploratory structural equation modeling. *Journal of Happiness Studies, 17*, 2023–2036.
40. Joshanloo, M., Bobowick, M., & Basabe, N. (2016). Factor structure of mental well-being: Contributions of exploratory structural equation modeling. *Personality and Individual Differences, 102*, 107–110.
41. Joshanloo, M., & Weijers, D. (2014). Aversion to happiness across cultures: A review of where and why people are averse to happiness. *Journal of Happiness Studies, 15*, 717–735.
42. Kahneman, D., Diener, E., & Schwarz, N. (1999). Preface. In D. Kahneman, E. Diener & N. Schwarz (Eds.), *Well-being: The foundations of a hedonic psychology* (pp. 9–12). New York: Russell Sage Foundation.
43. Keyes, C. L. M. (1998). Social well-being. *Social Psychology Quarterly, 61*, 121–140.
44. Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior, 43*, 207–222.
45. Keyes, C. L. M. (2003). Complete mental health: An agenda for the 21st century. In C. L. M. Keyes & J. Haidt (Eds.), *Flourishing: Positive psychology and the life well-lived* (pp. 293–312). Washington, DC: American Psychological Association.
46. Keyes, C. L. M. (2007). Promoting and protecting mental health as flourishing: A complementary strategy for improving national mental health. *American Psychologist, 62*, 95–108.
47. Keyes, C. L. M. (Ed.). (2013). *Mental well-being: International contributions to the study of positive mental health*. Dordrecht: Springer.
48. Keyes, C. L. M., & Lopez, S. J. (2002). Toward a science of mental health: Positive directions in diagnosis and interventions. In C. R. Snyder & S. J. Lopez (Eds.), *The handbook of positive psychology* (pp. 45–59). New York: Oxford University Press.
49. Keyes, C. L., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology, 82*, 1007–1022.
50. Keyes, C. L. M., & Waterman, M. B. (2003). Dimensions of well-being and mental health in adulthood. In M. Bornstein, L. Davidson, C. L. M. Keyes & K. A. Moore (Eds.), *Well-being: Positive development throughout the life course* (pp. 481–501). Mahwah: Erlbaum.
51. Lee, D.-J., & Sirgy, M. J. (2018). What do people do to achieve work-life balance? A formative conceptualization to help develop a metric for large-scale quality-of-life surveys. *Social Indicators Research, 138*, 771–791.
52. Lomas, T., Hefferon, K., & Ivtzan, I. (2015). The LIFE model: A meta-theoretical conceptual map for applied positive psychology. *Journal of Happiness Studies, 16*, 1347–1364.
53. Lomas, T., & Ivtzan, I. (2016). Second wave positive psychology: Exploring the positive–negative dialectics of wellbeing. *Journal of Happiness Studies, 17*, 1753–1768.
54. Lovallo, W. R. (2016). *Stress & health: Biological and psychological interactions*. Thousand Oaks: Sage.

55. McEwen, B. S., & Wingfield, J. C. (2003). The concept of allostasis in biology and biomedicine. *Hormones and Behavior*, *43*, 2–15.
56. Meadow, H. L., Mentzer, J. J., Rahtz, D. R., & Sirgy, M. J. (1992). A life satisfaction measure based on judgment theory. *Social Indicators Research*, *26*, 23–59.
57. Michalos, A. C. (1985). Multiple discrepancies theory (MDT). *Social Indicators Research*, *16*, 347–413.
58. Michalos, A. C. (1986). An application of Multiple Discrepancies Theory (MDT) to seniors. *Social Indicators Research*, *18*, 349–373.
59. Michalos, A. C., Hatch, P. M., Hemingway, D., Lavallee, L., Hogan, A., & Christensen, B. (2007). Health and quality of life of older people, a replication after six years. *Social Indicators Research*, *84*, 127–158.
60. Morling, B., & Fiske, S. T. (1999). Defining and measuring harmony control. *Journal of Research in Personality*, *33*, 379–414.
61. Munoz Sastre, M. T. (1998). Lay conceptions of well-being and rules used in well-being judgements among young, middle-aged, and elderly adults. *Social Indicators Research*, *47*, 203–231.
62. Pavot, W., & Diener, E. (1993). Review of the Satisfaction with Life Scale. *Psychological Assessment*, *5*, 164–172.
63. Pressman, S. D., & Cohen, S. (2005). Does positive affect influence health? *Psychological Bulletin*, *131*, 925–971.
64. Robitschek, C., & Keyes, C. L. M. (2009). Keyes's model of mental health with personal growth initiative as a parsimonious predictor. *Journal of Counseling Psychology*, *56*, 321–329.
65. Rockwood, K., Hogan, D. B., & MacKnight, C. (2000). Conceptualisation and measurement of frailty in elderly people. *Drugs & Aging*, *17*, 295–302.
66. Rowe, C. J., & Broadie, S. (Eds.). (2002). *Nicomachean ethics*. Chicago: Oxford University Press.
67. Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development and well-being. *American Psychologist*, *55*, 68–78.
68. Ryan, R. M., Huta, V., & Deci, E. L. (2008). Living well: A self-determination theory perspective on eudaimonia. *Journal of Happiness Studies*, *9*, 139–170.
69. Ryan, R. M., & Martela, F. (2016). Eudaimonia as a way of living: Connecting Aristotle with self-determination theory. In J. Vitterso (Ed.), *Handbook of eudaimonic well-being* (pp. 109–122). Dordrecht: Springer.
70. Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, *57*, 1069–1081.
71. Ryff, C. D., & Singer, B. (2003). Ironies of the human condition: Well-being and health on the way to mortality. In L. G. Aspinwall & U. M. Staudinger (Eds.), *A psychology of human strengths* (pp. 271–287). Washington, DC: American Psychological Association.
72. Schwartz, B. (2015). *Why we work*. New York: Simon & Schuster.
73. Schwartz, B., & Wrzesniewski, A. (2016). Internal motivation, instrumental motivation, and Eudaimonia. In J. Vitterso (Ed.), *Handbook of eudaimonic well-being* (pp. 123–134). Dordrecht: Springer.
74. Shapiro, A., & Keyes, C. L. M. (2008). Marital status and social well-being: Are the married always better off? *Social Indicators Research*, *88*, 329–346.
75. Sirgy, M. J. (2012). *The psychology of quality of life: Hedonic well-being, life satisfaction, and Eudaimonia*. Dordrecht: Springer.
76. Sirgy, M. J., Cole, D., Kosenko, R., Meadow, H. L., Rahtz, R. D., Cicic, M., Jin, G. X., Yarsuvat, D., Blenkhorn, D., & Nagpal, N. (1995). Judgment-type life satisfaction measure: Further validation. *Social Indicators Research*, *34*, 237–259.
77. Sirgy, M. J., & Lee, D.-J. (2016). Work-life balance: A quality-of-life model. *Applied Research in Quality of Life*, *11*, 1059–1082.
78. Sirgy, M. J., & Lee, D.-J. (2018). Work-life balance: An integrative review. *Applied Research in Quality of Life*, *13*, 229–254.
79. Sirgy, M. J., & Lee, D.-J. (2018). The psychology of life balance. In E. Diener, S. Oishi, & L. Tay (Eds.), *e-Handbook of subjective well-being*. NobaScholar.
80. Sirgy, M. J., & Wu, J. (2009). The pleasant life, the engaged life, and the meaningful life: What about the balanced life? *Journal of Happiness Studies*, *10*, 183–196.
81. Spinelli, S., Schwandt, M. L., Lindell, S. G., Heilig, M., Suomi, S. J., Higley, J. D., ... Barr, C. S. (2012). The serotonin transporter gene linked polymorphic region is associated with the behavioral response to repeated stress exposure in infant rhesus macaques. *Developmental and Psychopathology*, *24*, 157–165.
82. Sterling, P., & Eyer, J. (1988). Allostasis: A new paradigm to explain arousal pathology. In S. Fisher & J. Reason (Eds.), *Handbook of life stress, cognition, and health* (pp. 629–649). New York: John Wiley.
83. Suh, E., Diener, E., Oishi, S., & Triandis, H. C. (1998). The shifting basis of life satisfaction judgments across cultures: Emotions versus norms. *Journal of Personality and Social Psychology*, *74*, 482–495.
84. Vitterso, J. (Ed.). (2016). *Handbook of Eudaimonic well-being*. Dordrecht: Springer.
85. Waterman, A. S. (1993). Two conceptions of happiness: Contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. *Journal of Personality and Social Psychology*, *64*, 678–691.
86. Wolfer, R., & Scheithauer, H. (2013). Ostracism in childhood and adolescence: Emotional, cognitive, and behavioral effects of social exclusion. *Social Influence*, *8*, 1–20.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.