The self-determination theory perspective on positive mental health across cultures

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Vaillant provides an admirable historical and current overview of the concept of "positive mental health", outlining seven different conceptions of this fortuitous state. Interestingly, although the title of the article asks whether there is a cross-cultural definition of positive mental health, Vaillant does not spend much time addressing the cross-cultural issue. Are the seven models covered valid in other cultures? We don't really know. Vaillant does introduce a relevant metaphor in discussing champion decathloners, saying "All decathloners will share the positive characteristics of muscle strength, speed, endurance, grace and competitive grit, although the combinations may vary". This suggests that positive mental health might be characterized in the same basic ways in all cultures, even though particular cultures may differ in their amounts or mixtures of these characteristics (i.e., some cultures might have more "strength", others more "speed"). However, Vaillant does not speculate on how different cultural types might evidence more or less of the seven conceptions of positive mental health he reviews.

In order to shed more light on these issues, I will briefly discuss self-determination theory, a theory of motivational health which has received extensive empirical support over the last four decades, which I believe provides an eighth (and perhaps most fundamental) conception of mental health (1-3). It is possible that some readers of this journal are unfamiliar with this theory, which fits into the broad umbrella of "positive psychology". An advantage of the theory is that it concerns not just the positive, but also the struggle to obtain the positive in the context of potentially negative conditions and constraints. The theory also makes firm claims about the nature of positive motivation across cultures, which have been well confirmed empirically.

Self-determination theory assumes an inherently active individual, finding and following intrinsic motivations and in the process learning, growing, and thriving. Intrinsic motivations will emerge automatically, as long as environments support them (unfortunately, "controlling" environments can undermine them). The theory also proposes that all humans have three basic psychological needs, or experiential requirements, whose procurement supports intrinsic motivation, growth and health just as the procurement of basic physical requirements supports the growth and health of plants (4). The three needs are: autonomy (needing to be self-regulating; to own one's actions and to identify one's self with one's behavior); competence (needing to be effective; to be moving towards greater mastery and skill); and relatedness (needing to feel psychological connection with important others; to support, and be supported by, those others).

Note that these three needs correspond to Freud's "Love and Work", with the stipulation that work must be meaningful and autonomously chosen. The three needs also correspond to Jahoda's definition of mental health, discussed in Vaillant's paper: that mental health includes "autonomy (being in touch with one's own identity and feelings); investment in life (self-actualization and orientation toward the future); efficient problem solving (accurate perception of reality, resistance to stress, environmental mastery); and ability to love, work and play". Self-determination theory would propose that life-investment and future orientation emerge automatically when the other three needs are satisfied.

According to self-determination theory, these three needs evolved because humans who sought these psychosocial commodities, and who were psychologically reinforced when obtaining them, had a selective advantage compared to humans who did not. A large research literature now supports that these are three crucial components of health and well-being, which space limitations preclude me from covering. As just one example, a 2001 article tested ten candidate psychological needs as to their relative presence (or absence) within people's self-described "most satisfying events" (5). Autonomy, competence and relatedness emerged on top in this study; hedonic pleasure, financial success, popularity/status, safety/security, and even physical health and self-actualization, were not supported as basic needs by the study criteria.

Turning to the cross-cultural issue, the proposal that these are evolved basic needs within human nature suggests that they should be universally important across cultures. The literature clearly supports this: as just one example, Sheldon et al (6) found that these three needs predicted positive emotion and life satisfaction to an equal extent within twenty different cultures, including African, Asian, European, Latin, and Australasian cultures. This empirical approach takes, as evidence of a candidate need's status as a true need, that it predicts positive emotion and subjective well-being (two of the seven conceptions of positive mental health covered by Vaillant).

In the self-determination theory, positive emotion and subjective well-being are merely by-products of need satisfaction, rather than being the indicators of mental health themselves. In fact, self-determination theory might claim that all forms of mental health are ultimately supported by, and arise from, psychological need satisfaction.

How, then, do cultures differ in their mental health? According to self-determination theory, cultures differ in the amount to which they support the satisfaction of peoples' basic needs, and thus some cultures will be thriving (on average) more than others. For example, the autonomy need is typically less well-supported in Asian societies, as evidenced by lower autonomy need satisfaction scores in those cultures, which partially accounts for the reduced levels of posi-

tive emotion and subjective well-being seen in those cultures.

Returning to the decathlon metaphor, there are certain key experiential ingredients to mental health. Psychologically healthy people within all societies will evidence large quantities of these ingredients. However, societies will vary in the exact mix with which these ingredients are supplied and supported. For example, in their 2001 study, Sheldon et al (6) showed that South Koreans reported more relatedness than competence need satisfaction in their "most satisfying events", while the order was the opposite in the US. Nevertheless, competence and relatedness both predicted positive emotion to the same extent in the two cultures.

In sum, self-determination theory attempts to specify the "psychological nutriments" necessary for all forms of mental health, in all cultures. Individual and cultural differences in need satisfaction can explain individual and cultural differences in many kinds of positive mental health (7).

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The application of Ryff's model (2), both in terms of assessment and treatment, thus suggests that optimally balanced well-being differs from person to person: there is no single right way to be well (people have differing combinations of strengths and vulnerabilities and one has to work with what is available). The cross-cultural implications of the model are thus considerable and should integrate Vaillant's framework. Further, Ryff (2) emphasizes that personality assets should be combined with contextual variables (work, family life, social ties and socioeconomic conditions). The central message is that personality, well-being and distress come together in different ways for different people.

G. Engel (8) defined etiological factors as "factors which either place a burden on or limit the capacity of systems concerned with growth, development or adaptation". Positive mental health should aim to address these etiological factors. Assessment of well-being and pursuit of well-being enhancing strategies such as WBT should be incorporated in clinical evaluation and therapeutic plans (9).

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Healthy personality development and well-being

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George Vaillant describes seven concepts of positive mental health: effective functioning, strengths of character, maturity, positive emotional balance, socio-emotional intelligence, life satisfaction (true happiness), and resilience. His descriptions reflect his outstanding contributions to the epidemiological investigation of mental health as well as his affiliations with psychoanalysis and positive psychology. He makes the valuable observation that these seven concepts of well-being overlap extensively.

The correlations observed by Vaillant among empirical measures of these constructs suggest that feedback interactions among multiple distinct processes influence the development of well-being as a complex adaptive system (1,2). The development of well-being must involve such a complex adaptive system because the same personality traits can lead to different health outcomes (i.e., multi-finality), and different sets of personality traits can lead to the same health outcome (i.e., equifinality) (2). As a result, linear stage models of development like those of Erikson, Piaget, and Kohlberg are inadequate.

The feedback dynamics of well-being has hopeful implications for mental health care because it means that there are multiple paths to well-being that can be accommodated by the unique strengths and weaknesses of each person. At the same time, such complex dynamics presents a severe challenge for the validation of distinct measures of the components of well-being. Measures of all seven of the concepts of well-being described by Vaillant are moderately correlated with Temperament and Character Inventory (TCI) measures of maturity (i.e., self-directedness and cooperativeness) and low harm avoidance (3). Regrettably, the residual variability is not well understood in terms of content, structure, or function of other personality dimensions like self-transcendence and persistence, although progress is being made (4-6).

Nevertheless, the dynamic nature of the processes that promote well-being implies that there is a crucial role for self-transcendence in the flourishing of health with maturity, integrity, wisdom, resilience, and creativity. Erikson's and Vaillant's spiral of maturity can be systematically related to the development of the three character traits of self-directedness, cooperativeness, and self-transcendence (1). Like Vaillant, the DSM-5 is proposing a general definition of healthy personality in terms related to self-directedness and cooperativeness. However, the DSM-5 neglects self-transcendence, even though all three character traits are important in predicting physical, mental, and social components of health and happiness (3).

A self-transcendent outlook of unity is actually fundamental to healthy personality development, even though it may be devalued in materialistic cultures. For example, the humanistic psychologist G. Allport stated: "The basic existentialist urge to grow, pursue meaning, seek unity is also a given. It is a major fact – even more prominent in man's nature than his propensity to yield to surrounding pressures" (7). Recognizing the need for a dynamic balance between autonomy and

coherence, Allport described the characteristics of psychological maturity as an adaptive set of seven functions: a) self-extension (authentic and enduring involvement in significant life activities, such as work, family life, or community service); b) dependable ways of relating warmly to others, such as tolerance, empathy, trust, and genuineness; c) self-acceptance or emotional security (the ability to regulate and live with one's emotional states); d) realistic perception and appraisal (seeing the world as it is in contrast to being defensive or distorting reality to conform to one's wishes); e) problem-centeredness (resourceful problem solving); f) self-objectification (self-awareness allowing a person to know oneself with insight and humor); and g) a unifying philosophy of life, allowing comprehension and integration of one's goals and values (7). According to Allport, a healthy person is constantly striving toward unification of personality by integration of all aspects of his/her life.

Inspired by the descriptions of psychological maturity by Allport and other humanists, C. Ryff developed reliable measures for components of mental health, which she calls psychological well-being (8). Ryff's measures have been helpful in differentiating the psychobiological correlates of well-being and ill-being (9). Her empirical findings show that the absence of symptoms of mental disorders does not assure the presence of positive emotions, life satisfaction or other indicators of well-being. Unfortunately, Ryff's proposal does not provide an adequate measure of self-transcendence or a unifying philosophy of life. Her measures are moderately explained by high self-directedness, high co-operativeness, and low harm avoidance. Ryff's measure of personal growth is positively correlated with self-transcendence but only weakly (10). An adequate model of well-being will require a better understanding of the role of self-transcendence (5). In contrast to defensiveness and effortful control, an outlook of unity is expressed in activities such as fluidity in athletic performance, improvisation in musical composition, trustful perception of social support, and generosity in charitable donations, which each activate the most recently evolved parts of the brain, particularly prefrontal poles (11). Activation of the anterior prefrontal cortex produces feelings of satisfaction even when anticipating adversity or when making meaningful personal sacrifices.

In summary, Vaillant's concepts can help people to reflect on the content and functions of the components of well-being. Much more work is needed to develop empirical measures that are able to reliably distinguish the different processes that promote healthy personality development and well-being. We need to better understand the crucial role of self-transcendence along with other dimensions of personality in the development of health and happiness (3,5). The great deficiency of emerging classifications of mental disorders is that they embody little or no understanding of the science of well-being. I applaud George Vaillant and the leadership of *World Psychiatry* for their roles in stimulating this valuable discussion of well-being.

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What is health and what is positive? The ICF solution

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When talking about positive health, a clarification of concepts and definitions is essential. Vaillant gives a spectrum of answers, but raises at the same time even more questions which need a detailed discussion.

A first question in need of clarification is what is meant with "health". Additional to what is discussed by Vaillant, a definition is needed of what is meant with "positive", and whether "positive" and "health" are synonyms. Vaillant points to exceptional persons like astronauts or decathlon champions. This suggests that positive health is something different from health as such, i.e. health of ordinary persons. If this is meant, the question is, who is interested in extremes of health, and can these be called health at all? Is the disfigured heart of an athlete healthy or is it sick, as it may kill the person in spite of the fact that it temporarily helps to achieve high scores in sport? And is persistent happiness and well-being not called hyperthymia? So, what is the criterion to say that something is "healthy"? We need norms and Vaillant is correct in saying that they can neither be taken from distributions of scores nor from achievement.

A second question in need of clari-

fication is the relation between health and illness. Vaillant says that "mental illness is a condition that can be defined reliably" and he then contrasts mental illness with "positive mental health". Contrary to the traditional view that "health" and "illness" are two ends of a one-dimensional continuum, Vaillant proposes a two-dimensional concept, e.g., when talking about a world class soccer player with a broken ankle who is ill and healthy at the same time. The assumption that health and illness are two independent dimensions allows to study the interaction between them, and not only to measure but also to address both illness and health specifically. Especially in the treatment of chronic illness, like myocardial infarction, cancer, or anxiety, the problem is in many cases not so much the illness but the deterioration of health because of the illness. We have called this the "cuckoo's-egg-syndrome". In order to have a beautiful garden, it is not enough to tear out weeds (addressing illness), but you also have to plant flowers (improving health). There is a long list of well-evaluated interventions for the improvement of health, which we have summarized under the term "salutotherapy" (1).

A third question in need of clarification is what dimensions are included under the term "health". Vaillant points to seven areas of psychological research, but there are further concepts of interest like personality, cognitive intelligence (not only emotional intelligence), activities of daily living, workability, coping, social competence, self efficacy, adaptation, purpose of life psychology, wisdom psychology, quality of life, sense of coherence (2-5). These are also important dimensions in describing the psychology of health and each is supported by a large body of research. One more question is why only psychological constructs are discussed. Are there no biological or somatic dimensions of mental health? (6).

In summary, the conclusion is that the problems with health are the same as with illness. There is no general definition of illness nor of health which catches all aspects. There are many illnesses, with quite different definitions and criteria, and similarly we should talk about many different forms of health. The structure of Vaillant's paper goes in this direction, as it discusses not health but resilience, well-being, etc., which are all important, needed, and helpful dimensions, but which are not "health as such".

Is there a way to answer the open questions and come to a "differential diagnosis" of health? The International Classification of Functioning, Disability, and Health (ICF), produced by the World Health Organization (7), can serve as a frame of reference for the classification of health, as the ICD in the classification of illness. The ICF describes "functional health" by discriminating between function, capacity, environment, person, and participation. Capacity is qualified in reference to context factors, which solves the problem of norms (8). This is analogous to intelligence tests, where the intelligence quotient is calculated also on the basis of, for example, age and education. The ICF covers somatic and psychological functions, and includes a list of activities and context factors as well as recommendations for their assessment. The ICF provides a frame in which one can include all the different concepts discussed by Vaillant, showing that we do not have to look for "the" definition of health, since there are many "healths", which become of interest to therapists whenever they are needed, endangered, or impaired in a given individual and at a given time (8-10).

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Subjective positive well-being

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Among the seven models of positive mental health so clearly described by George Vaillant in this issue of *World Psychiatry*, the model of subjective well-being, reflecting the positive tone of the World Health Organization (WHO) definition of health, has cross-cultural validity. Actually, Vaillant himself refers to the single-item question "How do you feel about your life as a whole?" as a simple candidate for such a cross-culturally valid measure.

In the WHO Quality of Life Scale (WHOQOL), another "global" question is: "How would you rate your quality of life?". This item is measured on a "bipolar" scale with such answer categories as "poor", "neither poor nor good", and "good" (1). The WHOQOL has been found useful in many cross-cultural studies (1).

In the late 1970s, the Index Medicus accepted self-reported quality of life scales as outcomes in clinical studies. The most frequently used quality of life

scales in the 1980s and 1990s were the Psychological General Well-Being Scale (2) and the Short-Form 36 item health survey (SF-36) (3). Psychometric analyses of these scales identified the factors of physical versus mental health. The WHO (Five) Well-being Index (WHO-5) was then developed for the purpose of measuring positive mental health (4). The WHO-5 includes the following five items: a) feeling cheerful and in good spirits, b) feeling calm and relaxed, c) feeling active and vigorous, d) feeling fresh and rested when waking up, and e) feeling interested in day-to-day activities. The Likert answer categories, which take the past two weeks into account, range from "all of the time" to "at no time". As in the SF-36, the total score on the WHO-5 ranges from 0 to 100, where high scores signify better well-being. Decreased positive well-being as measured on WHO-5 is a sensitive indicator of mental health problems (5), and in clinical trials the goal of treatment is to move the scores up to the mean scores in the general population, i.e. approximately 70 (6).

Subjective psychological well-being or health-related quality of life is often considered to be a rather individualistic, personal or idiographic issue, implying that a cross-cultural definition is very difficult to obtain. As discussed elsewhere (7), subjective well-being might in the first place be considered as a self-reflective, private language in which the person is communicating with herself or himself from the moment when she or he wakes up, perceiving and planning the day, having emotional appetite for starting her or his day. However, studies all over the world have indicated that the WHO-5 items seem to cover basic life perceptions of well-being, allowing this private language to be translated into a simple language of communication (6,7).

In Table 1 of his paper, Vaillant demonstrates that subjective well-being indeed predicted objective mental health with the highest coefficient of correlation when compared to the other models of positive health over a time span of 15 years. The predictive validity of the WHO-5 in a 6-year survival analysis of cardiology patients was also found to be high (8).

Vaillant states that "chemicals can alleviate mental illness but do not improve healthy brain function". The pharmacopsychometric triangle has recently been introduced in trials of antidepressants (6,7,9). The outcomes of pharmacotherapeutic chemicals are hereby triangularized. Antidepressants are not intended to directly treat decreased quality of life, but to treat depressive illness (A) with as few side effects as possible (B). When the balance between (A) and (B) is evaluated by the patients themselves on subjective well-being scales such as the WHO-5 (C), where the goal is to move the scores up into the area of the general population mean scores (6), antidepressants do not, as concluded by Vaillant, enhance mental health beyond this level. Forty years ago, the great American psychopharmacologist L. Hollister (6) taught me that, when treating a 35-year old man for a major depressive episode with an antidepressant, we can move his depression scores down to remission over 6 weeks and then, hopefully, in the relapse prevention continuation therapy, bring him out of the depressive episode. On the other hand, we are not able to then turn the patient into a great violinist if he never had held a violin in his hands prior to treatment.

Within the field of clinical medicine we as psychiatrists do our best to restore the brain functions of our patients suffering from mental disorders, using subjective well-being as an essential goal of treatment within the pharmacopsychometric triangle.

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Problems in the definitions of positive mental health

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I would like to congratulate George Vaillant for his balanced presentation and thoughtful discussion of seven main models of positive mental health. Although the paper has many merits, it also evokes several questions. Due to restricted space, I will just focus on a couple of them.

First, I do not agree with Vaillant's statement that the limits of mental illness are relatively clear. I think that one of the main problems in modern psychiatry is the unclearness of diagnostic boundaries. As just one example, we recently showed that changing the threshold for only one question in a diagnostic interview resulted in major changes in the prevalence rates of major depressive episode (1). The use

of the threshold "depressed mood all day" yielded a prevalence of 4.7%, while using the thresholds of "depressed mood most time of the day" or "at least half of the day" yielded prevalence rates of 9.2% and 11.9%, respectively. This same problem of unclear boundaries applies of course also to the question of positive mental health.

The difficulty of defining positive mental health is exemplified by the obvious shortcomings of many of the definitions. In these definitions, functioning above normal, the presence of human strengths, positive emotions and subjective well-being are listed as criteria. However, if the basic idea is that positive mental health is more than just the absence of mental illness, it is problematic to say that these features are the core of positive mental health, because the lack of them has a high correlation with mental illness.

From a Nordic perspective, especially the concept of "spirituality" as one component of positive mental health appears odd. The Nordic countries are probably more secular than most other countries in the world. For a Finnish scholar like me, using words such as "faith" and "spirituality" in the context of positive mental health sounds very strange.

The definition of spirituality has changed over the years (2). If "spirituality" here means religiosity, I think it is wrong to link positive mental health to an ideology of any kind. This could imply that people without religious tendencies cannot be as mentally healthy as "spiritual" people. As far as I know, there are no studies showing that agnostic or atheist people have poorer mental health than "spiritual" people.

On the other hand, if a broader definition of spirituality is taken, there are indeed some studies showing that spirituality is associated with mental health. But here the problem is that modern measures of "spirituality" actually measure such things as sense of purpose and meaning in life, social connectedness, optimism, harmony, peacefulness and general well-being (2,3). The tautology is obvious, because patients suffering from psychiatric illnesses usually do not at the time of illness exhibit these features. Thus, it is not surprising that these measures are positively related to mental health.

The definitions of maturity and socio-emotional intelligence are to my mind less problematic, but their shortcoming is that they are restricted to the psychological sphere. If we assume that such characteristics as capacity for love, morality, generativity, conflict resolution and negotiation are some of the core features of positive mental health, we should perhaps include in the definition the evidence that these abilities are implemented in real life. Then we would have to define positive mental health in terms, for instance, of actions taken towards a society that is more equal and less competitive and exploitative than most of current societies are.

My last point is that physical health is ultimately defined in biological terms. If the roots of human mind are in the brain, should not the ultimate definition of positive mental health rely on optimal brain functioning? There are some reflections on this in Vaillant's article when he describes the models of positive emotions and socio-emotional intelligence. Although I am sure that neurobiology will in the future contribute importantly to this discussion, I do not, however, believe that one day we will have an unambiguous neurobiological description of optimal brain function as a basis of positive mental health. In my mind, the first reason for this is that the "mental" exhibits emergent properties in relation to brain functions (see 4). The other reason is that the definitions are and should be to some degree context dependent. Positive mental health is not only a property of a certain individual, but is heavily influenced by social phenomena (5).

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Positive mental health: a note of caution

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The concept of positive mental health is doubtless "too important to ignore". At the same time, as Vaillant states in his thought-provoking paper, "the study of positive mental health requires safeguards". Here I wish to emphasize two points: that positive mental health remains a fuzzy and contested construct, and that there are currently few data on clinician driven positive mental health interventions.

While Vaillant performs a service by outlining different models for conceptualizing positive mental health, the multiplicity of models underscores that this is a contested construct. While there is some agreement about the boundaries of typical physical disorders, there is likely less agreement about the concept of physical fitness. After all, definitions of physical fitness depend greatly on the particular individual at hand, and on the particular activity for which fitness is being determined (1). Similarly, while there is some agreement about the boundaries of typical mental disorders (2), there is likely less agreement about those for positive mental health.

Given the potential importance of positive mental health, how do we develop consensus? Vaillant argues for terms that are culturally sensitive and inclusive.

While such a goal seems laudable, cultures can be entirely wrong about scientific constructs. Another approach might be to rely on evolutionary theory, as have some approaches to disorder (3). But, given the apparent plasticity of human nature, evolutionary theory may emphasize precisely such plasticity, rather than specific fixed universal features of mental health. Relatedly, contra Vaillant, evolutionary theory emphasizes that negative emotions may be useful, while positive emotions may be maladaptive (4).

In the case of disorder, for typical conditions (e.g., acute infection), there may be substantial universal agreement that the condition is harmful, that individuals are not responsible for the condition, and that medical intervention is deserved. However, for atypical conditions (e.g., excessive alcohol use), there may be substantial disagreement from time to time and place to place about whether the condition is harmful, whether individuals bear responsibility, and whether medical intervention is deserved (5). A reasonable decision can, however, be made on the basis of arguments for and against categorizing a particular atypical condition as a medical disorder.

Similarly, for positive mental health, there is likely to be substantial agreement about some typical components (e.g., resilience to stress) (6), and controversy about more atypical components (e.g., career consolidation). In many regions, high levels of unemployment and other social factors may prevent transformation of "jobs" into "careers". As in the case of categorizing particular conditions as mental disorders, however, a reasonable decision can be made on the basis of a rigorous assessment of the relevant facts and values (5).

Concerning positive mental health interventions, we can easily agree that cosmetic surgeons who help treat disfigured children are doctors. We can easily agree that a surgeon who is willing to transform a particular individual to look more like his favourite movie star is not a doctor, but a schmoctor (7). And we can reasonably debate whether cosmetic surgery to enhance appearance in particular ways for particular individuals is doctoring or schmoctoring.

Similarly, in the case of positive mental health, mental health clinicians may reasonably be interested in key aspects (e.g., resilience after trauma). It may be harder to obtain consensus that mental health clinicians who help individuals, say, "tune into the energies of the universe" are not doctors, but schmoctors. Again, however, we can reasonably debate about whether particular mental health interventions aimed at enhancing the mind are doctoring or schmoctoring.

Such debate is in part about the validity of the relevant goals (e.g., surgery to look like a favourite movie star does not seem to be a health issue), and it is in part about the cost-effectiveness (e.g., society may be able to bear the costs of cosmetic surgery for major disfigurement, but not for enhancement procedures). Similarly, society may decide to focus on treating patients with severe mental disorders, rather than to fund clinical interventions to enhance resilience.

It is noteworthy that many interventions can potentially help humans to flourish mentally, including education, participation in the arts, etc. Indeed, there are growing literatures in the areas of conceptual work on the meaning of life (8), and empirical research on well-being and happiness (9-11). That said, it is a moot point as to whether interventions to improve positive mental health should necessarily fall within the purview of mental health clinicians.

Furthermore, empirical studies of costs and benefits of interventions are needed to inform decision-making. Vaillant argues that, in healthy individuals, psychopharmacological interventions are negative. Remarkably, large numbers of the population are using psychotropic agents for enhancement purposes (12). There is, however, no a priori reason to conclude that such agents are always harmful; indeed, given genetic variability, individual responses may be quite variable (13).

Vaillant's view is that we can enhance mental health through cognitive, behavioural and psychodynamic means. However, there is a dearth of empirical data on the efficacy and cost-effectiveness of positive mental health interventions. Arguably, appropriate nutrition and exercise are likely amongst the most efficacious and cost-effective positive mental health interventions (14). More certain is the need for additional research in this area.

In conclusion, debate in the arena of public health often refers not to psychiatric disorders, but rather to mental health. This is exemplified perhaps by the World Health Organization's slogan "no health without mental health". Such rhetoric may offer a number of advantages. Furthermore, the science of positive mental health is an important area of investigation.

At the same time, caution is warranted. While there is universal agreement about the need to treat some typical and burdensome physical and mental disorders, there is less agreement about what constitutes positive mental health, and about which clinical interventions may be efficacious and cost-effective. Empirical data may help shed more light on these key questions.

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