Optimism and Other Sources of Psychological Well-Being
A New Target for Cardiac Disease Prevention

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People have characteristic mindsets, habitual ways of thinking that are the product of temperament, upbringing, life experiences, and other factors. One of the best characterized mindsets is that of optimism versus pessimism. According to a simple definition, optimists tend to have a general expectation of positive outcomes, whereas pessimists tend to expect negative outcomes. The value of optimism is clear. Optimism has been repeatedly shown to predict better success in many walks of life, including education, business, politics, and sports performance, and has been associated with more successful aging, higher quality of social relationships, greater resiliency, generally greater get-go, and more happiness.

Initial medical investigations into the health benefits of optimism began with studies of individuals’ explanatory style about life events, as promulgated by Seligman. For instance, optimists tend to explain negative events as transient in nature, whereas pessimists tend to explain events in more permanent terms. In recent years, investigators have favored measuring dispositional optimism, as commonly assessed according to the Revised Life Orientation Test. This scale includes items such as “in uncertain times, I usually expect the best” and “I hardly ever expect things to go my way”. Notably, both explanatory-style and dispositional optimism have been demonstrated to predict better health outcomes.

In this issue of Circulation: Heart Failure, Kim et al² report on the 4-year follow-up of 6808 individuals, with a mean age of 70 years, for the development of incident heart failure after an initial psychological and clinical evaluation that included measurement of optimism–pessimism according to the Revised Life Orientation Test. Even after thorough adjustment for clinical, demographic, behavioral, and psychological covariates, including depression, optimism predicted a lower risk for developing heart failure. A dose–response relationship was noted between increasing levels of optimism and decreasing incidence of heart failure. Overall, the risk for heart failure was approximately half in optimists versus pessimists. To minimize the possibility that heart failure itself was leading to pessimistic thinking, the investigators confirmed their findings after excluding those patients who developed heart failure in the first 2 years of follow-up.

These findings, the first to assess the relationship between optimism–pessimism and heart failure, add to a remarkably consistent recent literature that has linked optimism–pessimism to other cardiovascular outcomes, including myocardial infarction, stroke, and cardiac death.³ In each study in which it has been assessed, a dose–response relationship has been observed between increasing optimism and decreasing risk for cardiovascular events. These observations provide conclusive evidence for the health benefits of optimism.

Can Pessimists Be Turned Into Optimists?
The growing findings on optimism–pessimism raise the following clinical question: are there interventions which can increase optimism and if so, how effective and practical are they? Addressed narrowly, there are indeed techniques that have been shown to improve optimistic thinking. One approach has involved modifying the use of cognitive behavioral therapy techniques traditionally used to treat negative conditions, such as depression, anxiety, and insomnia, for promoting optimism. Another approach has involved positive activity interventions, such as the Best Possible Self exercise developed by King⁴, which assigned individuals the following basic writing exercise: “Think about yourself in the future. Imagine that everything has gone as well as it possibly could. Think of this as the realization of all your life dreams. Now, write about what you imagined.” The value of this intervention has been confirmed by other investigators.⁴⁵

Broader Perspective
From a clinical vantage, however, changing any type of behavioral health habit has proven difficult in medical practice, and it could be well argued, in this regard, that changing habits of thinking may be the hardest of habits to change. Thus, there would be a natural inclination to consider strategies for promoting optimism with skepticism in medical circles. To deal with this challenge, it is important to reframe the potential goal of optimism building according to a broader perspective: the goal of inducing psychological well-being (PWB). The presence of PWB is associated with vitality, a highly relevant health parameter. Vitality, having an innate sense of energy, tends to be pleasurable and provide people with agency, the desire to do things. People who feel vital also tend to be more resilient and have more energy for emotional regulation.⁶ Optimism represents one road toward PWB and higher vitality but there are others which are given below.
Other Positive Mindsets
These include an attitude of gratitude, kindness, and forgiveness. Similarly, there are contrasting negative mindsets that can detract from PWB, including rumination (a thought pattern of repetitive intrusive thinking about distressing topics) and worry. Notably, such negative mindsets place individuals at increased risk for developing depression and anxiety. Unlike optimism–pessimism, these other mindsets have not been well studied epidemiologically, but physiological study is suggestive. For instance, rumination promotes cardiovascular physiological hyper-reactivity to stressful challenge, whereas trait or state forgiveness has the opposite effect.8

Other Positive Psychosocial Factors
Studies have identified potent psychosocial risk factors for cardiovascular disease (CVD). Besides pessimism, these include depression, anxiety, chronic stress, social isolation, and a low sense of life purpose.9,10 Less well emphasized is that each of these negative risk factors has its positive counterparts. These include positive emotional states, an emotional sense of security, successfully taking on and handling challenges (positive stress), strong social integration, and a strong sense of life purpose.

Positive Health Behaviors
There is an important and underemphasized reciprocal relationship between health behaviors and psychosocial functioning.2 For instance, exercise is a health behavior that tends to increase overall health proactivity (eg, better diets), improve sleep, minimize the pathophysiologic effects of stress, favorably alter brain plasticity and cognitive function, and reduce depressive symptoms.11

Clinical Tailoring
From a clinical perspective, this understanding of PWB is important for a few reasons. First, it provides expanded avenues for clinical intervention. For instance, an increasing evidence base supports the fostering of PWB through the use of appreciation and gratitude exercises, such as developed by Emmons and McCullough;12 kindness interventions;13 and meditative practices, such as mindfulness-based stress reduction. In addition, although it is not directly measured in scales such as the Revised Life Orientation Test, one of the essential components of optimism is the sense that one can land on his or her own 2 feet in the face of life’s challenges. To that end, the development of coping skills and promotion of self-efficacy is generally helpful for building optimism and PWB. Alternatively, health behaviors may be targeted, including physical activity, sleep behaviors, and healthy nutrition.

Second, there is a basic distinction to be drawn between the conventional medical versus behavioral management of CVD risk factors. Much of current medical management is guideline driven. There are specific indications, for example, relative to the use of cholesterol-lowering or antihypertensive medications. When it comes to the goal of promoting healthy behaviors and inducing PWB, however, there is no one appropriate approach or strategy for all.2 In a given patient, initiating an exercise program or dealing with insomnia might be the right first approach for enhancing PWB. In another patient, teaching coping skills or providing social support might be the best initial strategy toward building PWB. A third patient might benefit from cognitive behavioral therapy approaches to optimizing optimism or might take to exercises, such as the Best Possible Self exercise.

Third, just as exercise or diet plans can be formulated from easy to hard, the same is true for behavioral interventions. Thus having a repertoire of behavioral interventions allows tailoring according to the level of patients’ motivation and sense of self-efficacy.

Transforming Behavioral Healthcare
Implicit to the varied pathways toward PWB is the need to develop integrative programs that could provide patients with the opportunity for appropriate support and counseling across a variety of disciplines, such as exercise training, nutrition, sleep hygiene, and varied forms of behavioral counseling, including those designed to promote PWB rather than just treat obvious psychosocial dysfunction. Cardiology is already accustomed to the concept of structured behavioral interventions. Cardiac Rehabilitation, a program that supports exercise training after cardiac events, has proven to be efficacious in reducing recurrent cardiac event rates. Incorporation of psychosocial counseling into Cardiac Rehabilitation programs has been found to be of further benefit in reducing cardiac events.14 However, the structure of Cardiac Rehabilitation is too expensive for primary prevention. What is now required is the development of a new cost-effective healthcare delivery model where individuals can benefit from the growing number of evidence-based techniques that can help promote patient motivation, successful goal execution, and long-term maintenance and improve PWB.2

Clinical Imperative
The current study by Kim et al15 provides further evidence between the strong link between both positive and negative psychosocial factors and CVD. The mechanisms underlying this link have also become increasingly clear. With respect to optimism, for example, emerging evidence has already identified several mechanisms through which optimism exerts its beneficial cardiovascular effects, including promotion of healthier physiology (eg, enhanced neuroendocrine and endothelial function, reduced inflammation, better blood pressure)15–17; a greater tendency toward healthy lifestyle habits, such as exercise and better diet;15 and indirect benefits that can secondarily promote health, such as better social functioning.19 By contrast, negative psychosocial risk factors are pathophysiologic, drive negative health behaviors, and inhibit the ability of patients to make effective behavioral change.

Current health trends represent a call to action. Despite our modern advances in cardiovascular healthcare, CVD risk factors remain highly prevalent within society, CVD care has become increasingly costly, and CVD still remains the leading cause of death in the United States. Perhaps, we have become too dependent on going after the low hanging fruit—those coronary artery disease risk factors that can be treated medicinally. And as suggested by Fihn,20...
we may soon reach a saturation point with respect to the ability of medicines alone to reduce further CVD mortality rates. Ominously, those risk factors that require behavioral modification for their control—obesity, sedentary behavior, and various psychosocial risk factors—are not only prevalent within society but are also increasing in prevalence. Behavioral modification represents the high hanging fruit of preventive healthcare. It is still there for the taking.

**Disclosures**

None.

**References**


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