



Editorial

Optimism, Pessimism, and Mortality

Maruta and colleagues¹ report in this issue of *Proceedings* quite a remarkable finding: that the new Optimism-Pessimism scale of the Minnesota Multiphasic Personality Inventory (MMPI) predicts no less a dependent variable than death itself. The finding is unusually important for 2 reasons: First, the obvious one is predicting a “hard” measure like mortality from a “mere” paper-and-pencil psychological construct. The second is more subtle, and it comes from the long history of this project.

More than 2 decades ago, researchers in the field of learned helplessness began to find in animals that encountering uncontrollable bad events resulted in inadequate rejection of implanted tumors and inadequate immune function.^{2,3} Findings in these well-controlled studies were in line with the more anecdotal evidence on helplessness and mortality that had steadily accumulated since the early writings of Curt Richter⁴ on sudden death and of George Engel⁵ on helplessness-hopelessness and physical illness. Researchers of learned helplessness turned to the study of humans in the 1970s and pursued work on a trait that turned out to be a major amplifier of helplessness: pessimism and optimism. It was found that pessimistic individuals (people who interpret bad events as permanent and pervasive) became helpless and depressed more easily than optimists (who see bad events as temporary, controllable, and local). A questionnaire, the Attributional Style Questionnaire, was validated for optimism and pessimism and was widely used to predict depression.⁶ A content-analytic method of measuring optimism and pessimism was then derived to index this trait in people who do not take questionnaires, such as Presidents of the United States, sports heroes, and the dead. Pessimism measured in this way predicted poor health in late middle age as well as mortality.^{7,8}

The content-analytic measure of optimism-pessimism has 2 disadvantages, however: it is labor-intensive, and it

requires authentic, extensive written or spoken material from an individual's life. Since there was a clear prediction from the work on learned helplessness and on pessimism that pessimistic individuals are at risk for poor health and premature death, a better method allowing wider sampling for measuring pessimism was needed. In stepped Robert Colligan. Large numbers of people have taken the MMPI over the last 50 years, he reasoned. Many of these people are now dead, but their age and health were well documented at the time they took the MMPI. Therefore, by content analyzing every item on the MMPI for pessimism and optimism, a subscale could be created that could then be used to test for the long-term effects of this trait on physical illness and mortality.⁹ And this is the second important aspect of the study by Maruta et al in this issue: they tested and confirmed the predictive validity of this derived, but easily used, measure of optimism and pessimism. They have opened the field to use this scale to predict much in the way of the specifics of physical illness and its sequelae from optimism and pessimism and the medical records of the many individuals who have taken the MMPI earlier in their lives.

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So now I believe we have converging and compelling evidence that optimists and pessimists differ markedly in how long they will live. What should the next steps be? There are 3 significant projects that now follow: Which? Mechanism? Intervention?

Which?

It is not clear from the evidence in the article by Maruta et al or in the converging findings⁶⁻⁸ if pessimism shortens life, optimism prolongs life, or both.

Mechanism?

There are at least 4 mechanisms by which this trait could make a difference to mortality⁶: (1) Pessimists are passive and have more bad life events than optimists. More bad life events are associated with shorter lives. (2) Pessimists,

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believing that “nothing I do matters,” comply less well with medical regimens and take fewer preventive actions, like giving up smoking. (3) Pessimists become depressed at a markedly higher rate than optimists do, and depression is associated with mortality. (4) The immune system of pessimists functions less adequately than that of optimists.^{10,11}

Intervention?

Pessimism is identifiable early in life and changeable. So it is possible that individuals at specific physical risk might enter into brief programs that stably change their thinking about bad events and so lower their risk for physical illness and even death.¹²

The discovery that Maruta and colleagues have made will aid progress on all 3 of these steps.

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