The glass is not half empty: optimism, pessimism, and health among older adults

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ABSTRACT

Objectives: Optimism and pessimism are distinct constructs that have demonstrated independent relationships with aspects of health and well-being. The purpose of this study was to investigate whether optimism or pessimism is more closely linked with physical and mental health among older adults.

Design: Cross-sectional survey.

Participants: Community-dwelling older adults (N=272) ages 59–95 in the southern United States.

Measurements: The Life Orientation Test—Revised and the Short Form 8.

Results: At the bivariate level, optimism was associated with higher physical health and mental health, while pessimism was associated with lower physical health and mental health. Multiple-regression analyses as well as comparison of correlation coefficients found that pessimism was more closely associated with physical health and mental health than optimism.

Conclusions: These results add to the literature suggesting that, in terms of older adults’ health and well-being, avoiding pessimism may be more important than being optimistic.

Key words: physical health, mental health

Introduction

Successful aging has been a topic of interest since it was introduced by Havighurst (1961). Rowe and Kahn (1987) defined successful aging as low probability of disease and disability, high cognitive and physical functioning, and active engagement with life. However, Rowe and Kahn’s model of successful aging has been criticized as being overly focused on physical health (Crowther et al., 2002). There is evidence that psychological factors play an important role in successful aging. In the UCSD-WHI study of successful aging, older adult women highest in subjectively rated successful aging had high levels of resilience, self-esteem, and optimism—indeed, optimism was one of the strongest predictors of successful aging (Vahia et al., 2012). Optimism has been linked with health, well-being, quality of life, and perceived physical functioning (Scheier and Carver, 1985; Sulkers et al., 2013; Warner et al., 2012). However, optimism does not appear to be a unidimensional construct (see below); rather, optimism and pessimism are relatively separate constructs that independently predict aspects of health and well-being. Robinson-Whelen et al., (1997) found that pessimism, but not optimism, was a better predictor of psychological and physical health outcomes among older adults. The purpose of this study was to investigate relationships between optimism, pessimism, physical health, and mental health among older adults.

Optimism

Optimism refers to positive expectancies regarding future outcomes (Achat et al., 2000; Scheier and Carver, 1985). Optimism can be conceptualized as having two forms: situational optimism, or expectations about particular outcomes in certain situations, and dispositional optimism, which refers to generalized expectations about the future (Carver and Scheier, 2014). In this study, we focused on relationships between dispositional optimism, physical health, and mental health. Optimism was originally conceptualized as being unidimensional
hypothesized (Scheier and Carver, 1985); however, a body of research has found that optimism and pessimism are distinct constructs (e.g., Conway et al., 2008; Kubzansky et al., 2004; Marshall et al., 1992; Mroczek et al., 1993; Robinson-Whelen et al., 1997; Sulkers et al., 2013).

Pessimism

Pessimism refers to negative expectancies regarding future outcomes (Sherman and Cotter, 2013). Highly pessimistic individuals experience heightened awareness to stressful situations (Conway et al., 2008) and when chronic stressors are present (Palgi, 2013), which may increase the likelihood of poor health. In a stressful situation, pessimistic individuals perceive the situation as more difficult and requiring more effort (Puig-Perez et al., 2015). Expressing negative emotions and behavioral disengagement frequently could influence an individual into having pessimistic views, which in turn could influence their mental capacities (Jason et al., 2003). Among older adults, pessimism is a stronger predictor than optimism of anxiety, perceived stress, and self-rated health one year later (Robinson-Whelen et al., 1997). Pessimism is positively associated with depressive symptoms (Chang et al., 2013; Hirsch et al., 2014) and suicidal behavior in older adults (Fiske et al., 2009).

The Current Study

The purpose of this study was to investigate whether optimism or pessimism is more closely linked with physical and mental health among older adults. We hypothesized (H1) that optimism will be associated with higher physical health, and pessimism will be associated with lower physical health. We also hypothesized (H2) that optimism will be associated with higher mental health, and pessimism will be associated with lower mental health. Consistent with the findings of Robinson-Whelen et al. (1997), we hypothesized (H3) that pessimism will show greater associations with physical health and mental health than optimism.

Methods

Participants

Participants consisted of community-dwelling older adults (N = 272; 73% female) ages 59 to 95 (M = 80.11, SD = 8.43). Participants were recruited via announcements and flyers at independent living retirement communities in two large metropolitan areas in the southern United States. Regarding ethnicity, the overwhelming majority of participants (91.5%) identified as white/Caucasian, 1.8% as Hispanic, 1.5% as black/African American, 0.7% as Asian American, and 4.5% as another ethnicity. Regarding marital status, the majority of participants identified as widowed (56.6%), 23.9% as married, 12.5% as divorced, and 7.0% as another marital status.

Measures

Optimism and pessimism

The Life Orientation Test–Revised (LOT-R; Carver and Scheier, 2003) is a self-report measure of dispositional optimism and pessimism. The LOT-R consists of 10 items, of which 4 are filler items, 3 measure dispositional optimism (e.g., “I’m always optimistic about my future”), and 3 measure dispositional pessimism (e.g., “I rarely count on good things happening to me”). Participants respond on a Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Higher scores on the three items measuring dispositional optimism represent higher levels of optimism, and higher scores on the three items measuring dispositional pessimism represent higher pessimism. In this study, both optimism and pessimism demonstrated acceptable internal consistency: optimism (Cronbach’s $\alpha = 0.56$) and pessimism (Cronbach’s $\alpha = 0.66$). Although these values are lower than some (Churchill, 1979; Peter, 1979) consider ideal, others (Cho and Kim, 2015) question these cutoff points and suggest that values in this range may be acceptable.

Physical and mental health

The SF-12 (Ware et al., 1996) is a widely used self-report measure of eight health domains (physical functioning, role-physical, bodily pain, general health, vitality, social functioning, role-emotional, and mental health). Each of the 12 items utilizes either a 3-point or 5-point Likert-type scale. Two composite scores can be computed from these items: a physical component summary (PCS) and a mental component summary (MCS). These are norm-based scores ranging from 0 to 100 in which 50 is the average score. In this study, the PCS and MCS demonstrated adequate internal consistency (PCS $\alpha = 0.82$, MCS $\alpha = 0.82$).

Procedure

This study was approved by the university committee for the protection of human subjects. Informed consent was obtained from all participants, who were then given the survey packet and a sealable envelope. Participants completed the survey independently and sealed the completed survey in the envelope, which was collected by the researchers one week later.
Results

Descriptive statistics for and bivariate correlations between all variables of interest are displayed in Table 1.

In order to test the hypothesis \( (H_1) \) that optimism will be associated with higher physical health and pessimism will be associated with lower physical health, we conducted a multiple-regression analysis in which optimism and pessimism were the independent variables and physical health was the dependent variable. Optimism and pessimism explained 3.1% of the variance in physical health, \( F(2,269) = 4.25, p = 0.01 \). Only pessimism demonstrated a significant unique relationship with physical health (\( \beta = -0.12, p = 0.04 \)).

In order to test the hypothesis \( (H_2) \) that optimism will be associated with higher mental health and pessimism will be associated with lower mental health, we conducted a second multiple-regression analysis in which optimism and pessimism were the independent variables and mental health was the dependent variable. Optimism and pessimism explained 7.1% of the variance in mental health, \( F(2,269) = 10.23, p = 0.001 \). Only pessimism demonstrated a significant unique relationship with mental health (\( \beta = -0.25, p < 0.001 \)). Results of the multiple-regression analyses are displayed in Table 2.

In order to test the hypothesis \( (H_3) \) that pessimism will show greater associations with physical health and mental health than optimism, we used Hotelling’s \( t \) and Steiger’s \( Z \) tests (Cohen, 1989; Meng et al., 1992; Steiger, 1980). The correlation between pessimism and physical health was significantly larger than that between optimism and physical health, \( t(df = 269) = 2.73, Z = 2.70, p = 0.007 \). The correlation between pessimism and mental health was significantly larger than that between optimism mental health, \( t(df = 269) = 3.98, Z = 3.88, p < 0.001 \).

Discussion

The purpose of this study was to investigate whether optimism or pessimism is more closely linked with physical and mental health among older adults. We had hypothesized \( (H_1) \) that optimism would be associated with higher physical health and pessimism would be associated with lower physical health. Optimism had a small positive bivariate correlation with physical health, and pessimism had a small negative bivariate correlation with physical health. In the multiple-regression analysis, only pessimism was associated with physical health, but this relationship was small and only narrowly significant. Therefore, we considered \( H_1 \) to be partially supported. These results are consistent with previous research (Sulkers et al., 2013) showing links between bivariate optimism and physical health and pessimism and physical health. We had also hypothesized \( (H_2) \) that optimism would be associated with higher mental health and pessimism would be associated with lower mental health. Optimism had a small positive bivariate correlation with mental health, and pessimism had a larger negative bivariate correlation with mental health. In the multiple-regression analysis, optimism was not associated with mental health, but pessimism was associated with lower mental health. Therefore, we also considered \( H_2 \) to be partially supported. These results are consistent with previous research (Hirsch et al., 2014; Jason et al., 2003) showing links between univariate optimism and mental health. Finally, consistent with

Table 1. Bivariate correlations between and descriptive statistics for study variables \((N = 272)\)

<table>
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<tr>
<th>VARIABLES</th>
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<th>3</th>
<th>4</th>
<th>M</th>
<th>SD</th>
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<tr>
<td>1. Optimism</td>
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<td>—</td>
<td>—</td>
<td>—</td>
<td>11.22</td>
<td>2.01</td>
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<tr>
<td>2. Pessimism</td>
<td>—.25**</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>10.90</td>
<td>2.39</td>
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<tr>
<td>3. Physical health</td>
<td>.12*</td>
<td>—.14*</td>
<td>—</td>
<td>—</td>
<td>36.50</td>
<td>10.56</td>
</tr>
<tr>
<td>4. Mental health</td>
<td>.11*</td>
<td>—.26**</td>
<td>.09</td>
<td>—</td>
<td>52.79</td>
<td>8.73</td>
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*p < 0.05, **p < 0.01.

Table 2. Standard multiple regressions predicting physical health and mental health \((N = 272)\)

<table>
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<tr>
<th>VARIABLES</th>
<th>PHYSICAL HEALTH</th>
<th>MENTAL HEALTH</th>
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<td></td>
<td>B</td>
<td>SE</td>
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<tr>
<td>Optimism</td>
<td>.51</td>
<td>.33</td>
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<td>Pessimism</td>
<td>-.54</td>
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Robinson-Whelen et al. (1997), we had hypothesized \( H_3 \) that pessimism would show greater associations with physical health and mental health than optimism. Pessimism had larger and more significant bivariate correlations with both physical health and mental health, and pessimism was associated with both physical and mental health (particularly the latter) in the multiple-regression analyses. Comparison of the correlation coefficients found that the correlations between pessimism and both physical health and mental health were larger than those between optimism and both physical health and mental health. Therefore, we considered \( H_3 \) to be supported.

This study was limited in several ways. The sample consisted of older adults from independent living retirement communities, and thus the results may not generalize to older adults as a whole. The cross-sectional design of the study limits conclusions that can be drawn about causality and directionality of the results. Also, the size of the relationships found was modest. Optimism and pessimism explained 7.1% of the variance in mental health. These results are of interest at a theoretical level, and they suggest that optimism and particularly pessimism may play a role in health among older adults; however, the limited variance explained suggests that a variety of other factors, as expected, would contribute to physical health and mental health among older adults. Future studies could explore mediators of the relationship between optimism/pessimism and health outcomes (e.g., coping and religiosity).

Previous research has suggested that optimism is an important component of successful aging (Warner et al., 2012; Vahia et al., 2012). Our results are generally consistent with this hypothesis. However, considering optimism and pessimism as distinct constructs, it would appear that pessimism plays a greater role in terms of physical health and particularly for mental health. In other words, for successful aging, it may be more important not to be pessimistic than it is to be optimistic. By having a more pessimistic attitude, rather than an optimistic one, an individual may be more stressed, anxious, or depressive, which affects their physical and mental health. Furthermore, having pessimistic attitudes toward life may affect one’s physical health and mental health in older age and may disrupt the process of successful aging.

**Conflict of interest**

The authors have no conflicts of interest to declare.

**Ethical approval**

Informed consent was obtained from all individual participants included in the study.

**Description of authors’ role**

M. Barnett designed the study, carried out data collection, carried out the statistical analysis, and wrote the paper. E. Anderson carried out the statistical analysis and wrote the paper.

**References**


