

Original Research Report

The Relation of Ego Integrity and Despair to Personality Traits and Mental Health

Gerben J. Westerhof,¹ Ernst T. Bohlmeijer,¹ and Dan P. McAdams²

¹Department Psychology, Health, and Technology, University of Twente, Enschede, The Netherlands. ²Department Psychology, Northwestern University, Evanston, Illinois.

Correspondence should be addressed to Gerben Westerhof, PhD, Department Psychology, Health, and Technology, University of Twente, POBox 217, 7500AE Enschede, The Netherlands. E-mail: g.j.westerhof@utwente.nl

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Abstract

Objectives: Existing studies in the Eriksonian tradition found that ego integrity and despair are important indicators of life-span development. The present study relates ego integrity and despair to contemporary theories of personality and mental health.

Method: A cross-sectional study of Dutch adults aged between 50 and 95 years ($N = 218$) was carried out, using the Northwestern Ego Integrity Scale, the subscales for neuroticism, extraversion, and openness to experience of the NEO-FFI, the Mental Health Continuum-Short Form, and the Center for Epidemiological Studies Depression Scale-Short Form.

Results: Extraversion and openness to experience have an indirect relation to ego integrity that is mediated by well-being. Neuroticism was related to despair and explained the relationship of depressive symptoms to despair. Chronological age did not moderate these findings.

Discussion: Ego integrity appears to be related to fluctuating states of mental health, whereas despair is more an expression of a general trait-like disposition of neuroticism. Implications for further research are discussed.

Keywords: Depression—Despair—Ego integrity—Erikson—Mental health—Personality—Well-being

Ego integrity and despair form one of the fascinating conceptual pairs that Erik Erikson coined in his theory of human development across the life span. In contrast to identity versus role confusion (Kroger, 2007) or generativity versus stagnation (McAdams, 2009), it has not been the subject of intensive empirical research. Existing studies have mainly been carried out in the Eriksonian tradition, relating ego integrity and despair to the resolution of earlier psychosocial crises, to the acceptance of the past and the finitude of life. The present study addresses ego integrity and despair from recent theories of personality and mental health to bring it closer to contemporary psychology. We use a cross-sectional study of Dutch adults in their second half of life (50–95 years) to assess hypotheses derived from this broader framework. We are especially interested how

ego integrity and despair are related to more stable dispositional traits as well as to mental health as a more momentary and fluctuating state.

Erikson (1950, 1982) distinguished eight phases in his model of life-span development, each of which is characterized by a particular psychosocial issue. The last phase of life is characterized by the duality of ego integrity versus despair. Erikson described ego integrity as “the acceptance of one’s one and only life cycle as something that had to be” (1950, p. 268) and later as “a sense of coherence and wholeness” (1982, p. 65). At the same time, late life brings reasons for experiencing despair, such as aspects of the past, present, and future that are difficult to integrate into a meaningful whole. Late life is therefore characterized by both integrity and despair as alternating states that need to be balanced.

According to the epigenetic principle ego integrity versus despair will be related to the resolution of earlier crises (Erikson, 1982). Cross-sectional studies have indeed shown a relation of ego integrity with generativity and identity (Domino & Affonso, 1990; Hannah, Domino, Figueredo, & Hendrickson, 1996; Ryff & Heincke, 1983; Webster, 2003). Longitudinal studies also found that ego integrity is related to the resolution of the identity crisis 45 years earlier in life (James & Zarrett, 2005) and to generativity 9 years earlier (Torges, Stewart, & Duncan, 2008). However, most cross-sectional studies did not find differences according to age (Hannah et al., 1996; Ryff & Heincke, 1983; Webster, 2003; see however, Domino & Affonso, 1990). The longitudinal Rochester study also did not find evidence of an increase with age (Sneed, Whitbourne & Culang, 2006; Whitbourne, Sneed, & Sayer, 2009). Hence, ego integrity and despair are more a matter of the resolution of previous dilemmas of human development than of chronological age.

In Erikson's model, ego integrity is achieved through a process of reminiscence about one's past that contributes to wisdom and death acceptance. Cross-sectional studies found that reminiscing about the past is related to ego integrity (Santor & Zuroff, 1994; Taft & Nehrke, 1990). The resolution of regret about the past has both a cross-sectional and longitudinal relation to ego integrity (Torges et al., 2008, 2009). Studies also found a moderate negative relation between ego integrity and death anxiety (Hui & Coleman, 2013) as well as a positive relation to wisdom (Webster, 2010).

Most of the studies mentioned earlier in this article addressed ego integrity and despair as two poles on a single continuum, building on instruments like the scale by Ryff and Heincke (1983) that have a one-dimensional structure. Instruments that measure ego integrity and despair as two separate dimensions have shown that different combinations of ego integrity and despair exist (Walaskay, Whitbourne, & Nehrke, 1983) and that both dimensions hold different relations to other variables, for example to goal attainment and well-being (Van Hiel & Vansteenkiste, 2009). In Erikson's theory (1950, 1982) each psychological stage is indeed characterized by a duality that can be resolved in terms of a virtue. Wise people are not characterized by a continuous state of ego integrity, but they experience both ego integrity and despair. It is thus important to distinguish ego integrity and despair as two dimensions.

To conclude, existing studies have shown systematic relations fitting Erikson's life-span theory: the sequence of resolutions of dilemmas in adult development, reminiscence, and death acceptance. Ego integrity and despair might thus be seen as important indicators of life-span development. In the present study, we add to these insights by studying ego integrity and despair in relation to personality traits and mental health.

There is a dearth of studies relating ego integrity and despair to personality traits. Personality traits, such as neuroticism, extraversion, or openness to experience, are conceptualized as rather stable dispositions to feel, think,

and act in certain ways (McCrae & Costa, 1986; Denissen, van Aken, & Roberts, 2011). Although it is recognized that changes across the life span may initiate changes in personality traits, the personality perspective basically treats individual differences in adaptation and growth across the life span as the result of rather stable traits. Hence, personality traits might be related to life-span developmental indicators such as ego integrity and despair.

Studies indicate that the personality traits neuroticism, extraversion, and openness to experience are related to reminiscence and life review, whereas there is less evidence for a relation of agreeableness and conscientiousness to these processes (Cappeliez & O'Rourke, 2002; Cully, LaVoie, & Gfeller, 2001). We therefore focus on the first three traits in this study. More neurotic persons tend to be more emotionally vulnerable and self-conscious than less neurotic persons (McCrae & Costa, 1986). They do not only experience more negative emotions (Steel, Schmidt, & Shultz, 2008) but also have a strong tendency to ruminate over what has gone wrong (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). When reflecting about their past life, they continue to revive bitter experiences (Cappeliez & O'Rourke, 2002; Cully et al., 2001). Stronger neuroticism may thus be related to higher levels of despair. More extraverted persons tend to be more outgoing and self-assertive (McCrae & Costa, 1986). They have a tendency to experience more positive emotions (Steel et al., 2008) and to use more effective coping strategies, such as positive thinking (McCrae & Costa, 1986). When they think back about their life, they tend to share it with others, which might also contribute to finding meaning in their past (Cappeliez & O'Rourke, 2002; Cully et al., 2001). Extraversion may thus have a positive relation to ego integrity. Persons who are more open to experience tend to be more interested in exploring new ideas, values, and experiences (McCrae & Costa, 1986). This might be of help in finding new meanings in past experiences. When people who are more open to experience reminisce about their life, they are more inclined to search for their identity, to look for how they solved problems earlier in life, and to prepare for life's finitude (Cappeliez & O'Rourke, 2002; Cully et al., 2001). They will therefore find it easier to accommodate both positive and negative life events into their view of themselves and experience more ego integrity.

Besides their relation to personality traits, we also study the relations of ego integrity and despair to mental health. From a life-span developmental perspective, the traditional view of mental health as the absence of mental disorders, such as depression or anxiety, is a rather minimal outcome (Westerhof & Keyes, 2010). More recently, mental health has been defined in a more positive way as the presence of positive feelings in combination with optimal psychological and social functioning (Keyes, 2007; WHO, 2005). The operationalization of this positive view on mental health has mainly built on research that distinguished different views on well-being (Keyes, 2005). Subjective or emotional

well-being stems from a hedonistic view and addresses well-being as the presence of positive emotions and positive evaluations of life (Diener et al., 1999). Eudemonic well-being refers to the Aristotelian view of virtuous self-realization and addresses well-being as the evaluation of one's functioning in personal and social life (Ryff, 1989; Keyes, 1998). The Aristotelian view includes not only the optimal functioning but also a positive approach to life events and disappointments in later life, for example by acceptance and compassion (Westerhof & Bohlmeijer, 2014).

An important question is how the absence of mental disorders relates to the presence of well-being. Recent evidence supports a dual continua model. Confirmatory factor analyses have shown that the absence of mental illness and the presence of well-being are two related, yet distinct, dimensions (Keyes, 2005, 2007; Lamers, Westerhof, Glas, & Bohlmeijer, 2015). People with mental illness may experience high levels of well-being and vice versa. For example, a representative Dutch study showed that among the 10% people with most psychiatric complaints one in six experienced optimal levels of well-being (Westerhof & Keyes, 2010). Further evidence for the dual continua model comes from studies that show that mental illness and well-being hold different and independent relations to demographic variables, health care utilization, work productivity, and psychosocial functioning (Keyes, 2005; Keyes & Grzywacz, 2005). Hence, complete mental health consists of both the absence of mental illness and the presence of well-being (Keyes, 2005; Westerhof & Keyes, 2010).

The theoretical and empirical distinction between mental illness and well-being nicely fits the dualistic conception of ego integrity and despair. A number of studies found ego integrity and despair to be related to feelings of depression and anxiety (James & Zarrett, 2005; Santor & Zuroff, 1994; Van Hiel & Vansteenkiste, 2009) as well as to feelings of well-being and meaning in life (Dezutter, Wiesmann, Apers, & Luyckx, 2013; James & Zarrett, 2005; Phillips & Ferguson, 2013; Torges et al., 2009; Van Hiel & Vansteenkiste, 2009; Webster, 2010; Wiesmann & Hannich, 2011). However, these studies did not use the more encompassing dual continua model. As ego integrity refers to the meaning of both triumphs and disappointments in life, we expect that it will be related to well-being. Because despair is characterized by feelings of regret and failure, it will be related to symptoms of mental illness.

A last question concerns which role well-being and mental illness—as more momentary states—play in the relation of the rather stable dispositional characteristics to ego integrity and despair. Meta-analyses have shown that personality traits are consistently related to well-being and mental illness (Malouff, Thorsteinsson, & Schutte, 2005; Steel, Schmidt, & Shultz, 2008). Building on the dual continua model, we found that extraversion and openness to experience are related to well-being, whereas neuroticism is related to mental illness (Lamers, Westerhof, Kovács, & Bohlmeijer, 2012). Well-being and mental illness might

thus play a mediating role in the relation of traits to ego integrity and despair. In this article, we study depressive symptoms as the most prevalent symptoms of mental illness in the Dutch population (De Graaf, ten Have, & van Dorsselaer, 2010). We expect that neuroticism is indirectly related to despair through depressive symptoms, whereas extraversion and openness to experience have an indirect relation to ego integrity through well-being.

To summarize, we test the following hypotheses:

- (1) Neuroticism is related to despair and extraversion and openness to experience to ego integrity.
- (2) Depressive symptoms are related to despair and well-being to ego integrity.
- (3) Depressive symptoms mediate the relation between neuroticism and despair, whereas well-being mediates the relation of extraversion and openness to ego integrity.

Method

Participants

In the present study, 218 Dutch adults aged between 50 and 95 years participated. These adults were recruited by first-year psychology students who were enrolled in an introductory course on personality psychology at the University of Twente, the Netherlands. Students got course credits to recruit one or two persons older than the age of 50 years in their own social network. Most students asked a grandparent (45%) or a parent (44%) to participate, but some asked other relatives (5%), neighbors (3%), or acquaintances (3%).

Table 1 shows that the sample is rather diverse in age, gender, educational level, and marital status. Participants were between 50 and 95 years old with a mean of 67 years ($SD = 13.0$). A majority is women and most participants are married. Almost half of the participants had 10 years of education or less.

Instruments

Participants filled out a questionnaire with different instruments using Survey Monkey. Respondents had to answer

Table 1. Demographic Characteristics of Participants ($N = 218$)

| Variable | Value | Distribution |
|-------------------|---------------|----------------------------|
| Age | 50–95 years | Mean = 67.4 $SD = 13.0$ |
| Gender | Male | 37.2% |
| | Female | 62.8% |
| Marital status | Married | 64.2% |
| | Never married | 3.2% |
| | Widowed | 27.5% |
| | Divorced | 5.0% |
| Educational level | ≤10 years | 47.7% |
| | 11–14 years | 22.0% |
| | ≥15 years | 30.3% |

all items of an instrument before proceeding with the next instrument, so there were no missing values.

Ego integrity was measured with the Northwestern Ego Integrity Scale (NEIS; Janis, Canak, Machado, Green, & McAdams, 2011). This 15-item scale was translated into Dutch and backwards into English to obtain a Dutch version that is equivalent to the English one. The scree plot in an exploratory factor analysis suggested that the NEIS is a two-dimensional scale. Nine items loaded higher than .50 on one of both dimensions. We used these items in a confirmatory factor analysis (LISREL 9.10). We found that a structure with two unrelated factors fitted the data well ($\chi^2(26) = 55.7, p = .001$; RMSEA = .072, $p_{(RMSEA<.05)} = .078$; SRMR = .055; CFI = .95; GFI = .95; AGFI = .91) and significantly better than a one factor solution ($\Delta\chi^2(18) = 193.4; p > .05$). We also assessed factorial invariance between the younger age group (50–64 years; $n = 100$) and the older age group (65–95 years; $n = 118$). The fit of the model that constrained the factor loadings and item error variances to be identical had a similar fit as the model that leaves these parameters free ($\Delta\chi^2(18) = 24.029, p > .05$; $\Delta CFI = .01$; $\Delta RMSEA = 0.003, p > .05$; Cheung & Rensvold, 2002). Hence, items have the same quality as measures of ego integrity and despair for both age groups. The completely standardized solution for the total group is given in Table 2. The internal consistency is satisfactory (Cronbach alpha is .74 for ego integrity and .75 for despair).

Three personality traits (neuroticism, extraversion, and openness to experience) are measured with the Dutch version of the NEO-FFI (Hoekstra, Ormel, & de Fruyt, 1996). The internal consistency (Cronbach alpha) of the subscales in this sample was .86 for neuroticism, .75 for extraversion, and .76 for openness to experience.

Well-being was measured using the Mental Health Continuum-Short Form (Keyes et al., 2008), a reliable and well-validated instrument in the Netherlands (Lamers, Westerhof, Bohlmeijer, ten Klooster, & Keyes, 2011). The scale covers emotional well-being (3 items, e.g., “In the past month, how often did you feel satisfied”), social well-being (5 items, e.g., “In the past month, how often did you feel

that you had something important to contribute to society”), and psychological well-being (6 items, e.g., “Good at managing the responsibilities of your daily life”). Each item represents a theoretically validated feeling of well-being, of which the frequency in the last month is rated (0 = never to 5 = every day). We used the mean score across the 14 items, a higher score indicates a better well-being. The scale had a good reliability in the present sample (Cronbach alpha = .88).

Depressive symptoms were assessed with the brief Center for Epidemiological Studies Depression scale (Cole, Rabin, Smith, & Kaufman, 2004; Haringsma, Engels, Beekman, & Spinhoven, 2004). The scale is highly reliable in our sample (Cronbach alpha = .83).

Participants also completed a brief demographic questionnaire assessing age, gender, marital status, and education (Table 1).

Results

The first hypothesis stated that neuroticism is related to despair and extraversion and openness to experience to ego integrity. We first analyzed the bivariate relations of the personality traits to ego integrity and despair (Table 3). More neuroticism has a significant relation to more despair but not to ego integrity. More extraversion is related to more ego integrity and less despair. Last, higher levels of openness to experience are significantly related to more ego integrity but not to despair. As some traits are related among each other (Table 3), we also carried out an ordinary least squares regression analysis with ego integrity and despair as the dependent variables (Table 4). We simultaneously entered demographic characteristics (age, being female, being married, and educational level) as control variables and the three personality traits. The multivariate relations of ego integrity and despair with personality traits differ somewhat from the bivariate correlations. More neurotic and more open persons experience higher levels of despair. Ego integrity is not significantly related to demographic variables or personality traits. The first hypothesis receives stronger support for despair than for ego integrity.

Table 2. Confirmatory Factor Analysis of the Northwestern Ego Integrity Scale (completely standardized solution; $N = 218$)

| Item | Ego integrity | Despair |
|-----------------------------------------------------------------------------------------------|---------------|---------|
| 15. As I get older, my life story makes more sense to me. | .72 | — |
| 06. I have reached a point where I can accept the events in my life as having been necessary. | .70 | — |
| 10. I see a meaningful thread running through the many events in my life. | .60 | — |
| 13. Even my sufferings have had meaning. | .52 | — |
| 07. As I grow older, I understand people more. | .49 | — |
| 02. It pains me to think about dreams and goals I have had that I did not fulfill. | — | .69 |
| 05. I wish I had loved more in my life. | — | .67 |
| 14. I wish I had more time to take a different path in life. | — | .64 |
| 08. I am bothered by mistakes I have made in the past. | — | .63 |

Note: Item numbers refer to the original item order.

Table 3. Relations of Ego Integrity to Personality Traits and Mental Health Indices

| | Range | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---------------------------|-------|-----|-----|------|-------|-------|-------|-------|-------|---|
| Ego integrity and despair | | | | | | | | | | |
| 1. Ego integrity | 1–6 | 4.2 | 0.8 | | | | | | | |
| 2. Despair | 1–6 | 2.9 | 1.0 | .13 | | | | | | |
| Personality traits | | | | | | | | | | |
| 3. Neuroticism | 1–5 | 2.4 | 0.6 | -.07 | .44* | | | | | |
| 4. Extraversion | 1–5 | 3.3 | 0.5 | .16* | -.17* | -.36* | | | | |
| 5. Openness | 1–5 | 3.0 | 0.6 | .14* | .12 | -.09 | .27* | | | |
| Mental health | | | | | | | | | | |
| 6. Depressive symptoms | 1–4 | 1.7 | 0.5 | -.12 | .32* | .60* | -.33* | -.15* | | |
| 7. Well-being | 1–6 | 3.9 | 0.9 | .38* | -.06 | -.29* | .43* | .36* | -.44* | |

Note: * $p < .05$.

Table 4. Ordinary Least Squares Regression of Ego Integrity and Despair on Demographic Characteristic and Personality Traits

| | Model 1a | | | Model 1b | | | Model 2a | | | Model 2b | | |
|-----------------------------|---------------|-----|------|----------|-----|--------|---------------|-----|--------|----------|-----|--------|
| | Ego integrity | | | Despair | | | Ego integrity | | | Despair | | |
| | B | SE | Beta | B | SE | Beta | B | SE | Beta | B | SE | Beta |
| Demographic characteristics | | | | | | | | | | | | |
| Age | .01 | .01 | .10 | .00 | .01 | .03 | .01 | .01 | .09 | .00 | .01 | .00 |
| Gender (female) | .11 | .14 | .06 | -.35 | .14 | -.17* | .05 | .13 | .03 | -.36 | .14 | -.18* |
| Married | -.11 | .14 | -.06 | .03 | .15 | .02 | -.20 | .14 | -.11 | .04 | .15 | .02 |
| Education | .06 | .08 | .06 | .03 | .08 | .02 | .01 | .08 | .01 | .03 | .08 | .02 |
| Personality traits | | | | | | | | | | | | |
| Neuroticism | -.05 | .11 | -.04 | .80 | .11 | .50*** | .04 | .12 | .03 | -.69 | .13 | .44*** |
| Extraversion | .23 | .14 | .13 | -.06 | .14 | -.03 | .01 | .14 | .00 | -.07 | .15 | -.03 |
| Openness | .17 | .12 | .12 | .31 | .12 | .18* | .05 | .12 | .03 | .28 | .13 | .16* |
| Mental health | | | | | | | | | | | | |
| Well-being | | | | | | | -.03 | .15 | .40*** | .30 | .17 | .15 |
| Depressive symptoms | | | | | | | .40 | .08 | -.02 | .09 | .09 | .08 |
| Explained variance | | | | | | | | | | | | |
| Adjusted R^2 | | | .02 | | | .23*** | | | .14*** | | | .23*** |

Note: * $p < .05$. *** $p < .001$.

The second hypothesis was that depressive symptoms have a relation to despair and well-being to ego integrity. The bivariate relations (Table 3) show that more depressive symptoms are significantly related to more despair but not to ego integrity. More well-being has a significant relation to more ego integrity but not to despair. As well-being and depressive symptoms hold a relation as well ($r = -.44$; Table 3), we also assessed the partial correlations, controlling for the complementary continuum. Again, we found that depressive symptoms are related to despair (partial $r = .32$, $p < .001$) but not to ego integrity (partial $r = .05$, $p = .215$) when controlling for well-being. Well-being remains related to ego integrity (partial $r = .37$; $p < .001$) but not to despair (partial $r = .09$; $p = .200$). These findings support the second hypothesis.

The third hypothesis was that depressive symptoms mediate the relation between neuroticism and despair,

whereas well-being mediates the relation of extraversion and openness to ego integrity. We first added well-being and depressive symptoms to the regression model in Table 4. The relation of depressive symptoms to despair is no longer significant when controlling for personality traits. Well-being still holds a relation to ego integrity. We did mediating analyses with the SPSS macro “mediate” (Preacher & Hayes, 2004), using bootstrapping procedures ($n = 5,000$ bootstrap resamples) in order to assess the indirect relation of personality traits through well-being and depressive symptoms. Neuroticism did not have a significant indirect relation to despair through depressive symptoms ($r = -.02$; 95% confidence interval (CI) = $-.05$ to $.18$). Extraversion had an indirect relation to ego integrity through well-being ($r = .22$; 95% CI = $.12$ – $.36$). Openness to experience also had a significant indirect relation to ego integrity through well-being ($r = .12$; 95% CI = $.04$ – $.24$). None of the other

indirect relations of the three personality traits to despair and ego integrity through depressive symptoms and well-being was significant. These findings support the hypothesis for ego integrity but not for despair.

As the age range of the sample was broad, we also assessed whether age moderates the relations of personality traits and well-being and depressive symptoms to ego integrity and despair. We therefore added interactions of age as a continuous variable with all other variables (demographic characteristics, personality traits, and well-being and depressive symptoms). As five moderating tests were conducted for each dependent variable (three for personality traits and two for well-being and depressive symptoms), we applied a Bonferroni correction and used $p < .01$ instead of $p < .05$ as significance level. Age did not significantly moderate the relations of the other variables to ego integrity or despair. The findings regarding the relations of personality traits and well-being and depressive symptoms to ego integrity and despair thus apply for people with different chronological ages in their second half of life.

Discussion

Previous studies in the Eriksonian tradition have shown that ego integrity and despair are important characteristics in later life that are related to the resolution of previous dilemmas, reminiscence, and death acceptance. The present study is the first to take a broader perspective of personality and mental health to the study of ego integrity and despair. Extraversion and openness to experience had an indirect relation to ego integrity that was mediated by well-being. Neuroticism was related to despair and explained the relationship between depressive symptoms and despair.

Previous studies showed that ego integrity and despair do not hold strong relations to age (Hannah et al., 1996; Ryff & Heincke, 1983; Webster, 2003; see however, Domino & Affonso, 1990). We also found that chronological age is unrelated to ego integrity and despair. Age also did not moderate the relations of ego integrity and despair to personality traits and well-being and depressive symptoms. Last, indirect and direct relations of ego integrity and despair to rather stable personality traits were found. Taken together, these findings suggest that ego integrity and despair might be more a question of individual personality traits than of chronological age.

However, this conclusion fits the findings on despair better than those on ego integrity. In fact, the differential relations of ego integrity and despair to well-being and depressive symptoms support the dual continua model (Keyes, 2005; Westerhof & Keyes, 2010) as well as the conceptualization of ego integrity and despair as a duality rather than as two poles on a continuum as we stated earlier. Although despair was related to more fluctuating states of depressive symptoms, neuroticism explained this relation. The latter finding is in line with studies on the neurotic cascade (Suls & Martin, 2005): neurotic people are more sensitive to negative affect,

generally experience more negative life events, and interpret them in more negative terms. By contrast, well-being had a significant relation to ego integrity when controlling for personality traits and mediated the relationship of extraversion and openness to ego integrity. Ego integrity appears to be more than an expression of dispositional traits but is also related to more fluctuating states.

Further research should address processes that play a role beyond personality traits and mental health. Such studies might shed light on the question whether ego integrity and despair belong to a domain of more flexible characteristic adaptations across the life span rather than being an expression of a rather stable personality trait (Hooker & McAdams, 2003; McAdams & Pals, 2006). We see an important role for death acceptance and life review here. The awareness of life's finitude may evoke feelings and cognitions about death that are related to ego integrity and despair (Hui & Coleman, 2013; Van Hiel & Vansteenkiste, 2009). However, this existential theme goes beyond stable personality traits and fluctuating states of mental health and might thus provide more insight in the function of ego integrity and despair. Similarly, ego integrity might depend on life review as a process of evaluating one's life on the basis of autobiographical reasoning (Freeman, 2010; Randall & McKim, 2008; Westerhof & Bohlmeijer, 2014). Such studies could point out whether ego integrity and despair are related to life review as an important process in developmental regulation across the life span (Pasupathi, Weeks, & Rice, 2006; Webster & Gould, 2007; Westerhof, Bohlmeijer, & Webster, 2010).

There are some limitations to our study. First of all, like almost all studies on ego integrity and despair, it had a cross-sectional design. Only longitudinal studies can clarify how personality traits, the two continua of mental health, and ego integrity and despair are related across time. Second, students recruited an ad hoc sample that consisted mainly of close relatives. The sample contains an overrepresentation of women and higher educated participants in comparison with the Dutch population. As gender and education played a minor role in the regression analyses, this selective effect will not be strong. Although we reached a diverse group of participants, the recruitment strategy might result in a more homogeneous sample. For example, this might account for the lack of age differences. It would therefore be interesting to test the hypotheses in a more representative survey as well as in more specific samples, like people who are confronted with death by an incurable disease. Third, we only assessed three out of the big five of personality traits and only depressive symptoms as a measure of mental illness. Further studies should address whether other traits such as agreeableness and conscientiousness, as well as other aspects of mental illness such as anxiety, hold similar relations to ego integrity and despair. Last, we did not add measures for the resolution of other psychosocial crises such as generativity versus stagnation or identity versus role confusion. Other studies in the Eriksonian tradition did not only find that ego integrity

is related more to the resolution of previous crises than to chronological age (e.g., James & Zarrett, 2005; Torges et al., 2008). They also suggest that other dualities, such as identity versus role confusion, are not just important in adolescence but refer to a continuous process of consolidation and revision in relation to age-graded life contexts (Kroger, 2007; Westerhof, 2010; Whitbourne, 1986). Adding measures for other crises would make it possible to better demonstrate the added value of also adding personality traits and mental health variables to the Eriksonian model. Despite these limitations, we conclude that our study sheds new light on ego integrity and despair from contemporary models of personality and mental health.

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