

On the quality of adjustment to retirement: The longitudinal role of personality traits and generativity

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Abstract

Objective: Although psychological factors have been explored in relation to other life transitions, their influence on retirement adjustment quality has been largely overlooked. This study assessed the contribution of personality traits and generativity before retirement in the prediction of hedonic and eudaimonic well-being at two temporal points after retirement.

Method: This article analyzes data from the Midlife in the United States (MIDUS) longitudinal sample. Specifically, it uses a subsample of people who were not retired at Time 1, but were 9 years after at Time 2 ($n = 548$) and 18 years after at Time 3 ($n = 351$).

Results: After controlling both for initial values on hedonic and eudaimonic well-being and for the effects of personal attributes and resources, higher scores on Extraversion at Time 1 significantly predicted hedonic well-being at Time 2, whereas lower scores on Neuroticism and higher scores on generativity at Time 1 significantly predicted eudaimonic well-being at Time 2. Neuroticism and generative concern at Time 1 remained significant in the prediction of eudaimonic well-being at Time 3.

Conclusions: The study shows that personality traits and generative concern at mid-life explain a meaningful part of the variation in individuals' quality of subsequent retirement adjustment.

KEYWORDS

eudaimonic well-being, generativity, hedonic well-being, longitudinal studies, personality traits, retirement adjustment

1 | INTRODUCTION

Throughout their life span, individuals experience many life changes that require adjustment and adaptation. Among them, retirement is one of the most important life transitions in late adulthood. Retirement has the potential to challenge one's social roles, relationships, routines, and assumptions (Schlossberg, 2011). The rapid rise in the number of retirees in Western countries, as well as their increasing longevity, has increased the interest in understanding the factors that are associated with a more positive or negative adjustment to retirement. As a consequence, research in this area has gained momentum in recent years (for a review, see Van Solinge, 2013).

Retirement is heterogeneously experienced (e.g., Wang, 2007), with the impact of leaving the workforce showing significant variation across individuals. Researchers have identified a range of factors associated with what is called "retirement adjustment quality" (Wang, Henkens, & Van Solinge, 2011) or "satisfaction with retirement" (Van Solinge & Henkens, 2008), defined as "the extent to which retirees are psychologically comfortable with the changed circumstances of life in retirement" (Wang et al., 2011, p. 208). Personal attributes and resources, in particular, are significant predictors of retirement adjustment quality (e.g., Kubicek, Korunka, Raymo, & Hoonakker, 2011). Personal resources are assets (material, social, or psychological) that individuals

can use to cope with the retirement experience, and their availability therefore has a strong influence on the quality of retirement adjustment (Van Solinge, 2013).

Although personal attributes and resources such as age, gender, health, education, or income have received considerable attention in previous studies (e.g., Kubicek et al., 2011; Pinquart & Schindler, 2007; Van Solinge, 2013; Van Solinge & Henkens, 2008; Wang, 2007), psychological factors such as personality variables and dispositional traits have been largely overlooked in retirement research (Van Solinge, 2013, 2016; Wang et al., 2011). This is surprising, since psychological factors are important individual resources that have shown a strong influence on the quality of individuals' adjustment to other life transitions and processes (Wang et al., 2011).

In view of the minimal literature on this topic, the central question of this study is as follows: Do psychological variables such as personality traits and generativity concerns and motives predict better retirement adjustment quality over and above the effects of personal attributes and resources?

1.1 | The role of personality traits

As mentioned earlier, personality traits have been associated with people's quality of adjustment to different life transitions, such as marriage (Kelly & Conley, 1987), parenthood (Levy-Shiff, 1994), divorce (Kurdek, 1993), community relocation (Kling, Ryff, Love, & Essex, 2003), expatriation (Wang & Takeuchi, 2007), or career choice (Page, Bruch, & Haase, 2008). As a life transition that usually involves dealing with stress (Yeung, 2013), retirement might also arouse heterogeneous reactions according to personality characteristics. Indeed, factors such as high self-esteem (Reitzes & Mutran, 2004), personal sense of mastery (Donaldson, Earl, & Muratore, 2010; Price & Balaswamy, 2009), or internal locus of control (Gall, Evans, & Howard, 1997) have been linked to a better quality of retirement adjustment. However, although some studies have explored the links between personality traits and retirement timing (Blekesaune & Skirbekk, 2012) and retirement anxiety (Gana et al., 2009) or the longitudinal changes in personality traits in response to retirement (Lockenhoff, Terracciano, & Costa, 2009), research into the impact of personality traits on retirement adjustment quality has been very limited (Robinson, Demetre, & Corney, 2010).

In this article, we adopt the well-replicated Big Five model (McCrae & Costa, 1990)—which describes adult personality using the five dimensions Neuroticism, Extraversion, Agreeableness, Conscientiousness, and Openness to Experience—to test the contribution of these traits in the prediction of hedonic and eudaimonic well-being levels after retirement. The links between personality traits and

retirement adjustment quality are likely to replicate the results of research associating low Neuroticism and high Extraversion with higher levels of life satisfaction (DeNeve & Cooper, 1998; Steel, Schmidt, & Shultz, 2008) and psychological well-being (Anglim & Grant, 2016; Grant, Langan-Fox, & Anglim, 2009; Sun, Kaufman, & Smillie, 2016). Neuroticism and Extraversion are associated with enduring affective dispositions that account for the effect of these traits on life satisfaction and psychological well-being (McCrae & Costa, 1990), and they are therefore likely to affect retirement adjustment quality as well.

Individuals high in Neuroticism tend to experience negative emotions and maladaptive behavior across many situations, including retirement, which may contribute to lower levels of retirement adjustment quality (Hypotheses 1 and 2; Lockenhoff et al., 2009; Reis & Gold, 1993; Robinson et al., 2010). Conversely, individuals high in Extraversion are prone to be active, effective, and socially involved, all factors that may enhance the quality of their postretirement adjustment (Hypotheses 3 and 4; Lockenhoff et al., 2009; Reis & Gold, 1993; Robinson et al., 2010).

Although the links of Agreeableness, Conscientiousness, and Openness to Experience with retirement adjustment quality are somewhat more difficult to establish, Reis and Gold's (1993) theoretical model positively associated them with the quality of retirement adjustment. These authors argued that individuals scoring high in Agreeableness may be more likely to develop social support networks beyond work-related friendships, a factor that could relate to higher levels of retirement adjustment quality (Hypotheses 5 and 6). As for those high in Conscientiousness, they may be better prepared to cope with some of the age-related health issues and financial problems associated with retirement, and they will therefore show a better adjustment to this life transition (Hypotheses 7 and 8). Finally, individuals scoring high in Openness to Experience may find it easier to acquire new, non-work-related activities during retirement, a factor that could relate to higher levels of retirement adjustment quality (Hypotheses 9 and 10).

As far as we know, only two studies have empirically explored these relationships. Lockenhoff et al. (2009), using a probability sample of 144 retirees, found that low Neuroticism and high Extraversion were associated with higher overall retirement satisfaction; and Robinson et al. (2010), using a purposively selected sample made up of 279 retirees, found that high Conscientiousness, high Agreeableness, and low Neuroticism were linked to higher life satisfaction. These studies, however, relied on cross-sectional data. Consequently, we need longitudinal data to help disentangle such effects from the alternative causal ordering that retirement itself might instead affect levels of these personality traits.

1.2 | Generativity and adjustment to retirement

In addition to personality traits, generativity could play a role in the quality of retirement adjustment. Generativity has its origins in Erikson's (1963, 1982) developmental theory, which proposed that the life span could be divided into eight stages, each one implying a certain social challenge or developmental "crisis." In Erikson's theoretical model, successfully negotiating a stage strengthens the self, or ego, and increases the likelihood that the individual is able to deal competently with the challenges of subsequent stages.

Within this model, generativity is the central task of adulthood, and is defined as the concern to nurture, guide, and ensure the well-being of future generations and, ultimately, to leave a legacy that is going to survive us (Erikson, 1963, 1982). Generativity could be expressed by all the activities that contribute to the enhancement and maintenance of families and communities (Villar, 2012). However, generativity not only includes contributing to others, but also implies some individual benefits. Thus, there are many studies linking high generativity concerns in adulthood to life satisfaction (McAdams, De St. Aubin, & Logan, 1993; Stewart, Ostrove, & Helson, 2001) and well-being (Huta & Zuroff, 2007; Villar, López, & Celdrán, 2013). Vaillant (1993) even reported some longitudinal evidence for this link, supporting the idea that being generative in adulthood may promote successful coping with later life challenges. In his study, women who mastered generativity at 60 showed better adaptation to older age when assessed 17 years later.

As McAdams and colleagues have argued (McAdams & De St. Aubin, 1992; McAdams, Hart, & Maruna, 1998), generativity should be conceived as a multidimensional concept rather than as a single entity. Thus, McAdams created a model explaining how adults face the crisis of generativity, which includes several dimensions of the Eriksonian concept: inner desire, cultural demand, belief in the worthiness of the human species, generative concern, generative goals, generative behavior, and generative scripts. Of the seven dimensions, generative concern is the closest to a personality factor and the one that has been most widely addressed in previous research (Serrat, Villar, Warburton, & Petriwskyj, in press).

Generativity has been linked to individuals' positive adjustment to different life transitions and events, such as parenting (Guastello, Guastello, & Briggs, 2014; Pratt, Danso, Arnold, Norris, & Filyer, 2001), grandparenting (Thiele & Whelan, 2008; Villar, Celdrán, & Triadó, 2012), or caregiving for aging parents (Peterson, 2002). In the work domain, generativity has been mainly studied as a motive for older people to look for a job (Mor-Barak, 1995), to engage in bridge employment (Dendinger, Adams, & Jacobson,

2005; Zhan, Wang, & Shi, 2015), or to transfer the family business to the next generation (Zacher, Schmitt, & Gielnik, 2012). In a study with a sample of older university employees, working for generative reasons predicted job satisfaction and attitudes toward retirement, in terms of perceived gains and losses associated with retirement (Dendinger et al., 2005). Finally, a study by Colby, Sippola, and Phelps (2001) used a subsample of the first wave of MIDUS and found generative concern to predict more satisfaction with work life.

However, as far as we know, no study has explored the longitudinal impact of generative concern on the quality of retirement adjustment. If, as Erikson (1963) stated, the positive resolution of a developmental task fosters individuals' capacities for dealing with the challenges of subsequent stages, we can expect that people scoring higher on generative concern at midlife should report a better quality of retirement adjustment when they have moved toward facing the challenge that Erikson posed for older age, that is, ego integrity (Hypotheses 11 and 12). It also seems likely that generative concern may be particularly likely to foster satisfaction with the larger sense of purpose and meaning in life, rather than immediate emotional enjoyment (Villar et al., 2013). We describe this important distinction next.

1.3 | Hedonic and eudaimonic well-being after retirement

Regardless of their focus, most studies of retirement have assessed adjustment quality by means of a single measure. Satisfaction with life has been the most widely used indicator (e.g., Dingemans & Henkens, 2014; Hershey & Henkens, 2014; Horner, 2014; Kim & Moen, 2001; Pinqart & Schindler, 2007), although there are also studies that have employed other measures, such as self-perceived health (e.g., Rijs, Cozijnsen, & Deeg, 2012), positive and negative affect (e.g., Burr, Santo, & Pushkar, 2011; Bye & Pushkar, 2009), depression (e.g., Butterworth et al., 2006; Kubicek et al., 2011; Virtanen et al., 2014), or emotional well-being (e.g., Coursole, Sweeney, Raymo, & Ho, 2010). However, considering more than one measure could provide a broader and more reliable, valid view of what it means to be well or badly adjusted to a life transition.

In this vein, following the traditional Aristotelian distinction between the "pleasant" life and the "meaningful" life, some researchers have proposed to distinguish two different dimensions of well-being: hedonic well-being and eudaimonic well-being (Bauer & McAdams, 2010; Huta, 2015; Linley, Maltby, Wood, Osborne, & Hurling, 2009; Ryan & Deci, 2001). Hedonic well-being is defined as being satisfied with life and experiencing high levels of positive affect, and it has been associated with the construct of subjective

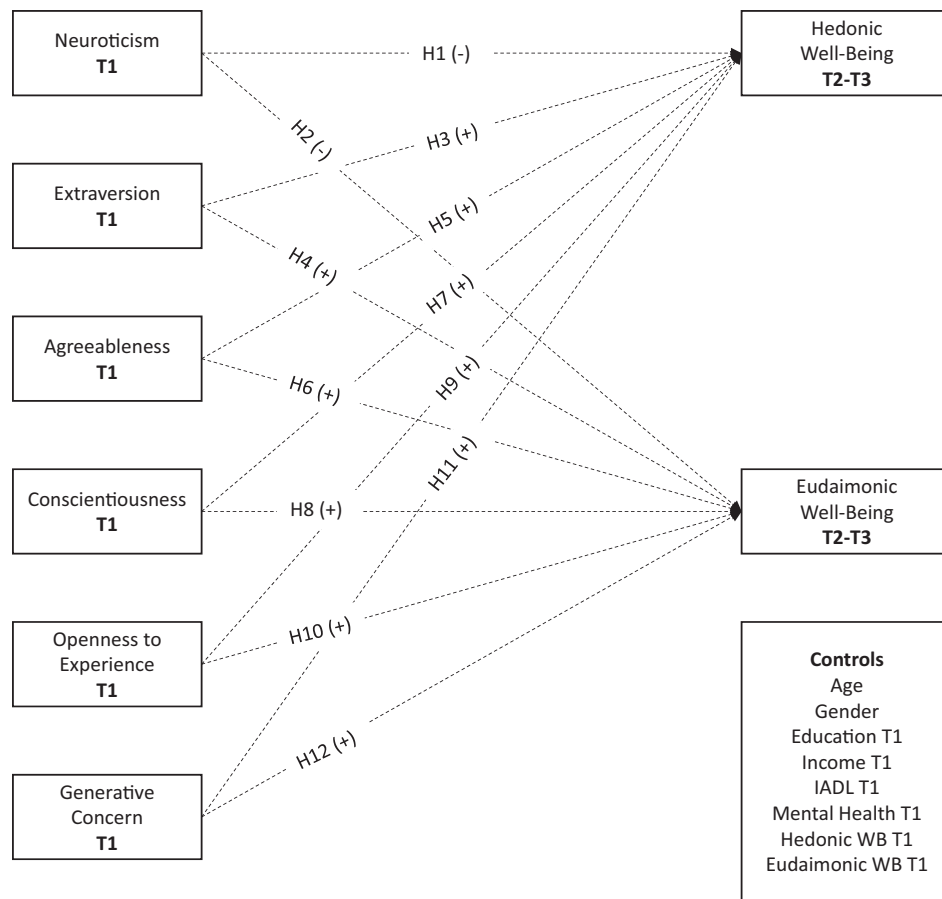


FIGURE 1 Hypothesized relationships between personality traits, generativity concern, hedonic well-being, and eudaimonic well-being. T1 = variable assessed at T1; T2 = variable assessed at T2; T3 = variable assessed at T3; IADL = instrumental activities of daily living

well-being (Diener, Emmons, Larsen, & Griffin, 1985). Eudaimonic well-being has to do with the idea of pursuing one's goals, realizing one's potential, and feeling that one's life is purposeful and meaningful. Such bidimensional measurement of well-being could be useful in assessing adjustment to retirement, a transition that has the potential to alter different facets of life. In particular, we expected that generative concern would be more likely to predict eudaimonic than hedonic well-being during the retirement experience.

1.4 | Purpose of the study

The aim of this study is to longitudinally assess the contribution of personality traits and generative concern in the prediction of hedonic and eudaimonic well-being at two time points after retirement, while controlling both for the initial values on hedonic and eudaimonic well-being and for the effects of various personal attributes and resources. Figure 1 synthesizes the 12 hypotheses arising from the consideration of the theoretical framework.

2 | METHOD

2.1 | Sample

The sample was drawn from the National Survey of Midlife in the United States (MIDUS). MIDUS is currently a three-wave longitudinal study (MIDUS I: 1995–1996; MIDUS II: 2004–2006; MIDUS III: 2013–2014) of factors related to healthy aging in a national probability sample of American adults (ages 25–74 at baseline). Full information about sampling procedures, response rates, survey design, and methods is described in the MIDUS I, II, and III codebooks, available from the survey's website at <http://www.midus.wisc.edu/>.

In this study, data from MIDUS I were considered as baseline data (T1) and data from MIDUS II (T2) and MIDUS III (T3) as follow-up data. Taking into account our interest in the quality of retirement adjustment, this study was focused on a subset of participants who met the following conditions: (a) age 50 and over at T1 and (b) either working, self-employed, looking for work, unemployed, temporarily laid off, or on maternity or sick leave at T1, and retired at T2. There were a total of 548 respondents at MIDUS II and 351 respondents at MIDUS III who met these

criteria. At T2, mean age was 67.7 ($SD = 5.5$), and participants were fairly evenly split in terms of gender (51.8% female). Regarding educational attainment, 39.6% reported high school studies or less, 41.8% college, and 18.6% graduate school, master's, or PhD. The median household income was \$80,439. Close to 61% of the sample rated their mental health as very good or excellent.

As has been previously reported (e.g., Radler & Ryff, 2010), retention in the MIDUS II sample was associated with better health, higher education, and other positive factors. Our attrition analyses draw similar conclusions with regard to those who remained and those who dropped out across all three waves. Specifically, at T2, those who dropped out were older, were poorer, had greater difficulty in performing activities of daily living, and were less extraverted, less conscientious, less open to experience, and less generative at T1. At T3, those who dropped out were older, were poorer, had greater difficulty in performing activities of daily living, and were less extraverted, more neurotic, and less generative. At both time points, there were also significant differences between dropouts and respondents demonstrated by chi-square tests on gender, educational level, self-rated mental health, and self-rated physical health. Little's (1988) missing completely at random (MCAR) test was carried out using SPSS 20.0. Results were not significant ($p > .05$), indicating that missingness was at random, which allows us to use full information maximum likelihood estimation (FIML) in the following structural equation analyses (Enders, 2010).

2.2 | Measures

Table 1 shows all predictors and outcomes used in this study, as well as their percentages, means, standard deviations, coding algorithms, wording of survey questions, and psychometric properties. Internal consistencies for multi-item variables, as measured by Cronbach's alpha, were satisfactory, with values ranging from .57 (Conscientiousness) to .90 (instrumental activities of daily living).

2.3 | Analytic strategy

First, we calculated bivariate correlations between the predictor variables at T1 and the two outcomes variables at T1, T2, and T3. Analyses were performed with SPSS 20.0. Second, we performed structural equation modeling analyses using AMOS 24. These analyses used FIML to estimate missing data. We tested two models, one predicting hedonic and eudaimonic well-being at T2, and the other predicting these variables at T3. Each of these models therefore included two endogenous variables (hedonic and eudaimonic well-being assessed at T2 or T3), six exogenous variables (all measured

at T1: Agreeableness, Extraversion, Neuroticism, Conscientiousness, Openness to Experience, and generative concern), and eight control variables also measured at baseline (age, gender, education level, income, instrumental activities of daily living, self-rated mental health, hedonic well-being, and eudaimonic well-being). To test the hypothesized models, paths were drawn according to the hypotheses presented above (see Figure 1). The six exogenous variables and the eight control variables were allowed to covary, as well as the hedonic and eudaimonic well-being error terms.

We adopted a multifaceted approach to assess the goodness of fit of the models tested (Tanaka, 1992), using the following criteria: chi-square likelihood ratio statistic, root mean square error of approximation (RMSEA), comparative fit index (CFI), and standardized root mean square residual (SRMR). Model fit was considered acceptable when RMSEA was lower than .08 (Browne & Cudeck, 1992), CFI was greater than .95, and SRMR was lower than .08 (Hu & Bentler, 1999).

3 | RESULTS

First, we computed Pearson correlation coefficients to examine the associations between the predictor variables at T1 and the two outcomes variables at T1, T2, and T3. Most variables were significantly correlated (see Table 2).

Second, to assess the combined effects of control variables, personality traits, and generative concern at baseline on hedonic and eudaimonic well-being at T2 and T3, we tested two models, one predicting these variables at T2, and the other at T3.

Fit indices for the model predicting hedonic and eudaimonic well-being at T2 indicated that the model fit the data well: The chi-square value was not significant ($\chi^2 = 4.85$, $df = 2$, $p = .089$), and the other fit indexes were adequate (RMSEA = .051, CFI = .99, SRMR = .005). The standardized path coefficients are presented in Figure 2 (additional information about the omitted coefficients is provided in Table S1 in online supplementary materials).

As can be observed, only three paths were significant. Extraversion at T1 positively predicted hedonic well-being at T2 ($\beta = .10$, $p < .05$), and Neuroticism at T1 ($\beta = -.12$, $p < .01$) and generative concern at T1 ($\beta = .15$, $p < .001$), respectively, negatively and positively predicted eudaimonic well-being at T2. The model accounted for a large proportion of variability in hedonic and eudaimonic well-being at T2. Specifically, R^2 values at T2 were 30% for hedonic well-being and 44% for eudaimonic well-being.

With regard to hedonic and eudaimonic well-being at T3, fit indices indicated that the model fit the data well: The chi-square value was not significant ($\chi^2 = 5.59$, $df = 2$, $p = .061$), and the other fit indexes were adequate

TABLE 1 Percentages, means, standard deviations, coding algorithms, wording of survey questions, and psychometric properties of the predictor and outcome variables measured at baseline

| Variable | % | M | SD | Coding algorithm | Wording of question/item | α |
|--|----------------------|-------------|-------------|---|--|----------|
| Predictors | | | | | | |
| Control variables | | | | | | |
| Age | – | 67.7 | 5.5 | Continuous variable | | n/a |
| Gender | 51.8 | – | – | Dummy variable: 1 = female, 0 = male | | n/a |
| Education | 39.6 41.8 18.6 | – – – | – – – | High school or less College Graduate school/master's/PhD | What is the highest grade of school or year of college you completed? (12 answer categories: <i>no school/some grade school, eighth grade/junior high school, some high school, GED (General Equivalency Diploma), graduated from high school, 1 to 2 years of college (no degree), 3 or more years of college (no degree), graduated from a two-year college or vocational school, graduated from a four- or five-year college or bachelor's degree, some graduate school, master's degree, PhD, or other professional degree</i>) | n/a |
| Income | – | 80,439 | 62,052 | Continuous variable (in \$) | Sum of income from self, spouse, or other family members in household. Social Security, government assistance, and all other sources | n/a |
| Instrumental activities of daily living ^a | – | 1.6 | 0.7 | Scores constructed by calculating the mean across items (1–4 scale range) | Seven-item scale of 4-point ratings (ranging from 1 = <i>not at all</i> to 4 = <i>a lot</i>). Items: <i>How much does your health limit you in doing each of the following? Lifting or carrying groceries / Climbing several flights of stairs / Bending, kneeling, or stooping / Walking more than a mile / Walking several blocks / Vigorous activities (e.g., running, lifting heavy objects) / Moderate activities (e.g., bowling, vacuuming)</i> | .90 |
| Self-rated mental health | 39.2 33.4 27.4 | – – – | – – – | Poor/fair/good Very good Excellent | In general, would you say your mental or emotional health is...? (five answer categories: <i>poor, fair, good, very good, or excellent</i>) | n/a |
| Personality traits | | | | | | |
| Neuroticism ^b | – | 2.1 | 0.6 | Scores constructed by calculating the mean across items (1–4 scale range) | Four-item scale of 4-point ratings (ranging from 1 = <i>not at all</i> to 4 = <i>a lot</i>) on <i>moody, worrying, nervous, calm</i> | .72 |
| Extraversion ^b | – | 3.2 | 0.5 | Scores constructed by calculating the mean across items (1–4 scale range) | Five-item scale of 4-point ratings (ranging from 1 = <i>not at all</i> to 4 = <i>a lot</i>) on <i>outgoing, friendly, lively, active, talkative</i> | .76 |
| Agreeableness ^b | – | 3.5 | 0.5 | Scores constructed by calculating the mean across items (1–4 scale range) | Five-item scale of 4-point ratings (ranging from 1 = <i>not at all</i> to 4 = <i>a lot</i>) on <i>helpful, warm, caring, softhearted, sympathetic</i> | .81 |

(Continues)

TABLE 1 (Continued)

| Variable | % | M | SD | Coding algorithm | Wording of question/item | α |
|---|---|------|------|---|---|----------|
| Conscientiousness ^b | – | 3.5 | 0.4 | Scores constructed by calculating the mean across items (1–4 scale range) | Four-item scale of 4-point ratings (ranging from 1 = <i>not at all</i> to 4 = <i>a lot</i>) on <i>organized, responsible, hardworking, careless</i> | .57 |
| Openness to Experience ^b | – | 3.0 | 0.5 | Scores constructed by calculating the mean across items (1–4 scale range) | Seven-item scale of 4-point ratings (ranging from 1 = <i>not at all</i> to 4 = <i>a lot</i>) on <i>creative, imaginative, intelligent, curious, broad-minded, sophisticated, adventurous</i> | .78 |
| Generativity | | | | | | |
| Generative concern ^b | – | 17.3 | 3.7 | Scores constructed by summing the values of the items (6–24 scale range) | Six-item scale, adapted from Loyola Generativity Scale (McAdams & De St. Aubin, 1992), of 4-point ratings (ranging from 1 = <i>not at all</i> to 4 = <i>a lot</i>). Items: <i>Others would say that you have made unique contributions to society / You have important skills you can pass along to others / Many people come to you for advice / You feel that other people need you / You have had a good influence on the lives of many people / You like teaching things to people</i> | .85 |
| Outcomes | | | | | | |
| Well-being variables | | | | | | |
| Hedonic well-being ^b | – | 1.78 | 0.0 | Scores constructed by summing the standardized z-scores of positive affect and satisfaction with life | Positive affect: Six-item scale of 5-point ratings (ranging from 1 = <i>all</i> to 5 = <i>none of the time</i>) on how much of the time respondents felt indicators of positive affect during the past 30 days. Items: <i>cheerful, in good spirits, extremely happy, calm and peaceful, satisfied, full of life</i> . Scores constructed by calculating the mean across items (1–5 scale range) | .91 |
| Satisfaction with life: Rate your life overall these days (10-point ratings ranging from 0 = <i>worst possible life overall</i> to 10 = <i>best possible life overall</i>) | | | | | | |
| Eudaimonic well-being ^b | – | 83.2 | 11.6 | Scores constructed by summing the scores of the six subscales (18–126 scale range) | Ryff's (1989) scales of psychological well-being. Each of the six scales consisted of three items of 7-point ratings (ranging from 1 = <i>strongly agree</i> to 7 = <i>strongly disagree</i>). Cronbach's alpha coefficient for all items combined was .80 | n/a |
| Autonomy. Items: <i>I tend to be influenced by people with strong opinions / I have confidence in my own opinions, even if they are different from the way most other people think (R) / I judge myself by what I think is important, not by the values of what others think is important (R)</i> | | | | | | |
| | | | | | | .47 |

(Continues)

TABLE 1 (Continued)

| Variable | % | M | SD | Coding algorithm | Wording of question/item | α |
|----------|---|---|----|------------------|---|----------|
| | | | | | Environmental mastery. Items: <i>The demands of everyday life often get me down / In general, I feel I am in charge of the situation in which I live (R) / I am good at managing the responsibilities of daily life (R)</i> | .51 |
| | | | | | Personal growth. Items: <i>For me, life has been a continuous process of learning, changing, and growth (R) / I think it is important to have new experiences that challenge how I think about myself and the world (R) / I gave up trying to make big improvements or changes in my life a long time ago</i> | .54 |
| | | | | | Positive relations with others. Items: <i>Maintaining close relationships has been difficult and frustrating for me / People would describe me as a giving person, willing to share my time with others (R) / I have not experienced many warm and trusting relationships with others</i> | .59 |
| | | | | | Purpose in life. Items: <i>Some people wander aimlessly through life, but I am not one of them (R) / I live life one day at a time and don't really think about the future / I sometimes feel as if I've done all there is to do in life</i> | .34 |
| | | | | | Self-acceptance. Items: <i>I like most parts of my personality (R) / When I look at the story of my life, I am pleased with how things have turned out so far (R) / In many ways I feel disappointed about my achievements in life</i> | .52 |

Note. $N = 548$. ^aHigher scores reflect a greater difficulty in performing instrumental activities of daily life. ^bHigher scores reflect higher standings on the variable.

TABLE 2 Bivariate correlations

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|------------------------------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1. Neuroticism T1 | | | | | | | | | | | |
| 2. Extraversion T1 | -.18** | | | | | | | | | | |
| 3. Agreeableness T1 | -.01 | .51*** | | | | | | | | | |
| 4. Conscientiousness T1 | -.15* | .15* | .35*** | | | | | | | | |
| 5. Openness to Experience T1 | -.19*** | .43*** | .38*** | .17** | | | | | | | |
| 6. Generative concern T1 | -.16** | .31*** | .29*** | .25*** | .39*** | | | | | | |
| 7. Hedonic well-being T1 | -.50*** | .27*** | .16** | .14* | .13* | .14* | | | | | |
| 8. Eudaimonic well-being T1 | -.51*** | .31*** | .23*** | .29*** | .32*** | .33*** | .49*** | | | | |
| 9. Hedonic well-being T2 | -.40*** | .27*** | .15* | .09 | .16* | .14* | .50*** | .39*** | | | |
| 10. Eudaimonic well-being T2 | -.43*** | .31*** | .26*** | .23*** | .30*** | .37*** | .35*** | .68*** | .48*** | | |
| 11. Hedonic well-being T3 | -.33*** | .21*** | .18** | .16** | .10 | .16** | .46*** | .36*** | .51*** | .38*** | |
| 12. Eudaimonic well-being T3 | -.33*** | .25*** | .21*** | .22*** | .27*** | .32*** | .23*** | .56*** | .33*** | .65*** | .51*** |

Note. T1 = variable assessed at T1; T2 = variable assessed at T2; T3 = variable assessed at T3.
 $\hat{p} < .1$. * $p < .05$. ** $p < .01$. *** $p < .001$.

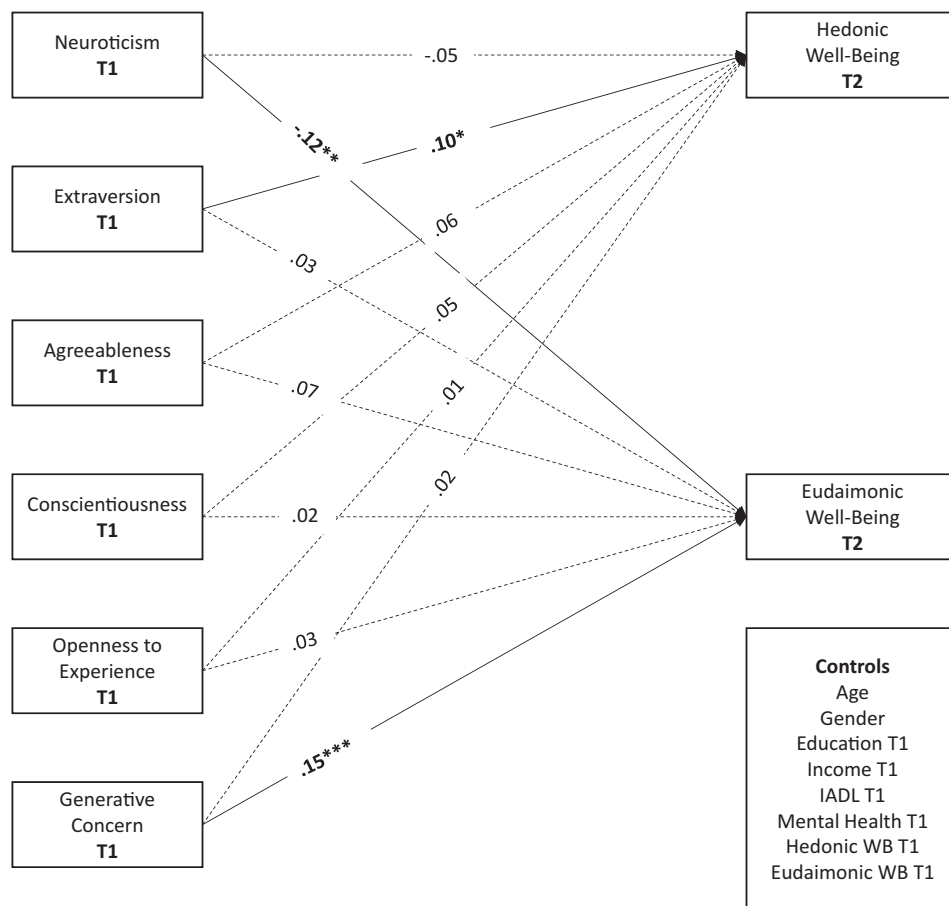


FIGURE 2 Results of the structural equation modeling analyses for hedonic and eudaimonic well-being at Time 2. $N = 548$. T1 = variable assessed at T1; T2 = variable assessed at T2; IADL = instrumental activities of daily living. Standardized path coefficients are presented. Solid lines refer to significant paths, and dotted lines refer to nonsignificant paths. * $p < .05$. ** $p < .01$. *** $p < .001$

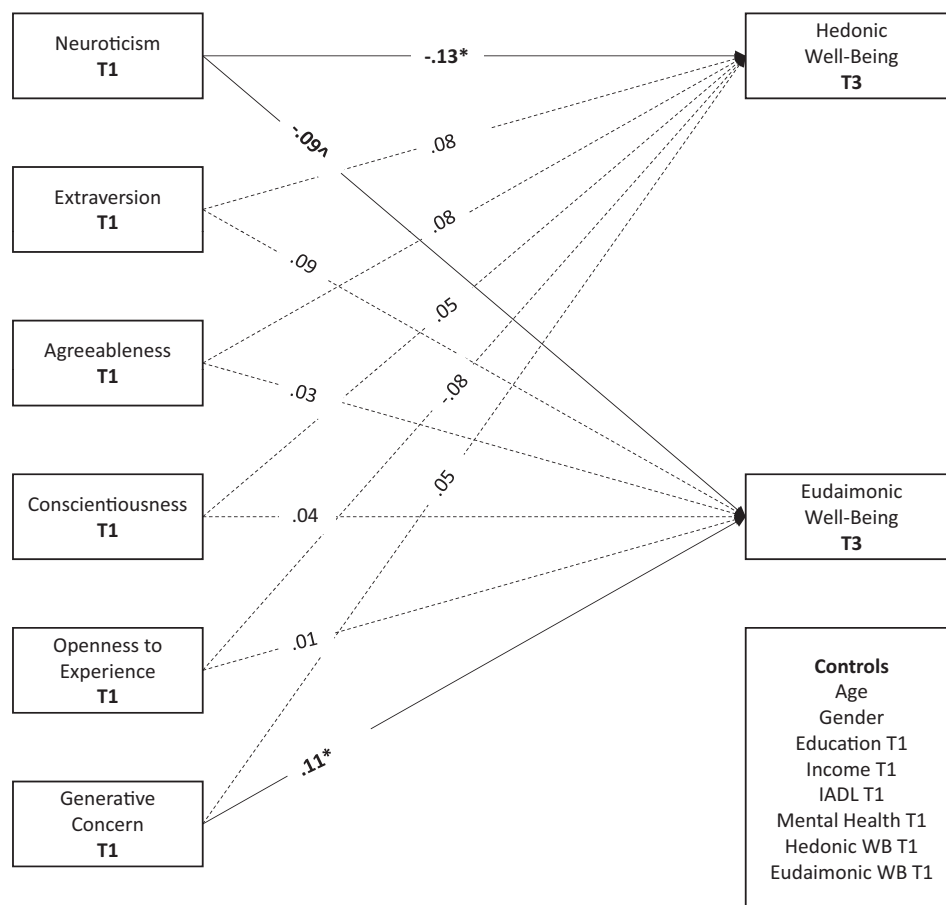


FIGURE 3 Results of the structural equation modeling analyses for hedonic and eudaimonic well-being at Time 3. $N = 351$. T1 = variable assessed at T1; T3 = variable assessed at T3; IADL = instrumental activities of daily living. Standardized path coefficients are presented. Solid lines refer to significant paths, and dotted lines refer to nonsignificant paths. [†] $p < .1$. * $p < .05$

(RMSEA = .072, CFI = .99, SRMR = .007). The standardized path coefficients are presented in Figure 3 (additional information about the omitted coefficients is provided in Table S2 in online supplementary materials).

Only three paths were significant or approached significance. Neuroticism at T1 negatively predicted both hedonic ($\beta = -.13$, $p < .05$) and eudaimonic ($\beta = -.09$, $p < .1$) well-being at T3, and generative concern at T1 positively predicted eudaimonic well-being at T3 ($\beta = .11$, $p < .05$). The model accounted for a large proportion of variability in hedonic and eudaimonic well-being at T3. Specifically, R^2 values at T3 were 27% for hedonic well-being and 35% for eudaimonic well-being.

4 | DISCUSSION

The main aim of this study was to longitudinally assess the contribution of personality traits and generative concern in the prediction of hedonic and eudaimonic well-being at two time points after retirement in a major longitudinal, national sample (MIDUS), while controlling for initial values on

hedonic and eudaimonic well-being and for the effects of personal attributes and resources. It is important to highlight that as baseline values of both hedonic and eudaimonic well-being were controlled in the analyses, our study is essentially predicting change in these constructs 9 and 18 years later using a large longitudinal data set.

This study shows that personality traits and generative concern at midlife explain a meaningful part of the variation in individuals' quality of subsequent retirement adjustment. Results from the bivariate analyses provided support for all the hypotheses of the study. Hedonic and eudaimonic well-being at T2 and T3 were negatively associated with Neuroticism (Hypotheses 1 and 2) and positively associated with Extraversion (Hypotheses 3 and 4), Agreeableness (Hypotheses 5 and 6), Conscientiousness (Hypotheses 7 and 8), Openness to Experience (Hypotheses 9 and 10), and generative concern (Hypotheses 11 and 12). However, when all of these variables were combined, and the effects of initial values of well-being and personal attributes and resources were controlled in structural models, most of the effects of Big Five variables disappeared. Thus, only Neuroticism and Extraversion were significant in the prediction of retirement

adjustment quality, although these effects were not consistent across waves and across well-being types.

As for Neuroticism, we have found some evidence for the hypothesized inverse relationship between this variable and retirement adjustment quality (Hypotheses 1 and 2). Thus, individuals scoring higher in Neuroticism were more likely to obtain lower scores on eudaimonic well-being 9 years later, and lower scores both in hedonic and eudaimonic well-being 18 years later. These findings are consistent with the cross-sectional results from Lockenhoff et al. (2009) and Robinson et al. (2010) on life satisfaction during retirement.

As Reis and Gold (1993) have argued, individuals scoring high in Neuroticism are prone to experience negative emotions and maladaptive behaviors across many situations, and they may find it hard to cope with the problems and stresses associated with the retirement process. Neuroticism is associated with enduring affective dispositions that negatively affect life satisfaction (e.g., DeNeve & Cooper, 1998). Thus, it is not too surprising that more neurotic individuals also experience a worse quality of adjustment to retirement than less neurotic individuals do.

With regard to Extraversion (Hypotheses 3 and 4), this variable was positively associated with retirement adjustment quality, although the effect was only significant in the case of hedonic well-being measured at T2. This result is in line with Lockenhoff et al. (2009), who found a positive relationship between Extraversion and overall retirement satisfaction. It appears that being active, effective, and socially involved (all characteristics of extraverted individuals) has only a midterm effect on subjective well-being and is not protective in the long run. Neither do these characteristics seem to have an impact on the possibilities of experiencing eudaimonic well-being, which includes a sense of purpose and meaning after retirement.

As we mentioned in the introduction with regard to our literature review, the links of Agreeableness, Conscientiousness, and Openness to Experience with retirement adjustment quality have been somewhat less evident, and this fact was reflected in our results. Thus, retirement adjustment quality was not associated with Agreeableness (Hypotheses 5 and 6), Conscientiousness (Hypotheses 7 and 8), or Openness to Experience (Hypotheses 9 and 10). These results differ from Robinson et al. (2010), who found a positive concurrent association between the traits of Conscientiousness and Agreeableness and life satisfaction.

A possible explanation for this might be that the findings of this earlier cross-sectional study were actually an expression of the contrary direction of relations, with retirement satisfaction impacting traits, rather than the converse; since this study was not longitudinal in nature, we cannot know for sure. It is thus not too surprising that the relations between some personality traits and later retirement

satisfaction may differ for the present study in comparison to the findings for Agreeableness and Conscientiousness in this previous cross-sectional analysis.

However, the fact that most of our predictions for the Big Five model were supported in bivariate correlations but not in structural models merits further discussion. There are several explanations for this. It is possible that the effects of the Big Five are not as significant as the effects of personal attributes and resources, which seem to explain some of the variation in hedonic and eudaimonic well-being after retirement, in line with previous research on retirement adjustment quality (e.g., Kubicek et al., 2011; Pinquart & Schindler, 2007; Van Solinge, 2013; Van Solinge & Henkens, 2008; Wang, 2007). It is also possible that well-being levels do not change that much over time, particularly when it comes to hedonic well-being (e.g., Ryan & Deci, 2001), and only those variables strongly associated with them therefore show a predictive effect in structural models. Construct overlap among personality and well-being variables (e.g., Schmutte & Ryff, 1997) could also account for these results, as well as changes in Big Five traits over time (e.g., Roberts & Mroczek, 2008), which could explain the differential association of these baseline predictors with well-being variables in cross-sectional and longitudinal analyses. In any case, it is now clear that further longitudinal work is required to understand these patterns of personality trait prediction and later retirement satisfaction more fully.

Finally, a noteworthy result of our study is that generative concern (Hypotheses 11 and 12) was positively associated with adjustment both in the earlier and the longer periods of retirement we assessed, even after controlling for the effects of personal resources and attributes, personality traits, and initial values of well-being. As expected, this result only held for eudaimonic, and not hedonic, well-being. In this respect, the positive resolution of the generativity crisis may foster individuals' capacities for dealing with the challenges of retirement. Highly generative individuals may be able to sustain a sense of meaning and contribution to larger purposes, despite the changes that retirement brings to the area of work. In turn, this should have a positive impact on their adjustment to this important life transition into the final stage of ego integrity, as predicted from Erikson's (1963, 1982) theoretical perspective. Such ego integrity concerns regarding life meaning are likely best captured in eudaimonic rather than hedonic well-being, as seems to be the case for the present analyses of later life.

5 | LIMITATIONS, STRENGTHS, AND CONCLUSION

Although this study has produced a number of important findings, their interpretation has to be made with caution due

to the following limitations. First, the sample used for this study was exclusively made up of people who were fully retired. Future research may consider those who engage in bridge employment before entering full retirement to look at its influence on the quality of adjustment. Second, as the MIDUS survey followed individuals during a period of almost 20 years, the changes in the sociopolitical context may certainly have had an influence on their answers. However, these contextual factors, as well as changing cultural attitudes toward retirement, could not be readily addressed in this study. Finally, some of the measures used in this study were composed of a limited number of items (e.g., well-being scales or generative concern scale) or showed modest internal consistency (particularly Conscientiousness as a personality trait). Further research using longer versions of these measures is needed to confirm the robustness of the results.

Despite these limitations, this study has a number of strengths. A major strength is the use of a bidimensional measure of retirement adjustment quality, assessing both hedonic and eudaimonic well-being, and therefore encompassing positive personal functioning in multiple domains. Prior research has tended to assess adjustment quality by means of a single—and often unidimensional—measure, such as satisfaction with life (e.g., Dingemans & Henkens, 2015), positive and negative affect (e.g., Burr et al., 2011), or depression (e.g., Virtanen et al., 2014). The use of a bidimensional measure, focused on hedonic and eudaimonic well-being, is of particular significance in understanding the quality of retirement adjustment, a life transition that could affect several dimensions of life and therefore could be managed in different ways, resulting in different outcomes. The findings of this study support the value of considering these two types of well-being as somewhat distinctive, particularly with regard to the role of generative concern as a predictor, given its distinctive role in Erikson's (1963, 1982) theoretical model of the transition from mid- to late life development.

A second major strength of this study is having considered the influence of personality variables on the quality of retirement adjustment. Although psychological factors have been explored in relation to other life transitions, their influence on retirement adjustment quality has been largely overlooked (Van Solinge, 2013; Wang et al., 2011). Thus, this study adds to the scant literature on the topic (Lockenhoff et al., 2009; Robinson et al., 2010) and shows that personality traits as well as generative concern at midlife explain an important part of the variation in individuals' quality of subsequent retirement adjustment. Additional longitudinal research is needed in the future to test theoretical models of the transition to late life, such as Erikson's (1963, 1982), more rigorously.

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CONFLICT OF INTERESTS

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the supporting information tab for this article.

Table S1

Table S2

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