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Five-factor Model Personality Traits and the Retirement Transition: Longitudinal and Cross-sectional Associations

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Abstract

We examined associations between five-factor personality traits and retirement in a diverse community sample. Longitudinal analyses ($n=367$) compared personality trajectories of participants who remained employed and participants who retired. Personality at baseline did not predict future retirement, but compared to participants who remained employed, retirees increased in Agreeableness and decreased in Activity, a facet of Extraversion. In cross-sectional analyses among retirees ($n=144$), those low in Neuroticism and high in Extraversion reported higher retirement satisfaction and those high in Extraversion reported higher post-retirement activity levels. Findings suggest that the trait perspective contributes to our understanding of the retirement process.

Keywords

Retirement; personality traits; five-factor model; longitudinal; aging

Retirement is a major normative life transition (Atchley, 1976; Theriault, 1994) which profoundly affects patterns of everyday activities and social network composition (e.g., Bossé, Aldwin, Levenson, Workman-Daniels, & Ekerdt, 1990; Mor-Barak, Scharlach, Birba, & Sokolov, 1992; Kim & Moen, 2002). Research on interindividual differences in retirement outcomes (e.g., Pinquart & Schindler, 2007; van Solinge & Henkens, 2007; 2008) has focused on sociodemographic factors (e.g., Wu, Tang, & Yan, 2005), physical health (e.g., Herzog, House, & Morgan, 1991; Wu et al., 2005), and subjective well-being (e.g., Pinquart & Schindler, 2007). In contrast, very few studies have examined the link between personality traits and retirement. The present study adds to the literature by examining personality as a predictor of retirement, patterns of longitudinal personality change associated with retirement, and personality correlates of retirement outcomes.

We adopt the widely replicated five-factor model (FFM; Goldberg, 1993; Paunonen, Zeider, Engvik, Oosterveld, & Maliphant, 2002; McCrae & Costa, 2003), which describes personality along the dimensions of Neuroticism (N), Extraversion (E), Openness to Experience (O), Agreeableness (A), and Conscientiousness (C). Theoretically, FFM traits are thought to

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influence biographical events, such as retirement, via their association with emotional appraisals, motivational priorities, and coping strategies (McCrae & Costa, 2008). Conversely, major biographical events are thought to elicit shifts in personality traits because they change people's investment in self-defining social roles (Roberts, Wood, & Smith, 2005).

The synergy between personality and biography is well-documented for work-related variables in early adulthood. In meta-analyses, C and low N are consistent predictors of better job performance, whereas A is selectively linked to work-related interpersonal skills (Barrick & Mount, 1991; Salgado, 1997; Hurtz & Donovan, 2000). Individuals high in E and C and low in N also report higher satisfaction with their work experiences (for a meta-analysis see Judge, Heller, & Mount, 2002). In turn, work experiences may be linked to changes in younger adults' personality. Specifically, higher occupational attainment and involvement appear to be associated with increases in aspects of C and E and decreases in aspects of N (e.g., Elder, 1969; Roberts, 1997; Costa, Herbst, McCrae, & Siegler, 2000; Roberts, Caspi, & Moffitt, 2003).

To date, comparable research on personality and retirement is very scarce. A review of the literature identified only three studies that examined longitudinal changes in personality traits from pre- to post-retirement. Howard et al. (1986) found that retirement was associated with a decline in Type A behavior within a year of retirement. Theriault (1994) found that trait anxiety was high in the months before retirement but decreased thereafter. Finally, Mroczek and Spiro (2003) found that retirement did not affect trajectories of N and E. Findings are further limited because samples were exclusively male and did not examine the influence of baseline personality on future retirement.

This lack of research is troubling because prominent theories of aging differ in their predictions about longitudinal linkages between personality traits and retirement. Disengagement theory (Cumming & Henry, 1961) views retirement as a mutual withdrawal between society and individual as a result of older adults' declining energy levels. From this perspective, personality changes would be seen as a predecessor, not a consequence of retirement. Activity theory (Havighurst, 1961) and social investment perspectives (Kim & Moen, 2001; Roberts, Wood, & Smith, 2005), in contrast, emphasize retirement-related role losses and would predict personality changes in response to retirement, not vice versa. Finally, continuity theory (Atchley, 1989), proposes that even after retirement, individuals maintain previous patterns of lifestyles, values, and identities. From this perspective, basic personality traits should remain fairly stable throughout the retirement process and beyond. So far it cannot be determined which of these perspectives best describes retirement-associated changes in personality traits.

With regard to cross-sectional associations, theoretical considerations suggest that personality traits should be differentially associated with conceptually distinct aspects of retirement (e.g., retirement preparation, satisfaction, and adjustment) that have been identified in recent research (e.g., van Solinge & Henkens, 2007; 2008).

Retirement preparation, should be associated with traits linked to planning and self-control as well as anticipatory emotions. Thus, people high in C, who are deliberate and well-organized should be well-prepared, whereas the anxiety and impulsivity associated with N may leave individuals ill-prepared and fearful. In support of this view, Hershey and Mowen (2000) found that high C and low N were associated with better financial preparedness for retirement.

Associations between personality and retirement satisfaction, in turn, are likely to mirror the large body of research which links high N and low E to general life satisfaction (see DeNeve & Harris, 1998). Because such effects are thought to be driven by enduring affective dispositions associated with N and E (McCrae & Costa, 1991), they are likely to extend to retirement satisfaction as well. Consistent with this view, low N around age 60 was found to

predict higher retirement satisfaction at age 65–75 (Vaillant, DiRago, & Mukamal, 2006). So far, associations between retirement satisfaction and the remaining FFM traits have not been examined.

One important aspect of retirement adaptation is the ongoing involvement in social roles and activities (Kim & Moen, 2001). Because of their active and outgoing nature, individuals high in E would be expected to maintain high levels of activity beyond their retirement. Previous research links E to higher activity levels among older adults (Rousseau, Pushkar, & Reis, 2005). However, evidence examining the specific context of the retirement transition is missing.

To address the aforementioned gaps in the research record, the present study examines the association between personality traits and retirement-related variables both cross-sectionally and longitudinally. Longitudinal analyses examine baseline personality as a predictor of retirement, as well as personality changes in response to retirement. Cross-sectional analyses examine personality correlates of retirement anticipation, satisfaction, and post-retirement activity levels. To obtain a fine-grained assessment of the associations between five-factor traits and retirement-related variables, we assess personality both at the level of the five higher order factors and at the level of individual facets. Further, because previous studies have found that demographic variables influence both retirement-related outcomes (e.g., Howard et al.; Belgrave, 1988; Pienta, 2003) and personality stability (Löckenhoff et al., 2008) we utilize a diverse, community-based sample and systematically control for age, gender, ethnicity, and education. Physical and mental health which appear to be consistently linked to better retirement outcomes (e.g., Belgrave, 1988; Mo Barak et al, 1992; Bosse et al., 1987) are included as covariates as well. Finally, we examine whether the association between personality traits and retirement-related variables is affected by the voluntariness of the retirement transition (van Solinge & Henkens, 2007).

Method

Participants

The sample is drawn from the East Baltimore Epidemiologic Catchment Area Study (ECA, Eaton et al., 1997). A probability sample of household residents were initially recruited in 1981 ($n = 3481$) and followed up in 1993–1998 ($n = 1920$) and 2004/05 ($n = 1071$).¹ The 1993–1998 wave is abbreviated here as “1995” and the 2004/2005 wave as “2004”. Retirement-related data in 2004 were available for all participants who had retired within the past 10 years. Personality assessments were available for 42% of participants in 1995 and for 90% of participants in 2004.²

Participants were included in the longitudinal sample if they were employed full-time in 1995 and had valid personality and mental/physical health scores in both 1995 and 2004. Participants were included in the cross-sectional sample if they were retired in 2004 and had completed retirement-related questions, health scores, and valid personality assessments in 2004. Because of concerns about the validity of self-reports among individuals with cognitive impairment, we screened out participants with Mini Mental State Scores below the standard cut-off of 24 (Folstein, Folstein, & McHugh, 1975).

¹Participants who did not complete the follow-up assessments were significantly older ($t=18.6$, $p < .001$, $d = .64$) and less educated ($t = 14.5$, $p < .001$, $d = -.50$), but did not differ in gender or ethnicity. For further details regarding general attrition rates in the ECA see Eaton, Kalaydjian, Scharfstein, Mezuk, and Ding (2007) and Löckenhoff et al. (2008).

²Personality data in 1995 were collected in the context of several unrelated sub-projects of the ECA. Mean personality scores did not differ significantly across these projects (see Löckenhoff et al, 2008 for details). Compared to the rest of the sample, participants who had completed one or both personality assessments were significantly younger ($t > 4.01$, $p < .001$, $d > .94$) and more educated ($t > 1.93$, $p < .01$, $d > .46$), but they did not differ in gender, ethnicity, or retirement status in 2004.

Matching the population distribution at initial recruitment, the vast majority of the sample were either Black or White. Because retirement experiences may differ for these groups (e.g., Choi, 1994) we opted to systematically control for Black versus White ethnicity and excluded 2.6% of otherwise eligible participants who did not belong to either of these ethnic group.³

Measures

Personality traits were measured with the Revised NEO Personality Inventory (NEO-PI-R, Costa & McCrae, 1992), a 240-item questionnaire that assesses six facets for each of the five major dimensions of personality. Scores were standardized using combined gender norms (Costa & McCrae, 1992). In the longitudinal sample, internal consistencies ranged from $\alpha = .84$ for O to $\alpha = .91$ for N.

Mental health was assessed with the 12-item version of the General Health Questionnaire (Goldberg & Williams, 1988). Internal consistency in the longitudinal sample was $\alpha = .79$.

Subjective physical health was assessed with a single-item measure asking participants to rate their present health on a 4-point scale from “poor” to “excellent”.

Retirement-related variables included retirement status (whether or not participants considered themselves retired), retirement expectedness (whether or not participants had expected to retire in the year preceding their retirement), retirement voluntariness (whether participants viewed retirement as something they wanted to do vs. were forced to do), anticipatory thoughts and emotions (rated on 4-point scales with higher scores indicating greater forethought and more positive emotions), post-retirement activity levels (rated on a 4-point scale from “not busy at all” to “very busy”), involvement in part-time work (yes or no), and overall retirement satisfaction (rated on a 3-point scale from “not at all satisfying” to “very satisfying”).

Results

Descriptive analyses

Table 1 describes the samples with regard to demographics, personality, mental/physical health and retirement-related variables. Compared to the normative U.S. population (Costa & McCrae, 1992), participants scored slightly lower in O. Levels of mental and subjective physical health were moderate. On average, participants had retired less than five years before the 2004 assessment. The majority had not expected their upcoming retirement and did not retire voluntarily. Nevertheless, they reported moderate levels of anticipatory thoughts, slightly positive anticipatory emotions, and fairly high levels of satisfaction. According to self-reports, participants remained quite active after retirement.

Supplemental analyses compared retirees who were followed longitudinally to those for whom only cross-sectional assessments were available. Compared to the cross-sectional sample, the longitudinal sample of retirees were slightly younger ($t = 2.94, p < .01, d = .49$), had retired more recently ($t = 3.41, p < .01, d = .58$), and were less likely to expect retirement ($\chi^2 = 6.46, p < .01$). No differences were found in any of the other variables listed in Table 1.

Longitudinal analyses

To examine whether personality in 1995 predicted future retirement over and above the effects of covariates we conducted a logistic regression with retirement status (yes vs. no) in 2004 as the binary dependent variable. Block 1 entered demographic predictors (age, gender, ethnicity,

³Supplemental analyses that compared participants with minority status to Whites yielded the same pattern of results as Black versus White comparisons.

and education), Block 2 added mental/physical health in 1995, and Block 3 entered personality factors in 1995. Block 1 reached significance ($\chi^2(4) = 101.73, p < .001$) with advanced age emerging as a significant predictor of future retirement ($B = .213, S.E. = .028, p < .001$). Block 2 reached significance as well ($\chi^2(2) = 6.52, p < .05$) with low physical health significantly predicting retirement ($B = -.66, S.E. = .26, p < .05$). Block 3, which added personality factors, did not reach significance ($\chi^2(5) = 6.24, n.s.$), although there was a significant individual effect suggesting that impending retirement was predicted by lower levels of C ($B = -.05, S.E. = .02, p < .05$). An additional logistic regression examining demographics, health, and personality in 1995 as predictors of retirement voluntariness did not find any significant effects.

Next, we examined whether personality trajectories differed between participants who retired between personality assessments and participants who were consistently employed. For this purpose we computed a set of hierarchical linear regressions with personality factor and facet scores in 2004 as the dependent variables. As predictors, we entered personality scores in 1995 (Block 1), age, gender, ethnicity, and education (Block 2), mental and physical health in 1995 (Block 3), and retirement status (retired between follow-ups vs. remained employed, Block 4). Separate analyses were conducted for each of the personality factors and facets. Because of concerns about alpha inflation, we focus our interpretation of facet-level findings on effects significant at the $p < .01$ level.

Consistent with the high retest correlations typically observed for the NEO-PI-R (e.g., Costa & McCrae, 1992) personality in 1995 (Block 1) significantly predicted personality in 2004 (for all factors and facets $\beta > .51, \Delta R^2 > .26, p < .001$). Results for Blocks 2–4 are presented in Table 2. The effects of demographic variables on personality change in the ECA sample (Block 2) are merely included for control purposes in the present study and have already been described elsewhere (see Löckenhoff et al.). Block 3 indicated that better mental health in 1995 was associated with decreases in N, N3: Depression, and N6: Vulnerability, and that better physical health in 1995 was associated with decreases in N5: Impulsiveness and increases in C6: Deliberation. Finally, Block 4 indicated that compared to participants who remained employed, recent retirees increased in A. On the facet level, this effect was exclusively driven by increases in A4: Compliance. In addition, recent retirees decreased in E4: Activity. A weaker effect ($p < .05$) suggested declines in C5: Self-discipline.⁴ Supplemental analyses indicated that personality changes in response to retirement did not differ depending on retirement voluntariness or post-retirement involvement in part-time work (all $ps > .05$).

Cross-sectional analyses

Cross-sectional analyses examined associations between retirement-related variables and concurrent personality scores in 2004. We conducted a series of regressions examining the association of personality factors (entered in Block 4) with retirement anticipation, post-retirement activity levels, and retirement satisfaction after controlling for demographics (Block 1), mental/physical health (Block 2), and retirement voluntariness (Block 3). Effects on binary and continuous dependent variables were examined with logistic and hierarchical linear regressions, respectively.

Results are summarized in Table 3. Older adults were more likely to report that they expected and looked forward their retirement; women reported less anticipatory thoughts than men; Whites reported higher post-retirement activity levels; and more educated and physically healthy individuals reported greater expectedness and anticipatory thoughts/emotions as well

⁴The statistical approach to calculating change scores may influence estimates of mean level change (Roberts & Chapman, 2000). Supplemental analyses therefore re-examined patterns of change using repeated-measures ANCOVAs entering retirement as a between subjects factor and demographics, mental, and physical health as covariates. The effects of retirement on mean level changes in A, A4, and E4 were replicated but the effect for C5 was reduced to a trend ($p = .15$).

as greater retirement satisfaction and post-retirement activity levels. Further, individuals who viewed their retirement as voluntary, reported greater expectedness and anticipatory thoughts, more positive anticipatory emotions, and higher retirement satisfaction. After controlling for these effects, personality factors accounted for significant portions of the variance in several retirement-related variables. Significant effects at the factor level were followed up with supplemental analyses which added the corresponding personality facets in Block 4 of the regressions. Findings suggest that participants low in N (especially N1: Anxiety, N3: Depression, N4: Self-consciousness, and N6: Vulnerability, $Bs < -.04$, $ps < .05$) were more likely to perceive their retirement as expected. Retirement satisfaction was also associated with low N (particularly the Depression and Vulnerability facets, $Bs > .01$, $ps < .01$) as well as higher scores on E and four of its facets (E1: Warmth, E2: Gregariousness, E4: Activity, and E6: Positive emotions, $Bs > .01$, $ps < .05$). Higher scores on E were further associated with greater post-retirement activity levels and involvement in part time work. Not surprisingly these effects were primarily driven by the Activity facet (E4, $Bs > .03$, $ps < .05$).

Discussion

The present findings contribute to our understanding of the association between personality traits and retirement in several important ways. First, we studied personality-traits not only as a correlate of retirement-related variables, but also examined traits as a predictor of retirement, as well as longitudinal personality changes associated with retirement. Second, we used a well-validated and comprehensive measure of personality traits. Third, we utilized a diverse community-based sample and systematically controlled for the influence of demographic variables, mental/physical health, and retirement voluntariness.

There was little evidence indicating that personality traits predict future retirement. Although those who scored low in C at baseline were more likely to retire later on, this effect did not reach statistical significance. This does not provide much support for the tenets of disengagement theory which argues that retirement is heralded by changes in the aging individual.

For most aspects of personality, longitudinal analyses revealed high levels of stability across the retirement transition as would be predicted by continuity theory. Consistent with the findings by Mroczek and Spiro (2003) there were no changes in the N and E factors. However, there were a couple of significant retirement-related changes in select aspects of E and A. After retirement, participants described themselves as less fast-paced and vigorous (decreased E4: Activity) as well less competitive and argumentative (increased A4: Compliance) than before. It is interesting to note that these changes parallel the decrease in Type A behavior reported by Howard et al. (1986). In contrast, we found no evidence of declines in facets of N suggesting that the changes in trait anxiety reported by Theriault (1994) are specific to the immediate retirement transition and not found in longer-term follow-ups. In terms of size, the observed changes amounted to about 4 T-score points. This is slightly larger than the effects reported by Costa et al. (2000) who compared personality change in participants who were promoted versus fired and four times larger than the rate of age-related change that would be expected in a late mid-life sample (i.e., about one T-Score point per decade; Terracciano, McCrae, Brant, & Costa, 2005).

Theoretically, the decrease in E4: Activity conforms to our predictions and supports activity and social investment theories which view retirement-related role-losses as a possible trigger for “slowing down”. Role and social investment theories (Roberts et al. 2005) also offer a possible explanation for the observed increases in A and A4: The absence of work-related role strain may have reduced the need for aggressive and competitive pursuit of one's goals and led to more harmonious social interactions. In the long run, these changes in everyday experience

could have been pervasive enough to affect contextualized aspects of participants' personality traits. Future studies could further pursue such effects by assessing the number and nature of social roles that participants are involved in. At the same time, it is important to note that we found no retirement-related changes in N or emotional facets of E suggesting that the loss of work-related roles and the decrease in activity levels had no apparent negative emotional consequences.

Consistent with our hypotheses, cross-sectional analyses support the notion that personality traits are differentially associated with various retirement outcomes. On the broad factor level, both low N and high E were associated with retirement satisfaction. In addition, high E was selectively associated with post-retirement activity levels whereas low N was associated with retirement expectedness. Facet-level analyses revealed that retirement satisfaction was not only associated with emotion-related aspects of personality (such as N3: Depression and E6: Positive emotions) but also with facets that capture action tendencies. This includes N6: Vulnerability, which describes a persons' approach to handling stressful situations and E4: Activity, which captures the speed and vigor of a person's actions. This lends some support to the predictions of activity and role theory which would suggest that retirees fare better if they remain active and identify new roles for themselves.

Our findings are qualified by a number of important limitations. First, although the ECA is fairly diverse, the high attrition rate and selective availability of personality data limit the generalizability of our findings. Also, we assessed personality at only two time points and the follow-up assessment occurred within a few years after retirement. Thus, we were not able to detect any curvilinear trajectories or examine the implications of personality traits among long-term retirees. Research on retirement and subjective well-being (Pinquart & Schindler, 2007) suggests that retirement-related changes tend to level off after several years. Similar effects need to be explored for changes in personality traits. Also, although we statistically controlled for the influence of demographic factors, our sample size was too small to explore moderating effects of age, gender, ethnicity, or education. Future studies should also strive to include a wider range of ethnic backgrounds, utilize objective measures of physical health, and employ multi-item measures of retirement satisfaction (e.g., Kimmel et al., 1978).

In conclusion, our findings indicate that five-factor personality traits show small but significant changes in response to the retirement transition and that personality is related to retirement satisfaction as well as post-retirement activity levels. This suggests that future research in the field of retirement would benefit from a closer consideration of personality traits.

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References

- Atchley, RC. The sociology of retirement. John Wiley and Sons; New York: 1976.
- Atchley RC. A continuity theory of normal aging. *The Gerontologist* 1989;29:183–190. [PubMed: 2519525]
- Barrick MR, Mount MK. The Big-Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology* 1991;44:1–26.
- Belgrave LL. The Effects of Race Differences in Work History, Work Attitudes, Economic Resources, and Health on Women's Retirement. *Research on Aging* 1988;10:383–398. [PubMed: 3187189]

- Bossé R, Aldwin CM, Levenson MR, Workman-Daniels K, Ekerdt D. Differences in social support among workers and retirees: Findings from the Normative Aging Study. *Psychology and Aging* 1990;5:41–47. [PubMed: 2317300]
- Choi NG. Racial differences in timing and factors associated with retirement. *Journal of Sociology and Social Welfare* 1994;21:31–52.
- Costa PT Jr, Herbst JH, McCrae RR, Siegler IC. Personality at midlife: stability, intrinsic maturation, and response to life events. *Assessment* 2000;7:365–378. [PubMed: 11151962]
- Costa, PT., Jr.; McCrae, RR. Revised NEO Personality Inventory (NEO-PI-R) and the NEO Five-Factor Inventory (NEO-FFI) professional manual. Psychological Assessment Resources; Odessa, FL: 1992.
- Cumming, E.; Henry, W. Growing Old: The Process of Disengagement. Basic Books; New York: 1961.
- Eaton WW, Anthony JC, Gallo J, Cai G, Tien A, Romanoski A, et al. Natural history of diagnostic interview schedule/DSM-IV major depression: The Baltimore ECA Followup. *Archives of General Psychiatry* 1997;54:993–999. [PubMed: 9366655]
- Eaton WW, Kalaydjian A, Scharfstein DO, Mezuk B, Ding Y. Prevalence and incidence of depressive disorder: The Baltimore ECA follow-up 1981–2004. *Acta Psychiatrica Scandinavica* 2007;116:182–188. [PubMed: 17655559]
- Elder GH Jr. Occupational mobility, life patterns, and personality. *Journal of Health and Social Behavior* 1969;10:308–323.
- Folstein M, Folstein S, McHugh P. Mini-Mental State: A practical method for grading the cognitive state of patients for the clinician. *Journal of Psychiatric Research* 1975;12:189–198. [PubMed: 1202204]
- Gall TL, Evans DR, Howard J. The retirement adjustment process: Changes in the well-being of male retirees across time. *Journals of Gerontology: Psychological Sciences and Social Sciences* 1997;52:P110–P117.
- Goldberg, D.; Williams, P. A User's Guide to the General Health Questionnaire. NFER-Nelson; Windsor: 1988.
- Goldberg LR. The structure of phenotypic personality traits. *American Psychologist* 1993;48:26–34. [PubMed: 8427480]
- Havighurst RJ. Successful aging. *The Gerontologist* 1961;1:4–7.
- Hershey DA, Mowen JC. Psychological determinants of financial preparedness for retirement. *The Gerontologist* 2000;40:687–697. [PubMed: 11131085]
- Herzog AR, House JS, Morgan JN. Relation of work and retirement to health and well-being in older age. *Psychology and Aging* 1991;6:202–211. [PubMed: 1863389]
- Howard JH, Rechnitzer PA, Cunningham DA, Donner AP. Change in Type A behaviour a year after retirement. *Gerontologist* 1986;26:643–649. [PubMed: 3542729]
- Hurtz GM, Donovan JJ. Personality and job performance: The Big Five revisited. *Journal of Applied Psychology* 2000;85:869–879. [PubMed: 11125652]
- Judge TA, Heller D, Mount MK. Five-Factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology* 2002;87:530–541. [PubMed: 12090610]
- Kim JE, Moen P. Is retirement good or bad for subjective well-being? *Current Directions in Psychological Science* 2001;10:83–86.
- Kim JE, Moen P. Retirement transitions, gender, and psychological well-being: A life-course ecological model. *Journal of Gerontology: Psychological Sciences* 2002;57B:P212–P222.
- Kimmel DC, Price KR, Walker JW. Retirement Choice and Retirement Satisfaction. *Journal of Gerontology* 1978;33:575–585. [PubMed: 752048]
- Löckenhoff CE, Terracciano A, Bienvu OJ, Patriciu NS, Nestadt G, McCrae RR, Eaton WW, Costa PT Jr. Ethnicity, education, and the temporal stability of personality traits in the East Baltimore Epidemiologic Catchment Area Study. *Journal of Research in Personality* 2008;42:577–598. [PubMed: 19122849]
- McCrae, RR.; Costa, PT, Jr.. Personality in adulthood: A Five-Factor Theory perspective. Vol. 2nd ed.. Guilford Press; New York: 2003.
- McCrae, RR.; Costa, PT, Jr.. The Five-Factor Theory of personality. In: John, OP.; Robins, RW.; Pervin, LA., editors. Handbook of personality: Theory and research. Vol. 3rd ed.. Guilford; New York: 2008.

- Mor Barak ME, Scharlach AE, Birba L, Sokolov J. Employment, social networks, and health in the retirement years. *International Journal of Aging and Human Development* 1992;35:145–159. [PubMed: 1399075]
- Mroczek DK, Spiro A III. Modeling intraindividual change in personality traits: Findings from the Normative Aging Study. *Journals of Gerontology B: Psychological Sciences and Social Sciences* 2003;58:153–165.
- Paunonen SV, Zeidner M, Engvik HA, Oosterveld P, Maliphant R. The nonverbal assessment of personality in five cultures. *Journal of Cross-Cultural Psychology* 2000;31:220–239.
- Pienta AM. Partners in marriage: An analysis of husbands' and wives' retirement behavior. *Journal of Applied Gerontology* 2003;22:340–358.
- Pinquart M, Schindler I. Changes of life satisfaction in the transition to retirement: A latent-class approach. *Psychology and Aging* 2007;22:442–455. [PubMed: 17874946]
- Roberts BW. Plaster or plasticity: Are work experiences associated with personality change in women? *Journal of Personality* 1997;65:205–232. [PubMed: 9226940]
- Roberts BW, Caspi A, Moffitt T. Work Experiences and Personality Development in Young Adulthood. *Journal of Personality and Social Psychology* 2003;84:582–593. [PubMed: 12635918]
- Roberts BW, Chapman C. Change in dispositional well-being and its relation to role quality: A 30-year longitudinal study. *Journal of Research in Personality* 2000;34:26–41.
- Roberts BW, Wood D, Smith JL. Evaluating five-factor theory and social investment perspectives on personality trait development. *Journal of Research in Personality* 2005;39:166–184.
- Rousseau F, Pushkar D, Reis M. Dimensions and predictors of activity engagement: A short-term longitudinal study. *Activities, Adaptation and Aging* 2005;29:11–33.
- Salgado JF. The five factor model of personality and job performance in the European community. *Journal of Applied Psychology* 1997;82:30–43. [PubMed: 9119797]
- Solinge H, van & Henkens K. Adjustment to and satisfaction with retirement: two of a kind? *Psychology and Aging* 2008;23:422–434. [PubMed: 18573015]
- Solinge H, van & Henkens K. Involuntary retirement: the role of restrictive circumstances, timing, and social embeddedness. *Journal of Gerontology* 2007;62B:S295–S303.
- Terracciano A, McCrae RR, Brant LJ, Costa PT Jr. Hierarchical linear modeling analyses of NEO-PI-R scales in the Baltimore Longitudinal Study of Aging. *Psychology and Aging* 2005;20:493–506. [PubMed: 16248708]
- Theriault J. Retirement as a psychosocial transition: Process of adaptation to change. *International Journal of Aging and Human Development* 1994;38:153–170.
- Vaillant GE, DiRago AC, Mukamal K. Natural History of Male Psychological Health, XV: Retirement Satisfaction. *American Journal of Psychiatry* 2006;163:682–688. [PubMed: 16585444]
- Wu AMS, Tang CSK, Yan ECW. Post-retirement Voluntary Work and Psychological Functioning Among Elderly Chinese. *Journal of Cross-cultural Gerontology* 2005;20:27–45. [PubMed: 15875123]

Table 1

Sample characteristics

	Longitudinal Sample		Cross-Sectional Sample
	Workers	Retirees	Retirees
n	304	63	144
Age	51.13 (5.80)	60.59 (7.83)	63.15 (9.45)
Gender (% female)	62.2%	63.5%	59.0%
Ethnicity (% White)	65.5%	57.1%	65.3%
Education (years)	13.20 (2.19)	12.16 (2.11)	12.21 (2.36)
Neuroticism	50.31 (9.61)	49.96 (9.57)	49.46 (9.29)
Extraversion	50.17 (8.47)	49.43 (8.29)	48.62 (8.61)
Openness	46.76 (8.72)	46.18 (7.96)	46.12 (7.79)
Agreeableness	48.53 (9.52)	54.20 (8.74)	53.73 (7.89)
Conscientiousness	50.11 (8.95)	47.94 (9.77)	47.68 (9.21)
Physical Health	2.92 (0.73)	2.59 (0.82)	2.14 (0.40)
Mental health	2.12 (0.33)	2.12 (0.42)	2.59 (0.81)
Retirement-related variables			
Years since retirement	-	3.73 (2.72)	4.6 (2.96)
Retirement expected	-	30.6%	42.7%
Retirement voluntary	-	36.5%	43.1%
Involved in part-time work	-	38.1%	38.9%
Anticipatory thoughts	-	2.48 (1.23)	2.37 (1.19)
Anticipatory emotions	-	2.78 (1.04)	2.79 (0.98)
Post-retirement activity levels	-	3.03 (0.78)	2.97 (0.92)
Retirement satisfaction	-	2.25 (0.69)	2.25 (0.69)

Note: SDs are shown in parentheses. All variables reported at 2004 assesment.

Table 2
 Summary of hierarchical regressions examining the association of retirement (Block 4) with longitudinal change in personality factors and facets after controlling for baseline personality (Block 1, described in text), demographic variables (Block 2), and mental/physical health (Block 3)

NEO-PI-R	Block 2			Block 3			Block 4		
	β_{Age}	$\beta_{\text{Gender (female)}}$	$\beta_{\text{Ethnicity (White)}}$	$\beta_{\text{Education}}$	β_{Mental}	β_{Physical}	β_{Retired}	ΔR^2	ΔR^2
Neuroticism	-.044	.058	.058	-.047	-.093*	-.046	.059	.011*	.002
Extraversion	-.047	.090*	.033	-.041	.011	-.021	-.023	.000	.000
Openness	-.002	.012	-.059	.062	-.021	.053	.013	.003	.000
Agreeableness	.041	.134**	-.005	.014	-.067	.066	.140**	.006	.014**
Conscientiousness	-.005	-.085*	-.077	-.008	.009	.079	-.043	.006	.001
N1: Anxiety	.049	.085*	.110**	-.037	-.049	-.044	.005	.005	.000
N2: Angry Hostility	-.080	-.033	.007	-.044	-.033	-.117*	.002	.016*	.000
N3: Depression	-.030	.052	.048	-.015	-.129**	-.058	.060	.020**	.003
N4: Self-Consciousness	-.016	.048	.017	-.011	-.058	-.041	.059	.006	.002
N5: Impulsiveness	-.056	-.019	.038	-.054	.023	-.141**	-.004	.018*	.000
N6: Vulnerability	-.066	.096*	.069	-.016	-.131**	-.048	.086	.019**	.005
E1: Warmth	.057	.136**	.029	-.007	.005	.020	.082	.000	.005
E2: Gregariousness	-.033	.110*	.037	.006	.068	.013	-.003	.005	.000
E3: Assertiveness	-.017	-.047	-.074	.069	.042	-.046	-.005	.003	.000
E4: Activity	-.109*	.007	.060	-.008	.000	.072	-.149**	.005	.016**
E5: Excitement-Seeking	-.010	-.073	.014	-.034	.048	.001	-.071	.002	.004
E6: Positive Emotions	.002	.086*	-.043	-.010	-.039	.017	-.023	.001	.000
O1: Fantasy	-.022	-.021	.038	.012	-.035	.001	.071	.001	.004
O2: Aesthetics	-.049	.040	-.045	.046	-.016	.041	-.002	.002	.000
O3: Feelings	-.022	.127**	.019	.058	-.018	.055	.059	.003	.002
O4: Actions	-.015	.020	-.051	.068	-.052	.085	-.037	.007	.001
O5: Ideas	.052	-.044	-.047	.049	-.008	.056	-.044	.003	.001
O6: Values	-.051	.044	-.003	.024	.087	-.041	.030	.007	.001
A1: Trust	.057	.105**	.054	.044	.035	.053	.075	.005	.004
A2: Straightforwardness	.075	.133**	.003	-.009	-.085	.019	.060	.007	.003

NEO-PI-R	Block 2			Block 3				Block 4		
	β_{Age}	$\beta_{Gender (female)}$	$\beta_{Ethnicity (White)}$	$\beta_{Education}$	ΔR^2	β_{Mental}	$\beta_{Physical}$	ΔR^2	$\beta_{Retired}$	ΔR^2
A3: Altruism	.016	.118**	.016	-.015	.014	-.080	.062	.008	.074	.004
A4: Compliance	.030	.084	-.085	.046	.018*	.010	.055	.003	.150***	.016***
A5: Modesty	.004	.082	.033	-.001	.007	-.039	-.002	.001	.057	.002
A6: Tender-Mindedness	.022	.066	-.110*	.023	.018	-.098	.058	.010	.091	.006
C1: Competence	.051	-.068	-.105*	.088	.022*	.024	.088	.008	-.071	.004
C2: Order	-.038	-.103	-.026	-.077	.016	.021	.075	.006	.060	.003
C3: Dutifulness	.056	-.053	.050	.076	.014	.059	.049	.007	.040	.001
C4: Achievement Striving	-.046	-.051	-.140	.025	.023*	.016	.038	.002	-.052	.002
C5: Self-Discipline	-.013	-.052	-.036	-.046	.005	.079	.081	.015*	-.101*	.007*
C6: Deliberation	.085	-.060	-.063	.001	.012	.024	.122**	.016*	.046	.002

Note: n = 367

* $p < .05$

** $p < .01$

Table 3
 Summary of hierarchical regressions examining cross-sectional associations between personality factors (Block 4) and retirement-related variables after controlling for demographic characteristics (Block 1), mental and physical health (Block 2), and retirement voluntariness (Block 3)

	Expected Retirement	Anticipatory Thoughts	Anticipatory Emotions	Retirement Satisfaction	Activity Level	Part-Time Work
Block 1						
B _{Age}	.077**	.010	.027**	.010	.004	-.042
B _{Gender (female)}	-.664	-.606**	-.088	.050	.164	.063
B _{Ethnicity (White)}	-.488	-.004	.122	.076	.472**	-.205
B _{Education}	.233**	.085*	.109**	.079**	.083*	-.009
p(Block 1)	<.001**	.003**	<.001**	.012*	.005**	.218
Block 2						
B _{Physical health}	.267	.441**	.356**	.231**	.425**	.633*
B _{Mental health}	.330	.200	.090	.127	-.190	-.593
p(Block 2)	.312	.001**	.001**	.002**	<.001**	.031*
Block 3						
B _{Voluntariness}	1.64**	.808**	.933**	.357**	.239	.218
p(Block 3)	<.001**	<.001**	<.001**	.002**	.113	.575
Block 4						
B _{Neuroticism}	-.095**	-.004	-.014	-.014*	-.007	.008
B _{Extraversion}	-.019	.010	.012	.015*	.027**	.050*
B _{Openness}	.055	-.008	-.017	.003	.003	-.051
B _{Agreeableness}	-.011	-.021	-.004	.001	-.010	-.025
B _{Conscientiousness}	.009	-.003	-.006	.002	.013	.006
p(Block 4)	.034*	.48	.063	.044*	.004**	.153

Note: $n = 144$

All variables measured at 2004 assessment.

* $p < .05$

** $p < .01$.