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Does psychological well-being change with age? Longitudinal tests of age variations and further exploration of the multidimensionality of Ryff's model of psychological well-being

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ABSTRACT

Using two population-based surveys, we provide the first test of longitudinal age variations in Ryff's model of psychological well-being (RPWB) across three midlife to later-life transitions. Through these analyses we explore: (a) age variation in RPWB, (b) the structure of RPWB, and (c) the potential for methodologically driven age patterns. In general, RPWB dimensions do not consistently exhibit distinct age profiles; further, longitudinal age variations are exceptionally small, never accounting for more than 4% of the variance. We observe far greater variation *within* ages or periods than *between* subscales across age or time – providing strong evidence against substantively different age profiles of RPWB. Moreover, heterogeneity among positively and negatively worded items yield varied age patterns indicating that the small age variations of RWPB could be driven, at least in part, by methodological artifacts rather than maturation.

1. Introduction

Drawing from the perspective of eudaimonic well-being, Ryff (1995) suggested a multidimensional model of psychological well-being that comprises six distinct dimensions: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance that supposedly vary in meaningful ways by personal characteristics including age (Ryff, 1989a,b). Our analysis pursues substantive and methodological objectives: (a) assess the direction and magnitude of life-course changes in psychological functioning related to aging and maturational processes, and (b) contribute to recent studies of the structure of RPWB by examining the extent to which the six dimensions exhibit different age profiles and the degree to which methodological variations (positive/negative item phrasing) can affect age variations (Abbott et al., 2006; Ryff and Keyes, 1995; Ryff and Singer, 2006; Springer and Hauser, 2006; Springer et al., 2006). We analyze data from two large, independent, longitudinal surveys: Midlife in the United States (MIDUS) and the Wisconsin Longitudinal Study (WLS), each of which assessed RWPB on two occasions, about a decade apart.

Extant research on age-related variation in RPWB has been based on cross-sectional data and, thus, has tended to confound *inter*- and *intra*-cohort variation (Clarke et al., 2000; Ryff, 1989b; Ryff and Keyes, 1995; Ryff et al., 2003). Furthermore, age variation results are generally not consistent across studies (Ryff, 1989a,b). Building on these past projects, we are the first we know of to estimate true maturation changes in RPWB among real cohorts of men and women at three life-course transitions.

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Examining longitudinal age variations in RPWB also provides an opportunity for further assessment of the structure of RPWB. The six dimensions of RPWB have been theoretically proposed to measure distinct aspects of well-being. However, scholars using multiple datasets from different countries have found little empirical support for the proposed multidimensionality of RPWB (Abbott et al., 2006; Springer and Hauser, 2006; Van Dierendonck et al., 2008). For example, Springer and Hauser (2006) observed that latent variable correlations among personal growth, purpose in life, environmental mastery, and self-acceptance approached 1.00 in three large surveys, indicating almost complete overlap in these subdimensions.

In the current project, we examine age-related patterns of RPWB using longitudinal data for three life-course transitions: from adulthood to early midlife, from early midlife to late midlife, and from late midlife to old age. We study these life-course changes using two waves of data that are 10 years apart – long enough to study age effects but short enough to have minimal period effects. Substantively, our project sheds light on life-course change or continuity in eudaimonic well-being. Methodologically, it adds to the debate about the multidimensionality of RPWB. If the six dimensions vary differently by age, this suggests that they reflect different aspects of well-being. If their longitudinal age profiles are similar, this is further evidence of fewer than six dimensions. Further, if age variations differ by positive/negative phrasing of items, this highlights the importance of accounting for heterogeneity and demonstrates that age variations could be due to measurement rather than maturation. We focus on analyzing changes in subscale scores rather than factor loadings, because most research claiming age variations in RPWB focuses on subscale variations (i.e. Clarke et al., 2000; Ryff, 1991). By focusing on subscales we can therefore directly engage with these prior projects and hopefully shape future research on scale differences.

2. Methods

2.1. Data

The Wisconsin Longitudinal Study (WLS) is a long-term study of a random sample of men and women who graduated from Wisconsin high schools in 1957 (Sewell et al., 2004). The graduates were surveyed in 1957, 1975, 1993–1994, and 2004–2005. Starting in 1977, the WLS has also conducted surveys of randomly selected siblings of the graduates. Because the siblings range from about 10 years younger to 10 years older than the graduates, we use a pooled sample of the WLS graduates and their siblings who participated in the 1993–1994 and 2004–2005 waves of the WLS. A total of 19 items (four items for purpose in life and three items for each of the other five dimensions) that were asked on the 1993–1994 and 2004–2005 mail surveys are the basis of our longitudinal analysis of the WLS sample (Appendix A).

Midlife Development in the United States (MIDUS) is a national, multistage probability sample of non-institutionalized English-speaking American adults first interviewed at age 25–74 in 1995–1996 (MIDUS I) and then re-interviewed in 2004–2006 (MIDUS II). Both rounds of the MIDUS survey included 18 RPWB items administered on mail questionnaires (Appendix A).[2,3]

2.2. Variables

Psychological well-being. Response categories are the same in the two WLS waves: "(1) agree strongly, (2) agree moderately, (3) agree slightly, (4) disagree slightly, (5) disagree moderately, (6) disagree strongly." In MIDUS I, each item has seven response categories: "(1) agree strongly, (2) agree somewhat, (3) agree a little, (4) don't know, (5) disagree a little, (6) disagree somewhat, (7) disagree strongly." Yet, in MIDUS II, the label of the middle category was changed to "Neither agree nor disagree" (versus "don't know" in MIDUS I). To make response categories in the two waves identical and, thus, facilitate longitudinal comparisons, we excluded respondents who chose the midpoint category at least once in at least one wave. Removing the middle response category is consistent with common usage of the RPWB items in MIDUS (i.e. Greenfield and Marks, 2004; Keyes et al., 2002).[4]

We created three versions of the subscales for each RPWB dimension: a subscale comprising both positively and negatively phrased items (for the main analyses), a subscale comprising positively phrased items only, and a subscale based on negatively phrased items only. Scores for individual items were averaged and, when necessary, items were reverse-coded so that higher scores always corresponded to higher levels of psychological well-being. When data for one or more items were missing, the average was calculated across items that did not have missing data.

Age. We combined the 1993 and 2004 samples of the WLS graduates with the 1994 and 2005 samples of the WLS siblings, respectively. The pooled sample comprised 6943 respondents who were categorized into three age groups based on their age in 1993–1994: 32–51 years ($n = 604$); 52–56 years, containing mostly graduates ($n = 5883$); and 57–75 years ($n = 457$).

Similarly, the MIDUS respondents were divided into the following age categories based on their age in MIDUS I: 32–49 years ($n = 941$); 50–59 years ($n = 498$); and 60–75 years ($n = 387$), for a total of 1826 respondents. We chose these category boundaries to maximize the comparability with the WLS age groups.

[2] Please see http://www.ssc.wisc.edu/wlsresearch/ for further information on the WLS and http://www.midus.wisc.edu/ for further information on MIDUS.

[3] The sub-scale reliabilities were similar to other studies using shortened versions of RPWB – between 0.30 and 0.70 (i.e. An and Cooney, 2006; Keyes et al., 2002; Ryff and Keyes, 1995).

[4] We did conduct sensitivity tests examining the MIDUS scales including the midpoints. The results were largely – but not always – consistent with results using the scales without midpoints. Noteworthy differences are detailed in the results and discussion sections.