

**CULTURAL PERSPECTIVES ON AGING AND
WELL-BEING: A COMPARISON OF JAPAN
AND THE UNITED STATES**

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ABSTRACT

This study investigated age differences in multiple aspects of psychological well-being among midlife and older adults in Japan ($N = 482$) and the United States ($N = 3,032$) to test the hypothesis that older Japanese adults would rate aspects of their well-being (personal growth, purpose in life, positive relations with others) more highly than older U.S. adults. Partial support was found: older adults in Japan showed higher scores on personal growth compared to midlife adults, whereas the opposite age pattern was found in the United States. However, purpose in life showed lower scores for older adults in both

cultural contexts. Interpersonal well-being, as hypothesized, was rated significantly higher, relative to the overall well-being, among Japanese compared to U.S. respondents, but only among younger adults. Women in both cultures showed higher interpersonal well-being, but also greater negative affect compared with men. Suggestions for future inquiries to advance understanding of aging and well-being in distinct cultural contexts are detailed.

In the United States, early studies of aging and well-being found that old age was not inevitably characterized by declining life satisfaction or morale compared to earlier age groups (Lawton, 1975; Neugarten, Havighurst, & Tobin, 1961). Subsequent work on positive and negative affect also revealed some gains in well-being with age (Charles, Reynolds, & Gatz, 2001; Diener & Suh, 1997; Mroczek & Kolarz, 1998; Shmotkin, 1990). Those studying adult development, in turn, frequently employed measures of psychological well-being as outcomes in their investigations (e.g., An & Cooney, 2006; Bauer & McAdams, 2004; Freund & Baltes, 2002; Holahan, Holahan, Velasquez, & North, 2008). In contrast to these hedonic aspects of well-being (Kahneman, Diener, & Schwarz, 1999), studies of eudaimonic well-being (see Ryan & Deci, 2001) that address purposeful life engagement and continued growth (Ryff, 1989) showed sharply downward trajectories from midlife to old age in both U.S. and Canadian samples (Clarke, Marshall, Ryff, & Rosenthal, 2000; Keyes, Shmotkin, & Ryff, 2002; Ryff, 1989, 1991; Ryff & Keyes, 1995).

Whether the above patterns of aging and well-being are specific to North America, or have generalizability to other cultural contexts is largely unknown. In this study, we compare midlife and older-aged adults in Japan and the United States, to test the hypothesis that more positive aging profiles would be evident in Japan. To explicate the rationales that underlie this prediction, we first examine the literature on culture and well-being, which for the most part has ignored issues of life course dynamics. We then consider the influence of cultural context, namely, how ideas, beliefs and practices relevant to aging might differentially shape psychological experience in the transition from midlife to old age.

CULTURAL CONTEXT AND WELL-BEING: THE NEED FOR A LIFE COURSE PERSPECTIVE

A good deal of prior research has charted how conceptions and experiences of well-being vary across cultural contexts (Christopher, Christopher, & Dunnagan, 2000; Diener & Suh, 2000; Kitayama & Markus, 2000; Sastre, 1999; Taylor, Sherman, Kim, Jarcho, Takagi, & Dunagan, 2004; Uchida, Norasakkunkit, & Kitayama, 2004). These studies show that much cultural variation in well-being is tied to fundamental cultural differences in conceptions of self and relationships. In *independent* cultural contexts such as the United States, the person is regarded as separated from others and personal goals often are accorded priority over

in-group goals, whereas in more *interdependent* cultural contexts such as Japan, the person is understood as connected to others and part of an encompassing social unit, wherein in-group norms have priority over personal needs (Markus & Kitayama, 1991).

Correspondingly, well-being in independent contexts has been correlated with high levels of autonomy (Oishi, 2000), personal achievement (Uchida & Kitayama, 2009), self esteem (Diener & Diener, 1995, Diener & Suh, 2000), and high ratings of uniqueness, self-confidence, and self-motivation (Heine, Lehman, Markus, & Kitayama, 1999; Kitayama & Markus, 2000). By contrast, well-being in interdependent contexts is predicted by social relational factors such as social harmony (Kang, Shaver, & Sue, 2003; Kwan, Bond, & Singelis, 1997; Uchida & Kitayama, 2009), attainment of relational goals (Oishi & Diener, 2002), socially engaging emotions (Kitayama, Markus, & Kurokawa, 2000), and perceived emotional support from close others (Uchida, Kitayama, Mesquita, Reyes, & Morling, 2008).

Most prior research has not considered whether the above relationships vary by age of research participants. Indeed, much of the preceding literature has been based on college samples of young adults. Our investigation focuses explicitly on between-cultural comparisons, where *distinct life course profiles* of well-being seem probable, particularly in the contrast between Japan and the United States. The rationales behind such expectations are elaborated below.

Aging and Well-Being in Japan

Demographic data show that Japan is an older and more quickly aging society than the United States. Japan has the highest median age (41 years) and longest life expectancy (80 years) in the world (the respective numbers in the United States are 35 and 77) (Kinsella & Velkoff, 2001). Thus, by sheer numbers, older persons may be more salient in social policies, common practices, and everyday discourse in Japan than in the United States. With regard to living arrangements, older Americans are more likely than their Japanese counterparts to live alone: over a decade ago, 31% of 65+ Americans lived alone, compared to 10% of older Japanese adults; conversely, 32% of 65+ Japanese lived with children or others, while the counterpart figure for the United States was 15% (Rowland, 1992). More recent data indicated that in 2001, 58% of people 60+ lived with at least one of their children, a figure 3 to 10 times greater than found in comparably developed Western societies such as the United States (17%), Germany (15%), and Sweden (5%) (Takagi, Silverstein, & Crimmins, 2007). Such living arrangements increase the likelihood that Japanese elders, in comparison to their U.S. counterparts, give and receive more economic, instrumental, and emotional social support, which may lead to a greater sense of well-being.

In addition, aging has more benign meanings in Japan than the United States. Japanese conceptions of aging are rooted in Buddhist, Confucian, and Taoist

philosophical traditions that characterize aging as maturity. Old age is thus understood as a socially valuable part of life, even a time of “spring” or “rebirth” after a busy period of working and raising children (Kitayama, 2000; Lebra, 1976, 1984). With age, individuals are expected to gain transcendental understanding, including an accepting attitude toward death and the capacity to be an impartial contributor to social interactions (Lebra, 1984, Lock, 1998; Plath, 1980). The image of the older person as a *sen-nin* (wise sage) is common in popular Japanese culture. Finally, the pervasive Confucian norm of filial piety, in which children should honor their parents, promotes the importance of continued respect and care of elderly parents (Hwang, 1999).

Aging in Japan also is divided into more clearly recognized social roles and age-graded tasks than in the United States. Many Japanese women participate in age-specific neighborhood groups that are organized and assisted by the city government (Lebra, 1984). Special celebrations mark a person’s 60th birthday (the completion of a life-calendar cycle), as well as the 77th, 88th, and 99th birthdays. Japan celebrates a Revere the Elder day on which city mayors give money to people who are over 80 years old. Age-specific terminology is used to address older people. This complex of linguistic and social practices contributes to the acceptance and appreciation of old age (Lebra, 1984; Lock, 1998; Shweder, 1998).

For women, older age (55-70) in Japan may be a particularly good time of life because they are free from obligations of child rearing, have time and energy for personal pursuits, and may have more disposable income than at any other time of life. Japanese men enjoy these post-retirement benefits, but they are forced to retire from work at age 65 and, as such, many may be left without a sense of purpose (Lebra, 1984). These retired men are sometimes called “*nure ochiba*,” translated as “sticky fallen leaf,” meaning dependent on their wives.

The overall portrayal of older persons in Japan must be tempered with awareness of changing norms for elder respect and filial piety in East Asian countries more generally, where trends toward more egalitarian and reciprocal patterns of mutual respect between generations are increasingly evident (Ikels, 2004; Sung, 2001).

Aging and Well-Being in the United States

Although the age-related mental and physical decline is recognized in both cultural contexts, aging in the United States occurs against the backdrop of cultural ideologies such as the Protestant work ethic and the American Dream, which define personal worth in terms of active engagement in work, individual achievement, and responsibility for control over one’s own actions (Quinn & Crocker, 1999; Sanchez-Burks, 2002). Shifts out of active engagement in work and toward dependency on others are seen more negatively in this context. Hence, the prevalent injunction to resist aging, or keep it at bay, as exemplified by

popular book titles: *Stop Aging Now* (Carper, 1995), *Secrets of the Superyoung* (James, 1998), *Age Erasers* (Dollemore, 1997; Fisher, 1997), and *Feel 30 for the Next 50 Years* (Johnson, 1999).

The field of social gerontology reflects the American discomfort with aging. Kuypers and Bengtson (1973) formulated the “social breakdown syndrome” to describe the pernicious processes whereby the lack of meaningful roles, diminished normative guidance, and limited reference groups lead to negative self-attitudes and an internalized sense of reduced competence among the elderly. Similarly, Riley, Kahn, and Foner (1994) described the “structural lag” phenomenon, which refers to the failure of American institutions to keep up with the added years of life that many Americans now experience. These views underscore the perceived dearth of meaningful opportunities for older Americans in the realms of work, family, and leisure and, as such, may account for the downward age trajectories on eudaimonic aspects of well-being such as purpose in life and personal growth noted earlier.

AIMS AND PREDICTIONS OF THE PRESENT STUDY

Based on the prior literature showing that European Americans report more positive self-evaluations than Asians (e.g., Heine & Hamamura, 2007; Heine & Lehman, 1995), we first hypothesized that U.S. adults would rate eudaimonic and hedonic aspects of well-being higher than Japanese adults, regardless of age. Such differences likely reflect culturally distinct norms of self-presentation—that is, tendencies to publicly avow personal virtues in the independent cultural contexts, compared to tendencies toward modesty in self-evaluation in interdependent cultural contexts. In addition, the measures we employed were all developed in the United States. Thus, the scales themselves, especially measures of autonomy, environmental mastery, and self-acceptance, are likely biased toward independent aspects of well-being. The need for more culturally balanced ratings is a topic to which we return to in the discussion.

Regarding our focus on life course variation, we next hypothesized that there would be unique age differences in reported well-being *within* each culture. Drawing on the above literature review, we reasoned that Japan provides a more benign context for growing old than does the United States, and thus predicted that older compared to midlife individuals in Japan would show higher levels of well-being, especially for eudaimonic dimensions dealing with active life engagement (personal growth, purpose in life) and social connection (positive relations with others). Alternatively, in the United States, we predicted that midlife adults would score higher than older adults on these same aspects of well-being. For hedonic well-being, where prior United States research has documented age-related gains, with older adults reporting higher levels of positive affect and lower levels of negative affect than younger adults, we hypothesized that the aged in both cultural contexts would be advantaged, relative to those in midlife.

With regard to gender differences, we hypothesized that women in both cultural contexts would rate the social aspects of well-being (positive relations with others) higher than men, thus underscoring the view that females perceive themselves to be more socially connected than do males (Ryff, 1989; Ryff & Keyes, 1995). Nonetheless, we also predicted that women in both cultures would report higher levels of negative affect compared to men, thus extending prior research, including international studies, on women and depressive symptoms (Nolen-Hoeksema, 2001). Whether older Japanese women would rate their well-being higher than older Japanese men was also of interest, given the observations in our preceding depiction of aging in Japan.

METHODS

Samples

We recruited a convenience sample of 482 Japanese adults (199 males, and 283 females; age range 26-74; mean age = 51) from the cities of Tokyo (the capital and largest metropolitan area in Japan) and Sapporo (a regional center of the northern island of Hokkaido). In Tokyo, participants were recruited through adult education classes offered by the pertinent municipalities, whereas in Sapporo, they were recruited through college students, who requested their adult family members (mostly parents and grandparents but in some cases older siblings) to fill out the questionnaire. There were no differences between the Tokyo and Sapporo samples in age or reported health (chronic conditions), although more women participated in the Tokyo sample compared to the Sapporo sample. Nearly all respondents in both samples (87% to 99%) were married. The response rate for the Tokyo sample was 64%. Response rates could not be calculated for the Sapporo sample because questionnaires were distributed only to students whose parents indicated a willingness to participate. All respondents completed a self-administered questionnaire at home and returned it in a confidential envelope after a week. While not representative, the Japanese sample covered a wide age range and varied educational attainment levels (only 47% had at least some college education). Data collection occurred in 2000.

The U.S. sample was from the MIDUS national survey, which consists of a probability sample of 3,032 adults (1,472 males and 1,561 females; age range = 25 to 74; mean age = 47), recruited through random-digit dialing procedures. Participants completed a telephone interview and self-administered questionnaire. The response rate for the phone interview was 70%, and 87% of those individuals completed the questionnaire. With regard to education, 39% of respondents had a high school degree or less, while 61% had completed some post high-school education. Approximately 64% of respondents were married (compared to 92% of Japanese respondents). Data collection occurred in 1995/96.

The two samples differ on several dimensions, most notably size and how they were recruited. Convenience sampling sometimes results in positively select samples, but in this instance Japanese respondents were somewhat less educated than U.S. respondents, and they also reported more chronic conditions (Japanese $M = 3.22$, $SD = .24$; United States $M = 2.73$, $SD = .28$; $p < .001$). That more Japanese respondents were married is consistent with population-level differences in marital status between the two countries (U.S. Bureau of Labor Statistics, 2003). With regard to age, which was the key focus of the study, the two samples had equivalently wide age ranges (25 to 74), and comparable midlife age means (47 in Japan, 51 in the United States).

These above sampling differences and similarities need to be considered in interpreting obtained findings. Nonetheless, because most prior research on culture and well-being has been conducted with small, age-restricted samples (mostly college students), the research offers useful strides forward in comparing self-reports on multiple aspects of well-being between relatively large samples of middle and older aged adults in Japan and the United States.

Measures and Procedures

All scales, originally developed in English, were translated in Japanese using back translation to achieve equivalent meanings in the two languages.

Eudaimonic Well-Being

Eudaimonic well-being was measured with six scales of psychological well-being (Ryff, 1989; Ryff & Keyes, 1995): autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Each scale consisted of three items to which respondents indicated how much they agreed or disagreed with the item on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*). Negative items were reverse coded, so that higher scores indicated higher well-being. Alpha coefficients for the six scales in the U.S. sample ranged from .36 to .59; for the Japanese sample, the coefficients ranged from .24 to .64. These low to moderate reliabilities resulted from two factors detailed in other published work (Ryff & Keyes, 1995). The first was to dramatically reduce scale length (from 14 items to 3 items for each scale) so that the instruments could be included in a national survey. The second was that in selecting short-form items, the goal of maintaining fidelity to the theoretical foundation of each scale was given priority over the goal of maximizing internal consistency. That is, each of the six dimensions had a multifactorial structure that was meaningfully linked to the conceptual definitions from which the items were generated (Ryff, 1989). Short-form items were thus selected from *across* the subfactors of each dimension so as to maintain the theoretical integrity of the instrument.

The six-factor multidimensional structure of well-being has been supported in multiple studies, all using confirmatory factor analysis (Chen & Chan, 2005; Clarke, Marshall, Ryff, & Rosenthal, 2000; Gallagher, Lopez, & Preacher, 2009; Ryff & Keyes, 1995; Springer & Hauser, 2006; Van Dierendonck, 2004).

Hedonic Well-Being

Hedonic well-being was measured with scales of positive and negative affect (Mroczek & Kolarz, 1998). Respondents were asked how often in the past 30 days they felt:

1. cheerful, in good spirits, extremely happy, calm and peaceful, satisfied, and full of life (positive affect); and
2. hopeless, worthless, nervous, restless or fidgety, that everything was an effort, and so sad that nothing could cheer you up (negative affect).

Response options were on a 5-point scale from ranging from (1) *all of the time* to (5) *none of the time*. Alpha coefficients for the six-item positive affect scale were .91 (U.S. sample) and .94 (Japanese sample). Alpha coefficients for the six-item negative affect scale were .87 (U.S. sample) and .87 (Japanese sample).

RESULTS

Data were analyzed with analysis of variance procedures using a 2 (cultural context) by 2 (gender) by 4 (age group) design. Our initial analyses were based on five age groups (25-34, 35-44, 45-54, 55-64, 65-74), derived from prior analyses from the MIDUS investigation (Brim, Ryff, & Kessler, 2004). Findings across multiple domains (physical health, psychological well-being, work, and family life) showed these to be meaningful categories for documenting life course differences. However, due to the relatively small number of respondents in the youngest age group in Japan ($n = 28$), we dropped those in the youngest age category in all subsequent analyses. Thus, final analyses were based on 454 Japanese respondents and 2,359 U.S. respondents. Because of the notably different sample sizes in Japan and the United States, we also ran parallel analyses on 25 randomly selected subsamples from the United States that were comparable in size to the Japanese sample. The pattern of findings resulting from this exercise did not differ from the results reported below (i.e., more than 90% of the obtained effects were the same). Thus, the evidence does not indicate that the large difference in sample size biased the patterns of obtained findings.

As a methodological refinement, we assessed key predictions with raw scores as well as ipsatized scores (Tsai, Knutson, & Fung, 2006; Yik & Russell, 2003). The latter have been used to adjust for culture-specific norms in ratings of the self (e.g., the tendency toward modesty in self-assessment in Japan). Ipsative scores center each respondent's ratings on the person's own mean and standard

deviation, and thereby provide useful comparative information, at the individual level, across aspects of well-being. We predicted that independent-oriented components of well-being (autonomy, environmental mastery, self-acceptance) would be rated higher, relative to overall well-being, in the United States compared to Japan. With regard to more interdependent-oriented aspects of well-being (positive relations with others), we predicted that self-ratings in Japan would be higher, relative to overall well-being, than in the United States.

Raw score means and standard deviations, arrayed separately by cultural context, age, and gender, are provided for all well-being measures in Table 1. Ipsatized score means and standard deviations are provided for the eudaimonic scales in Table 2. The latter were created by subtracting each person's mean on eudaimonic items (18 in total) from his/her mean for a specific scale (three items) and dividing by his/her standard deviation for all items. Because only single scales were available for positive and negative affect, it was not possible to create ipsatized scores for hedonic well-being.

Results from the statistical analyses are presented below first for the separate scales of eudaimonic well-being and then for the hedonic measures. Main effects of cultural context, age, and gender are described first, followed by a summary of significant interactions, with a select number accompanied by graphic illustrations. The Tukey HSD statistic was used to clarify which groups were significantly different when any of the above effects involved multiple groups. Graphical illustrations for significant effects are provided only in instances where obtained patterns could not be easily visualized.

Finally, because the number of multiple comparisons, particularly in analyses of age group differences for eight dependent variables, was high, all reported results controlled for the false discovery rate (Benjamini & Hochberg, 1995).

Eudaimonic Well-Being

Autonomy

Items for this scale measure the degree to which individuals feel that they are self-determining and able to live by their own convictions and standards, even if they go against conventional wisdom. A significant main effect of cultural context, $F(1, 2789) = 187.23, p < .001, \eta^2 = .06$, indicated that U.S. adults rated themselves higher than Japanese adults on this aspect of well-being. There was also a main effect of gender, in which males had significantly higher autonomy self-ratings than females, $F(1, 2789) = 8.56, p < .001, \eta^2 < .01$, but this effect was modified by a gender by age interaction, $F(3, 2789) = 2.78, p < .05, \eta^2 < .01$, which is depicted in Figure 1. Women in both cultural contexts scored significantly lower than men in the two early decades of adulthood, whereas their scores became comparable to men in the two later decades of aging.

The ipsatized analyses paralleled these results, showing a main effect of cultural context, $F(1, 2787) = 223.62, p < .001, \eta^2 = .07$, with the Japanese rating their

Table 1. Well-Being: Raw Score Means and Standard Deviations by Age, Culture, and Gender

Well-being type	Japan		United States	
	Females (<i>n</i> = 269)	Males (<i>n</i> = 185)	Females (<i>n</i> = 1210)	Males (<i>n</i> = 1147)
EUDAIMONIC				
Autonomy				
35-44	4.19 (1.17)	4.78 (1.14)	5.33 (1.11)	5.53 (1.08)
45-54	4.22 (1.12)	4.69 (1.17)	5.47 (1.18)	5.60 (1.01)
55-64	4.71 (1.12)	4.58 (1.04)	5.63 (1.12)	5.59 (1.07)
65-74	4.97 (1.10)	5.13 (1.29)	5.62 (1.09)	5.80 (0.96)
Total	4.35 (1.15)	4.75 (1.16)	5.49 (1.14)	5.60 (1.04)
Environmental mastery				
35-44	4.67 (0.81)	4.64 (0.69)	5.10 (1.11)	5.25 (1.15)
45-54	4.65 (0.93)	4.73 (1.01)	5.21 (1.19)	5.40 (1.19)
55-64	5.09 (1.04)	4.97 (0.93)	5.38 (1.16)	5.56 (1.03)
65-74	5.30 (0.88)	5.09 (0.99)	5.31 (1.05)	5.76 (1.03)
Total	4.77 (0.94)	4.83 (0.96)	5.24 (1.15)	5.44 (1.13)
Personal growth				
35-44	5.25 (1.09)	5.18 (0.71)	5.89 (1.06)	5.97 (1.03)
45-54	5.11 (0.92)	5.31 (0.95)	5.92 (1.16)	6.00 (1.01)
55-64	5.33 (0.89)	5.34 (0.92)	5.86 (1.21)	5.87 (1.02)
65-74	5.59 (0.66)	5.57 (1.17)	5.70 (1.13)	5.70 (1.08)
Total	5.21 (0.93)	5.34 (0.95)	5.86 (1.14)	5.92 (1.03)
Positive relation with others				
35-44	4.63 (0.92)	4.67 (0.89)	5.29 (1.39)	5.14 (1.35)
45-54	4.83 (0.99)	4.71 (0.84)	5.41 (1.41)	5.16 (1.40)
55-64	5.07 (0.95)	4.35 (1.00)	5.56 (1.36)	5.26 (1.44)
65-74	4.70 (1.06)	4.73 (1.09)	5.44 (1.31)	5.52 (1.28)
Total	4.82 (0.98)	4.62 (0.94)	5.42 (1.38)	5.23 (1.38)
Purpose of life				
35-44	5.54 (1.03)	5.40 (1.00)	5.39 (1.20)	5.55 (1.12)
45-54	5.30 (0.95)	5.36 (0.95)	5.51 (1.25)	5.56 (1.21)
55-64	5.25 (1.07)	5.08 (1.06)	5.35 (1.19)	5.38 (1.34)
65-74	4.87 (1.30)	5.40 (1.06)	4.77 (1.30)	5.23 (1.41)
Total	5.30 (1.02)	5.31 (1.00)	5.33 (1.25)	5.47 (1.25)

Table 1. (Cont'd.)

Well-being type	Japan		United States	
	Females (<i>n</i> = 269)	Males (<i>n</i> = 185)	Females (<i>n</i> = 1210)	Males (<i>n</i> = 1147)
Self-Acceptance				
35-44	5.05 (1.09)	5.19 (1.07)	5.27 (1.25)	5.42 (1.22)
45-54	5.22 (0.99)	5.23 (0.96)	5.43 (1.21)	5.56 (1.17)
55-64	5.39 (0.95)	5.42 (0.89)	5.48 (1.11)	5.61 (1.05)
65-74	5.56 (0.95)	5.56 (0.85)	5.31 (1.05)	5.88 (0.91)
Total	5.24 (1.00)	5.32 (0.94)	5.38 (1.18)	5.57 (1.13)
HEDONIC				
Positive affect				
35-44	3.28 (0.58)	3.20 (0.56)	3.19 (0.80)	3.34 (0.71)
45-54	3.39 (0.75)	3.25 (0.69)	3.28 (0.79)	3.38 (0.72)
55-64	3.47 (0.52)	3.33 (0.58)	3.39 (0.73)	3.49 (0.77)
65-74	3.76 (0.74)	3.64 (0.66)	3.49 (0.70)	3.61 (0.57)
Total	3.41 (0.69)	3.28 (0.66)	3.32 (0.77)	3.42 (0.72)
Negative affect				
35-44	1.88 (0.63)	1.71 (0.56)	1.73 (0.74)	1.56 (0.62)
45-54	1.87 (0.72)	1.65 (0.68)	1.66 (0.75)	1.44 (0.54)
55-64	1.79 (0.60)	1.63 (0.71)	1.54 (0.56)	1.47 (0.62)
65-74	1.72 (0.60)	1.40 (0.47)	1.55 (0.61)	1.34 (0.45)
Total	1.85 (0.69)	1.62 (0.66)	1.63 (0.69)	1.47 (0.58)

autonomy significantly lower, as predicted, relative to their overall well-being, compared to U.S. respondents. Also similar was a main effect of gender, $F(1, 2787) = 5.34, p < .05, \eta^2 < .01$, with males rating their autonomy significantly higher, relative to their overall well-being, than females. The ipsatized analysis also revealed a cultural context by gender interaction, $F(1, 2787) = 5.09, p < .05, \eta^2 < .01$, which showed that Japanese women rated their autonomy significantly lower, relative to their overall well-being, than did Japanese men, but this difference was not evident in the United States. There was also a significant main effect of age $F(3, 2787) = 6.32; p < .01, \eta^2 = .01$, which was further modified by a gender by age interaction, $F(1, 2787) = 3.06, p < .05, \eta^2 < .01$. The pattern of this effect was similar to that obtained in the raw score analyses.

Table 2. Well-Being: Ipsative Score Means and Standard Deviations by Age, Culture, and Gender

Well-being type	Japan		United States	
	Females (<i>n</i> = 269)	Males (<i>n</i> = 185)	Females (<i>n</i> = 1210)	Males (<i>n</i> = 1147)
EUDAIMONIC				
Autonomy				
35-44	-0.37 (0.56)	-0.08 (0.65)	0.21 (0.45)	0.26 (0.47)
45-54	-0.37 (0.57)	-0.15 (0.58)	0.23 (0.45)	0.26 (0.44)
55-64	-0.11 (0.56)	-0.13 (0.57)	0.28 (0.45)	0.27 (0.45)
65-74	-0.04 (0.60)	-0.02 (0.63)	0.37 (0.42)	0.30 (0.44)
Total	-0.30 (0.58)	-0.11 (0.59)	0.26 (0.45)	0.27 (0.45)
Environmental mastery				
35-44	-0.07 (0.44)	-0.16 (0.42)	0.10 (0.40)	0.11 (0.40)
45-54	-0.10 (0.48)	-0.09 (0.49)	0.11 (0.40)	0.16 (0.42)
55-64	0.11 (0.47)	0.10 (0.51)	0.18 (0.41)	0.25 (0.36)
65-74	0.19 (0.47)	-0.03 (0.44)	0.21 (0.36)	0.30 (0.38)
Total	-0.04 (0.48)	-0.05 (0.48)	0.14 (0.40)	0.18 (0.40)
Personal growth				
35-44	0.27 (0.53)	0.19 (0.37)	0.26 (0.42)	0.48 (0.36)
45-54	0.21 (0.49)	0.25 (0.46)	0.42 (0.38)	0.44 (0.37)
55-64	0.21 (0.44)	0.33 (0.37)	0.40 (0.42)	0.39 (0.36)
65-74	0.35 (0.27)	0.29 (0.60)	0.39 (0.39)	0.26 (0.42)
Total	0.23 (0.47)	0.27 (0.45)	0.44 (0.40)	0.42 (0.38)
Positive relation with others				
35-44	0.24 (0.59)	0.13 (0.59)	-0.01 (0.73)	-0.11 (0.72)
45-54	0.34 (0.63)	0.22 (0.60)	0.00 (0.69)	-0.13 (0.72)
55-64	0.31 (0.66)	-0.13 (0.70)	0.05 (0.70)	-0.08 (0.71)
65-74	-0.01 (0.68)	0.10 (0.72)	0.04 (0.65)	0.03 (0.71)
Total	0.29 (0.64)	0.10 (0.65)	0.02 (0.70)	-0.09 (0.72)
Purpose of life				
35-44	0.42 (0.48)	0.33 (0.42)	0.25 (0.44)	0.27 (0.40)
45-54	0.31 (0.44)	0.31 (0.43)	0.26 (0.44)	0.25 (0.42)
55-64	0.17 (0.55)	0.15 (0.44)	0.16 (0.44)	0.17 (0.47)
65-74	-0.06 (0.65)	0.15 (0.43)	-0.04 (0.49)	0.06 (0.53)
Total	0.28 (0.50)	0.25 (0.44)	0.19 (0.46)	0.21 (0.45)
Self-acceptance				
35-44	-0.33 (0.43)	-0.21 (0.43)	-0.52 (0.36)	-0.55 (0.35)
45-54	-0.15 (0.42)	-0.33 (0.41)	-0.51 (0.38)	-0.52 (0.34)
55-64	-0.31 (0.32)	-0.23 (0.33)	-0.49 (0.34)	-0.51 (0.37)
65-74	-0.18 (0.44)	-0.35 (0.41)	-0.43 (0.38)	-0.42 (0.32)
Total	-0.21 (0.41)	-0.29 (0.40)	-0.50 (0.36)	-0.51 (0.35)

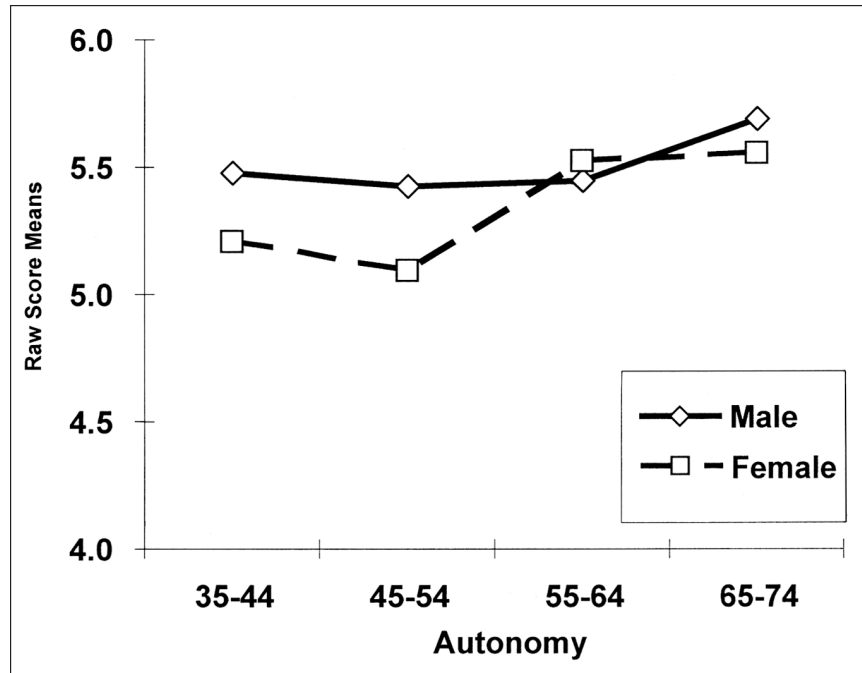


Figure 1. Autonomy: Significant gender by age interaction (raw scores).

Environmental Mastery

Items for this scale assess the extent to which individuals see themselves as able to manage the demands of daily lives and create environments that fit their personal needs. A main effect of cultural context, $F(1, 2799) = 51.68$, $p < .001$, $\eta^2 = .02$, showed that U.S. adults rated themselves significantly higher on environmental mastery than did Japanese adults. There was also a main effect of age, $F(3, 2799) = 9.23$, $p < .001$, $\eta^2 = .01$, which revealed that the two younger age groups scored significantly lower than the two older age groups. A cultural context by gender interaction, $F(1, 2799) = 5.34$, $p < .05$, $\eta^2 < .01$ revealed that U.S. men scored significantly higher than U.S. women, whereas no gender difference was evident in Japan.

All of the above effects were evident with the ipsatized analyses. Thus, a main effect of cultural context, $F(1, 2797) = 55.42$, $p < .001$, $\eta^2 = .02$, showed that U.S. respondents rated environmental mastery as significantly higher, relative to their overall well-being. A main effect of age, $F(1, 2797) = 13.96$, $p < .001$, $\eta^2 = .02$, showed that the two younger age groups rated their environmental mastery significantly lower, relative to the overall well-being, compared to the

two older age groups. Finally the cultural context by gender interaction, $F(1, 2797) = 7.39, p < .01, \eta^2 < .01$) showed that U.S. males rated their environmental mastery significantly higher, relative to their overall well-being, than U.S. women, whereas no gender difference was evident in Japan.

Personal Growth

Items for this scale assess the extent to which adults perceive that they are developing their talents and capabilities over time. A main effect of cultural context, $F(1, 2799) = 66.61, p < .000, \eta^2 = .02$, revealed that U.S. respondents rated their personal growth higher than Japanese respondents. However, a cultural context by age interaction, $F(3, 2799) = 4.28, p < .01, \eta^2 < .01$, also was obtained and is illustrated in Figure 2. The figure shows that Japanese adults, as predicted, showed higher scores on personal growth with age, particularly from middle adulthood to old age, whereas U.S. respondents showed lower scores with age.

The ipsatized analyses converged with the above patterns. Thus, a main effect of cultural context, $F(1, 2795) = 39.16, p < .001, \eta^2 = .01$) showed that

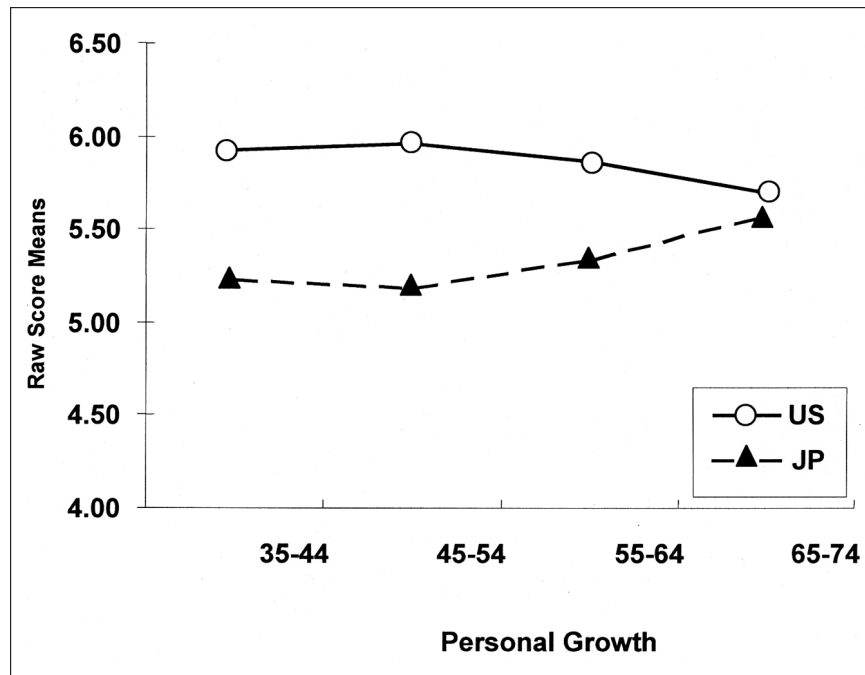


Figure 2. Personal growth: Significant culture by age interaction (raw scores).

U.S. respondents rated their personal growth significantly higher, relative to the overall well-being, compared to Japanese adults. A cultural context by age interaction, $F(1, 2797) = 4.33, p < .001, \eta^2 < .01$, further clarified that Japanese adults' ratings of their personal growth, relative to the overall well-being, showed significant increments with age, whereas in the United States self-ratings of personal growth, relative to overall well-being, showed decrements with age.

Positive Relations With Others

Items for this scale assess the degree to which individuals feel they have close, meaningful connections to others. The raw score analyses revealed a main effect of cultural context for positive relations with others, $F(1, 2799) = 63.35, p < .001, \eta^2 = .02$ in which U.S. adults rated their interpersonal well-being significantly higher than Japanese adults. In addition, there was a main effect of gender, $F(1, 2799) = 4.69, p < .05, \eta^2 < .01$, in which women rated their interpersonal well-being higher than men.

However, for this measure, ipsatized analyses revealed different results. Specifically, a main effect of cultural context, $F(1, 2794) = 17.25, p < .001, \eta^2 = .01$, showed that Japanese adults had significantly *higher* scores than U.S. adults. Thus, although the raw score analyses showed higher scores among U.S. respondents, the ipsative scores, which examine how this aspect of well-being compares with overall well-being, were, as predicted, higher among Japanese adults. A main effect of gender, $F(1, 2797) = 7.69, p < .01, \eta^2 < .01$ paralleled the above findings by showing that women rated their interpersonal well-being significantly higher, relative to their overall well-being, than men. The ipsatized analyses also showed a cultural context by age interaction, $F(3, 2797) = 3.80, p < .01, \eta^2 < .01$. As illustrated in Figure 3, Japanese adults rated their interpersonal well-being as significantly higher, relative to their overall well-being, than did U.S. adults, but primarily in the earlier decades of adulthood. The two later decades showed similar relative scores—indeed, nearly identical scores for the oldest age group. It is worth noting that this age-related convergence follows both from the age decrements in relative ratings of interpersonal well-being among aging Japanese adults as well as the age increments in relative ratings of interpersonal well-being among older U.S. respondents. With this analysis, we were thus able to find the expected cultural difference by avoiding the rating bias in which Americans tended to score higher than Japanese respondents on most eudaimonic scales.

Purpose in Life

Items for this scale assess the degree to which individuals feel their lives have meaning, direction, and goals to live for. This was the *only* aspect of eudaimonic well-being in which there was *not* a main effect of cultural context in the raw score analyses; that is, adults in both contexts had similar average ratings. A significant

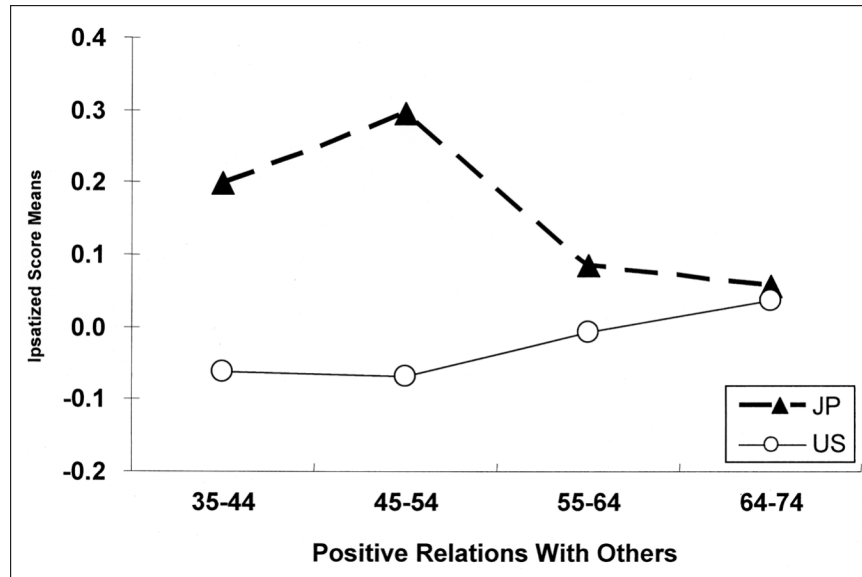


Figure 3. Positive relations with others: Significant culture by age interaction (ipsatized scores).

main effect of age, $F(1, 2795) = 5.50, p < .001, \eta^2 = .01$ revealed that the two younger age groups had significantly higher scores than the oldest age groups.

The same age effect was also evident with the ipsatized analysis, $F(3, 2796) = 19.69, p < .001, \eta^2 = .02$, showing that in both cultural contexts the two younger age groups rated their purpose in life as significantly higher, relative to the overall well-being, than the two older age groups.

Self-Acceptance

Items for this scale assess the extent to which individuals feel generally positive about themselves and their past lives as well as accepting of their own limitations. A main effect of cultural context for self-acceptance, $F(1, 2799) = 6.12, p < .01, \eta^2 < .01$, showed that U.S. adults rated themselves significantly higher than Japanese adults. A main effect of gender, $F(1, 2799) = 4.50, p < .05, \eta^2 < .01$, showed that males rated themselves significantly higher on self-acceptance than females. There was also a main effect of age, $F(3, 2799) = 3.80, p < .01, \eta^2 < .01$, in which the two oldest age groups had significantly higher scores than the youngest age group.

The above main effect of cultural context was also evident with the ipsatized scores, $F(1, 2797) = 110.32, p < .001, \eta^2 = .04$, but the direction of the effect was

opposite to the above finding. That is, U.S. respondents rated this aspect of well-being significantly lower, relative to their overall well-being, than did Japanese respondents. There was also an age by gender interaction, $F(3, 2797) = 3.18, p < .05, \eta^2 < .01$, which revealed that younger males rated their self-acceptance significantly lower, relative to the overall well-being, than older males, whereas for females, the age pattern was nonlinear (i.e., females aged 35-44 and 55-64 showed relative ratings of self-acceptance that were significantly lower than those aged 45-54 and 64-74).

Hedonic Well-Being

It was not possible to create ipsatized scores for positive and negative affect because each was measured with only a single scale. Thus, our analyses for hedonic well-being focus only on raw scores.

Positive Affect

Self-ratings of positive affect varied by age in both cultural contexts, $F(3, 2807) = 11.74, p < .001, \eta^2 = .01$, such that there were linear increments from young adulthood through old age. There was also a cultural context by gender interaction, $F(3, 2807) = 8.72, p < .001, \eta^2 < .01$, which revealed that Japanese women reported significantly higher scores than Japanese men, whereas in the United States, men reported significantly higher levels of positive affect than women.

Negative Affect

A main effect of cultural context, $F(1, 2804) = 19.40, p < .001, \eta^2 = .01$, revealed that Japanese adults reported significantly higher levels of negative affect than U.S. respondents. There was also a significant main effect of age, $F(3, 2804) = 4.26, p < .01, \eta^2 = .01$, such that the two youngest age groups had significantly higher levels of negative affect than the oldest age group. Finally, a significant main effect of gender, $F(1, 2804) = 23.71, p < .001, \eta^2 = .01$, revealed that females in both cultural contexts reported strongly higher levels of negative affect than did males.

DISCUSSION

The purpose of this study was to assess multiple aspects of psychological well-being (eudaimonic and hedonic) in age-diverse samples from Japan and the United States. The key hypothesis was that growing old may be a more benign experience in Japan compared to the United States, given the different meanings and practices (e.g., living arrangements, philosophical and religious traditions, recognized holidays, popular literature) accorded to old age in the two cultural contexts. Within the limits of cross-sectional inference, partial support for this

prediction was evident, namely, in self-ratings of personal growth, which measure the extent to which individuals see themselves as developing over time and making the most of their talents and abilities (Ryff, 1989). Here the data (both raw scores and ipsative scores) revealed higher scores with age among Japanese adults, compared to lower scores with age among U.S. respondents. With its interdependent way of being (Kitayama & Markus, 2000) as well as age-supportive everyday meanings and practices, Japan appears to provide a more personal growth-producing context for its elders, compared to their same-aged counterparts in the United States.

For other aspects of well-being, however, the findings revealed higher scores with age in *both* cultural contexts. That is, for self-acceptance and environmental mastery, older adults scored significantly higher (both raw and ipsative scores) than younger adults. Similarly, hedonic well-being showed the same pattern in Japan (i.e., higher scores with age on positive affect, lower scores with age on negative affect) that has been observed in the United States (Charles, Reynolds, & Gatz, 2001; Mroczek & Kolarz, 1998). Thus, for multiple aspects of well-being, older adults in both cultural contexts revealed more favorable aging profiles than younger adults.

The notable exception to this positive story pertains to purpose in life, which showed significantly lower scores with age in both cultural contexts (raw and ipsative scores). Such downward profiles may be tied to the structural lag phenomenon—that is, that social institutions in work, educational, community, and family life have not kept up with the added years of life that elders are experiencing (Riley et al., 1994). Similar patterns have been observed among Canadian elders (Clarke et al., 2000), thus adding to the international evidence that this particular aspect of well-being—purposeful and meaningful life engagement—poses unique challenges for those in later life, perhaps especially in advanced, technological societies.

The extent to which longitudinal aging versus cohort differences account for the above patterns is unknown. Older members of the Japanese sample lived through post-war reconstruction in a war-torn country, whereas older members of the United States lived through a post-war economic boom. In that sense, old age for many in Japan may, in fact, reflect improvement over prior life periods. As noted earlier, traditional Japanese society is also changing, not only with regard to norms of filial piety and elder respect (Ikels, 2004; Sung, 2001) for its rapidly growing aging population, but also related to pervasive economic problems, and accompanying trends toward consumerism, materialism, and a high media/digital influence (Kagamimori, Gaina, & Nasermoaddeli, 2009). All of these changes constitute the complex cultural backdrop within which the above findings must be interpreted.

The obtained age/cohort profiles were also embedded in strong main effects of cultural context in which U.S. adults reported higher well-being overall than did Japanese adults. We had hypothesized that these main effects of cultural

context would be most strongly evident for independent aspects of well-being such as autonomy, thus, extending prior distinctions between independent versus interdependent cultural contexts and their links to well-being (Diener & Suh, 2000; Heine, Lehman, Markus, & Kitayama, 1999; Kitayama et al., 2000; Oishi & Diner, 2001; Uchida & Kitayama, 2009). In fact, self-assessment of autonomy, which measures the extent to which individuals feel they are self-determining and can follow their own convictions even if such beliefs go against surrounding conventions, produced dramatic cultural differences.

Given these strong main effects of cultural context, it was noteworthy that two scales of well-being (namely, purpose in life and positive affect) did *not* show significant differences between Japanese and U.S. respondents. Thus, in areas measuring purposeful life engagement and feelings of contentment, our data were at odds with the frequently reported bias toward more positive self-ratings among western compared to East Asian respondents (Heine & Hamamura, 2007; Heine & Lehman, 1995). As such, the results point to a more nuanced perspective on culture and well-being than is conveyed in prior research.

Our ipsative analyses offered further refinements by showing cultural differences in how various dimensions of well-being compare with each in individuals' self-ratings. Japanese adults, as predicted, rated their interpersonal well-being (positive relations with others) higher relative to their overall well-being than did U.S. adults. However, this effect was evident only among the two younger age groups. The results thus converged with the frequently documented emphasis on social relational factors in interdependent cultural contexts (Kitayama, Markus, & Kurokawa, 2000; Kwan et al., 1997; Markus & Kitayama, 1991; Oishi & Diener, 2001), but clarified that the pattern is not as prominent among older adults. Given that much prior research on culture and well-being has been conducted with young adults, the findings underscore the need for caution in generalizing results to later periods in the life course. As shown in Figure 3 (ipsatized data), elders in Japan reported lower interpersonal well-being compared to their younger age counterparts, while in the United States positive relations with others was rated higher among older compared to younger adults. Freedom from constraints related to social roles may partially account for this later life story in Japan, whereas the U.S. pattern may reflect growing appreciation with age of meaningful social connections.

The above interpretation is strengthened by the positive affect findings evident in both cultural contexts showing higher scores with age. In the United States, the combination of higher profiles on positive relations and positive affect among older adults seems consistent with ideas of socioemotional selectivity theory (Carstensen, 1995). In Japan, however, higher positive affect among elders is evident, despite accompanying age decrements in interpersonal well-being. Future studies of ideal well-being, akin to other investigations of ideal affect (Tsai, 2007), would be useful in testing these interpretations—that is, to clarifying what elders in both culturally contexts ideally desire, and specifically whether

interpersonal well-being is less salient among older compared to younger adults in Japan.

Gender differences were prominent in our findings. As hypothesized, women in both cultural contexts scored significantly higher than men on positive relations with others (both raw and ipsative scores) as well as on negative affect. Such findings converge with frequently documented U.S. findings showing women's strengths relative to men in the interpersonal realm (Ryff, 1989; Ryff & Keyes, 1995), combined with their greater vulnerability to negative affect (Nolen-Hoeksema, 2001), but now extend such patterns to Japan. Men in both cultural contexts also scored significantly higher than women on self-acceptance and autonomy, although the latter outcome pertained only to young adults. With regard to cultural differences, Japanese women reported significantly higher scores on positive affect than did Japanese men, whereas in the United States, men reported significantly higher positive affect than women. Such findings converge with the suggestions of others (Lebra, 1984; Lock, 1998) as well as the sticky leaf metaphor ("nure ochiba") that older women fare better than older men in Japan.

Although this investigation is among the first to examine aging and well-being in Japan and the United States, our findings are limited in multiple ways. First, all assessments of well-being were developed in European-American contexts and thus likely reflect constructs and wordings biased toward Western understandings of well-being. For example, only one scale was explicitly interpersonal (e.g., positive relations with others). Other dimensions of interdependent well-being likely to be relevant, such as meeting social obligations and appropriately adjusting to expectations of others, were not tapped in the current questionnaire. In addition to the Japanese linkage of happiness with social harmony (Uchida & Kitayama, 2009), recent findings emphasize well-being as a "minimalist virtue" (Kan, Karasawa, Kitayama, 2009). Rooted in East Asian philosophical traditions (Confucianism, Zen, Taoism), happiness is regarded as fleeting, transitory, and even incomprehensible. It is a kind of nothingness, which Western tools for assessing well-being fail to capture. Item phrasing in the United States also frequently begin with "I," which may be too direct and egoistic in orientation for culturally-sensitive assessments of well-being in Japan. Thus, future studies would benefit from more culturally balanced assessments of well-being.

Second, the sampling strategies between the two countries resulted in a larger, more representative group of middle and older-aged adults in the United States compared to a smaller, more geographically-select sample in Japan. The Japanese sample was also somewhat less educated, reported more chronic conditions, and was more likely to be married than the U.S. sample. Together, these differences make the pattern of higher scores in well-being among the Japanese all the more notable. It will be important for future studies to be conducted with comparable recruitment strategies (i.e., representative samples) in both contexts. Nonetheless, we emphasize that this investigation is among the first to examine multiple aspects

of psychological well-being in age diverse samples of adults drawn from both independent and interdependent cultural contexts.

Third, as noted earlier, all obtained patterns are based on cross-sectional data. As such, cohort differences may be implicated in outcomes showing that older persons have better, or worse, well-being than younger adults. Longitudinal studies will be necessary to discern which aging patterns are due to maturational, life course processes, versus experiences of unique cohorts aging during different historical periods. Our conceptual emphasis on cultures of independence and interdependence as well as everyday practices and meanings within cultural contexts seem nonetheless compatible with a maturational account (i.e., the shape that aging takes is contoured by surrounding social structures, norms and beliefs), but long-term data are needed to verify such an interpretation. Other factors (e.g., education, income, work/family experience, health practices) are also likely implicated in reported well-being and also need to be considered in future efforts to account for age trajectories therein (cross-sectional or longitudinal).

Fourth, effects sizes throughout the obtained results were small, although similar to other published findings from MIDUS (Lachman, Röche, Rosnick, & Ryff, 2008). Large studies, particularly those based on national samples, may be inherently plagued by small effect sizes, given the tremendous variability accompanying attempts to represent all segments of society. Obtained means are surrounded by greater variability than tends to occur in highly controlled experimental work conducted with sociodemographically similar respondents (college sophomores). Thus, within-group effects (defined by age or gender) are rarely accompanied by the small standard deviations needed to generate large effect sizes. Nonetheless, as argued by others, small effects can be important (Prentice & Miller, 1992; Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007), either for reasons of their practical significance (i.e., they matter for something else), or because they may accumulate over time, or because they are important theoretically. In the present context, we consider it premature to conclude whether the obtained age patterns are or are not meaningful or consequential. Those judgments require both longitudinal analyses, and the linkage of self-reported well-being to other outcomes.

Longitudinal analyses from other large U.S. samples show, for example, that purpose in life does actually decline with aging (Springer, Pudrovska, & Hauser, 2011), thus adding credibility to the cross-section differences on this aspect of well-being in both cultural contexts. Do such declines matter—that is, do they have practical significance? Recent epidemiological studies document that older adults with low levels of life purpose are at increased *subsequent* risk for mild cognitive impairment, Alzheimer's disease, and mortality (Boyle, Barnes, Buchman, & Bennet, 2009; Boyle, Buchman, Barnes, & Bennett, 2010). Such inquiries connecting aging, well-being and health *through time* are important future scientific priorities (Ryff & Singer, 2008).

Overall, our findings suggest numerous areas in which older individuals show higher well-being compared to midlife adults, whether they reside in cultural contexts in which ideas, beliefs, and practices of independence, or interdependence, are prevalent. In addition, our results suggest that Japan's age-supportive cultural meanings and practices nurture perceptions of personal growth among its aging adults, whereas in the United States, the aged show diminished profiles of personal growth relative to midlife adults. In both cultural contexts, purpose in life shows age decrements, thus calling for greater attention to structural influences, particularly in advanced technological societies, that may undermine purposeful life engagement among the elderly. In sum, aging and well-being, viewed from the perspective of cultural context, is a multifaceted story. Future studies with more representative samples, longitudinal designs, and culturally-sensitive measures are needed to carry this inquiry forward.

REFERENCES

- An, J. S., & Cooney, T. M. (2006). Psychological well-being in mid to late life: The role of generativity development and parent-child relationships across the lifespan. *International Journal of Behavioral Development, 30*, 410-421.
- Bauer, J. J., & McAdams, D. (2004). Growth goals, maturity, and well-being. *Developmental Psychology, 40*, 114-127.
- Benjamini, Y., & Hochberg, Y. (1995). Controlling for the false discovery rate: A practical and powerful approach to multiple testing. *Journal of the Royal Statistical Society, Series B (Methodological), 57*, 289-300.
- Boyle, P. A., Barnes, L. L., Buchman, A. S., & Bennett, D. A. (2009). Purpose in life is associated with mortality among community-dwelling older persons. *Psychosomatic Medicine, 71*, 574-579.
- Boyle, P. A., Buchman, A. S., Barnes, L. L., & Bennett, D. A. (2010). Effect of purpose in life on risk of incident Alzheimer disease and mild cognitive impairment in community-dwelling older persons. *Archives of General Psychiatry, 67*, 304-310.
- Brim, O. G., Ryff, C. D., & Kessler, R. C. (2004). *How healthy are we: A national study of well-being at midlife*. Chicago, IL: University of Chicago Press.
- Carper, J. (1995). *Stop aging now: The ultimate plan for staying young and reversing the aging process*. New York: Harper.
- Carstensen, L. L. (1995). Evidence for a life-span theory of socioemotional selectivity. *Current Directions in Psychological Science, 4*, 151-156.
- Charles, S. T., Reynolds, C. A., & Gatz, M. (2001). Age-related differences and change in positive and negative affect over 23 years. *Journal of Personality and Social Psychology, 80*, 136-151.
- Chen, S. T., & Chan, A. C. M. (2005). Measuring psychological well-being in the Chinese. *Personality and Individual Differences, 38*, 1307-1316.
- Christopher, S., Christopher, J. C. & Dunnagan, T. (2000). Culture's impact on health risk appraisal psychological well-being questions. *American Journal of Health Behavior, 24*(5), 338-348.

- Clarke, P. J., Marshall, V. W., Ryff, C. D., & Rosenthal, C. J. (2000). Well being in Canadian seniors: Findings from the Canadian Study of Health and Aging. *Canadian Journal on Aging, 19*(2), 139-159.
- Diener, E., & Diener, M. (1995). Cross-cultural correlates of life satisfaction and self-esteem. *Journal of Personality and Social Psychology, 68*, 653-663.
- Diener, E., & Suh, E. M. (1997). Measuring quality of life: Economic, social, and subjective indicators. *Social Indicators Research, 40*, 189-216.
- Diener, E., & Suh, E. M. (2000). Measuring subjective well-being to compare the quality of life of cultures. In E. Diener & E. M. Suh (Eds.), *Culture and subjective well-being* (pp. 3-12). Cambridge, MA: MIT Press.
- Dolmore, D. (1997). *Age erasers for men: Hundreds of fast and easy ways to beat the years*. New York: St. Martins Press.
- Fisher, P. (1997). *Age erasers for women: Actions you can take right now to look younger and feel great*. New York: Bantam.
- Freund, A. M., & Baltes, P. B. (2002). Life-management strategies of selection, optimization, and compensation: Measurement by self-report and construct validity. *Journal of Personality and Social Psychology, 82*, 642-662.
- Gallagher, M. W., Lopez, S. J., & Preacher, K. J. (2009). The hierarchical structure of well-being. *Journal of Personality, 77*, 1025-1049.
- Heine, S. J., & Hamamura, T. (2007). In search of East Asian self-enhancement. *Personality and Social Psychology Review, 11*, 4-27.
- Heine, S. J., & Lehman, D. R., (1995). Cultural variation in unrealistic optimism: Does the West feel more invulnerable than the East? *Journal of Personality and Social Psychology, 68*, 595-607.
- Heine, S. J., Lehman, D. R., Markus, H. R., & Kitayama, S. (1999). Is there a universal need for positive self-regard. *Psychological Review, 106*, 766-794.
- Holahan, C. K., Holahan, C. J., Velasquez, K. E., & North, R. J. (2008). Longitudinal change in happiness during aging: The predictive role of positive expectancies. *The International Journal of Aging and Human Development, 66*, 229-241.
- Hwang, K. (1999). Filial piety and loyalty: Two types of social identification in Confucianism. *Asian Journal of Social Psychology, 2*, 163-183.
- Ikels, C. (Ed.). (2004). *Filial piety: Practice and discourse in contemporary East Asia*. Stanford, CA: Stanford University Press.
- James, J. (1998). *Secrets of the superyoung: The scientific reasons some people look ten years younger than they really are—and how you can, too*. New York: Villard.
- Johnson, D. W. (1999). *Feel 30 for the next 50 years*. New York: Harper Perennial.
- Kagamimori, S., Gaina, A., & Nasermoaddeli, A. (2009). Socioeconomic status and health in the Japanese population. *Social Science and Medicine, 68*, 2152-2160.
- Kahneman, D., Diener, E., & Schwarz, N. (1999). Well-being: The foundations of hedonic psychology. New York: Russell Sage Foundation.
- Kan, C., Karasawa, M., & Kitayama, S. (2009). Minimalist in style: Self, identity, and well-being in Japan. *Self and Identity, 8*, 300-317.
- Kang, S., Shaver, P. R., & Sue, S. (2003). Culture-specific patterns in the prediction of life satisfaction: Roles of emotion, relationship quality, and self-esteem. *Personality & Social Psychology Bulletin, 29*(12), 1596-1608.
- Keyes, C. L. M., Shmotkin, C., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology, 82*, 1007-1022.

- Kinsella, K., & Velkoff, V. A. (2001). *An aging world*. U.S. Census Bureau, Series P94/01-1. Washington, DC: U.S. Government Printing Office.
- Kitayama, S. (2000). Cultural variations in cognition: Implications for aging research. In P. C. Stern & L. L. Carstensen (Eds.), *The aging mind: Opportunities for cognitive research* (pp. 218-237). Washington, DC: National Academy Press.
- Kitayama, S. & Markus, H. R. (2000). The pursuit of happiness and the realization of sympathy: Cultural patterns of self, social relations, and well-being. In E. Diener & E. M. Suh (Eds.), *Culture and subjective well-being* (pp. 113-161) Cambridge, MA: MIT Press.
- Kitayama, S., Markus, H. R., & Kurokawa, M. (2000). Culture, emotion, and well-being: Good feelings in Japan and the United States. *Cognition and Emotion, 14*(1), 93-124.
- Kuypers, J. A., & Bengtson, V. L. (1973). Social breakdown and competence. *Human Development, 16*, 181-201.
- Kwan, V. S. Y., Bond, M. H., & Singelis, T. M. (1997). Pancultural explanations for life satisfaction: Adding relationship harmony to self-esteem. *Journal of Personality and Social Psychology, 73*, 1038-1051.
- Lachman, M. E., Röcke, C., Rosnick, C., & Ryff, C. D. (2008). Realism and illusion in Americans' Temporal Views of Their Life Satisfaction. *Psychological Science, 19*, 889-897.
- Lawton, M. P. (1975). The Philadelphia geriatric center morale scale: A revision. *Journal of Gerontology, 30*, 85-89.
- Lebra, T. S. (1976). *Japanese patterns of behavior*. Honolulu, HI: University of Hawaii Press.
- Lebra, T. S. (1984). *Japanese women: Constraint and fulfillment*. Honolulu, HI: University of Hawaii Press.
- Lock, M. (1998). Deconstructing the change: Female maturation in Japan and North America. In R. A. Shweder (Ed.), *Welcome to middle age! (And other cultural fictions)* (pp. 45-74). Chicago, IL: University of Chicago Press.
- Markus, H. R., & Kitayama, X. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, 224-253.
- Mroczek, D. K., & Kolarz, C. M. (1998). The effect of age on positive and negative affect: A developmental perspective on happiness. *Journal of Personality and Social Psychology, 75*(5), 1333-1349.
- Neugarten, B. L., Havighurst, R. J., & Tobin, S. (1961). The measurement of life satisfaction. *Journal of Gerontology: Medical Sciences, 16*, 134-143.
- Nolen-Hoeksema, S. (2001). Gender differences in depression. *Current Directions in Psychological Science, 10*, 173-176.
- Oishi, S. (2000). Goals as cornerstones of subjective well-being: Linking individuals and cultures. In E. Diener & E. M. Suh (Eds.), *Culture and subjective well-being* (pp. 87-112). Cambridge, MA: MIT Press.
- Oishi, S., & Diener, E. (2001). Goals, culture, and subjective well-being. *Personality and Social Psychology Bulletin, 27*, 1674-1682.
- Plath, D. (1980). *Long engagements*. Palo Alto, CA: Stanford University Press.
- Prentice, D. A., & Miller, D. T. (1992). When small effects are impressive. *Psychological Bulletin, 112*, 160-164.
- Quinn, D. M., & Crocker, J. (1999). When ideology hurts: Effects of feeling fat and the Protestant ethic on the psychological well-being of women. *Journal of Personality and Social Psychology, 77*, 402-414.

- Riley, M. W., Kahn, R. L., & Foner, A. (1994). *Age and structural lag*. New York: Wiley.
- Roberts, B. W., Kuncel, N. R., Shiner, R., Caspi, A., & Goldberg, L. R. (2007). The power of personality: The comparative validity of personality traits, socioeconomic status, and cognitive ability for predicting important life outcomes. *Perspectives on Psychological Science, 2*, 313-345.
- Rowland, D. (1992). A five-nation perspective on the elderly. *Health Affairs, 11*(3), 205-215.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology, 52*, 141-166.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*, 1069-1081.
- Ryff, C. D. (1991). Possible selves in adulthood and old age: A tale of shifting horizons. *Psychology and Aging, 6*, 286-295.
- Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology, 69*, 719-727.
- Ryff, C. D., & Singer, B. H. (2008). Understanding healthy aging: Key components and their integration. In V. Bengtson, D. Glans, N.M. Putney, & M. Silverstein (Eds.), *Handbook of theories of aging* (2nd ed., pp. 117-144). New York: Springer.
- Sanchez-Burks, J. (2002). Protestant relational ideology and (in)attention to relational cues in work settings. *Journal of Personality and Social Psychology, 83*, 919-929.
- Sastre, M. T. M. (1999). Lay conceptions of well-being and rules used in well-being judgements among young, middle, aged, and elderly adults. *Social Indicators Research, 47*(2), 203-231.
- Shmotkin, D. (1990). Subjective well-being as a function of age and gender: A multivariate look for differential trends. *Social Indicators Research, 23*, 201-230.
- Shweder, R. A. (Ed.). (1998). *Welcome to middle age! (And other cultural fictions)*. Chicago, IL: University of Chicago Press.
- Springer, K. W., & Hauser, R. M. (2006). An assessment of the construct validity of Ryff's scales of psychological well-being: Method, mode, and measurement effects. *Social Science Research, 35*, 1120-1131.
- Springer, K. W., Pudrovska, T., & Hauser, R. M. (2011). Does psychological well-being change with age? Longitudinal tests of age variations and further explorations of the multidimensionality of Ryff's model of psychological well-being. *Social Science Research, 40*, 392-398.
- Sung, K. (2001). Elder respect: Exploration of ideals and forms in East Asia. *Journal of Aging Studies, 15*, 13-26.
- Takagi, E., Silverstein, M., & Crimmins, E. (2007). Intergenerational coresidence of older adults in Japan: Conditions for cultural plasticity. *Journal of Gerontology: Social Sciences, 62B*, S330-S339.
- Taylor, S. E., Sherman, D. K., Kim, H. S., Jarcho, J., Takagi, K., & Dunagan, M. S. (2004). Culture and social support: Who seeks it and why? *Journal of Personality & Social Psychology, 87*(3), 354-362.
- Tsai, J. L. (2007). Ideal affect: Cultural causes and behavioral consequences. *Perspectives on Psychological Science, 2*, 242-259.

- Tsai, J. L. Knutson, B., & Fang, H. H. (2006). Cultural variation in affect valuation. *Journal of Personality and Social Psychology, 90*, 288-307.
- Uchida, Y., & Kitayama, S. (2009). Happiness and unhappiness in East and West: Themes and variations. *Emotion, 9*, 441-456.
- Uchida, Y., Kitayama, S., Mesquita, B., Reyes, J., & Morling, B. (2008). Is perceived emotional support beneficial? Well-being and health in independent and interdependent cultures. *Personality and Social Psychology Bulletin, 34*, 741-754.
- Uchida, Y., Norasakkunkit, V., & Kitayama, S. (2004). Cultural constructions of happiness: Theory and empirical evidence. *Journal of Happiness Studies, 5*(3), 223-239.
- U.S. Bureau of Labor Statistics. (2003, September). Families and work in transition in 13 countries, 1980-2001. *Monthly Labor Review*, (Table 1300).
- Van Dierendonck, D. (2004). The construct validity of Ryff's scales of psychological well-being and its extension with spiritual well-being. *Personality and Individual Differences, 36*, 629-643.
- Yik, M. S., & Russell, J. A. (2003). Chinese affect circumplex: I. Structure of recalled momentary affect. *Asian Journal of Social Psychology, 6*, 185-200.

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