


Relationship between bicultural identity and psychological well-being among American and Japanese older adults

Health Psychology Open
January-June 2016: 1–12
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sagepub.com/journalsPermissions.nav
DOI: 10.1177/2055102916650093
hpo.sagepub.com


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Abstract

In a large national sample of American and Japanese older adults, this study investigated how bicultural identity affects perception of health and well-being in 11 individual psychological variables (i.e. positive well-being: self-esteem, optimism, subjective well-being Japanese equivalent, gratitude, Positive and Negative Affect Schedule—positive adjectives, and satisfaction with life; negative well-being: depression, pessimism, social anxiety, Positive and Negative Affect Schedule—negative adjectives, and perceived stress). This sample consisted of 1248 Americans from the Midlife in the United States survey, 2004–2006, and 380 Japanese from the Midlife in Japan survey in Tokyo, Japan, 2008–2010. Results showed that bicultural individuals (having both highly independent and interdependent self-construals) in both countries tend to exhibit higher scores across most perceived health and well-being measures when compared to other groups (i.e. marginal, interdependent, and independent). Cultural-specific aspects of self-construal, health, and well-being are explained to support the findings. Discussion of these findings and their implications is also provided.

Keywords

bicultural identity, culture, health, psychological well-being, self-construal

Introduction

Self-construal refers to how one perceives himself or herself within the context of relationships with others (Markus and Kitayama, 1991, 1994). Researchers have investigated the importance of self-construal for health and psychological well-being since early 1990s (Cross and Madson, 1997; Markus and Kitayama, 1991; Oyserman et al., 2002; Singelis, 1994). Recent empirical research has addressed the impact of self-construal on depression and anxiety (Cross et al., 2003; Kim and Zane, 2004; Lam, 2006) and peer relationships (Cross and Morris, 2003) as well as on other areas of human functioning. In general, increasing attention has been paid to the impact of self-construal on psychological well-being. However, past research has focused primarily on the effects on well-being of two alternative self-construal orientations: independence and interdependence.

Each of these two self-construal orientations has been described as being associated with a particular cultural

context. Markus and Kitayama (1991) found that in Western cultures, people tend to construe the self as separate from its social context and thus emphasize its autonomy and independence; this approach is described as *independent* self-construal. In contrast, in Eastern cultures, people conventionally construe and construct the self as a constituent within a broader social context; their concept of the self entails characteristics and qualities of the social environment and, therefore, represents an example of *interdependent* self-construal.

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Presumably, self-construal varies based on a particular culture's emphasis on independence or interdependence (Markus and Kitayama, 1991).

Given the increasing interaction of global cultures today, one would expect that various combinations of independent and interdependent self-construals may be observed in people with multiple cultural affiliations. Accordingly, Kim et al. (1996) developed a two-dimensional, four-type model of self-construal, adding the *bicultural* type (people who have incorporated both independent and interdependent styles) and the *marginal* type (people who are low in both independent and interdependent styles). A few studies have explored the effects of bicultural self-construal on health and psychological well-being. In one of these studies, Lam (2006) found that among Vietnamese-American adolescents, those with bicultural self-construal exhibited higher levels of socioemotional adjustment on all measures except anxiety in comparison with their counterparts. To extend Lam's work, this study focuses on the moderating effects and functions of bicultural identity (as one of the four types of self-construals) on health and psychological well-being among a large national sample of American and Japanese older adults.

To describe the significant role of bicultural identity in health and well-being, we first review the literature regarding its effects in different cultural contexts. Second, we explore the notion of the four types of self-construals as introduced above (Kim et al., 1996) and predict the differences in psychological well-being among these four types in a large national sample of American and Japanese older adults. We then present our study and its results, followed by discussion of its implications.

Literature review

Identity structure and self-construal

The distinction between self and identity is not consistently maintained in the literature, and the two concepts are often used interchangeably (Swann and Bosson, 2010). Pilarska (2014) noted four possible definitions of identity in terms of (a) subjective self-experience (Vignoles et al., 2006), (b) cognitive structure (Berzonsky, 2004), (c) axiological orientation (Berzonsky, 2004), and (d) life history (McAdams, 2013).

Nevertheless, it may be useful to distinguish self (or self-concept) from identity more rigorously (Pilarska, 2014). The self can be considered a broader and superordinate concept, whereas identity may be considered an expression of self or a particular subcomponent or aspect of the self—in other words, a kind of extract from the self (Owens, 2006). Identity, in turn, is composed of those self-representations that are keys to defining oneself and distinguishing the self from the non-self. The self is considered as a multifaceted phenomenon, consisting of conceptions

that change depending on the situational context, role, and relationships with others (Markus and Wurf, 1987; Swann and Bosson, 2010). Pilarska (2014) suggested that this notion of a multifaceted self has been appealing to some researchers, but that it seems difficult to provide a cohesive model of the multiple self (McConnell, 2011; Swann and Bosson, 2010).

Although the development of self-construal in relation to mental health has been observed in the literature, self-construal is widely considered dichotomously (Markus and Kitayama, 1991). However, given the increased diversity of the US population, cultural boundaries are becoming blurred, making it plausible that the two aspects of self-construal could coexist in an individual, particularly one who has experienced two discrepant cultural traditions (Harrington and Liu, 2002; Kim et al., 1996; Liem et al., 2000; Liu and Liu, 1999; Okazaki, 1997; Singelis, 1994; Yamada and Singelis, 1999). The traditional dichotomous notion of self-construal has thus been expanded to encompass the alternative possibility of dual selves (Kim et al., 1996; Singelis, 1994). Individuals can simultaneously maintain high or low levels of both interdependent and independent self-construals. Cross (1995) noted this bidimensionality of self-construals in a study of stress and coping behaviors of exchange students coming from North America (typically high in independent self-construal) and East Asia (normally high in interdependent self-construal). Cross found that the East Asian students could develop independent self-construal while retaining the interdependent aspect of their self-construal as well.

The structure of bicultural identity

Biculturalism has been defined in various ways (Benet-Martinez and Haritatos, 2005; Berry, 1997). The term can refer to comfort and proficiency with both one's heritage culture and the culture of the country or region in which one has settled. It may apply to people who live in ethnic enclaves, where their cultural heritage may be maintained across generations. It can also apply to people from visible minority groups who may be identified as different from the majority ethnic group, even if their families have participated in their new society for multiple generations (Benet-Martinez and Haritatos, 2005; Berry, 1997).

Outcome-oriented frameworks explain how individuals recognize people who display the characteristics of more than one culture based on original cultural norms and patterns (Heo and Kim, 2013). In social psychology, ethnic identity has been examined by means of social identity theory (Tajfel and Turner, 1986) as one aspect of social identity, which is an individual self-concept stemming from group membership. Tajfel (1982) contended that in order to have a positive self-concept, individuals must have a sense of belonging to their group.

Acculturation theory (Berry and Kim, 1988) suggests that individuals may have various attitudes with regard to the value of retaining their heritage culture while interacting with the host culture. Thus, this theory provides one framework for biculturalism and links the research described above with another group of researchers who have focused on the process of producing a bicultural identity (Heo and Kim, 2013). Current research on Asian or Asian American bicultural experiences with self-construals has established that bicultural individuals have some degree of both independent and interdependent self-construals (Sui et al., 2007). Lam (2006), Singelis (1994), and Yamada and Singelis (1999) paid particular attention to self-construals from bicultural perspectives. Social-cognitive research has improved on a process model of biculturalism that depicts the self as an internalized “cultural meaning system” and suggests that an individual who identifies with more than one culture also develops more than one corresponding cultural meaning of self (Sui et al., 2007).

Self-construal and well-being

Studies on the impact of self-construal type on self-esteem (an important component of health and well-being) have produced conflicting results. In a society where individualism is dominant, low self-esteem was found among minority adults and adolescents who attempted to assert their autonomy in traditionally interdependent families (Zhou and Bankston, 1998). However, Singelis et al. (1999) reported that a more independent and less interdependent self-construals predicted higher levels of self-esteem. Similarly, Oyserman et al. (2002) indicated that interdependent self-construal was correlated negatively with self-esteem, whereas independent self-construal had a positive correlation. Harrington and Liu (2002) contended that self-esteem might be elevated among individuals who exhibit both types of self-construals in a pluralist society.

The presence of interdependent or independent self-construals might also influence how individuals perceive distress. Okazaki (1997) found that Asian Americans scored significantly higher than their Caucasian-European counterparts on anxiety measures. Her findings indicated that low levels of independent self-construal were significantly related to high scores on social anxiety. Other research (Moscovitch et al., 2004) lent support to this finding. When faced with conflict, individuals with interdependent self-construal might experience greater distress because they are unable to maintain control over a situation (Cross and Madson, 1997). Bae (1999) and Barry (2000), both of whom used East Asian university students as their sample, found that interdependent self-construal was positively correlated with depressive symptomatology and depression, whereas independent self-construal was negatively correlated with these factors.

Because a single, bipolar self-construal construct seems to inadequately reflect individual behavioral variations across individualistic and collectivistic cultures, Kim et al. (1996) proposed and tested a multidimensional framework of four self-construal types (bicultural, marginal, independent, and interdependent). They reported that the expanded framework clarified behaviors more dependably than the bipolar model of independent and interdependent self-construal types. Individuals with *bicultural self-construal* (*biculturals*) possess both high independent self-construal and high interdependent self-construal. As products of a multicultural society, these individuals demonstrate the ability to adjust their self-construal so that they can function successfully in different contexts. *Marginals* are low in both independent and interdependent self-construals. Biculturals demonstrated a greater capacity for adaptive communication (Kim et al., 1996; Yum, 2004) and experienced less distress in unfamiliar settings (Cross, 1995).

This four-type self-construal model has since been used in a variety of contexts including conversational settings (Kim et al., 1996), dating relationships (Yum, 2004), socioemotional development among Vietnamese-American adolescents (Lam, 2006), and the impact of collective and individual self-esteem on subjective well-being among Chinese college students (Yu et al., 2014). These studies have indicated that possessing a bicultural identity influences individuals' adjustment, cognition, and behaviors. While early studies of bicultural identity often used a unidimensional construct, recent studies have introduced a multidimensional construct including blended and harmony components. Using mainland Chinese adult immigrants in Hong Kong and native-born college students in both Hong Kong and mainland China as their sample, Chen et al. (2008) demonstrated that people with a high bicultural identity are more likely to experience better adjustment in multiple facets such as higher levels of self-esteem, life satisfaction, and subjective happiness as well as less anxiety or loneliness. Furthermore, a relationship between multicultural identity integration and greater psychological well-being has been identified among young adults from diverse backgrounds in Canada. Bicultural individuals are more likely to have a high level of bicultural identity integration and a high level of adjustment (Downie et al., 2004, 2006).

Thus far, relatively little research has been conducted on bicultural identity as a contributor to psychological well-being. Bicultural individuals could be motivated to develop an identity that provides them with a sense of uniqueness and harmony. One's optimal level of satisfaction may depend on how one is constructed as an interdependent or an independent individual (or both). Bicultural individuals may exercise personal choice in forming their own clear boundaries, becoming secure in the new identity that they create for themselves while incorporating various cultural frames of reference (Bennett, 1993). Furthermore, in addition to feeling relatively secure about their self-concept,

they have been found to experience comfortable movement between cultural identities. This ability to shift comfortably between different cultural frames of reference requires the bicultural individual to display empathy for others (Bennett, 1993). To get along well with others of different cultural orientations, the bicultural individual must constantly imagine being in the other person's shoes. Thus, this capacity for empathy with people of various cultures may be a key to explaining bicultural individuals' success in making smooth transitions between cultures. This psychological functioning may ultimately lead to their overall sense of personal well-being.

The main purpose of this study is to explore differences in health and well-being outcomes among American and Japanese older adults who exhibit the four different types of self-construals. It is predicted that the bicultural self-construal group will demonstrate the highest levels of health and well-being in both countries.

Method

Participants

For the US sample of this study, Midlife in the United States (MIDUS) Project 4 of the second wave of MIDUS (i.e. MIDUS II) was used as nationally representative data. MIDUS II is a longitudinal follow-up of a subsample ($N=1255$) of respondents to the original MIDUS study (MIDUS I) in the United States. This study can use only MIDUS II Project 4 because some measures of MIDUS I are not relevant. The 1248 US samples comprised 541 males and 707 females, aged 34–84 years ($M=54.5$, standard deviation (SD)=11.7). A subset of the MIDUS participants was recruited to participate in the biological data collection ($N=1249$). The Japanese sample was a parallel dataset of the MIDUS, called the Midlife in Japan (MIDJA; $N=1027$). A subset of the MIDJA participants was also recruited to participate in psychological well-being data collection ($N=380$).

Measurement instruments

Self-esteem was measured using the Self-Esteem Scale (Rosenberg, 1965). Responses to seven independent items ((a) I am no better and no worse than others; (b) I take a positive attitude toward myself; (c) at times, I feel I am no good at all; (d) I am able to do things as well as most people; (e) I wish I could have more respect for myself; (f) on the whole, I am satisfied with myself; and (g) I certainly feel useless at times) were measured on a 7-point scale, ranging from 1 (strongly disagree) to 7 (strongly agree). High scores reflect low self-esteem. In the current sample, Cronbach's alphas were .78 (United States) and .89 (Japan).

Optimism was measured using the Life Orientation Test (Scheier and Carver, 1985). Responses to three independent items ((a) in uncertain times, I usually expect the best; (c) I am always optimistic about my future; and (f) I expect more good things to happen to me than bad) were measured on a 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree). In the current sample, Cronbach's alphas were .68 (United States) and .60 (Japan).

Positive and Negative Affect Schedule (PANAS)—positive adjectives were measured using Mroczek and Kolarz's (1998) scale. Responses to 4 independent items ((i) enthusiastic? (j) attentive? (k) proud? and (l) active?) were measured on a 5-point scale, ranging from 1 (none of the time) to 5 (all of the time). In the current sample, Cronbach's alphas were .85 (United States) and .80 (Japan).

Satisfaction with life was measured using Pavot and Diener's (1993) Satisfaction with Life Scale. Responses to five independent items ((b) in most ways, my life is close to ideal; (c) the conditions of my life are excellent; (d) I am satisfied with my life; (e) so far, I have gotten the important things I want in life; and (f) If I could live my life over, I would change almost nothing) were measured on a 7-point scale, ranging from 1 (strongly disagree) to 7 (strongly agree). In the current sample, Cronbach's alphas were .88 (United States) and .89 (Japan).

Gratitude was measured using McCullough et al.'s (2002) Gratitude Scale. Responses to two independent items ((g) I have so much in life to be thankful for and (h) I am grateful to a wide variety of people) were measured on a 7-point scale, ranging from 1 (strongly disagree) to 7 (strongly agree). In the current sample, Cronbach's alphas were .71 (United States) and .91 (Japan).

The Subjective Well-Being Japanese Comparison Scale by Uchida et al. (2004) was used. Responses to eight independent items ((a) be critical and reflect on your actions, (b) be needed by others, (c) be in harmony with others and surrounding events, (d) have the ability to make a good effort at something and stick to it, (e) have a sense of peace and satisfaction, (f) to receive sympathy from others, (g) to receive respect from others, and (h) to give something back to society) were measured on a 4-point scale, ranging from 1 (not at all important) to 4 (extremely important). In the current sample, Cronbach's alphas were .73 (United States) and .88 (Japan).

Depression was measured using the Center for Epidemiological Studies–Depression (CES-D) Scale (Radloff, 1977). Respondents were asked to rate how they felt in the past week on a 4-point Likert scale ranging from 1 (rarely or never) to 4 (most of the time). Sample items included statements such as “I was bothered by things that usually do not bother me” and “My sleep was restless.” Positive-effect items were reverse coded. Higher scores indicated a higher level of depression. In the current sample, Cronbach's alphas were .89 (United States) and .89 (Japan).

The Liebowitz Social Anxiety Scale was used to measure social anxiety with a comparison of psychometric properties of self-report and clinician-administered formats (Fresco et al., 2001). It has nine subscale items: (a) talking to people in authority; (b) going to a party; (c) working while being observed; (d) calling someone you do not know well; (e) talking with people you do not know very well; (f) being the center of attention; (g) expressing disagreement or disapproval to people you do not know very well; (h) returning goods to a store; and (i) resisting a high-pressure salesperson) were measured on a 4-point scale ranging from 1 (none) to 4 (severe). In the current sample, Cronbach's alphas were .85 (United States) and .89 (Japan).

The Perceived Stress Scale was used to measure stress according to stress status (Cohen et al., 1983). It has 10 subscale items, as follows: In the last month, how often have you ... (a) been upset because of something that happened unexpectedly; (b) felt that you were unable to control the important things in your life; (c) felt nervous and stressed; (d) felt confident about your ability to handle your personal problems; (e) felt that things were going your way; (f) found that you could not cope with all the things you had to do; (g) been able to control irritations in your life; (h) felt you were on top of things; (i) been angered because of things outside of your control; and (j) felt difficulties were piling up so high that you could not overcome them? We asked participants to indicate their degree of agreement with each statement on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). In the current sample, Cronbach's alphas were .86 (United States) and .66 (Japan).

Pessimism was measured using the Life Orientation Test (Scheier and Carver, 1985). Responses to three independent items ((a) if something can go wrong for me, it will; (b) I hardly ever expect things to go my way; and (c) I rarely count on good things happening to me) were measured on a 5-point scale, ranging from 1 (a lot disagree) to 7 (a lot agree). In the current sample, Cronbach's alphas were .82 (United States) and .51 (Japan).

PANAS-negative adjectives were measured using Mroczek and Kolarz's (1998) scale. Responses to five independent items ((h) afraid? (i) jittery? (j) irritable? (k) ashamed? and (l) upset?) were measured on a 5-point scale, ranging from 1 (none of the time) to 5 (all of the time). In the current sample, Cronbach's alphas were .80 (United States) and .82 (Japan).

The Self-Construal Scale (Singelis, 1994) was used to measure independent and interdependent self-construals. This instrument was divided into two separate subscales, one measuring interdependent self (12 items) and the other measuring independent self (12 items). Each subscale consisted of statements regarding beliefs and attitudes associated with two cultures. Sample items included the following: "I have respect for the authority figures with whom I

interact" (interdependent subscale) and "I prefer to be direct and forthright when dealing with people I have just met" (independent subscale). The items were coded on a 7-point scale measuring degree of agreement with each statement from 1 (strongly disagree) to 7 (strongly agree). In the current sample, Cronbach's alphas were .67 (independent, United States) and .76 (independent, Japan) and .70 (interdependent, United States) and .72 (interdependent, Japan). To determine the number and types of categories of the Self-Construal Scale, a cluster analysis was conducted on the two dimensions: interdependent and independent. The first step was a cluster analysis using Ward's method (Bartholomew et al., 2002). The second step was to examine the dendrogram, which found that the three-, four-, and five-cluster solutions would best fit the data. This study examined and found four-cluster solutions from standardized *z*-scores of independent (ID) and interdependent (IT). The four-cluster solutions were consistent with and supported Kim et al.'s (1996) theory. Statistical analyses of the hypotheses were conducted.

Results

Preliminary analyses

Tables 1 and 2 report descriptive statistics for study variables, and Tables 3 and 4 report correlation analyses for study variables. The mean of interdependent self-construal subscale scores for all participants was 4.73 (SD=0.65), and the mean of independent self-construal subscale scores was 4.71 (SD=0.74). American and Japanese older adult participants' interdependent and independent self-construal scores were entered into the cluster analysis using Ward's method to combine groups. Examination of the dendrogram and the error sum of squares suggested that the three-, four-, and five-cluster solutions would best fit the data. This study obtained the three-, four-, and five-cluster solutions. Each cluster was selected in this study, which examined and found four-cluster solutions from standardized *z*-scores of ID and IT. The four-cluster solutions were consistent with and supported Kim et al.'s (1996) theory: first cluster: *z*-score of IT=-0.64 and ID=0.89; second cluster: *z*-score of IT=0.71 and ID=0.59; third cluster: *z*-score of IT=-0.96 and ID=-0.81; fourth cluster: *z*-score of IT=0.70 and ID=-1.02. Thus, the first cluster is independent, the second cluster is bicultural, the third cluster is marginal, and the fourth cluster is interdependent. As a result, this study found that the four-cluster solution mimicked Kim et al.'s (1996) four-type model of self-construal in the United States, with one group high in both interdependent and independent (bicultural: 35.48% (*n*=578)), low in both interdependent and independent (marginal: 17.07% (*n*=278)), high in interdependent and low in independent (interdependent: 10.99% (*n*=179)), and high in independent and low in interdependent (independent: 13.14% (*n*=214)); and in Japan, with one

Table 1. Mean values and standard deviations for study measures in the United States and Japan.

US study variables	United States		Japan	
	M	SD	M	SD
1. ID	5.20	0.82	4.72	0.65
2. IT	5.17	0.66	4.71	0.73
Positive health and well-being				
3. Self-esteem	38.30	7.34	31.02	5.58
4. Optimism	12.01	2.37	10.00	2.22
5. Subjective well-being	2.89	0.43	2.91	0.51
6. Gratitude	6.26	0.84	5.53	1.13
7. Positive emotions	1.53	0.52	3.07	0.76
8. Satisfaction with life	4.78	1.31	4.07	1.21
Negative health and well-being				
9. Depression	8.73	8.20	9.75	6.96
10. Pessimism	6.10	2.94	8.60	2.20
11. Social anxiety	1.83	0.55	1.81	0.55
12. Negative emotions	1.50	0.55	1.89	0.66
13. Perceived Stress Scale	22.23	6.34	26.11	5.77

ID: independent; IT: interdependent; SD: standard deviation.

group high in both interdependent and independent (bicultural: 4.91% ($n=80$)), low in both interdependent and independent (marginal: 12.28% ($n=200$)), high in interdependent and low in independent (interdependent: 3.07% ($n=50$)), and high in independent and low in interdependent (independent: 3.07% ($n=50$)). Therefore, the four-cluster solution was chosen for the analysis of the hypotheses.

Main analysis

Because the 11 individual psychological dependent variables (positive well-being: self-esteem, optimism, subjective well-being Japanese comparison, gratitude, PANAS-positive adjectives, and satisfaction with life; negative well-being: depression, pessimism, social anxiety, PANAS-negative adjectives, and perceived stress) were all strongly correlated (see Table 2) in terms of differences among groups, a multivariate analysis of covariance (MANCOVA) was conducted of them. Then, a multiple analysis of covariance (ANCOVA) was conducted. The forms of Wilks' Λ were used in the MANCOVA model. Gender and age were

Table 2. Correlations of health and well-being measures in the United States.

United States	1	2	3	4	5	6	7	8	9	10	11
1. Self-esteem	–	.26**	.31**	.26**	.29**	–.16**	.22**	–.25**	–.42**	–.17**	–.25**
2. Optimism	–	–	.17**	.34**	.37**	–.09**	.29**	–.04	.20	–.07*	–.16**
3. Subjective well-being			–	.19**	.35**	–.42**	.38**	–.57**	–.36**	–.43**	–.42**
4. Gratitude				–	.35**	.01**	.14**	–.07**	–.04**	–.01**	–.07**
5. Positive emotions					–	–.20**	.50**	–.26**	–.14**	–.23**	–.30**
6. Satisfaction with life						–	–.37**	.41**	.33**	.82**	.50**
7. Depression							–	–.33**	–.22**	–.37**	–.54**
8. Pessimism								–	.30**	.46**	.41**
9. Social anxiety									–	.37**	.40**
10. Negative emotions										–	.47**
11. Perceived Stress Scale											–

* $p < .05$, ** $p < .01$.

Table 3. Correlations of health and well-being measures in Japan.

Japan	1	2	3	4	5	6	7	8	9	10	11
1. Self-esteem	–	.40**	.05	.19**	.40**	.45**	–.24**	–.44**	–.35**	–.36**	–.54**
2. Optimism		–	.18**	.30**	.30**	.46**	–.10	–.32**	–.15**	–.21**	–.35**
3. Subjective well-being			–	.32**	.17**	.15**	.15**	–.06	.07	–.02	–.07
4. Gratitude				–	.32**	.48**	.07	–.16**	–.11**	–.07**	–.19**
5. Positive emotions					–	.45**	–.06	–.23**	–.28**	–.23**	–.38**
6. Satisfaction with life						–	–.11**	–.36**	–.21**	–.28**	–.44**
7. Depression							–	.18**	.24**	.44**	.33**
8. Pessimism								–	.17**	.25**	.36**
9. Social anxiety									–	.41**	.40**
10. Negative emotions										–	.54**
11. Perceived Stress Scale											–

* $p < .05$, ** $p < .01$.

the covariates, and culture and bicultural groups were independent variables; these were included in the study's MANCOVA and ANCOVA models.

For the MANCOVA, all factors were significant, revealing significant main effects of gender (Wilks' Λ (6, 1395)=0.98, $p < .001$), age (Wilks' Λ (6, 1395)=0.96, $p < .001$), culture (Wilks' Λ (6, 1395)=0.85, $p < .001$), culture types (Wilks' Λ (18, 3946.14)=0.84, $p < .001$), and culture \times culture types (Wilks' Λ (18, 3946.14)=0.94, $p < .001$). Based on the MANCOVA results, ANCOVAs were conducted to find patterns of health and well-being variables from the notions of four types of self-construals. The results of ANCOVA, controlling for gender and age, are shown in Table 5. There were significant main effects of culture (i.e. United States vs Japan) for all dependent variables. Significant main effects of culture types (i.e. bicultural, independent, interdependent, and marginal groups) were also found in all dependent variables except depression and negative emotions. Significant interaction

effects (i.e. culture \times culture types) were found in gratitude and depression.

Pairwise comparisons

Pairwise comparisons with Holm–Bonferroni correction were conducted as post hoc tests for each dependent variable. Because we focus on the bicultural cultural type in comparison with other groups, three contrasts are described below.

First, pairwise comparisons between bicultural and independent groups indicated that significant mean differences were found in 5 of 11 dependent variables: self-esteem, subjective well-being, gratitude, satisfaction with life, and social anxiety (Table 5). Mean scores in the bicultural group were higher than in the independent group for subjective well-being (mean difference=0.18, adjusted $p < .001$), gratitude (mean difference=0.33, adjusted $p < .01$), satisfaction with life (mean difference=0.39, adjusted $p < .01$), and social anxiety (mean difference=0.13, adjusted $p < .05$). For self-esteem, the mean score in the independent group was higher than in the bicultural group (mean difference=1.71, adjusted $p < .05$).

Second, a pairwise comparison between the bicultural and interdependent groups revealed that significant mean differences were found in terms of 8 of 11 dependent variables: self-esteem, optimism, subjective well-being, positive emotions, satisfaction with life, pessimism, social anxiety, and Perceived Stress Scale (Table 5). Mean scores in the bicultural group were higher than in the interdependent group for self-esteem (mean difference=3.21, adjusted $p < .001$), optimism (mean difference=1.07, adjusted $p < .001$), subjective well-being (mean difference=0.11, adjusted $p < .05$), positive emotions (mean difference=0.31, adjusted $p < .001$), and satisfaction with life

Table 4. Number of people in each cluster and culture.

	Culture		Total
	United States	Japan	
Independent	214 (17.13%)	50 (13.16%)	264 (16.21%)
Bicultural	578 (46.28%)	80 (21.05%)	658 (40.39%)
Marginal	278 (22.26%)	200 (52.63%)	478 (29.34%)
Interdependent	179 (14.33%)	50 (13.16%)	229 (14.06%)
Total	1249 (100.00%)	380 (100.00%)	1629 (100%)

ID: independent; IT: interdependent.

Cluster analysis of ID and IT yielded four clusters: first cluster: high ID and low IT—-independent group; second cluster: high ID and high IT—bicultural group; third cluster: low ID and low IT—marginal group; fourth cluster: high IT and low ID—interdependent group.

Table 5. Mean for outcome variables across self-construal types.

Outcome variables	Bicultural	Independent	Interdependent	Marginal	Nationality; F value	Culture types; F value	Interaction; F value
Positive health and well-being							
1. Self-esteem	35.83 ^a	37.53 ^b	32.62 ^c	33.58 ^c	168.76 ^{***}	20.79 ^{***}	1.90
2. Optimism	11.78 ^a	11.50 ^a	10.71 ^b	10.50 ^b	93.20 ^{***}	21.39 ^{***}	0.55
3. Subjective well-being	3.07 ^a	2.89 ^b	2.95 ^b	2.73 ^c	14.26 ^{***}	33.87 ^{***}	0.59
4. Gratitude	6.28 ^{a,c}	5.95 ^b	6.19 ^{b,c}	5.76 ^{b,d}	46.29 ^{***}	20.70 ^{***}	20.76 ^{***}
5. Positive emotions	3.54 ^a	3.53 ^a	3.23 ^b	3.22 ^b	76.41 ^{***}	16.14 ^{***}	1.09
6. Satisfaction with life	4.96 ^a	4.58 ^b	4.42 ^{b,c}	4.19 ^c	38.56 ^{***}	21.42 ^{***}	0.46
Negative health and well-being							
7. Depression	8.44	9.01	9.85	9.85	9.13 ^{**}	2.22	9.51 ^{***}
8. Pessimism	7.20 ^{a,b}	6.70 ^a	7.91 ^c	7.66 ^{b,c}	155.39 ^{***}	7.06 ^{***}	1.96
9. Social anxiety	1.72 ^a	1.60 ^b	2.12 ^c	1.92 ^d	4.86 [*]	37.36 ^{***}	0.96
10. Negative emotions	1.68	1.70	1.79	1.75	97.33 ^{***}	2.13	0.27
11. Perceived Stress Scale	23.05 ^a	22.93 ^a	24.56 ^b	24.74 ^b	75.69 ^{***}	6.74 ^{***}	1.49

Different typefaces beside mean scores mean significant difference between each other, * $p < .05$, ** $p < .01$, *** $p < .001$.

(mean difference = 0.54, adjusted $p < .001$). Mean scores in the interdependent group were higher than in the bicultural group for pessimism (mean difference = 0.71, adjusted $p < .05$), social anxiety (mean difference = 0.40, adjusted $p < .001$), and Perceived Stress Scale (mean difference = 1.51, adjusted $p < .05$).

Third, a pairwise comparison between the bicultural and marginal groups revealed that significant mean differences were found in terms of 8 of 11 dependent variables: self-esteem, optimism, subjective well-being, gratitude, positive emotions, satisfaction with life, social anxiety, and Perceived Stress Scale (Table 5). Mean scores in the bicultural group were higher than in the marginal group for self-esteem (mean difference = 2.24, adjusted $p < .001$), optimism (mean difference = 1.29, adjusted $p < .001$), subjective well-being (mean difference = 0.33, adjusted $p < .001$), gratitude (mean difference = 0.52, adjusted $p < .001$), positive emotions (mean difference = 0.32, adjusted $p < .001$), and satisfaction with life (mean difference = 0.77, adjusted $p < .001$). Mean scores in the marginal group were higher than in the bicultural group for social anxiety (mean difference = 0.20, adjusted $p < .001$) and Perceived Stress Scale (mean difference = 1.69, adjusted $p < .01$).

Additionally, significant interaction effects were found in gratitude and depression. In terms of gratitude, significant simple main effects of culture types were found only in Japan ($F(3, 1421) = 30.05, p < .001, \eta_p^2 = .02$). Pairwise comparisons with Holm–Bonferroni correction indicated that the gratitude score in the bicultural group was higher than in the independent group (mean difference = 0.47, $p < .05$) and marginal group (mean difference = 0.83, $p < .001$) in Japan. In terms of depression, significant simple main effects of culture types were found only in the United States ($F(3, 1390) = 31.50, p < .001, \eta_p^2 = .03$). Pairwise comparisons with Holm–Bonferroni correction indicated that the depression score in the bicultural group was lower than in the marginal (mean difference = 4.16, $p < .001$) and interdependent groups (mean difference = 2.68, $p < .001$) only in the United States.

Discussion and conclusion

This study examined how bicultural identity (in comparison with other types of self-construals) affected perceptions of health and well-being on 11 domain variables for a large national sample of American and Japanese older adults. Using a cluster analysis, we explored the effects of the four types of self-construals (Kim et al., 1996) on health and well-being. Overall, we found that bicultural individuals are most likely to exhibit greater health and psychological well-being across most measures when compared to the other three groups.

Our findings showed lower depression and distress among the bicultural group than in the other groups, in both Japan and the United States. Overall, the bicultural group

had more favorable results on measures of optimism, subjective well-being, gratitude, PANAS-positive adjectives, and satisfaction with life than the other groups. Similarly, the bicultural group exhibited lower scores on depression, pessimism, social anxiety, PANAS-negative adjectives, and perceived stress than the other cultural groups. It may be that due to being grounded in the social networks of both American and Japanese culture, the bicultural participants were better able to manage their own emotional needs through their strong connectedness with and support from individuals and the community. These resources may make them less prone to low levels of well-being. This result is supported by the literature on biculturalism (LaFromboise et al., 1993). Prior research on bicultural individuals has shown that they have an integrated, multicultural frame of reference to which they are fully committed. They exercise personal choice in forming their own clear boundaries and are secure in the new identity that they have created, which incorporates various cultural frames of reference (Bennett, 1993). This study identified the need to consider the possibility that multiple and sometimes contradictory functions may be associated with each self-construal structure, with accompanying implications for one's sense of well-being.

The independent group had higher self-esteem than the other three cultural groups. This study's findings support previous research on independent self-construal (Markus and Kitayama, 1991). The sense of personal control associated with independent self-construal is likely to yield a strong sense of self-worth or high self-esteem. Many studies have shown that self-esteem and a related tendency to self-enhance through social comparison are major predictors of well-being among Americans (Diener and Diener, 1995; Kwan et al., 1997).

However, the interdependent group had higher scores on the undesirable factors of depression (in the United States only), pessimism, social anxiety, and negative emotion than the other three cultural groups (Markus and Kitayama, 1991). Although some studies have found that the interdependent group experienced more distress than the independent group (Barry, 2000), this study did not support such an interpretation. The results indicated no significant differences between the two groups in depression and self-esteem. These findings suggest that interdependent individuals may develop coping strategies by creating structures that help to facilitate their adjustment (Jochen and Lerner, 1999). Notably, the individuals in the interdependent group reported more group orientation and harmony, suggesting a stronger sense of community and social ties. Individuals with high interdependent self-construal would be likely to foster and flourish in an environment that promotes group membership (Cross and Madson, 1997). Thus, as this sample was derived from a Japanese ethnic enclave, this difference seems to be noteworthy. Zhou and Bankston (1998) reported that the Japanese ethnic enclave facilitated a high level of consensus on values and norms and created an effective system of

social control. Thus, when the individuals and their families are connected to the ethnic enclave, they can be shielded from the negative influences of the surrounding neighborhood within which they are marginalized.

The marginal group experienced high levels of negative emotions including depression (in the United States only) and perceived stress. This may indicate that individuals in the marginal group might be unable to use their ethnic networks, notions, and ties as an alternative to their local environments, which may often be located in economically disadvantaged and socially marginal neighborhoods, in order to foster their sociocultural adaptation to mainstream society (Zhou and Bankston, 1998). Consequently, they might experience greater difficulties in achieving and maintaining health and well-being as compared to the bicultural, independent, and interdependent groups. The relative lack of difference between the marginal, independent, and interdependent groups on health and well-being indices is notable and warrants further study. This study's findings support the notion that marginal persons live in two cultures that are not merely different but antagonistic. This notion views identity in a linear sense, according to which individuals either attain membership in the dominant group or they are left with nothing (Stonequist, 1935).

Theoretical implications

Previous research on self-construal has mainly used a one-dimensional model with two types generally associated with two different cultures: independent (primarily Western) and interdependent (East Asian) self-construals. In order to address the bicultural identity perspective, combining degrees of both interdependent and independent self-construals, and its potential contribution to psychological well-being, we used a two-dimensional model that comprised four types: bicultural, marginal, independent, and interdependent (Kim et al., 1996). This approach is derived from the literature on biculturalism (LaFromboise et al., 1993). Alternatively, bicultural individuals might have a complex set of aspects of their identity that help them to identify issues and communicate messages appropriately in specific situations in order to accomplish their desired goals (O'Keefe and Shepherd, 1987).

Some empirical research has explored the four types of self-construals proposed by Kim et al. (1996) and their connection to cultural differences as well as to individual-level differences in social behaviors. The recently growing body of cross-cultural studies on the self has clarified that self-concept is a vital mediator between cultural and individual psychological processes and behaviors (Kim, 2002; Kim et al., 1996). Self-concept has been connected to many of the social behaviors that were previously related to cultural dimensions (such as individualism vs collectivism). The notion of self-concept as a mediator allows us to better specify the role of the self in regulating

preferences for social behaviors. Thus, locating variables that are influenced by culture and social behaviors may advance our understanding of the complexities involved in the impact of culture on social behavior (Kim, 2002; Kim et al., 1996). Amid the rapid demographic changes occurring today, increasing contact is taking place between various cultural groups with different types of self-construals. Therefore, it is recommended that researchers studying other ethnic groups should be attentive to the potential influence of self-construal on group identity and individual well-being.

Practical implications

The findings in this study may have important clinical and practical implications. Our research suggests that interventions intended to foster individual well-being need to go beyond simply encouraging emotional expression and should instead apply a more culturally sensitive perspective regarding emotion management and its relationship to well-being. Specific knowledge about the effects of suppressing emotional expression among diverse groups of individuals may enable mental health professionals to understand the vulnerabilities and resiliencies of specific groups, which, in turn, might allow them to make more well-informed and appropriate treatment accommodations. This knowledge could help professionals to define more precisely when the inhibition of emotional expression may serve as a risk factor for physical and behavioral problems.

Further research is warranted on how interventions related to health status or various health conditions should differ across cultures. For instance, it may be useful for counseling interventions to consider cross-cultural differences in how depression is recognized and validated. In the past, among Euro-Americans, psychological counseling interventions may generally have aimed at increasing people's sense of control, consistent with the dominant cultural influences in this context. For Asians, however, interventions may have sought to increase people's sense of relational orientation and socially supportive networks, again consistent with local cultural influences. It may be that in both cases, previous intervention programs grounded in dominant cultural values have not been as effective in producing a sense of well-being as they could be and that, instead, future interventions should foster bicultural identity. Because bicultural identity is increasing amid globalization, bicultural or multicultural views should be promoted. The findings of this study suggest the strength of bicultural identity (comprising aspects of both interdependent and independent self-construals) in enhancing psychological well-being. They also suggest that the relationship between self-construal and how individuals perceive their community—a relationship that has not been heavily emphasized in previous research—may have a connection to mental health indicators.

Limitation and the future direction

Several limitations of this study should be noted. First, it used a cross-sectional method, so inferences regarding causation in the relationship between the four different types of self-construals and health and well-being should be made cautiously. One's health and well-being affect how one orients and perceives the self. A longitudinal method could be more appropriate for determining the direction of effects between self-construal and health and well-being. Second, behavioral genetics research has identified various types of relationships between genotype and environment (Reiss et al., 2000). Thus, this study might not exclude the possibility that genetic factors also affect the relationship between self-orientation and one's health and well-being. Third, because this study was conducted using nationally representative sample data on non-clinical individuals in the United States and Japan, the range of severity on several health and well-being indices was restricted. Finally, all measurements in this study were self-reported. Thus, using integrative methods might offer a better understanding of the meaning of self-orientation and individual perceptions of one's social context that could improve health and well-being.

Despite these limitations, this study contributes to the literature by suggesting that the four different types of self-construals might influence the health and well-being of a large national sample of American and Japanese older adults. This study confirmed that bicultural individuals (who are both highly independent and interdependent in terms of self-construal) tend to exhibit greater perceived positive health and well-being across divergent measures when compared to the other three self-construal groups (marginal, interdependent, and independent). Furthermore, it showed that bicultural individuals are more likely to report higher levels of happiness than other groups, presumably because they are able to use their bicultural characteristics to adjust more effectively to their multiple cultural contexts.

One theoretical contribution of this study is that it suggests the possibility of empirically substantiating cultural differences between the United States and Japan from various psychological and communication perspectives in the social sciences. Previous theoretical perspectives from these fields have emphasized individual-level processes, but there have been few empirical findings with regard to bicultural identity and its relationship to psychological well-being. One's culture is an umbrella concept, inherently vague and difficult if not impossible to appropriately operationalize. However, the concept of self-construal sheds light on broad dimensions of cultural variability by identifying them at the level of individual analysis. This theoretical perspective suggests that it may be both legitimate and quite parsimonious to define bicultural individuals as people who incorporate both independent and interdependent forms of self-construal, thereby bridging cross-cultural differences (Kim, 2010).

Although prior research exists on identity-related determinants of effective psychological adjustment, few studies have been conducted on the impact of identity structure on well-being outcomes. As globalization continues, more people will have the opportunity to incorporate the frameworks of two or more cultures. People with multicultural personalities will have the flexibility to enhance their psychological adaptability and adjustment. Because the development of identity may involve the adoption of certain values, goals, and beliefs, bicultural self-construal may influence the motivational aspects of one's identity.

Future studies should be designed to investigate possible links between subjective, self-reported measures and physiological measures. Very strong associations between interdependence and physiological measures of well-being may be found in Asia, where interdependent social relationships carry high social value. This research agenda may merit further investigations using culturally valid measures of interdependence along with physiological measures.

One's self-construal may promote the appearance of motivational tension in the formulation of one's personal identity; it may also contribute to identity crises. One's level of well-being may be related to one's success in establishing a self-construal that satisfies one's personal identity in a given cultural context (Pilarska, 2014). Thus, the relationship between the two significant factors of biculturalism and bicultural self-construal, and the impact of both factors on one's sense of well-being, should be further explored. Moreover, the multiple functions of self-construal might be a fruitful research area within the field of identity formation.

Acknowledgements

The authors thank Prof. Kiyoshi Kurokawa, Global Health Innovation Policy Program (GHIPP) and the staff members for their invaluable assistances.

Funding

This research was funded by the Grant-in-Aid for Academic Research Support Expenses, Otsuka Pharmaceutical Co., Ltd., Grant-in-Aid for Scientific Research B (25285113), Grant-in-Aid for Scientific Research C (25380893), and Grant-in-Aid for Scientific Research C (15K04142).

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