

Core self-evaluations in Japan: relative effects on job satisfaction, life satisfaction, and happiness

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Summary

The present study tested, in a non-Western culture (Japan), the relative validity in predicting job satisfaction, life satisfaction, and happiness of core self-evaluations (CSE), positive and negative affectivity (PA/NA), and the Neutral Objects Satisfaction Questionnaire (NOSQ). Consistent with previous results in primarily Western cultures, the four lower-order traits that comprise CSE—self-esteem, generalized self-efficacy, locus of control, and neuroticism—indicated a higher-order factor. While each lower-order trait was itself related to the study's criteria, the CSE concept displayed in general, higher correlations with the dependent variables, and explained incremental variance in two of the study's three outcomes beyond PA, NA, and the NOSQ. These results indicate initial support for the generalizability of CSE in a culture that differs in many respects from Western cultures, and suggest that judgments of satisfaction and happiness in a non-Western culture have a dispositional source. Copyright © 2005 John Wiley & Sons, Ltd.

Introduction

Research on the dispositional source of job satisfaction has had a long and prosperous history. One recent approach focuses on a broad personality trait termed *core self-evaluations* (CSE; Judge, Locke, & Kluger, 1997), which are fundamental premises that individuals hold about themselves and their functioning in the world (Judge & Larsen, 2001). Drawing on research in several disciplines, Judge, Locke, and Durham, (1997) argued that people's appraisals of the external world are affected not only by the attributes of objects and people's desires with respect to those objects, but also by the assumptions people hold about themselves, other people, and the world.

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The CSE concept was originally proposed as an explanatory variable of job satisfaction, and recent studies have offered significant evidence of the concept's validity (Judge & Bono, 2001; Judge, Bono, & Locke, 2000; Judge, Locke, Durham, & Kluger, 1998). Beyond job satisfaction, Judge and colleagues have related CSE to life satisfaction (Judge, Locke et al., 1998), job performance (Judge & Bono, 2001), and motivation (Erez & Judge, 2001; Judge, Erez, & Bono, 1998). In studies that consider relations between disposition and work outcomes, the CSE concept emerges as a valid predictor of both affective and objective work outcomes.

Core self-evaluations is a higher-order concept comprised of four more specific lower-order traits: (1) *self-esteem*—the basic appraisal people make of themselves and the overall value that one places on himself as a person, (2) *generalized self-efficacy*—an estimate of one's fundamental ability to cope with life's exigencies, to perform, and to be successful, (3) *locus of control*—the degree to which individuals believe that they control events in their lives, and (4) *neuroticism*—the tendency to exhibit poor emotional adjustment and experience negative affects such as fear, hostility, and depression (Goldberg, 1990). Some studies have used *emotional stability* in place of neuroticism to describe the fourth core trait (Judge & Bono, 2001), such that individuals low in neuroticism are thought to have high emotional stability.

Neuroticism, locus of control, generalized self-efficacy, and self-esteem are proposed to be functionally distinct, but two recent studies reported high correlations ($r > 0.60$) among the traits (Judge, Erez, & Bono, 1998; Judge, Erez, Bono, & Thoresen, 2002). In each of these studies, the authors examined the factor structure of the four traits and constrained the traits to load on a single, higher-order latent factor. The CSE concept emerged to explain correlations among the traits (e.g., Judge et al., 2002), providing some integration of personality and psychology in the relation of affective disposition to motivation, satisfaction, and dysfunctional thinking.

The CSE concept is among several approaches to examining the dispositional source of satisfaction, but other measures, such as positive and negative affectivity (PA/NA; Watson, Clark, & Tellegen, 1988) and the Neutral Objects Satisfaction Questionnaire (NOSQ; Weitz, 1952) have also shown strong relations with job satisfaction (for a review, see Judge & Larsen, 2001). Indeed, research on affect has provided support for the notion that judgments of satisfaction and happiness have a dispositional source. Happiness and life satisfaction are both facets of 'subjective well-being', where happiness is regarded as '... the frequency and intensity of pleasant emotions' (Diener, 2000: p. 36) and life satisfaction indicates a person's assessment of his life in general or how close his life is to the ideal (Schimmack, Radhakrishnan, Oishi, Dzokoto, & Ahadi, 2002). Judge et al. (1998) and Schimmack et al. (2002) each provided empirical and theoretical support for the notion that measures of personality and stable affective dispositions relate to judgments of subjective well-being.

While CSE, PA/NA, and the NOSQ are each related to judgments of satisfaction and happiness, the relative validity of these measures has yet to be fully explored. Whereas cross-cultural validation studies of other personality measures have found consistent factor patterns and concept validity (Bond, 1994; Campbell et al., 1996; Yoon, Schmidt, & Ilies, 2002), similar evidence has not yet been published for the CSE trait. That is, each of the four lower-order traits has been examined separately across culture, but no study has utilized a non-Western sample to examine the four traits as indicators of a common core.

In that vein, the purpose of the present study is to test the higher-order factor structure of the CSE concept using a Japanese sample, and to examine the relative validity of three measures of affective disposition in predicting job satisfaction, life satisfaction, and happiness. The purpose of the study is an important one in that while previous job satisfaction research has studied PA/NA (Connolly & Viswesvaran, 2000), the NOSQ (Judge & Hulin, 1993; Judge & Locke, 1993), and psychological well-being (Wright & Cropanzano, 2000), no previous research has compared the relative validities of these frameworks in a non-Western culture.

Japan is a particularly useful sample for the examination of attitudes at work as its culture is starkly different from that of the U.S. It is important to determine whether any or all I/O psychology findings are culture specific (Dickson, Hanges, & Lord, 2001) and certainly, the most challenging test of a cross cultural replication is to compare cultures that are significantly different. As Japan differs from the U.S. on each of Hofstede's (1980) dimensions of national culture—individualism/collectivism, masculinity/femininity, power distance, and uncertainty avoidance—the two countries certainly fit that criterion.

Hypotheses

Nearly all the research on CSE as a higher-order concept has been conducted in the United States. The only exception is that Judge et al. (1998) reported evidence for a sample of Israelis. While there may exist some difference between Israeli and U.S. national cultures (Robbins, 1993), Judge et al. noted that the Israeli culture is, in many ways, 'very Western' (p. 32). Thus, with tests conducted only in Western cultures, it is unknown whether or not the core concept will generalize to national cultures that are very different.

The most widely cited model for examining differences in national culture was introduced by Hofstede (1980), who defined national culture along four primary dimensions: (1) *individualism/collectivism*—the degree to which people in a country prefer to act as individuals rather than as members of a group, (2) *power distance*—the degree to which people accept hierarchical power structures in organizations and institutions, (3) *masculinity/femininity*—the degree to which people generally act according to values such as dominance and assertiveness (masculine) or modesty and tenderness (feminine), and 4) *uncertainty avoidance*—the extent to which people are willing to accept risk and their preference for structure.

Despite the fact that the Hofstede (1980) model is over 20 year old, no reasonable alternative has emerged to take its place. There do exist critiques of Hofstede's model (Sondergaard, 1994), particularly in regard to its dimensionality and general application, yet only recently has work attempted to expand our understanding of factors that shape human behavior around the world (Javidan & House, 2001). The GLOBE project (House, Javidan, & Dorfman, 2001), an on-going, global examination of leadership and culture, is one such effort, but this stream of research relies heavily on Hofstede's original dimensions. Thus, the Hofstede model remains a viable platform for evaluating similarities and differences across culture.

As Hofstede (1980) observed, Japan is, in general, more collectivistic than the United States, and the Japanese are, in general, more 'masculine,' more accepting of power differences, and less willing to accept uncertainty than their American counterparts. Beyond collectivism and masculinity, individuals in collectivist cultures may not rely heavily on self-relevant cues when forming judgments of self-worth. Markus and Kitayama (1991) noted, '... people in Japan and America [hold] strikingly divergent construals of the self, others, and the interdependence of the two' (p. 224). That said, consistent with arguments that suggest basic human tendencies are independent of cultural influence (McCrae & Costa, 1997), empirical support exists for the cross-cultural validity of the lower-order core traits.

Ghorpade, Hattrup, and Lackritz (1999), for example, found that the Rosenberg (1965) Self-Esteem Scale and the James (1957) Locus of Control Scale each exhibited a similar pattern of factor loadings in U.S. and Indian samples. According to the authors, these measures exhibit construct and scaling equivalence across culture. Zhang and Norvilitis (2002) also tested the internal consistency and convergent validity of the Rosenberg (1965) Self-Esteem scale in a Chinese sample, and even though one item in the scale appeared to be ambiguous, the scale demonstrated convergent validity and a factor structure that was similar to a U.S. comparison group. Further,

Yoon et al., (2002) showed construct validity of the five-factor model of personality (including neuroticism) in a Korean sample by testing the factor structure of the broad personality domains (neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness) and the specific facets of each dimension. Despite mean differences on several facet scales, a five-factor model provided the best fit.

We are mindful of arguments that suggest the need for positive self-regard does not generalize to a Japanese culture (Heine, Lehman, Markus, & Kitayama, 1999) and that self-beliefs are less stable in Japanese samples (Campbell et al., 1996). Indeed, whereas high self-esteem is regarded as a fundamental component of self-evaluation in individualistic societies, there is some suggestion that self-referenced evaluations may not be central to a person's identity in collectivistic cultures (Bond & Torenzky, 1973; Suh, Diener, Oishi, & Triandis, 1998). However, whereas individuals in a collectivist culture may utilize different references than those in an individualistic culture, we expect that a positive self-concept is a basic psychological need across culture.

Hypothesis 1: Self-esteem, generalized self-efficacy, neuroticism, and locus of control will indicate a CSE concept in an Eastern culture (Japan).

In their meta-analytic review of self-esteem, generalized self-efficacy, locus of control, and emotional stability, Judge and Bono (2001) showed that all four traits display positive, non-zero correlations of similar magnitude with job satisfaction. However, their meta-analysis did not address the issue of whether the relationships of the core traits with satisfaction generalize to an Eastern culture. Thus, it may be fruitful to examine evidence on the relationships between the lower-order traits and affective outcomes across culture.

In studies of non-Western samples, the four traits appear to have expected relations with job satisfaction. Cheng (1994) showed, for example, in a sample of 558 secondary school teachers, that locus of control was a 'critical indicator of multiple aspects of job attitudes and organizational perceptions' (p. 187), such that teachers with an internal locus of control tended to be more satisfied with co-workers and rewards than teachers with an external locus of control. Similar results have been reported in China (Zhang, 2000), Greece (Nikolaou & Robertson, 2001), and Germany (Schyns & von Collani, 2002), suggesting that the lower order traits may be related to affective outcomes in non-Western cultures.

In addition, the four core traits also appear to be related to judgments of life satisfaction and happiness. Schimmack et al. (2002) found that extraversion and neuroticism predicted life satisfaction to the same degree in U.S., German, and Japanese samples. These relationships were stronger in individualistic cultures (U.S. and Germany) than in the collectivist culture (Japan), but a significant personality—life satisfaction relationship existed in Japan as well. Kwan, Bond, and Singelis (1997) reported a significant positive relationship between self-esteem and life satisfaction in a sample of college students in Hong Kong, and Diener and Diener (1995) reported a positive correlation between self-esteem and life satisfaction in a sample of college students in Japan. Thus, even though authors have suggested that individuals in collectivist and individualistic cultures utilize different references when forming judgments of satisfaction (Suh et al., 1998), the core traits appear to have positive relations with job attitudes across culture. We therefore expect that each trait will be related to affective outcomes in an Eastern culture (Japan).

Hypothesis 2: The four CSE traits will be related to: (a) job satisfaction, (b) life satisfaction, and (c) happiness, with the relations of self-esteem, generalized self-efficacy, and locus of control being positive and the relations of neuroticism being negative.

In personality measurement for personnel selection, a debate exists over whether broad measures of personality are superior to specific measures of narrow traits. While Paunonen, Rothstein, and Jackson (1999) argued that the use of multiple unidimensional predictors of job performance provides important advantages (empirical accuracy and psychological meaningfulness) over the use of aggregate predictors, Ones and Viswesvaran (1996) argued that these advantages were mainly due to erroneous conventional beliefs and statistical artifacts. As Ones and Viswesvaran (1996) suggested, coefficient alpha reliabilities for broad factors are usually higher than those found in the narrow personality variables, and general trait factors, like conscientiousness, have greater criterion specific validities than narrower facets, like dependability and achievement orientation (Stewart, 1999). Thus, we expect that the broad dispositional CSE concept will be more reliable than the four sub-traits and display stronger relationships with each of the study's criteria.

Furthermore, job satisfaction is often regarded as a broad psychological concept (Locke, 1976; Weiss, 2002), and broad personality traits may be best suited to predict broadly defined outcomes (Judge, Bono, Erez, Locke, & Thoresen, 2002). Consistent with the principle of correspondence (Ajzen & Fishbein, 1977), Judge et al. noted, '... psychological concepts [should] be matched in terms of their generality or specificity if maximum empirical validity or theoretical understanding is to be gained' (p. 55). Studies that have compared the explanatory power of the broad CSE concept to each of the specific traits have tended to show the core trait as a more valuable predictor (Erez & Judge, 2001; Judge et al., 2002). That is, the core trait tends to explain variance in motivation, performance, and satisfaction beyond the lower-order traits, whereas the specific traits add little beyond the core trait.

Hypothesis 3: The validity of the CSE concept in predicting job satisfaction (H-3a), life satisfaction (H-3b), and happiness (H-3c) in an Eastern culture (Japan) will be higher than each of the four sub-traits that indicate the core concept.

As investigation into the dispositional source of job satisfaction has evolved, several measures of affective disposition have been introduced. Watson, Clark, and colleagues have suggested that affective disposition is composed of two facets: positive and negative affectivity. High energy, enthusiasm, and pleasurable engagement characterize Positive Affectivity (PA), while distress, unpleasing engagement, and nervousness characterize Negative Affectivity (NA; Watson, Clark, & Tellegen, 1988). Several studies have reported significant relations of PA and NA to job satisfaction (Agho, Mueller, & Price, 1993; Brief, Butcher, & Roberson, 1995), and a recent meta-analysis of 27 articles found significant true score correlations of PA and NA with job satisfaction (Connolly & Viswesvaran, 2000). However, there does exist some inconsistency in the predictive validity of PA and NA. Necowitz and Roznowski (1994), for example, found that NA was related to some facets of job satisfaction but not others, while Watson and Slack (1993) showed that NA was significantly related to facets of job satisfaction but not significantly related to overall job satisfaction. Drawing on these observed inconsistencies and on the results presented by Judge et al. (1998), who found that CSE explained incremental variance in job satisfaction controlling for PA and NA, we expect that CSE will explain incremental variance in the study's criteria beyond PA and NA.

Another important measure of affective disposition is the Neutral Objects Satisfaction Questionnaire (NOSQ), which was adapted from Weitz's (1952) checklist of facially neutral objects common to everyday life. The idea behind the NOSQ was that individuals who are dissatisfied with a list of otherwise neutral items are predisposed to be unhappy with most aspects of their lives, including their jobs (Judge & Larsen, 2001). While this measure has been found to display significant relations with facets of job satisfaction (Judge & Hulin, 1993; Judge & Locke, 1993), its usefulness in predicting job attitudes beyond other dispositional measures is unclear. For example, Judge, Locke et al. (1998) conducted a usefulness analysis and found that the NOSQ did not explain incremental variance in job

satisfaction controlling for CSE (though CSE did explain incremental variance controlling for the NOSQ). Thus, we expect that CSE will explain incremental variance in the study's criteria beyond the NOSQ.

Hypothesis 4: Core self-evaluations will explain incremental variance in job satisfaction (H-4a), life satisfaction (H-4b), and happiness (H-4c) beyond PA, NA, and the NOSQ.

Organizational Context

The Organization

The company in the current study was a Japanese subsidiary of one of the world's leading pharmaceutical companies. With headquarters in New York City, the parent company has 150 international subsidiaries, 115 000 employees worldwide, and annual revenues exceeding \$50 billion (US). The company leads in the development and distribution of major pharmaceutical products including both prescription and over-the-counter medicines. The Japanese subsidiary is headquartered in Tokyo, with annual sales of \$4 billion (US) and 6200 employees in research, development, and marketing.

The Industry

Japan's pharmaceutical market is the 2nd largest in the world behind the U.S., accounting for 19 percent of the global market. The Japanese market is dominated by local providers with 90 percent of national sales coming from domestic production. Imports account for less than 10 percent of the total market. Many of the foreign pharmaceutical companies in Japan are large U.S. and European drug companies that manufacture and sell their products locally and/or license compounds to Japanese drug manufacturers. The U.S. and Germany each hold approximately 20 percent of the Japanese import market for pharmaceuticals, followed by Great Britain (11.5 percent), Sweden (10 percent), and Switzerland (8 percent). As Japan's economy boomed during the 1980s, many foreign companies made sizeable investments in the Japanese economy, highlighted by U.S. companies, who held a 25 percent share in Japan's \$20 billion medical equipment market at the time of this study.

An Aging Population

An important social trend in Japan provides interesting context for the current study. Longer life expectancies have driven significant economic and political changes in the healthcare and medical services industries, and the Japanese society, in general, has been aging more rapidly than most other advanced industrialized societies. In the year 2000, for example, Japan's rate of aging was five times that of France and three times that of the U.S. By the year 2050, one of every three Japanese citizens will be above the retirement age, extending the country's need for medical and nursing care services. Japan's aging population, which will eventually lead to enormous growth in the demand for high-quality, cost effective medical equipment, inspired sweeping changes in the medical industry during the late 1990s. Tight regulations in the medical market has been a burden on Japan's National Health Insurance system, which runs a deficit of nearly \$7.7 billion (US) per year.

Deregulation

Historically, the Japanese government allowed only limited private-sector access to the medical and healthcare services industry. However, in March of 1998, just several months before the start of this study, Japan's Ministry of Health and Welfare announced a plan to deregulate the medical industry by the year 2000. Major reforms began in May 1998, when policies were initiated to separate new product testing from new product approval for imported medical devices. Under this initiative, foreign clinical trial data would earn higher levels of acceptability, allowing for the introduction of new, innovative foreign medical products, many of which were expected to increase cost efficiency and improve the overall quality of health care in Japan.

The company that participated in this study was a large Japanese subsidiary of an American pharmaceutical company. The Japanese subsidiary employed nearly 900 professionals in sales, administration, and operations. Of particular interest were the sales representatives, who were responsible for introducing pharmaceutical products to medical doctors and for developing professional relationships with new and existing clients. Tests of general mental ability and salesmanship are used during the selection of sales and marketing representatives, and each salesperson is expected to earn certification by an external association of medical professionals.

In each fiscal year, sales representatives are given specific personal goals, which are expected to reflect a desired share of the local market for each product. In addition, sales representatives are expected to develop their knowledge on relevant diseases, medicine, and pharmacology, and to have expert understanding of the national regulations associated with the introduction, marketing, and delivery of medical equipment and supply.

Method

Research setting, participants, and procedure

Two of the authors met with Human Resources (HR) professionals in a Japanese subsidiary of an American pharmaceutical company, and agreed on the research design, survey administration, and time requirements for the current study. A total of 349 sales representatives were identified as potential participants. The HR division distributed a set of questionnaires via in-house mail and participants were asked to return their completed material to the principal investigator's laboratory. Instructions with the survey material indicated that research on job and life attitudes was being conducted by a professor at one of Japan's largest universities. Confidentiality was assured, though respondents who wished to receive personal feedback (approximately 20 per cent) were advised to write their names on the survey's cover page.

Data collection took place over 5 weeks, and of the 349 initial participants, 318 (91.1 per cent) returned completed questionnaires. In subsequent analyses, missing data and listwise deletion reduced the final sample size to 271. Participants' ages ranged from 24–36 years (mean age = 31, SD = 2.87), and organizational tenure ranged from 2 to 13 years (mean tenure = 6; SD = 2.70). All participants had obtained a college degree, and as the vast majority of the participants were male (96.3 per cent), female participants (12) were excluded from the final sample.

Measures

Unless otherwise noted, all variables were measured with 10-point Likert scales, 0 = strongly disagree, 10 = strongly agree.

NOSQ

Affective disposition was measured with 23 items of the Neutral Objects Satisfaction Questionnaire (NOSQ; Weitz, 1952), which asks participants to indicate their level of satisfaction (1 = dissatisfied, 2 = neutral, 3 = satisfied) with items common in everyday life such as 'the local newspapers' and 'telephone service.'

Positive affectivity (PA) and negative affectivity (NA)

Affective disposition was also measured with the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988), in which participants indicate how often they generally experience ten positive emotions (e.g., interested, excited, alert), and ten negative emotions (e.g., distressed, guilty, scared).

Self-esteem

Self-esteem was measured with six items taken from Rosenberg's (1965) 10-item scale. Participants were asked to indicate their agreement with statements such as, 'I feel that I have a number of good qualities' and 'I take a positive attitude toward myself.'

Neuroticism

Neuroticism was measured with six items from Eysenck Personality Inventory Neuroticism Scale (Eysenck & Eysenck, 1968), on which participants indicate their level of agreement with statements such as, 'I'm a worrier', 'I am a nervous person', and 'My feelings are easily hurt.' High scores indicate a greater degree of neuroticism than low scores.

Generalized self-efficacy

Using the Judge et al. (1998) scale, participants indicated their level of agreement with six items such as, 'I am strong enough to overcome life's struggles' and 'I can handle the situations that life brings.'

Locus of control

We used Levenson's (1981) measure of locus of control, in which participants indicated their level of agreement with twelve statements such as 'Whether or not I get to be a leader depends mostly on my ability' and 'My life is determined by my own actions.'

Overall job satisfaction

We measured overall job satisfaction with five items taken from the Brayfield and Rothe's (1951) measure, where participants responded to items such as 'I feel fairly well satisfied with my present job' and 'Most days I am enthusiastic about my work.'

Life satisfaction

Life satisfaction was measured with the five-item Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffins, 1985). Participants indicated their agreement with statements such as, 'The conditions of my life are excellent' and 'I am satisfied with my life.'

Happiness

We measured happiness with five items from Underwood and Froming's (1980) measure, in which participants indicated their agreement with items such as, 'I generally look at the sunny side of life', and 'I consider myself a happy person.'

To mitigate the tendency for cultural response bias on self-descriptive questionnaires (Watkins & Cheung, 1995), we used 10-point Likert scales for most of the variables in the study. Although many of the measures were originally developed with shorter response scales (e.g., Rosenberg's measure used a 4-point Likert scale), Hui and Triandis (1989) suggested using 10-point scales to reduce bias associated with extreme response or modesty response tendencies characteristic of non-Western samples. Some authors argue for the use of shortened Likert scales when testing constructs across culture (Clarke III, 2001), but Hui and Triandis noted that a 10-point scale allows subjects to map responses along a wider subjective range, reducing the bias associated with culturally influenced response tendencies.

All scales used in the study were translated into Japanese by two experts in organizational psychology and human resources management. Translators were native Japanese, fluent in English, and well published in the cross-cultural literature on scale measurement and job attitudes. Rather than rely strictly on literal translation, each scale item was translated to assure natural expression of Japanese language. Two authors separately translated the English scales into Japanese, and then cross-checked each other's translated version to insure that each item captured cross-cultural content validity and contextual equivalence to the original scales.

Analysis

To investigate the structure of the CSE concept, we used principal-components analysis (PCA) and confirmatory factor analysis (CFA) in SPSS 11.0. PCA is useful for extracting factor scores to be used in subsequent analyses (Klein, 1998). We used PCA to uncover the latent structure of the CSE trait and to determine if correlations among the four lower-order traits could be explained by a higher-order factor. CFA procedures permit testing the number and structure of factors in the data. Covariance structure modeling was estimated in the present study by using LISREL 8 (Jöreskog & Sörbom, 1993) to test the hypothesized structure of the core concept.

As noted previously, cultural differences exist between Japan and the U.S. To determine the magnitude of these differences, we utilized country ratings along each of Hofstede's (1980) dimensions to calculate *d*-scores (Cohen, 1988). The *d*-score was calculated by dividing the difference between Japan and the U.S. on each dimension by the dimension's standard deviation (based on scores for all available countries). According to Cohen, *d*-scores can be interpreted as weak ($d \leq 0.20$ or less), medium ($d \cong 0.50$), or strong ($d \cong 0.80$). For each dimension, calculated differences between Japan and the U.S. were medium or strong (individualism: $d = -1.79$; masculinity: $d = 1.83$; uncertainty avoidance: $d = 1.93$; power distance: $d = 0.65$), further supporting the notion that national cultures between the two countries are quite different.

Results

Descriptive statistics, intercorrelations among variables, and scale reliabilities are presented in Table 1. Given the high intercorrelations among the four lower level traits (average intercorrelation, $r = 0.44$), we used principal-components analysis to investigate the dimensionality of these dispositions. A single CSE factor was extracted by factor-analyzing the four individual traits at the scale level. This factor had an eigenvalue greater than 1.0 (eigenvalue = 2.36) and explained 59.01 per cent of the variance in the scales, providing support for hypothesis 1.

Table 1. Means (M), standard deviations (SD), and intercorrelations among variables

	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Weitz measure	48.65	5.49	(0.77)										
2. Positive affectivity	56.04	11.34	0.22*	(0.76)									
3. Negative affectivity	42.27	16.25	-0.23*	-0.22*	(0.85)								
4. Self-esteem	38.29	8.26	0.28*	0.38*	-0.33*	(0.76)							
5. Generalized self-efficacy	38.01	8.17	0.24*	0.40*	-0.33*	0.64*	(0.80)						
6. Locus of control	76.91	13.31	0.16	0.36*	-0.36*	0.40*	0.50*	(0.74)					
7. Neuroticism	30.80	10.52	-0.23*	-0.24*	0.63*	-0.39*	-0.41*	-0.33*	(0.86)				
8. Core composite	0.00	1.00	0.29*	0.45*	-0.54*	0.79*	0.83*	0.73*	-0.70*	(0.76)			
9. Job satisfaction	23.09	7.26	0.26*	0.64*	-0.33*	0.36*	0.44*	0.33*	-0.37*	0.49*	(0.78)		
10. Life satisfaction	25.07	8.14	0.38*	0.47*	-0.27*	0.53*	0.48*	0.26*	-0.32*	0.52*	0.54*	(0.86)	
11. Happiness	31.62	8.37	0.27*	0.40*	-0.49*	0.57*	0.56*	0.37*	-0.54*	0.67*	0.45*	0.55*	(0.78)

Note: Core composite is core self-evaluations composite. Coefficient alpha reliability estimates are on the diagonal. Listwise $n = 271$.

* $p < 0.05$.

To determine whether a higher-order factor existed to integrate the individual traits, we estimated a latent variable structural equation model. A minimum of three indicators is needed to identify a latent concept (Klein, 1998). For CSE, this was not an issue as it had four hypothesized indicators. For the individual traits, however, additional indicators were needed. As recommended by Schaubroeck, Ganster, and Fox (1992), the items of each respective trait were broken into three parcels (items 1&6, 2&5, 3&4 of the self-esteem, neuroticism, and generalized self-efficacy scale) and combined to define the respective higher-order factors. In general, parcels tend to be more reliable than the individual items and allow for more accurate estimation of latent variable models than when using the individual items alone.

Before estimating the LISREL model, we performed a confirmatory factor analysis wherein three parcels for each trait were constrained to load on their four respective factors, and the four traits were constrained to load on one core trait. This model adequately fit the data (NFI = 0.96, CFI = 0.97, RMSR = 0.06) and parcels loaded strongly and significantly on their respective factors (the average factor loading was 0.78). Results of structural analyses are provided in Figure 1. Each of the loadings of the higher-order concepts on the second-order factor was significant—self-esteem, 0.81; neuroticism, -0.52; generalized self-efficacy, 0.98; locus of control, 0.64—which suggests that the CSE concept is a latent factor that integrates the four lower level traits.

Prior to considering relationships among the core traits and the study's criteria, we specified a series of structural equation models to determine if the dependent variables were themselves distinct. Life satisfaction and happiness are each components of subjective well-being, but the two are specified and examined as separate concepts (Diener, 2000). Scale items for each outcome measure were combined into parcels and constrained to load on three separate factors. The model adequately fit the data (NFI = 0.96, CFI = 0.97, RMSR = 0.05) and parcels displayed significant correlations with their respective factors (average factor loading = 0.78).

In addition, we tested three structural equations models to determine if simpler models provided an equivalent fit to the data. In a two-factor model, for example, items from job and life satisfaction scales were constrained to load on one factor, while items for happiness were specified to load on a separate factor. In a similar two-factor model, items from the life satisfaction and happiness scales were constrained to load on one factor while items for job satisfaction were constrained to load on another. Each of the simpler models, however, exhibited a significant decrement in fit from the three-factor model.

As expected, the CSE concept displayed positive, non-zero correlations with all three of the study's outcomes (job satisfaction, $r = 0.49$; life satisfaction, $r = 0.52$; and happiness, $r = 0.67$), suggesting that those with positive self-evaluations were happier, and reported higher levels of job and life

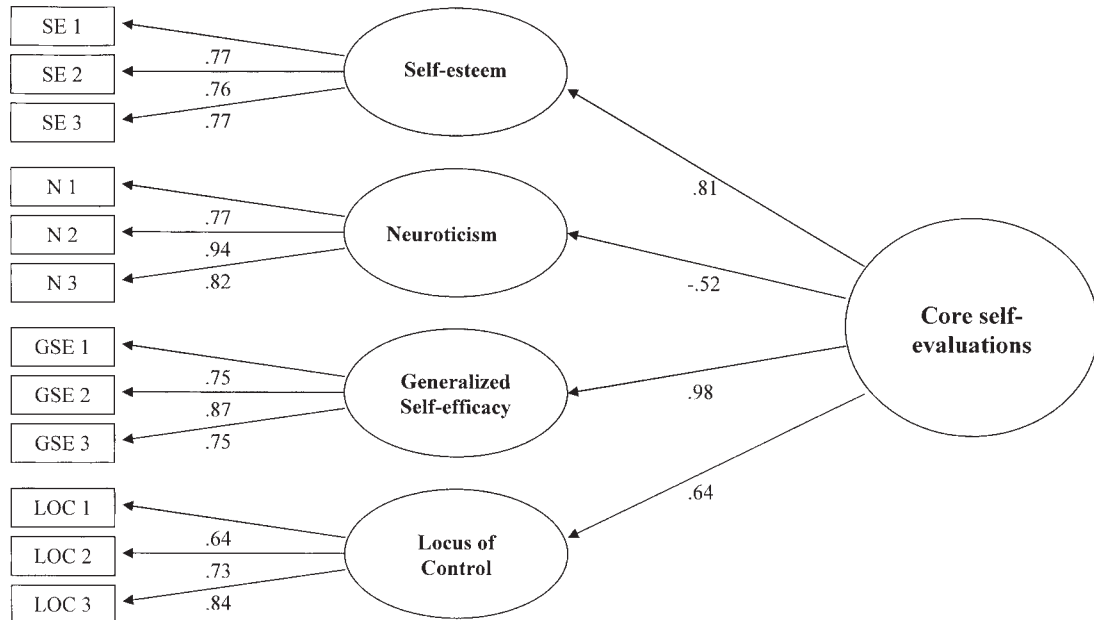


Figure 1. LISREL estimates of the model relating dispositions to the CSE concept. All estimates are significant at $p < 0.01$

satisfaction. All four of the core traits—self-esteem, generalized self-efficacy, locus of control, and neuroticism—were significantly related to the study's outcome variables as well, providing support for hypothesis 2. Correlations with job satisfaction ranged from $r = 0.44$ for generalized self-efficacy to $r = 0.34$ for locus of control. Correlations with life satisfaction ranged from $r = 0.53$ for self-esteem to $r = 0.26$ for locus of control, and from $r = 0.57$ (self-esteem) to $r = 0.37$ (locus of control) with happiness.

Consistent with hypothesis 3, the CSE concept displayed, in general, higher correlations with the study's outcomes than the lower-order traits. The correlations between happiness and the four traits, for example, are all significant—self-esteem ($r = 0.57$, $p < 0.05$), generalized self-efficacy ($r = 0.56$, $p < 0.05$), locus of control ($r = 0.37$, $p < 0.05$), neuroticism ($r = -0.54$, $p < 0.05$)—but not as strong as the relation with the core trait ($r = 0.67$, $p < 0.05$). Results are similar for job and life satisfaction, and suggest that when the four traits are investigated as one core disposition, they prove to be, in general, more strongly associated with the criteria than when used in isolation.

To determine if these observed differences were meaningful, we used the technique proposed by Cohen and Cohen (1983) to test the significance of differences between dependent correlations. We compared zero-order correlations between the core trait and each criterion to the correlations yielded by each lower-order trait. Of the 12 possible comparisons, 9 were significant at $\alpha = 0.05$ (the core trait was similar to generalized self-efficacy in its relations to job and life satisfaction, and similar to self-esteem in its relation to life satisfaction).

To examine further the contribution of the core trait beyond each lower-order trait, we conducted a usefulness analysis (Darlington, 1990) in similar form to Erez and Judge (2001). In a series of linear regression equations, a single lower-order trait (e.g., self-esteem) was entered in step one to predict the criteria, and then the CSE factor was entered in step two. If the beta coefficient in step two is significant, it can be concluded that the CSE factor is a meaningful predictor beyond the lower-order trait. We then entered the core trait and the lower-order traits in reverse order and estimated their relative valid-

Table 2. Regression results of core self-evaluations composite and lower-order traits

	Job satisfaction			Life satisfaction			Happiness		
	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2
1. Self-esteem	0.34*	0.12*		0.53*	0.28*		0.58*	0.33*	
2. CSE	0.53*	0.22*	0.10*	0.28*	0.31*	0.04*	0.57*	0.46*	0.13*
1. CSE	0.47*	0.22*		0.52*	0.27*		0.67*	0.45*	
2. Self-esteem	0.00	0.22*	0.00	0.31*	0.30*	0.03*	0.12	0.46*	0.01
1. Generalized self-efficacy	0.42*	0.18*		0.49*	0.24*		0.57*	0.32*	
2. CSE	0.39*	0.22*	0.04*	0.38*	0.28*	0.04*	0.66*	0.45*	0.13*
1. CSE	0.47*	0.22*		0.52*	0.27*		0.67*	0.45*	
2. Generalized self-efficacy	0.09	0.22*	0.00	0.17	0.28*	0.01	0.00	0.45*	0.00
1. Locus of control	0.31*	0.10*		0.25*	0.06*		0.37*	0.14*	
2. CSE	0.52*	0.22*	0.12*	0.72*	0.31*	0.25*	0.85*	0.48*	0.34*
1. CSE	0.47*	0.22*		0.52*	0.27*		0.67*	0.45*	
2. Locus of control	-0.07	0.22*	0.00	-0.28*	0.30*	0.03*	-0.24*	0.48*	0.03*
1. Neuroticism	-0.36*	0.13*		-0.33*	0.11*		-0.53*	0.28*	
2. CSE	0.43*	0.22*	0.09*	0.57*	0.27*	0.16*	0.58*	0.46*	0.18*
1. CSE	0.47*	0.22*		0.52*	0.27*		0.67*	0.45*	
2. Neuroticism	-0.06	0.22*	0.00	0.07	0.27*	0.00	-0.13*	0.46*	0.01*

Note: Beta coefficients and R^2 values in step 1 indicate the contribution of the variable when entered as a single predictor of the outcome.

* $p < 0.05$.

ities. Results of this analysis are presented in Table 2. The core trait increased multiple correlations in all 12 relationships beyond the individual traits, whereas the individual traits explained variance beyond the core trait in only 4 of the 12 relationships (self-esteem—life satisfaction, locus of control—life satisfaction, and happiness, neuroticism—happiness). Taken together, these results provide support for hypothesis 3 and suggest that the core trait is, in general, a more valuable predictor than the individual traits.

Relation of CSE to affective disposition

As PA, NA, and the NOSQ are among the most common measures of affective disposition, we were interested in the relation between these measures and CSE. CSE was significantly correlated with PA, NA, and the NOSQ ($r = 0.45$, $r = -0.54$, and $r = 0.29$, respectively), and given these correlations, we undertook several analyses to investigate the role of PA/NA and NOSQ relative to CSE in explaining the dispositional source of satisfaction and happiness.

The composite CSE trait appears to be more highly related to two of the study's three criteria than the other trait taxonomies in this study. Correlations between life satisfaction and the three measures ranged from $r = 0.47$ for PA to $r = -0.27$ for NA, but the composite CSE trait correlated at $r = 0.52$ with life satisfaction. While correlations between happiness and the three measures ranged from $r = -0.49$ for negative affectivity to $r = 0.27$ for the NOSQ, the composite CSE trait correlated at $r = 0.67$ with happiness. Positive affectivity ($r = 0.64$) was more highly correlated with job satisfaction than CSE ($r = 0.49$), suggesting that those who are more likely to experience and express positive emotions tend to make favorable judgments about their jobs.

To evaluate the relative validity of all four measures of affective disposition, we conducted a series of simple linear regression equations. Results are summarized in Table 3. When the four measures

Table 3. Full regression results

	All 4		- CSE		- NOSQ		- PA		- NA	
	β	R^2	β	R^2	β	R^2	β	R^2	β	R^2
Job satisfaction										
Weitz measure (NOSQ)	0.08*	0.46*	0.10*	0.43*		0.45*	0.14*	0.25*	0.09*	0.45*
Positive affectivity (PA)	0.51*		0.56*		0.52*				0.51*	
Negative affectivity (NA)	-0.10		-0.20*		-0.12*		-0.07			
Core self-evaluations (CSE)	0.17*				0.18*		0.40*		0.22*	
Life satisfaction										
Weitz measure (NOSQ)	0.22*	0.37*	0.26*	0.30*		0.33*	0.25*	0.32*	0.22*	0.38*
Positive affectivity (PA)	0.27*		0.37*		0.29*				0.26*	
Negative affectivity (NA)	0.02		-0.14*		-0.01		0.03			
Core self-evaluations (CSE)	0.34*				0.38*		0.46*		0.34*	
Happiness										
Weitz measure (NOSQ)	0.06	0.48*	0.13*	0.34*		0.48*	0.08	0.47*	0.07	0.46*
Positive affectivity (PA)	0.12*		0.26*		0.13*				0.11*	
Negative affectivity (NA)	-0.18*		-0.42*		-0.19*		-0.16*			
Core self-evaluations (CSE)	0.50*				0.51*		0.56*		0.60*	

Note: * $p < 0.05$.

were entered in the same regression equation, PA and CSE had significant effects on all three outcomes. Controlling for the other three measures, CSE had significant effects on job satisfaction ($\beta = 0.17$), life satisfaction ($\beta = 0.34$) and happiness ($\beta = 0.50$), while PA displayed effects of similar magnitude ($\beta = 0.51$, $\beta = 0.27$, $\beta = 0.12$, respectively). Contrary to results reported in studies of Western samples (Judge et al., 1998), PA emerged as a more valuable predictor of job satisfaction than the core trait, suggesting that experienced positive emotion is a particularly meaningful predictor of job satisfaction in a collectivist culture.

Table 4 provides a summary of regression results that evaluate the incremental validity explained by each measure of affective disposition. When evaluated as a single independent predictor, the CSE trait explained 27 per cent of the variance in life satisfaction. When entered in step 2 of a hierarchical regression equation, the core trait explained an additional 7 per cent variance beyond the other three measures combined, similar to the level of incremental validity in life satisfaction explained by PA (6 per cent) and the NOSQ (5 per cent). For happiness and job satisfaction, the CSE trait explained 45 per cent and 22 per cent, respectively, of the variance when entered alone, and an

Table 4. Incremental validity of dispositional traits in predicting criteria

Trait	Job satisfaction		Life satisfaction		Happiness	
	R^2 alone	ΔR^2	R^2 alone	ΔR^2	R^2 alone	ΔR^2
Weitz measure	0.07*	0.01	0.14*	0.05*	0.08*	0.00
Positive affectivity	0.38*	0.21*	0.21*	0.06*	0.14*	0.01*
Negative affectivity	0.11*	0.01	0.08*	0.00	0.24*	0.02*
CSE	0.22*	0.02*	0.27*	0.07*	0.45*	0.14*

Note: R^2 alone is variance explained by trait when entered into regression alone. ΔR^2 was computed by adding trait on last step of the equation with the other three traits already in the equation.

* $p < 0.05$.

additional 14 per cent and 2 per cent variance beyond the three measures combined. Once again, PA appeared to be the strongest predictor of job satisfaction, explaining 38 per cent of its variance when entered alone, and an additional 21 per cent beyond the other three measures.

Worth noting, PA and the CSE trait explained variance across all three outcomes, and significant incremental variance beyond the other three measures combined. NA, for example, explained 11 per cent of the variance in job satisfaction when entered as a single predictor, but did not account for any incremental variance beyond the other three measures. These results indicate that PA and CSE consistently explain significant variance in affective outcomes. Further, the four measures combined to account for significant variance in all three outcomes—job satisfaction, $R^2 = 0.43$; life satisfaction, $R^2 = 0.37$; happiness, $R^2 = 0.43$ —suggesting that a sizeable portion of the variance in judgments of satisfaction and happiness is explained by dispositional sources.

Discussion

The current study tested the latent factor structure of the core self-evaluations (CSE) concept in an Eastern culture, evaluated relationships among the concept's four lower-order traits, estimated relationships between CSE and judgments of job satisfaction, life satisfaction, and happiness, and tested the relative validity of the core concept to PA, NA, and the NOSQ.

Whereas some authors have argued that judgments of satisfaction and happiness in a collectivist culture rely on the existence of harmonious relationships rather than on positive self-regard (Diener & Diener, 1995; Oishi, Diener, Lucas, & Suh, 1999), results of the current study indicate that a positive self-concept is fundamental to the formation of job and life attitudes. There have been mixed results regarding the universal influence of positive self-regard (Heine et al., 1999) and the manner in which self-relevant judgments are formed (Markus & Kitayama, 1991; Schimmack et al., 2002), but the current study replicates results of studies conducted in the U.S., and identifies a psychological phenomenon which may be universal. That is, positive self-regard is a valuable predictor of satisfaction and happiness not only in individualistic cultures (in which judgments of the world rely on self-referenced appraisal), but also in collectivistic cultures as well (in which attitudes depend in part on the quality of relationships one has with others).

Consistent with other cross-cultural studies of self-concept (e.g., Diener & Diener, 1995) participants in the current study reported lower mean scale scores on each of the core traits than were reported by Judge et al. (1998). This may indicate a modesty bias of the Japanese (Chen, Lee, & Stevenson, 1995). However, despite these observed differences, a single latent factor emerged to explain high correlations among the traits, supporting, in part, the generalizability of the CSE concept and the notion that global dispositional traits exist (McCrae et al., 2000). That said, while we argue here that the CSE trait generalizes to an Eastern culture (Japan), we do not mean to imply that the trait generalizes to every Eastern culture. Japan is certainly different from the U.S., with notable differences along Hofstede's (1980b) individualism/collectivism (IC) and uncertainty avoidance dimensions, but there exist other countries that emerge as more different from the U.S. than Japan. For example, whereas the U.S. rates among the most individualistic countries, Japan is regarded as 'medium' along the IC dimension, not quite as collectivist as China or Hong Kong (Hofstede, 1993). Japan tends to be more collectivist than the U.S., but not as collectivist as other Eastern cultures.

As expected, core self-evaluations were positively associated with job satisfaction. However, PA, which was measured at the general rather than the job level, correlated more highly with job satisfaction than CSE. One would have expected a general measure of PA to correlate more highly with life satisfaction and happiness, but the opposite was true in this particular study. One possible explanation

is that participants treated the PA scale as a measure of work-related affectivity rather than overall positive affectivity. Even though directions explicitly asked participants to describe their feelings 'in general,' the placement of the PA scale within the questionnaire (immediately after a set of questions regarding job characteristics) may have led participants to describe work-related affectivity instead. Further, as data were collected in a work environment and participants received surveys from a company representative, perhaps the affectivity scale was regarded as work-related. Indeed, survey responses may be biased by the context in which questionnaires are placed (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

Another possible explanation is that PA has an advantage over CSE in predicting affective outcomes. While the Neuroticism component of CSE is strictly affective, the other traits are not. Thus, as PA is a purely affective measure (e.g., interested, excited, and enthusiastic), it should correlate more highly with affective concepts (e.g., job satisfaction) than with measures that are cognitive and more description-focused (Brief, 1998). This may also explain why CSE, which was originally introduced as an explanatory variable of job satisfaction, was more strongly associated with life satisfaction and happiness. While CSE is a measure of affective disposition, the concept contains cognitive components (e.g., self-efficacy), which emerge as strongly associated with cognitive assessments of satisfaction, such as life satisfaction, the 'cognitive component' of subjective well-being (Schimmack et al., 2002).

The dimensional structure of affect used in this study—PA and NA—is not the only one. Russell and colleagues have argued that affect is best represented by a different rotation, that of pleasantness and activation (Russell, 1980). We used PA and NA because research has indicated that both traits are significantly correlated with job satisfaction (Thoresen, Kaplan, & Barsky, 2003). There is early evidence that pleasantness-based measures of affect predict performance (Wright & Staw, 1999), but there is much less research on the relationships between pleasantness and activation dimensions and job satisfaction. Future research could study this other dimensional structure with integrative job satisfaction models.

An interesting aspect of the relationship between PA and CSE was that the overall correlation between them was relatively high ($r=0.45$), consistent with the Judge et al. (1998) study ($r=0.48$). In the present study, CSE and NA were negatively correlated ($r=-0.54$) which is not greatly different from the correlation ($r=-0.64$) reported by Judge, Locke et al. (1998). The high correlations between CSE and PA/NA suggest that these are measures of relatively similar concepts, and that judgments of the self are similar to affective dispositions. Judge et al. (1998) suggested that CSE could be a cause of PA in that thinking well of oneself should make one happy, but there is no way to determine whether the observed correlation is due to cultural factors or to the translation of items into another language.

Limitations and Recommendations

The current study correlated measures of attitudes without manipulation of the independent variables, so we cannot assert causal connections among the variables. However, several factors make causal inferences plausible. First, the current study replicated findings from studies in which attitude information was obtained from significant others (Judge et al., 1998), mitigating the same source bias concern. Second, Judge et al. have built a theoretical network of relationships based on previous studies which limits the plausibility of alternative causal interpretations. For example, it is highly unlikely that perceptions of the job, studied in previous work (Judge et al., 1998), would be a cause of CSE. Third, we know that core evaluations affect objective outcome variables such as job performance and

job choice (Judge & Bono, 2001). Several of Judge's previous studies were longitudinal (Judge & Hulin, 1993; Judge et al., 1998), which does allow for causal inference of CSE on work-related outcomes. Fourth, clinical observation suggests how people feel about themselves and how they see their lives and the world (Lorr & Wunderlich, 1988).

For practical implementation of the study, we used shortened versions of the scales for two of the four core traits. It is possible that doing so attenuated observed reliability estimates and thus limits the external validity of our results. However, we tested correspondence between the full length measures of each trait and the shortened versions used in this study by collecting data in a laboratory setting (undergraduate students, $n = 232$). For each trait, the correlation between the full length and shortened scales exceeded conventional levels of scale reliability ($r > 0.90$). While each of the scales used in this study displayed adequate reliability ($\alpha > 0.70$), future studies might use the 12-item Core Self-evaluations Scale (Judge, Erez, Bono, & Thoresen, 2003), which has equivalent construct validity to a weighted factor of the 4 lower-order traits.

All studies that attempt to evaluate psychological constructs across culture are subject to limitations pertaining to response style (Steers, 1989). In particular, there may exist differences in how American and Japanese individuals respond to Likert-type questionnaires (e.g., use of extreme categories), and a tendency for self-reported levels of self-esteem to differ across culture and race (e.g., modesty bias). Estimates of self-esteem may be particularly affected by response style as some participants artificially inflate their level of self-esteem in a socially desirable manner (Bachman & O'Malley, 1984). Further, using multiple measures of personality, Yoon et al. (2002) observed that Korean subjects regularly reported lower mean scales scores than their American counterparts. The authors attributed observed differences to the tendency for Asians to be more modest when providing self-evaluation.

The current study used an all male sample of medical sales professionals. While there was no systematic bias in our data collection process, the low turnout among women may be indicative of work trends in Japan, and more specifically, women's representation in the Japanese workforce. In general, women tend to be underrepresented in the work force of most developed countries (Mammen & Paxson, 2000), and the level of participation among women is particularly low in countries that adhere strongly to traditional, masculine values (Sama & Papamarcos, 2000). Future studies of disposition and job satisfaction should strive to be more inclusive of women, and capture occupations in which women are more adequately represented.

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