A Cross-Cultural Study of Daily Variability in Self-Esteem and Mood

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Abstract

Every day for two weeks, participants at four sites (2 in the US, 1 in Canada, and 1 in Japan) described their self-esteem and mood and they described the events that occurred each day. Multilevel random coefficient modeling analyses found that the self-esteem of Japanese participants changed more in reaction to daily social events (both positive and negative) than it did for North American participants. For negative social events, the Japanese were more reactive in terms of depressed mood than North Americans, whereas they were less reactive in terms of positive affect. In contrast, the Japanese were less reactive to negative achievement events than North Americans in terms of positive affect and anxious mood.
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Interest in daily variability in psychological states has grown rapidly over the past two decades, and much of this research has concerned how daily psychological states covary with the events that occur in people’s daily lives. As is the case with much psychological research, much of this research has studied the daily lives of residents of the United States, predominantly Caucasian Americans, most of whom could be broadly described as ethnically European-American. Although such studies are valuable, they need to be complemented by studies of the daily lives of other cultural groups, both within the US and in other countries.

People’s daily lives occur and are embedded within the cultures in which they live, and a full accounting of how people react to daily events needs to include these cultural contexts. Accordingly, the present study examined the covariation between daily events and daily self-esteem and mood across four different groups representing different socio-cultural milieus. Two groups were from the US. One of these groups was predominantly white and European-American and the other was black and African-American. A third group was from Canada and was predominantly white and of European ancestry. The fourth group was from Japan and was of Japanese ancestry. Collecting data from these groups allowed us to compare North Americans to Japanese and to compare meaningfully different groups of North Americans to each other. Our general expectation was that, despite the differences among them, the three North American groups would be more similar to each other than they would be to the Japanese. More specific hypotheses are presented below.

It is important to note that most of the existing research on cultural differences in the constructs examined in the present study has relied on between-person analyses. For example, correlations among a set of measures are calculated for different groups and then the correlations are compared (e.g., Diener, Diener, & Diener, 1995). Although such research has been and will continue to be informative, between-person relationships cannot be presumed to be the same as within-person relationships. Relationships at the two levels of analysis are mathematically independent (Nezlek, 2001) and may
Cross-cultural mood represent different psychological processes (Tennen & Affleck, 1996). A detailed explanation of such possibilities, including examples, is presented in Nezlek (2001). Although we had no reason to expect that the results of our within-person analyses would be dramatically different from the results of between-person analyses, the possibility existed.

With the important exception of collecting data cross-culturally, the design of this study was similar to the design of numerous previous studies on daily events and psychological states. Each day participants described their self-esteem and mood, and they described the events that occurred. Self-esteem and mood were chosen because they are two constructs about which a reasonable amount of cross-cultural research has been done and written. These data allowed us to examine within-person relationships between daily events and daily self-esteem and mood, and they allowed us to examine cross-cultural differences in these relationships.

Daily events can be conceptualized along various dimensions, and for present purposes, events were differentiated on the basis of whether they were social or achievement related. Such a distinction has a long history in psychology ranging from Freud's "Arbeit und Liebe" (Work and Love), to Bales’s socioemotionality vs. instrumentality (Bales, 1950), to more recent work on communion vs. agency. The universality of such a distinction across time and theoretical perspectives suggests that social and achievement domains represent important, perhaps fundamental, dimensions of people's day-to-day lives. Moreover, as discussed below, certain cultural differences may be more important when considering social events than when considering achievement events, and vice versa.

Studies of daily events have relied on various models, and Eysenck’s model of personality (e.g., Eysenck & Eysenck, 1985) or variations thereof has probably been the most common. Studies relying on this model have tended to emphasize affective reactions to daily events, particularly negative affective reactions to stressful events (e.g., Bolger & Schilling, 1991; van Eck, Nicolson, & Berkhof, 1998). Moreover, given the biological basis of Eysenck’s model, this approach does not emphasize cultural differences.

Recently, a complementary model of understanding reactions to daily events, tentatively labeled
Cross-cultural mood

the self-model, has been proposed (Nezlek, 2005; Nezlek & Plesko, 2003). This model assumes that understanding reactions to daily events needs to consider the impact events have on the self and on various components of the self. One of the bases of this model is Rogers’s theory of the self, particularly his beliefs about conditions of self-worth (Rogers, 1961). To Rogers, mental health was defined in terms of how much people’s self-worth changes in response to environmental feedback (such as daily events). Less change (or a more unconditional sense of self in Rogers’s terminology) is associated with better mental health.

Although Rogers emphasizes self-worth (or self-esteem) in his theory, his model can readily be extended to include numerous aspects of the self, and studies in this tradition have found relationships between daily events and various self-relevant constructs such as self-esteem and perceptions of control over the environment (e.g., Butler, Hokanson, & Flynn, 1998, Nezlek & Gable, 2001). Moreover, it appears that daily events and various self relevant constructs covary independently of the covariation between events and affect (Nezlek, 2005; Nezlek & Plesko, 2003), suggesting that a self-based model concerns a meaningfully different domain than that concerned by affectively based models.

Like Eysenck, Rogers assumed a sort of universality of his model, and cultural differences per se did not figure heavily in his theory. Nevertheless, the centrality of the self in Rogers’s theory provides an important link to the growing body of research on cultural differences in the self and on cultural differences in relationships between the self and various constructs. More specifically, if reactions to daily events are understood in terms of the self, cultural differences in self-definition might moderate such reactions – people with different self definitions may react differently to the same events, and it is this possibility that guided the present study.

There is growing agreement that there are important cultural differences in how the self is defined or conceptualized. One of the more important of these differences reflects the extent to which people think of themselves as individuals or as members of collectives, a distinction that is frequently referred to as individualism vs. collectivism or independent vs. interdependent when discussing self-relevant constructs. See Oysermann, Coon, and Kemmelmeier (2002) for a discussion of these and
related terms. For the most part, research suggests that Asians (particularly East Asians) tend to have a less independent sense of self than Westerners (i.e., Northern and Western Europeans and North Americans). Again, see Oysermann et al. (2002) for a review and possible limitations on these and similar summary statements.

Such differences in self definition have been extended to include examination of cultural differences in self worth and in the maintenance of self worth. For example, Heine (2005) suggests that Westerners maintain self worth by promoting their self-esteem, whereas East Asians do so by “saving face.” Within this context, face is defined as ‘the respectability and/or deference which a person can claim for himself from others by virtue of the relative position he occupies in his social network and the degree to which he is functioned adequately in that position’ (Ho, 1976, p. 883).” Self-esteem is defined individualistically as the evaluation of the self and its components. A similar distinction was made by Cohen and Hoshino-Browne (2005). They distinguished insider and outsider perspectives on the self and the social world. Within their framework, Westerners tend to see the world from the point of view of the self, whereas East Asians tend to see the self from the point of view of how the social world perceives them.

In terms of the present study, this research on cultural differences suggested that the self-esteem of East Asians, as individuals with a less independent sense of self, should be more sensitive to social events than the self-esteem of individuals with a more independent sense of self, such as North Americans. Accordingly, our first hypothesis was that the daily self-esteem of our Japanese participants would covary more strongly with daily social events than the self-esteem of our North American participants. Consistent with considerable previous research, we expected that daily self-esteem would be positively related to positive social events and would be negatively related to negative social events for both groups. We believed however, that these within-person relationships would be stronger (more positive and more negative respectively) for the Japanese than they would be for North Americans.

Research on cultural differences also concerns differences in emotions under the assumption that people’s emotions are strongly influenced by their culture’s predominant patterns of action and
interaction (e.g., Kitayama, Markus, & Kurokawa, 2000). Consistent with this emphasis, in the present study, we also examined daily variability in affect. Moreover, focusing on cultural differences in emotional or affective reactions to daily events provides links to research based on Eysenck’s model and to research suggesting that psychological adjustment should be considered as an affective phenomenon (e.g., Clark & Watson, 1991). Broadly speaking, research on affective expression and experience suggests that East Asians should be less reactive to daily events, particularly regarding positive feelings such as happiness (e.g., Heine et al., 1999). Accordingly, our second hypothesis was that within-person relationships between daily mood and daily events would be weaker for Japanese participants than for North Americans, particularly for positive moods.

Our third hypothesis concerned reactions to achievement events, particularly failure. In their review, Heine, Lehman, Markus, and Kityama (1999) discuss various characteristics the Japanese may possess such as greater self-criticism and self-discipline that should influence how they react to achievement feedback, particularly negative feedback such as failure. Heine et al. suggest that socialization and social norms in Japan focus more on weaknesses and overcoming those weaknesses than they do in North America.

Along the same lines, Heine et al. (1999) believe that the Japanese, compared to North Americans, place relatively more value on effort, perseverance, and endurance than on success. Both greater self-criticism and self-discipline should be associated with diminished reactions to failure. Assuming that the Japanese are “more concerned with the journey than the destination” (Heine et al., 1999; p. 771) than North Americans, we expected the Japanese to react less strongly to achievement events, particularly negative achievement events, than North Americans. This prediction is also consistent with the results of Heine et al. (2001) who found that the Japanese, compared to North Americans, tended to treat failure (on tasks that were not socially focused) as diagnostic and tended to react to failure with renewed effort.

The foregoing discussion and hypotheses concerned reactivity to events, and no attention was paid to mean differences in daily well-being primarily because such mean differences were not the focus
of this article. Nevertheless, the data we collected allowed us to examine mean differences. Consistent with previous research (reviewed in Heine et al., 1999), compared to North Americans, we expected Japanese participants to report lower levels of self-esteem and lower levels of affect.

Method

Participants

Participants were 90 students attending the College of William & Mary in the US (WM), 65 students attending Hampton University, a historically Black college in the US (HU), 102 students attending the University of Western Ontario in Canada (UWO), and 99 students attending either Kurume, Fukuoka Educational, Yamaguchi Prefectural, or Yamaguchi Universities in Japan (JP).

Measures

Daily self-esteem was measured with items 3, 6, 7, and 10 of the Rosenberg Self-Esteem scale (Rosenberg, 1965) with response scales reworded to refer to how participants felt that day. These items were “Today…I felt like a failure; I felt that I had many good qualities; I thought I was no good at all; on the whole, I was satisfied with myself.” These items have been used successfully in previous studies (e.g., Nezlek & Plesko, 2003). Daily self-esteem was operationally defined as the mean response to these three items. These questions were answered using 7-point scales with higher numbers indicating greater agreement with the item.

Each day, participants rated their daily affect by indicating how they felt during the day using a circumplex model (e.g., Feldman Barrett & Russell, 1998) as a basis for these ratings. Participants rated how enthusiastic, happy, proud, alert, and excited they were (PA – positive activation) and how nervous, stressed, tense, upset, and embarrassed they were (NA – negative activation). They also rated how calm, satisfied, relaxed, peaceful, and content they were (PD – positive deactivation), and how depressed, sluggish, sad, bored, and disappointed they were (ND – negative deactivation). Participants responded using 7-point scales with endpoints labeled "Did not feel this way at all " and "Felt this way very strongly," and a midpoint (4) labeled “Felt this way moderately." For each participant, for each day, four different measures were calculated. One was the mean response to all the items measuring
PA, another the mean for the NA items, and so forth.

Daily events were measured using a subset of items from the Daily Events Survey (DES; Butler et al., 1994). In the present study, 22 of the 40 events from the DES were measured, 12 positive and 10 negative, with equal numbers of social and achievement events. This set of events has been used successfully in past research (e.g., Nezlek & Gable, 2001; Nezlek & Plesko, 2003). These events included: "Went out to eat with a friend/date" (social positive), "Tried to do homework and couldn't understand it" (achievement negative), "Did well on a school or work task (e.g. test, assignment, job duty)" (achievement positive), "Had plans fall through to spend time with someone special" (social negative). In addition to the items from the DES, four items, each representing a combination of positive-negative and social-achievement, were created to measure other events that may have occurred. For example, other positive social events were measured using the item "Had other type of pleasant event (not listed above) with friends, family, or date".

A total of 26 events were measured, 7 positive social, 7 positive achievement, 6 negative social, and 6 negative achievement. Each day, participants rated each event using the following scale: 0 = did not occur, 1 = occurred and not important, 2 = occurred and somewhat important, 3 = occurred and pretty important, 4 = occurred and extremely important. For each day, ratings of events were averaged to create event composite scores. One score represented positive social events, another negative social events, a third represented positive social events, and a fourth represented negative achievement events.

Procedure

Across all sites, the procedure was similar. Participants attended an introductory meeting during which the study was explained. Participants were told that they would have to provide data every day for two weeks at the end of each day. For the three English speaking sites participants were told how to use a website to provide their data. For the Japanese site, most participants did not have ready access to computers at the end of each day, and so 92 of 99 participants provided data using pencil and paper measures.

One advantage of web-based data collection is the ability to document exactly when data were
provided; the date and time of data entry are recorded by the server. On this basis, the data of 13 participants were excluded. In addition, the data for some individual days for some participants were excluded because they were not entered as per instructions. This left 343 participants (WM – 89; HU – 65; UWO – 89; JP – 99) who provided a total of 4715 days of data ($M = 13.8$ days, $SD = 2.62$). All participants provided at least 5 daily measures, and 95% provided at least 9.

Results

Within the general terminology of multilevel modeling, the primary analyses were two level models. Measures for days were nested within people, and for each person, coefficients were estimated representing the within-person (or day-to-day) relationships between daily self-esteem and daily events and between daily mood and daily events. In multilevel terminology, such coefficients are referred to as slopes to distinguish them from intercepts. In addition, analyses were done to determine if these within-person relationships varied as a function of site (or culture). Descriptions of the strategy underlying these analyses can be found in Nezlek (2001, 2003).

The first set of analyses estimated means for the daily measures, and compared means across sites. The level 1 model was “totally unconditional” in that no predictors were entered.

$$y_{ij} = \beta_{0j} + r_{ij}$$

In this model, $y_{ij}$ is a daily measure of adjustment for person $j$ on day $i$, $\beta_{0j}$ is a random coefficient representing the mean of $y$ for person $j$ (across the $i$ days for which each person provided data), $r_{ij}$ represents the error associated with each measure, and the variance of $r_{ij}$ constitutes the day level residual (or error) variance.

Differences among the four sites were examined at level 2 with the following model:

$$\beta_{0j} = \gamma_{01} (WM) + \gamma_{02} (HU) + \gamma_{03} (UWO) + \gamma_{04} (JP) + u_{0j}.$$ 

In these no intercept models, WM, HU, UWO, and JP were dummy-coded variables representing each site, and so the resulting coefficients represented the means for each site. These means were compared using chi-squared based tests of fixed effects (Bryk & Raudenbush, 1992; Nezlek, 2001). One test compared the mean of the means for the three North American sites to the mean for the Japanese site.
This was followed by paired comparisons of each site against the other. The results of these analyses are presented in Table 1.

The results of these analyses were quite consistent. The means for the two US samples (WM and HU) were higher than means for the Canadian (UWO) and Japanese (JP) samples for measures of daily self-esteem, daily PA, and daily PD. Moreover, for all of these measures, the means for the Japanese sample were lower than means for the Canadian sample. In terms of daily well-being, these data clearly indicate that American participants had higher daily well-being than Canadian participants, who in turn had higher well-being than Japanese participants.

Differences across the four sites in mean negative affect and mean daily events were not as consistent as differences for the other measures. Moreover, although there were differences across the sites in daily negative affect, these differences were much smaller than differences in positive affect and daily self-esteem. Participants from HU report lower levels of NA than participants from the other 3 sites. Participants in the 3 North American sites reported more positive events than Japanese participants, whereas participants from HU and UWO reported more negative events than WM and JP participants.

**Daily Self-Esteem, Mood, and Daily Events**

The next set of analyses examined relationships between daily self-esteem, daily mood, and daily events. The level 1 (or within-person) model for these analyses was:

\[ y_{ij} = \beta_{0j} + \beta_{1j} (\text{PosSoc}) + \beta_{2j} (\text{NegSoc}) + \beta_{3j} (\text{PosAch}) + \beta_{4j} (\text{NegAch}) + e_{ij}. \]

In this model, \( \beta_{1j}, \beta_{2j}, \beta_{3j}, \text{ and } \beta_{4j} \) are random coefficients (slopes) representing the relationships between daily adjustment and positive and negative, social and achievement event scores respectively. Event scores were group-mean centered. In this case, group-centering refers to the fact that the slopes and intercepts were estimated for each person based on deviations from that person’s mean event scores. This is functionally equivalent to calculating a within-person regression equation for each person. This meant that individual (and site level) differences in event scores did not contribute to estimates of mean slopes. See Nezlek (2001) for a discussion of centering options in studies of daily
Differences in slopes across the four sites were examined at level 2 with a model similar to that used to examine site differences in means. For example, the following equation examined site differences in the social positive event slope:

$$\beta_{1j} = \gamma_{11} \text{ (WM)} + \gamma_{12} \text{ (HU)} + \gamma_{13} \text{ (UWO)} + \gamma_{14} \text{ (JP)} + u_{1j}.$$ 

In these no intercept models, WM, HU, UWO, and JP were dummy-coded variables representing each site, and so the resulting coefficients represented the mean slopes (i.e., mean within-person relationships) for each site. Mean slopes were compared using chi-squared based tests of fixed effects. One test compared the average of the means for the three North American sites to the mean for the Japanese site. This was followed by paired comparisons of each site against the other. Mean slopes represent the expected change in a particular outcome measure for each 1.0 unit change in an event score.

Social Events

The mean coefficients between daily social events and daily self-esteem and mood are presented in Table 2. Consistent with previous research, across all four sites, participants’ self-esteem was positively related to daily positive social events. There were differences across sites in the strength of these relationships however. As hypothesized, the daily self-esteem of Japanese participants was more strongly related (positively) to daily positive social events than the self-esteem of participants from the other three sites (.40 vs. a mean of .24).

Similarly, and consistent with previous research, across all four sites, participants’ self-esteem was negatively related to daily negative social events. There were also differences in the strength of these relationships across sites. As hypothesized, the self-esteem of the Japanese was more strongly related (negatively) to negative social events than the self-esteem of participants from the other three sites (-.72 vs. a mean of -.26). The greater sensitivity of the Japanese to negative social feedback was also reflected in the stronger relationship between negative social events and depressed mood (ND) for the Japanese compared to the three North American sites (.72 vs. a mean of .48). Incidentally, there
were no differences among the three North American sites in mean slopes between self-esteem and positive social events or between self-esteem and negative social events.

Also as hypothesized, the Japanese reacted less strongly affectively to social events than participants from the other sites in terms of positive affect. Whereas the PA and PD of participants from the three North American sites were significantly negatively related to negative social event scores (means of -.24 and -.27 for PA and PD), the PA and PD of Japanese participants were not significantly related to negative social events. Similarly, whereas NA was significantly negatively related to positive social event scores for the three North American sites (mean of -.21), the NA of Japanese participants was weakly, positively related to positive social events.

There were no site differences in relationships between ND and positive social events. All four sites had negative coefficients of approximately .30. There were also no site differences in relationships between NA and negative social events. All four sites had coefficients of approximately .50.

Achievement Events

The mean coefficients between daily achievement events and daily self-esteem and mood are presented in Table 3. As hypothesized, Japanese participants reacted less strongly to negative achievement events than North American participants in terms of daily PA (-.23 vs. -.02), daily PD (-.32 vs. -.09), and daily NA (.40 vs. .21). Moreover, consistent with our expectations about the lack of Japanese reactivity in terms of positive affect, negative achievement event slopes for the Japanese sample were not significantly different from 0 for daily PA. There were however, no significant site differences in the relationships between negative achievement events and self-esteem or daily ND.

Comparisons of the mean positive achievement coefficients for North Americans and the Japanese coefficient did not produce strong or reliable differences. A comparison of the mean coefficient between positive achievement events and self-esteem for North Americans (.17) versus the Japanese (.27), approached, but did not reach, conventional levels of significance (p < .07); however, none of the North American coefficients was significantly different from the Japanese coefficient. Although the mean coefficient between positive achievement events and PA for the North American
sites was significantly less than coefficient for the Japanese (.26 vs. .37, p < .05), this difference was due primarily to the fact that the coefficient for the WM site (.19) was lower than the coefficient Japanese – the coefficients for the other two sites were not significantly different from the Japanese coefficient. A similar situation occurred in the analysis of depressed mood (ND). There were no site differences in relationships between positive achievement events and PD or NA. It should be noted that none of the four coefficients between NA and positive achievement events was significantly different from 0.
Discussion

The study was guided by three hypotheses, and each was confirmed by the results. As expected, the self-esteem of Japanese participants rose and fell more in response (respectively) to positive and negative social events than the self-esteem of their North American counterparts. It is important to note that self-esteem positively covaried with positive events (both social and achievement) and negatively covaried with negative events (both social and achievement) for all four groups of participants. This covariation was just stronger for the Japanese. Also as expected, Japanese participants reacted less strongly affectively to daily events than North Americans, particularly in terms of positive affect. Finally, as expected, Japanese participants reacted less strongly than North Americans to task failure, i.e., negative achievement events.

The greater changes in self-esteem of the Japanese in reaction to social events is consistent with the growing body of research suggesting that the self is defined differently in East Asian societies such as Japan and than it is in North America societies. Being part of and accepted by the collective appears to be more important to the Japanese than it is to North Americans, and this greater importance is reflected in how sensitive people’s self-worth is to their social experiences and feedback (e.g., Heine, 2005).

These results are also consistent with the sociometer hypothesis of self-esteem as proposed by Leary, Tambor, Terdal, & Downs (1993). According to the sociometer hypothesis, individual differences in self-evaluations (specifically self-esteem) reflect how fully people think they are accepted by their social groups. Self-esteem measures one’s acceptance, and acceptance is more important in Japan than in North America, hence the greater changes in self-esteem in response to social events in Japan. The greater sensitivity of the Japanese to social feedback was also suggested by their greater reactions to negative social events in terms of well-being defined in terms of depression. Compared to their North American counterparts, the negative deactive emotions (ND, e.g., sadness) of the Japanese rose and fell more than the deactive emotions and the depressogenic adjustment of North Americans in response to negative social events.
Recent research on cultural differences in the impermanence of the world is also consistent with the cultural differences in the reactivity of self-esteem we found. For example, Ji (2005) presents ample evidence that East Asian societies are more likely than Western societies to believe that all things must change. If good things happen now, bad things can follow, and vice versa. Peng (2005, pg. 243) points out the importance of this belief when it comes to self evaluation. “If the world is constantly changing, it follows that the categories and concepts that reflect reality, including the self, will be malleable and multifaceted.”

Our findings on changes in depressed mood suggest however, that although the Japanese may expect to accept or experience more changes in self-concept than North Americans, social rejection has it’s emotional costs for them. In terms of cultural differences, Heine et al. (1999) suggest that in response to negative social feedback, the Japanese are much more prone to experience shame and guilt, emotions that share space in the affective circumplex with the ND moods we measured. It is important to note that this cultural difference narrowly concerns reactions to negative social events. There were no cultural differences in mean ND scores (Table 1).

However prone the Japanese may be to experience depressed mood in response to negative social experiences, they are not so prone as their North American counterparts to feel less positive affect in response to such events. This apparent dissociation was somewhat unexpected. Speculatively speaking, the lack of reactivity of positive affect may reflect some of the same processes that were presumed to underlie reactions to achievement events, a sort of stoicism on the part of the Japanese. It should be noted however, that the Japanese were equally prone as North Americans to experience positive affect in the presence of positive social experiences. Understanding why the Japanese felt more depressed, but not less happy and peaceful (PA and PD) in the face of negative social feedback will require further research.

Our second hypothesis, that the positive affect of the Japanese would change less than the positive affect of North Americans, was supported for reactions to negative events, both social and achievement. As noted above, the Japanese reacted less than North Americans to negative social events
in terms of both PA and PD. In fact, for both measures, the slope of Japanese participants was not significantly different from 0 – i.e., statistically speaking, they did not react. The Japanese also reacted less strongly to negative achievement events (i.e., failure) than North Americans in terms of PA, PD, and NA. In fact, for PA, the slope of Japanese participants was not significantly different from 0.

In contrast, there were only a few cultural differences in affective reactions to positive events. For positive social events, as expected, the Japanese reacted less in terms of NA. For positive achievement events, there was one weak cultural difference in affective reactivity in the opposite direction as hypothesized. For PA, although the slope for the Japanese was greater than the mean slope for the North Americans (.37 vs. .26), the Japanese slope was significantly different from only one of the North American slopes.

In confirmation of our third hypothesis, the Japanese reacted less to task failure (negative achievement events) than North Americans in terms of PA, PD, and NA, although not in terms of self-esteem and depressed mood (ND). This weaker reactivity is consist with our expectations and with the analysis offered by Heine et al. (1999) and confirmed by Heine et al. 2001, although our results suggest a modest modification to Heine and colleagues’ analysis. As suggested by Heine and colleagues, failure in the achievement (non-social) domain has different consequences for the Japanese than it does for North Americans. As found by Heine et al. (2001), the Japanese tend to view failure as an opportunity to learn or as a stimulus for growth and change. This difference probably reflects differences in the cultural values Heine and colleagues discuss, such as self-criticism, self-discipline, emphasis on self-improvement, and so forth. In mild contrast to the analysis offered by Heine and colleagues, our results suggest that success is not less important for the Japanese than it is for North Americans. Slopes for positive achievement events were similar for the two groups, and whatever differences existed suggest that the Japanese reacted more strongly to positive achievement events than North Americans.

It is particularly important to note that differences in the within-person relationships we found are not subject to concerns about the validity of cross-cultural comparisons of responses to Likert scales (e.g., Heine, Lehman, Peng, & Greenholtz, 2002). First, and perhaps relatively unimportant, none
of the daily items used an agree-disagree format, the format that Heine et al. examined. Response formats varied across constructs, but all used some variant of magnitude estimation, e.g., how much, to what extent, and so forth. Nonetheless, the types of reference group influences Heine et al. discussed may have influenced participants’ responses with these formats.

Despite this possibility, the within-person coefficients we found were adjusted de facto for whatever mean differences in daily measures that existed among cultures or individuals. Coefficients were based on individuals’ means and deviations from those means. This meant that individual and cultural differences in means did not influence estimates of within-person coefficients. In some ways, this adjustment is similar to the within-culture comparisons discussed by Heine et al. (2001). Heine et al. discussed how comparing different groups within a culture controls for differences in the interpretation of response scales.

Although the primary focus of the study was on reactions to daily events, the data we collected allowed us to examine differences in means of our daily measures. Consistent with research summarized by Heine et al. (1999), compared to North Americans, Japanese participants reported lower levels of self-esteem and lower levels of affect (PA, PD, and NA). Interestingly, there were no such differences in daily depressed mood (ND). This lack of differences in depressed mood further highlights the importance of distinguishing the quadrants of the affective circumplex. It should be noted that however, that the mean differences we found may also reflect the types of reference group effects discussed by Heine et al. (2002), although we believe that the magnitude estimation response scales we used reduced such effects.

In addition to these differences in daily well-being, an inspection of the means in Table 1 shows that Japanese participants reported fewer positive events (both social and achievement), and as discussed previously they also reported lower levels of daily well-being. Consistent with previous research (Butler et al., 1994; David, Green, Martin, & Suls, 1997; Nezlek & Gable, 2001; Nezlek, 2005), the present study found positive relationships between positive events and daily well-being. This leaves open the possibility that differences between Japanese and North Americans in daily well-being
were due to differences between the two cultures in the number of positive events people experienced each day. The Japanese may have reported lower levels of daily well-being because their daily lives were not as positive as the daily lives of North Americans.

This possibility was examined in a series of analyses in which daily well-being was predicted by daily events, but daily event scores were grand-mean instead of group-mean centered. When predictors are grand-mean centered, slopes are based on deviations from the grand mean. For the present study, this meant that individual (and by extension, cultural) differences in events contributed to the estimates of slopes and intercepts. In these grand-mean centered analyses, intercepts represented daily means for well-being adjusted for individual differences in event scores. These means for these adjusted coefficients were very similar to the means presented in Table 1, suggesting that cultural differences in daily events were not responsible for cultural differences in daily well-being.

Perhaps the most important issue raised by the present results concerns cross-cultural differences in the nature of self-esteem. There is a sense among some scholars (e.g., Heine et al. 1999) that individually focused self-esteem, i.e., how worthy an individual believes he or she is, is not that relevant a construct for members of certain cultures such as the Japanese. According to this perspective, individual self-esteem is not that important, in that members of such cultures are not motivated to maintain or enhance their self-esteem. Self-regard is inextricably interwoven with ties to the collective, rendering nearly irrelevant the type of self-esteem that has been the focus of most of the research on self-esteem as it exists in Western cultures.

In contrast to this view, other scholars posit that self-esteem is an integral part of human nature. Some argue that self-esteem has deep evolutionary roots (e.g., Leary et al., 1995; Kirkpatrick & Ellis, 2001), and that without some sort of individually based understanding of one’s worth, people would not have been able to function effectively and would ultimately have died out. Others, such as Deci and Ryan (1985), believe that some type of individually based evaluation of one’s worth, competence, etc., is a necessary part of human growth, broadly defined. According to this perspective, individual self-esteem represents a sort of cumulative sense of accomplishment, particularly a sense of mastery over the
environment. Having a sense of self and self worth and maintaining this self worth are integral, inseparable parts of being human.

The present findings that the daily self-esteem of Japanese participants fluctuated more strongly with daily social events (both positive and negative) seems to favor the second, more universal, view of self-esteem than it favors the view that individual self-esteem is not relevant to Japanese. The items used to measure daily self-esteem were taken from the Rosenberg Self-esteem scale (Rosenberg, 1965), arguably the gold-standard for measuring the type of individual self-esteem some have suggested is not relevant for the Japanese. Examination of these items shows that they clearly concerned how a person evaluated him or herself. Accepting this, the stronger covariation we found between daily events and self-esteem among the Japanese than among the North Americans was due to the fact that social approval and acceptance is more important for the Japanese than it is for North Americans. The present results suggest that the Japanese have an individual sense of self-worth that may function very similarly to the individual sense of self-worth North Americans have; however, the life experiences on which self-worth is based and maintained may vary between the two cultures.

In addition to shedding some light on cross-cultural differences in the self and daily affective experiences, the present results also highlight the importance of distinguishing affective and self-evaluative states. Some (e.g., Watson, Suls, & Haig, 2002) have suggested that self-esteem should be conceptualized as an affective phenomenon. Although certainly self-esteem has an affective component (most measures of self-esteem include assessments of how one feels about one’s self), the present results suggest that it is meaningful to distinguish changes in daily affect and changes in daily self-esteem. Daily self-esteem and measures of daily affect had meaningfully different patterns of covariation with daily events. These results are consistent with the conclusion reached by Nezlek (2005) that although daily affective and non-affective states (including self-esteem) covary with each other, affective and non-affective states covary independently with daily events. More broadly speaking, this implies that daily variability in psychological states needs to be considered in more than affective terms.

As is invariably the case, the conclusions of the present study are limited by numerous factors.
We studied only 4 groups of collegians, and from this we tried to draw conclusions about broad cultural differences. Moreover, although we believe that we measured psychologically important constructs, we could have examined various other daily measures. Differences between collegians and non-collegians might also be particularly pronounced in terms of the types of event that occur in their lives. Nonetheless, to our knowledge, the present study is the first of its kind. Although considerable previous research has examined cultural differences in self-esteem and has examined the within-person covariation between daily events and various constructs (including self-esteem), no study has examined cultural differences in the within-person covariation between daily events and self-esteem. At the least, the present study integrates two areas of research that have not been integrated despite considerable overlap in the constructs of interest.
References


Author's notes

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Footnotes

1. Positive and negative frequency scores, based on the number of events occurring each day, were also created. Analyses using composite mean scores were presented because there was less heterogeneity of variance for composite scores than for frequency scores, and because composite scores incorporate differences in the importance of events, whereas frequency scores assume all events are equally important. Nevertheless, the results of analyses using frequency scores were similar to the results presented in this article.

2. For the Japanese site, materials were translated into Japanese and then backtranslated. Details of these procedures are available from Satoru Yasunaga.
Table 1

Means for Daily Measures by Site

<table>
<thead>
<tr>
<th>Measure</th>
<th>WM</th>
<th>HU</th>
<th>UWO</th>
<th>JP</th>
<th>NA-JP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-esteem</td>
<td>5.64a</td>
<td>5.86a</td>
<td>5.20b</td>
<td>4.09c</td>
<td>.00</td>
</tr>
<tr>
<td>PA</td>
<td>4.28b</td>
<td>4.59a</td>
<td>4.02c</td>
<td>3.18d</td>
<td>.00</td>
</tr>
<tr>
<td>PD</td>
<td>4.56a</td>
<td>4.78a</td>
<td>4.18b</td>
<td>3.46c</td>
<td>.00</td>
</tr>
<tr>
<td>NA</td>
<td>2.85abc</td>
<td>2.65c</td>
<td>2.92ab</td>
<td>3.04a</td>
<td>.01</td>
</tr>
<tr>
<td>ND</td>
<td>2.71ab</td>
<td>2.62b</td>
<td>2.93a</td>
<td>2.83ab</td>
<td>ns</td>
</tr>
<tr>
<td>Positive social events</td>
<td>1.67a</td>
<td>1.69a</td>
<td>1.61a</td>
<td>1.02b</td>
<td>.00</td>
</tr>
<tr>
<td>Negative social events</td>
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<td>.60a</td>
<td>.64a</td>
<td>.34b</td>
<td>.00</td>
</tr>
<tr>
<td>Positive achievement events</td>
<td>1.18b</td>
<td>1.53a</td>
<td>1.11b</td>
<td>.83c</td>
<td>.00</td>
</tr>
<tr>
<td>Negative achievement events</td>
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<td>.84b</td>
<td>1.00a</td>
<td>.65c</td>
<td>.00</td>
</tr>
</tbody>
</table>

Note: Means not sharing a subscript were significantly different at .05 or beyond.
## Table 2

Relationships Between Daily Self-Esteem, Mood, and Daily Social Events by Site

<table>
<thead>
<tr>
<th>Events</th>
<th>WM</th>
<th>HU</th>
<th>UWO</th>
<th>JP</th>
<th>NA-JP</th>
</tr>
</thead>
<tbody>
<tr>
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<td>.23b</td>
<td>.26b</td>
<td>.40a</td>
<td>.00</td>
</tr>
<tr>
<td>PA</td>
<td>.40b</td>
<td>.48ab</td>
<td>.55a</td>
<td>.50ab</td>
<td>ns</td>
</tr>
<tr>
<td>PD</td>
<td>.28b</td>
<td>.37ab</td>
<td>.39a</td>
<td>.42a</td>
<td>ns</td>
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<td>NA</td>
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<td>-.19a</td>
<td>-.21a</td>
<td>.08b</td>
<td>.00</td>
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<tr>
<td>ND</td>
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<td>-.26</td>
<td>-.35</td>
<td>-.27</td>
<td>ns</td>
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<tr>
<td>Negative Self-esteem</td>
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<td>-.72a</td>
<td>.00</td>
</tr>
<tr>
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<td>-.21ab</td>
<td>-.26a</td>
<td>-.04*b</td>
<td>.00</td>
</tr>
<tr>
<td>PD</td>
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<td>-.22ab</td>
<td>-.33a</td>
<td>-.04*b</td>
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<tr>
<td>NA</td>
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<td>.45</td>
<td>.49</td>
<td>.49</td>
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</tr>
<tr>
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<td>.38b</td>
<td>.57ab</td>
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<td>.01</td>
</tr>
</tbody>
</table>

Note: All means were significantly different from 0 at .05 or beyond except those marked with *. Means not sharing a subscript were significantly different at .05 or beyond. In rows with no subscripts, no pair of means was significantly different.
Table 3
Relationships Between Daily Self-Esteem, Mood, and Daily Achievement Events by Site

<table>
<thead>
<tr>
<th>Site</th>
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<th>UWO</th>
<th>JP</th>
<th>NA-JP</th>
</tr>
</thead>
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<td>.07</td>
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<td>.35a</td>
<td>.25ab</td>
<td>.37a</td>
<td>.05</td>
</tr>
<tr>
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<td>PD</td>
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<td>.18</td>
<td>.18</td>
<td>.14</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>NA</td>
<td>.07*</td>
<td>-.05*</td>
<td>.02*</td>
<td>.04*</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>ND</td>
<td>-.14b</td>
<td>-.29a</td>
<td>-.16ab</td>
<td>-.29a</td>
<td>.10</td>
</tr>
<tr>
<td>Negative</td>
<td>Self-esteem</td>
<td>-.42</td>
<td>-.30</td>
<td>-.35</td>
<td>-.29</td>
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</tr>
<tr>
<td></td>
<td>PA</td>
<td>-.26a</td>
<td>-.25a</td>
<td>-.17a</td>
<td>-.02*b</td>
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<td></td>
<td>PD</td>
<td>-.39a</td>
<td>-.31a</td>
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<td>-.09b</td>
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</tr>
<tr>
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<td>NA</td>
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<td>.41ab</td>
<td>.31bc</td>
<td>.21c</td>
<td>.01</td>
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Note: See note for Table 2.