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# Development and Validation of the Japanese version of the Savoring Beliefs Inventory (SBI-J)

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## Abstract

Savoring is defined as people's capacity to attend to positive experiences and to regulate positive feelings in response to positive events. The purpose of this study was to develop a Japanese adaptation of the Savoring Beliefs Inventory (SBI-J). The SBI is a self-report measure designed to assess individuals' beliefs about their ability to savor positive experience within three temporal orientations involving future-focused anticipation of upcoming positive events, present-focused savoring of ongoing positive moments, and past-focused reminiscence about positive memories. After back-translating the SBI, we used an Internet survey to administer the instrument, along with a set of validation criterion measures, to a sample of 520 Japanese adults. Supporting hypotheses and replicating results with Western samples, confirmatory factor analyses revealed that responses to the SBI-J were best conceptualized in terms of five factors reflecting the three, intercorrelated temporal orientations (anticipating, savoring the moment, and reminiscing), as well as two "method" factors involving positive and negative item-valence. Strong, significant correlations among the three temporal SBI-J subscales also support the use of a total score that provides an overall summary of global savoring ability. Each of the three temporal subscales and total score showed acceptable internal consistency reliability and strong one-month test-retest reliability. Correlations of the SBI-J subscales and total score with criterion measures, and gender differences in mean SBI-J scores, support the convergent and discriminant validity of the instrument. These results indicate that the SBI-J is a valid and reliable tool for assessing savoring ability among Japanese adults.

**Keywords:** Savoring, savoring beliefs, Japanese adults, positive psychology, well-being

## Introduction

For many years, psychology focused almost exclusively on understanding how people deal with negative events and handle their feelings in response to stress and trauma (Seligman & Csikszentmihalyi, 2000). For instance, when people experience a stressful event, they typically try to resolve the event or reduce negative emotions that result from it (Lazarus & Folkman, 1984). Indeed, being able to adapt to adversity and cope with negative experience is an indispensable skill in maintaining mental and physical health (e.g., Parkes, 1990; Penley, Tomaka, & Wiebe, 2002).

More recently, however, work in psychology has shifted toward a focus on positive human functioning to advance understanding of personal adjustment beyond stress and coping and develop effective interventions to help individuals, communities, and societies flourish (Seligman & Csikszentmihalyi, 2000). Nevertheless, even before the advent of positive psychology, some researchers emphasized that being able to cope with negative experience does not mean one is also able to derive joy, meaning, and fulfillment from positive experience (Bryant, 1989). In other words, "just because you're not down doesn't mean you're up." As a positive

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counterpart to the process of coping with adversity, Bryant (1989) proposed the concept of savoring, or the process through which people attend to positive experiences and engage in thoughts and behaviors that regulate positive feelings in response to these experiences (Bryant, Chadwick & Kluwe, 2011; Bryant & Veroff, 2007; Quoidbach, Mikolajczak & Gross, 2015). Whereas coping concerns how people deal with negative events and handle negative emotions, savoring concerns how people appreciate positive events and manage positive emotions. The ability to survive adversity does not necessarily produce fulfillment; savoring and coping are both “imperative for those who seek true happiness” (Lin, Chen & Wang, 2011, p. 166).

It is important to distinguish savoring from similar concepts in positive psychology, such as pleasure (Frijda, 2001), flow (Csikszentmihalyi, 1990), and mindfulness (Kabat-Zinn, 2003). Regarding the distinction between pleasure and savoring, whenever one is savoring, one is experiencing and appreciating a positive feeling. However, it is not always the case that whenever one is experiencing a positive feeling, one is necessarily savoring this positive feeling. Savoring involves not just an experience of pleasure, but also a conscious attention to or meta-awareness of the experience of pleasure (Bryant & Veroff, 2007). Savoring involves the deliberate use of a set of cognitive or behavioral strategies through which people regulate their positive feelings in response to specific positive events (Smith & Bryant, 2017).

Similarly, although flow is a positive experience, it does not involve conscious attention to ongoing positive feelings, whereas savoring always involves attention to positive feelings. Flow experiences occur when people engage in a specific activity that provides perceived challenges that match their perceived skills. During flow, individuals lose track of time and place, and become absorbed in a particular activity. Compared with savoring, flow activity implies far less conscious attention to positive feelings while a positive experience is unfolding (Bryant & Veroff, 2007). Indeed, Csikszentmihalyi (1999) has argued that an awareness of pleasure during flow activities may happen only afterwards: “Strictly speaking, during the [flow] experience people are not necessarily happy because they are too involved in the task to have the luxury to reflect on their subjective states” (p. 825).

A related construct, mindfulness, has also attracted considerable attention in contemporary psychology. One conceptual definition of mindfulness is “the awareness that emerges through paying attention on purpose, in the

present moment, and nonjudgmentally to the unfolding of experience moment by moment” (Kabat-Zinn, 2003, p. 145). To date, practitioners have employed mindfulness techniques to help individuals enhance attentional awareness and effectively implement thought processes that reduce maladaptive behavior and emotional distress (Bishop et al., 2004). Whereas mindfulness involves an open state of awareness with deliberate attention to all aspects of ongoing experience, savoring also entails a mindful awareness of ongoing experience but with a more restrictive attentional focus on internal and external stimuli associated with positive affect (Bryant & Veroff, 2007).

### **Savoring Experiences, Savoring Strategies, and Savoring Beliefs**

In explicating the construct of savoring, Bryant and Veroff (2007) distinguished among the related concepts of savoring experiences, savoring strategies, and savoring beliefs. Savoring experiences (e.g., a concertgoer listening to a symphony in a music hall, a climber taking in the view from the summit of a high mountain, a diner tasting an exotic dish in a gourmet restaurant) represent “the totality of a person’s sensations, perceptions, thoughts, behaviors, and emotions when mindfully attending to and appreciating a positive stimulus, outcome, or event, along with the accompanying environmental or situational features of that encounter” (Bryant & Veroff, 2007, p. 13). Savoring strategies (e.g., sharing one’s feelings with others, building a memory of a positive event, counting one’s blessings) involve specific, concrete thoughts or behaviors in which a person engages during a savoring experience that moderate the impact of positive events on positive emotions by amplifying or dampening the intensity, or by prolonging or curtailing the duration, of positive feelings. Savoring beliefs (e.g., “I can enjoy pleasant events in my mind before they actually occur,” “I find it hard to hang onto a good feeling,” “It’s easy for me to rekindle the joy from pleasant memories”) reflect people’s self-evaluations of their capacity to appreciate positive experience and regulate their positive feelings in response to good events. Based on Publilius Syrus’ (42 B.C./1856) observation that “No man is happy who does not think himself so,” people’s beliefs about their savoring capacity are assumed to reflect their actual ability to savor positive experiences.

As a way of measuring people’s savoring beliefs, Bryant (2003) developed the Savoring Beliefs Inventory (SBI) consisting of 24 items designed to assess people’s perceptions of their ability to savor positive experience

within three different temporal orientations: the future (anticipating upcoming positive events), the present (savoring ongoing positive events), and the past (reminiscing about prior positive events). As a concrete example, consider the positive experience of a relaxing summer vacation. Before the vacation, one can prospectively savor the joy of anticipation by imagining how good it will feel in the future to be on the upcoming vacation. During the vacation, one can concurrently savor the joy of the moment by thinking and acting in ways that enhance appreciation of the present vacation as it unfolds in real time. After the vacation, one can retrospectively savor the joy of reminiscence by recalling how good it felt in the past to be on the earlier vacation.

In rating their level of agreement with each of the statements that compose the SBI, respondents indicate how capable they believe they are of appreciating positive experiences through anticipating (8 items), savoring the moment (8 items), and reminiscing (8 items). Half of the SBI items are positively valenced, and half are negatively valenced. Using confirmatory factor analysis (CFA), Bryant (2003) demonstrated that a five-factor model, consisting of three temporal factors (anticipating, savoring the moment, and reminiscing) and two method factors (positively- and negatively-valenced item wording) provides an appropriate measurement model for the SBI in a large American sample ( $N = 415$ ).

### **Savoring Beliefs, Personality, and Psychological Well-Being**

Consistent with the idea that maintaining positive emotional experience can have important consequences for an individual's well-being (Tugade & Fredrickson, 2007), a great deal of research has linked savoring beliefs to adaptive personality traits and psychological outcomes. For example, greater perceived savoring ability has been linked to greater mindfulness (Beaumont, 2011; Ritchie & Bryant, 2012), wisdom (Beaumont, 2011), extraversion and optimism (Bryant, 2003), and to lower neuroticism, hopelessness, and guilt. Also, savoring beliefs are uncorrelated with social desirability (Bryant, 2003).

Moreover, the ability to savor positive experience is associated with greater psychological well-being across the lifespan (e.g., Bryant, 2003; Gentzler, Morey, Palmer, & Yi, 2013; Meehan, Durlak, & Bryant, 1993). For example, higher savoring ability has been linked to stronger positive affect and self-esteem among children (Bryant & Veroff, 2007), and to greater happiness, life satisfaction, and perceived control among adolescents

and college students (Bryant, 2003; Meehan et al., 1993) and older adults (Bryant, 2003; Smith & Hollinger-Smith, 2015).

Evidence also connects savoring to lower levels of subjective distress. For instance, Hou et al. (2016) found that greater perceived capacity to savor the moment was associated with less anxiety and depression among caregivers of patients recently diagnosed with cancer. In a related vein, Eisner, Johnson, and Carver (2009) found that greater ability to savor the moment predicted lower levels of social phobia and obsessive-compulsive disorder among undergraduates. Researchers have also linked higher perceived savoring ability to fewer depressive symptoms among older adults (Bryant, 2003; Smith & Hollinger-Smith, 2015).

### **Applied Research on Savoring Interventions**

Numerous randomized experiments have demonstrated the effectiveness of interventions designed to enhance savoring as a means of boosting psychological well-being (Smith, Harrison, Kurtz, & Bryant, 2014). With respect to past-focused savoring, for example, undergraduates who used either memorabilia or cognitive imagery to reminisce twice a day for a week reported greater increased frequency of happy feelings, compared to participants in a control condition (Bryant, Smart, & King, 2005). Using another form of past-focused savoring, senior citizens who reflected on valuable insights they had learned in the course of growing older reported more positive attitudes toward aging and greater life satisfaction than older adults who reflected on the negative consequences of aging or simply completed outcome measures (Smith & Bryant, 2018). With respect to present-focused savoring, participants who savored beautiful or meaningful images by mindfully photographing them reported greater positive mood, compared to those who photographed neutral subjects (Kurtz, 2015). And with respect to future-focused savoring, participants who imagined each day for two weeks positive events they could reasonably experience the next day reported greater increases in happiness than did those who imagined negative or neutral events (Quoidbach, Wood, & Hansenne, 2009).

### **Purpose of This Study**

To facilitate cross-cultural research on savoring, the SBI has been translated into a variety of different languages, including Turkish (Metin-Orta, 2018), Persian (Aghaie, Roshan, Mohamadkhani, Shaeeri & Gholami-Fesharaki, 2016), French (Golay, Thonon, Nguyen, Fankhauser & Favrod, 2018), Spanish (Robles et al., 2011), Chinese (Lin et al., 2011), and Korean (Kim & Bryant, 2017).

Likewise, there is a growing interest in positive psychology in Japan, and many books that introduce work in this field have been published in Japanese (e.g., Froh & Parks, 2013; Seligman, 2011). However, to date, there has been no research on savoring beliefs within Japanese culture.

Therefore, the objectives of the current study were to develop a Japanese version of the SBI and investigate the reliability and validity of the translated instrument. To achieve these goals, we conducted both cross-sectional and longitudinal Internet surveys using a sizeable sample of Japanese adults. The original SBI has been validated in English-speaking populations and has evidenced strong psychometric properties, including internal consistency and test-retest reliability, as well as structural, convergent, and discriminant validity (Bryant, 2003; Smith & Bryant, 2017). Accordingly, we tested hypotheses about the structure of savoring beliefs and about the pattern of relationships between savoring beliefs and important criterion measures, in the process of evaluating the reliability and validity of the Japanese version of SBI (SBI-J).

In particular, we used CFA to test hypotheses about the factor structure of the SBI-J using the full Time 1 dataset. Second, we assessed (a) the internal consistency reliability of the SBI-J by calculating Cronbach's alphas using data from each of two separate waves of the longitudinal survey, and (b) the instrument's temporal reliability by computing the correlation between SBI-J scores at Times 1 and 2 for the longitudinal sample. Finally, we evaluated the construct validity of the SBI-J by examining correlations between scores on the instrument and scores on criterion measures that served as validation criteria. Based on existing theory and the validation study of the original SBI (Bryant, 2003), we hypothesized that savoring beliefs would be: (a) positively correlated with optimism, happiness, life satisfaction, internal locus of control, and positive emotional intensity; (b) negatively correlated with pessimism and depression; and (c) uncorrelated with social desirability.

Many prior studies have found that gender is reliably associated with differences in savoring beliefs. Specifically, across culture from mid-childhood to older adulthood (Bryant & Veroff, 2007), women typically report greater savoring ability than do men (Bryant, 2003; Gentzler, Palmer & Ramsey, 2016). Therefore, we also hypothesized that SBI-J scores would be higher in females than in males.

## Method

### Participants

We employed a professional survey company (Macromill, Inc.) to conduct two Internet surveys, which enabled us to recruit participants from a variety of ages and occupations. The first survey (February 2017) was designed to examine the factor structure of the Japanese version of the SBI and to assess the construct validity and internal consistency of the instrument. Participants were 520 Japanese adults (males = 260, females = 260), who ranged in age from 20 to 69 years ( $M = 44.61$ ,  $SD = 14.08$ ) and were stratified evenly according to age group (i.e., 20s, 30s, 40s, 50s, and 60s). The second survey (March 2017) was designed to assess the one-month test-retest reliability of the SBI-J. Participants were 110 participants (55 males, 55 females), who ranged in age from 20 to 69 years ( $M = 44.72$ ,  $SD = 13.94$ ) and were randomly selected from the initial sample of 520 Japanese adults. Participants answered all measures anonymously in return for points that could be redeemed online through the Internet survey company.

### Translation Process

After obtaining permission from the original author of the SBI, the three Japanese co-authors of this paper first translated the SBI from English into Japanese. Subsequently, we employed a Japanese company specializing in English-Japanese translation to back-translate the SBI-J items into English. After this process, the original author of the SBI compared the original English items and the back-translated English items to ensure the accuracy of the Japanese translation. Based on comments from the original author, we slightly modified some Japanese items to enhance the clarity of their meaning.

### Measures

The survey included: (a) individual questions assessing demographic variables (i.e., gender and age); (b) the Japanese version of the SBI (SBI-J); and (c) seven additional measurement instruments for use in evaluating the construct validity of the SBI-J.

**Savoring.** Perceived savoring ability was assessed using the SBI-J, which was translated for this study from the original 24-item English version of this measure (Bryant, 2003). As with the original SBI, participants received the following instructions: "For each statement listed below, please circle the one number that best indicates how true the particular statement is for you. There are no right or wrong answers. Please be as honest as you can." Half of statements were positively-anchored, and half were negatively-anchored. Participants were given a seven-point Likert rating scale

ranging from 1 (strongly disagree) to 7 (strongly agree) with which to respond to each item. Higher SBI scores reflect greater perceived savoring ability.

Median internal consistency reliabilities reported for the original SBI across six studies (Bryant, 2003) were as follows: Anticipating subscale ( $\alpha = .79$ ), Savoring the Moment subscale ( $\alpha = .78$ ), Reminiscing subscale ( $\alpha = .81$ ), SBI total score ( $\alpha = .89$ ). In the present study, these reliabilities were as follows: Anticipating subscale (Time 1  $\alpha = .86$ ; Time 2  $\alpha = .86$ ), Savoring the Moment subscale (Time 1  $\alpha = .83$ ; Time 2  $\alpha = .82$ ), Reminiscing subscale (Time 1  $\alpha = .76$ ; Time 2  $\alpha = .74$ ), SBI total score (Time 1  $\alpha = .92$ ; Time 2  $\alpha = .92$ ).

**Optimism.** Respondents' levels of dispositional optimism were measured using the 10-item Revised Life Orientation Test (R-LOT), which was initially developed by Scheier, Carver, and Bridges (1994). This study used the Japanese version of the R-LOT adapted by Sakamoto and Tanaka (2002), using a five-point Likert rating scale ranging from 1 (strongly disagree) to 5 (strongly agree). This measure includes a three-item Optimism subscale, a three-item Pessimism subscale, and four unscored "filler" items. Reported internal consistency reliability indices for this scale ranged from .75-.78 (Sakamoto & Tanaka, 2002), and in the present study were as follows: Optimism ( $\alpha = .74$ ), Pessimism ( $\alpha = .78$ ).

**Happiness.** Global happiness was measured using the 4-item Japanese version of the Subjective Happiness Scale (SHS), which was developed initially by Lyubomirsky and Lepper (1999) and adapted by Shimai, Otake, Utsuki, Ikemi, and Lyubomirsky (2004). Participants rated all items using a seven-point scale. One negatively worded item was reverse coded. Higher scores reflect greater happiness. Research demonstrated an adequate internal consistency reliability coefficient with a Japanese sample ( $\alpha = .82$ ; Shimai et al., 2004). In the present study, this reliability coefficient was .81.

**Life satisfaction.** Life satisfaction is viewed as an overall evaluation of the quality of one's life (Pavot & Diener, 1993). We assessed participants' life satisfaction using the Japanese version (available at <http://labs.psychology.illinois.edu/~ediener/SWLS.html>) of the Satisfaction with Life Scale (SWLS), which was originally developed by Diener, Emmons, Larsen and Griffin (1985). The SWLS is designed to measure global cognitive judgments of satisfaction with one's life. Participants rated 5 items using a Likert-type scale from 1 (strongly disagree) to 7 (strongly agree), with higher scores reflecting greater life satisfaction. The reported internal consistency reliability index for this scale was

.74 (Hashimoto & Koyasu, 2011). In present study, this reliability coefficient was .88.

**Locus of control.** A core construct in personality theory and research is the concept of locus of control (LOC, Rotter, 1966), or the degree to which people believe that they can control outcomes and events that occur in their lives (i.e., internal LOC) as opposed to these outcomes and events being determined by forces beyond their control (i.e., external LOC). LOC was measured using the 18-item Locus of Control Scale developed by Kanbara, Higuchi, and Shimizu (1982). Examples of items are, "Do you think that you can become friends with anyone if you strive?" and "Do you think you have decided your own life yourself?" In rating each item, participants chose a number from "1: disagree" to "4: agree." Higher LOC total scores reflect a greater internal locus of control. The internal consistency reliability coefficient reported for this scale was .78 (Kanbara et al., 1982). In the present study, this reliability coefficient was .76.

**Positive emotional intensity.** The dispositional intensity of participants' emotions was assessed using the Emotional Intensity Scale (EIS) developed by Bachorowski and Braaten (1994) and adapted by Noguchi, Sato, and Yoshikawa (2008). Emotional intensity is a relatively stable trait that reflects the strength with which people typically experience emotions (Larsen & Diener, 1987). Although the EIS was originally found to consist of separate positive and negative subscales, the present study used only the 14-item Positive Emotional Intensity subscale with a 5-point Likert rating scale. Higher scores reflect greater positive emotional intensity. The internal consistency reliability coefficient reported for this scale was .78 (Noguchi et al., 2008). In the present study, this reliability coefficient was .85.

**Depression.** Depressive symptoms were measured using the 20-item Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) adapted by Shima, Shikano, Kitamura, and Asai (1985). This instrument is suitable for use with both general and clinical populations. Examples of items are, "I felt that I was just as good as other people," "I felt depressed," and "I felt sad." Participants' responded to each CES-D item by indicating how often they had experienced the particular symptom during the past week, using a 4-point scale (0 = rarely or none of the time, 1 = some of the time, 2 = much of the time, 3 = most or all the time). Four negatively-worded items were reverse coded. Higher CES-D scores indicate greater depressive symptomology. The reported internal consistency

reliability index for this scale was .91 (Murakami & Maeda, 2010), and in the present study it was .89.

**Social desirability.** Crowne and Marlowe (1960) defined social desirability bias as a tendency to report engaging in culturally acceptable behaviors that are in fact unlikely to occur in real life. To measure the degree to which participants tended to exhibit socially desirable responses, we used the Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1991) adapted by Tani (2008). We used 12 items measuring the tendency to respond in ways that falsify an accurate self-image. Participants rated the degree to which each item was true for them using a Likert scale ranging from 1 (not at all) to 7 (a great deal). Higher BIDR scores reflect a stronger tendency to respond in socially desirable ways. The internal consistency reliability coefficient reported for this scale was .70 (Tani, 2008). In the present study, this reliability coefficient was .73.

### Procedure

The ethics committee at the Graduate School of Contemporary Psychology at Rikkyo University (Tokyo) approved the procedure used in the present study. We informed all participants in advance that the survey results would be statistically processed in a way that prevented personal identification of individuals' responses. Moreover, we guaranteed participants that their completion of the survey was not mandatory, and that they were free to cancel at any time with no penalty.

All participants answered online questionnaires from the research company via a personal computer or mobile phone. We expected respondents to answer all the questions without a break and assumed the response time was around 10 to 15 minutes. Survey measures were administered in the same order as in Bryant (2003).

## Results

### Factor Structure of the Japanese version of the Savoring Beliefs Inventory (SBI-J)

We first examined whether the five-factor measurement model developed for the original English SBI (Bryant, 2003) provided an appropriate representation of responses to the SBI-J. We based these analyses on the data of the full sample of 520 Japanese adults at Time 1.

We conducted confirmatory factor analysis (CFA; Brown, 2015) by using AMOS 23 (Arbuckle, 2014) to estimate five competing measurement models for the SBI-J data: (1) a one-factor model consisting of a single, global savoring dimension; (2) a two-factor model

consisting of correlated method-factors reflecting positively- and negatively-worded items; (3) a three-factor model consisting of a global savoring dimension and two correlated method-factors (positively- and negatively-worded items) that were uncorrelated with global savoring; (4) a three-factor model consisting of correlated savoring-factors reflecting anticipating, savoring the moment, and reminiscing; and (5) a five-factor model consisting of three correlated savoring-factors (anticipating, savoring the moment, and reminiscing) and two correlated method-factors (positively- and negatively-worded items), with savoring factors constrained to be uncorrelated with method factors. Based on analyses of the original SBI reported by Bryant (2003), we hypothesized that the five-factor CFA model would provide an acceptable goodness-of-fit to participants' responses to the SBI-J, whereas the other four, competing CFA models would not.

We used four measures of goodness-of-fit to assess how well each CFA model fit the data. As a measure of relative fit, we used the *comparative fit index* (CFI), which indicates how much better a particular model fits compared to a null model that assumes there is no common variance among the items being analyzed, with larger values reflecting better model fit. As measures of absolute fit, we used: (1) the *root mean square error of approximation* (RMSEA), which indicates the average discrepancy in model fit per degrees of freedom, with smaller values reflecting better model fit; (2) the *standardized root mean square residual* (SRMR), which indicates the absolute value of the average size of the standardized fitted-residuals, with smaller values reflecting better model fit; and (3) the *Akaike Information Criterion* (AIC), which balances goodness-of-fit against model complexity to obtain a parsimony-adjusted measure of absolute model fit, with smaller values reflecting better fitting models that are also less complex. In assessing goodness-of-fit, we considered CFI > .90 (Bentler & Bonett, 1980), RMSEA < .08 (Browne & Cudeck, 1993), and SRMR < .08 (Hu & Bentler, 1998) as representing acceptable model fit; and we used AIC to assess which model provided the best goodness-of-fit relative to its complexity. We also used the chi-square difference test to compare the goodness-of-fit of nested CFA models, in order to determine whether one model fit the data significantly better than another.

**Table 1.** Results of confirmatory factor analyses of SBI-J ( $N = 520$ )

Model	$\chi^2$	<i>df</i>	CFI	RMSEA	SRMR	AIC
(1) One global factor	2437.80	252	.645	.129	.112	2533.8
(2) Two factors: Positive method and Negative method	1410.48	251	.812	.094	.073	1508.4
(3) Three factors: Global savoring, Positive method and Negative method	916.09	227	.888	.076	.052	1062.1
(4) Three factors: Anticipating, Savoring the moment and Reminiscing	2303.7	249	.666	.126	.109	2405.7
(5) Five factors: Anticipating, Savoring the moment, Reminiscing, Positive method and Negative method	660.44	224	.929	.061	.053	812.44

Note. *df* = degrees of freedom. CFI = comparative fit index. RMSEA = root mean square error of approximation. SRMR = standardized root mean square residual. AIC = Akaike Information Criterion.

We also examined the goodness-of-fit of the other four CFA models in addition to the hypothesized five-factor model. We confirmed that a one-factor model that assumes savoring beliefs reflect a single underlying dimension provided a poor fit to the SBI-J data (CFI = .645, RMSEA = .129, SRMR = .112). In addition, although the two-factor CFA model consisting of positive and negative method-factors fit the data significantly better than did the one-factor model,  $\Delta\chi^2(1, N = 520) = 1027.32, p < .0001$ , this two-factor CFA model failed to provide an acceptable measurement model for the SBI-J (CFI = .812, RMSEA = .094, SRMR = .073).

Supporting the notion that savoring beliefs are multidimensional in the Japanese sample, the CFA model consisting of the three temporal forms of savoring (anticipating, savoring the moment, and reminiscing) fit the data significantly better than did the one-factor model,  $\Delta\chi^2(3, N = 520) = 134.11, p < .0001$ . We also note, however, that this three-factor CFA model failed to provide an acceptable measurement model for the SBI-J (CFI = .666, RMSEA = .126, SRMR = .109).

These results replicate Bryant's (2003) findings for the original English version of the SBI and strongly support the structural validity of the SBI-J as a measure of savoring beliefs for Japanese adults. The five-factor structure matches the a priori framework through which the SBI items were originally created, fits the data better than plausible competing models, and provides an acceptable measurement model for the SBI-J. Therefore,

we conclude that the SBI-J consists of the conceptual dimensions of anticipating, savoring moment, and reminiscing, along with positively- and negatively-anchored method factors, just as was found in the original study (Bryant, 2003).

Table 2 presents the factor loadings and factor intercorrelations that compose the five-factor model. It is informative to compare the size of the standardized factor loadings of the SBI items in the five-factor CFA model for (a) the current Japanese sample ( $N = 520$ ) and (b) the American sample with which the SBI was originally validated (Bryant, 2003;  $N = 415$ ). For the Anticipating factor, the median absolute value of loadings was .265 for the Japanese sample, compared to .435 for the American sample (thus, Japanese loadings were roughly 61% as large as those of the American sample). For the Savoring the Moment factor, the median absolute value of loadings was .185 for the Japanese sample, compared to .520 for the American sample (thus, Japanese loadings were roughly 36% as large as those of the American sample). For the Reminiscing factor, the median absolute value of loadings was .350 for the Japanese sample, compared to .385 for the American sample (thus, Japanese loadings were roughly 90% as large as those of the American sample). This pattern of findings suggests that the Western-based SBI items are most applicable for Japanese adults' self-assessments of their capacity to savor positive memories through reminiscing and least applicable for Japanese adults' self-assessment of their capacity to savor the present



moment. Future work on the SBI-J could strengthen the Savoring the Moment factor by generating new items that are framed in the context of Japanese culture rather than Western culture.

Examining the size of the standardized factor loadings of the SBI items on the two “method” factors, the median absolute value of loadings on the Positive Method factor was .655 for the Japanese sample versus .525 for the American sample (thus, Japanese loadings were roughly 25% larger than those of the American sample). For the Negative Method factor, the median absolute value of loadings was .690 for the Japanese sample versus .295 for the American sample (thus, Japanese loadings were roughly 134% larger than those of the American sample). Evidently, endorsement of one’s inability to savor positive experience, as represented by the Negative Method factor, is a more clearly defined concept among Japanese adults than among American adults. That Japanese adults have a more strongly focused sense of being unable to savor is consistent with evidence that East Asian samples report greater fear of happiness compared to Western samples (Joshani et al., 2014), who in contrast feel greater pressure to pursue happiness (Joshani & Weijers, 2014).

As expected, the three temporal factors showed strong positive relationships with each other in the CFA model, with factor correlations ranging from .53 to .74 (median  $r = .59$ ; see Table 2). The strongest correlation was between the Savoring the moment and Anticipating factors ( $r = .74, p < .01$ ). Although the intended tripartite model that distinguishes past, present, and future subscales provides the best fit to the data, the strong, significant correlations among the three temporal SBI-J subscales support the use of a total score that combines the subscales into an overall summary of global savoring ability. The SBI-J total score would be useful to researchers who need a global summary measure of people’s overall beliefs about their ability to savor positive experience. In fact, this same measurement approach had been adopted in using the original SBI (Bryant, 2003). Therefore, for the following analyses of the internal consistency, temporal stability, and validity of the SBI-J, we report results not only for the three savoring subscales, but also for SBI-J total score. Since half of the SBI-J are positively valenced and half are negatively valenced, we conducted the following analyses after reverse scoring the twelve negatively-anchored items.

## Internal Consistency and Temporal Stability

Having established a measurement model for the SBI-J, we next assessed the internal consistency of each of the three temporal savoring-factors and the total score using Cronbach’s  $\alpha$  separately for data from Time 1 and Time 2. As reported in our Method section, all internal consistency reliability coefficients for the SBI were above .80, except for the Reminiscing subscale, which had a lower Cronbach’s  $\alpha$  at both Time 1 ( $\alpha = .76$ ) and Time 2 ( $\alpha = .74$ ). Nevertheless, all three SBI-J subscales showed acceptable levels of inter-item reliability by commonly-used psychometric standards (Nunnally & Bernstein, 1994).

We also used the data of the subsample of 110 participants who completed the SBI-J at Times 1 and 2 to assess the instrument’s one-month test-retest reliability. Bryant (2003) reported the following three-week test-retest reliabilities for the original SBI: Anticipating subscale ( $r = .80$ ), Savoring the Moment subscale ( $r = .88$ ), Reminiscing subscale ( $r = .85$ ), and SBI total score ( $r = .84$ ). As hypothesized, there were strong, statistically significant correlations between participants’ scores across the two administrations of the SBI-J for the Anticipating ( $r = .71, p < .001$ ), Savoring the Moment ( $r = .80, p < .001$ ), and Reminiscing ( $r = .68, p < .001$ ) subscales, as well as for SBI-J total score ( $r = .78, p < .001$ ). Based on these results, we conclude that the SBI-J has acceptable temporal stability.

## Construct Validity of the SBI-J

We evaluated the SBI-J’s construct validity by using Pearson correlations to examine the relationships of the SBI-J subscales and total score with the criterion measures administered to the full sample ( $N = 520$ ) at Time 1. Specifically, we examined three forms of discriminant validity in terms of the degree to which: (1) savoring beliefs are distinct from, as opposed to overlapping with, the criterion measures; (2) the three temporal SBI subscales demonstrate different patterns of relationship with these criterion measures; and (3) SBI scores can be used to discriminate males and females, who are theoretically presumed to differ on the construct that the instrument is intended to measure.

Table 3 presents these validity coefficients. Supporting the construct validity of the SBI-J, all three savoring subscales, as well as the total score, showed hypothesized relationships with measures of psychological well-being and personality that replicate prior research on savoring beliefs in Western samples (Bryant, 2003; Smith & Bryant, 2017).

**Table 2.** Standardized factor loadings and intercorrelations for the five-factor CFA model ( $N = 520$ )

Items	Savoring factors				Method factors	
	ANT	MOM	REM	SMC	POS	NEG
Get pleasure from looking forward	.38	.00	.00	.14	.58	.00
Don't like to look forward too much	-.38	.00	.00	.14	.00	.59
Can feel the joy of anticipation	.42	.00	.00	.18	.67	.00
Anticipating is a waste of time	-.31	.00	.00	.10	.00	.74
Can enjoy events before they occur	.22	.00	.00	.05	.72	.00
Hard to get excited beforehand	-.11	.00	.00	.01	.00	.77
Can feel good by imagining outcome	.19	.00	.00	.04	.73	.00
Feel uncomfortable when anticipate	.04	.00	.00	.00	.00	.77
Know how to make the most of good time	.00	.36	.00	.13	.70	.00
Find it hard to hang onto a good feeling	.00	-.21	.00	.04	.00	.30
Can prolong enjoyment by own effort	.00	.16	.00	.03	.63	.00
Am own "worst enemy" in enjoying	.00	.03	.00	.00	.00	.74
Feel fully able to appreciate good things	.00	-.01	.00	.00	.81	.00
Can't seem to capture joy of happy moments	.00	-.16	.00	.03	.00	.81
Find it easy to enjoy self when want to	.00	.31	.00	.10	.72	.00
Don't enjoy things as much as should	.00	-.25	.00	.06	.00	.79
Enjoy looking back on happy times	.00	.00	.65	.42	.27	.00
Don't like to look back afterwards	.00	.00	-.61	.37	.00	.42
Can feel good by remembering past	.00	.00	.54	.29	.54	.00
Feel disappointed when reminisce	.00	.00	.07	.00	.00	.64
Like to store memories for later recall	.00	.00	.33	.11	.49	.00
Reminiscing is a waste of time	.00	.00	-.37	.14	.00	.64
Easy to rekindle joy from happy memories	.00	.00	.18	.03	.64	.00
Best not to recall past fun times	.00	.00	-.29	.08	.00	.51
	ANT	MOM	REM		POS	NEG
	—					-.60
	.74	—				
	.59	.53	—			

Note. ANT = Anticipating. MOM = Savoring the Moment. REM = Reminiscing. POS = Positively-anchored items. NEG = Negatively-anchored items. SMC = squared multiple correlation.

In particular, the Anticipating, Savoring the Moment, and Reminiscing subscales and the total score had: (a) significant positive correlations with optimism, happiness, life satisfaction, internal locus of control, and positive emotional intensity; as well as (b) significant negative correlations with pessimism and depression. Supporting the discriminant validity of savoring beliefs, however, beliefs about anticipating (median  $r^2 = .11$ ; range = .01- .28), savoring the Moment (median  $r^2 = .22$ ; range = .01- .46), and reminiscing (median  $r^2 = .07$ ; range = .01- .28), as well as SBI total score (median  $r^2 = .18$ ; range = .01- .35), shared less than half of their variance with these criterion measures. These results support the conclusion that savoring beliefs are distinct from future expectations, subjective well-being, and control. Supporting the discriminant validity of the separate SBI-J subscales, beliefs about Savoring the Moment showed stronger relationships with optimism, pessimism, happiness, life satisfaction, and depression than did beliefs about Anticipating and Reminiscing.

Additionally, replicating research with the original English SBI (Bryant, 2003), all three savoring subscales and the total score were uncorrelated with socially desirable responding. We also note that the social desirable responding of our sample ( $M = 47.71$ ,  $SD = 8.96$ ) was significantly higher than that of 395 Japanese ( $M = 43.44$ ,  $SD = 9.51$ ;  $t[913] = 7.29$ ,  $p < .01$ ,  $d = .46$ ) reported in the previous study (Tani, 2008).

As an additional test of discriminant validity, we examined hypothesized gender differences in scores on each of the three SBI-J subscales. Multivariate analysis of variance (MANOVA) was used to determine whether women ( $n = 260$ ) reported higher SBI-J scores than men ( $n = 260$ ). As predicted, there was a significant multivariate main effect of gender,  $F(3, 516) = 14.53$ ,  $p < .01$ ,  $\eta_p^2 = .08$ . Replicating results found in numerous prior studies of the SBI in different cultures (Smith & Bryant, 2017), females (Anticipating:  $M = 40.72$ ,  $SD = 7.87$ ; Savoring the Moment:  $M = 36.80$ ,  $SD = 7.43$ ; Reminiscing:  $M = 37.28$ ,  $SD = 6.91$ ) reported significantly higher scores than did males (Anticipating:

$M = 36.46$ ,  $SD = 6.97$ ,  $F [1, 518] = 42.69$ ,  $p < .01$ ,  $\eta_p^2 = .08$ ; Savoring the Moment:  $M = 33.61$ ,  $SD = 6.54$ ,  $F [1, 518] = 27.07$ ,  $p < .05$ ,  $\eta_p^2 = .08$ ; Reminiscing:  $M = 34.59$ ,  $SD = 5.74$ ,  $F [1, 518] = 23.42$ ,  $p < .01$ ,  $\eta_p^2 = .04$ ). Furthermore, a univariate analysis of variance revealed that females also reported higher SBI-J total scores ( $M = 114.81$ ,  $SD = 19.39$ ) than did males ( $M = 104.66$ ,  $SD = 16.97$ ),  $F (1, 518) = 40.45$ ,  $p < .01$ ,  $\eta_p^2 = .07$ . Thus, the present results strongly support the construct validity of the SBI-J as a measure of savoring beliefs for Japanese adults.

## Discussion

### Key Findings

The present study contributes to the literature on positive emotion regulation and to the broader field of positive psychology by developing and validating a Japanese version of the Savoring Beliefs Inventory (SBI-J), which was originally constructed for use in English speaking populations (SBI; Bryant, 2003). Replicating prior research in Western cultures (Smith & Bryant, 2017), our results demonstrate not only that savoring beliefs have positive relationships with happiness and life satisfaction as well as a negative relationship with depression among Japanese adults, but also that Japanese respondents make separate self-evaluations of their ability to savor positive experience concerning three temporal orientations—namely, anticipating future positive outcomes, savoring

ongoing positive outcomes in the present, and reminiscing about past positive outcomes. As in Western cultures, Japanese individuals' self-assessments of their ability to savor are interrelated across the three temporal forms. In particular, the Savoring the Moment subscale shares 56% of its variance with the Anticipating subscale and 35% of its variance with the Reminiscing subscale; and the Anticipating and Reminiscing subscales share 42% of their variance with each other (see Table 3).

With respect to the instrument's psychometric properties, our research demonstrates that the three temporal subscales of the SBI-J and the total score have acceptable levels of reliability in terms of both internal consistency and temporal stability. Confirming internal consistency reliability, the future-, present-, and past-focused subscales, as well as the total score, each showed acceptable Cronbach's  $\alpha$  coefficients for two separate cross-sectional samples. Confirming test-retest reliability, scores on each temporal savoring subscale and the total score showed strong, statistically significant correlations over time for a sample of Japanese adults who completed the SBI-J on two occasions one month apart. These findings indicate that researchers can be confident in using the SBI-J to obtain a reliable, temporally stable measure of savoring beliefs about anticipating, savoring the moment, and reminiscing, as well as a global summary measure of savoring beliefs, among Japanese adults.

**Table 3.** Correlations between SBI-J and the other study variables ( $N = 520$ )

Study Variables	<i>M</i>	<i>SD</i>	$\alpha$	1	2	3	4	5	6	7	8	9	10	11	12
1 Anticipating	38.59	7.73	.86	—	.75**	.65**	.92**	.33**	-.12*	.49**	.38**	.16**	.53**	-.33**	-.03
2 Savoring the moment	35.21	7.17	.83		—	.59**	.89**	.52**	-.34**	.68**	.57**	.17**	.42**	-.54**	.05
3 Reminiscing	35.94	6.49	.76			—	.83**	.28**	-.12*	.38**	.31**	.12*	.45**	-.26**	-.05
4 SBI-J total score	109.73	18.88	.92				—	.43**	-.22**	.59**	.48**	.17**	.53**	-.43**	-.01
5 Optimism	9.02	2.15	.74					—	-.26**	.55**	.55**	.35**	.28**	-.34**	.01
6 Pessimism	9.34	2.02	.78						—	-.34**	-.32**	.04	-.08	.26**	-.13*
7 Happiness	17.53	4.17	.81							—	.74**	.18**	.38**	-.51**	.11*
8 Satisfaction with life	18.64	6.10	.88								—	.21**	.27**	-.44**	.17**
9 LOC	44.79	6.38	.76									—	.29**	-.04	-.12*
10 Emotional intensity	46.25	7.24	.85										—	-.22**	-.02
11 Depression	16.87	10.34	.89											—	-.22**
12 Social desirability	47.71	8.96	.73												—

Note. \* $p < .01$ ; \*\* $p < .001$ .  $\alpha$  = Cronbach's alpha. The patterns of statistical significance reported above were unchanged when adopting a sequentially-rejective Sidak alpha-correction procedure to control for inflation in the family-wise Type I error rate.

The present study also provides extensive evidence to support the construct validity of the SBI-J. Using confirmatory factor analysis to assess the instrument's structural validity, we demonstrated that a hypothesized five-factor model consisting of the three temporal forms of savoring and separate method factors reflecting positively- and negatively-worded items fit the SBI-J data better than did four competing models consisting of simpler representations of responses to the SBI-J (i.e., a single "global savoring" factor; two method factors; a global savoring factor with two method factors; or the three temporal forms of savoring without method factors). Replicating previous research with the SBI in Western samples (Bryant, 2003), this five-factor model fits the SBI-J data well, provides an acceptable measurement model for the SBI-J, and strongly supports the structural validity of the instrument.

To evaluate convergent validity, we examined correlations of SBI-J scores with a set of eight criterion measures of psychological well-being and personality that were hypothesized, based on prior theory and research, to be associated with greater perceived savoring ability. As predicted, scores on all three temporal subscales, and total score, were positively correlated with optimism, happiness, life satisfaction, internal locus of control, and positive emotional intensity, and were negatively correlated with pessimism and depression.

With respect to the discriminant validity of the SBI-J subscales, the Savoring the Moment subscale showed stronger relationships with optimism, pessimism, happiness, life satisfaction, and depression than did the Anticipating and Reminiscing subscales. Replicating prior work on the SBI, women scored significantly higher than did men on all three temporal subscales and on total score; and all three subscales and total score were uncorrelated with socially desirable responding. Considered together, these findings strongly support the construct validity of the SBI-J as a measure of savoring beliefs among Japanese adults, and suggest that future researchers can use the SBI-J with confidence in research on savoring.

### Limitations and Future Directions

There are several limitations to keep in mind when interpreting the results of the present study. First, we used only self-report measures as criteria in evaluating the construct validity of the SBI-J, which is also a self-report measure. Future validation research with the SBI-J might include behavioral or neuropsychological measures of savoring as criteria for assessing convergent

validity (Bryant et al., 2011), in order to overcome the problem of shared method variance that results from using only self-report measures.

Another limitation of the present study is that we collected data using an Internet survey. Although Internet research offers the advantage of sampling a wider range of ages and occupations, Internet studies are often plagued by concerns about the reliability with which participants attend to the research materials. As a case in point, recent research (Miura & Kobayashi, 2015) demonstrates that participants in Internet studies often pay little or no attention when reading instructions or answering questions. In further validating the SBI-J, future investigators may wish to consider other means of surveying participants that increase the likelihood that participants will attend more closely in completing dependent measures.

Future research on the validity of the SBI-J might also expand the breadth of its validation criteria. Although the present study validated the SBI-J using eight measures of personality and well-being concepts linked to savoring beliefs in prior theory and research, future researchers should broaden the nomological network guiding the selection of relevant validation constructs and their expected patterns of interrelationship. Potential criteria for use in validity assessment include, for example, measures of perceived meaning in life, value fulfillment, the quality of social relationships, work satisfaction, health, psychophysical symptoms, gratitude, creativity, and spiritual well-being. Future investigators might also adopt other methods to assess the convergent validity of the SBI-J such as peer assessment, in which knowledgeable informants (e.g., friends, spouses, or relatives) provide ratings of the degree to which a particular participant is able to savor future, present, and past positive outcomes based on their shared personal experiences with the individual in everyday life, as a way of checking on the validity of participant self-reports.

Despite evidence of the reliability and validity of the English and Japanese versions of the SBI, this instrument is not without its limitations. First, most of the SBI items do not directly measure the degree to which respondents consciously attend to positive affect while these positive feelings are unfolding, even though this type of meta-awareness of positive experience is a defining feature of savoring (see Smith & Bryant, 2017). Instead, to evaluate perceived ability to anticipate, savor the moment, and reminisce, the SBI includes items that assess the degree to which respondents experience positive feelings and are capable of deriving positive feelings, when they look forward to, go through, or look back on positive events.

The use of such items assumes that: (1) respondents who report they feel positive affect when looking forward to, going through, or looking back on positive events are to some degree consciously aware of the positive feelings they are experiencing, even though the SBI assesses the level of such awareness only retrospectively; (2) respondents who report they can derive positive affect when looking forward to, going through, or looking back on positive events not only are aware of these positive feelings while they are experiencing them, but also believe they are able to regulate their positive feelings in response to positive events; and (3) respondents who report they do not feel positive affect when they look forward, go through, or look back on positive events are relatively low in perceived savoring ability, given that they report no positive feelings that could be savored.

Linking SBI responses to the meta-awareness of positive affect that is the essence of savoring, there is empirical evidence that higher scores on the SBI are associated with greater mindful awareness during positive experiences. In particular, SBI scores are positively correlated with both general trait mindfulness (Beaumont, 2011; Kiken, Lundberg, & Fredrickson, 2017), as well as conscious mindfulness specifically in relation to positive feelings (Ritchie & Bryant, 2012). This evidence supports the interpretation of SBI items as indicators of people's beliefs about their ability to savor in ways that involve mindful awareness of ongoing positive feelings.

Moreover, prospective research evidence supports the predictive validity of the SBI as a measure of the degree to which people actually savor positive events. To assess the SBI's validity prospectively in relation to a real-world event, Bryant (2003) conducted a longitudinal experiment in which he first used the SBI to assess college students' savoring beliefs and then, in a seemingly unrelated survey, assessed their actual behaviors and feelings as they went through their Christmas vacation three months later. According to random assignment, students were contacted via telephone either before, during, or after their Christmas vacation (none of them connected this later survey to the earlier SBI assessment). Participants in the before condition were contacted one week before their vacation and first asked to indicate how long it had been since they last looked forward and how much they had been looking forward to their upcoming vacation, and then asked to think about what the upcoming vacation would be like and report how it made them feel to anticipate the vacation. Participants in the during condition were contacted during their vacation and first asked to indicate

how long it had been since they last felt they were "really enjoying" their vacation and how much they were enjoying their vacation, and were then asked to think about what the ongoing vacation was like and report how it made them feel to reflect on the vacation. Participants in the after condition were contacted one week after their vacation and first asked to indicate how long it had been since they last looked back on their recent vacation and how much they had been looking back on their vacation, and then asked to think about what the vacation had been like and report how it made them feel to recall the vacation.

Results revealed that when either looking forward to, actually experiencing, or looking back on their Christmas vacation, participants' earlier baseline beliefs about their ability to savor within each time frame (i.e., Anticipating, Savoring the Moment, or Reminiscing subscale, respectively) generally predicted their reported behaviors and feelings within the relevant temporal condition more strongly than did savoring beliefs associated with the other two time frames. These prospective data support the conclusion that people's self-evaluations of savoring ability correspond to some degree to their actual ability to savor positive events.

Another limitation of the SBI is that the future- and past-focused SBI subscales include a mixture of items that assess "preference" versus "capacity" to savor, whereas the present-focused SBI items most clearly measure capacity to savor. All of the items that assess preference as opposed to capacity in the future- and past-focused SBI subscales are negatively-worded (reflecting preference not to savor), whereas all of the positively-worded items on these two temporal subscales reflect the endorsement of the ability to savor by anticipating or reminiscing, and none of these positively-worded items reflect preference to savor. The SBI includes a total of five items that reflect preference to avoid savoring. In particular, two of the four negatively-worded Anticipation subscale items assess preference to avoid future-focused savoring: "I don't like to look forward to good times too much before they happen," and "For me, anticipating what upcoming good events will be like is basically a waste of time." In addition, three of the four negatively-worded Reminiscence subscale items assess preference to avoid past-focused savoring: "I don't like to look back at good times too much after they've taken place," "I find that thinking about good times from the past is basically a waste of time," and "For me, once a fun time is over and gone, it's best not to think about it." We also note, however, that the future-focused Anticipation subscale includes two negatively-worded

items that reflect perceived inability to savor prospectively and four positively-worded items that reflect perceived ability to savor prospectively, and that the past-focused Reminiscence subscale includes one negatively-worded item that reflects perceived inability to savor retrospectively and four positively-worded items that reflect perceived ability to savor retrospectively.

SBI items that assess inability or ability to savor require respondents to be aware of the degree to which they experience positive feelings while looking forward to, going through, or recalling positive events. However, items that assess preference to savor or not to savor do not necessarily require respondents to be aware of the degree to which they experience positive feelings while looking forward to, going through, or recalling positive events. Instead, these latter items tap the degree to which respondents tend to choose to savor positive outcomes when given the opportunity.

How does “inability to savor” versus “preference to savor” relate to the conscious attention to positive emotion that defines the construct of savoring? In developing the original SBI items, it was assumed that people who are unable to savor would generally prefer not to try to do so; but it was also assumed that some people who are able to savor might choose not to do so at least some of the time, although they would probably not show a general predisposition to avoid savoring.

To test these assumptions empirically, we used three different data sets to examine the degree to which scores on the SBI items assessing ability to savor correlated with scores on SBI items assessing preference to savor, within both the Anticipation and Reminiscence subscales. These three SBI data sets were the Time 1 Japanese SBI-J sample ( $N = 520$ ), the Time 2 Japanese SBI-J sample ( $N = 110$ ), and a large sample (collected by the second author) of 1,943 undergraduates from a private US college who voluntarily completed the English version of the SBI in partial fulfillment of an introductory psychology course requirement. We began by reverse-scoring the negatively-worded items assessing inability to savor (so that high scores reflected ability to savor) and averaging responses to these reverse-scored items with responses to the positively-worded SBI items assessing savoring ability, to create separate subscales measuring the ability to savor through either anticipation (6 “ability to savor” items) or reminiscence (5 “ability to savor” items). We then reverse-scored the 2 negatively-worded SBI items assessing preference not to savor through anticipation and the 3 SBI items assessing preference not to savor through reminiscence, so that

high scores on these items reflected preference to savor through either anticipation or reminiscence.

For the Anticipation subscale, we then correlated scores on the 2 reverse-scored SBI items assessing preference to savor with average scores on the 6 SBI items assessing ability to savor; and for the Reminiscence subscale, we correlated scores on the 3 reverse-scored SBI items assessing preference to savor with average scores on the 5 SBI items assessing ability to savor. For the Anticipation subscale, the average correlation between the 2 reverse-scored SBI items assessing preference to savor and mean scores on the 6 SBI items assessing ability to savor was as follows: Time 1 sample,  $r = .52$  ( $p < .0001$ ); Time 2 sample,  $r = .53$  ( $p < .0001$ ); US sample,  $r = .39$  ( $p < .0001$ ). For the Reminiscence subscale, the average correlation between the 3 reverse-scored SBI items assessing preference to savor and mean scores on the 5 SBI items assessing ability to savor was as follows: Time 1 sample,  $r = .44$  ( $p < .0001$ ); Time 2 sample,  $r = .35$  ( $p < .0001$ ); US sample,  $r = .49$  ( $p < .0001$ ). These results support the conclusion that preference to savor is significantly, and strongly to moderately, correlated with perceived ability to savor for both the Anticipation and Reminiscence subscales.

We also correlated mean scores for the 6 SBI items assessing ability to savor through anticipation with the original, full 8-item version of the SBI Anticipation subscale that included items assessing both savoring ability and preference to savor. These correlations were 0.99 for all three samples. In addition, we correlated mean scores for the 5 SBI items assessing ability to savor through reminiscence with the original, full 8-item version of the SBI Reminiscence subscale that included items assessing both savoring ability and preference to savor. These correlations were also 0.99 for all three samples. These findings indicate that including items measuring preference to savor does not alter the substantive content of the construct that the SBI Anticipation and Reminiscence subscales assess, compared to including only items measuring ability to savor. Based on the above empirical evidence, we conclude that it is reasonable to include items tapping preference to savor as measures of perceived ability to savor through anticipation and reminiscence in the SBI.

Across cultures, people generally prefer to experience positive rather than negative emotions (Kuppens, Realo, & Diener, 2008); however, positive feelings are more desired and negative feelings are more undesired in individualistic Western cultures compared to collectivistic Eastern cultures (Eid & Diener, 2001). In Western populations, a personal preference not to savor

tends to be associated with the perception that savoring does not produce positive affect or that it produces negative affect. Such perceptions tend to reflect an inability to savor, as demonstrated in the sizeable and significant correlations reported for the US sample in the paragraph above. With respect to the sizeable and significant correlations observed between the savoring ability items and savoring preference items in our Japanese samples, we can speculate that individuals who adhere to traditional cultural norms regarding emotional experience tend both to perceive themselves as less capable of savoring and to prefer not to savor through anticipation and reminiscence, whereas those who reject traditional cultural norms tend both to perceive themselves as more capable of savoring and to prefer to savor through anticipation and reminiscence (see Kim & Bryant, 2017).

Previous research in Western samples indicates that people generally prefer to amplify rather than dampen their positive emotions (Bryant & Veroff, 2007). However, studies have found that people in East Asian cultures report feeling lower positive affect relative to negative affect the day after positive events, compared to Americans (Miyamoto & Ma, 2011). It is hoped that the newly created SBI-J will play an essential role in advancing our understanding of this cultural difference in response to positive events.

The SBI-J may also be useful in identifying people's shortcomings with respect to savoring capacity. Along these lines, Aghaie et al. (2016) suggested using the SBI to evaluate the effectiveness of therapeutic interventions aimed at teaching people how to generate or sustain positive experience. For example, the SBI-J might prove useful in research designed to promote savoring skills among Japanese adults as a way of reducing emotional deficits associated with depression (McMakin, Siegle, & Shirk, 2011), hopelessness (Chen & Zhou, 2017), schizophrenia (Meyer, Johnson, Parks, Iwanski, & Penn, 2012), and anhedonia (Strauss, 2013).

### Conclusion

This study has demonstrated that the SBI-J provides a valid and reliable means of assessing perceived savoring ability in Japanese adults. We found that the Japanese SBI has strong structural, convergent, and discriminant validity with an acceptable level of internal consistency and temporal stability. This instrument will be a valuable tool for researchers and practitioners who wish to explore savoring in the context of improving or maintaining well-being, and in developing interventions to enhance people's capacity to appreciate life.

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**Appendix****Descriptive statistics for the Japanese version of the Savoring Beliefs Inventory (SBI-J)**

	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
1 Get pleasure from looking forward	4,92	1,38	-0,55	0,42
2 Find it hard to hang onto a good feeling	4,55	1,34	-0,12	0,03
3 Enjoy looking back on happy times	4,17	1,38	-0,22	0,15
4 Don't like to look forward too much	3,08	1,39	0,26	-0,23
5 Know how to make the most of good time	4,06	1,31	-0,09	0,29
6 Don't like to look back afterwards	3,48	1,38	0,07	0,02
7 Can feel the joy of anticipation	4,93	1,36	-0,39	0,35
8 Am own "worst enemy" in enjoying	3,23	1,35	0,22	0,04
9 Can feel good by remembering past	4,53	1,25	-0,32	0,45
10 Anticipating is a waste of time	2,90	1,39	0,31	-0,27
11 Can prolong enjoyment by own effort	4,37	1,14	0,08	0,82
12 Feel disappointed when reminisce	3,24	1,53	0,26	-0,49
13 Can enjoy events before they occur	4,63	1,28	-0,32	0,68
14 Can't seem to capture joy of happy moments	3,08	1,50	0,39	-0,17
15 Like to store memories for later recall	4,24	1,19	0,06	0,72
16 Hard to get excited beforehand	3,28	1,33	0,22	0,34
17 Feel fully able to appreciate good things	4,77	1,27	-0,20	0,34
18 Reminiscing is a waste of time	3,07	1,42	0,30	-0,11
19 Can feel good by imagining outcome	4,64	1,30	-0,29	0,50
20 Don't enjoy things as much as should	3,51	1,41	0,11	-0,14
21 Easy to rekindle joy from happy memories	4,28	1,17	0,04	0,83
22 Feel uncomfortable when anticipate	3,27	1,41	0,06	-0,32
23 Find it easy to enjoy self when want to	4,38	1,28	-0,06	0,34
24 Best not to recall past fun times	3,48	1,31	0,05	0,23