

The Reliability and Validity of the Japanese Version of the Ways of Savoring Checklist (WOSC-J)

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Abstract

The purpose of this study was to evaluate the reliability and validity of the Japanese version of the Ways of Savoring Checklist (WOSC-J), adapted from the original English version of the Ways of Savoring Checklist (Bryant & Veroff, 2007). We translated and back-translated the WOSC-J, and administered it to 520 Japanese adults using an online survey. Exploratory and confirmatory factor analyses were used to examine the factor structure of the measure. Confirming our hypothesis, a two-factor model (amplifying and dampening) yielded the best goodness-of-fit to the data. Each of the two factors had adequate internal consistency reliability. To assess the criterion validity of the new instrument, this study also examined associations between the two WOSC-J subscales and measures of emotional experience, self-esteem, and optimism. Consistent with Western data, the amplifying subscale tended to show a stronger positive relationship with positive mood states than did the dampening subscale. Overall, the present findings indicate that the WOSC-J is an acceptable tool for measuring savoring among Japanese adults.

Keywords

Savoring, amplifying, dampening, Japanese adults, positive experiences, and Ways of Savoring Checklist.

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In the past century, the field of psychology has focused a great deal on the study of dysfunction, addressing topics such as depression, anxiety, and negative emotion. However, a growing demand to investigate positive functioning such as positive subjective experiences, happiness, and optimal individual traits has emerged in the last decade or two (Seligman & Csikszentmihalyi, 2000). These concepts are important in Japanese research and Japanese society as well. According to several pieces of cross-cultural research (e.g., Uchida, Norasakkunkit, & Kitayama, 2004), Japanese people report a lower level of happiness, self-esteem, and life satisfaction relative to Western countries. Additionally, the World Happiness Survey conducted by the Helliwell, Layard, and Sachs (2017) found that Japanese individuals score lower on subjective happiness relative to other countries despite Japan's financial wealth. Based on this background research, it is important to investigate how Japanese people appraise and experience positive emotions because it cannot be assumed that they perceive or process positive events in the same ways as do other people around the world.

According to Fredrickson (2004), positive emotions play a key role in fostering subjective well-being. She has argued that positive emotions "broaden peoples' momentary thought-action repertoires and build their enduring personal resources" (Fredrickson, 2004, p. 1369), which is a cornerstone of what she has termed the "broaden-and-build theory." Positive emotion enables people to acquire new resources which can promote future well-being; and positive emotions exert an upward positive spiral on levels of well-being. On the other hand, negative emotions narrow the range of thoughts and actions, which limits personal access to resources needed to reduce stress and subsequently increases the chances of a downward negative spiral (Fredrickson, 2004).

In this vein, Bryant and Veroff (2007) have identified ways that people regulate the intensity and duration of positive emotions, which they have termed "savoring strategies." Various cognitive and behavioral ways of savoring exist that people use to manage their positive emotions, including sharing their feelings with others and building memories of these feelings (Bryant & Veroff, 2007). Research shows that savoring strategies are essential in enhancing and prolonging positive emotions, which can promote happier and healthier lives (Bryant & Veroff, 2007; Smith & Bryant, 2017).

However, the question remains as to whether all cultural groups savor and regulate their positive emotions in the same ways. An emerging global interest in understanding savoring from a multicultural perspective has produced translations of instruments assessing people's beliefs about their ability to savor, i.e., the Savoring Beliefs Inventory (SBI; Bryant, 2003) and their use of specific savoring strategies, i.e., the Ways of Savoring Checklist (WOSC; Bryant & Veroff, 2007), into multiple languages for application in cross-cultural studies of savoring. For example, the SBI has been translated into Persian (Aghaie, Roshan, Mohamadkhani, Shaeri, & Gholami-Fesharaki, 2017), Turkish (Metin-Orta, 2018), French (Golay, Thonon, Nguyen, Fankhauser, & Favrod, 2018), Chinese (Lin, Chen, & Wang, 2011), and Korean (Kim & Bryant, 2017). In contrast, although the WOSC has also been translated into Korean (Kim & Bryant, 2017) and Hungarian (Szondy, Martos, Szabó-Bartha, & Pünkösty, 2014), it has not been as widely translated as the SBI. The present study was designed to develop a Japanese version of the WOSC and to validate its use as a measure of savoring strategies among Japanese adults, in order to facilitate future work on the determinants and consequences of different ways of savoring both within Japan as well as across cultures.

Definition of Savoring

The word “savor” comes from the Latin word “sapere,” which means “to have good taste” (Bryant & Veroff, 2007, p. 3). In general use, savoring refers to enjoying the full taste or flavor of food or drink slowly, in order to appreciate a gustatory experience as much as possible (Cambridge Dictionary, 2017). Although savoring usually refers to attending to a sensory experience such as taste, Bryant and Veroff (2007) define it more broadly as appreciating any positive experience. Specifically, they define savoring as the “capacities to attend to, appreciate, and enhance the positive experiences in their lives” (Bryant & Veroff, 2007, p. 2). Although positive psychologists have described several similar concepts, including pleasure and flow, savoring differs from these concepts. For example, if one is savoring a positive experience, then one would by definition experience enjoyment and appreciate this positive feeling. However, it is not true that if one is feeling pleasure, then one is necessarily engaging in the process of savoring this positive feeling. Savoring is best understood as a set of strategies that people can use to regulate (e.g., lengthen and deepen) positive feelings associated with positive events. Whereas flow does not require conscious attention to one’s feelings, savoring, in contrast, requires one to deliberately pay attention to ongoing positive feelings (Bryant & Veroff, 2007).

Whereas Bryant and Veroff (2007) originally implied that savoring typically involves amplifying or up-regulating positive emotion, later reformulations of the savoring construct (e.g., Bryant, Chadwick, & Kluwe, 2011; Jose, Lim, & Bryant, 2012) have acknowledged that savoring may also involve dampening or down-regulating in order to manage positive emotion in ways that are personally or culturally appropriate. In the present research, we have adopted this latter, broader conceptualization of savoring as encompassing both amplifying and dampening responses that people may use to regulate their positive feelings.

Previous studies have highlighted two primary savoring responses to positive experiences: up-regulating (i.e., amplifying) and down-regulating (i.e., dampening) (Jose et al., 2012; Nelis, Quoidbach, Hansenne, & Mikolajczak, 2011). Amplifying, on the one hand, is a way to maintain and enhance individuals’ positive emotions (Bryant & Veroff, 2007), as for example, by sharing with others, expressing emotions behaviorally, celebrating positive events, or reminiscing about positive memories. Dampening, on the other hand, “diminishes and cuts short enjoyment” (Bryant & Veroff, 2007, p. 97). Although it is believed that most people want to amplify rather than to dampen, some people may choose to dampen positive emotions. Examples of dampening are suppressing one’s positive emotions, paying attention to the negative elements of a situation, and engaging in thinking about ways in which a positive experience could be even better (Quoidbach, Berry, Hansenne, & Mikolajczak, 2010). Dampening often exhibits negative correlations with well-being and life satisfaction in Western contexts (Quoidbach et al., 2010). Nevertheless, Bryant and Veroff include dampening within the broad definition of savoring, as they argue that dampening, like amplifying, also involves the regulation of positive emotions, although not in a way that typically magnifies the intensity or duration of positive feelings in Western populations.

The Measurement of Savoring: The Ways of Savoring Checklist

Although there are several measurement tools used to assess savoring strategies (e.g., Feldman, Joormann, & Johnson, 2008; Nelis et al., 2011), the WOSC (Bryant & Veroff, 2007) includes a wider range of different types of items to capture a fuller range of savoring strategies. The WOSC measures savoring strategies by assessing respondents' recalled use of a wide variety of different savoring strategies in response to a recent positive event. According to previous studies (e.g., Bryant & Veroff, 2007), the 60-item WOSC yields ten subscales including Sharing with Others, Memory-Building, Self-Congratulation, Comparing, Sensory-Perceptual Sharpening, Absorption, Behavioral Expression, Temporal Awareness, Counting Blessings, and Kill-Joy Thinking. Whereas most of these subscales involve cognitive responses to positive events (e.g., Memory Building, Comparing), three subscales focus on behavioral savoring responses to positive events (e.g., Sharing with Others, Behavior Expression).

Although the original WOSC was constructed to contain ten subscales, subsequent research by Jose et al. (2012) shows that a two-factor model, reflecting amplifying and dampening responses, best explains people's responses to the instrument. Other related studies (e.g., Quoidbach et al., 2010) have also found these same two dimensions of up-regulating and down-regulating strategies using measures other than the WOSC. The primary goals of the present study were to evaluate the measurement adequacy of the Japanese translation of the WOSC, and to examine both the ten-factor model and the two-factor model of the WOSC to see which factor structure better explains the savoring responses of a Japanese sample.

Validity of the WOSC

In addition to investigating the psychometric adequacy of the Japanese WOSC, it was also important to determine the degree to which the obtained subscales demonstrate criterion validity as a measure of savoring. Bryant and Veroff (2007) reported empirical evidence that various savoring responses manifested significant relationships with expected outcomes. For example, they found that positive personality traits (i.e., Positive Affectivity, Extraversion, Optimism) tended to be positively correlated with the amplifying subscales of the WOSC, but unrelated to dampening (i.e., Kill-Joy Thinking); whereas scores on a trait Pessimism scale tended to be uncorrelated with the WOSC amplifying scales of the WOSC, but positively correlated with Kill-Joy Thinking.

In addition, several other studies have verified expected relationships between savoring and positive affective states (Gentzler, Palmer, & Ramsey, 2016; Nelis et al., 2011; Nelis et al., 2016; Quoidbach et al., 2010; Wood, Heimpel, & Michela, 2003). In a daily diary study, for example, Jose et al. (2012) demonstrated that amplifying savoring responses mediated the positive influence of positive life events on positive mood over time. In addition, Wood, Heimpel, and Michela (2003) have shown that people who have higher self-esteem are more likely to amplify positive feelings, whereas people who have lower self-esteem are more likely to dampen positive feelings. Taken as a whole, these studies show that amplifying manifests a positive association with positive emotion, whereas dampening exhibits a null or negative relationship with positive emotions.

However, in relation to these Western studies, other Eastern studies show that Japanese people experience and manifest a different pattern of savoring responses compared to Western people.

Research conducted by Lindberg (2004), for instance, showed that Japanese sojourner students reported lower levels of amplifying savoring and higher levels of dampening savoring relative to Western students. Lindberg argued that Japanese people may intentionally dampen their positive emotions because of social customs, beliefs in modesty and the avoidance of public displays of intense emotion, and adherence to the belief that positive events might trigger inevitable negative consequences (dialecticism). Dialectical beliefs refer to the notion that the world is constantly changing so that unhappiness often leads to happiness, and, in turn, happiness often leads to unhappiness (Peng & Nisbett, 1999). Consistent with this view, Miyamoto and Ma (2011) have shown that when experiencing positive events, Japanese individuals tend to dampen more compared to North Americans, because Japanese people tend to hold stronger dialectical beliefs. In sum, these two studies suggest that amplifying and dampening strategies may operate differently in the context of Japanese culture. Nevertheless, we hold that the Japanese version of the WOSC is still likely to show similar validity characteristics. Specifically, we hypothesized that among Japanese people amplifying responses would show strong positive relationships with positive mood outcomes, whereas dampening responses would exhibit weaker negative or null relationships with positive mood outcomes.

Goals and Hypotheses of This Study

The present study had two goals. Our primary goal was to investigate the reliability and validity of the Japanese version of WOSC. We expected that the Japanese version of the WOSC would yield a smaller number of subscales compared to the original English version of the WOSC. In particular, we expected to find two subscales similar to the amplifying and dampening subscales that Jose et al. (2012) identified in a Western (New Zealand) sample (Hypothesis 1).

A secondary goal was to examine associations of the WOSC subscales with a range of commonly used measures of affect and cognition (e.g., optimism, happiness, positive and negative mood, and self-esteem) in order to evaluate the instrument's validity. It was predicted that the amplifying subscale would exhibit moderate positive relationships with measures of positive mood states and personality characteristics, whereas the dampening subscale would exhibit weaker negative or null relationships with these same variables (Hypothesis 2).

Method

Participants

This study employed an Internet survey company (Macromill, Inc.), which enabled us to recruit participants from a variety of ages and occupations within Japan. The sampling frame for the present study was people who identified as Japanese, lived in Japan, and ranged from 20 to 70 years of age. In addition, the sample consisted of an equal number of female and male participants and an even distribution of ages over this 50-year range.

The first survey included 520 Japanese adults (260 males, 260 females). The participants ranged in age from 20 to 69 years ($M = 44.36$, $SD = 14.0$). The follow-up sample, which was specifically collected to evaluate the one-month test-retest reliability of the WOSC-J, consisted of 110 participants comprising 55 males and 55 females, and it was randomly selected from the initial

sample. Participants in the follow-up sample ranged in age from 20 to 69 years and yielded a similar mean age ($M = 44.71$, $SD = 13.68$).

Procedure

The online survey was administered twice (in February and March 2017) to investigate test-retest reliability over the two time points and the validity of the newly translated measure at Time 1. Participants completed all measures anonymously in return for points from the Internet survey company that could be redeemed online.

Translation of the Measure

First, the original version of the Ways of Savoring Checklist (WOSC) was translated from English into Japanese by three of the authors of this report. Second, an independent bilingual psychologist then checked the quality of the translation. After this step, we discussed the translated items in the research team to revise the translations. Third, translation back into English was performed by paid professional translators expert in English-Japanese translation. After this process, another author of the paper, who developed the original English version of the WOSC, compared the original English items and the back-translated English items to ensure the accuracy of the translation. And last, after this check, some additional translations of 11 items were slightly modified to enhance the clarity of the meanings. The present study was designed to check the reliability and validity of this Japanese version of the Ways of Savoring Checklist (WOSC-J).

Measures

Savoring. Savoring was assessed using the WOSC-J, which was translated specifically for this study. The original WOSC was developed in English by Bryant and Veroff (2007). In line with the use of this instrument in other cultures, participants first described a positive event they had recently experienced and then responded to 59 items tapping various savoring strategies. Respondents rated the degree to which each savoring strategy applied to what they had thought or done during the recent positive event using a seven-point Likert rating scale ranging from 1 (*definitely doesn't apply*) to 7 (*definitely applies*).

To assess criterion validity, we collected additional data concerning the following five constructs:

Optimism. Levels of trait optimism and pessimism were measured using the Revised Life Orientation Test (R-LOT), which was originally developed in English by Scheier, Carver, and Bridges (1994). This scale includes ten items which yield two subscales (optimism and pessimism). 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*).

Positive Emotion Intensity. Positive emotion intensity was assessed using the Emotional Intensity Scale (EIS) developed in English by Bachorowski and Braaten (1994). Although this scale was originally found to yield two subscales (positive and negative), in the present study we used only the positive emotion intensity subscale (14 items) with a five-point Likert rating scale. In this study, we used the Japanese version of the EIS, which was adapted by Noguchi, Sato, and Yoshikawa (2008).

Happiness. Subjective happiness was measured using the Japanese version of the 4-item Subjective Happiness Scale (SHS), which was originally developed in English by Lyubomirsky and Lepper (1999) and adapted by Shimai, Otake, Utsuki, Ikemi, and Lyubomirsky (2004). An example of an

item from the SHS is “Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?” Participants rated all items using a 7-point Likert scale.

Self-Esteem. Self-esteem was assessed using the Japanese version (Yamamoto, Matsui, & Yamanari, 1982) of the original English Rosenberg Self-esteem scale (Rosenberg, 1965). Participants rated all 10 items using a five-point Likert scale. Examples of the items are “On the whole, I am satisfied with myself” and “At times I think I am no good at all [reversed-scored].”

Positive and Negative Affect. To assess positive and negative affect, this study used the Japanese version of the Positive and Negative Affect Schedule (PANAS) scales (Sato & Yasuda, 2001), originally developed in English by Watson, Clark, and Tellegen (1985). The 16-item PANAS assesses both positive affect (PA) and negative affect (NA). Participants were asked to rate the extent to which they have experienced each particular emotion within a specified time period, with a 6-point Likert scale. The scale points ranged from 1 (*not at all*) to 6 (*very much*). A number of different time-frames have been used with the PANAS, but in the current study the time-frame adopted was “the present.”

This set of self-report measures of positive and negative affect was used to test the criterion validity of the WOSC-J. Criterion validity is a “form of validity in which a psychological measure is able to predict some future behavior or is meaningfully related to some other measure” (Burton et al., 2018, p. 67). Thus, we expected that: (a) the amplifying savoring subscale of the WOSC-J would correlate moderately and positively with positive affect scores, and would correlate negatively or null relationship with negative affect scores; and (b) the dampening savoring subscale would exhibit either weaker negative or null correlations with positive affect scores, and would correlate positively with negative affect scores. Both the EIS as well as the PANAS were included as criterion measures despite the apparent overlap in assessing positive affect. The key conceptual distinction between these two affective measures is that the EIS assesses trait-based positive affect (Bachorowski & Braaten, 1994), whereas the PANAS in this case assessed state-based positive affect (i.e., describe positive affect “in the present”).

Data Analysis

Two main steps were taken for the analyses. First, this study used factor analysis to evaluate the content validity of the Japanese version of the WOSC. Using both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), we sought to confirm the originally identified ten-subscale factor structure and explore whether another factor structure would provide a better goodness-of-fit to the data. Second, we sought information about the scale’s criterion validity by examining correlations among latent variables to test associations of obtained WOSC subscales with a range of commonly used measures of affective states and characteristics such as subjective happiness and positive emotion.

Results

Psychometric Analyses

Confirmatory Factor Analysis (CFA). This study first sought to determine whether a previous factor model obtained using U.S. samples was appropriate for the Japanese data. The analyses for this CFA were based on the initial sample of 520 Japanese adults. Using this sample, we estimated a 10-factor CFA model based on EFA results reported by Bryant and Veroff (2007). The resulting goodness-of-fit indices demonstrated poor model fit (CFI = .762, TLI = .746, RMSEA = .086, SRMR = .102). We also estimated a default one-factor model, which likewise evidenced poor goodness-of-fit (CFI = .638, TLI = .626, RMSEA = .102, SRMR = .099). On this basis, the previously identified 10-factor model, as well as the default one-factor model, were rejected.

Exploratory Factor Analysis (EFA) to Identify a Culture-Specific Model. This study explored whether a different factor structure than the one originally identified with Western samples might pertain to the Japanese sample. We next conducted EFA with the initial Japanese sample using the following steps in search of a reliable factor structure. The first step was to randomly divide our sample of 520 individuals into an exploratory group (Group 1; $n = 260$) and a confirmatory group (Group 2; $n = 260$). Before conducting the EFA, we assessed the distributional properties of the 60 WOSC items in Group 1. Because the last item has an open-ended response format, it was excluded, and we included 59 WOSC items for the descriptive analysis. Although some of the items showed slightly elevated skewness values, we ultimately decided to use all 59 items for the following analyses.

Next, we conducted EFA with Group 1, using principal axis factor analysis with direct oblimin rotation (to allow for correlated factors). To assist in determining the optimal number of factors, we conducted a parallel analysis, as recommended by Dinno (2009), and we also examined the scree plot. Although the parallel analysis suggested four factors, the scree plot suggested two factors: eigenvalues were 21.26, 5.14, 1.67, 1.45, 1.30, 1.11 and 0.98. Therefore, we first considered the four-factor model, and then worked back to the two-factor model. We used the following three criteria to decide whether or not items should be retained: (a) items should have a minimum factor loading of .32, which signifies 10% overlapping variance with the other items in the factor (Tabachnick & Fidell, 2007); (b) no items should have cross-loadings such that the difference between the item's highest and second-highest factor loadings is less than .15 (Worthington & Whittaker, 2006); and (c) no items should have absolute loadings higher than .32 on two or more factors (Tabachnick & Fidell, 2007; Worthington & Whittaker, 2006).

The four-factor model revealed numerous cross-loading items, and therefore we concluded that it was not optimal. Next, we examined the two-factor and three-factor EFA models by considering the factor loadings within the context of the criteria mentioned above in item inclusion. Considering the eigenvalues of the factors and the remaining items (after deleting 11 items that did not meet the above criteria), we ultimately extracted two factors, which generally conformed to the amplifying ($\alpha = .97$) and dampening ($\alpha = .96$) factors identified by Jose et al. (2012). The two-factor model explained 54% of the common variance, yielded a significant Bartlett's test of sphericity ($p < .01$), and a Kaiser-Meyer-Olkin (KMO) value of 0.95. Based on these results, we concluded that the two-

factor model was optimal and appropriate for confirmatory factor analysis. Table 1 shows the final results of the two-factor EFA. Note in Table 1 that 29 items constituted factor 1 and 19 items constituted factor 2.

Table 1. Results of the two-factor EFA (final version) of the WOSC-J ($N = 260$)

	I	II
I: Amplifying ($\alpha = .97$, 29 items)		
54. I thought about what a good time I was having.	.91	-.19
9. I reminded myself how lucky I was to have this good thing happen to me.	.90	-.18
29. I said a prayer of thanks for my good fortune.	.85	-.15
2. I tried to take in every sensory property of the event (sights, sounds, smells, etc.).	.81	-.08
19. I thought about what a lucky person I am that so many good things have happened to me.	.81	-.03
12. I thought about how I'd reminisce to myself about this event later.	.79	-.17
3. I reminded myself how long I had waited for this to happen.	.77	-.19
42. I thought about what a triumph it was.	.75	.07
43. I thought about how fast the time was passing.	.71	.08
14. I thought how I wished this moment could last—reminded myself how I must enjoy it now because it would soon be over.	.70	.02
6. I thought back to events that led up to it—to a time when I didn't have it and wanted it.	.69	-.01
1. I thought about sharing the memory of this later with other people.	.69	-.03
22. I consciously reflected on the situation—took in details, tried to remember them, made comparisons.	.67	.21
8. I thought only about the present, got absorbed in the moment.	.65	.02
34. I reminded myself that nothing lasts forever so I must enjoy this now.	.65	.12
36. I reminded myself that others who were involved in the event were also thinking and feeling the same way.	.62	.15
13. I reminded myself what a relief it was.	.60	-.02
20. I thought about ways in which it could have been better.	.60	.18
58. I imagined a whole sequence of good events that could arise as a consequence of this event.	.58	.19
51. I made associations with other past pleasant events and reminded myself of them.	.58	.21
41. I took mental photographs.	.58	.25
48. I tried to memorize my surroundings.	.56	.32
15. I laughed or giggled.	.56	.13
31. I hung around with others who know how to have a good time.	.55	.20
60. I tried not to think too much—just relaxed and enjoyed.	.53	.22
23. I told myself how proud I was.	.52	.24
11. I looked for other people to share it with.	.49	.17
24. I reminded myself that it would be over before I knew it.	.45	.28
53. I took photographs with a camera to capture the experience.	.43	.25
II: Dampening ($\alpha = .96$, 19 items)		
39. I told myself how it wasn't as good as I'd hoped for.	-.22	.91

30. I withdrew and inhibited my feelings (stiffened up).	-.17	.90
56. I thought about things that made me feel guilty.	-.14	.81
10. I told myself why I didn't deserve this good thing.	-.07	.79
46. I reminded myself of other places I should be or of other things I should be doing instead.	.03	.77
27. I tried to slow down and move more slowly (in an effort to stop or slow down time).	.11	.74
16. I thought about ways in which it could have been worse.	-.13	.72
52. I thought about other things that were hanging over me, problems and worries that I still had to face.	.10	.72
45. I compared myself to others (asked myself 'Am I enjoying this as much as they are?').	.21	.69
35. I sighed or made other verbal sounds of appreciation to help myself savor the moment (e.g., saying mmm, aahh, humming or whistling).	.14	.68
26. I focused on the future on a time when this good event would be over.	.22	.61
50. I touched myself—rubbed my stomach, clapped my hands, etc.	.22	.61
44. I screamed or made other verbal expressions of excitement.	.20	.60
33. I told myself how impressed others must be.	.25	.59
37. I concentrated and blocked out distractions; I intensified one sense by blocking another.	.31	.58
55. I thought about how things might never be this good again.	.29	.54
17. I opened my eyes wide and took a deep breath tried to become more alert.	.31	.53
25. I tried to speed up and move more quickly.	.27	.53
57. I got high or intoxicated to help me enjoy it.	.13	.53
Factor correlation		
I	-	.50
II		-

Note. KMO test = .95, Bartlett's Test: $\chi^2 = 10298.158$, $df = 1128$, $p < .001$

CFA of the Two-Factor Model in the Confirmatory Sample. Next, we conducted an item-level CFA with Group 2 (the confirmatory sample) to confirm the results from the Group 1 EFA. Since robust maximum likelihood (RML) estimation corrects for the effects of non-normality, we conducted both RML and the standard maximum likelihood (ML) estimation and compared results. With the item-level approach, we continued to obtain poor fit indices using both RML ($CFI = .779$, $TLI = .769$, $RMSEA = .069$, $SRMR = .102$) as well as ML estimation ($CFI = .740$, $TLI = .729$, $RMSEA = .098$, $SRMR = .102$).

An alternative approach to measurement modeling increasingly used in the field is to combine items into composite multi-item parcels (see Little, Cunningham, Shahar, & Widaman, 2002; Little, Rhemtulla, Gibson, & Schoemann, 2013). In support of this technique, numerous articles in positive psychology journals have used the composite-parcel technique (e.g., Ciarrochi, Parker, Kashdan, Heaven, & Barkus, 2015; Gallagher & Lopez, 2009). Previous studies have shown that parceling confers many advantages if the factors contain numerous items (e.g., Aa et al., 2009) or when the sample size is small (Hau & Marsh, 2004). Parcels have also been found to approximate normal distributions more optimally than do individual items (Cattell & Burdsal, 1975; Finch & West, 1997). However, a criticism of this approach is that parcels may obscure multidimensional or heterogeneous

factors, leading to problems in adequately assessing the validity of the measurement model (Bandalos, 2002). In the present case, since the internal consistency reliability (i.e., Cronbach's α) of each of the two factors was so high, the threat of heterogeneity within factors appears nonexistent.

Using the results reported in Table 1, we created parcels by systematically distributing items based on their factor loadings (Little et al., 2002). We selected items for the amplifying factor with loadings higher than .50, arranged the resulting 26 items in order of decreasing magnitude, and then systematically sorted the individual items into three parcels (i.e., the item with the highest loading added to parcel 1, the item with the second highest loading added to parcel 2, item with the third highest loading added to parcel 3, etc.), and then averaged scores for each parcel (see Appendix A). Using the same approach, we also sorted 19 items from the dampening factor into three parcels. After this data preparation, separate CFAs using RML and ML methods were performed to assess model fit using three parcels for amplifying and dampening, respectively (i.e., a total of six parcels). The results yielded a good model fit using both methods (RML: $CFI = .995$, $TLI = .991$, $RMSEA = .058$, $SRMR = .019$; ML: $CFI = .994$, $TLI = .989$, $RMSEA = .075$, $SRMR = .019$). Thus, both ML (the default approach) and RML (the more conservative approach) yielded the same excellent level of model fit. It is also relevant to note that the correlation between latent amplifying and dampening factors in the item-level CFA was .66, and the same correlation in the parcel-level CFA was .65. Therefore, it seems that the association between the two factors was virtually identical (i.e., 40% shared variance) regardless of the level of item measurement (i.e., parceled or not).

Table 2. Reliability assessment

Composite Measures	Cronbach's α (Time 1) $N = 520$	Cronbach's α (Time 2) $N = 110$	Test-Retest Correlation Coefficient $N = 110$
Amplifying	.97	.94	.48 **
amp1	.91	.92	.54 **
amp2	.90	.91	.54 **
amp3	.90	.86	.42 **
Dampening	.96	.87	.49 **
damp1	.87	.88	.53 **
damp2	.88	.97	.54 **
damp3	.87	.95	.50 **

Note. ** $p < .001$.

The reliabilities of the WOSC factors were assessed using Cronbach's α as a measure of internal consistency and the Pearson correlation coefficient as a measure of test-retest reliability (see Table 2). The Cronbach's α reliability of each of the item parcels as well as of each of the two factors in the final CFA model was higher than .80, which is the recommended minimum criterion proposed by Bagozzi and Yi (2012). Additionally, the mean WOSC-J subscale scores in the follow-up survey (Time 2) also exhibited appropriate internal reliabilities ranging from .86 to .97. Based on Pearson correlation coefficients, the one-month test-retest reliabilities were moderate in size: amplifying was .48, and dampening was .49. As predicted, the two-factor model based on parcels was determined to be an optimal factor structure for the WOSC-J. Supporting Hypothesis 1, the two-factor model yielded strong goodness-of-fit to the data, each of the two constituent factors manifested clear unidimensionality, and moderate test-retest reliability was obtained for both factors over time.

Validity findings

We report here analyses of the degree to which the two WOSC-J factors correlated with other constructs in expected ways (criterion validity). Appendix B presents descriptive statistics for all variables used in this study. We examined standardized covariances (i.e., correlations) among latent variables using the AMOS structural equation modeling program. These analyses were performed with separate CFA models for each criterion construct to avoid issues with multicollinearity. We assessed standardized covariances of both amplifying and dampening savoring in the model at the same time predicting each of the following constructs separately: optimism ($\alpha = .71$), pessimism ($\alpha = .72$), positive emotion intensity ($\alpha = .91$), subjective happiness ($\alpha = .81$), self-esteem ($\alpha = .87$), positive emotion ($\alpha = .93$) and negative emotion ($\alpha = .95$). As predicted, the latent variable of amplifying manifested a positive relationship with the latent variables of optimism ($r = .53, p < .001$), positive emotion intensity ($r = .50, p < .001$), subjective happiness ($r = .41, p < .001$), self-esteem ($r = .28, p < .001$), and positive affect ($r = .32, p < .001$). Unexpectedly, amplifying showed a small positive correlation with pessimism ($r = .12, p < .001$). However, confirming predictions, amplifying was uncorrelated with negative affect ($r = .01, ns$).

Partially confirming predictions, the latent variable of dampening yielded generally weaker relationships with the positive criterion variables—i.e., optimism ($r = .31, p < .001$), pessimism ($r = .19, p < .01$), positive emotion intensity ($r = .15, p < .001$), subjective happiness ($r = .11, p < .05$), self-esteem ($r = .02, ns$), and positive affect ($r = .33, p < .001$)—as well as a positive correlation with negative affect ($r = .32, p < .001$).

However, the fact the dampening subscale showed positive relationships with the positive criterion variables in our Japanese sample, rather than the expected negative or null relationships typically found in Western samples, fails to support Hypothesis 2. This latter finding is consistent with the notion that dampening strategies operate differently in the context of Japanese culture. Considered together, the present findings partially support Hypothesis 2, which stipulated that the amplifying subscale would show moderately strong positive relationships with the positive mood states and characteristics, whereas the dampening subscale would display weaker relationships with these same variables. However, the fact the dampening subscale showed positive correlations with the positive criterion variables in our Japanese sample, rather than the negative or null correlations typically found in Western samples, contradicts Hypothesis 2.

Discussion

The purpose of this study was to evaluate the reliability and validity of the newly translated WOSC-J measure with a sample of Japanese adults. In order to fulfil this purpose, we conducted exploratory and confirmatory factor analyses to evaluate the factor structure of responses to the WOSC-J, and we conducted structural equation modeling analyses to determine the direction and size of the associations between the WOSC-J and related constructs. Overall, the results indicated that the WOSC-J demonstrated acceptable levels of internal consistency and test-retest reliability and of criterion validity in the Japanese context.

Our first finding was that the WOSC-J evidenced two clear subscales in this Japanese sample, which supported Hypothesis 1. As predicted, the factor analysis identified a clear two-factor structure, which consisted of savoring responses reflecting amplifying and dampening. The two-factor model of the WOSC-J based on Japanese participants is broadly consistent with previous findings obtained using the WOSC with New Zealand participants (Jose et al., 2012). Unfortunately, since the latter study used a 30-item shortened WOSC, and the demographic characteristics of the two samples widely differ (e.g., age and gender ratio), meaningful comparisons between these two sets of results are not possible.

Furthermore, the present study found that the amplifying subscale exhibited positive relationships with a range of positive mood states. This set of results supported Hypothesis 2. Also as predicted, our results indicate that amplifying generally manifested positive relationships with a range of positive mood constructs, such as optimism, positive emotion intensity, subjective happiness and positive emotion, than did dampening, which is consistent with previous findings using Western samples (Bryant & Veroff, 2007; Jose et al., 2012; Quoidbach et al., 2010). We also hypothesized that dampening would be positively correlated with the two negative criterion variables, pessimism and negative affect, and it was. However, it is also notable that some unexpected cross-valence associations also emerged: amplifying was positively correlated with pessimism, and dampening was positively correlated with optimism, positive emotion intensity, subjective happiness, and positive mood states. Although these associations have not been found before, they may signal, as Bryant and Veroff (2007) suggested, that dampening can serve an adaptive function in certain populations, such as cultures in the East.

The fact that dampening explained a significant amount of variance in these positive outcomes above and beyond the impact of amplifying suggests that these two broad strategies are two complementary avenues through which to increase positive outcomes. Along these lines, Joshanloo et al. (2014) have investigated cultural differences in what they term “fear of happiness,” which may help elucidate the present findings. Fear of happiness is the belief that a present state of happiness has the possibility of leading to subsequent negative events and emotions, which represents a dialectical viewpoint (Miyamoto & Ma, 2011; Peng & Nisbett, 1999). Joshanloo et al. (2014) found that fear of happiness occurs at a higher rate in Eastern cultures than in Western cultures. Thus, Easterners are more likely than Westerners to believe that an intensely happy moment may precipitate a downturn, which would produce greater unhappiness. Another potential cause of fear of happiness is that some individuals believe that a state of happiness may invite rivalry or envy from

other people. In addition, Safdar et al. (2009) have argued that variations of emotion display rules, i.e., culture-specific rules controlling emotional expression depending on social circumstances, may predispose Eastern peoples to mute their positive emotions. Safdar et al. (2009) found that, compared to a North American sample, a Japanese sample tended to show less emotional expression of negative emotions such as anger and contempt, as well as less expression of positive emotions like happiness and surprise. These researchers also found that Japanese people employ different emotion expression rules with in-group and out-group members. Combining these perspectives, it is likely that Japanese people may dampen positive emotions if they worry that being happy will cause circumstances to worsen or if they are concerned about avoiding negative evaluations from other people.

Our main conclusion from the present study is that the Japanese version of the WOSC seems to be a psychometrically reliable and valid measure of savoring strategies for Japanese adults. The present results should encourage researchers to conduct savoring research in Japan as well as with Japanese participants in other countries, in order to understand better the nature of savoring in different social and cultural contexts. The WOSC-J may provide useful information to help understand important topics such as the fact that Japanese people reliably score lower in happiness relative to many other countries around the world (e.g., Uchida et al., 2004).

Limitations and Directions for the Future Studies

Even though our study produced results that are likely to be useful for future research, a few limitations should be considered. In particular, an in-depth qualitative investigation of savoring at an emic level (Harris, 1976) is necessary to obtain a culturally-grounded understanding of happiness and savoring in Japanese culture. In this study, we collected only quantitative data from a sample of Japanese adults and statistically extracted a two-factor model of savoring strategies from closed-ended responses to the WOSC-J. We are uncertain whether the items in the original WOSC scale capture the entirety of Japanese cultural perspectives on the regulation of positive affect, given that this instrument is based on North American views and most of the data collected using this measure are from Western samples. Future work should include qualitative emic enquiries into the nature of Japanese savoring strategies.

It is also notable that acceptable model fit for the WOSC-J was obtained only using the method of item parceling. Although item parceling can distort results by producing conceptual heterogeneity in factor structures (Bandalos, 2002), evidence indicates that the amplifying and dampening factors of the WOSC-J are each clearly unidimensional. Future work, however, is needed to verify this conclusion.

Although we used a large sample of adults covering a wide age range (from 20 to 69 years), adolescents were not included in the present study, and future work should examine individuals during these formative years, in order to assess the generalizability of the present findings. A final limitation that we should mention is that we did not follow our full sample of 520 individuals over time, but retested only a subset (i.e., 21%) of the original sample at two points in time, in order to evaluate the test-retest reliability of the WOSC-J. Future work might usefully track a larger sample of individuals over multiple time points to investigate forces that affect savoring and resultant positive mood states longitudinally.

Conclusions

This study represents an important first step in understanding the ways in which Japanese adults savor positive experiences. Our initial empirical evaluation of the Japanese translation of the WOSC produced promising evidence of its utility in measuring Japanese savoring strategies. Future researchers can use this measurement tool with confidence to investigate savoring in Japan and in work comparing savoring across cultures.

Declaration of Conflicting Interests

The author(s) declared no conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Appendix AItems for each parcel

$$\text{AmpP1} = (\text{Q54} + \text{Q2} + \text{Q3} + \text{Q14} + \text{Q22} + \text{Q36} + \text{Q58} + \text{Q48} + \text{Q59}) / 9.$$

$$\text{AmpP2} = (\text{Q9} + \text{Q19} + \text{Q42} + \text{Q6} + \text{Q8} + \text{Q13} + \text{Q51} + \text{Q15} + \text{Q23}) / 9.$$

$$\text{AmpP3} = (\text{Q29} + \text{Q12} + \text{Q43} + \text{Q1} + \text{Q34} + \text{Q20} + \text{Q41} + \text{Q31}) / 8.$$

$$\text{DamP1} = (\text{Q39} + \text{Q10} + \text{Q16} + \text{Q35} + \text{Q44} + \text{Q55} + \text{Q57}) / 7.$$

$$\text{DamP2} = (\text{Q30} + \text{Q46} + \text{Q52} + \text{Q26} + \text{Q33} + \text{Q17}) / 6.$$

$$\text{DamP3} = (\text{Q56} + \text{Q27} + \text{Q45} + \text{Q50} + \text{Q37} + \text{Q25}) / 6.$$

Appendix BDescriptive statistics for variables used in the present study ($N = 520$)

Variables	Mean	Std. Deviation	Skewness Value	Kurtosis Value
Amplifying	4.28	1.27	-0.76	0.88
Dampening	3.31	1.29	-0.04	-0.42
Optimism	2.95	0.78	-0.12	0.20
Pessimism	3.09	0.91	-0.20	0.15
Positive emotion Intensity	3.29	0.63	-0.33	0.94
Happiness	4.50	1.06	-0.03	0.18
Self esteem	3.21	0.71	-0.18	0.56
Positive emotion (PANAS)	3.76	1.17	-0.47	0.33
Negative emotion (PANAS)	3.30	1.40	0.18	-0.33
