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Translation and Validation Study of the Korean Self-Compassion Scale

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Abstract

Objective Several studies have been conducted to examine the factor structure of the Self-Compassion Scale in multiple languages. A preliminary review of the existing Korean version of the Self-Compassion Scale (SCS) indicated that some items were less accurately translated, necessitating a retranslation. The goal of the current study was to provide a reliable version of the K-SCS that can be used in further research on self-compassion, providing an accurate means of assessing the nature and correlates of self-compassion in a Korean population.

Method We translated K-SCS to address conceptual and methodological concerns using approved translation procedures. Upon translating the SCS, a total of 510 Korean participants completed the survey via online survey platform. We explored the factor structure of the scale using confirmatory factor analysis (CFA) and exploratory structural equation modeling (ESEM). We also investigated discriminant and convergent validity of the K-SCS.

Results Findings from the current study supported the use of 6-factor correlated and bifactor models using an ESEM approach, indicated by excellent goodness of fit indices. The K-SCS was negatively related to measures of negative emotions and positively related to measures of life satisfaction and happiness.

Conclusions The current study provides a reliable K-SCS that can be used to assess the 6 subscales as well as the total score of the SCS. Findings support the use of ESEM approach when examining the factor structure of the SCS, which has been increasingly used in validating translated versions of the SCS.

Preregistration This study is not preregistered.

Keywords Self-compassion · Self-compassion scale · South Korea · Confirmatory factor analysis · Exploratory structural equation modeling

Self-compassion, an Eastern philosophical concept derived from Buddhist philosophy, is an attitude focused on showing compassion towards the self (Neff, 2003a, b). According to Neff (2003a, b), self-compassion has three components: (a) self-kindness, (b) mindfulness, and (c) common humanity, with each component characterized by positive and negative poles. Self-kindness refers to providing understanding, support, and warmth to the self in the midst of failures and difficult times (Neff, 2003a, b). The counterpart of self-kindness is self-judgment, which involves harsh self-criticism when faced with difficulties and perceived inadequacies. Mindfulness is understood as recognizing one's current feelings, thoughts, and situations without denying or over-identifying with those painful experiences; over-identification is an opposite construct that describes an exaggerated emotional response when exposed to painful experiences (Neff, 2003a, b). Common humanity is defined as seeing life experiences (including failures, flaws, and painful situations) as shared with all human beings. In contrast to common humanity, isolation is defined as feeling different and disconnected from others in the midst of difficulties (Neff, 2003a, b).

Neff (2003a) conceptualizes self-compassion as showing understanding and care for oneself when faced with suffering and difficulties to generate a sense of well-being that is rooted in the experience of being human. Self-compassion was negatively associated with self-criticism, depression, anxiety, rumination, thought suppression, and neurotic perfectionism, and positively correlated with life satisfaction

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and social connectedness (Neff, 2003b). Self-compassion has also been reported to be related to optimism and happiness, as well as personal initiative, curiosity, and exploration (Neff, 2009; Neff et al., 2007), and life satisfaction (Anggraeni and Kurniawan, 2012; Arimitsu & Hofmann, 2015). Self-compassion is not only associated with positive psychological variables, but also negatively associated with psychopathology (e.g., Diedrich et al., 2016; Gilbert & Procter, 2006), suggesting self-compassion as a predictive correlate of mental health. A meta-analysis conducted by MacBeth and Gumley (2012) concluded that self-compassion is negatively associated with common expressions of psychopathology such as depression, anxiety, and stress.

With the burgeoning literature on self-compassion and its putative benefits on mental health and psychological well-being, advancing our understanding of the construct of self-compassion by exploring optimal ways to operationalize and assess self-compassion is crucial. The Self-Compassion Scale (SCS; Neff, 2003b) is the most widely used scale developed to measure thoughts, emotions, and behaviors related to showing compassion towards the self. The factor structure of the SCS has also received a great deal of research interest. It is imperative that studies on self-compassion with different populations explore the factor structure of the SCS because self-compassion can be a meaningful psychological construct in explaining how individuals respond to negative life events. Understanding the dimensions of self-compassion may inform the focus of psychoeducation or self-compassion interventions and assist in assessing the progress of patients.

In the original study of the development of the SCS (Neff, 2003b), it was initially hypothesized that the measure would indicate a 3-factor structure (i.e., self-kindness, mindfulness, and common humanity). However, the confirmatory factor analysis (CFA) and exploratory factor analysis (EFA) of the three components of self-compassion resulted in 2 factors each, representing a 6-factor structure (Neff, 2003b). Neff (2003b) theorized that this may be due to the presence of positive and negative aspects of each facet (e.g., self-kindness vs. self-judgment). Neff (2003b) noted that it is not uncommon for positive and negative items to load on separate factors. In addition to the 6-factor structure, Neff (2003b) reported that the intercorrelations between the factors can be explained by a single higher-order factor of self-compassion. Thus, the SCS has 6 subscales that can be summed to create a total score that represents the overarching construct of self-compassion.

After the introduction of the SCS, numerous studies were conducted to replicate its factor structure across different populations, with inconsistent findings. For example, Chinese (Chen et al., 2011) and Spanish (Garcia-Campayo et al., 2014) versions of the SCS suggested the single higher-order factor model. On the other hand, results from Italian (Petrocchi et al., 2014), German (Hupfeld & Ruffieux, 2011), Portuguese (Costa et al., 2015), and Dutch (López et al., 2015) versions of the SCS suggested that a single higher-order factor may not be the optimal method of examining the overarching construct of self-compassion. Although translation issues could be one possible explanation for these different factor structures, a study by Williams et al. (2014) using the original SCS failed to replicate the factor structure found in the initial validation study by Neff (2003b). In this study, poor goodness of fit index was observed in the hierarchical 6-factor structure, and an acceptable goodness of fit index was indicated for the 6-factor model, suggesting that the SCS may be used to assess six facets of self-compassion independently rather than the overall level of self-compassion.

Due to the concerns related to the factor structure of the SCS, several studies have attempted to explore the psychometric properties of the SCS. Several studies have suggested the use of a 2-factor model in which the SCS is conceptualized to have two dimensions: (1) self-compassion, which is comprised of self-kindness, mindfulness, and common humanity, and (2) self-coldness, which entails self-judgment, over-identification, and isolation (e.g., Costa et al., 2015; López et al., 2015). In this context, positively phrased items are summed to reflect the overall level of self-compassion, and negatively phrased items are summed to indicate the overall level of self-coldness. This aligns with Gilbert's (2005) theory of social mentalities, which states that there are two distinct processing systems involved in how people interact with the world: the threat-defense and safeness systems. According to Gilbert (2005), the internal processes involved in how individuals treat themselves vary depending on which system is being activated. Further research by Gilbert et al. (2011) indicated that the safeness system is associated with self-compassion while the threat-defense system is related to self-coldness. Likewise, other studies raised concerns regarding the inclusion of items related to uncompassionate attitude (i.e., self-judgment, isolation, and over-identification) because these items reflect vulnerability and psychopathological symptoms while compassionate items (i.e., self-kindness, mindfulness, common humanity) reflect healthy psychological functioning (Muris & Otgaar, 2020; Muris et al., 2018). Proponents of the 2-factor structure of the SCS particularly raise concerns regarding the use of a total score of the SCS. These inconsistent findings suggest ambiguity in how much each component of the SCS contributes to the total score and to other relevant external variables (Smith et al., 2009).

In response to the ongoing concern regarding the use of SCS to represent compassionate attitude towards oneself, Neff (2016b) further clarified that reduced uncompassionate attitude is a key part of the definition of self-compassion. Neff (2016b) emphasized that compassionate attitude

towards oneself not only entails increased self-kindness, mindfulness, and common humanity, but also includes reductions in their opposing components (i.e., self-judgment, over-identification, and isolation, respectively). Neff (2016b) underscored that the subscales for uncompassionate attitude form their own dimensions, which she explained as the theoretical reasons for proposing the use of 6 subscales in addition to the total score. In addition to theoretical explanations, Neff (2016a) introduced the bifactor model to address the growing number of inconsistent findings about the dimensions of the SCS and justify the use of overall self-compassion score. According to Neff (2016a), in a single higher-order model, self-compassion explains the intercorrelations of the 6 subscales, with an assumption that self-compassion is not directly associated with each item in the SCS (Reise et al., 2010). On the other hand, in the bifactor model, self-compassion is assumed to directly impact individual items in the SCS and how these individual items form the subscales. Neff (2016a) reclaimed that the bifactor model is a more theoretically coherent conceptualization of the construct because self-compassion directly impacts the ways individuals respond to their suffering, difficult situations, or perceived flaws, which are represented by each item in the SCS.

Neff et al. (2017) further examined the factor structure of the SCS using various statistical models. Based on their findings, they suggested that future attempts to translate and validate the SCS should use a single-factor bifactor model (also known as single-bifactor model) and a 6-factor correlated model when evaluating model fit. Neff et al. (2019) recently explored the factor structure of the SCS in 20 different populations across 16 countries and reported that the findings further supported the use of the single-bifactor model and 6-factor structure model using an exploratory structural equation modeling (ESEM) framework. The authors concluded that the single-bifactor model indicates that the overall score of SCS can be used to measure the general construct of self-compassion while a 6-factor correlated model suggests that the SCS can be used to examine the 6 subscales of constituent components of self-compassion.

Despite concerns related to the factor structure of the SCS, it remains one of the most widely used self-report measures for compassionate attitude towards oneself. In the context of South Korea, Kim et al. (2008) were the first researchers to translate and examine the psychometric properties of the SCS in Korean. CFA was used to examine model fit of the 3-factor structure, 6-factor structure, and a single higher-order structure of self-compassion. The 6-factor structure provided a moderate model fit. Another study (Neff et al., 2019) using the same data collected by Kim et al. (2008) examined the factor structure of the Korean version of the SCS using various statistical models including 1-factor, 2-factor, 6-factor correlated, single-bifactor, and 2-bifactor models. Results from this study supported the use of the bifactor as well as the 6-factor correlated model using an ESEM framework for the newly translated version of the Korean SCS.

Several studies used the Korean version of the SCS (Kim et al., 2008) to further explore the factor structure of the SCS using various suggested models (e.g., single factor, 2-factor, 3-factor, 6-factor, single bifactor, etc.). For instance, Lee and Lee (2010), Kim and Kim (2019), and Ku and Jung (2016) examined the factor structure of the Korean version of the SCS (Kim et al., 2008) and supported the 6-factor structure of the scale, which indicates the use of 6 subscales scores. On the other hand, other studies reported different findings. Shin (2018) tested eight different models in which only the dual factor model was supported. In this dual factor model, each item loaded onto one of the 6 factors while isolation, self-judgment, and over-identification factors also converged onto a latent factor (i.e., self-coldness). Another study (Park et al., 2020) conducted several models and supported a second order model, which indicates that the Korean version of the SCS is comprised of the 6 domain-specific factors and two general factors (i.e., self-compassion and self-coldness).

Although most validation studies of the Korean version of the SCS used the translated version by Kim et al. (2008), a few studies attempted to translate and examine the factor structure of the SCS. Jo and Kim (2011) translated the SCS using back-translation method and conducted principal components analyses to examine the validity of the use of the scale for Korean population. Findings supported for the 6-factor structure, with the removal of items that neither represented the construct of self-compassion nor the domain specific factors. Additionally, some of the retained items loaded onto a domain specific factor different from that of the original SCS (Neff 2003b). For example, an item that was originally under mindfulness loaded onto the self-kindness domain while some other items that were originally classified under over-identification loaded onto the isolation domain. Another study by Jin and Lee (2009) translated the SCS and conducted CFA, which supported the 6-factor structure as well as the hierarchical factor structure. Most recently, Park (2023) translated the SCS with an emphasis on readability and accessibility for Korean adolescents. The findings supported the use of 6-factor model as well as the 2 bifactor model, which indicates the use of 6 subscales as well as two general scales (i.e., compassionate self-responding for self-kindness, mindfulness, and common humanity subscales; uncompassionate self-responding for self-judgement, over-identification, and isolation subscales).

These studies illustrate that since the introduction of the Korean version of the SCS, several studies have been conducted in Korea to examine the validity of the SCS for Korean population. Although a few studies translated their

own version of the scale (Jo & Kim, 2011; Shin, 2018), these studies did not explain the reasons for retranslating the SCS. Moreover, most studies used the Korean version of the SCS translated by Kim et al. (2008) without assessing the accuracy of the translation. When conducting a validation study for translated measures, the initial step should be to review the accuracy of the translated items. This ensures that any discrepancies observed when examining the factor structure of a measure can be attributed to reasons other than misinterpretation of the items. By addressing potential translation inaccuracies early in the process, researchers can ensure that the data collected truly reflects the intended messages of the original measure, thereby reducing the possibility of less accurate responses. Therefore, the current study aimed to carefully review the Korean version of the SCS translated by Kim et al., (2008) through feedback sessions before examining the factor structure of the Korean version of the SCS.

As an initial step, the accuracy of the previously translated K-SCS (Kim et al., 2008) was reviewed to assess whether retranslation was warranted. Feedback on the Korean version of the SCS (Kim et al., 2008) was collected from 15 native Korean speakers and 15 Koreans who are bilingual in English and Korean. For native Korean speakers, the eligibility criteria to participate in the feedback discussion were as follows: (1) born and raised in Korea and (2) earned B.S or B.A in a university in Korea. For bilingual Koreans, the eligibility criteria were as follows: 1) received at least part of their secondary education in the US and (2) earned a B.S or B.A in the US. The purpose of collecting feedback from bilingual Koreans who had received part of their secondary education in the US and graduated from university in the US was to examine whether the translated phrases are captured better by English speakers who may be more familiar with phrases and idioms that are characteristic of English.

Discussion groups were held by the researcher separately for these two groups, evaluating the meaning and clarity of the Korean version of the SCS. Feedback from these groups indicated several concerns, with participants noting that the wording of some sentences was confusing, vague, and/or awkward. Some of the translated items were also deemed to convey different meanings from the original items. For example, the use of the Korean word "gotong (고통)" that was used to refer to "suffering" conveys a sense of physical pain, contrary to the broader meaning of the term in English that may refer to emotional, psychological, and physical challenges. The phrase "down and out" was translated as "galpangjilpang (갈팡질팡)", which was understood by both native and bilingual Koreans as emotional ups and downs. Furthermore, "failings" was translated as "silpae (실패)", which means failure, rather than shortcomings or weaknesses. This preliminary examination of the Korean version of the SCS suggested that retranslation of the measure was warranted to clarify some of the original version's connotations, and to capture American idioms more accurately. It was hypothesized that less accurately translated items may interfere with responses to the SCS and may not measure the intended construct of self-compassion. Furthermore, when assessing the factor structure of the SCS, misleading items may result in less accurate factor loadings or items loading onto different factors. This can compromise the validity of the measure and lead to incorrect interpretations of the underlying constructs.

Therefore, the current study aimed to retranslate the translation of the Korean version of the SCS and examine its factor structure. Careful examination of the existing version of the Korean SCS identified several problems with the translation and suggested that retranslation of the measure was warranted to clarify the connotations of certain words, and more accurately capture American idioms. Upon retranslation of the K-SCS, the current study aimed to explore 2-factor, 6-correlated, and single-bifactor CFA and ESEM models to investigate the factor structure of the newly translated version of the Korean SCS. Using the most optimal model based on the results, convergent and discriminant validity were assessed by exploring the relationship between self-compassion and mental health indices.

Method

Participants

Participants were recruited from an online survey portal, with care taken to incorporate measures that may reduce some of the shortcomings of this data source. As a part of the screening procedure, attention checks were used (e.g., an item stating "For this item, please click on 'strongly disagree'"). Two attention check items were included. Participants who failed to pass attention check items were compensated for completing the survey but excluded from data analyses. The datasets collected for the current study are available from the corresponding author upon reasonable request.

Inclusion criteria were Korean citizenship and age 18 years and older. Among 837 respondents, 209 failed to answer the attention check items correctly, 32 did not meet the qualifications for the study (e.g., younger than 18 years old), and 86 did not fully complete the survey. Overall, the final sample consisted of 510 participants (47.50% male) with a mean age of 43.32 (SD = 13.08).

Translation Procedure

Translators for the study were volunteers drawn from alumni of Emory University or Yonsei University, who

met the following criteria: the individual has (a) lived in both countries for at least 4 years during middle school, high school, and/or college, (b) is proficient in both languages, and (c) graduated from college. Based on the concerns raised during the feedback sessions, retranslation of the entire measure was conducted following the guidelines provided by Brislin (1970) and Sinaiko and Brislin (1973). Additionally, equivalence problems that frequently arise in the process of translation were considered throughout the process of translating SCS (Sechrest et al, 1972). First, the SCS (Neff, 2003b) was translated from English to Korean by a translator, and subsequently back-translated to English by another translator. Then, a group of three other translators compared the original and back-translated versions to evaluate concept equivalence. Any discrepancies between the two versions were addressed by retranslation of that item by the group of translators until consensus was achieved. This third step was repeated with a new group of translators until both versions were judged to have the same content. The third step of this sequence is referred to as the decentering procedure, which focuses on the meaning and context of the instruments rather than on verbatim literal translation (Brislin, 1970; Werner & Campbell, 1970).

Measures

Participants completed all measures in Korean including the K-SCS, which was translated for the current study. All the other Korean versions of the measures were translated, validated, and widely used in Korean populations.

Self-Compassion

The resulting retranslation was entitled the Korean Self-Compassion Scale (K-SCS). Following the original SCS (Neff, 2003b), the K-SCS contains 26 items consisting of 6 subscales: self-kindness, mindfulness, common humanity, self-judgment, over-identification, and isolation. The items are rated on a 5-point scale (1 = *almost never,* 5 = *almost always*), and items pertaining to self-judgment, over-identification, and isolation subscales are reverse coded. The newly translated version of the K-SCS constructed for this study was used (see Supplementary Information). Items are averaged for each subscale, and subscale scores are summed to yield an overall score, with higher scores reflecting greater self-compassion. In a study with 232 undergraduate students in the United States (Neff, 2003b), psychometric properties for the SCS demonstrates good internal consistency (Cronbach's alpha = 0.94) and test-retest reliability ($r = 0.94$). In the current study, both McDonald's omega (ω) and Cronbach's alpha (α) were 0.92.

Negative Emotions

The Depression, Anxiety, and Stress Scale-21 (DASS-21; Lovibond & Lovibond, 1995) is a 21-item version of the original 42-item scale. DASS-21 assesses three related negative emotional states of depression, anxiety, and tension/stress. Items are rated on a 5-point scale (0 = *did not apply to me at all* and 5 = *applied to me very much or most of the time)*. Subscale scores are obtained by adding corresponding items and multiplying the sum by 2. The overall score is the sum of the 3 subscales. Lee et al. (2019) translated the measure to Korean and examined its psychometric properties in a sample of 430 adults from community health care centers (nonclinical subgroup) and 50 adults from community mental health centers (clinical subgroup). The results demonstrated good internal consistency indicated by Cronbach's alpha (α) values of 0.81 for Depression, 0.84 for Anxiety, and 0.85 for Stress subscales. In the current study, McDonald's omega (ω) was 0.90 for Depression, 0.86 for Anxiety, and 0.89 for Stress subscales; Cronbach's alpha (α) was 0.90 for Depression, 0.85 for Anxiety, and 0.89 for Stress subscales.

Happiness

The Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999) is a 4-item survey that assesses global subjective happiness. Items are rated on a 7-point scale (1= *not a very happy person,* 7 = *a very happy person*). The total score is obtained by calculating the average of the items after reverse coding the fourth item (e.g., 7 = 1, 6 = 2), with higher scores indicating greater self-reported happiness. A Korean version of the measure has been widely used with Korean populations including adolescents (Kim, 2009), college students (Jang, 2016), and older adults (Jo & Song, 2012). In the current study, McDonald's ω was 0.83 and Cronbach's α was 0.81.

Life Satisfaction

The Satisfaction with Life Scale (SWLS; Diener et al., 1985) is a 5-item survey that assesses subjective judgement of one's life satisfaction. Items are rated on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree).* Items are summed to obtain an overall score, with higher scores reflecting greater life satisfaction. A Korean version of the Satisfaction with Life Scale (Cho & Cha, 1998) has been used with adolescents, young adults, and police officers (Lim, 2012) as well as with geriatric populations (Seo et al., 2013). Results from the current study demonstrated McDonald's ω of 0.91 and Cronbach's α of 0.90.

Data Analyses

The analyses were conducted with Mplus 8 (Muthén & Muthén, 2017) for model analyses and SPSS 29.0 for descriptive statistics and validity analyses. For all the models, weighted least squares mean and variance-adjusted estimator (WLSMV), as suggested by previous studies (e.g., Finney & DiStefano, 2006) for ordered-categorical items with five or fewer response options. The current study assessed three corresponding CFA and ESEM models to investigate the construct-relevant dimensionality of the K-SCS. These models include the following: (1) 2-factor model with 2 unitary factors representing self-compassion and self-coldness, (2) 6-factor correlated model with six components of self-compassion, and (3) single-bifactor model with a general self-compassion factor and 6 specific factors.

In the CFA models, items were permitted to load only onto their *a priori* target factors with cross-loadings being constrained to zero. In the ESEM models, items were allowed to load onto non-target factors. For the ESEM model pertaining to (1) and (2), the model was estimated with target rotation, while the ESEM model pertaining to (3) was specified as orthogonal to the general factor. For the evaluation of model fit, typical goodness-of-fit indices (Hu & Bentler, 1999; Marsh et al., 2005) were used, which include the comparative fit index (CFI), the Tucker-Lewis Index (TLI), and the root mean square error of approximation (RMSEA) with its 90% confidence interval (90% CI). For CFI and TLI, values above 0.90 were considered adequate and 0.95 as excellent; for RMSEA, values below 0.08 were considered adequate and those below 0.06 as excellent. For the evaluation of the magnitude of the factor loadings, values above 0.71 were considered excellent, values between 0.63 and 0.70 as very good, values between 0.55 and 0.62 as good, values between 0.33 and 0.54 as fair, and values below 0.32 as poor (Comrey & Lee, 2013).

For the analyses of convergent and discriminant validity, the New K-SCS was examined in relation to other related constructs such as negative emotions (i.e., stress, depression, and anxiety), happiness, and life satisfaction. For the evaluation of the magnitude of the correlations, values between ± 0.50 and ± 1 were considered strong, values between ± 0.30 and ± 0.49 as medium, and values between ± 0.29 and ± 0.01 as small correlations.

Results

The descriptive statistics from the New K-SCS yielded a total SCS mean score of 19.39 ($SD = 3.19$), which is similar to the mean scores and standard deviation values reported in the previous validation studies (e.g., Garcia-Campayo et al., 2014; Karakasidou et al., 2017). In order to examine whether there was a significant difference between male and female groups on the SCS scores, an independent t-test was conducted. Results indicated a significant difference between the two groups ($t(508) = 2.85$, $p = 0.005$), with males reporting slightly higher self-compassion ($M = 3.30$, $SD = 0.53$) than females ($M = 3.17$, $SD = 0.52$). However, the effect size (Cohen's $d = 0.25$) indicated a small to medium practical significance of this difference.

Model fit indices for each model are illustrated in Table 1. Both the 2-factor CFA and ESEM models demonstrated poor model fit, indicating that the K-SCS cannot be represented by self-compassion and self-coldness subscales. The CFA model for the 6-factor correlated structure illustrated adequate CFI and TLI values but did not show an acceptable RMSEA value. On the other hand, the 6-factor correlated ESEM approach indicated excellent model fit, with good to moderate standardized factor loadings ($\lambda = 0.34$ to 0.99, $M = 0.65$; see Table 2). Similarly, while the CFA for the single-bifactor model showed poor fit, the ESEM approach indicated excellent fit. The examination of the parameter estimates (Table 3) indicated that the general self-compassion factor was well-defined with mostly strong (i.e., $\lambda > 0.54$) and significant factor loadings ($\lambda = 0.10$ to 0.76, $M = 0.57$). Most of the specific factors were well defined, with the majority of factor loadings greater than 0.32: self-judgment ($\lambda = 0.46$ to 0.69, $M = 0.52$), common humanity ($\lambda = 0.28$ to 0.41, $M = 0.52$), isolation ($\lambda = 0.39$ to 0.67, $M = 0.54$), mindfulness ($\lambda = 0.36$ to 0.54, $M = 0.46$), and over-identification ($\lambda = 0.46$ to 0.56, $M = 0.50$). However, self-kindness was weakly defined ($\lambda = 0.05$ to 0.59, $M = 0.30$), indicating that the items pertaining to self-kindness might be indicators of self-compassion rather than the specific component of self-compassion. These findings are consistent with previous studies, such as those by Neff et al. (2019) and Tóth-Király et al. (2017), which also observed reduced factor loadings with the ESEM approach. These

Table 1 Goodness-of-fit indices for the models

Models	Model Fit Indices			
	CFI	TLI	RMSEA	90% CI
2-factor correlated CFA	0.88	0.87	0.11	0.10 – 0.11
2-factor correlated ESEM	0.87	0.84	0.11	0.11 – 0.12
6-factor correlated CFA	0.91	0.90	0.09	0.09 – 0.10
6-factor correlated ESEM	0.98	0.96	0.06	0.06 – 0.06
Bifactor-CFA	0.84	0.80	0.13	0.12 – 0.13
Bifactor-ESEM	0.99	0.97	0.05	0.04 – 0.06

Note. CFA confirmatory factor analysis, *ESEM* exploratory structural equation modeling, *CFI* comparative fit index, *TLI* Tucker-Lewis index; *RMSEA* root mean square error of approximation

Table 2 Standardized factor loadings for the 6-factor models

Items	CFA	ESEM					
	SF(λ)[a]	SK(λ)	SJ(λ)	CH(λ)	IS(λ)	MI(λ)	OI(λ)
Self-kindness							
sk5	**0.77**	**0.84**	-0.15	0.03	-0.02	-0.08	0.12
sk12	**0.83**	**0.92**	-0.07	0.00	0.02	-0.14	0.13
sk29	**0.69**	**0.54**	0.14	0.14	0.00	-0.05	0.05
sk23	**0.74**	**0.52**	0.19	-0.05	0.05	0.33	-0.14
sk26	**0.73**	**0.42**	0.28	0.07	-0.02	0.34	-0.16
Self-judgment							
sj1	**0.75**	0.15	**0.54**	0.02	0.00	0.06	0.21
sj8	**0.28**	0.07	**0.66**	0.03	-0.09	-0.25	-0.02
sj11	**0.82**	0.04	**0.59**	-0.03	0.22	0.21	0.04
sj16	**0.83**	-0.10	**0.53**	0.02	0.09	0.18	0.32
sj21	**-0.08**	-0.01	**0.57**	0.02	-0.06	-0.42	-0.18
Common Humanity							
ch3	**0.83**	0.17	0.06	**0.38**	0.12	0.24	-0.03
ch7	**0.75**	0.00	0.05	**0.85**	-0.06	-0.03	-0.02
ch10	**0.77**	-0.13	-0.05	**0.99**	-0.05	-0.01	0.03
ch15	**0.76**	0.17	-0.00	**0.51**	0.14	0.10	-0.13
Isolation							
is4	**0.79**	-0.05	0.15	0.09	**0.45**	0.02	0.25
is13	**0.81**	-0.03	-0.03	-0.01	**0.95**	-0.07	-0.03
is18	**0.80**	0.04	-0.03	-0.03	**0.99**	-0.06	-0.13
is25	**0.87**	-0.01	0.04	0.05	**0.58**	0.05	0.25
Mindfulness							
mi9	**0.79**	0.18	0.01	0.09	-0.04	**0.64**	0.05
mi14	**0.83**	0.04	-0.06	0.15	0.07	**0.72**	0.08
mi17	**0.80**	0.07	-0.08	0.12	0.03	**0.67**	0.13
mi22	**0.83**	0.32	-0.12	0.25	0.08	**0.34**	0.04
Over-identification							
oi2	**0.85**	0.15	0.10	-0.03	0.14	0.01	**0.62**
oi6	**0.83**	-0.03	0.22	0.12	0.21	-0.11	**0.56**
oi20	**0.80**	0.04	0.06	-0.09	0.03	0.13	**0.76**
oi24	**0.80**	0.07	0.05	0.00	0.06	0.11	**0.67**

Note. CFA confirmatory factor analysis, *ESEM* exploratory structural equation modeling, *SF* specific factor, *SK* self-kindness, *SJ* self-judgment, *CH* common humanity, *IS* isolation, *M* mindfulness, *OI* over-identification, λ standardized factor loadings

Target factor loadings are in bold. Each item loaded on its respective specific factor, while cross-loadings were constrained to zero

previous studies explained that with the ESEM approach, the factor loading of each item is less significant when the general factor (i.e., self-compassion) is well-defined. Overall, the results support the use of 6-factor correlated ESEM and bifactor ESEM approaches when using the new K-SCS. This indicates that both the 6 subscale scores as well as the overall total score can be used when using the K-SCS.

To evaluate the validity of the new K-SCS, Pearson correlation analyses were conducted to explore the relationship between self-compassion and other related psychological variables (Table 4). Typically, when obtaining a total SCS score, items from the self-judgment, isolation, and over-identification subscales are reverse-coded (e.g., 5 = 1, 4 = 2) to reflect a self-compassionate attitude. This means that, once these items are reverse-coded, lower scores on these subscales indicate greater self-compassion. However, when exploring the relationship between each subscale and other related psychological variables, the self-judgment, isolation, and over-identification subscale scores were not reverse-coded, in order to reflect the actual levels of self-judgment, isolation, and over-identification tendencies. As a result, reverse coding was only applied to these subscales when calculating

Table 3 Standardized factor loadings for bifactor models

Items	Bifactor CFA		Bifactor ESEM						
	GF(λ)	SF(λ)	GF(λ)	SK(λ)	SJ(λ)	CH(λ)	IS(λ)	MI(λ)	OI(λ)
Self-kindness									
sk5	**0.57**	**0.56**	**0.58**	**0.59**	-0.07	0.14	-0.07	0.10	-0.05
sk12	**0.63**	**0.64**	**0.67**	**0.55**	-0.01	0.12	-0.06	-0.01	-0.04
sk29	**0.55**	**0.38**	**0.58**	**0.31**	0.10	0.16	-0.06	-0.04	-0.05
sk23	**0.61**	**0.33**	**0.72**	**0.09**	-0.07	-0.01	-0.17	-0.03	-0.19
sk26	**0.60**	**0.29**	**0.76**	**-0.05**	-0.04	0.03	-0.28	-0.12	-0.26
Self-judgment									
sj1	**0.60**	**0.44**	**0.56**	0.03	**0.46**	-0.05	0.06	-0.01	0.17
sj8	**0.12**	**0.70**	**0.10**	0.10	**0.69**	0.00	0.06	-0.13	0.02
sj11	**0.66**	**0.43**	**0.62**	-0.11	**0.46**	-0.11	0.16	0.00	0.09
sj16	**0.69**	**0.40**	**0.56**	-0.12	**0.47**	-0.11	0.17	0.08	0.30
sj21	**-0.21**	**0.63**	**-0.15**	-0.00	**0.53**	0.01	0.02	-0.38	-0.08
Common Humanity									
ch3	**0.63**	**0.33**	**0.64**	0.06	-0.05	**0.28**	-0.01	0.12	-0.09
ch7	**0.45**	**0.68**	**0.46**	0.13	-0.01	**0.65**	-0.06	0.05	-0.11
ch10	**0.46**	**0.77**	**0.47**	0.07	-0.10	**0.75**	-0.05	0.07	-0.07
ch15	**0.53**	**0.47**	**0.54**	0.12	-0.07	**0.41**	0.00	0.08	-0.17
Isolation									
is4	**0.66**	**0.33**	**0.55**	-0.04	0.21	-0.01	**0.39**	0.02	0.27
is13	**0.59**	**0.66**	**0.52**	-0.05	0.09	-0.05	**0.67**	-0.07	0.14
is18	**0.60**	**0.62**	**0.55**	-0.03	0.08	-0.04	**0.67**	-0.09	0.06
is25	**0.73**	**0.38**	**0.64**	-0.07	0.08	-0.04	**0.44**	-0.03	0.27
Mindfulness									
mi9	**0.60**	**0.52**	**0.65**	0.00	-0.12	0.04	-0.13	**0.42**	-0.06
mi14	**0.62**	**0.64**	**0.67**	-0.05	-0.14	0.06	-0.04	**0.54**	-0.03
mi17	**0.60**	**0.58**	**0.65**	-0.02	-0.16	0.05	-0.06	**0.50**	0.01
mi22	**0.66**	**0.36**	**0.63**	0.23	-0.11	0.22	-0.01	**0.36**	-0.08
Over-identification									
oi2	**0.71**	**0.45**	**0.66**	-0.00	0.10	-0.12	0.18	-0.09	**0.47**
oi6	**0.71**	**0.37**	**0.58**	-0.04	0.26	-0.02	0.27	-0.12	**0.46**
oi20	**0.63**	**0.59**	**0.60**	-0.07	0.06	-0.19	0.13	0.02	**0.56**
oi24	**0.66**	**0.46**	**0.61**	-0.02	0.06	-0.10	0.14	0.04	**0.49**

Note. CFA confirmatory factor analysis, *ESEM* exploratory structural equation modeling, *SF* specific factor, *SK* self-kindness, *SJ* self-judgment, *CH* common humanity, *IS* isolation, *MI* mindfulness, *OI* over-identification, λ standardized factor loadings

Target factor loadings are in bold. Each item loaded on its respective specific factor, while cross-loadings were constrained to zero.

the overall self-compassionate attitude score, in order to align with the direction of self-compassion. Results indicated that the new K-SCS has satisfactory construct validity. Specifically, the new K-SCS demonstrated good convergent validity, where self-kindness, mindfulness, and common humanity subscales as well as the overall SCS were positively correlated with happiness and life satisfaction; self-judgment, isolation, and over-identification subscales were positively correlated with stress, depression, and anxiety subscales. The new K-SCS also demonstrated good discriminant validity, where self-kindness, mindfulness, and common humanity as well as the overall SCS were negatively associated with stress, depression, and anxiety, while self-judgment, isolation, and over-identification subscales were negatively related to happiness and life satisfaction.

Discussion

The current study developed and validated a newly translated Korean version of the SCS (the K-SCS) and examined its psychometric properties and factor structure. Specifically,

Table 4 Correlations of self-compassion subscales, self-compassion total score, and mental health indices

Measures	STR	DEP	ANX	SWLS	SHS
SK	-0.38**	-0.44**	-0.28**	0.39**	0.46**
CH	-0.23**	-0.34**	-0.19**	0.37**	0.41**
MI	-0.36**	-0.39**	-0.25**	0.35**	0.38*
SJ	0.42**	0.41**	0.33**	-0.32**	-0.42**
IS	0.51**	0.55**	0.44**	-0.50**	-0.56**
OI	0.54**	0.50**	0.36**	-0.42**	-0.47**
SCS	-0.57**	-0.61**	-0.43**	0.55**	0.62**

Note. *SK* self-kindness, *CH* common humanity, *MI* mindfulness, *SJ* self-judgment, *IS* isolation, *OI* over-identification, *SCS* total self-compassion, *STR* stress, *DEP* depression, *ANX* anxiety, *SWLS* satisfaction with life, *SHS* happiness

$p < 0.05$ *; $p < 0.001$**

the current study examined the factor structure and the validity of the K-SCS using CFA, ESEM, and correlation analyses. Findings from the current study supported the use of 6-factor correlated and bifactor models using an ESEM approach. Findings further support previous studies that indicated that the Korean version of the SCS is most appropriately analyzed using a 6-factor model (Jin & Lee, 2009; Jo & Kim, 2011; Ku & Jung, 2016; Kim & Kim, 2019; Lee & Lee, 2010). However, some previous studies (Park et al., 2020; Shin, 2018) reported different findings. For instance, Shin (2018) tested eight models (i.e., the single factor model, 2-factor model, 4-factor model, 6-factor model, single bifactor model, and other expanded versions of the 4-factor models) and supported the use of a dual-factor model which supports the 6-factor structure as well as the self-coldness general factor for over-identification, self-judgment, and isolation domain-specific factors. On the other hand, Park et al. (2020) supported the 6-factor structure as well as two general factors (i.e., self-compassion for self-kindness, mindfulness, and common humanity domain specific factors; self-coldness for over-identification, self-judgment, and isolation domain specific factors). These findings indicate that there is inconsistency regarding comprising the Korean SCS as a tool that measures a construct (i.e., self-compassion) or two constructs (i.e., self-compassion and self-coldness). Given that both studies used the translated version by Kim et al. (2008), which was observed to include less accurately translated items, it is less clear whether these supported models indicate the most accurate representation of the factor structure for the Korean version of the SCS. Another study that attempted to translate and validate the measure with Korean middle school students also indicated partially different findings (Park, 2023) from the current study. Park (2023) conducted CFA and ESEM to explore 6 different factor models and supported the 6-factor structure, which is consistent with findings from the current study. However, Park (2023) also supported the 2-bifactor model, which conceptualizes the SCS as a scale that broadly measures compassionate attitude towards oneself via self-kindness, mindfulness, and common humanity subscales and uncompassionate attitude towards oneself via self-judgment, over-identification, and isolation subscales. The lack of support for the single bifactor model may be due to the difference in the targeted population (i.e., middle school students in Park (2023) study and adults in the current study) and/or differences in the translation of the items. Further efforts should be made to conduct validation studies of the SCS across populations.

Using the newly translated K-SCS upon feedback sessions, findings from the current study indicate that the K-SCS can be used to assess the 6 subscales as well as the overall total score of the SCS. The present study's support for the ESEM approach further contributes to the steadily increasing literature on ESEM and on research of the SCS using ESEM (e.g., Neff et al., 2019; Tóth-Király et al., 2017). However, while the 6-factor correlated ESEM demonstrated adequate to excellent factor loadings for all items, some of the items in the bifactor ESEM resulted in less well-defined factor loadings. Particularly, Items 23 and 26 resulted in weak factor loadings, which are both under the self-kindness factor. According to Morin et al. (2016), when using an ESEM approach, not all specific factors are required to be equally well-defined if the global factor is well-defined. The current study further supports this argument, where the general factor (i.e., self-compassion) and most of the specific factors were well-defined. This finding is also consistent with previous studies (e.g., Neff et al., 2019; Tóth-Király et al., 2017) where some of the specific items were reported to be less-defined when accounting for the general self-compassion factor (i.e., global factor).

The findings on self-kindness could possibly be explained in the context of Korean culture. Items in the self-kindness subscale includes two main ways: (1) showing love and a caring attitude towards oneself when faced with difficulties or when in suffering and (2) showing understanding and patience despite one's flaws, shortcomings, and failures. The latter type of self-kindness, arguably, may be perceived differently for South Koreans, whose cultural values are deeply rooted in Confucian values of good conduct, hard work, and self-cultivation and improvement. The items that resulted in acceptable to good factor loadings in the self-kindness subscale are related to showing care, love, and kindness to oneself, while the other 2 items with weak factor loadings highlight being tolerant and patient with one's flaws, failures, and challenges. In Korean culture, examining and identifying one's own personal shortcomings are important Confucian values concerning work ethic and personal growth (DeVos, 1998). It is possible that for Koreans, being tolerant of one's flaws and being patient despite one's challenging life circumstances may be more associated with Confucian values of

drive for self-correction and self-improvement rather than with self-kindness.

Limitations, Future Directions, and Conclusions

The current study has added to the growing body of literature on the importance of reviewing and assessing translated measures, examination of the factor structure of translated measures, and cultural considerations when translating and analyzing the psychometric properties of translated measures. With a growing effort to study the role of self-compassion across various cultural groups, the SCS has been translated and validated in multiple languages. However, most studies either briefly described the translation process or used the previously translated version without assessing the accuracy of the translated measure. The current study highlights the consideration of the translation equivalence prior to conducting a validation study for the SCS. The current study was the first to revisit the translational equivalence of the Korean version of the SCS (Kim et al., 2008) and retranslate the scale to accurately capture the intended meaning and connotation of the original SCS prior to examining the factor structure of the measure.

In the context of South Korea, it was observed that most studies have used the SCS translated by Kim et al. (2008) to continue exploring the factor structure of the SCS and assess the validity of the measure for Korean population. Although it is important to assess the most appropriate way of using and interpreting the SCS for the Korean population, it is imperative to create an accurately translated measure prior to examining the psychometric properties of the measure. The current study observed misleading translations in the SCS translated by Kim et al. (2008), which may have interfered with measuring the intended construct. This raises concerns about the validity of the Korean version of the SCS, even before examining its factor structure. The current study shows that reviewing the translation of the materials is an essential preliminary step to exploring the psychometric properties of the scale. This also has implications for the broader field of self-compassion research, as several translated versions have been introduced since the introduction of the SCS (Neff, 2003b). As the field continues to explore the SCS across various cultural groups, it is indispensable to investigate and interpret both the universality of self-compassion and the extent of cultural differences in its manifestations. In order to do so, studies should first ensure that the translation of the measure is accurate and culturally appropriate to the target population. This comprehensive approach will enhance our understanding of self-compassion, ensuring that measures are both culturally sensitive and universally applicable.

Overall, findings from the current study provided a new version of the K-SCS and examined different models to explore the factor structure of the K-SCS. Findings supported the use of the bifactor ESEM approach, an advanced statistical method that has been recommended to address the highly restrictive nature of the CFA when exploring the SCS (Neff, 2016a). This indicates that the K-SCS can be used by scoring and interpreting items by 6 subscales as well as by summing up the mean of each subscale score for a total score. By providing an improved Korean version of the SCS, the present study may facilitate further research on the SCS for Korean population and highlight the importance of culturally appropriate translations when exploring translated measures.

However, the current study should be examined within the context of the study's limitations. First, although there are advantages to using online survey platforms such as expedited data collection, cost-effectiveness, and increased diversity (Buhrmester et al., 2011; Goodman et al., 2013; Peer et al., 2017), a number of researchers have raised concerns regarding the quality of data obtained from online survey portals (Chmielewski & Kucker, 2020; Smith et al., 2016). Follmer et al. (2017) indicated that the demographics of individuals who participate in online survey studies are skewed towards certain groups of people, which may lead to conclusions that are less representative of the general population. Other studies have identified inattentiveness as a major concern that may threaten the validity of results (Aruguete et al., 2019; Buhrmester et al., 2018). However, a recent meta-analysis of 90 online survey studies indicated that data obtained from online platforms yielded psychometric properties and validity indicators comparable to those collected from conventional sources such as college students (Walter et al., 2019). These studies indicate that the findings from the current study warrant further research on K-SCS with more diverse populations including college population, clinical population, and groups with a wide range of socioeconomic status. Furthermore, given the inconsistent findings in the factor structure of the K-SCS, it is important for the future studies to conduct validation studies of the K-SCS using the identical measure. Second, in addition to exploring the factor structure of the scale, measurement invariance should also be conducted across various groups (e.g., across gender, age, culture) in order to draw a more solid conclusion about the use of the SCS in various comparative studies across diverse cultural groups. Lastly, other analyses such as Rasch analysis should be considered to robustly consider differences in individual's responses that may stem from differences in the emphasis of the content in a specific item as a result of translations (Medvedev & Krägeloh, 2022).

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Author Contributions Si Woo Chae: Conceptualization, Formal analysis, Methodology, Writing – Original draft

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Yong-Hoon Kim: Funding Acquisition, Project administration, Resources

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Data Availability The data that support the findings of this study are available from the corresponding author, Si Woo Chae, upon reasonable request.

Declarations

Ethics Approval The study procedures including the informed consent were approved by Yonsei University Institutional Review Board office (IRB number: 7001988-202201-HR-1079-07).

Informed Consent Informed Consent was obtained via online survey portal from all participants before the start of the survey.

Use of the Artificial Intelligence The current study did not use any form of artificial intelligence tools.

Conflict of Interests The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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