

VALIDATION OF THE SELF-COMPASSION SCALE IN A MALAYSIAN SAMPLE

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Abstract: The Self-Compassion Scale (SCS) was developed to evaluate and capture how people act toward themselves in difficulties times. Although there were reports of its use in Malaysia, evidence of its validity is limited. A study was conducted to examine the factor structure and to externally validate the original English version in a Malaysian sample of adults ($n=222$; 73 males, 149 females). Results from the online survey show that a six-factor structure provides a better fit to the data than a two-factor structure. Composite reliability and average variance extracted showed limited reliability and construct validity evidence. Construct validity was also tested with measures of anxiety (State-Trait Anxiety Inventory), stress (Perceived Stress Scale), social support (Multidimensional Scale of Perceived Social Support), and life satisfaction (Satisfaction with Life Scale). The SCS is significantly correlated in the expected direction with mental health outcomes. Additionally, internal consistency and test-retest reliability indices are acceptable. Thus, overall, SCS may be considered as having good validity and reliability with the tested sample. With validation of the English version of SCS, translation of SCS into local languages would be the next step in extending the use of SCS in the wider Malaysian population.

Keywords: Self-compassion, Validation, Psychometric, Malaysia

Introduction

Self-compassion is “being touched by and open to one’s own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one’s suffering and to heal oneself with kindness” (Neff, 2003, p 87). In the context of positive psychology, self-compassion is an important construct in understanding positive and healthy functioning. It is a relatively new concept but had gained a lot of research interests. Publication on self-compassion, as compiled at self-compassion.org (when accessed 30th June 2018) had slowly increased annually to a double-digit figure from the year 2003 to 2008. Six years later, the figure breached 100 publications in a year and peaked at 255 in 2010. As of the date of access, there are 961 publications in the list. Many of these publications use a measure of self-compassion developed by Neff (2003a).

There is growing evidence that the Self-Compassion Scale (SCS) is a valid and reliable scale in Western and Eastern populations. SCS scores correlate positively with indices of psychological well-being. People with high scores in self-compassion had lower scores on measures of depression and neuroticism and high scores on measure of subjective well-being and life satisfaction (Neely, Schallert, Mohammed, Roberts, & Chen, 2009; Neff, 2003b; Neff, Kirkpatrick, & Rude, 2007). Low self-compassion is found to be strongly correlated with high level of anxiety (Andrade, Gorenstein, Vieira, Tung, & Artes, 2001; Caci, Bayle, Dossios, Robert, & Boyer, 2003). In the study of perceived stress towards parent of children with communication disorders, Arnos (2017) found a negative correlation between their self-compassion and stress. The correlation between self-compassion and perceived social support was also found (Maheux & Price, 2016). Moreover, self-compassion has been found to be positively associated with life satisfaction across diverse cultures (e.g. Neely, et al., 2009; Neff, 2003b; Neff, Pisitsungkagarn, & Hsieh, 2008). In short, there is an abundance of studies attesting to the construct validity of SCS.

The SCS has also shown good reliability and cross-cultural validity (Neff et al., 2008). The scale had been translated into European (Ceske (Benda & Reichová, 2016), French (Kotsou & Leys, 2016), Greek (Mantzios, Wilson, & Giannou, 2013), Italian (Petrocchi, Ottaviani, & Couyoumdjian, 2014) Portuguese (Castilho & Pinto-Gouveia, 2011), Slovak (Halamová, Kanovský, & Pacúchová, 2018) and Spanish (Garcia-Campayo, Navarro-Gil, Andrés, Montero-Marin, López-Artal, & Demarzo, 2014)) and Asian languages (Chinese (Chen, Yan, & Zhou, 2011), Japanese (Arimitsu, 2014), Korean (Lee & Lee, 2010), Iranian (Azizi, Mohammadkhani, Lotfi, & Bahramkhani, 2013), Thai (Tinakon, Nahathai, & Ruk, 2011), and Turkish (Deniz, Kesici, & Sumer, 2008). Voon, Lau and Leong (2017) argued that a culture-specific examination of self-compassion is needed in the context of counselling profession in Malaysia. One known study was done among undergraduates in Malaysia. The study found unacceptable internal consistency for two of SCS subscales (Ying & Hashim, 2016).

The question of the unidimensionality of the SCS is still being debated. The use of a single overall score, separate sub-scale scores, or positive scores and negative scores are hinged on the factor structure of the SCS. In 20 large international samples, the six factors were found (Neff, Tóth-Király, Yarnell, Arimitsu, Castilho, Ghorbani, *et al.*, 2018). Separate studies also reported the replication of the original six-factor structure of the SCS among samples in Greece (Karakasidou, Pezirkianidis, Galanakis, & Stalikas, 2017), Brazil (Souza, & Hutz, 2016) and France (Kotsou & Leys, 2016). Meanwhile, the Dutch version yielded two factor (López, Sanderman, Smink, Zhang, van Sonderen, Ranchor, *et al.* 2015). For German general

population, two and six factor solutions were recommended instead (Coroiu, Kwakkenbos, Moran, Thombs, Albani, Bourkas, et al., 2018).

Based on the mounting evidence of the utility of SCS in various settings, and the lack of local study examining its psychometric properties, the present study aims to validate an English version of the SCS in a Malaysian adult sample. The objectives of the study are (1) to compare two competing factor structures, and (2) to assess the reliability and validity of SCS.

Method

Participants

The participants are 73 males and 149 females with age ranging from 19 to 43. Nineteen participants did not specify their age. The majority (40.5%) of the respondents are between 20 and 25.

Instruments

Self-compassion (SCS)

Participants were given the full (long form) version of the 26-item Self-Compassion Scale. Responses are given on a 5-point scale from “1-Almost Never” to “5-Almost Always.” Mean scores on the six subscales were then averaged (after reverse-coding negative items) to create an overall self-compassion score. Higher scores correspond to higher levels of self-compassion. The internal consistency of the SCS was 0.9 and the test-retest reliability was 0.93 (Neff, 2003a) and .79 in a sample of Malaysian undergraduate students (Ying & Hashim, 2016).

State-Traits Anxiety Inventory (STAI)

The commonly used instrument to measure trait and state anxiety is the State-Traits Anxiety Inventory (STAI) (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). A six-item state version of STAI (Marteau & Bekker, 1992) with four-point scale (from “1=almost never” to “4=almost always”) was used. The higher the score, the greater is the anxiety level. The internal consistency ranged from .89 to .95 and the test-retest reliability indices range from $r=0.73$ to 0.86 (Spielberger, 1989).

Perceived Stress Scale (PSS)

The PSS (Cohen, 1994) is a psychological instrument that is widely used for measuring the stress perception of individual. The items in PSS ask about feelings and thoughts during the last month and for each case, the frequency or how often the respondents felt a certain way was asked with items measured with 5-point scale from 0=never to 4=very often. The internal consistency is .78 for the Malay version of the PSS (Al-Dubai, Alshagga, Rampal, & Sulaiman, 2012).

Multidimensional Scale of Perceived Social Support (MSPSS)

Zimet, Dahlem, Zimet and Farley (1988) developed the MSPSS that comprises twelve items rated on a 7-point Likert scale ranging from 1 (Very strongly disagree) to 7 (Very strongly agree) to measure individual perception of how often or how much he or she receives social support externally. There are three (3) sub-scales in the MSPSS which are Family, Friends and Significant Others. With Malaysian samples, the English version of MSPSS was reported

with .92 internal consistency index (Talwar, & Abdul Rahman, 2013) while the Malay version was reported with excellent psychometric properties (Ng, Siddiq, Aida, Zainal, & Koh, 2010).

Satisfaction with Life Scale (SWLS)

The scale is valid and reliable for measuring life satisfaction (Pavot, Diener, Colvin, & Sandwick, 1991). Participants were asked to indicate their agreement or disagreement to five items using a 7-point scales that ranges from 1 for strongly disagree to 7 for strongly agree. The higher scores indicate a higher level of satisfaction with life (Diener, Emmons, Larsen, & Griffin, 1985). Among Malaysian samples, the SWLS is a single-factor measure with satisfactory internal consistency for the English language version ($\alpha = .79$ to $.84$) (Ng, Loy, Gudmunson, & Cheong, 2009) and the Malay language version ($\alpha = .83$) (Swami, & Chamorro-Premuzic, 2009).

Procedure

The questionnaire set was prepared in Google Form. The link to the form was sent out via social media during a period of one month. For the retest of the SCS, respondents were contacted again after two weeks. Confirmatory Factor Analysis was performed with AMOS to compare two factor structure solutions. Subsequently, the composite reliability and average variance explained (AVE) were examined. The chosen model was then analysed for internal consistency (Cronbach's alpha), descriptive statistics and correlation with the other variables.

Results

In this section, the results are discussed in relation to the two objectives stated in the Introduction. The first part is about the factor structure and the second part regards the external validation of the SCS.

Model fit statistics in Table 1 show the 6-factor model is a better fit for to the data than the 2-factor model. For the first model, four items (Self Kindness items 5 and 19, Isolation item 18 and Self-judgment item 8) were deleted one by one (based on factor loading value being less than .5) and the remaining ones are as presented in Figure 1 while their factor loadings are presented in Table 2. An additional deletion of item Self-judgment item 11 (factor loading = .491) resulted in marginal improvements in the fit statistics. Therefore, the accepted model comprises 22 items. For the second model, three items were deleted that resulted in all items having a factor loading greater than .5. No further deletion was made.

Table 1: Model Fit Statistics Of SCS: Comparison of the 2- And 6-Factor Structure Solutions

Model	CMIN	GFI	CFI	RMSEA
6 factor	2.327	.841	.868	.077
2 factor	3.065	.745	.774	.097

Figure 1 shows very high correlations among the positively worded sub-scales (e.g. Mindfulness and Self-kindness; covariance = .344, $SE = .097$, $p < .001$). The same is observed for the negatively worded subscales (e.g. Self-judgment and Over-identification covariance = .212, $SE = .085$, $p = .12$; Isolation and Over-identification, covariance = .495, $SE = .128$, $p < .001$).

Another possible indicator of multicollinearity in the data is found in the pairing between Self-kindness and Common Humanity, covariance = .325, $SE=.102$, $p<.001$.

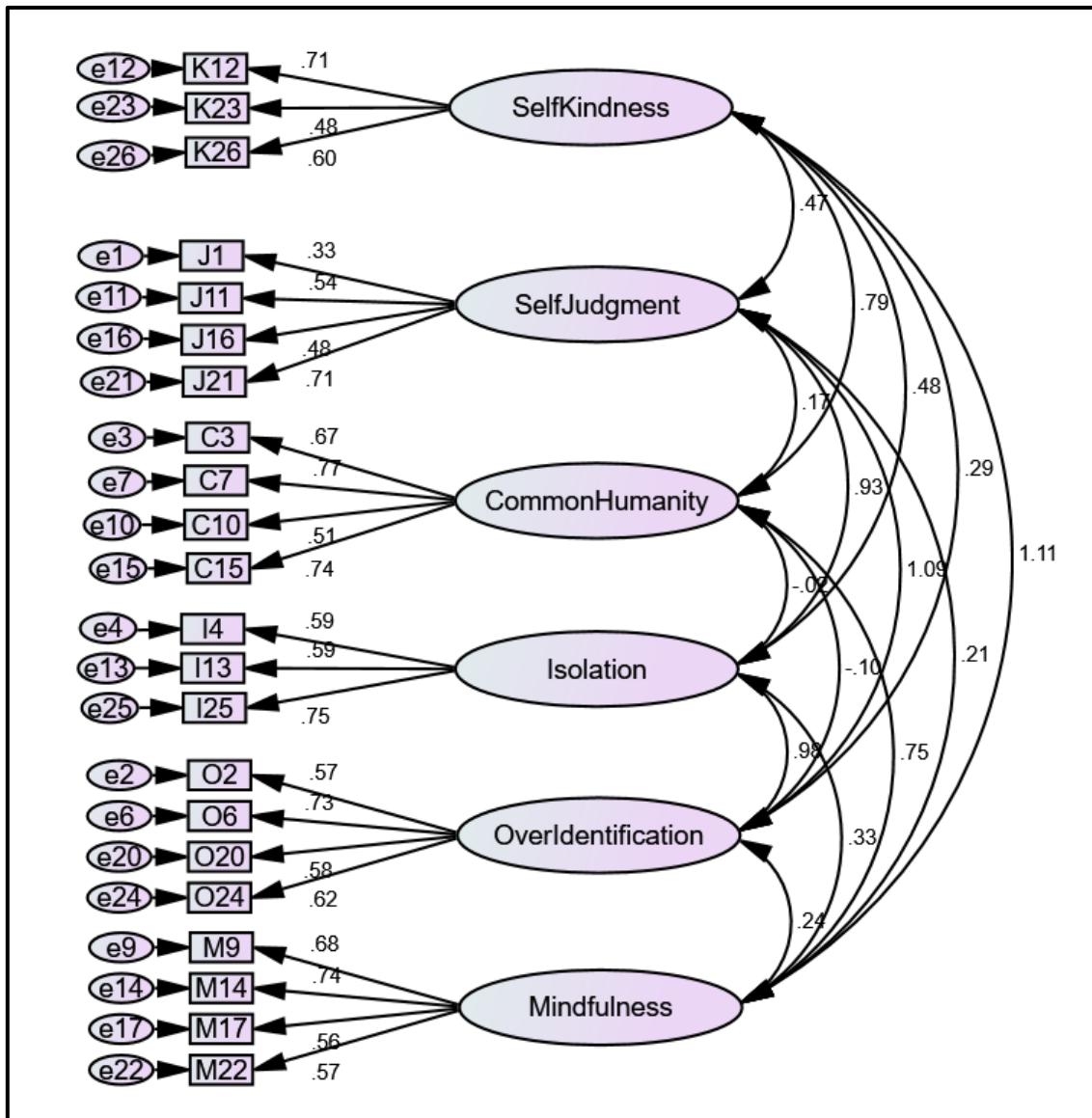


Figure1: Standardized Regression Weights: Six Factor Model of SCS.

The composite reliability values for all sub-scales presented in Table 3 exceed the .7 threshold value recommended by Hair, Ringle, and Sarstedt (2011). As for the convergent validity, the AVE is less than .5. However, because they are $>.4$ and the CR are greater than .6, as is the case in Table 3, convergent validity is considered adequate (Fornell, & Larcker, 1981). The exception to this observation is for the Self-judgmental sub-scale that has an AVE of less than .4. Removal of item J11 which has the lowest factor loading within the sub-scale has the opposite of the desired effect on the AVE. Therefore, item J11 was retained for further analysis.

Table 2: Factor Loading for The Six Sub-Scales of SCS

Item	CH	IS	SJ	SK	MF	OI
C10	.622					
C15	.730					
C3	.708					
C7	.642					
I13			.735			
I25			.715			
I4			.599			
J1				.662		
J11				.491		
J16				.551		
J21				.727		
K12					.662	
K23					.604	
K26					.759	
M14						.519
M17						.595
M22						.712
M9						.705
O2						.640
O20						.503
O24						.779
O6						.703

Notes: SK= self-kindness; SJ= self-judgment; CH= common humanity; IS=isolation; MF= mindfulness; OI= over-identification,

The z -scores for the Kurtosis and Skewness indicate that normal distribution assumption for the scores is not met for all of the sub-scales and the overall scale scores. Only three sub-scales have non-significant Kurtosis and Skewness (see Table 4). Additional evidence for the reliability of SCS is also presented in Table 4. The Cronbach's alpha for the whole scale and the sub-scales are all acceptable. Meanwhile, a two-week test-retest correlation is very good, $r(41) = .839$.

Table 3: Average Variance Extracted (AVE) Composite Reliability (CR) Of The SCS

Factors	AVE	CR
SK	.460	.717
SJ	.378	.704
CH	.458	.771
IS	.470	.725

MF	.407	.730
OI	.441	.755

Notes: *SK*=self-kindness; *SJ*= self-judgment; *CH*= common humanity; *IS*=isolation; *MF*=mindfulness; *OI*= over-identification,

Table 4: Descriptive Statistics and Cronbach's Alpha for The Six Variables

Measure	Median	<i>M</i>	<i>SD</i>	Cronbach's alpha	Skewness (z score)	Kurtosis (z score)
SCS	68	69.17	10.92	.861	1.072 (6.58)*	3.990 (12.28)*
SK	9	9.44	2.26	.718	.424 (2.60)*	.198 (.61)
SJ	12	11.92	2.93	.704	.261 (1.60)	.773 (2.38)*
CH	14	13.87	2.93	.768	-.067 (-.41)	-.046 (-.14)
IS	9	8.84	2.50	.723	.239 (1.47)	.225 (.69)
MF	13	13.36	2.82	.725	.318 (1.95)	.200 (.62)
OI	12	11.75	3.05	.757	.294 (1.80)*	.788 (2.42)*
STAI		45.94	10.79	.702		
PSS		25.17	5.79	.714		
MSPSS		59.51	15.39	.943		
SWLS		22.09	6.78	.892		

Notes: a) $N=222^*$; $p > .05$

b) *SE* for skewness = .163; *SE* for Kurtosis = .325

c) *STAI*=State Trait Anxiety Inventory; *PSS*=Perceived Stress Scale; *MSPSS*=Multidimensional Scale of Perceived Social Support (MSPSS); *SWLS*=Satisfaction with Life Scale

Further evidence of construct validity is found in Table 5. The four measures used to establish construct validity have good internal consistency. The correlations among the sub-scales of SCS with the well-being variables are significant and in the expected directions. The only exception to these findings is the lack of correlation between MSPSS and Over-identification. The correlations among the well-being variables are also significant in the expected directions. Positive well-being measures (SWLS and MSPSS) correlate positively with each other as are the negative well-being measures (STAI and PSS). Moreover, the positive and negative well-being measures are correlated negatively as expected.

Table 5: Correlations Among SCS and Four Other Variables

	1	1a	1b	1c	1d	1e	1f	2	3	4
1 SCS	-									
1 SK	.765**	-								
a										
1 SJ	.728**	.305**	-							
b										
1 CH	.457**	.479**	.011	-						
c										
1 I	.716**	.338**	.722*	-.063	-					

					*				
1	M	.649**	.765**	.096	.498*	.182*	-		
	e				*	*			
1f	OI	.691**	.263**	.731*	-.099	.696*	.114	-	
				*		*			
2	SWLS	.386**	.299**	.263*	.246*	.248*	.304*	.188**	-
				*	*	*	*		
3	MSPSS	.300**	.233**	.144*	.349*	.132*	.290*	.053	.640**
				*		*			-
4	STAI	-.542**	-.358**	-	-.138*	-	-	-	-.169*
					.461*		.466*	.268*	.473**
					*		*	*	.320**
5	PSSS	-.675**	-.402**	-	-	-	-	-	-.292**
					.594*	.211*	.558*	.318*	.595**
					*	*	*	*	.429**
									*

Notes: ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Discussion

The CFA that was performed to validate the English version of the SCS in a Malaysian sample has not provided conclusive evidence for validity and reliability of the data. Multicollinearity issue could have inflated the errors in measurement. However, the internal consistency indices and test-retest procedure provide supporting evidence for SCS' reliability. Further study could compare an online-based with paper-based administration of the SCS to ascertain the effect of multicollinearity.

While the findings on the comparison of the factor solutions are very clear - with 6-factor having better fit than the 2-factor - it was done by removing four items. The imperfect replication of the original factor structure could be due to cultural differences. With multi-ethnic respondents, the effects of each ethnicity and their respective cultural worldview are difficult to estimate given a heterogeneous sample. For example, while the SCS was validated with various ethnic groups, its original factor structure was not replicated with Buddhist respondents (Zeng, Wei, Oei, & Liu, 2016). Future study could examine whether Malaysian Buddhists respond in the same way to the SCS.

In addition, the 6-factor structure solution found meets a less stringent model fit criteria. For example, the stricter criteria of model fit require the RMSEA to be less than .05. Further improvements in the model fit would benefit from examining the conceptualization of the sub-scales from the context of local cultures. The extent to which respondents are willing to view themselves in both and positive lights could be influenced by their religiosity. For example, one article of faith in Islam is about accepting what Allah had ordained. The degree of belief in the ordainment could influence the way the respondents tolerating "own flaws and

inadequacies" (item 23). It could also be informative to subject the SCS conceptualisation to the scrutiny of religious experts in examining cultural (especially religious aspects) issues with the measurement.

Construct validity was demonstrated well via correlations with four measures of well-being. Not only the sub-scales are validated against the four measures, the latter group of variables are also validated amongst themselves. These findings are a strong support for the construct validity of the SCS. It strongly warrants further research in the development of SCS. The use of SCS among Malay-speaking population in Malaysia would be possible by translating it into the Malay language. An attempt at translating it into the Malay language was not entirely successful. Khatib, Hoesni, and Manap (2018) had to delete 12 out of the 26 items in their analysis. Removal of 46% of the items clearly would raise a question of the construct validity of the remaining items. The last suggestion for future research concerns the shorter version of the SCS (12 items). It should be validated independently from the full version. This would facilitate the use of SCS in a wider range of research especially one that requires brevity of scales.

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