

An analysis of cross-cultural equivalence of self-construal scale in Malaysia



Fazliyaton Ramley^{1,*}, Karnilowicz Wally², Md. Aris Safree Md. Yasin¹, Siti Balqis, Md. Nor¹

¹Faculty of Business, Economics and Social Development, University Malaysia Terengganu, Terengganu, Malaysia

²College of Health and Biomedicine (Psychology), Victoria University, Melbourne, Melbourne, Australia

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ABSTRACT

The central purpose of this study was to translate and adapt the original two-factor of an English version of the self-construal scale (SCS) to the Malaysian context. Specifically, through Confirmatory Factor Analysis the study examines the psychometric properties and model fit for the Malay population. Results showed that a revised scale of SCS which consists of 16 items instead of 30 items is a better fit for measuring independent and interdependent self-construals within collectivist societies such as Malaysia. Overall, the results highlighted that the moderate level of support suggests further research on the validity of SCS within non-Western societies. These results lead to a suggestion for replication and extension studies to a much more representative non-student samples of the respective cultures using an original and six-factor model version of SCS.

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1. Introduction

A person's constructed sense of identity is predominately social-cultural. The inherent connection between culture and identity has been supported and reinforced by the significant attention devoted to cross-cultural examinations of identity construction. This has been particularly highlighted in findings demonstrating the contrasting cultural influence on the identity between and within collectivist and individualist societies (Markus and Kitayama, 1991; Triandis, 1996; Matsumoto et al., 1996; Singelis, 1994; Levine et al., 2003).

The generally accepted dimensions often used to understand and interpret conceptions of the cultural constructions of self are independent self-construal (IndSC) and interdependent self-construal (IntSC) (Markus and Kitayama, 1991). IndSC refers to an individualist sense of self emphasizing an affective self-orientation, independence, self-reliance, autonomy and self-direction (Schwartz, 1992). This orientation is directly associated with self-related cognitive, emotional, behavioral and motivational aspects of behavior (Schwartz, 1992). IntSC, in contrast, emphasizes a collectivist self-orientation that values conformity, tradition, benevolence,

interdependence, and connectedness (Schwartz, 1992). Persons who are high in IntSC emphasize the interests of the other and are bound by societal norms.

IndSC defines the self as separate and unique, with high IndSC suggesting internalization of thoughts, feelings, actions and abilities. For people high in IndSC self-esteem is achieved through a persons' capacity to engage in direct communication and their ability to articulate openly what they think and how they feel, which in turn is consistent with their internal attributes and associated emotions (Singelis, 1994). In contrast, IntSC includes a degree of 'embeddedness' in which the sense of self, others and context are considered as one. IntSC is exhibited in a person's flexibility and capacity to fit in with others and associated contexts. IndSC and IntSC were initially coined by Markus and Kitayama (1991) to conceptually attend to the variability in a person's conception of self between and within individualist cultures (i.e., American and Western European) and collectivist cultures (i.e., Japanese, other Asian regions, African, Latin-American and Southern European). These concepts were further investigated in terms of their crucial implications on major psychological facets such as cognition, emotion and motivation (Markus and Kitayama, 1991).

Perhaps the most influential objective measure of IndSC and IntSC is Singelis (1994) self-construal scale (SCS). This self-report scale contains separate quantitative measures of individual differences related to IndSC and IntSC and has been cross-culturally validated through various factor analytic

* Corresponding Author.

Email Address: fazliyaton@umt.edu.my (F. Ramley)

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Corresponding author's ORCID profile:

<https://orcid.org/0000-0003-1873-7919>

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procedures including Confirmatory Factor Analysis (CFA) (Fernández et al., 2005; Harb and Smith, 2008). As a result, non-English versions of the SCS include Japanese (Ozawa et al., 1996), Filipino (Miramontes, 2011), Spanish and German (Fernández et al., 2005), Portuguese (Fernández et al., 2005) and Arabic (Harb and Smith, 2008). Nonetheless, despite the wide number of translations and use of the SCS within various individualist and collectivist societies. However, the globalization cultures across our world suggest that further study needs to be conducted to enhance our understanding of the characteristics of specific cultures. As a result, the validation and further study of identity as it relates to self-construal is timely in countries such as Malaysia.

1.1. General description: The SCS

The SCS originally consisted of 45 items. The scale utilized a 7-point Likert-Type format (1=strongly disagree, 7=strongly agree) to capture the constellation of major psychological facets (thoughts, feelings, and behaviors) of each individual through measures of independent and interdependent self-construals (Singelis, 1994). Building on Markus and Kitayama's (1991) work, Singelis (1994) carried out a pilot validation test of the 45-item SCS obtained among 364 ethnically diverse undergraduate students enrolled at the University of Hawaii. Measures of this early SCS reported repeated Cronbach Alpha reliabilities of .73 and 0.74 for IndSC and 0.69 and 0.70 for IntSC. This two-factor model was further supported by a CFA (GFI=0.853, AGFI=0.731, and RMR=0.076). The validation process led to a reduction in the number of items from 45 to the final 24-item SCS scale with 12 items measuring each of IndSC and IntSC (Singelis, 1994). A subsequent test of validity with an ethnically diverse sample of 165 university students further supported the 24 items two-factor version of the scale, yielding strong confirmatory properties (GFI=0.809, AGFI=0.772, and RMR=0.093 with chi-square (X^2 to df ratio)=2.75) and respective Alpha Coefficients of 0.70 for IndSC and 0.74 for IntSC (Singelis, 1994). The SCS also identified significant differences for IntSC and IndSC items between different ethnic groups defined as collectivist (i.e., Asian Americans) and individualist (i.e., Caucasian) (Singelis, 1994).

A replication study (Singelis and Sharkey, 1995) further supported the construct validity of the SCS and in turn, reported differences in IndSC and IntSC between persons from collectivist and individualist cultures. Singelis and Sharkey (1995) reinforced previous findings in their investigation of the relationship between individualist and collectivist cultures in terms of embarrassing ability. In this study, members of an Asian American ethnic group considered collectivist scored higher in IntSC than their Euro-American individualist counterparts. Specifically, they reported a positive correlation between interdependence and embarrass ability

with the group from collectivist nations which was inverse to the findings with the group from individualist cultures. In short, individuals with higher scores on IntSC were more susceptible to embarrass ability.

Singelis et al. (1999) carried out a larger study with a sample of participants from diverse ethnocultural backgrounds, comprising 814 undergraduate students from universities in Hong Kong, Hawaii, and the US Mainland. In this study, the first version of self-reported SCS (12-items for IntSC and 13-items for IndSC) was correlated with Modigliani (1968). Their findings supported their contention that the collectivist Hawaii Asian American and Hong Kong Chinese would be more inclined to score highly on IntSC and therefore be more susceptible to shyness and embarrass ability.

More recently there is controversy surrounding the influence of situational priming on several items of the SCS (Levine et al., 2003). Through a meta-analysis study of ten existing studies, Levine et al. (2003) posited their concern over the inconsistencies of the self-construal scores in each of the two subscales. They report that the self-construal inventories were not particularly reliable and failed to support the claim that individuals in Asian countries were more interdependent than individuals in Western countries. The presence of situational priming and the existence of Western bias in these self-report measures were identified as among the necessary conditions that led to poor convergent validity. The influence of priming on interdependent self-construal was demonstrated in the nature of persons with high IntSC who are flexible and situational-bound. However, Gudykunst and Lee (2003) suggested that the Levine et al. (2003) conclusions are contentious given that the samples used in the meta-analysis were small and the invariant characteristics of the respondents in most of the selected studies were not representative of individualistic-collectivistic populations. Most participants were also college students who were highly exposed to generational change and therefore might not be truly representative of a clearly identifiable culture. They also argued that situational priming does not directly influence the final score of SCS, but rather triggers either one of the individual self-construal in the given circumstances since both dimensions co-exist in every person across cultures.

Despite the concerns and associated controversy with the structure of the SCS, the conceptual and theoretical dimensions of self-construal have been further refined. The relatively simplistic interpretation of the independent-interdependent dimensions as measured in the original SCS is considered neither sufficient nor comprehensive enough to capture the full meaning of self-construal, particularly as it relates to an increasingly globalized world. For example, further investigations (Singelis et al., 1995) suggest a four-factor model in the measurement of self-construal in contrast to the traditional two-factor model and contend that there are four prominent cultural patterns in

understanding self-construal. First, Horizontal-Collectivism (H-C) refers to the belief that one belongs to a larger group and that other people in that group are equal. This sense of egalitarianism suggests that an individual in this group shares a common goal with others. Second, Vertical-Collectivism (V-C) refers to considering oneself as a unit of a bigger group but recognizing the inherent hierarchy in that group. This characteristic suggests that there is an individual or group of people above others in terms of a collectivist belief, despite the prioritization of group goals over personal goals. Third, Horizontal-Individualism (H-I) suggests that people want to be unique and see others as the same, but have limited access to a higher status and/or recognition. Fourth, Vertical-Individualism (V-I) recognizes societal inequalities with the inevitable competition for higher status and recognition.

In order to be increasingly relevant, further development and evolution of the SCS has considered and engaged with the further theorizing and associated increasing complexity of IndSC and IntSC. As a result, Singelis et al. (1995) constructed a 32-item version of the SCS and tested the validity and reliability of this modified scale with 267 undergraduate students enrolled in large American Universities. Using CFA, the 32-item SCS supported the four-factor model (GFI=0.79, AGFI=0.75, RMR=0.089, X^2 to df ratio=1.96) more than the two-factor model (GFI=0.73, AGFI=0.69, RMR=0.097, X^2 to df ratio=2.30). In addition, and consistent with the CFA, the Cronbach Alpha reliability estimates for the four dimensions were also meaningful (H-C=0.74, V-C=0.68, H-I=0.67, and V-I=0.74). Overall, the four horizontal and vertical dimensions of individualism and collectivism converged within IndSC and IntSC. The modified SCS was further confirmed by test results gathered across various cultures and associated differing ethnic groups (Christopher et al., 2012; Hardin et al., 2004).

1.2. An operational definition of interdependent and independent self-construal

Based on Singelis (1994), the present study defines self-construal within the framework of an individual's sense of self as individualist and/or collectivist. This sense of self drives how one feels, thinks and acts, depending upon the social context. Consistent with the SCS, self-construal is defined as interdependent and independent. IntSC refers to one's sense of connectedness with others and the extent to which it influences (a) attending to external attributes such as roles and environment, (b) flexibility and adaptability, (c) knowing where one stands in the society and acting accordingly, and (d) understanding others and engaging in indirect communication (Singelis, 1994). In contrast, IndSC is defined as a strong sense of separateness from others independent from social context (a) owning abilities, thoughts and emotions (b) unique identity and manifesting the self openly (c) priming own goal and achievement, and (d) directly conveying a

thought and feeling (Singelis, 1994). Because the SCS has been used infrequently in the Malaysian Collectivist context, the more expansive 30-item two-model version was subjected to an analysis of its psychometric properties among Malaysian participants.

2. Method

2.1. Purpose

The purpose of this study was to translate and to adapt the original English version of the SCS to the Malaysian context. Specifically, through CFA the study examines the psychometric properties of the scale in terms of the Malay population.

2.2. Participants

Participants included Malaysian undergraduate students majoring in Psychology and Counselling from the University Malaysia Terengganu (n=137) and Islamic Science University of Malaysia (n=98). The students ranged in age from 19 years to 27 years (M=21.79). The majority were female (n(F)=169, 71.9%; n(M)= 66, 28.09%). The students were predominately Malay, with 6 non-Malay (Chinese=4, Indian=1, 2=unknown).

2.3. Measures

The 30-item bilingual SCS was used to measure IntSC and IndSC. Participants responded to the items on a 7-point Likert scale with the options 1=strongly disagree to 7=strongly agree.

2.4. Procedure

In the first instance, participants were asked to complete Singelis (1994) SCS to assess independent self-construal and interdependent self-construal. The SCS version used for this study consists of 30 items. The scale utilizes a 7-point Likert-scale format (1=strongly disagree, 7=strongly agree) to capture the constellation of major psychological facets (thoughts, feelings, and behaviors) of each individual through measures of independent and interdependent self-construal. Fifteen items assessed the tendency of the respondent to engage in independent thought and behavior (e.g., 'Being able to take care of myself is a primary concern for me', and 'I enjoy being unique and different from others in many respects'), while the other items assessed the likelihood of the respondent engaging in interdependent thought and behavior (e.g., 'I respect people who are modest about themselves', and 'I should take into consideration my parents' advice when making education/career plans'). Items and response scales were available in Malay and English for use with Malay and English speaking participants. The questionnaire also included a

number of relevant demographic questions (i.e., age and gender).

The scores for each subscale were computed independently. The researcher conducted an analysis of the SCS for the purpose of identifying which self-construal was more prominent according to the cultural context in shaping each respondent's concept of self, given that both at any point in time co-exist within an individual. For example, it was expected that participants from Australia would display predominately independent (individualist) self-construal while participants from Malaysia would display predominately interdependent (collectivist) self-construals (Triandis, 1989; Markus and Kitayama, 1991).

2.5. Pursuing cross-cultural equivalence through trans-adaptability

Translating a psychometric scale in order to have it semantically equivalent and accessible to a different culture and associated language requires linguistic equivalence considered in terms of objects, behaviors, concepts, and situations (Van de Vijver and Hambleton, 1996). Amongst the concerns with a test developed in a specific culture is the need to contextualize the operationalization of measures of behaviors, concepts and situations relevant to an alternative or other culture (Berry, 1992). For example, measuring independence and autonomy in a Malay by asking the person to rate the item 'My whole self stands behind the important decisions that I make' is precarious because many Malays engage important and intimate others when answering the question. However, this does not suggest that they are not autonomous; instead, autonomy is expressed in considering the thoughts of important and intimate others in making a personal decision. Achieving linguistic equivalence is problematic and there needs to be a carefully considered approach in adapting and translating an instrument, particularly when there is some difficulty in the matching of psychological constructs across cultural groups.

The SCS was selected given its wide use in various cultures and following a brief face-value interpretation by the first author of its relevance and utility within the Malaysian context and associated language. This step is often ignored when translating and adapting an instrument to a different population from that in which the test was originally developed (Gudmundsson, 2009). In applying an instrument developed in one language to a population who converse in a different language, it is necessary to consider the original version of the instrument in terms of its psychometric properties (Gudmundsson, 2009). The translation of an instrument which in its original form has poor psychometric properties does not empirically justify its use in a different cultural setting (Berry, 1992).

To achieve linguistic equivalence, the translator needed to be proficient in English and Malay. In addition, the translator needed to be familiar with

the cultural context of the target population and the test content in order for the semantic meaning of the construct to be understandable and have equivalent meaning to that of the original language. In short, it was necessary to recruit a native Malay speaker also proficient in the English language and knowledgeable in the subject matter. Fortunately, while the SCS was presented in both English and Malay, the participants were also highly proficient in speaking and reading in English. The first author translated the original version of the SCS into the Malay language. The author has a high level of proficiency in English and Malay. Her proficiency in reading and writing in English was enhanced by a four-year residency in the USA and an extended stay in Melbourne, Australia. She also spent four years studying undergraduate courses at an international university in Malaysia in which the primary language is English. The translation considered relevant, cognitively clear and understandable words to avoid miscommunications or misunderstandings (Brislin, 1986). For example, translating 'independent person' reads as 'orang yang bebas' in Malay. When back-translated, the words change in translation to 'free person'. The concern was with the possibility of words inaccurately representing the intended meaning according to the original version of the SCS. The English words and phrases within the SCS were preserved by assuming contextual relevance across cultures in considering the translation of words and phrases. Following the first author's translation of the SCS into Malay, two experienced Public University lecturers of Malay origin who had taught for over seven years in English literature, back-translated the Malay version of the SCS into English. The first author, in order to assess translation quality and accuracy, compared the two back-translated versions of the SCS with the original English language version. Most of the items in the back-translated versions were comparable to the original items, except for the items, 'having a lively imagination is important to me' and 'my personal identity, independent of others, is very important to me'. The intended meaning of the words 'lively imagination' was inconsistent with the back-translated item in which the word the Malay lecturers back-translated as 'daydream' and 'fantasy'. For the Malay, these words are negative in connotation. Individuals who daydream are labeled 'lazy' and 'unreal'. Furthermore, the back-translated word 'independent' did not have the equivalent semantic meaning and context or intended meaning of the original item. The original item centered on owning a sense of self-independent from the self of others. To establish the content equivalence of the original and translation scale over the inconsistent items, the first author conferred with two independent bilingual psychologists familiar with the subject matter. The two psychologists held doctoral degrees in psychology from universities in Australia and are highly proficient in English and Malay. After reaching an agreement on the final

wording, the Malay SCS was combined with the original scale to make up the 30-item bilingual SCS.

2.6. Data analysis

The Statistical Package for Social Sciences (SPSS) 22 was used to measure the descriptive statistics and the demographic details of the samples. A confirmatory factor analysis (CFA) through AMOS was performed to assess the factor structure of the SCS. CFA is used in this instance given that it is a test of relations between specific factor structures based on existing and a priori knowledge (Ballesteros, 2003). CFA was appropriate since this study was looking at the trans-adaptability of the two-factor model of the SCS in Malaysia.

3. Results

The SCS model consisted of two orthogonal factors, Independent and Interdependent Self Construal, measured by adding each subject's scores

on a series of 15 items per construct via a 7-point Likert scale with strongly agree and strongly disagree as endpoints. The scale score is measured by the summation of subject responses to each of the items divided by 15 to give a mean score.

Means, standard deviations and standardized regression weights are presented in Table 1. The 30 items and the latest version of the model of Self-Construal is presented in Fig. 1. We evaluated the assumptions of multivariate normality and linearity through SPSS AMOS version 20. Using Mahalanobis distance we observed a number of outliers. Using .05 as the threshold value for designation as an outlier, 43 observations were subsequently deleted from the total pool of 235 observations. The final sample consisted of 192 participants and there was no missing data. Subsequent tests of skewness and kurtosis supported both the assumption of normality and the use of the maximum likelihood estimate in performing the CFA.

Table 1: Means, standard deviations and standardized regression weights for the SCS

Item content	Mean (SD)	Standardized Regression Weight
Independence		
Q1 Unique	5.44(1.31)	0.44
Q2 Talk to an older acquaintance openly	4.98(1.36)	0.32
Q5 Do my own thing	4.16(1.84)	0.21
Q7 Independent	6.37(.755)	0.54
Q9 Saying "no"	5.28(1.30)	0.64
Q10 Lively imagination	5.89(1.05)	0.61
Q13 Direct	4.71(1.50)	0.38
Q15 Praised alone comfortably	5.11(1.19)	0.30
Q18 Speak up	4.83(1.51)	0.38
Q20 Consistent behaviors	5.26(1.39)	0.40
Q22 Value good health	6.04(.934)	0.58
Q24 Self-benefit	4.78(1.56)	0.37
Q25 Taking care of oneself	6.12(.828)	0.58
Q27 Personal identity	5.23(1.23)	0.46
Q29 Consistent behaviors	5.08(1.44)	0.40
Interdependence		
Q3 Avoid arguments	5.96(.994)	0.46
Q4 Respect authority figures	6.24(.791)	0.47
Q6 Respect modest people	6.14(.882)	0.47
Q8 Sacrifice for in-group	5.32(1.11)	0.46
Q11 Consider parents' advice	6.23(.926)	0.48
Q12 Feeling intertwined	3.99(1.65)	0.22
Q14 Feel good when cooperating	5.81(.949)	0.59
Q16 Responsible for relatives	5.32(1.35)	0.42
Q17 Importance of relationships	4.56(1.51)	0.37
Q19 Offer my seat to my boss in a bus	5.66(1.07)	0.47
Q21 Others' happiness	5.24(1.49)	0.35
Q23 Remain in in-group	4.99(1.46)	0.31
Q26 Respect groups' decision	5.98(.862)	0.61
Q28 Group harmony	6.15(.833)	0.50
Q30 Get along with what others want	4.59(1.60)	0.22

The model of Self-Construal is presented in Fig. 1. The interpretation of results associated with the test of the strength of the original model presented in Table 2 indicated a poor fit between the model and the observed data. The comparative fit index (CFI) at >0.95, the GFI at >0.90, the Tucker-Lewis fit index (TLI) at >0.95, and the RMSEA at >0.05 were non-significant.

Because of the poor fit of the model, post-hoc modifications were undertaken in order to revise and present a reasonably valid model for this

population. Using the modification indices and a careful analysis of the standardized residual covariance and factor loadings resulted in the systematic deletion of 14 items. The result was a two-factor solution consisting of 16 items with seven correlated error terms (Fig. 2). The revised model was superior to the initial model. The interpretation of results for the revised version presented in Table 2 indicated a moderate fit between the model and observed data. Both the CFI and TLI approached

acceptable levels of significance as did the RMSEA with the GFI at >0.90.

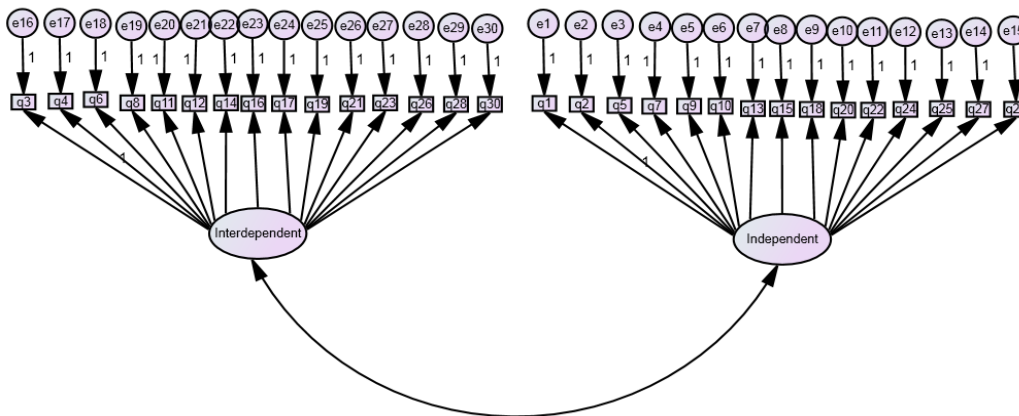


Fig. 1: Original 30 item self-construal scale

Table 2: Comparison of fit measures for the initial and revised solutions for the SCS

Solution	Initial (original 30 items)	Revised (16 items)
<i>n</i>	192	192
χ^2 goodness of fit	938.356	181.531
df	404	99
<i>p</i>	0.000	0.000
RMSEA	0.083 (0.076-0.090)	0.066 (0.051-0.081)
RMR	0.151	0.082
	Fit Indices	
NFI	0.512	0.749
CFI	0.640	0.863
TLI	0.613	0.834
	Absolute Fit Indices	
GFI	0.730	0.902
AGFI	0.690	0.865
PGFI	0.634	0.656

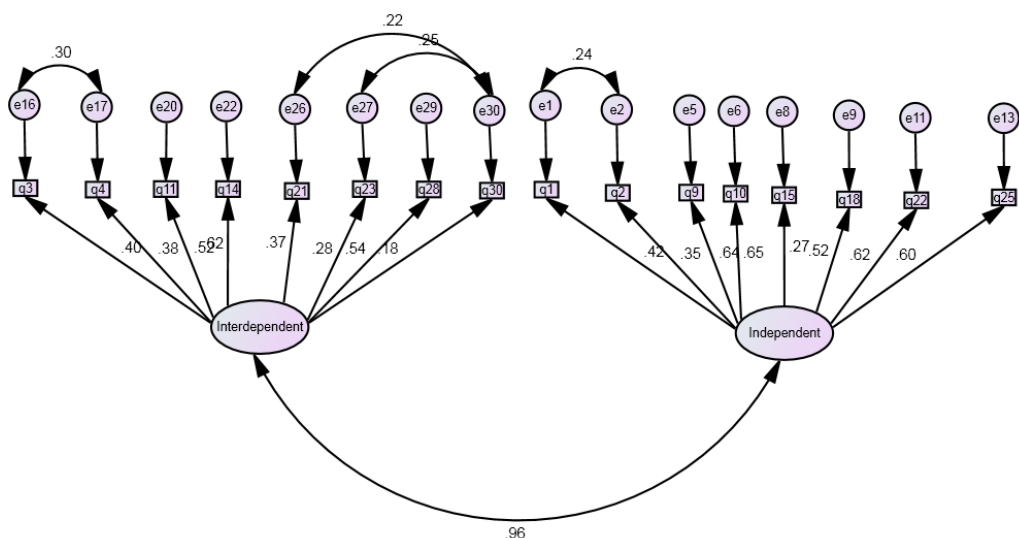


Fig. 2: Revised 16 item self-construal scale

4. Discussion

The results added to the evidence differentially supporting the use of the SCS within the Asian context. The analysis generally suggested that the revised scale in contrast to the original scale is a potentially effective measurement of independent and interdependent self-construal. The iterative process of CFA indicated that the revised model was a better fit than the first model and further confirmed the theoretical constructs within a non-western collectivist cultural group. The reduced

number of items from 30 to 16 also created a more parsimonious set of items for each construct. However, and most importantly, the moderate level of support suggested that the SCS needs to be further researched in collectivist cultures such as Malaysia to further investigate the validity of the instrument in this context.

The confirmatory factor analysis showed that the factorial model of SCS that consists of two factors does not sufficiently account to describe the interrelationship of the SCS items within the Malaysian sample. Christopher et al. (2012)

provided support for the two-factor CFA solution to the two-factor Thai SCS model compared to the six-factor model within the Thai sample. Yet, they also reported that the items are not accurately representative of the two main constructs of the scale for the Thai sample as depicted for the Western culture. Also, a further study by Miramontes (2011) that used two-factors of SCS for its measurement force within Malaysia, Philippines, Mexico, Australia and American population did not support the two of the self-construal hypotheses and suggesting a multifaceted domain as a better fit to the data in the countries mentioned. Meanwhile, the findings from the study conducted by Hardin and colleagues (2004), SCS can be termed as a valid measurement for assessing independence and interdependence factors with $X^2/df=2.68$; GFI= 0.84; CFI= 0.58; and RMSEA= 0.07. However, because participants consisted of European American and Asian American students, the examination of the factor structure of SCS should be extended to other population particularly non-student and non-Western backgrounds.

Future investigations intending to unravel the complexities and in turn clarifying self-construal should focus, albeit not exclusively, on self-image, particularly with persons who score high in one or other dimensions (Kam et al., 2012). Different cultural contexts also tap into different forms of self-construal (Kanagawa et al., 2001). Most individuals in cultures within Japan (Singelis, 1994), Malaysia (Miramontes, 2011) and in Arab countries like Jordan and Syria (Harb and Smith, 2008) may be defined as interdependent. The way the self is understood together with the dominant values will shape the society as a collectivistic culture. On the other hand, American, Australian and Western European countries are considered individualistic. However, given the wider diversity of cultural groups within one and or other of these countries due to the more recent influx of migrants and refugees from a number of regions throughout the world, claiming interdependence or independence as a defining characteristic of a particular culture is increasingly problematic. It is becoming increasingly difficult to position a culture along a continuum of IndSC and IntSC.

Along with the problems associated with defining culture as either collectivist or individualist are difficulties associated with the measurement of self-construal (Schimmack et al., 2005). Under these circumstances, establishing construct validity is also problematic. A threat to the valid measurement of self-construal is acquiescence bias. Acquiescence bias is a response bias in which the test taker perceives them as agreeing with the test item question despite doubts they have when answering (Ford and Scandura, 2005).

Finally, serious consideration also needs to be given to the characteristics of the sample. While convenient, recruiting samples from university populations confound cross-cultural inferences. For example, students in a collectivistic society such as

Japan are exposed to generational changes, so it is most expected that they have more individualistic and less collectivistic values compared to older generations (Matsumoto et al., 1996). A university student in Malaysia or any other collectivistic culture may accurately represent the characteristics of that particular culture as either individualist or collectivist; however, it is advised that researchers should seek to access the student's degree of identification and or 'belongingness' with a culture (Gudykunst and Lee, 2003).

Compliance with ethical standards

Conflict of interest

The authors declare that they have no conflict of interest.

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