

Initial Development and Validation of Multicultural Counseling Competencies Scale for Malaysian School Counselors

Salleh Amat¹, Kamarul Md. Shah¹, Zuria Mahmud¹, Amla Mohd. Salleh¹, Rosseni Din¹ & Mohd. Izwan Mahmud¹

¹ Faculty of Education, Universiti Kebangsaan Malaysia, Malaysia

Correspondence: Salleh Amat, Faculty of Education, Universiti Kebangsaan Malaysia, 43600 UKM Bangi, Selangor, Malaysia. Tel: 60-3-8921-6260. E-mail: sallehamat@gmail.com; sallehba@ukm.my

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Abstract

Multicultural counseling is an important aspect in counseling. The introduction of the multicultural counseling competencies was a major step to improve counseling services among school counselors. However, there is a lack of valid and reliable instrument to measure multicultural counseling competencies in Malaysian context. This initial study focuses on the development of a local instrument to assess multicultural counseling competencies among Malaysian school counselors. This instrument consists of 42 items and it was administered to 212 secondary school counselors in Negeri Sembilan and Wilayah Persekutuan, Kuala Lumpur. Principal component analysis (PCA) was conducted in which items within initial dimensions of multicultural counseling competencies were reshuffled and checked for their psychometric properties. After series of principal component analysis (PCA) and analysis from the experts, three dimensions of multicultural counseling competencies with 28 items were formed. This paper also discusses the findings and its implication to the instrument development and the validation process.

Keywords: multicultural counseling competencies, Malaysian school counselor, counseling

1. Introduction

The guidance and counseling services became an integral part of the Malaysian education system in the year of 1960 (Kementerian Pendidikan Malaysia, 1993). This service foothold our nation's human capital developments plan. A lot of skills training had been introduced to provide more professional counselors to support the vision and mission of counseling ever since (Kementerian Pelajaran Malaysia, 2010). This service has been through enhancement process in phases and it started out with the post of school counselors in secondary schools in 1996. Meanwhile guidance teachers were provided in primary schools in 2002.

Current statistic (Kementerian Pelajaran Malaysia, 2012) shows the total number of 2.33 million secondary school students' with 1163430 male students and 1163797 female students. In general, Malaysian population comprises many ethnic groups with the Malays at around 50.4%, followed by Chinese and Indians with approximately 23.7% and 7.1% of the population respectively and others 7.8%. There are also other indigenous groups in Sabah and Sarawak at around 11% of the population. It gives the whole picture of various kinds of students that leads to multicultural amongst secondary school students which supposed to be faced by school counselors.

A good quality school counselor from the aspect of personal and professional would affect students' self-identity and nation's capital development. Effective counselors do not have only good counseling skills but they are also different in self-beliefs and personalities (Combs, 1982). Having knowledge and knowing one-self from the aspect of efficiency, values and self-belief, patient and loving, power and intimacy, self-analyses and interpersonal awareness, an ability to be a model and an influence to others, less selfish, flexible, sympathy and empathy are the common traits of an effective counselor (Belkin, 1981; Cormier & Cormier, 1998; Lawrence & Ginger, 1999; Hanbal, 1998).

Based on *Theory Multicultural Counseling and Therapy* by Sue, Ivey and Pedersen (1996) and *Model Multicultural Counseling Competencies* by Sue, Arredondo and McDavis (1992), the multicultural counseling competencies involve three main dimensions which include awareness, knowledge and skills. Pedersen (2002),

Sodowsky (1996) and Contantine & Ladany (2000) had made many research and writings involving multicultural counseling competencies amongst lecturers, trainee counselors and counselors as well as the perceptions of minorities towards the multicultural counseling competencies from the aspect of training, efficiency, practices and counseling etiquette.

According to Ching and Ng (2010), the future of Malaysian's guidance and counseling services depends on the enhancement and active development of the three important aspects; theoretical orientation such as family therapy, multicultural approach, research and clinical trainings that focuses on new findings. Research in multicultural competencies in Malaysia is still in a lower degree compared to research in western countries (Kamarul & Salleh, 2010). The lack of appropriate instruments that suitable for local culture has blazed a trail for researchers to build an instrument that can measure the multicultural counseling competencies.

Result from the literature reviews and interviews from local counseling experts had suggested four main constructs to define the multicultural counseling competencies in Malaysia. In the early stage, four constructs were named as awareness, knowledge, skills and counselor traits. The purpose of this study is to develop and to validate the multicultural counseling competencies scale for Malaysian school counselors. This study has three research questions. The research questions are:

- 1) Is the sample size adequate to perform principal component analysis (PCA)?
- 2) What are the factors extracted from PCA?
- 3) Are there any overlapping measurements (multicollinearity) among the reshuffle items?

2. Method

2.1 Population and Sampling

This study used purposive sampling to collect the data (Ary et al., 2002; Othman, 2001; Konting, 1993). The samples were school counselors in Negeri Sembilan and Wilayah Persekutuan Kuala Lumpur with the population number of 300 out of 500 school counselors in that states. Two hundred and twenty six (226) school counselors were chosen to meet the sample size determination by Krejcie and Morgan (1970). Samples were chosen and were generalized as the whole population of Malaysian school counselors that had been trained and recognized by the Ministry of Education. However, only 212 questionnaire that were successfully recollected and enough to be analyzed with 42 constructed items (Hair et al., 1998; Hair et al., 1987; Coakes & Steed, 1999).

2.2 Instrument

This instrument had been built to identify the multicultural counseling competencies scale amongst secondary school counselors with the considerations of Malaysian culture and society. It was build based on the theory, literature reviews and interviews with experts in counseling. The procedures in developing this instrument had been used by most researchers to collect the quantitative data from research samples (Jazimin, 2008; Bogdan & Biklen, 2003; Sidek, 2005; Shertzer & Linden, 1979). The final questionnaire that had been distributed to research samples consists of 42 items.

3. Results and Discussion

The aim of the study is to examine the psychometric properties of the developed multicultural counseling competencies instrument. This was established by running the reliability test of the instrument using SPSS 20.0. Principal Component Analysis (PCA) with Varimax rotation was performed to find the underlying dimension of the instrument with minimal loss of information. The extracted factors and factor loadings and component matrix were matched with the conceptual framework derived from theories and literature review. Reliability test and item analysis were also performed to describe the psychometric properties of the instrument.

3.1 Sample Adequacy

Sphericity Barlett was conducted to ensure that all variables have the factorability with high Chi Square value (significant 0.05). Meanwhile, Kaiser-Meyer-Olkin (KMO) was conducted to see the sampling adequacy (Hair et al., 1998). As shown in Table 1, the Bartlett Sphericity Test yielded statistically significant intercorrelation $\chi^2(861) = 6891.799$, $p = .000$ with an overall MSA of .905, which exceeds the value of .60, indicating that the study had fulfilled the sampling adequacy requirement for factor analysis. Hair et al. (1998) also noted that PCA requires partial correlation between items to be more than 0.7.

Table 1. KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	Bartlett's Test of Sphericity		
	Approx. Chi-Square	df	Sig.
.905	6891.799	861	.000

Table 1 shows the KMO to answer the first research question "Is the sample size adequate to perform principle component analysis?" To conduct PCA, the minimum value of KMO must not less than .50 and a significant value of < 0.05 (Field 2005) is required. By mapping these requirements to the output of the analysis, it could be concluded that the multicultural counseling competencies questionnaire met the first requirement for the implementation of PCA. Respectively, the anti-image correlation values of the developed items are greater than 0.7.

3.2 Structuring Factors Using Principal Component Analysis

This instrument had been through the factor analysis process to choose exact items for each construct. Varimax Rotation was done to validate the constructed items as well as to see the respective group item for each construct. Through the analysis, the actual numbers of the construct had been determined. In factor loading, practical significance value of 0.40 is required (Coakes & Steed, 1999; Hair et al., 1998).

Table 2 shows the total variance explained. Only a total initial eigenvalues of above 1.0 or cumulative value above 60% was considered (Field, 2005). For the multicultural counseling competencies questionnaire, there were 8 values greater than 1.0. Thus, researchers conclude that there are 8 constructs in this questionnaire with cumulative value greater than 60% that is 69.25%. Besides total variance explained, the scree plot as shown in Figure 1 can also be used to determine the number of constructs. In this case, the scree plot shows only 3 constructs within the multicultural counseling competencies questionnaire. The scree plot supports the theories used in this study claiming that there are three principal factors that could be used to determine the competencies of multicultural counseling among the school counselors.

Table 2. Total variation that can be determined

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	14.376	34.228	34.228	14.376	34.228	34.228	9.713	23.126	23.126
2	5.079	12.092	46.320	5.079	12.092	46.320	5.752	13.694	36.821
3	3.206	7.634	53.954	3.206	7.634	53.954	4.194	9.985	46.806
4	1.588	3.782	57.736	1.588	3.782	57.736	2.823	6.721	53.527
5	1.343	3.197	60.932	1.343	3.197	60.932	1.985	4.727	58.254
6	1.217	2.898	63.830	1.217	2.898	63.830	1.977	4.708	62.962
7	1.170	2.786	66.616	1.170	2.786	66.616	1.462	3.480	66.442
8	1.106	2.634	69.250	1.106	2.634	69.250	1.179	2.808	69.250
9	.997	2.373	71.623						
10	.947	2.254	73.877						
11	.847	2.017	75.894						
12	.754	1.796	77.690						
13	.724	1.725	79.415						
14	.676	1.611	81.025						

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
15	.643	1.530	82.555						
16	.597	1.423	83.978						
17	.541	1.289	85.267						
18	.524	1.248	86.515						
19	.488	1.162	87.677						
20	.447	1.064	88.741						
21	.429	1.021	89.762						
22	.385	.918	90.680						
23	.365	.870	91.549						
24	.335	.798	92.348						
25	.313	.746	93.094						
26	.296	.705	93.799						
27	.278	.662	94.461						
28	.266	.633	95.094						
29	.236	.562	95.656						
30	.225	.537	96.193						
31	.208	.494	96.687						
32	.199	.473	97.160						
33	.179	.426	97.587						
34	.168	.400	97.987						
35	.152	.361	98.348						
36	.146	.347	98.696						
37	.120	.287	98.982						
38	.108	.257	99.239						
39	.098	.233	99.473						
40	.091	.217	99.690						
41	.068	.162	99.851						
42	.062	.149	100.000						

Extraction Method: Principal Component Analysis.

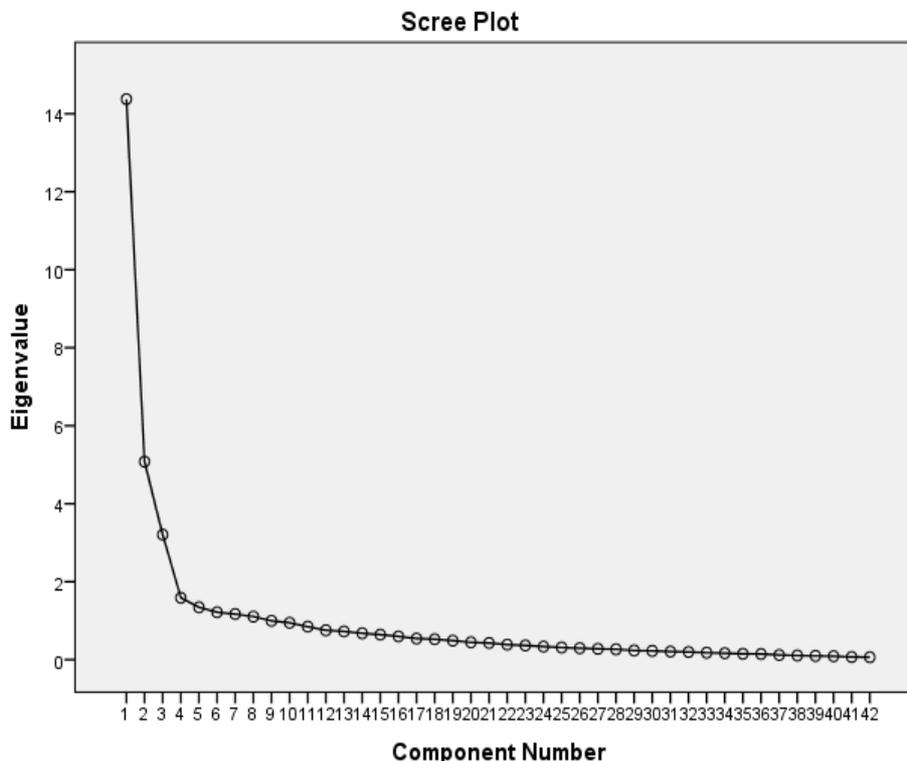


Figure 1. Determination of total factor using the scree plot

3.3 Overlapping Measurement (Multicollinearity)

A series of PCA was carried out to identify items that fit in a specific component. Analysis by rotated component matrix table stipulates that only values which have the capacity or loading of .40 and above will be accepted as items for the respective construct. The first extraction method using principal component analysis by Varimax with Kaiser Normalization rotation method converged in 10 iterations yielding 8 factors. After careful considerations, overlapping items were properly examined where some items were selected for certain constructs and some were discarded. These overlapping items indicated the existence of multicollinearity.

At first, overlapping items which discarded were items no 13, 14, 16, 17, 21 and 27. Meanwhile, item no 25 that did not have the factor loading .40 was discarded too. There were no more overlapping items after three times PCA were done. However, 7 components were still yielded. Three components (component 1, 2 and 3) were apparently represented by specific items. Meanwhile the other four components were represented by one to three items.

Based on the expert judgment, component 6 and 7 which represented by one item was discarded. After that, items in component 4 and 5 were evaluated. Items in component 4 (items no 10, 11 and 12) and component 5 (item no 18 and 19) were actually had been represented by items in component 1, 2 and 3. Based on theories and interviews with the experts, researchers agreed that three components can be determined from the analyses. Thus, items in component 4 and 5 had been discarded. In conclusion seven items were finally discarded. Table 3 and 4 shows the last two results of the analysis which eight original components have been trimmed down to 3 components or factors.

Overlapping items show that the respective items, measure more than one construct. Thus analysis and evaluation of the items were made to determine where the respective items belonged to, in addition to take into account the value of the items that were loaded on both constructs. This process was intended to elicit answer for the third research question-"Is there overlapping measurements (multicollinearity) among the items that measure the multicultural counseling competencies"? Based on the rotated component matrix, it could be concluded that the multicultural counseling competencies instrument contained multicollinear items that were cross loading with other constructs at the beginning.

Table 3. Structuring factors using rotated component matrix

	Rotated Component Matrix ^a						
	Component 1	2	3	4	5	6	7
S34	.888						
S33	.876						
S36	.863						
S31	.861						
S37	.858						
S32	.817						
S35	.780						
S30	.774						
S24	.732						
S26	.689						
S20	.683						
S22	.666						
S15	.596						
S9	.429						
S5		.884					
S6		.852					
S3		.846					
S7		.837					
S2		.815					
S8		.784					
S1		.764					
S4		.657					
S39			.773				
S40			.760				
S41			.739				
S38			.737				
S42			.686				
S28			.486				
S11				.752			
S12				.722			
S10				.520			
S19					.809		
S18					.645		
S23						.859	
S29							.733

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Table 4. Structuring factors using rotated component matrix

	Component		
	1	2	3
S34	.888		
S33	.876		
S36	.863		
S31	.861		
S37	.858		
S32	.817		
S35	.780		
S30	.774		
S24	.732		
S26	.689		
S20	.683		
S22	.666		
S15	.596		
S9	.429		
S5		.884	
S6		.852	
S3		.846	
S7		.837	
S2		.815	
S8		.784	
S1		.764	
S4		.657	
S39			
S40			.773
S41			.760
S38			.739
S42			.737
			.686
S28			.486

Based on the theory and discussion with the research team, these factors were subsequently named as (i) awareness, (ii) knowledge, and (iii) skills. Constructs of the counselor characteristics that had been proposed in the early discussion had been respectively represented by items in component 1, 2 and 3. This questionnaire also has the three main constructs which parallel with multicultural counseling competencies theory. Table 5 summarizes the total item and items that represent each construct.

Table 5. Summary of constructs

Construct	Item	Total Item
Awareness	S5, S6, S3, S2, S7, S8, S1, S4	8
Knowledge	S34, S33, S36, S31, S37, S32, S35, S30, S24, S26, S20, S22, S15, S9	14
Skills	S39, S40, S41, S38, S42, S28	6
Total Item		28

4. Conclusion

As one of the initial research, this study had successfully identified three main domains in multicultural counseling competencies for Malaysian school counselors. The research findings also reveal the suggested aspects that a counselor must have in order to become a competent counselor. According to the experts' judgment and counselors, the multicultural counseling competencies in Malaysian cultural context are the awareness, knowledge and skills. From the findings, in-depth research needs to be done in order to identify constructs that lead to multicultural counseling competencies, based on the local culture. More specific instruments are needed especially the constructed items to measure whether it really represents the constructs of multicultural counseling competencies. The developed questionnaire must be used in larger population and the reliability test should be rerun. This 28 items questionnaire needs to be analyzed again so a high validity instrument could be developed. Latest research analysis method such as Rasch Modeling could be applied for future study.

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