

Reliability and validity of adapted cross-cultural counselling inventory-revised on the sample of undergraduate counsellor trainees

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ABSTRACT

The cross-cultural counseling inventory-revised (CCCI-R) is one of the limited instruments available to measure the observed multicultural counselling competence. Most studies utilized self-report multicultural counselling competence instruments. Therefore, for the benefit of counsellor educators and multicultural training in Malaysia, this study investigated the factor structure, reliability, and validity of the adapted CCCI-R in the local context. There were 38 supervisors who completed 205 the adapted CCCI-R for their respective counsellor trainees. As the result, internal consistency was found to be=.947, while construct reliability was found to be .968. The confirmatory factor analysis (CFA) yielded a convergent validity value of .909. The adapted CCCI-R factor structure, reliability, and validity were all verified in this study. Counsellor educators were able to successfully employ the CCCI-R across gender and ethnicity when rating counsellor trainees observed multicultural counselling competence due to its excellent reliability and validity.

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1. INTRODUCTION

Previously, several competency models have been established since the start of the multicultural movement. The tripartite model of multicultural competence, on the other hand, has gotten a lot of attention and recognition. Sue *et al.* model [1] was a pioneering work that was recognized by the American counselling association (ACA) code of Ethics as a guideline for counsellors working with a variety of clients. According to Arredondo and Toporek [2], counsellors who are multiculturally competent provide ethical counselling. They are counsellors who have: i) Knowledge of own beliefs, attitudes, and prejudices; ii) Understanding of the worldview of the culturally diverse client; and iii) Devised suitable intervention strategies and approaches [3]. All of the elements mentioned by Sue [4] can be identified through multicultural competent counsellor characteristics, which include: i) Actively instilling awareness of his or her assumptions about human behavior, value, bias, early notion, and personal limitation; ii) Actively attempting to understand clients' culturally diverse worldview without passing judgement; and iii) Actively developing and practicing relevant and sensitive approaches and skills.

Nevertheless, to enhance counsellors' multicultural efficiency working with diverse clients, a recent multicultural counselling competence model is proposed by Ratts *et al.* [5]. The multicultural counselling and social justice (MCSJ) was endorsed by the association for multicultural counseling and development's (AMCD) and ACA in 2015 [5]. In the conceptual framework, the MSJC visually shows the relationships between the competencies' essential constructs: multicultural and social justice praxis, quadrants, domains, and competencies [5]. The MSJC assists counsellors in better understanding clients as persons in the context of their surroundings, which is especially important when working with marginalized clients. MSJC might be an aim for counsellors to exercise cultural humility in their profession by improving their understanding and commitment to multicultural counselling and social justice competency [6].

Counsellor trainees and professional counsellors' level of multicultural counselling competencies reflect their readiness to embrace the MCSJ's aspiration. Multicultural counselling competencies were significantly related to clients' satisfaction with counselling [7]. In fact, since decades ago, multicultural counselling competence is emphasized and nurtured to reduce racial and ethnic disparities in mental health treatment [8], [9]. Counsellors are expected to acquire a critical component of multicultural counselling competence such as the abilities to address racial and ethnic differences with clients [10]. Multiculturally competent counsellors are believed to practice counselling ethically [2] as well as able to reduce the risk of iatrogenic harm to the clients [11]. Furthermore, one of the critical components of assessing counsellor effectiveness is the ability of counsellors to connect with clients on issues of race, ethnicity, and culture [12].

The measurement of multicultural counselling competence is believed to reflect multicultural training effectiveness in the counsellor education program [13], [14]. This implied that the measurement of multicultural counselling competence had become the focus in multicultural counselling researches. Several literatures on multicultural counselling competence were found to mainly use self-report measures [15]–[19] and a limited studies use observer rated measure [20] or a combination of the two measures [21]–[24]. Accordingly, measurement of competency which are the measurement of skills, behavior, psychomotor performance should be conducted by involving second and/or third parties that are related to the provided services. The second party refers to the individual who received or experienced the services. Meanwhile, the third party refers to the individual who are either the experts in the field or the experienced professional colleagues. Inputs from the second and third parties will contribute to a bigger picture of the counsellor, provided services as well as the counsellors' training. Therefore, the measurement of counsellors or counsellor trainees multicultural counselling competence may include the third person's perspective, such as the supervisor.

In multicultural counselling competence researches, most of the instruments used to measure multicultural counselling competence are in the form of self-report. Self-report format of multicultural counselling competence assessment instruments refers to instruments used by the subject (e.g., counsellor trainees, counsellors) to assess their competence. There are several self-report of multicultural counselling competence assessment instruments: i) Multicultural awareness, knowledge & skills survey (MAKSS) [25]; ii) Multicultural counselling inventory (MCI) [26]; iii) Multicultural counselling knowledge & awareness scale (MCKAS) [27]; and iv) Multicultural counselling competence survey and training-revised (MCCTS-R) [28]. Researchers who used the self-report format of multicultural counselling competence instruments report the measurement's outcome as the perceived multicultural counselling competence.

Nevertheless, there was a critique regarding self-reported multicultural counselling competence instrument's ability to capture all three components of multicultural counselling competence model, especially the multicultural skills component. Scholars doubt its inability to provide a precise measurement of multicultural counselling competence. It is believed that it only measures a form of efficacy or self-belief, rather than competence [16]. Therefore, Worthington, McNett, and Moreno [29] have a similar view that to precisely assess multicultural counselling competence, it should be done with or together with observer-rated multicultural counselling competence instruments. It is believed that the observer-rated instruments can comprehensively capture multicultural counselling competence skill and when used together with self-report observer-rated instruments will result in more precise multicultural counselling competence. However, there are limited studies that utilized observer-rated multicultural counselling competence instruments.

The observer-rated multicultural counselling competence instrument refers to supervisors' instrument to assess other subject's (e.g., counsellor trainees, counsellors) multicultural counselling competence. One of a very few of observer-rated format of multicultural counselling competence assessment instrument is the cross-cultural counseling inventory-revised (CCCI-R). It was developed based on the cross-cultural counselling competencies identified by the education and training committee of division 17 of the American psychological association (APA) position paper that incorporated earlier definitions of the construct into the dimensions of cross-cultural counselling competence. LaFromboise, Coleman, and Hernandez [20] designed CCCI-R specifically for supervisors to assess trainees' multicultural counselling competence. The outcome from the CCCI-R is the observed multicultural counselling competence.

Thus, this study utilized the CCCI-R to measure counsellor trainees observed multicultural counselling competence due to its ability to measure counsellor trainees multicultural counselling competence as observed and rated by their supervisors during internship training. The CCCI-R demonstrate good content, construct, and criterion-related validity and excellent reliability [20]. Smith *et al.* [30] reported the divergent validity of the CCCI-R. The CCCI-R was not correlated with the MCI: total ($r=.04$) nor MCI: skills ($r=-.05$). It was weakly positively correlated with the MCI: knowledge ($r=.13$) and the MCI: awareness ($r=.15$), and weakly negatively correlated with the MCI: relationships ($r=-.11$) subconstructs. In terms of reliability, previous study [20] reported reliability of .95 for total CCCI-R.

However, the most recent study on CCCI-R psychometric properties examined client's ratings of counsellors' multicultural counselling competence [21], [31] or counsellors' self-perceived multicultural counselling competence [23], [32] instead of its original intentions. The adaptation of CCCI-R was made by considering both Malaysian cultural frame of reference and the most appropriate model of multicultural counselling competence, the tripartite model of multicultural counselling competence [3]. Thus, in this study, the adapted CCCI-R had undergone back-to-back translation, and expert validation process as this is one of the few attempts to utilize CCCI-R in the US's outer context. Therefore, the purpose of this study is to examine the psychometric properties of adapted CCCI-R through investigation of its factor structure, reliabilities and validities on the sample of undergraduate counsellor trainees.

2. RESEARCH METHOD

2.1. Subject of study

The subjects in this study are counsellor trainees were at the final phase of their counselling internship training at numerous local organizations such as schools, universities, prisons and welfare departments. Whenever a trainee is chosen, his or her supervisor will be automatically included. Random sampling was used to choose the 208 counsellor trainees, with 38 supervisors automatically participating. Majority of the counsellor trainees are Malay ($n=154$, 77.0%), Muslim ($n=167$, 83.5%), female ($n=159$, 79.5%), and at the age of 22 to 24 years old ($n=159$, 79.5%). Meanwhile, the supervisors are mostly female with at least master education and five years' experience in counselling supervision. In average, a supervisor had to supervise at least three counsellor trainees.

2.2. Research instruments

2.2.1. CCCI-R

The CCCI-R was first developed for the use of trained observers or supervisors to measure the trainees' cross-cultural counselling competence, specifically to assess counsellor trainees' counselling effectiveness with culturally diverse clients [20]. The CCCI-R has three subconstructs. Table 1 exhibits the distribution of items according to each of subconstructs. Each item is presented on a 6-point Likert-type scale ranging from 1 (strongly disagree) to 6 (strongly agree). Only one item (15) is reverse-scored. The total score indicates the degree of counselling effectiveness with culturally diverse clients, indicating the counsellor trainees observed multicultural counselling competency level as rated by their supervisor.

Table 1. Items and subconstructs of instruments

Instruments	Subconstructs	No. of items	Total
CCCI-R	Cross-cultural counselling skill	10	20 items
	Socio-political awareness	6	
	Cultural sensitivity	4	
MCSE-RD	Multicultural terminology	4	32 items
	Multicultural knowledge	20	
	Multicultural awareness	8	
MCCTS-R	Multicultural intervention	24	37 items
	Multicultural assessment	6	
	Multicultural counselling session management	7	

2.2.2. MCCTS-R

There are 32 positively stated items from three subconstructs that build up MCCTS-R [28]. Table 1 exhibits the distribution of items according to each of subconstructs. The total score should be in the range of 32 to 128 as response for each item was rated based on four-point Likert scale (1=not competent to 4=very competent). The total score of MCCTS-R is the product of summation of each item rating. This total score reflects the respondents self-perceived multicultural counselling competence. The MCCTS-R was reported to have excellent reliability value for its subscales ranging from α of .85 to .97 [28].

2.2.3. Multicultural counseling self-efficacy-racial diverse (MCSE-RD)

The MCSE-RD has three subconstructs that make up the total of 37 positively stated items. Table 1 exhibited the distribution of items according to each of subconstructs. The rating scale ranges from 0 (no confidence at all) to 9 (complete confidence). The total score represents the counsellor trainees' multicultural counselling self-efficacy trainees. The MCSE-RD was reported to have excellent reliability value for its subscales ranging .98 [33] and .95 [16].

2.2.4. Demographic sheet

The purpose of demographic questionnaire was to collect information on participants' demographic variables. Thus, a demographic sheet next to the last page of the questionnaire provided information on the respondent's age, gender, ethnicity, and religion. To encourage participants to feel more at ease, to be less wary, and to be more open, the demographic questions were included to the questionnaire's final section.

2.3. Research instruments' preparation

For the use in the current study, the instruments were carefully prepared in which they have undergone four preparation phases. The four phases are translation, validation, inter-rater reliability, and exploratory factor analysis. These preparation phases were carried out not only to ensure the creation of a new translation of the CCCI-R but also to preserve its quality.

2.3.1. Phase 1 translation of CCCI-R

First and foremost, the researcher had granted permission to utilize the CCCI-R from the original author. The back-to-back translation method was used in this study and it was done according to Noah's [34] recommendation. As a result, the six translators were chosen according to their experience in counselling and excellent English ability. In the first round, the original English version of CCCI-R was translated into the Malay language by three translators. The three drafts of Malay translated CCCI-R were thoroughly reviewed by the researchers in a meeting and produced only one version of Malay translated CCCI-R. Later, this only Malay version was submitted to another three translators to translate back into English. Again, the three drafts of back-translated CCCI-R were thoroughly reviewed by the researchers in a meeting and produced only one version of back-translated CCCI-R. The final translated version of CCCI-R was pre-tested to gain feedback on terminology, phrases, and sentence structure. As a result, a few small spelling mistakes were corrected.

2.3.2. Phase 2 expert validation of CCCI-R

The content validation procedure began with a pre-tested version, which was then presented to an expert panel. The appointed experts are instructors of multicultural counselling course, have at least five years' experience of counselling supervision, and involved in research related to multicultural counselling. One feedback is to divide double barrel items such as items 10 and 11 into two sentences. Following the feedback given, item 10 then was broken into item 10a (counsellor elicits a variety of verbal responses from the client) and item 10b (counsellor elicits a variety of non-verbal responses from the client). The, item 11 was also broken into item 11a (communicates variety of verbal messages.) and item 11b (communicates a variety of nonverbal messages.). The divided item then was numbered in continuing order. Including the new version of items, translated, and adapted CCCI-R was made up of 22 items.

2.3.3. Phase 3 inter-rater reliability of CCCI-R

As CCCI-R was rated by each of the counsellor trainees' supervisor, this study also reported the inter-rater reliability of CCCI-R. The best statistic available for obtaining inter-rater reliability is the intraclass correlation or R, with reasonable inter-rater reliability estimates are typically .70 and above [35]. From the analysis, the inter-rater reliability is .824, which implies that the adapted CCCI-R is a reliable observer-rated multicultural counselling competence instrument.

2.3.4. Phase 4 exploratory factor analysis (EFA)

This phase was conducted after gaining data from the pilot study, which involved 73 counsellor trainees representing the sample in the main study. The EFA is a method used to analyze data and determining the number of components are required to represent the data. It's usually used in the early stages of a study to gather information on the interdependencies between a set of variables. The principal component analysis (PCA) was used in the EFA. It may be determined that the revised CCCI-R fulfilled the criterion for PCA implementation based on the Bartlett test of sphericity (approx. chi-square=2117.374, df=231, Sig.=000) and the Kaiser Mayer Olkin (KMO=.934).

The CCCI-R was used to assess observed multicultural counselling competence, and EFA revealed a three-factor structure with eigenvalues greater than 1.0, accounting for 72.56% of the total variance. This result means the number of dimensions and items is sufficient to measure the construct of observed multicultural counselling competence as the total variance is more than 60% [36]. There are few recommendations for acceptable factor loading cut-off, such as factor loading greater than .30 [37] or .40 [38], [39]. Nevertheless, factor loadings generated from the study factor analysis are fair, ranged from .517 to .829. Table 2 presents the distribution of the 22 items after factor analysis.

Table 2. Rotated component matrix^a

Item	Component		
	1	2	3
1. Omcc1	.778		
2. Omcc2	.742		
3. Omcc3	.723		
4. Omcc4	.752		
5. Omcc5	.588		
6. Omcc6	.714		
7. Omcc7	.617		
8. Omcc8		.693	
9. Omcc9			.614
10. Omcc10a		.690	
11. Omcc10b			.692
12. Omcc11a			.692
13. Omcc11b			.790
14. Omcc12	.597		
15. Omcc13		.728	
16. Omcc14	.615		
17. Omcc15		.593	
18. Omcc16		.676	
19. Omcc17	.526		
20. Omcc18		.617	
21. Omcc19		.829	
22. Omcc20		.517	

Extraction method: principal component analysis

Rotation method: Varimax with kaiser normalization

a. Rotation converged in 12 iterations

After granted approval from ethical committee of Universiti Putra Malaysia (JKEUPM) and permission from selected universities. A formal letter was sent to the dean, head of the department and the internship coordinators to inform and seek their assistance for this study. Their help was essential to get access to the counsellor trainees and supervisors' data to build up the sampling frame. The data needed were the total number of counsellor trainees, counsellor trainees' name, matric number, e-mail address, address of internship location, and supervisors' name and e-mail address. Then, a number which represented total number of counsellor trainees in a particular university was written on a piece of paper. All the papers were folded and placed into a bowl. The researcher drew upon it until the total number of samples achieved was 208 participants.

The questionnaire sets for counsellor trainees, and supervisors were attached with a consent form and cover letter. The counsellor trainees' confidentiality is maintained by coding the questionnaire sets. Similarly, questionnaire sets for supervisors have also coded. A particular supervisor would receive three sets of questionnaires for his or her three supervisees. The code for each counsellor trainee was attached in the supervisor's cover letter. The questionnaires were e-mailed five weeks before the end of the counsellor trainees' internship training. There were 38 supervisors successfully responded to the questionnaires, which resulted in 205 returned questionnaires. Figure 1 illustrates the data collection procedures.

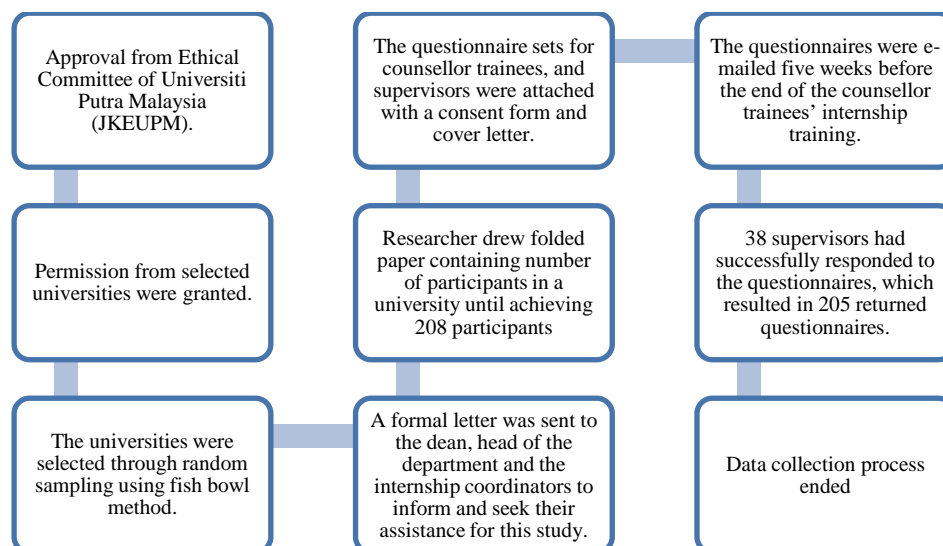


Figure 1. Data collection procedure

2.4. Data analysis

Relying on the 205 usable responses, data was analyzed using statistical product and service solutions (SPSS) 25 and the analysis of moment structures (AMOS) 23 computer program. The SPSS 25 and AMOS 23 were used to evaluate the reliability and validity of the adapted CCCI-R. Meanwhile, the confirmatory factor analysis (CFA) was used to test the hypothesized factor structure model utilizing the AMOS 23. Meanwhile, the descriptive findings such as mean, standard deviation, skewness, and kurtosis of the study were done using SPSS 25.

3. RESULTS

3.1. The three-factor structure

The CFA was performed using a five factors hypothetical model as generated from the EFA. To determine model fit, McDonald and Ho [40] suggested at least four common fit indices were used, which include: i) Goodness of fit indexes (GFI); ii) Comparative fit index (CFI); iii) Incremental fit indexes (IFI); iv) Root mean square error of approximation (RMSEA). Meanwhile, Hair *et al.* [38] is convinced that a model must have at least three fit indices to provide appropriate proof of model fit. In agreement with previous study [38], Iacobucci [41] stated that the Chi-square value must be provided alongside at least one absolute index (RMSEA) and one incremental index (i.e., CFI). Cangur and Ilker [42] also concluded that Chi-square, RMSEA and CFI are appropriate fit indices for model fit in multivariate normal distribution condition. As a result, the Chi-square/df, CFI, Tucker-Lewis index (TLI), and RMSEA were used to determine model fit in this work, with a word of caution from Hu and Bentler [43]. They cautioned that even if a few of the fit indices showed a poor fit, a model could nevertheless match the data.

As shown in Figure 2, the fit index was not met [$\chi^2(206)=720.710$, $p=.000$, $\chi^2/df=3.499$, $CFI=.853$, $TLI=.835$, $RMSEA=.112$]. The TLI did not achieve at least .85 and RMSEA bigger than the cut-off point .100 [44]. The CFA posits linkages or correlations between observed indicator variables and the latent variables they are supposed to measure. It 'confirms' the predicted factorial structure by comparing them to the data [45]. CFA eliminates the requirement to summate scales and enables for the automatic correction of correlations between constructs for the amount of error variance in the construct's measures.

As a result, Figure 3 shows the second-order CFA model, which revealed that 16 items from three factors were kept due to factor loadings ranging from .50 to .85. Because of their high MI, the other six were removed from the construct. The result shows that fit index is [$\chi^2(102)=250.339$, $p=.000$, $\chi^2/df=2.454$, $CFI=.932$, $TLI=.920$, $RMSEA=.085$]. All fit indices attained, as shown in the results. The cut-off point is .85, and the RMSEA is less than the cut-off point .100 [44]. The results were largely satisfactory, and they reflected the same three factors as the previous version. As a result, the initial hypothesized model is well-fitting in general.

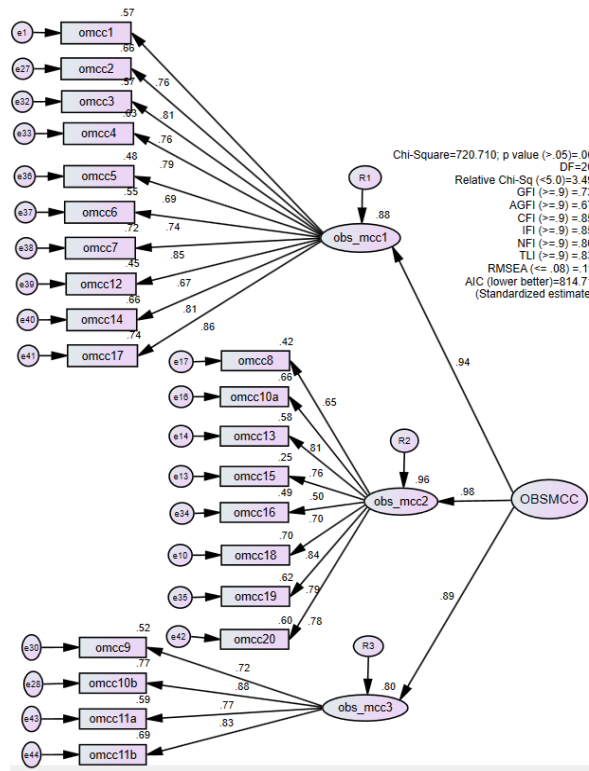


Figure 2. CFA model of original CCCI-R for total sample

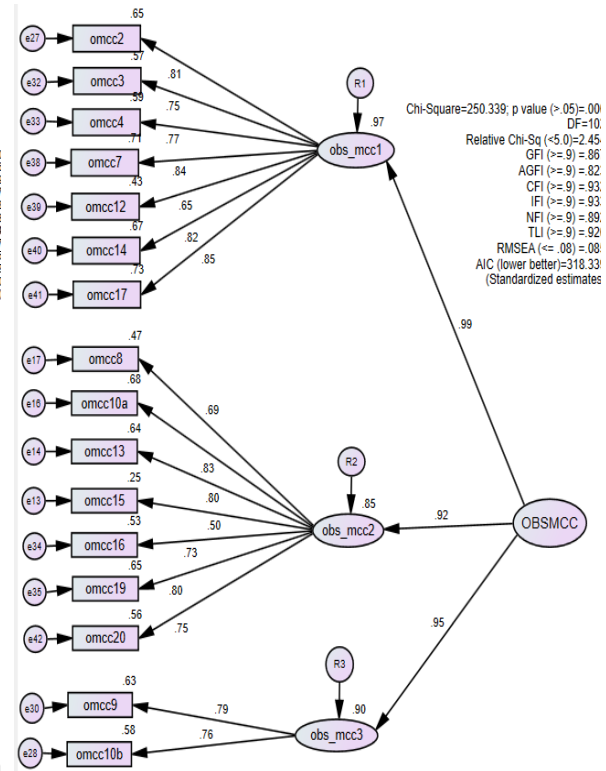


Figure 3. CFA model of CCCI-R for a total sample

Fair fit indices and statistically significant factor loadings were also obtained using this model, both for the overall sample and for subsamples separated by gender and ethnicity. Multigroup analysis across gender with factor loadings freely determined revealed a fair fit to the data [χ^2 (202)=513.444, $p=.000$, $\chi^2/df=2.542$, CFI=.922, TLI=.907, RMSEA=.066] when the gender invariance of the adapted model was tested as presented in Table 3. Similarly, the table as well as presents the freely estimated factor loadings with an excellent fit to the data [χ^2 (205)=420.146, $p=.000$, $\chi^2/df=2.049$, CFI=.916, TLI=.902, RMSEA=.066] for the model invariance regarding ethnicity.

Table 3. Fit indices for models presented in Figures 1 and 2

Model	Sample	CFI	TLI	RMSEA
Model 1	Total sample	.853	.836	.112
Model 2	Total sample	.932	.919	.086
	Male subsample	.922	.907	.066
	Female subsample	.922	.907	.066
	Malay subsample	.916	.902	.066
	Non-Malay subsample	.916	.902	.066

3.2. Reliability

3.2.1. Internal consistency

With a Cronbach alpha coefficient of .947, the entire CCCI-R instrument has a strong internal consistency. The detail is displayed in Table 4. All factor internal consistency values are relatively high, ranging from .750 to .926.

Table 4. Internal consistency of CCCI-R

Factor	No. of item after CFA	Cronbach alpha (α)
1	7	.926
2	7	.860
3	2	.750
Total	16	.947

3.2.2. Construct reliability

The amount to which the indicator presents the measured latent component is referred to as construct reliability [38]. It's calculated by adding the squared sum of factor loadings and the sum of error variance terms for each construct. Good reliability is defined as a reliability value of .70 or greater. With a current ratio (CR) of .968, the CCCI-R achieves good reliability, indicating a highly significant correlation between construct elements. The measures have a high construct dependability, which means they consistently represent the same latent [38].

3.3. Validity

3.3.1. Construct validity

According to Pallant [46], only the items with a value more than .30 should be retained. As presented in Table 5, the construct validity gained from the corrected item-total correlations are more than .30, ranged from $r=.492-.833$. Therefore, all items were retained.

Table 5. Corrected item-total correlation and Cronbach alpha if item deleted of 16 items

Item	Corrected item-total correlation	Cronbach's alpha if item deleted
omcc2	.768	.943
omcc3	.717	.943
omcc4	.753	.943
omcc7	.797	.942
omcc8	.608	.946
omcc9	.718	.943
omcc10a	.777	.942
omcc10b	.708	.944
omcc12	.631	.946
omcc13	.707	.944
omcc14	.797	.942
omcc15	.492	.952
omcc17	.833	.941
omcc18	.816	.941
omcc19	.723	.943
omcc20	.749	.943

3.3.2. Convergent validity

Convergent validity describes how items of indicators for a specific construct should converge or share a high proportion of variance [38]. The CFA provides for convergent validity assessment in addition to construct reliability. Factor loading and average variance extracted (AVE) might be used to determine it. The cut-off value for factor loading must be greater than .40 [47] for a measurement to be valid. Standardized loading estimates, on the other hand, should be .50 or higher, with all components statistically significant at a minimum [38]. CFA revealed that factor loadings for each observed item were greater than .50, and AVE met the .50 requirement (AVE=.909). As a result, the CCCI-R achieves convergent validity.

3.4. Descriptive statistics

Table 6 shows the mean, standard deviation, skewness, and kurtosis of each item. The standard deviation varies from .638 to 1.222 while the mean varies from 4.380 to 5.115. The items are normally distributed based on skewness and kurtosis, as long as the skewness and skewness values are between 2.00 and 7.00.

The results of descriptive statistics analysis of each scale employed in the study are presented in Table 7. On the current sample, the results demonstrate that the other two instruments utilized have appropriate internal consistency (α). The gender differences were examined using independent sample t-tests, with the findings shown in Table 8. There is no significant difference in CCCI-R between males ($M=4.805$, $SD=.633$) and females ($M=4.819$, $SD=.629$; $t(198)=-.132$, $p=.895$), according to the findings.

Table 6. Descriptive statistics of CCCI-R

Item/factor	Mean	Std. deviation	Skewness	Kurtosis
omcc2	4.985	.653	.015	-.632
omcc3	4.905	.806	-.349	-.363
omcc4	4.830	.796	-.228	-.438
omcc7	4.845	.803	-.301	-.358
omcc12	4.435	1.045	-.547	-.284
omcc14	4.805	.800	-.228	-.421
omcc17	4.835	.788	-.134	-.572
Factor 1	4.806	.664	-.122	-.486
omcc8	5.115	.703	-.339	-.335
omcc10a	4.990	.723	-.307	-.181
omcc13	4.905	.780	-.409	.220
omcc15	4.380	1.222	-.544	-.505
omcc16	5.070	.638	-.060	-.531
omcc29	5.055	.731	-.241	-.633
omcc20	4.880	.774	-.381	-.112
Factor 2	4.914	.602	.198	-.569
omcc9	4.775	.817	-.289	-.372
omcc10b	4.685	.933	-.420	.014
Factor 3	4.730	.784	-.209	-.129
Total CCCI-R	4.816	.628	.266	-.694

Table 7. Descriptive statistics measures of scales used in the study

Scale		Mean	Std. deviation	Skewness	Kurtosis	α
MCSE-RD	Factor 1	5.738	1.418	5.738	1.418	.942
	Factor 2	6.241	1.399	6.241	1.399	.959
	Factor 3	5.484	1.456	5.484	1.456	.876
MCCTS-R	Factor 1	2.497	.558	2.497	.558	.935
	Factor 2	2.611	.549	2.611	.549	.872
	Factor 3	2.563	.591	2.563	.591	.906

* α =Cronbach's alpha coefficient

Table 8. Mean difference of CCCI-R and its four factors according to gender

	Gender	N	Mean	Std. deviation	t	df	Sig. 2 tailed
Factor 1	Male	41	4.770	.679			
	Female	159	4.815	.662	-.385	198	.701
Factor 2	Male	41	4.864	.578			
	Female	159	4.926	.609	-.589	198	.556
Factor 3	Male	41	4.780	.775			
	Female	159	4.717	.789	.461	198	.645
Total	Male	41	4.805	.633			
	Female	159	4.819	.629	-.132	198	.895

The differences in ethnicity were further evaluated using independent sample t-tests, the results are shown in Table 9. The results demonstrate that Malay ($M=4.864$, $SD=.665$) and Non-Malay ($M=4.656$, $SD=.456$; $t(107.604)=2.428$, $p=.017$) had significantly different CCCI-R scores. The amount of the mean differences was small ($\eta^2=.020$).

Table 9. Mean difference of CCCI-R and its three factors according to ethnicity

	Gender	N	Mean	Std. deviation	t	df	Sig. 2 tailed
Factor 1	Malay	154	4.847	.699			
	Non-Malay	46	4.668	.515	1.897	99.360	.061
Factor 2	Malay	154	4.951	.638			
	Non-Malay	46	4.789	.441	1.953	106.571	.053
Factor 3	Malay	154	4.795	.824			
	Non-Malay	46	4.511	.592	2.597	102.149	.011
Total	Malay	154	4.864	.665			
	Non-Malay	46	4.656	.456	2.428	107.604	.017

4. DISCUSSION

The purpose of this study was to examine the CCCI-R psychometric qualities in terms of factor structure, reliability, and validity in a local setting. On a sample of Malaysian counsellor trainees, the study tested the hypothesized structure of CCCI-R and the invariance of the adapted model across gender and ethnicity. The CFA validated the CCCI-R tested three-factor structure across the entire sample and two

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subsamples (e.g., gender and ethnicity). This finding is in-line with the original paper, which reported a three-factor structure of CCCI-R [20]. Except for the initial research, there was little published evidence on the CCCI-R factor structure in a sample of counsellor trainees [20]. In another study, Drinane *et al.* [31] used the CCCI-R as a self-report measure on the sample of clients reported opposite from previous findings [20]. Nevertheless, this study has confirmed CCCI-R's factor structure in the Malaysian context. This finding is a novel sign that this may be the beginning for CCCI-R to be used consistently during local counsellor trainee's supervision as well as to be used to justify counsellors' readiness to embrace MCSJ's aspiration.

One of the goals of this study is to examine the CCCI-R reliability and validity in measuring multicultural counselling competence in counsellor trainees as assessed by their supervisors. The translated and adopted CCCI-R achieved a high level of internal consistency, with a Cronbach's Alpha of .947. It was determined that CCCI-R has strong internal consistency based on the coefficient values obtained. This result suggests that the instrument's scores are highly consistent from one instrument administration to the next [48]. LaFromboise, Coleman, and Hernandez [20] also reported excellent reliability value with $\alpha=.95$ for the total CCCI-R. As a result, the items in the CCCI-R can be claimed to be capable of measuring the desired construct and producing consistent results.

This study additionally assesses construct reliability to ensure that the revised CCCI-R is consistent. CFA results suggest that construct reliability is strong in this study, with CR=.968. This suggests that the elements in the CCCI-R are all defining the same latent construct. The convergent validity in this study is .909. This value denotes that the CCCI-R's model uni-dimensionality has been verified.

The mean scores for CCCI-R items illustrate that counsellor trainees have high observed multicultural counselling competence. This reflects that the counsellor trainees can demonstrate their multicultural knowledge and awareness and channel their confidence into visible behaviors that can be observed by their supervisor. All factors of and total CCCI-R's means are significantly different according to ethnicity. These implied that the supervisors noticed that counsellor trainees from different ethnicities demonstrated multicultural counselling competence differently in their respective internship settings. This difference may be due to fulfilling the needs of their clients that come from a diverse background.

Despite different instruments used, the present study finding is in line with [22]. Instead of CCCI-R, previous researchers [22] measured their participants' multicultural counselling competence based on experts' evaluation on participants responses on the multicultural critical incident vignettes (MCIV). Their findings showed that younger and people of color provided better responses and scored higher on observed multicultural counselling competence. Similarly, in this study, the counsellor trainees deal with clients from a younger age group, and different ethnic groups rated a high rating on observed multicultural counselling competence by their supervisors.

5. CONCLUSION

The observable multicultural counselling competence may reflect counsellor trainees' multicultural awareness, knowledge, and confidence to perform multicultural counselling skills. Therefore, this study had confirmed CCCI-R's ability to measure precisely counsellor trainees demonstrable multicultural counselling competence, as observed by their supervisors through its proven factor structure, high reliability, and sufficient validity. As recommendation, the study may be replicated on other sample and in another context to further explore the CCCI-R psychometric properties.

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





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