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Malay Translation of Attitudes Toward Career Counselling Scale for University Students in Malaysia

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ABSTRACT: The purpose of this study is to translate the Attitudes Towards Career Counselling Scales (ATCCS) into Malay version. The researcher also tested the validity and reliability of the instrument using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). A total of 500 final-year undergraduate students at four public universities in Malaysia were included in this study (100 for EFA, 400 for CFA). There are four experts involved in the translation process. The three experts consist of a university lecturer in the field of counseling and a translation specialist. The face and content validity of the instrument involved five experts and resulted in a high validity score of 0.95. Two factors were formed through EFA, namely value and stigma, based on an eigenvalue of above 1. The total cumulative percentage is 64.95% and is considered strong. All items have factor loading values above .6. The result of the CFA analysis shows that the ATCCS measurement model had fulfilled the fit index RMSEA (0.089), CFI (0.926), TLI (0.914) and Chisq/df (4.191). The results also show that convergent validity and composite reliability were achieved. These two factors have an internal consistency value (Cronbach's alpha) of value α =.95, stigma α =.88, total ATCCS α =.85, and these values are within an acceptable range. The conclusion from the EFA and CFA conducted is that the Attitudes Toward Career Counselling in the Malay version meets the criteria of validity and reliability of the instrument to be used by future researchers in determining students' planned happenstance skills among university students.

Keywords: career counselling, help seeking, attitudes, value, stigma.

I. INTRODUCTION

Career counseling is crucial in the university setting as it offers students the essential assistance and tools to make well-informed choices regarding their academic and professional paths. Career counseling enables students to examine their interests, talents, beliefs, and ambitions to uncover potential career routes that are in line with their desires. Career counseling aids students in cultivating crucial career-oriented abilities, like crafting resumes, preparing for interviews, and establishing professional connections [1]. In addition, career counseling in the university setting can help students understand the current job market, industry trends, and potential employment opportunities [2]. Through individual counseling, career guidance helps students navigate the complex world of work and equips them with the tools they need to succeed professionally [3]. It is clear from this that career guidance has the potential to bridge the gap between education and the labor market by providing students with insights into the latest trends, requirements, and needs of the industry.

The significance of attitudes toward career guidance in the utilization of career counseling services cannot be overstated [4]. These attitudes can either facilitate or hinder help-seeking behavior, depending on the individual's perception and opinion of career guidance [5]. Research indicates that individuals with a positive attitude toward career counseling are more likely to seek career counseling services actively [6]. Students who approach career counseling with an open and positive attitude are more likely to develop self-confidence, explore diverse career options, and effectively utilize the resources and assistance provided by

career counselors. By actively participating in career counseling, students can gain a deeper understanding of their skills, interests, values, and goals, leading to more meaningful and successful career choices [7].

The Attitudes Toward Career Counselling Scale (ATCCS) is a widely recognized and utilized tool in career development research and practice [8]. It was specifically designed to assess individuals' attitudes toward career counseling and their willingness to engage in the process based on their perceptions of value and stigma [9]. The use of the ATCCS enables researchers and practitioners to gain valuable insights into people's perceptions and beliefs about career counseling [10]. Furthermore, the ATCCS can help identify potential barriers or stigma associated with career counseling that may deter individuals from seeking help. Understanding and addressing these attitudes is crucial to increasing the uptake of career counseling services and supporting individuals in their career development [11]. In summary, the ATCCS is a valuable tool for assessing attitudes toward career counseling and can guide the development of interventions to enhance students' engagement with career counseling services.

II. LITERATURE REVIEW

The Attitudes Toward Career Counseling Scale is a valuable tool for assessing individuals' attitudes toward career counseling [9, 11, 12]. It focuses on two main factors: perceived value (the importance and benefits of career counseling) and stigma (negative associations or concerns about seeking career guidance) [9, 13-15]. The ATCCS has demonstrated strong psychometric properties, including good internal consistency, test-retest reliability, and construct validity. Its successful validation in various countries like Korea, the United Arab Emirates, and Turkey highlights its cultural adaptability [10, 11, 16].

Research shows that individuals with higher perceived value are more likely to engage in career counseling, while higher stigma can hinder help-seeking behaviors [16]. For example, studies have found that men often report higher stigma levels and lower value levels compared to women [10]. Additionally, the ATCCS has been positively correlated with self-esteem, self-efficacy, and decision-making styles, further emphasizing the importance of positive attitudes toward career counseling [10, 16, 18].

The ATCCS's ability to identify potential barriers to help-seeking allows practitioners to tailor interventions and address specific concerns. This is particularly relevant for groups like athletes who may face unique stigmas related to seeking help [19]. By understanding individuals' perceptions of career counseling, professionals can create more effective strategies to promote engagement and ultimately support personal and career well-being [11, 15, 18].

The translation of psychological tests is a critical aspect of cross-cultural research and clinical practice. It is a meticulous and detailed process, essential for ensuring that the translated versions of these instruments maintain the authenticity and credibility of the original versions. Several studies, including those by [20, 21], highlight the importance of rigorous translation procedures in psychological assessment.

One of the primary challenges in translating psychological tests lies in adapting the language to be suitable for the target audience. The language used in a psychological test should be easily understood by the individuals taking it, considering their cultural background, age, and education level. [22, 23] emphasize the importance of culturally sensitive language in ensuring the validity and reliability of translated tests.

To address the complexities of language and cultural nuances, the translation process typically involves a collaborative effort between language experts and content experts [24]. highlights the importance of involving both types of experts to ensure linguistic accuracy and conceptual equivalence. Language experts ensure that the translated items convey the same meaning as the original items, while content experts verify that the cultural context and relevance of the items are maintained.

The [25], recognizing the significance of accurate translation assessments, recommends a four-stage process for translating and adapting instruments. This process includes:

1. *Forward Translation*: The instrument is translated from the original language to the target language by two independent translators.
2. *Expert Panel Back-Translation*: The translated versions are then back-translated into the original language by a different set of translators. An expert panel then compares the back-translated versions with the original instrument to identify and resolve any discrepancies.
3. *Pre-testing and Cognitive Interviewing*: The translated version is then pre-tested with a small sample of individuals from the target population to assess its clarity, comprehensibility, and cultural

appropriateness. Cognitive interviewing techniques may be used to gather feedback on the understanding and interpretation of the items.

4. *Final Version*: Based on the feedback from the pre-testing and cognitive interviewing stage, the translated instrument is finalized, ensuring that it is linguistically accurate, culturally appropriate, and conceptually equivalent to the original instrument.

Establishing the validity and reliability of research instruments is crucial for ensuring the quality and trustworthiness of scientific findings. Confirmatory Factor Analysis and Exploratory Factor Analysis are valuable statistical techniques for evaluating instrument validity, encompassing content, construct, and criterion-related validity [26]. While content validity primarily relies on rational analysis of how well items represent the intended construct, EFA can support this by uncovering the underlying factor structure and ensuring item alignment [27]. Construct validity, the degree to which an instrument measures the theoretical construct, benefits from both CFA and EFA [28]. CFA tests a predefined factor structure based on prior hypotheses, while EFA explores the data to identify latent factors [29]. Criterion-related validity, which assesses the relationship between instrument scores and external criteria, can also be investigated using CFA and EFA by examining the relationships between factors and external measures [28]. By employing both techniques, researchers gain a comprehensive understanding of an instrument's validity, ensuring it accurately measures the intended constructs and relates appropriately to relevant criteria [26].

Even though there is limited knowledge regarding the perception of attitudes toward career counseling in Eastern cultures [17], the new Malay version of ATCCS can minimize any issues related to culture and bias in research. The aims of this study are as follows:

i. To translate the Attitudes Toward Career Counselling Scale (ATCCS) into the Malay version of the scale.
ii. To assess the content validity of the ATCCS among Malaysian university students.
iii. To examine the construct validation and reliability of the ATCCS among Malaysian university students.

III. MATERIAL AND METHOD

The purpose of this study is to translate the Attitudes Toward Career Counselling Scale (ATCCS) and assess the reliability and validity of this scale in relation to the construct of ATCCS among public university students. The collection of quantitative data was achieved by use of an online self-administered survey questionnaire. In this research endeavor, a meticulously chosen sample of 500 final-year undergraduate students from four prominent Malaysian public universities was utilized, with 400 students designated for CFA (confirmatory factor analysis) and 100 for EFA (exploratory factor analysis). The selection process involved the intricate utilization of cluster and stratified random sampling methods to ensure a representative and diverse participant pool. Prior to the distribution of the questionnaire, a comprehensive approach to maintaining strict confidentiality of the research data was diligently implemented. Following data collection, the analytical phase involved the utilization of the IBM SPSS version 25.0 and AMOS 24.0 program, allowing for a robust and extensive analysis of the gathered data. All implementation processes are shown in Figure 1.

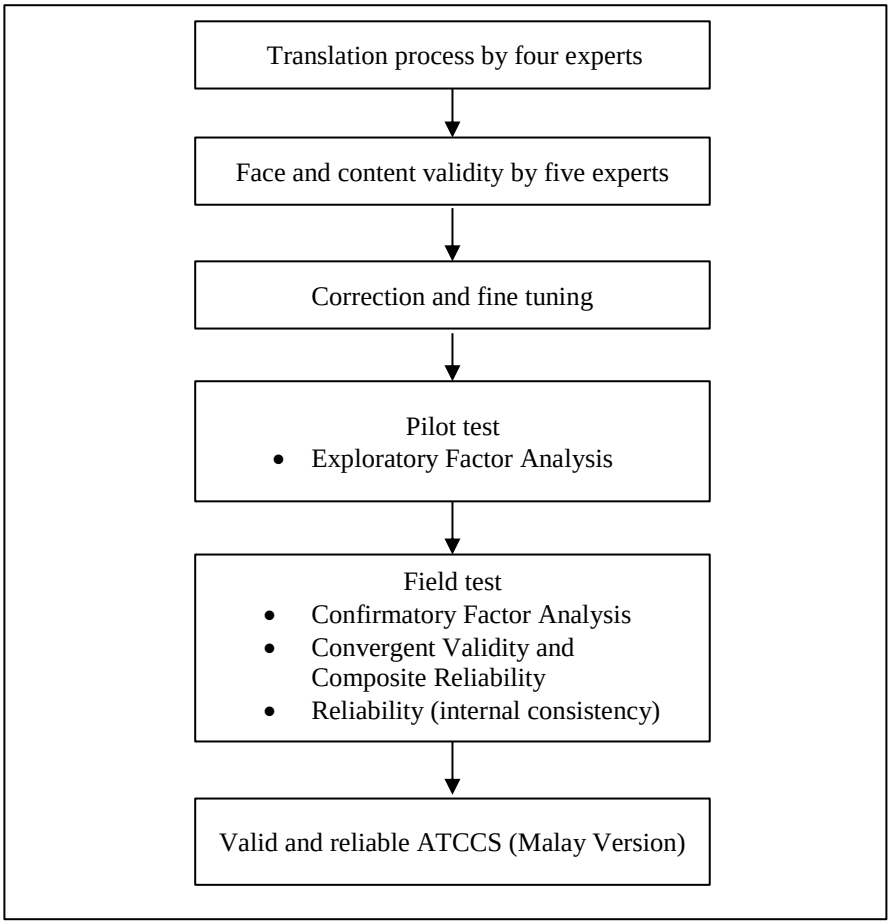

FIGURE 1. Flow chart of the conduct of the study

1. RESPONDENT BACKGROUND

This study includes Malaysian students who are in their final year of pursuing a first degree at a public institution. Malaysia has a total of 20 public universities, which have been classified into four distinct clusters: research universities, focused universities, comprehensive universities, and technical universities. For the pilot study, the researcher selected a single research university. However, for the field study, the researcher chose four universities, each representing a different type of university cluster.

1.1 Pilot Test

The primary objective of this pilot study is to procure preliminary data ahead of the principal study. The intention is to uncover any potential deficiencies in the research instrument, ascertain the representativeness of the research sample in relation to the population, and furnish initial findings concerning the validity of the research hypothesis. A pilot study holds significant importance as it ensures the seamless execution of the actual study by identifying and addressing any deficiencies or inadequacies that may surface as a result of the pilot study's findings. The validation of the modified instrument calls for the enactment of pretests and pilot studies [30, 31], particularly if the initial tool was tailored for a different cultural or demographic context than that of this study [32]. Following this, the researcher will administer the questionnaire to participants with the aim of gathering data from a minimum of 100 respondents for the EFA, incorporating any necessary revisions based on the pretest findings [33, 34].

In this pilot study, the researcher has selected a university from the research university cluster as the sample for respondents. The demographic characteristics of the pilot study respondents, including gender and study program, are detailed in Table 1. Descriptive findings reveal that 60 (60.00%) of the respondents are female,

while 40 (40.00%) are male. Furthermore, based on the respondents' study programs, 74 (74.00%) belong to the science stream, while 26 (26.00%) are enrolled in the arts stream.

Table 1. Demographic distribution of respondents for pilot test

No.	Dimension	Frequency	Percent (%)
1.	Gender		
	Male	40	40.00
	Female	60	60.00
2.	Field of Study		
	Science Stream	74	74.00
	Art Stream	26	26.00

1.2 Field Test

The population for this study consists of 75,000 final-year students pursuing their first degree. The minimum sample size was determined based on the guidelines provided by [35-38]. After considering the recommendations and conducting an analysis using G*Power Software, the researcher decided on a sample of 400 respondents for the study. Two sampling techniques will be used: cluster sampling for selecting the study locations and stratified random sampling based on the proportion of students in different universities and fields of study (science and arts). Four universities from different clusters will be chosen as study locations using a voting method. The next step will involve selecting respondents based on the ratio according to the university and field of study. This study aims to bring clarity to the sampling procedures and ensure a representative sample for analysis.

Table 2. Demographic distribution of respondents for field test

No.	Dimension	Frequency	Percent (%)
1.	Gender		
	Male	93	23.25
	Female	307	76.75
2.	University Cluster		
	Research Universities	100	25.00
	Focused Universities	100	25.00
	Comprehensive Universities	100	25.00
	Technical University	100	25.00
3 .	Field of Study		
	Science Stream	50	50.00
	Art Stream	50	50.00

The analysis of the study participants' characteristics is based on several factors, including gender, university cluster, and 'study field flow,' which refers to the movement of students across different academic disciplines. This information, presented in Table 2, provides valuable insights into the demographics of the respondents. It is worth noting that 307 (76.75%) of the respondents are female, while 93 (23.25%) are male. Delving into the breakdown of university clusters reveals that the respondents are evenly distributed across different types of universities, with 100 (25%) from Research Universities, 100 (25%) from Focused Universities, 100 (25%) from Comprehensive Universities, and 100 (25%) from Technical Universities. Furthermore, the study captures the diversity of academic backgrounds among the respondents through the 'study field flow' analysis, which shows that 200 (50%) of the participants are enrolled in the science stream, and another 200 (50%) are pursuing studies in the art stream. This diversity is significant as it has implications for the findings of the study.

2. RESEARCH INSTRUMENT

This study employs a 16-item questionnaire adapted from the Attitudes Toward Career Counselling Scale (ATCCS) developed by Rochlen, Mohr, and Hargrove (1999) [9] to assess individuals' attitudes toward career counseling. The ATCCS comprises a total of 16 items, which are further divided into two subscales: Value, consisting of eight items, and Stigma, also consisting of eight items. The Value subscale comprises items that pertain to the perceived worth and utility of career counseling. Higher scores on this subscale indicate a more robust impression of the value of career counseling. Conversely, the stigma subscale comprises items that pertain to the unfavorable perception and guilt associated with receiving professional career counseling. Higher scores on this subscale indicate a more significant Stigma associated with obtaining career counseling. This study used a 7-point Likert scale, which spans from 1 (disagree) to 7 (agree). The 7-point scale is more reliable than the 5-point scale in terms of capturing respondents' perceptions in the poll. Utilizing a 7-point scale enhances the range of choices and facilitates the provision of more comprehensive information. Moreover, the utilization of a 7-point scale can enhance the probability of aligning the respondent's choice with the objective fact. Moreover, the utilization of a 7-point scale serves as a stimulus to capture the respondent's focus in order to facilitate decisions [39-42].

3. TRANSLATION PROCESS

In order to achieve success, it is imperative to adhere to a precise sequence of actions. Firstly, translators must identify a language and content expert [24]. Subsequently, the translator should translate the instrument into the language of the target audience. Following this, it is crucial to involve other specialists to translate the tool without referring to the original instrument. Adhering to these correct processes will significantly enhance the face and content validity of the instruments [43]. The translation procedure of ATCCS into the Malay form is meticulously divided into four distinct phases, as outlined by the World Health Organization in 2018 [35]. During the initial phase, two experts were carefully selected to translate the instrument into a Malay version. These experts included a lecturer in the field of counseling and a language translation expert from the university's language center. In the subsequent phase, two expert panels (lecturers in the field of counseling) comprising individuals with expertise in counseling, language, and assessment thoroughly evaluated and provided feedback on the language, word usage, and format. This rigorous evaluation process, which considered every suggestion and feedback, was intentionally designed to enhance the translation process of the instrument. In the third phase, two additional translators were enlisted to translate the Malay version of ATCCS into English. The blind translation procedure involved translating the Malay version into English without consulting the original instrument.

4. EXPERT CONTENT VALIDATION

The content validity study of the ATCCS involved experts focusing on its face validity and content validity. Following the recommendations of [44], five experts with counseling backgrounds were selected to review the instruments. The experts unanimously agreed that the instrument format, item relevance, language clarity, legibility, and overall content were all appropriate. In this study, the content validity score was calculated using the formula x/y * 100, and the instrument achieved a high validity score of 95% or 0.95, as recommended by [45].

5. EXPLORATORY FACTOR ANALYSIS (EFA)

Exploratory factor analysis is a statistical technique used to uncover the underlying structure of a set of measured variables or items [46]. By using exploratory factor analysis, researchers can identify the distinct factors or latent constructs that contribute to the observed patterns of responses [46]. This medium can have several advantages for the validity and reliability of measuring instruments: (1) It helps in identifying the appropriate number of factors or dimensions that should be included in the measuring instrument. (2) It allows for the identification and elimination of irrelevant or redundant items, which improves the efficiency and precision of the instrument. (3) It helps in understanding the interrelationships between the items and how they contribute to the overall construct being measured [47-49].

The instrument validity and construct validity were rigorously evaluated through the utilization of EFA with Varimax rotation. It is crucial to grasp that EFA plays a pivotal role in establishing the fundamental

sequence of the variables in the study. Factors, as unobservable constructs, encompass a collection of entities that are supposed to be assessed but cannot be directly assessed. The EFA approach is employed when there is ambiguity regarding the number of potential factors in a set of variables [36, 39]. The EFA process is a necessary step for each construct to ascertain whether the components of the items deviate from those found in earlier studies, underscoring its importance.

An EFA was carried out by the researcher to ascertain the components of the items that are used to evaluate each construct. The EFA process involves several steps, including data preparation, factor extraction, and factor rotation, which are used to identify the underlying structure of the data. The data obtained from the pilot study were utilized to ascertain whether or not all items fell into one or more components [36]. Every construct should undergo an EFA analysis to determine whether the components of the most recent research item differ from those of earlier studies and whether there are variations related to population characteristics [31, 36, 50].

6. CONFIRMATORY FACTOR ANALYSIS (CFA)

Research in the social sciences often employs the statistical method of CFA to determine whether a measurement tool is valid and reliable [51]. Confirmatory factor analysis has several benefits: (1) Validation of theoretical model: CFA enables researchers to assess the proposed factor structure of a measuring instrument using pre-existing theoretical knowledge [52]. (2) CFA is a useful tool for identifying measurement mistakes or items that do not align with the underlying components [53]. (3) Evaluation of concept validity: CFA offers a rigorous statistical examination to determine the accuracy of the constructs being evaluated by the instrument [54]. (4) CFA is used to identify convergent and divergent validity. It assesses whether items designed to measure the same construct are positively correlated (convergent validity) and whether items designed to measure different constructs are not strongly correlated (divergent validity) [55]. (5) Evaluation of discriminant validity: CFA enables researchers to determine whether the items measuring various dimensions are apart from each other and do not exhibit substantial correlation [52]. (6) CFA is used to establish the reliability of a measuring instrument by assessing the consistency and stability of the components across time and different samples [48]. (7) CFA evaluates the fit of a model by using statistical measures such as chi-square, comparative fit index, root-mean-square error of approximation, and standardized root-mean-square residual. These measures assist researchers in determining the extent to which the observed data align with the proposed factor structure [56]. Overall, CFA offers researchers a systematic and objective approach to evaluate the validity and reliability of measuring instruments. This method enables more precise and strong data analysis and interpretation in social science research.

The research aimed to validate the measurement model of latent components using a CFA approach. This was done to ensure that the model exhibited convergent validity, construct validity, discriminant validity, and composite reliability. The researchers conducted a CFA using data collected from the field study and an EFA using data received from the pilot study [31, 36].

IV. DATA ANALYSIS

1. EXPLORATORY FACTOR ANALYSIS (EFA)

The questionnaire comprises a total of sixteen items labeled ATCCS1 through ATCCS16, which are used to evaluate the ATCCS construct. Detailed descriptive statistics for each item, including the mean and standard deviation, can be found in Table 3. The mean for each item ranges from 4.12 to 5.3, indicating the average response for each question. In contrast, the standard deviation ranges from 1.167 to 1.535, showing the amount of variability or dispersion in the responses for each item. To analyze the EFA process, the two components that comprise the ATCCS construct from the earlier research were utilized during the process. Each element of the ATCCS, including both its value and stigma, was analyzed concurrently. The EFA was employed. As a result, 16 items were divided into two distinct components, and all 16 items were kept because their factor loadings exceeded 0.6 in the analysis. The items are displayed in the rotated component matrix according to their respective categories.

Table 3. Descriptive statistics items for ATCCS

Item	Statement	Mean	Std. Deviation
ATCCS1	Saya akan mendapatkan perkhidmatan kaunseling kerjaya, sekiranya saya menghadapi dilema kerjaya.	5.10	1.201
ATCCS2	Kaunseling kerjaya boleh menjadi cara yang berkesan untuk mengetahui pekerjaan yang paling sesuai dengan minat saya.	5.30	1.167
ATCCS3	Kaunseling kerjaya adalah sumber yang berharga dalam membuat pilihan kerjaya.	5.26	1.211
ATCCS4	Jika saya berada dalam peralihan kerjaya, saya akan mengambil peluang untuk berjumpa dengan kaunselor kerjaya.	5.00	1.222
ATCCS5	Jika saya menghadapi masalah dalam memilih jurusan, saya akan membuat temu janji dengan kaunselor kerjaya.	4.90	1.201
ATCCS6	Saya merasakan kaunseling kerjaya boleh memberi manfaat kepada saya.	5.23	1.162
ATCCS7	Mendapatkan kaunseling daripada kaunselor kerjaya terlatih membuatkan saya lebih yakin untuk membuat keputusan kerjaya.	5.08	1.228
ATCCS8	Dalam banyak cara yang berbeza untuk mendapatkan bantuan bagi membuat keputusan kerjaya, saya melihat kaunseling kerjaya sebagai agak penting.	5.00	1.239
ATCCS9	Saya takut stigma negatif yang dikaitkan dengan berjumpa kaunselor kerjaya.	4.06	1.277
ATCCS10	Berjumpa dengan kaunselor untuk berbincang mengenai isu kerjaya adalah satu kelemahan.	4.92	1.535
ATCCS11	Perasaan saya tentang kaunseling secara umum akan membuatkan saya teragak-agak untuk berjumpa dengan kaunselor kerjaya.	4.16	1.195
ATCCS12	Jika saya berjumpa dengan kaunselor kerjaya, saya tidak mahu sesiapa tahu mengenainya.	4.17	1.341
ATCCS13	Berjumpa dengan kaunselor kerjaya untuk membincangkan isu kerjaya adalah perkara yang sangat peribadi yang tidak sepatutnya dibincangkan dengan sesiapa pun.	4.13	1.323
ATCCS14	Keperluan untuk berjumpa kaunselor untuk bercakap berkaitan kerjaya menggambarkan ketidakpastian dalam diri saya.	4.12	1.327
ATCCS15	Saya berasa terlalu malu untuk membuat temu janji dengan kaunselor kerjaya.	4.63	1.425
ATCCS16	Saya beranggapan bahawa pengalaman mengikuti kaunseling kerjaya adalah tidak menyeronokkan.	4.73	1.369

1.1 Kaiser-Meyer-Olkin (Kmo)

The KMO (Kaiser-Meyer-Olkin) test is a widely used statistical measure that assesses the appropriateness of factor analysis or principal component analysis for a given dataset. Failure to properly archive the results of this test can have significant consequences for the validity and reliability of any research findings that rely on these multivariate techniques [57]. The results, as shown in Table 2, are significant, with Bartlett's Test of Sphericity p=0.00 (p-value < 0.05). The Kaiser-Meyer-Olkin (KMO) measure, a key indicator of sampling precision, is .869, surpassing the threshold of 0.6 [58, 59]. These findings, with a statistically significant Bartlett's test and a KMO value above 0.6, confirm the suitability of the data for the subsequent stage of data reduction [58, 59]. This result implies that the ATCCS construct can be effectively measured using the 16 items and the EFA methodology.

Table 4. KMO and Bartlett's for ATCCS

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.869
Bartlett's Test of Sphericity	Approx. Chi-Square	1108.737
	df	120
	Sig.	.000

1.2 Components and Total Variance

In the realm of exploratory factor analysis, the percentage of total variance explained by the extracted factors is a critical metric when assessing the adequacy of a factor solution. This percentage represents the proportion of variability in the observed variables that can be accounted for by the underlying latent factors. A higher percentage suggests that the extracted factors capture a larger amount of the total information contained within the data. Given that the eigenvalues are greater than 1.0, a common criterion for factor extraction, the findings shown in Table 5 demonstrate that the EFA technique yields two dimensions or components. Component 1, representing (value), accounts for 37.34% of the variance, while Component 2, representing (stigma), accounts for 27.61% of the variance. The cumulative variance explained by these two components is 64.95%. This finding is noteworthy because researchers widely accept that the total variance explained by the extracted factors should exceed 60% [58-60]. When this threshold is met, it indicates that the factors adequately capture the underlying structure of the data [61]. In this specific case, the total variance explained surpasses 60%, suggesting that the number of components and the number of items within each component are appropriate for evaluating the ATCCS construct. By extracting factors that account for at least 60% of the total variance, researchers can be more confident that most of the meaningful information in the data has been captured. This allows for a more robust and reliable interpretation of the underlying constructs [60]. Conversely, if the percentage of variance explained is too low, it suggests that important factors may be overlooked, potentially leading to an incomplete or misleading understanding of the data [62].

Table 5. Components and total variance explained for the ATCCS constructs

	Initial eigenvalues			**Extraction sums of squared loadings**		
Components	**Total**	**Variance (%)**	**Cumulative**	**Total**	**Variance (%)**	**Cumulative**
Value	5.974	37.340	37.340	5.974	37.340	37.340
Stigma	4.417	27.606	64.946	4.417	27.606	64.946

Furthermore, the screen plot for the ATCCS construct illustrates the division of the sixteen items into two components Figure 2. The EFA approach yielded two components for this construct, as depicted in Figure 2, a scree plot. Subsequently, the 16 elements were segregated into two distinct groups utilizing the EFA methodology. Each component in the rotating component matrix contains a specific number of items that are grouped under their appropriate component [63, 64]. To summarize, the scree plot, cumulative value, and eigenvalue all indicate that there are two components to ATCCS.

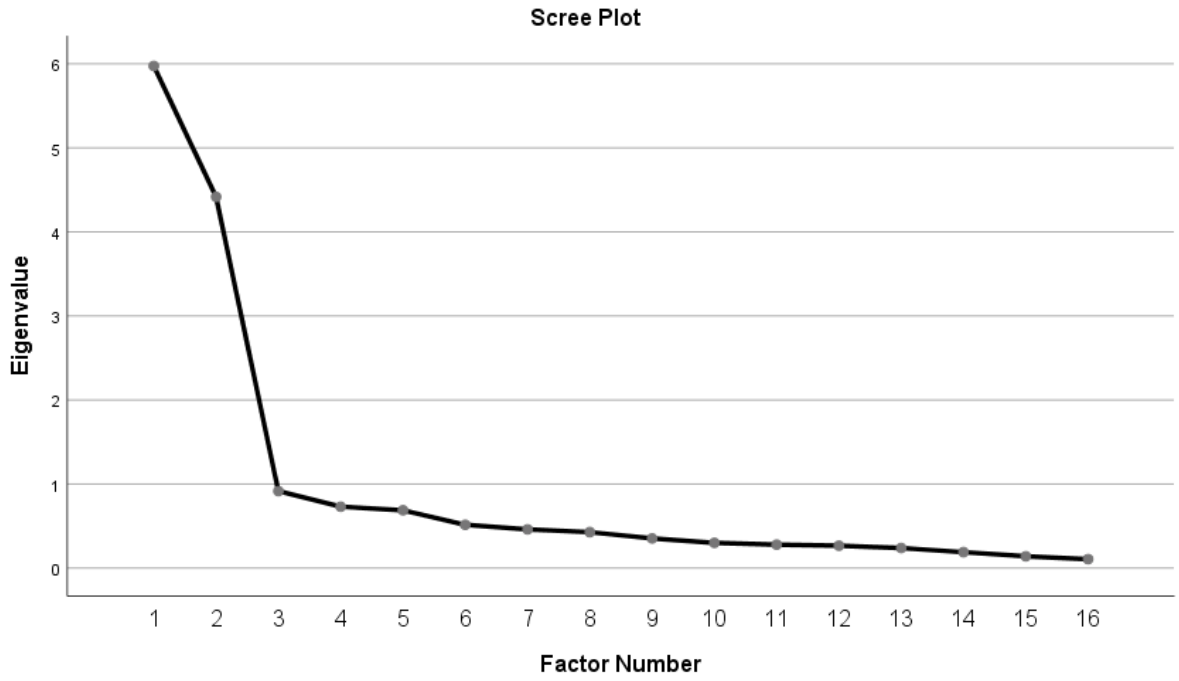

FIGURE 2. Scree plot of the ATCCS construct

1.3 Rotation Component Matrix

The next stage of the analysis involves determining the allocation of the dimensions, or components, identified through Exploratory Factor Analysis. As shown in Table 6, the EFA conducted on the 16 items yielded two distinct dimensions. Notably, all items exhibit strong factor loadings, ranging from 0.639 to 0.901, exceeding the recommended threshold of 0.6 [65]. This indicates that each item shares a substantial amount of variance with its corresponding latent factor, signifying a strong relationship between the observed variables and the underlying constructs [65]. Following the guidelines established by [31, 36] and supported by [65, 66], items with factor loadings below 0.6 are typically considered for removal due to their weak association with the latent factor. However, since all items in this analysis surpass this threshold, no items need to be deleted. Consequently, all 16 items are retained, along with the two identified components, for subsequent analysis.

Table 6. EFA and each item in the components

Item	Value	Stigma
ATCCS1	.802	
ATCCS2	.867	
ATCCS3	.901	
ATCCS4	.863	
ATCCS5	.836	
ATCCS6	.878	
ATCCS7	.878	
ATCCS8	.839	
ATCCS9		.678
ATCCS10		.854
ATCCS11		.778

ATCCS12	.775
ATCCS13	.697
ATCCS14	.639
ATCCS15	.822
ATCCS16	.653

2. CONFIRMATORY FACTOR ANALYSIS (CFA)

The CFA analysis showed that the ATCCS structures appeared as second-order constructs with two components, as depicted in Figure 3. Each component was assessed using eight items in the questionnaire. Figure 3 displays the initial measurement model of the ATCCS construct. The component names and their corresponding number of measuring items are value (8 items) and stigma (8 items).

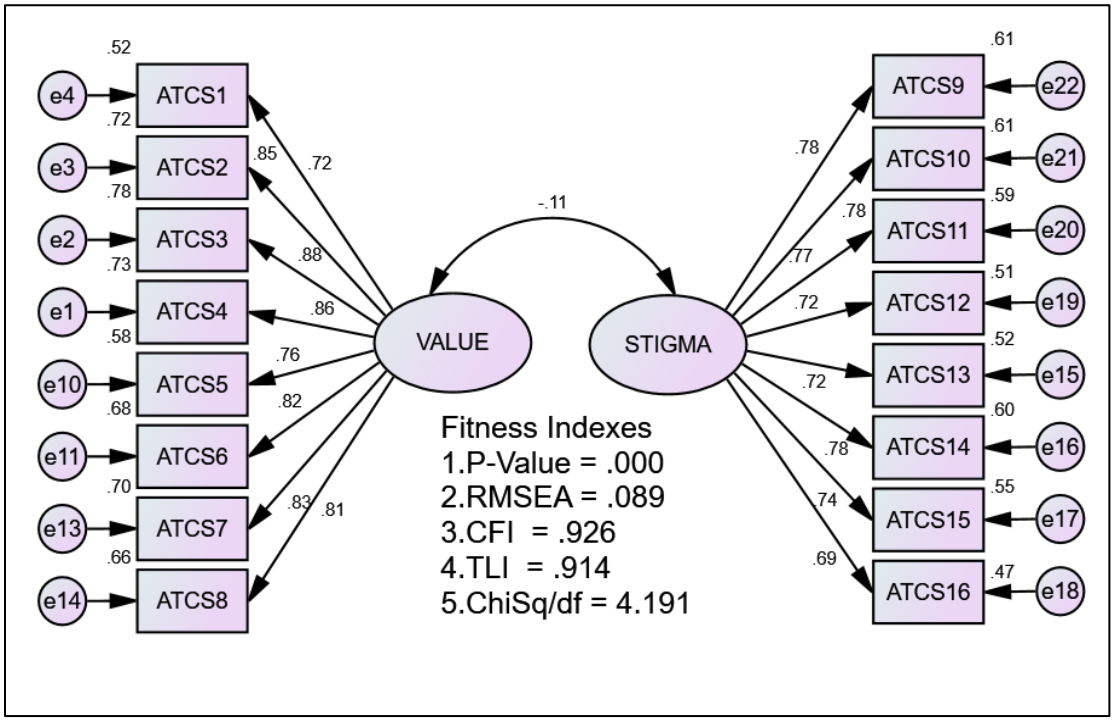

FIGURE 3. The measurement model for ATCCS

Figure 3 showcases the measurement model for ATCCS following the integration of fitness indices analysis. This analysis reveals that the measured construct successfully meets the established criteria for construct validity as recommended by [31, 36]. Fitness indices analysis shows that:

- Absolute Fit: The RMSEA value is 0.089, falling below the acceptable limit of 1. This indicates a good fit of the model to the data, suggesting the model accurately represents the relationships being measured.
- Incremental Fit: Both the CFI and TLI values exceed the threshold of 0.90, with values of 0.926 and 0.914 respectively. These values signify a strong fit of the model compared to a baseline model, further supporting the model's validity.
- Parsimonious Fit: The Chisq/df ratio is 4.191, which is less than the prescribed limit of 5.0. This demonstrates that the model achieves a good balance between complexity and fit, meaning it explains the data well without being unnecessarily complicated.

In summary, the fitness indices analysis provides robust evidence that the final measurement model of ATCCS achieves the critical requirement of construct validity. This indicates that the model accurately measures the concept it is intended to measure, strengthening the reliability and trustworthiness of the research findings.

2.1 Convergent Validity and Composite Reliability

To assess the convergent validity for the ATCCS construct, it is necessary to compute the average variance extracted (AVE). Convergent validity is achieved when the Average Variance Extracted (AVE) value is over 0.5 [31, 36]. This study must calculate the composite reliability (CR) for the ATCCS meaningfulness construct and its sub-constructs. To achieve the desired level of reliability, the CR values need to exceed 0.6 [31, 36]. Table 7 displays the results of the Average Variance Extracted (AVE) and the Composite Reliability (CR) for the constructs of the ATCCS. The table indicates that the AVE and CR values exceed the threshold values of 0.5 and 0.6, respectively. Therefore, it may be inferred that the ATCCS sub-constructs' convergent validity and composite reliability have been successfully achieved.

Table 7. AVE and CR for ATCCS constructs.

Sub-Construct	Item	Factor Loading	CR (>0.6)	AVE (>0.5)
Value	ATCCS1	0.72	0.941	0.669
	ATCCS2	0.85		
	ATCCS3	0.88		
	ATCCS4	0.86		
	ATCCS5	0.76		
	ATCCS6	0.82		
	ATCCS7	0.83		
	ATCCS8	0.81		
Stigma	ATCCS1	0.78	0.910	0.560
	ATCCS2	0.78		
	ATCCS3	0.77		
	ATCCS4	0.72		
	ATCCS5	0.72		
	ATCCS6	0.78		
	ATCCS7	0.74		
	ATCCS8	0.69		

3. RELIABILITY

The analysis of Cronbach's alpha value was used to determine the reliability or internal consistency of the ATCCS. Cronbach's alpha is a widely used statistic that measures how closely related a set of items are as a group. It is considered a measure of scale reliability and internal consistency. A high Cronbach's alpha indicates that the items in the scale are measuring the same underlying construct. The result of the internal consistency coefficients for the scale in this study was: value α =.95, stigma α =.88, and total ATCCS α =.85. These values all exceed the generally accepted threshold of 0.7, indicating good internal consistency reliability for the ATCCS scale and its subscales [35, 58, 63, 67].

V. DISCUSSIONS

The purpose of the Attitudes Toward Career Counselling Scale (ATCCS) is to assess individuals' attitudes toward career counseling services, specifically focusing on the value they place on such services and the stigma associated with seeking help [15, 16, 19]. The Attitudes Toward Career Counseling Scale (ATCCS) proves to be a valuable tool for assessing individuals' attitudes toward career counseling in various cultural contexts.

Studies have shown that the ATCCS, validated in Western cultures [9], United Arab Emirates [10], Korean [11], and Turkish [16] populations, provides a reliable measure of attitudes towards seeking professional help and career counseling services. However, there currently needs to be a Malay version of this measuring tool that aligns with Malaysian culture. Considering the constraints that have been encountered, one of the potential solutions to the challenges encountered is to modify the current instruments that have been established to make it possible to carry out this study, particularly within the cultural framework of Malaysia. To satisfy the requirements for instruments in the counseling field in Malaysia, translating and adapting instruments from other languages could be possible.

This study aims to translate and measure the validity and reliability of ATCCS items among Malaysian students who are in their final year of pursuing a first degree at a public university using outlined by the World Health Organization in 2018, Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). The advantages of using EFA and CFA are that they can contribute to the assessment of an instrument's validity and reliability by providing information about the internal structure of the instrument and the consistency of the items in measuring the intended constructs [49, 68]. The utilization of a 7-point interval scale is preferred due to its enhanced precision in the measuring model when compared to a 5-point scale, as well as its provision of increased choice and freedom. The sample size of 100 and 400 final-year students in this study is adequate for measuring EFA and CFA [33, 34]. According to the EFA results, the two components that assess the ATCCS account for 64.95% of the variability in the connection between items. All 18 items in the questionnaire were kept since all 18 items for the ATCCS construct have factor loadings exceeding 0.60. The conclusive results of this study have confirmed that two elements of the ATCCS framework align with the factor structure discovered in the original instrument and another language version [9-11, 16]. The CFA result further strengthens the validity of the ATCCS construct. The fitness index analysis shows that the measured construct has met the set level as suggested by [31, 35], covering the Absolute Fit category, with an RMSEA of 0.089 (less than the limit of 1). In the Incremental Fit category, the CFI is 0.926 (greater than the limit of 0.90), the TLI is 0.914 (greater than the limit of 0.90), and the Parsimonious Fit category, the Chisq/df ratio is 4.191 (less than the prescribed limit of 5.0). Therefore, the final measurement model of ATCCS has achieved the construct validity requirement. The AVE and CR values also exceed the threshold values of 0.5 and 0.6, respectively, confirming the ATCCS constructs' convergent validity and composite reliability. Additionally, the components demonstrate high reliability (Cronbach's α from 0.88 to 0.95). These findings affirm the usability and validity of the questionnaire among students studying at public universities in Malaysia, providing a solid foundation for the application of the Malay Version-ATCCS in career counseling practices.

VI. CONCLUSION AND LIMITATION

This research makes a significant contribution to the field of career counseling in Malaysia in three key areas. Firstly, it represents a pioneering effort to translate the Attitudes Towards Career Counseling Scale into Malay, adhering to the guidelines set forth by the World Health Organization in 2018. This accomplishment is noteworthy as it marks the creation of the first and only instrument available for measuring attitudes toward career counseling that is both reliable and valid in the Malay language. This is particularly relevant for the Malaysian context, where the use of standardized instruments in the national language is crucial for ensuring cultural sensitivity and accessibility, especially among student populations.

Secondly, the Malay Version-ATCCS is highly recommended for its user-friendly design, which includes a wider score scale ranging from 1 to 7. This expanded scale is not just a technical feature but a practical tool that allows for greater sensitivity in capturing nuanced attitudes and perceptions toward career counseling. It provides researchers and practitioners with more detailed and informative data, enhancing the effectiveness of their work. This contrasts with other scales that may have a more limited range of responses, potentially obscuring subtle differences in attitudes.

Finally, this research is a beacon of empowerment, illuminating how individuals perceive the value and potential stigma associated with career counseling. It equips practitioners with the knowledge to develop more targeted and effective interventions. Understanding these perceptions is not just important; it's essential for addressing any negative biases or misconceptions that individuals may hold, ultimately promoting greater engagement in career counseling services. By tailoring interventions to address specific concerns, practitioners can create a more welcoming and beneficial experience for individuals seeking career guidance.

While this study provides significant psychometric insights into ATCCS among public university students in Malaysia, thereby enhancing our understanding of attitudes toward career counseling, it is crucial to address several limitations to maximize the generalizability and applicability of the findings:

1. *Sampling Method and Representativeness*: The study's sampling method, while valid, may limit the generalizability of the findings to a broader population of Malaysian university students. To overcome this, future research should adopt a stratified sampling approach, encompassing a wider range of public universities and potentially including private institutions. This approach would yield a more diverse sample, enhancing the findings' generalizability and allowing for comparisons between student populations. Additionally, examining the factor structure's invariance across demographic variables like gender, academic achievement, and socioeconomic background would further strengthen the findings' robustness.
2. *Test-Retest Reliability*: A notable omission in the current study is the assessment of test-retest reliability. Future studies should incorporate this measure to establish the ATCCS's consistency over time, further validating its reliability as a measurement tool.
3. *Inclusion of Private Institutions*: To gain a more comprehensive understanding of ATCCS across the higher education landscape in Malaysia, it is imperative that future research extends the investigation to include students from private universities. This would provide valuable insights into potential differences in attitudes towards career counseling services between public and private institutions, thereby allowing for tailored interventions to meet diverse student needs.

By addressing these limitations through future research, we can fortify the foundation of the ATCCS and contribute to a more nuanced understanding of student perspectives on career counseling in Malaysia. This, in turn, will significantly enhance the effectiveness of our career counseling interventions, benefiting both our students and our institutions.

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Conflict of Interests

The authors have no potential conflicts of interest or other such divergences linked with this research study.

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