



Split-Half Analysis: Measurement of Validity and Reliability of the Career Counselling Self-Efficacy Scale (CCSES) in Malaysian Public Universities

Aden, E^{a*}, Amat, S.^b, Mahmud, M.I.^c, Abu Bakar, A.Y.^d, Ghazali, N.M.^e, Annuar, A.^f, ^{a,b,c,d}Faculty of Education, Universiti Kebangsaan Malaysia 43600 UKM, Bangi Selangor, Malaysia, ^{a,e,f}Faculty of Cognitive Science and Human Development, 94300 Kota Samarahan, Sarawak, Malaysia, Email: ^{a*}edrisadenukm@gmail.com

Self-efficacy is an important aspect in measuring counsellor's abilities to conduct counselling processes. This study aims to assess the validity and reliability of self-efficacy using the Split-half technique. The Career Counselling Self-Efficacy Scale (SSES) aims to measure the level of counsellor's readiness to provide career counselling services to clients that covers aspects of knowledge and skills. A quantitative approach was used and data analysed by using the SPSS. The instrument has been translated into Malay and involved a 25 items instrument consisting of five sub-scales related to the counsellor's efficacy. The analysis using the Split-half approach reported the reliability value for the entire item of Part 1 (0.96) and Part 2 (0.97). The study has inferred that the instrument has a satisfactory level of reliability and can be used in the Malaysian context. The new version of instruments has an impact to the counsellor competency in practice. The counsellor will have a view in terms of their ability to handle career counselling. Aside from curriculum development, career counselling can be improved in line with current need. There are a limited numbers of inventories translated into Malay. The new version of CCSES can minimise the cultural issues faced by counsellors in their practice.

Key words: *Career Counselling, Self-Efficacy, Split-Half, Validity, Reliability.*



Introduction

Career counseling services are paramount in developing human potential. The success of counseling service provision is influenced by many factors. Training of counselors is one of the major aspects that have contributed to the effectiveness in counseling practice. In Malaysia, the counseling education training programs are the sole responsibility of the Malaysian Board of Counselors. All universities must offer an accredited counseling program according to the requirements set by the Board of Counselors which will enable the program to produce students with counseling qualifications upon graduation. Failure to comply with these standards would result in the inability of graduates to register with the Board of Counselors upon completion of their studies (Board of Counsellor (Malaysia), 2015). Counselors with adequate formal counseling education and continuous life-long learning skills have the capability of providing quality services to clients (Wan Marzuki et al., 2011; Ramuhulu & Chiranga 2018).

Though counsellors are professionally trained to provide career counselling, there is an argument to the extent that counsellors who have graduated certified from counselling programmes accredited by the Board of Counsellors could perform their job as career counsellors effectively. Therefore, the Career Counselling Self-Efficacy Scale introduced by O'Brien et al. (1997) may be a potential instrument to assess the counsellors' abilities to provide quality career counselling services even though the aspect of culture and values remain questionable when using the assessment in the Malaysian context. The use of this testing tool dominated by certain cultures has led to various implications (Kim & Zabelina, 2015; Rahman & Castelli 2013; Reynolds & Suzuki, 2012). The researchers have found that the Cronbach's value of the CCSS is more than .80 which reflects its high validity and reliability and is indeed an appropriate tool to use for Malaysian counsellors. Moreover, there is no other existing study that has focused on the translation of the CCSS instrument to Malay language. Thus, the research findings can be an added value especially in measuring the career counselling self-efficacy among counsellors in Malaysia.

Literature Review

Self-efficacy can generally be defined as a counsellor's ability to apply knowledge and skills in the counselling process. Bandura (1982) and Larson et al. (1992) emphasize the cognitive, social and behavioural aspects in defining the meaning of self-efficacy. The self-efficacy of counsellors has been associated with the professional training that they have attended. Those who attended trainings offered by the Board of Counsellors were more likely to conduct counselling services effectively. Counsellors who received frequent professional trainings and with high number of counselling cases were more likely to be competent in their respective counselling settings (Larson et al., 1992; Board of Counsellor, 2011; Melchert et al., 1996; Mullen, Uwamahoro et al., 2015). In addition to the formal training of counsellors, regular



training and active involvement in supervision has a direct relationship with the counsellor's efficiency. Neutral supervision helps the counsellor identify their strengths (Kozina et al., 2010; Lent et al., 2009).

The competency of a career counsellor is an important characteristic for a counsellor to provide good counselling services to client. According to the National Career Development Association (2009), there are 11 minimum competencies required in career counselling practices. Some of the core competencies are career development theory, individual and group counselling skills, and individual and group assessment. Meanwhile, the International Association for Educational and Vocational Guidance (2003) focuses on 11 core competencies for career counsellors. Some of the core competencies are the counsellors must demonstrate appropriate ethical behaviours, awareness and appreciation of clients' culture, awareness of their own capacity and limitation, and knowledge updates on the educational training, employment trend, labour market, and social issues. To date, there is no structured and formal guideline or standards for career counselling practices. The professional counsellors in Malaysia are only required to enrol in at least two career courses in their professional training (Board of Counsellor, 2011, 2015)

The career counselling self-efficacy scale has been widely used in the counselling field. Among the self-efficacy test tools are the Counselling Self-Estimate Inventory (Larson et al., 1992) and Career Counselling Self-Efficacy Scale (O'Brien et al., 1997). The main purpose of the Career Counselling Self-Efficacy Scale is to evaluate the ability of counsellors in applying career counselling. The results from the test illustrate the counsellor's strengths and weaknesses that need to be addressed to help improve career counselling services (Falco & Summers, 2017; Perrone et al., 2000). There are 25 items in The Career Counselling Self-Efficacy Scale which consist of four important sub-scales that measure the Therapeutic Process and Alliance Skills, Vocational Assessment and Interpretation Skills, Multicultural Competency Skills and Current Trends in the World of Work, and Ethics and Career Research (O'Brien et al., 1997). There has been little research that has utilized this instrument for evaluating the self-efficacy of counsellors (Bodenhorn & Skaggs, 2005; Morgan et al., 2014).

The process of translating a psychological test tool needs to be done thoroughly in order to avoid any issues between his or her authenticity and credibility (Amin Al-Hadi Shafie, Zuria Mahmud, Salleh Amat, Amla Salleh, 2011; Braje & Nagayama Hall, 2015; Puteri, 2018). Among the challenges in the translation process is the use of appropriate language to target groups that will use the psychological testing tools (Mhd Subhan et al., 2018; Weeks, Swerissen, & Belfrage, 2007). The translation process usually involves both language and content experts (Brislin, 1970). The World Health Organization (2019) discusses four stages in the translation process: forward translation, expert panel back-translation, pre-testing and cognitive interviewing, and final version. By following the correct translation process, the researcher is able to improve the suitability of the test tool in the real context.



Validity aims to measure what should be measured in the context of the study. Internal validity refers to the ability of the testing tool to measure a test tool while external validity refers to the capability of a test tool for generalization (Drost, 2011; Fraenkel et al., 2012; Heale & Twycross, 2015; Taherdoost, 2016; Pysny, et.al 2017). On the other hand, reliability is intended to measure consistency of results when the same study is conducted at different times and locations. The Split-half method aims to test the internal consistency of a test. It measures as far as each and every item accounts for equally, with regards to what is supposed to be measured. It is done by comparing the even and odd items in the test tool (Thompson, Green, & Yang, 2010). The two comparative results aimed to measure the same behaviour at the same time (Drost, 2004). As Piaw (2006) states, correlation values between 0.75 and 0.95 are considered satisfactory.

The cultural aspects of administering psychological testing tools should be addressed to avoid bias issues and because findings do not necessarily reflect the actual situation of individuals using the test (Kassan, 2017). Kim and Zabelina (2015) emphasise an individual's cultural aspects when responding to the psychological testing tools. In common practice, psychological testing tools tend to measure the level of knowledge and intelligence of a particular group. The immediate impact of this issue was that the findings might not represent an out-of-town culture (Leong, Hardin, & Gupta, 2010; Mushquash & Bova, 2007). Validity and reliability issues have a direct connection with the quality of the psychological testing tool. Therefore, it is pertinent for the researchers to carry out validity and reliability processes regularly when using the psychological instruments (Borsboom, Mellenbergh, & Van Heerden, 2004; Drost, 2011; Fraenkel, Wallen, & Hyun, 2012; Kimberlin & Winterstein, 2008; Norsaleha Mohd. Salleh, Ab. Halim Tamuri, & Salleh Ahmat, 2013; Taherdoost, 2016).

Even though there are few studies on the importance of self-efficacy to counsellors which are related to the training obtained by counsellors, the use of CCSES can measure counsellor's competency in practicing career counselling and the Malay version of CCSES can minimise any issues related to culture and bias in research. In addition, the new version of CCSES can be one of the tools to examine the capability of counsellor in practicing career counselling. The main objective of this study is to translate CCSES into a Malay version and the subsidiary objectives are to identify the validity and reliability of CCSES.

Research Methodology

This quantitative study examines the validity and reliability of the translated Career Counselling Self-Efficacy Scale (CCSES). There were 108 participants involved in this study which include counselling students from two public universities, aged between 22 to 23 years old. The participants must have completed two compulsory career counselling courses required

by the Malaysia Board of Counsellors to participate in the study. The researchers trained the career counseling lecturers on how to administer the questionnaires. The participants were required to answer all questions via The Google Form format within 40 minutes. The involvement of participants was on a voluntarily basis and they had right to withdraw from the study. All data used for the research purpose was kept confidential. The data was analysed using SPSS version 24. In addition, the Split-half method was used by researcher to assess the internal consistency of the CCSES (Thompson et al., 2010).

This study has utilized the Career Counselling Self-Efficacy Scale Inventory and developed by O'Brien et al. (1997). The instrument consists of 25 items and is divided into five sub-scales. The instrument consists of five sub-scales which include Therapeutic Process and Alliance Skills (item 2, 3, 5, 8, 13, 16, 21, 22, 23 and 25), Vocational Assessment and Interpretation Skills (item 1, 6, 7, 12, 17 and 18), Multicultural Competency Skills (item 4, 9, 10, 15, 19 and 20), and Current Trends in the World of Work, Ethics and Career Research scale (item 11,14 and 24). The 25-item scale has a range of internal consistency 0.72 to 0.89.

The English version of the scale has been translated into Malay language by four expert panel members in both Malay and English languages. The Malay version and the original English version were then given to the four experts who have a strong expertise in counselling and psychology to check the face validity. The final version of the instrument was then uploaded into a Google Form version and distributed to the targeted participants using a Malay version of CCSES as presented in Table 1.

Table 1: The career counseling self-efficacy scale

| Bil | Soalan | Tidak Yakin (1) | Kurang Yakin (2) | Sederhana Yakin (3) | Yakin (4) | Sangat Yakin (5) |
|-----|---|-----------------|------------------|---------------------|-----------|------------------|
| 1. | Memilih alat ujian untuk menjelaskan kebolehan kerjaya klien <i>Select an instrument to clarify a career client's abilities</i> | | | | | |
| 2. | Menyediakan sokongan bagi membolehkan klien merealisasikan matlamat kerjaya. <i>Provide support for a client's implementation of her/his career goals.</i> | | | | | |
| 3. | Membantu klien memahami bagaimana kehidupan diluar pekerjaan (cth: keluarga, masa lapang, minat, dan sebagainya) mempengaruhi keputusan kerjaya. <i>Assist a client in understanding how his/her non-work life (e.g., family, leisure, interest, etc.) affects career decisions.</i> | | | | | |

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|-----|--|--|--|--|--|--|
| 4. | Memahami isu yang tertentu berkaitan jantina dalam membuat keputusan kerjaya. <i>Understanding special issues related to gender in career decision making.</i> | | | | | |
| 5. | Membina hubungan terapeutik dengan klien kerjaya. <i>Develop a therapeutic relationship with a career client.</i> | | | | | |
| 6. | Memilih alat ujian yang bersesuaian untuk menjelaskan personaliti kerjaya klien yang mempengaruhi perancangan kerjaya. <i>Select an instrument to clarify aspects of a career client's personality which may influence career planning.</i> | | | | | |
| 7. | Menjelaskan keputusan ujian kepada klien <i>Explain assessment results to a career client.</i> | | | | | |
| 8. | Membuat penamatan sesi kaunseling kerjaya dengan berkesan. <i>Terminate counseling with a career client in an effective manner.</i> | | | | | |
| 9. | Memahami isu berkaitan etnik di tempat kerja. <i>Understand special issues related to ethnicity in the workplace.</i> | | | | | |
| 10. | Memahami isu berkaitan dengan lesbian, gay dan biseksual dalam pembuatan keputusan kerjaya klien. <i>Understand special issues that lesbian, gay and bisexual clients may have in career decision making.</i> | | | | | |
| 11. | Menyediakan maklumat pasaran pekerjaan samada di peringkat tempatan dan kebangsaan. <i>Provide knowledge of local and national job market information and trends.</i> | | | | | |
| 12. | Memilih alat ujian kepada klien yang bersesuaian dengan jantina, umur, pendidikan dan latar belakang budaya klien. <i>Choose assessment inventories for a career client which are appropriate for the client's gender, age, education, and cultural background.</i> | | | | | |
| 13. | Membimbing klien untuk menyesuaikan perasaan tentang proses membuat keputusan kerjaya. <i>Assist the career client in modulating feeling about the career decision-making process.</i> | | | | | |

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|-----|---|--|--|--|--|--|
| 14. | Menggunakan maklumat pekerjaan di peringkat tempatan dan kebangsaan. <i>Apply knowledge of local and national job market information and trends.</i> | | | | | |
| 15. | Memahami isu khas yang dikongsi oleh klien lesbian, gay dan biseksual di tempat kerja. <i>Understand special issues present for lesbian, gay, and bisexual clients in the workplace.</i> | | | | | |
| 16. | Mempamerkan penerimaan tanpa syarat terhadap klien kerjaya. <i>Communicate unconditional acceptance to a career client.</i> | | | | | |
| 17. | Memilih alat ujian untuk menilai minat kerjaya klien. <i>Select an instrument to assess a career client's interests.</i> | | | | | |
| 18. | Memilih alat ujian untuk menjelaskan nilai kerjaya klien <i>Select an instrument to clarify a career client's values.</i> | | | | | |
| 19. | Memahami isu khas berkaitan jantina di tempat kerja. <i>Understand special issues related to gender in the workplace.</i> | | | | | |
| 20. | Memahami isu yang berkaitan dengan jantina di dalam membuat keputusan kerjaya. <i>Understand special issues related to gender in the workplace.</i> | | | | | |
| 21. | Mendengar dengan efektif berkaitan kebimbangan yang dikongsi oleh klien. <i>Listen carefully to concerns presented by a career client.</i> | | | | | |
| 22. | Mensisntesis maklumat diri dan kerjaya agar masalah klien dapat difahami <i>Synthesize information about self and career so that a career client's problems seem understandable.</i> | | | | | |
| 23. | Membantu klien mengenalpasti halangan dalaman mahupun luaran yang mengganggu pencapaian matlamat kerjaya. <i>Help a career client identify internal and external barriers that might interfere with reaching her/his career goals.</i> | | | | | |

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|-----|--|--|--|--|--|
| 24. | Menggunakan dapatan kajian terkini bagi membantu klien dengan berkesan. <i>Use current research findings to intervene effectively with a career client.</i> | | | | |
| 25. | Berempati dengan keputusan klien sekiranya mereka menolak untuk bertanggungjawab terhadap keputusan kerjaya yang mereka buat. <i>Be empathic toward a career client when the client refuses to accept responsibility for making decisions about his/her career.</i> | | | | |

Discussion / Analysis

Translation Process

The translation process of the Career Counselling Self-Efficacy Scale has been guided by the World Health Organization (2019) which involves four major processes. In the first stage, the instrument has been translated into Malay without changing the exact meaning of each item by using two experts in language and field (Brislin, 1970; Chen & Boore, 2009). The same process has also been performed on the latest version of the test tool and re-translated into English by appointing two experts who have the skills and knowledge in the field of language and counselling. Comments from experts for both stages have been taken into account in ensuring that testing tools were accurate and could measure the efficacy level of counsellor trainers. In addition, researchers have appointed some experts to view the instrument's face validity before it was distributed to the target groups (Nweze & Okolie, 2014; Raza, et.al 2017). Instruments that have gone through all of the above processes have been tested with a group of students for piloting purposes before actual studies were conducted.

Reliability Scale

In this study, researchers have used the Split-half technique in assessing the reliability of the scale. The findings have indicated that the Cronbach's alpha results for the instrument are at 0.96 (Part 1) and 0.97 (Part 2). The Career Counselling Self-Efficacy Scale has a high reliability based on the results. The Cronbach's alpha reliability of two parts Split-half technique (Part 1 & Part 2) were shown in Table 2. Researchers have also made comparisons between the reliability values between the English (O'Brien et al., 1997) and Malay version. Table 3 indicates the reliability value between the English and Malay version. For the sub-scale of Therapeutic process and alliance skills, the reliability value is 0.88 for the English Version and 0.95 for Malay version. Meanwhile, for the sub-scale of Vocational assessment and interpretation skills, the reliability value is at 0.97 for the English Version and 0.94 for the Malay version. For the sub-scale of Multicultural competency skills, the reliability value is at

0.92 for the English version and 0.91 for the Malay version and the latter for the sub-scale of Current Trends in the World of Work, Ethics, and Career Research, the reliability value for the English Version is at 0.80 and 0.84 for Malay version.

Table 2: The Cronbach's alpha reliability for two part of the scale

| Part | Cronbach Alpha | Number of Items |
|--------|----------------|-----------------|
| Part 1 | 0.97 | 13 |
| Part 2 | 0.95 | 12 |

Table 2: Comparing the reliability of the English version with the current study

| No. | Factors/Sub-scale | English version (n=289) | Translated version (n=108) |
|-----|--|--------------------------|----------------------------|
| 1. | Therapeutic process and alliance skills | 0.88 | 0.95 |
| 2. | Vocational assessment and interpretation skills | 0.97 | 0.94 |
| 3. | Multicultural competency skills | 0.92 | 0.91 |
| 4. | Current Trends in the World of Work, Ethics, and Career Research | 0.80 | 0.84 |

Discussion

The Split-half analysis reported that the reliability values for Part 1 and Part 2 were at a high level of 0.96 and above. Each sub-scale has a high reliability value of more than 0.84 and above which has met the set criteria of the Cronbach's alpha value (Fisher, 1996; Pallant, 2011). The research objectives for this study have therefore been met. According to Piaw (2006), the correlation values ranging from 0.75 to 0.95 indicate satisfactory reliability. It can be inferred that the instrument can be used in the Malaysian context. The findings of the study might have been influenced by several factors which have also impacted on the improvement of the self-efficacy of the counsellor. Some of the factors include the types of training and counselling training at selected universities.

Two compulsory courses of career counselling and career development theory assigned to counselling trainees have been an effective approach because these two subjects set to enhance their competency in career counselling skills. This is also supplemented with the requirement of professional bodies that puts emphasis on the practicum and internship aspects of each



counsellor's training. This is with the goal of ensuring that counsellors are constantly improving their knowledge and skills (Min, 2012; Wan Marzuki Wan Jaafar et al., 2011).

Conclusion

In conclusion, the inventory translation process (CCSES) has provided room for improvement in the aspect of career counselling. The highly valued instrument has shown that it can be used in the Malaysian context. In addition, more question items are geared towards the knowledge and skills of counsellors in career counselling, positively impacting the training providers to evaluate the ability of counsellor trainees during training. This can help them identify the best approach to help improve their ability to handle career counselling. The instrument in Malay with regard to the language and cultural context has helped to reduce the issues related to the lack of appropriate instrument for training counsellors.

Limitation and Study Forward

Some of the limitations have been identified in this study. As discussed, the sample size has involved two Malaysian public universities only. The findings could not be generalized to similar population at other universities. The study has only utilized online survey form and there would be a tendency for social desirability bias.

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