Content validity of Malay Version Subjective Exercise Experiences Scale (SEES)

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ABSTRACT

Exercise provides positive effects on physical and psychological wellbeing. However, the available translated instruments to measure the psychological aspects are very limited, more so in our local population. Thus, there is a need to provide a valid and reliable Malay version instrument. The aim of this study was to determine the validity and reliability of the Malay version Subjective Exercise Experiences Scale (SEES). This is a cross sectional study conducted from October-December 2018 with purposive sampling technique. The data was collected through email from experts who were willing to participate. These experts answered a questionnaire on a four-option Likert scale, based on the four concepts that included comprehensive, relevancy, representativeness, and clarity about Malay version SEES. Six experts from various related fields of exercise participated in this study. The content validity was measured consisting of total items, scale of content validity index (CVI) and average congruency percentage (ACP). Results showed that mean scoring for item analysis ranged from 4.07-6.47. Content validity revealed an acceptable CVI (0.92), mean Item-CVI (0.90), Scale-CVI/Ave (0.90), and excellent value of ACP (0.87). The Malay version SEES had good content validity and can be used to assess the psychological aspect of exercise stimulus in the Malaysian population.

Keywords: Subjective Exercise Experiences Scale, content validity, content validity index

INTRODUCTION

Exercise has been identified to provide beneficial effects on physical and psychological related diseases (Antunes, Stella, Santos, Bueno, & De Mello, 2005; John O. Holloszy, 1998; Lynch, Peterson, Sanchez, Abel, & Smith, 2013). Exercise has also been shown to have positive effects on mood (Lane & Lovejoy, 2001) and psychological well-being (Scully et al., 1998). Thus, exercise has benefitted both physiological and psychological aspects of an individual. Subsequently, there are various tools developed to assess psychological responses to the exercise. These tools include Profile Mood Scale (POMS) and Positive and Negative Affect Schedule (PANAS). Both tools are now widely used to measure psychological effects of exercise. However, these instruments have some limitation when used to assess the effects of exercise stimulus. For example, POMs were more likely to measure negative effects only in adolescence age. Furthermore, the relevancy of the items used for exercise setting is contradictory (McAuley & Courneya, 1994). Whereas, PANAS by Watson, Clark, & Tellegen, (1988) which consisted of 10-item mood scales appears to adequately reflect the negative and positive affect. Compared with POMs, PANAS has been reported to have better psychometric properties and support the relationship between physical activity and psychological aspects of a person. Nonetheless, certain items in PANAS are still questionable with regards to its association with exercise (McAuley & Courneya, 1994).

Later, a new instrument was develop by McAuley & Courneya, (1994) which relates to exercise stimulus. This instrument composed of 12 items with three constructs which were Psychological wellbeing (PWB), Psychological Distress (PD) and Fatigue (FAT). Each construct consists of 4 items. The item scale uses a seven-point Likert scale (1=not at all, 4=moderately and 7=very with Likert scale ranges from 1 to 7. Recently, SEES was widely used in exercise study (Nina Ivancic, Durdica Miletic, 2016; Sealey RM, 2010) and exercise related study (Everson, Daley, & Ussher, 2006).

Validity is the degree to which a measurement measures what it purports to measure (Kimberlin & Winterstein, 2008). There are many types of validity and validation process. One of the validation processes is content validity. Content validity can be defined as “...whether or not the items sampled for inclusion on the tool adequately represent the domain of content addressed by the instrument” as cited in (Polit & Beck, 2006). Up to date, Malay translated version of SEES has been validated with construct validity.
Thus, further study on validity of SEES-M is required to support the validity status of this Malay version. In this study we aim to determine the content validity of the translated version of the SEES.

**MATERIALS AND METHODS**

**Study design and sampling method**

This was a validation study among a group of expertise in the area of exercise. The participants were recruited using convenience sampling method. The researcher contacted the potential participants by email and telephone.

**Participants**

There were six experts involved in this study. They include two psychologist lecturers (Expert1 and Expert4), two sport science teachers (Expert2 and Expert3), a fitness trainer (Expert5) and a personal trainer (Expert6). Among the six participants, five were Malay and one Chinese. All of participants have at least a degree holder, with two participants holding a PhD degree (refer Table 1). They were well versed with languages, Malay and English.

**Sample size**

There are no fixed methods for determining the required sample size. The sample size used in this study was based on those suggested by Devon et al., (2007). From the calculated sample size, seven experts were chosen to measure content validity index (CVI). However, one expert was excluded from the final CVI calculation due to being heterogenous from the group.

**Ethical approval**

This study obtained ethical approval from the Universiti Teknologi Mara Ethical Committee. Prior to the commencement of this study, verbal consent was obtained from the participants to ensure their personal details were kept confidential. The participants were informed by email regarding the criteria and purpose of this study.

**Recruitment process**

The recruitment process was conducted by searching for potential participants (experts) through the website of their institutions. The experts with related expertise were shortlisted. The invitation to participate in this study was sent to 40 experts. Only seven experts (n=7) were willing to participate in this study. The seven responded were contacted via telephone and the study documents were sent through email.

**Instruments**

The study instruments used were: 1) sociodemographic questionnaire and 2) original SEES questionnaire and 3) translated version of SEES from the previous (Ruslan et al., 2018). Each item was rated based on fours aspects which were relevancy, representativeness, clarity and comprehensiveness.

Experts were asked to rate each instrument item using a content validity rating form. The rating description form provided an overview of the instrument, explained on how to complete the assessment, and describe the domains to be rated.

**Data collection**

The process of validation was performed by the experts at their own time and completed assessments were emailed to the researcher. The ratings from each expert were recorded and calculated using Microsoft Excel.

**RESULTS AND DISCUSSION**

The content validity can be determined by calculating the Content validity index (CVI). The CVI value indicated the degree of which an instrument has an appropriate items for the construct to be measured (Polit & Beck, 2006). Content validity can be measured using I-CVI (item content validity index) or S-CVI (scale content validity index). I-CVI value is used to determine the validity of individual items. It is related the content and the item rated by an expert. It assists researchers or experts in deciding when to revise, delete or substitute the individual items. I-CVI also can be determined by dividing the value of the scale-CVI with the total number of experts (S-CVI/Ave). The CVI and I-CVI for this study was calculated as shown in Table 2 and Table 3.

Results for this study has shown that the mean scoring for item analysis ranged from 4.07-6.47. This study revealed an acceptable content validity with an acceptable CVI (0.92), Item-CVI ranging from 0.67-1.00 (mean 0.90), S-CVI/Ave (0.90), and an excellent value of ACP (0.87) (Table 3). For ACP, the results revealed a value of 0.87. This indicated that the average items congruence was 87%. This was obtained from the average rating of each item with the number of experts. Based on the recommendation, the I-CVI for six experts or more should be 0.80. To achieve the value of 0.80 and above, only one expert is allowed to rate as non-relevance in any of the item (Polit & Beck, 2006). Hence, a value of 0.87 for I-ICVI was proven in the acceptable range.
There were some limitations to this study, which were particularly related to the participants involved. Firstly, the experts involved in this study were less familiar with validation study and hence limited experts were willing to participate, which results in a small sample size. Secondly, the recruitment was limited to Malaysian citizen only, since only these individuals were familiar and well verse in both language, Malay and English. Future studies would benefit from a bigger sample size and more heterogeneous background among the experts.

CONCLUSION

This study supports that the Malay version of SEES can be considered as valid tool after undergoing content validity.

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