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VALIDITY AND RELIABILITY OF THE INDONESIAN VERSION OF THE KIDSCREEN-52 QUESTIONNAIRE IN OVERWEIGHT ADOLESCENTS

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ABSTRACT

Overweight is one of the health problems that need attention at various ages. Overweight is not only a health problem that is only experienced by adults, but overweight can also occur in adolescence. In adolescents, overweight can also lead to various health problems that can affect quality of life. Objective: Given the importance of quality-of-life issues in overweight adolescents, this study aims to adapt and validate the Kinderscreen-52 questionnaire. Method: This study is a quantitative study with a cross-cultural approach to instrument adaptation and validation. The stages of the process of translating the Kinderscreen-52 instrument into Indonesian adopted Brislin's (1970) procedure in Astuti & Kao (2022), it is translation and back translation. The population involved in the validation of the Indonesian version of the Kinderscreen-52 instrument is overweight adolescents, aged 16-18 years who attend school in the city of Semarang. Results: The results of the Content validity index (I-CVI) by three experts obtained a value of 1 which means valid and the results of the instrument trial obtained reliability with Cronbach alpha 0.748. Conclusions: The Indonesian version of the Kidscreen-52 instrument has gone through appropriate procedures in the cross-cultural adaptation and validation process with good validation and reliability results.

Keywords: overweight adolescents; reliability; quality of life; validity

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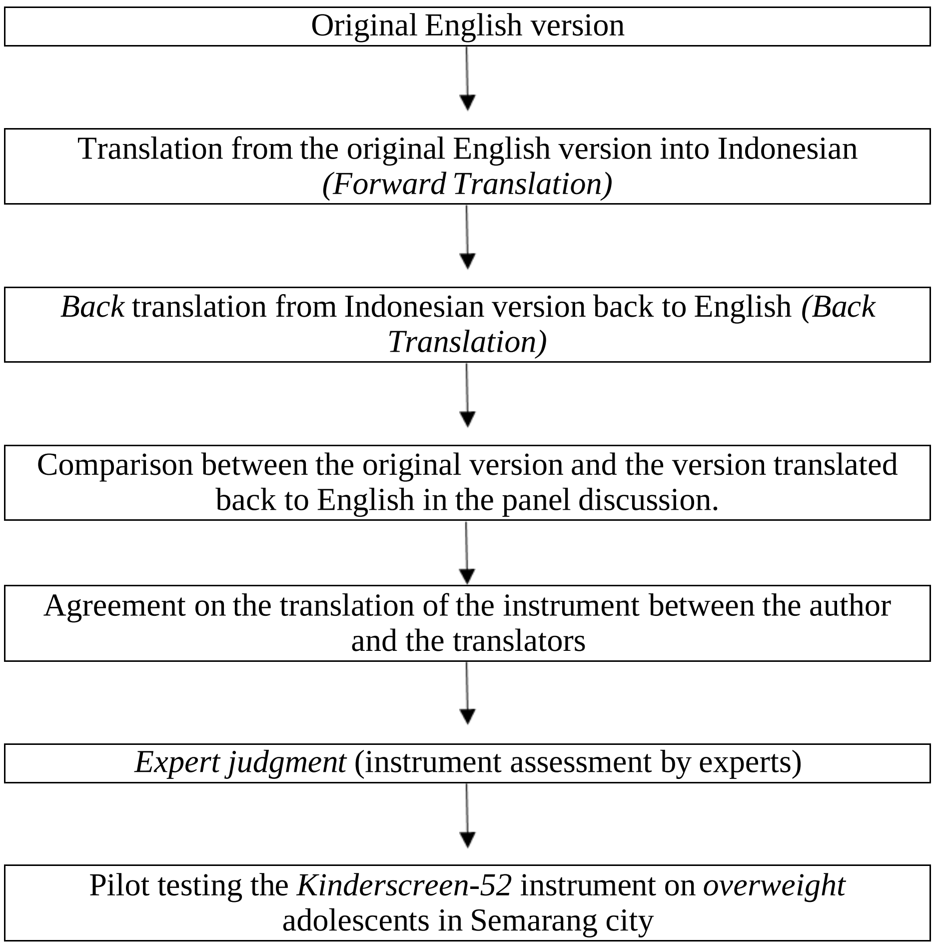
INTRODUCTION

Overweight is one of the health problems that need attention at various ages. Overweight is not only a health problem that is only experienced by adults, but overweight can also occur in adolescence. The prevalence of overweight in adolescents aged 16-18 years in Indonesia is 9.5%. (Kemenkes, 2018). According to the Indonesian Health Survey (IHS) in 2023, the prevalence of overweight adolescents aged 16-18 years based on IMT/U is 8.8%. (BKPK, 2023). In the 2018 Basic Health Research, Central Java Province with adolescents aged 16-18 years classified as overweight amounted to 7.9% (Riskesdas Jateng, 2018), meanwhile, in 2023 the prevalence of overweight in Central Java increased to 8.7% based on the Indonesian Health Survey report (BKPK, 2023). Semarang City has the third highest prevalence in Central Java Province for overweight among adolescents aged 16-18 years with a prevalence of 12.20% in 2018. A report on school-age adolescent health activities showed that 3.91% of adolescents were overweight in Semarang City(Dinkes Kota Semarang, 2022).

Adolescent overweight is a complex problem involving lifestyle, environment and genetics. Overweight in adolescents can affect many things including physical health, decreased quality of activity and productivity (Supit et al., 2023). In addition, overweight can potentially cause someone to become obese. Obesity is a serious problem because it will continue into adulthood, and is a risk factor for various metabolic diseases and degenerative diseases such as cardiovascular disease, diabetes mellitus, cancer, osteoarthritis, and others (Kansra et al., 2021). In adolescents, overweight can also lead to various health problems that can affect quality of life. Research in Spain in 2020 explained that the quality of life and life satisfaction of adolescents who are overweight have a significantly lower average score than adolescents with normal weight (Baile et al., 2020). This is also in line with research Felix et al., 2020 if someone is overweight, their quality of life can decrease.

Quality of life is an individual's perception of the well-being they have in their ability to carry out daily activities that are supported through the facilities and infrastructure in the surrounding environment (Pasaribu et al., 2023). Kinderscreen-52 is a 52-item HRQoL (Health Relate Quality of Life) measure designed for use in children between 8-18 years of age (Özgür & Gürbüz Özgür, 2020). Kinderscreen-52 assesses on ten dimensions the number of items in brackets: physical well-being (5); psychological well-being (6); mood and emotions (7); self-perception (5); autonomy (5); parental relationships and home life (6); social and peer support (6); school environment (6); social acceptance (3); and financial resources (3) (Davison et al., 2023). This questionnaire has been widely used and translated, including in Japanese (Nezu et al., 2015), Turkish (Baydur et al., 2016) and Columbia (Rodríguez et al., 2023). Given the importance of quality-of-life issues in overweight adolescents, this study aimed to adapt and validate the Kinderscreen-52 questionnaire

METHOD



This study is quantitative research with a cross-cultural approach for instrument adaptation and validation. The stages of the process of translating the Kinderscreen-52 instrument into Indonesian were carried out in the following steps: In the first step, the translation of the instrument into Indonesian adopted the procedure of Brislin (1970) in Astuti & Kao (2022) , procedure, it is translation and back translation. After going through the process, in the next step, selected experts assessed and reviewed the instrument (instrument validation process). The third step is to test the Indonesian version of the instrument to 30 respondents to determine the respondents' understanding of the instrument or validate the instrument that has been translated into Indonesian with a cross- sectional approach. The population involved in the validation of the Indonesian version of the Kinderscreen-52 instrument is overweight adolescents, aged 16-18 years who attend school in the city of Semarang. The validation process of the Indonesian version of the Kinderscreen-52 instrument was carried out using the content index (CIV) as a validation test and the reliability stage using Cronbach alpha.The process of translation-back translation of the Kinderscreen-52 instrument into Indonesian is detailed as follows according to Brislin (1970) in Astuti & Kao (2022).

RESULT

The Indonesian version of Kinderscreen-52 has been translated by two translators who are proficient in Indonesian and English, and are experts in their fields. The first translator (forward translator) was born and lives in Indonesia, has a sworn certificate for translation, the translator translated the Kinderscreen-52 questionnaire from English to Indonesian. The second translator (back translator) was also born in Indonesia, has a sworn certificate for translation, the translator translated the Indonesian version that had been translated by the forward translator, back into English. A professional lecturer who is an expert in the field of nutrition compared the original version with the back translation version into English. Furthermore, an assessment by 3 experts (expert judgment) was carried out on the instrument that had gone through the back translation process. The results of the Content validity index (I-CVI) by three experts obtained 1, thus the Indonesian version of the Kinderscreen-52 questionnaire was declared valid. The results of the assessment of the three experts are listed in the following table:

Tabel 1.
Content Validation by Experts

Items	Expert	I-CVI
52	3	1
S-CVI		1

The next process after the questionnaire is declared valid is the pilot test. This was done to see the internal consistency of the adapted instrument. The reliability test of this instrument was conducted on 30 school adolescents aged 16-18 years who were overweight in Semarang City. The test-retest process uses Cronbach alpha values for each domain of the Kidscreen-52 questionnaire and the overall question items. From the results of the instrument test, reliability was obtained with Cronbach alpha 0.748, with the results of each domain having a high value, it is the general situation domain (0.896) while the lowest value was the domain about oneself (0.710).

Tabel 2.
Kidscreen-52 Domain Questionnaire Reliability Test Results

No	Domain	Item/Number of Questions	Nilai
1	Physical activity and health	1-5/5 questions	0,721
2	Feelings	6-11/ 6 questions	0,863
3	General situation	12-18/ 7 questions	0,896
4	About yourself	19-23 / 6 questions	0,710
5	Free time	24-28 / 5 questions	0,768
6	Family and home life	29-34 / 5 questions	0,848
7	Financial problems	35-37/ 3 questions	0,757
8	Friends	38-43 / 6 questions	0,724
9	School and learning	44-49/ 6 questions	0,741
10	Bullying	50-52/ 3 questions	0,742

Table 3.
Reliability Test Results of Kidscreen-52 Questionnaire

Cronbach Alpha	*N of Items*
0,748	52

DISCUSSION

Cross-cultural adaptation research is essential when a tool is to be applied in different cultures, languages and countries (Kolisa & van Wyk, 2020). However, an instrument still needs a clear methodology, and in order to be able to produce a good and reliable adaptation, a cross-cultural adaptation study is needed (Utari & Lestari, 2020). The stages in the adaptation process include the most common and highly recommended procedure of translation and back translation (Brislin, 1970). The language that is the object of this instrument adaptation is Indonesian. The adaptation process of an instrument must be able to maintain the meaning of the original questionnaire. This is done by back translation which serves for validity checking (*validity checking*) (Beaton et al., 2000). In addition, the forward and backward translation process is the most frequently used way by several studies in cultural adaptation. Like the research Utari & Lestari (2022) who said that one of the important aspects that must be considered in the cross-cultural adaptation process is the forward-backward translation stage.

Another process of cross-cultural adaptation is validation, in this study validation was carried out by means of content validation. Content validation testing is a process that is considered important in the development of research instruments. A valid research instrument is a measuring instrument with high theoretical quality (Soares et al., 2021) and will improve the quality of the results of the research (Rocha et al., 2020). Content validity in this study was carried out by expert judgment and calculating the content validity index consisting of item-level (I- CVI) and scale-level (S-CVI)(Puspitasari & Febrinita, 2021). I-CVI is the proportion of agreement on the relevance of each question item with a value of 3 and 4, where the agreement value is between 0-1. Meanwhile, S-CVI is the proportion of total items that are considered valid by the content validator. The result of content validity in this study based on the results of I-CVI and S-CVI is 1 which means that this questionnaire is valid. According to Lynn (1986) in Polit et al. (2007) said that content validity is influenced by the number of experts involved. If the number of experts is less than or equal to 5, the I-CVI value must be 1, but if it is more, a disagreement of 0.83 is accepted, assuming that 1 person disagrees. The content validity index that is usually commonly used is content validity, but there are several other alternatives that can be used in content validity such as, content validity ratio (CVR) which is suitable for instruments with a dichotomous scale, kappa coefficient, and alpha coefficient. (Puger, 2021). But this is different from previous Kidscreen-52 adaptations conducted in Japan, Turkey and Columbia where validation uses content and construct validity and Intra-class Correlation Coefficient (ICC) ((Nezu et al., 2015), (Baydur et al., 2016), (Rodríguez et al., 2023)).

Furthermore, for the instrument testing process or called the reliability test, based on tables 2 and 3, it can be seen that the Indonesian version of the Kidscreen-52 questionnaire can be said to be reliable for measuring adolescents' quality of life with a total value of a = 0.748 for 52 questions and with a range of a = 0.710-0.896. When viewed by each domain, the highest a value is the general situation domain (0.896) while the lowest value is the domain about oneself (0.710). According to Taherdoost, (2018) an instrument is declared reliable when the reliability value is very good (≥0.90), high reliability (0.70-0.90), medium reliability (0.50-

0.70) and low reliability (≤0.50). Reliability values in each domain were found to vary in several previous studies. As in research in Japan has a Cronbach alpha value of 10 dimensions is > 0.70, domains except Self-Perception in children (0.68) (Nezu et al., 2015). Research in Turkey found Cronbach's alpha values ranging between 0.69 and 0.95 for the child/adolescent version of KIDSCREEN-52 (Baydur et al., 2016), and a study in Columbia showed satisfactory internal consistency values (Cronbach's alpha between 0.77 and 0.89) for the 10 dimensions (Rodríguez et al., 2023).

CONCLUSION

The Indonesian version of the Kidscreen-52 instrument has gone through appropriate procedures in the cross-cultural adaptation and validation process with good validation and reliability results. The alpha value is still quite low in the domain of self, requiring further identification or exploration. However, in general, the instrument can be declared valid and reliable so that it is expected to help health workers or other fields in assessing the quality of life in children or adolescents

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