ORIGINAL ARTICLE

The Coping Self-efficacy Scale Among People Living With HIV: Validity and Reliability Indonesian Version

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ABSTRACT

Introduction: Self-efficacy is a predictor of to adherence antiretroviral therapy and coping with stress. Coping self-efficacy has a high impact on psychological distress in people living with HIV. If people living with HIV have psychological distress will be impacted by the quality of life. Objectives: The aim of this study was to figure out the psychometric properties of the coping self-efficacy scale among HIV-positive people in Indonesia. **Materials and methods:** A cross-sectional study design was used to investigate the psychometric properties of the CSE scale. Seventy-eight people living with HIV referred to NGOs Victory Plus Yogyakarta Indonesia in October 2020 were selected through a simple random sampling method. A group of impartial scholars and linguists evaluated the backward translation of CSE-16 from English to Indonesia to assure its reliability, face validity, and construct validity. Reliability scale analysis assesses the accuracy and consistency of a measurement. The r-table value's scale is indicative of the validity of the question item, whereas the Cronbach's alpha coefficient measures its reliability. **Results:** The Indonesian adaptation of the coping self-efficacy scale comprised 16 items divided into three subscales. The r-table's reference value of 0.224 is less than the anger score item's range of 0.52 to 0.86. In addition, the Cronbach's alpha coefficient for the popularity scale of the items falls within the range of 0.84 to 0.87. **Conclusion:** The Indonesian version of the coping self-efficacy scale is a valid instrument to measure among people living with HIV in Indonesia.
Malaysian Journal of Medicine and Health Sciences (2025) 21(SUPP3): 136-140. doi:10.47836/mjmhs.21.s3.21

Keywords: Coping self-efficacy, HIV, Psychometric, Validity and reliability, Seropositive HIV

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INTRODUCTION

One of the programs to achieve the 2030 Sustainable Development Goals (SDGs) is that 90% of the world's population knows their HIV status, 90% of those who test positive for HIV undergo antiretroviral therapy, and 90% of those experiencing ART are adherent to treatment (1)(2)(3). From this program, some people who feel they are at risk of being exposed to HIV become aware of being tested for HIV. People who test positive for HIV are very vulnerable to experiencing stress and rejection of their status. This fact is a new stressor in people who test positive for HIV and requires social support to support the adaptive coping system.

Stress and coping theory have served as the basis for many descriptive analyses of the stress mechanism. There are less data to support its use as a basis for coping interventions. One of the impediments to translating stress and managing theories into intervention is the well-documented difficulty of measuring intervention-associated improvements in coping(4). Coping describes an individual's cognitive and behavioural efforts to manage a stressful experience(5)(6). The idea of the scale development was base on belief about a person's ability to conduct particular coping behaviours, which influences intervention outcomes when intervention is designed to improve coping(5). Self-efficacy is a determinant of coping habits. Individuals who have a greater sense of self-efficacy respond to challenges more insistently and favourably, show coherent and active

coping behaviours, set higher goals for themselves, and have higher achievement standards. On the other hand, individuals with low self-efficacy tend to give up in the face of difficulty and experience increased psychological distress(7).

The assumption that one is capable of coping is crucial to implementing adaptive coping strategies. This term, also known as self-efficacy, refers to people's trust in their abilities to perform an action required to achieve an objective(8). Self-efficacy values play a significant role in motivation and success across many populations and environments, separately affecting performance attainment(9). According to Pajares (10), self-efficacy is a person's confidence in their abilities to achieve goals effectively. Self-efficacy determines decisions, purposes, problem-solving, and consistency in attempting. It can contribute to different behaviours among people with the same skill. Self-efficacy is essential in encouraging actions to accomplish daunting tasks to reach particular goals (11). (Chemers, L. Hu). A low of self-efficacy compounds anxiety and avoidance behaviour. Individuals will refrain from participating in actions that will intensify the circumstance. Threats do not cause this, but they feel they cannot manage things that have risks(9). Self-efficacy is often essential in encouraging actions to accomplish complex tasks to achieve specific goals (11).

Social reinforcement is a significant predictor of high or poor self-efficacy. Social support has no apparent effect on personal wellbeing. It lowers the risk of psychiatric problems by serving as a shield while the person is anxious (12). Belief in self-efficacy is part of a secondary review of stress and coping philosophy that also discusses the measurement of stress controllability through coping(13). Using adaptive techniques can assist HIV-infected people in maintaining their psychological and physical health. A variety of social and psychological influences affect one's ability to deal effectively with a chronic disease such as AIDS(14).

Coping self-efficacy is a significant psychological aspect (CSE). Patients with high coping self-efficacy (CSE) may partake in more adaptive coping behaviours. They still have lower rates of depression and greater levels of transparency(15) . Coping self-efficacy (CSE) focuses on the premise that individuals must honestly feel they can participate in a coping action to engage in adaptive coping behaviours successfully (5). Coping self-efficacy (CSE) is a stress and coping theory-related term that focuses on controlling behavioural and cognitive reactions to challenging circumstances(16).

CSE will be expected to affect treatments aimed at increasing coping, personal effectiveness, reducing social pain, and enhancing wellbeing(5). It is essential to use psychometric tests to determine the precise degree of Coping self-efficacy (CSE) in patients. The 16-item CSE scale is a reliable tool for measuring perceived self-efficacy in coping with problems in life or pressures (17).

MATERIALS AND METHODS

Design and Procedure

A cross-sectional sample design was used to explore the construct validity of the CSE scale. The steps for examining the construct validity of the CSE scale are described in the following sections.

Translation of English Version of CSE Scale to Indonesia

CSE-16's original edition was adapted from English to Indonesia(17). An impartial community of professional academic and linguists checked the backward translation in order to obtain a reliable Indonesia edition. The translation department consisted of two academic researcher, two nursing experts, and one translator. Translators thoroughly analyzed the text before including a dozens Of languages edition of the CSE scale as a total representation in terms of phrasing and content with regard to Indonesian culture.

Validity and reliability

The construct validity of the 16-item instrument scale is evaluated using the Pearson Product Moment correlation. The test decision involved comparing the correlation coefficient (r value) of each item statement with the critical value (r table). The outcome's correlation coefficient (r) showed the corrected item-total correlation (r) at the 5% level of significance, and the critical value (r table) was observed. If the value of r results is greater than or equal to the value of r table, then the question item is considered valid. Conversely, if the value of r results is less than the value of r table, then the question is deemed invalid. Omitted were question elements that were deemed invalid. The score table for 78 respondents is 0.224. The test's reliability was assessed by comparing the Alpha Cronbach's coefficient (0.6) with the critical value from the r table. If the value of Alpha Cronbach's coefficient is greater than or equal to the value in the r table, then the instrument can be considered dependable. Conversely, if the value of Alpha Cronbach's coefficient is less than the value in the r table, then the instrument cannot be considered reliable(18–20).

A basic random sampling strategy was employed to assess 78 eligible HIV-infected patients who were referred to NGOs at Victory Plus in Yogyakarta, Indonesia in 2020. It is important to mention that around five cases were selected for each CES-16 object. Below are the screening criteria for the study: 1) Patients' willingness to collaborate, 2) HIV-infected patients of both genders, 3) minimum age of 18 years, 4) proficiency in reading and writing in Indonesian language On the scheduled day, a member of the research faculty identified 80 patients who fulfilled the requirements to participate. However,

only 78 of these eligible patients willingly accepted to take part in the study, resulting in 2 individuals being excluded. Both participants were provided with information regarding the research objectives, and formal agreement was obtained from each of them. The rights of the participants were completely safeguarded, and their answers were maintained as anonymous.

Ethical Clearance

The Ethical clearance from ethics Committee of Sekolah Tinggi Ilmu Kesehatan Ngudia Husada with number 709/KEPK/STIKES-NHM-/EC/IX/2020.

RESULTS

Demographic Characteristics

A total of 78 people living with HIV/AIDS (PLWHAs) were recruited to participate in the study. Demographic characteristics encompass gender, sexual orientation, age, education level, and marital status (Table I).

Table I: Demographic Characteristics people new living with HIV/AIDS n=78

Demographic data	Frequency (n)	Percent (%)
Gender		
Female	16	20.5
Male	59	75.6
Other	3	3.8
Total	78	100
Sexual-orientation		
Heterosexual	26	33.3
Homosexual	30	38.5
Bisexual	15	19.2
Other	7	9
Total	78	100
Age		
Adolescent	24	30.8
Adult	51	65.4
Elderly	3	3.8
Total	78	100
Education-level		
Middle-elementary school	7	9
High school	50	64.1
Undergraduate	20	25.6
Postgraduate	1	1.3
Total	78	100
Merital status		
Sigle	58	74.4
Meried	16	20.5
Window/windower/divorce	4	5.1
Total	78	100

Construct validity and reliability

The all items score of r value more than with the r table value 0.224, this indicated all items is valid. Cronbach α of 3 subscales was acceptable (range, 0.84- 0.87). Table II presents Corrected Item-Total Correlation and Cronbach α coefficients of sub¬scales.

Table II: Corrected Item-Total Correlation and Cronbach α for Items and Subscales of Indonesian Coping Self-efficacy

Items/Subscale	No. of items and Scale range	Mean±SD	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Use problem-focused coping	7 items on a 11-point scale from 0 = ('cannot do at all) degree to 10 = (certain)			0.87
I break my problems down into smaller parts first and then think about each part of the problem at a time		6.78±2.06	0.63	0.85
I sort out what can be changed, and what cannot be changed.		7.37±1.92	0.70	0.84
I leave my options open when things get stressful and find different solutions for my most challenging problems.		6.59±2.0	0.56	0.86
I resist the impulse to act hastily when I am under pressure.		6.69±2.56	0.69	0.84
When confronting a problem, I make an action plan first; then try to find different solution for my problem if my first solution does not work.		7.69±1.76	0.70	0.84
Make myself believe that I am capable of solving my problems.		7.68±2.05	0.69	0.84
I develop new hobbies or recreations.		7.69±2.11	0.57	0.60
Stop unpleasant emotions and thoughts	5 items on a 11 point scale 0 = ('cannot do at all) degree to 10 = (certain)			0.84
I always try to avoid unpleasant thoughts as they, more than likely, make me feel sad and lonely.		7.24±2.02	0.59	0.86

CONTINUE

Table II: Corrected Item-Total Correlation and Cronbach α for Items and Subscales of Indonesian Coping Self-efficacy. (CONT.)

Items/Subscale	No. of items and Scale range	Mean±SD	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I look for something positive for myself in a negative situation.		7.38±2.05	0.79	0.80
I try to pray to remain calm when I am under pressure.		8.01±1.64	0.52	0.87
I take my mind off unpleasant thoughts.		7.22±1.99	0.85	0.80
I try to visualize a pleasant activity or place in unpleasant situation.		7.18±1.91	0.71	0.82
Support from friends and family	4 items on a 11 point scale from 0 = ('cannot do at all) degree to 10 = (certain)			0.86
I get emotional support from community organizations or resources.		7.32±2.11	0.72	0.812
I get friends to help me with the things I need.		7.42±2.11	0.86	0.74
I get emotional support from friends and family.		7.28±1.99	0.71	0.81
Do something positive for myself when I feel discouraged.		7.88±1.62	0.53	0.88

DISCUSSION

This study established the evidence the construct validity and reliability of the CSE for use among adolescent in Indonesia. Pearson Product Moment correlation used to assess the construct validity of the 16-item instrument scale. The correlation coefficient (r-value) for each item statement was compared to the critical value (r-table) in order to make a decision in the test. At the five percent significance level, the r-value in the table and the result's r-value in the Corrected Item-Total Correlation column were both apparent (18–20). The all items score more then woth r table and Cronbach ***α*** of 3 subscales was acceptable. Like the original validity of the CSE (17), this study discovered that the three-factor structure remains consistent, consisting of coping techniques categorized as emotion-focused, problem-focused, and social support/interaction.

Although there is no study that has confirmed the accuracy of the coping self-efficacy scale, the general self-efficacy has been extensively studied and has consistently shown internal consistencies ranging from α= 0.75 to α= 0.90 (21). Prior research has documented high reliability and validity in assessing self-efficacy beliefs for managing the effects of arthritis (22) and people living with HIV(17).

The Coping Self-Efficacy Scale-Vietnamese Version (CSES-V)'s construct validity among Vietnamese teenagers has 97.6% of the variation in the CSES-V was explained by a three-factor structure, and the three components' respective Cronbach's alpha coefficients were satisfactory. There was strong support for both longitudinal measurement invariance and all levels of measurement invariance between participants who were male and female. The external element of the concept validity was supported by the three CSES-V factors' low to moderate negative correlation with the DASS21 subscales and their positive correlation with the MHC-SF(23).

The Coping Self-Efficacy Scale questionnaire in Russian showed a good degree of point consistency. Regarding the COVID-19 illness that the participants and their family members were afflicted with, there were no appreciable variations in coping mechanisms amongst respondents of different genders, family and educational backgrounds, or in relation to these factors ($p > 0.50$) (24).

CONCLUSION

The original CSE scale has been modified to suit the Indonesian setting. The results of this questionnaire exhibit an identical structure to the original CSE version. The researchers conducted a study to assess the accuracy and consistency of the CSE questionnaire. The test validity assessment suggests that all question items are legitimate, while the test reliability analysis demonstrates that the Bahasa CSE version has a good level of dependability. At that point, this Bahasa Indonesia version of CSE could be used for research in the realm of social science, particularly in the areas of social psychology and mental health.

ACKNOWLEDGEMENT

The authors express their gratitude to the HIV/AIDS patients and the non-governmental organizations Victory Plus Yogyakarta, Indonesia.

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