

Translation and Validation of the Drug Avoidance Self-Efficacy Scale for High-Risk Populations in Malaysia

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Abstract

Self-efficacy plays a crucial role in treating individuals with addiction issues. It influences their willingness to seek treatment, follow therapeutic protocols, and bring about enduring behavioral changes. However, there is a lack of reliable psychometric instruments in the Malay language to gauge self-efficacy among Malaysians. This study aimed to translate and validate the Drug Avoidance Self-Efficacy Scale (DASES) into Malay, evaluate its reliability and internal consistency, and explore its content and construct validity among individuals with methamphetamine use disorders. The DASES assesses self-efficacy levels for abstaining from drug use in various high-risk situations. Translation, Content Validation Index (CVI), and calculation of Cronbach's alpha coefficient were employed to assess the internal consistency of the final Malay version of DASES. The Malay translation of DASES tested among residents of Narcotics Addiction Rehabilitation Centers explained 70.39% of the total variance, which was adequate and had good Cronbach's alpha values of 0.825. This study concluded that the Malay version of DASES is a valid and reliable tool for assessing self-efficacy levels in resisting drug use across diverse risk scenarios within Malay-speaking populations.

Keywords

Drug Avoidance Self-Efficacy, Methamphetamine, Rehabilitation Centers, Translation, Validation

1. Introduction

Drug use and addiction have significant implications for individual health, as they

compromise mental well-being, strain social connections, destabilize economic security, and diminish overall quality of life. This phenomenon generates a ripple effect that extends into families and communities. The National Institute on Drug Abuse (NIDA) offers comprehensive research regarding the alterations in brain chemistry induced by drugs and their contribution to the development of addiction.

Neuroimaging studies reveal that substances such as cocaine, opioids, and alcohol hijack the brain's reward system, resulting in compulsive drug-seeking behaviors. Research by [Nie et al. \(2020\)](#) demonstrates that chronic methamphetamine use leads to significant changes in the brain, including hard-to-recover cortical thickening in the bilateral superior frontal gyri and reversible volumetric reduction in the right hippocampus, bilateral accumbens nuclei, and regions of the cortical areas surrounding the insulae. These changes may contribute to neurocognitive dysfunctions associated with methamphetamine use and reflect how the brain responds specifically to the drug. Furthermore, the chronicity of methamphetamine use appears to have an impact, indicating that the patterns of use can influence the effects.

Additionally, a study by [Gan et al. \(2018\)](#) reveals a high prevalence of psychiatric symptoms among patients with methamphetamine use disorder, with hallucinations and delusions being the most common symptoms. Participants diagnosed with methamphetamine-induced psychosis exhibited more severe substance use issues, emotional symptoms, and cognitive impairments. The study also identified several risk factors linked to methamphetamine-induced psychosis, including an earlier onset of drug use, higher quantities of drug consumption, greater craving, moderate to severe drug use disorder, and increased anxiety symptoms. A recent study by [Ali et al. \(2024\)](#) emphasizes the considerable impact of drug abuse, particularly methamphetamine, on escalating healthcare costs, diminishing productivity, and straining the criminal justice system. The ramifications of this drug extend beyond individual users, affecting families and communities and leading to economic instability due to long-term rehabilitation expenses and a reduced workforce. Furthermore, research by [Deen et al. \(2021\)](#) explores the public stigma surrounding methamphetamine use and its negative effects on individuals' ability to maintain social connections. This stigma not only discourages people from seeking treatment but also inflicts significant psychological distress—especially for those who internalize a negative self-view influenced by mainstream culture ([Cama et al., 2016](#)).

Research conducted by [McKetin et al. \(2019\)](#) revealed that methamphetamine dependence is correlated with a decline in health-related quality of life (HRQoL). The study underscores a range of factors contributing to the diminished quality of life among methamphetamine users. It notes that these individuals experience a lower quality of life compared to the general population, which is linked not only to their dependence on methamphetamine but also to other influential factors, particularly poor mental health. Furthermore, the research indicates that

women within this group tend to face more significant health challenges. As the studies found that drug usage and addiction lead to a reduction in the physical, mental, and social components of quality of life, governments worldwide are taking urgent action to address this issue (Alsuhaibani et al., 2021; Huang et al., 2020; Zada et al., 2022), including Malaysia (Haitham et al., 2021; Rodzlan Hasani et al., 2021).

Self-efficacy refers to an individual's belief in their ability to attain desired outcomes through necessary actions (Bandura, 1977). It plays a vital role in substance abuse treatment by serving as a reliable predictor of treatment outcomes and mediating the effects of various interventions (Citlik Saritas & Erci, 2019). In this context, self-efficacy greatly influences a person's confidence in their ability to abstain from drug use and manage withdrawal symptoms effectively. Thus, it is a crucial psychological factor for initiating and sustaining behavior changes in cases of substance abuse (Kadden & Litt, 2011; Liu et al., 2020).

Self-Efficacy Theory is a subset of Bandura's (1986) Social Cognitive Theory. In relation to substance use disorders, refusal self-efficacy pertains to an individual's belief in their capacity to reject a substance in specific high-risk scenarios (Bandura, 1999). Research consistently demonstrates that low refusal self-efficacy correlates with heavier substance use, increased frequency of use, and greater levels of dependence in both clinical and non-clinical populations (Alexander et al., 2019; Wanigasooriya et al., 2021). Additionally, self-efficacy predicts behavior modification across various treatment stages and closely aligns with the principles of Self-Efficacy Theory (Bandura, 1994; Bandura & Adams, 1977). Individuals with high self-efficacy often view challenges as opportunities for mastery, while those with low self-efficacy may perceive challenges as threats to be avoided (Liu et al., 2020).

In their research, Martin et al. (1995) developed a self-efficacy scale specifically concerning drug avoidance, referencing this theoretical framework. They contend that self-efficacy encompasses an individual's belief in their capacity to engage in specific behaviors and to navigate challenging or dynamic situations. According to Self-Efficacy Theory, these beliefs serve as a foundation for predicting future behaviors and expected outcomes. The contributions of Self-Efficacy Theory to the field of addiction underscore the importance of individuals' abilities to refrain from using alcohol, tobacco, or other drugs. Consequently, in the context of the work by Martin et al., efficacy beliefs are integral to the capacity to resist substance use.

The availability of reliable instruments to measure self-efficacy is essential in addiction treatment. While the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) measures self-efficacy in coping with life's challenges, it is not specific in assessing drug avoidance behaviours. To address this gap, (Martin et al., 1995) developed the Drug Avoidance Self-Efficacy Scale (DASES) to assess individuals' confidence in avoiding drug use across diverse situations. However, in Malaysia, there is a lack of psychometric instruments in the Malay language to measure drug

avoidance self-efficacy accurately. Adapting validated instruments like DASES is crucial in understanding drug avoidance self-efficacy among Malaysians.

Translating and validating the Drug Avoidance Self-Efficacy Scale (DASES) for use in Malaysia involves key considerations. Cultural and linguistic nuances in Malay require meticulous translation to maintain accuracy and cultural relevance as it involves adapting an existing questionnaire for another geographical setting or for people in a country that has diversity in languages and cultures (Epstein et al., 2015; Hawkins et al., 2020; Sousa & Rojjanasrirat, 2011). Cultural adaptation ensures resonance with Malaysian values, while pilot testing identifies any discrepancies. Validating the instrument involves assessing reliability, internal consistency, and validity within the Malaysian context, including content and construct validity.

This study aims to translate and validate the Malay version of DASES to assess drug avoidance self-efficacy among drug users in Malaysia. By providing the psychometric properties of the Malay version of DASES, this study seeks to address the critical need for culturally adapted instruments to measure drug avoidance self-efficacy within the Malaysian context.

2. Objectives

The study involves three main objectives: firstly, the study aims to translate DASES into Malay, ensuring that it is culturally and linguistically equivalent; secondly, it aims to assess the reliability and internal consistency of the Malay version of DASES through psychometric analysis, which includes calculating Cronbach's alpha coefficient; lastly, it aims to explore the content and construct validation of the Malay version of DASES by evaluating its relevance, clarity, and factor structure among individuals with methamphetamine use disorders. The ultimate goal of this study is to provide a culturally adapted and psychometrically reliable instrument for assessing drug avoidance self-efficacy within the Malaysian context.

3. Methods

This study applied a quantitative observational cross-sectional method.

Fifty residents were selected randomly with inclusion criteria listed below:

- The participants' age is over 18 years.
- The participants have been in the PUSPEN for at least three months.
- The participants were not in a psychotic state. The MINI instruments were used to screen this criterion.
- If the participants have a chronic infectious disease such as HIV/AIDS and Tuberculosis (TB), they must be in stable condition and monitored as fulfilling ethics in conducting research involving participants with HIV/AIDS and TB.

The translation and validation process of the instrument is discussed below.

3.1. Psychometric Instrument

The Drug Avoidance Self-Efficacy Scale (DASES) (Martin et al., 1995) was

originally published in English, consisting of 16 items to measure abstinence self-efficacy across different high-risk situations. For each item, participants were asked to rate their level of confidence (self-efficacy) in their ability to refrain from using drugs in a given situation after imagining themselves in that scenario based on the Likert scale of seven points from 1 = “certainly no” to 7 = “certainly yes”. The following items are recoded (7 = 1; 6 = 2; 5 = 3; 3 = 5; 2 = 6; 1 = 7) before scoring: 2, 4, 7, 8, 10, 11, 12 and 16. All 16 items are summed together to get the final score. A sample of 373 young multiple drug users between the ages of 16 and 30 was used to evaluate the properties of the scale. Cronbach’s alpha was 0.91 and approximately 44.4% of the variance in the criterion groups was accounted for the corrected item-total correlation, which ranged from 0.25 to 0.66 (Martin et al., 1995).

3.2. Data Collection

Permission was obtained from the Ethics Committee for Research Involving Human Subjects of Universiti Putra Malaysia [JKEUPM-2023-053] and received permission from National Anti-Drugs Agency (NADA) to conduct this study on the residents of Narcotics Addiction Rehabilitation Centres (PUSPEN) Sungai Besi, Selangor, Malaysia. The process included the collection and use of data or reporting of findings. Consent from the participants was obtained before the participants answered the survey. The participants were also informed about the purpose of the research and assured of their right to refuse to participate or withdraw from the study at any time without any penalty imposed.

Trained research assistants reduce the risk of assessment bias with the administration of DASES. Only 30 minutes were given for the participants to complete the questionnaires. Demographic data, such as age, gender, race, religion, education level, status, household income, mental health status, and status of other drugs taken, were also obtained using customized data collection forms.

3.3. Translation

Two bilingual individuals with a counselling background completed the DASES questionnaire forward and backward translations. DASES’s English original was independently translated into Malay before being merged into a single Malay translation. Two other bilingual translators then retranslated this into English. Minor changes were recommended, and all translators were pleased with the Malay translations. Afterwards, an expert committee was formed to create a preliminary version of the translation, review all translated versions, and finalize both. The adaptation process was described as achieving semantic, idiomatic, experiential, and conceptual equivalence between the source and target questionnaires (Beaton et al., 2000; López-Roig & Pastor, 2016). DASES’ final Malay translation was tested on 50 PUSPEN Sungai Besi, Selangor residents to ensure clarity and comprehensiveness. Participants were interviewed to ensure that the translation met its optimal target, and the results showed that DASES was clear and

understandable to the participants. To ensure that different cultural backgrounds were equivalent, the researchers took into account translation equivalence, conceptual equivalence, and measurement equivalence (metrics), as [Matsumoto \(1996\)](#) suggested.

3.4. Validation

Five experts in addiction counselling who are fluent in Malay and English examined the content validity. The selection criteria of the experts are as follows: (1) possess profound knowledge in narcotic addiction counselling; (2) have related experiences for at least 7 to 37 years in the field; and (3) have produced an extensive study on the subject. All experts successfully examined the construction of the instrument and offered feedback according to the study's objectives. They take into account specific concerns like language, culture, and the acceptance of terminology in the community that used in this instrument. A four-point expert rating scale was used, where 4 represented very relevant, 3 represented strong relevance, 2 represented weak relevance, and 1 represented not relevant.

3.5. Reliability

The reliability of DASES was tested using internal consistency where Cronbach's alpha coefficient equal to 0.70 or higher was considered satisfactory ([Nunnally & Bernstein, 1994](#)).

3.6. Data Analysis

Data were analysed using the IBM SPSS. The presented descriptive statistical data using mean values, standard deviations, and percentages for the demographic variables. Cronbach's alpha coefficients corrected item-total correlation, and inter-item correlation matrix analysis were used to assess the internal consistency reliability. A Cronbach's alpha of ≥ 0.7 and item-total correlation of > 0.2 was considered statistically acceptable ([Nunnally & Bernstein, 1994](#)).

4. Findings

4.1. Demographic Information

Demographic information of the participants is presented in the form of descriptive data. The participant's age ranged between 20 and 50 years old with a mean age of 32.54 years ($SD = 8.79$). Participants are all male, most are Malay ethnicity, attended secondary school, single, lower income group, and abusing methamphetamine and other drugs.

4.2. Translation Process

The process of translating DASES from English to Malay was executed with meticulous attention to accuracy and cultural relevance. Initially, two bilingual translators with counselling backgrounds independently translated the scale into

Malay. Subsequently, their translations were merged into a single version. To ensure the fidelity of the translation, two other bilingual translators rendered the Malay version back into English. To ensure cultural appropriateness and relevance to the Malaysian context, experts in narcotic addiction counselling meticulously reviewed all translated versions of DASES, guaranteeing that the items accurately captured the nuances of substance abuse self-efficacy within the local cultural context.

Following the translation and review process, the Malay version of DASES was administered to a sample of 50 PUSPEN residents from Sungai Besi, Selangor, Malaysia. This step served to assess the clarity and comprehensibility of the translated items. Additionally, participants were interviewed to gauge their understanding of the scale items in terms of both language and context. The findings from these interviews revealed that the translated DASES was indeed clear and understandable to the participants, which indicates the effectiveness of the translation process in ensuring that the scale remains accessible and relevant to Malaysian individuals grappling with substance abuse issues.

4.3. Content Validity

The present study aimed to evaluate the content validity of DASES Malay through a rigorous expert assessment using a 4-point relevance scale. The five experts were provided with both the Malay and original English versions of DASES and were requested to rate each item based on its relevance to the domain being measured. The scale ranged from 1 (not related) to 4 (highly related).

The content validation process yielded highly favourable results, with all experts unanimously agreeing on the relevance of the items in the DASES Malay version. The Item Content Validity Index (I-CVI) was calculated and indicated strong relevance, with an impressive score of 0.975 across all items. An I-CVI value exceeding 0.79 signifies excellent relevance, further confirming the appropriateness of the translated items (Zamanzadeh et al., 2015).

To assess the overall content validity of the DASES Malay version, the Scale Content Validity Index (S-CVI) was calculated, demonstrating a high level of content validity with an S-CVI value of 0.9375 (Table 1). S-CVI/UA was calculated as the proportion of the number of ratings of three or four items by the total number of the scale; S-CVI/Ave was tested by taking the average of the item-level CVIs (I-CVIs). The acceptance criterion of S-CVI among instrument makers is 0.9 an excellent criterion and the numerical value of 0.80 is the lower acceptance limit of the content of the instrument (Almanasreh et al., 2022; Madadzadeh & Bahariniya, 2023; Polit et al., 2007).

Strong content validity is demonstrated by the DASES Malay version, as evidenced by the high I-CVI and S-CVI scores and the strong agreement among experts. This validation affirms that the scale's items are relevant and appropriate for assessing drug avoidance self-efficacy within the Malaysian context.

Table 1. CVI calculation.

ITEM	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Experts in agreement	I-CVI	UA
Q1	1	1	1	1	1	5	1	1
Q2	1	0	1	1	0	3	0.6	0
Q3	1	1	1	1	1	5	1	1
Q4	1	1	1	1	1	5	1	1
Q5	1	1	1	1	1	5	1	1
Q6	1	1	1	1	1	5	1	1
Q7	1	1	1	1	1	5	1	1
Q8	1	1	1	1	1	5	1	1
Q9	1	1	1	1	1	5	1	1
Q10	1	1	1	1	1	5	1	1
Q11	1	1	1	1	1	5	1	1
Q12	1	1	1	1	1	5	1	1
Q13	1	1	1	1	1	5	1	1
Q14	1	1	1	1	1	5	1	1
Q15	1	1	1	1	1	5	1	1
Q16	1	1	1	1	1	5	1	1
						S-CVI/Ave	15.6/16 = 0.975	
Proportion relevance	1	0.94	1	1	0.94	S-CVI/UA		15/16 = 0.9375

Average proportion of items judged as relevance across the five experts = 0.98.

4.4. Construct Validity

The statistical findings presented in **Table 2** demonstrate that the data under analysis is a suitable candidate for factor analysis. This is evidenced by the highly significant statistic yielded by the Bartlett Sphericity Test (χ^2 (120) = 456.043, p = 0.000) and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (MSA = 0.736), which exceeded the minimum accepted threshold of .5 (Field, 2009; Hair et al., 1998; Kaiser, 1974). Therefore, the sample in this study provides adequate information for conducting factor analysis.

Table 2. KMO and Bartlett's test.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	Expert 1
Bartlett's Test of Sphericity Approx. Chi-Square	1
Df	1
Sig.	1

The Bartlett test of sphericity and the KMO measure combined confirm that the DASES Malay version is well-suited to perform principal component analysis (PCA). Hence, the data set is appropriate for extracting meaningful factors underlying the self-efficacy constructs measured by the scale. The study is well-equipped to investigate the underlying structure of the DASES Malay version using factor analysis, allowing for a more in-depth understanding of its psychometric properties and utility in assessing self-efficacy in the context of drug avoidance among Malaysians.

Construct validity measures the extent to which the item in a scale all measures the same construct. The validity of the DASES was examined using Principal Component Analysis (PCA) (Citlik Saritas & Erci, 2019). The factor analysis method was used to assess the construct validity of the instrument. **Table 3** shows the PCA determines the factors accounting for the total variance of the specific construct. The factor analysis revealed a single factor with eigenvalues above 1.0, which accounted for 70.39% of the total variance. **Table 4** shows the factor loadings, in which four components extracted appear cross-loading between the items. Generally, a factor loading of .40 is acceptable to be the lowest loading in factor analysis and can be included in the scale (Hair et al., 1998; Nunnally & Bernstein, 1994; Stevens, 2009).

Table 3. Total variation that can be determined.

Component	Total Variance Explained					
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	5.477	34.234	34.234	5.477	34.234	34.234
2	3.286	20.535	54.769	3.286	20.535	54.769
3	1.347	8.418	63.187	1.347	8.418	63.187
4	1.152	7.203	70.390	1.152	7.203	70.390
5	0.961	6.008	76.398			
6	0.753	4.707	81.105			
7	0.655	4.095	85.200			
8	0.473	2.959	88.159			
9	0.414	2.590	90.748			
10	0.367	2.292	93.040			
11	0.274	1.714	94.754			
12	0.246	1.538	96.292			
13	0.219	1.368	97.660			
14	0.180	1.122	98.782			
15	0.107	0.666	99.448			
16	0.088	0.552	100.000			

Extraction method: principal component analysis.

Table 4. Component matrix.

	Component Matrix ^a			
	Component			
	1	2	3	4
Q1	0.519	-0.315	0.671	0.109
Q2	0.630	0.361	0.271	-0.234
Q3	0.352	-0.207	0.214	0.776
Q4	0.641	0.455	0.086	0.049
Q5	0.479	-0.539	-0.279	0.185
Q6	0.619	-0.566	0.284	0.037
Q7	0.663	0.532	0.116	-0.005
Q8	0.620	0.402	0.151	-0.274
Q9	0.659	-0.448	0.199	-0.262
Q10	-0.447	0.435	0.340	-0.054
Q11	0.480	0.491	0.005	-0.087
Q12	0.521	0.613	-0.357	0.148
Q13	0.717	-0.411	-0.190	0.016
Q14	0.741	-0.286	-0.450	-0.046
Q15	0.477	-0.416	-0.147	-0.427
Q16	0.643	0.565	-0.183	0.291

Extraction method: principal component analysis; a. 4 components extracted.

A scale should have a high degree of internal consistency, as evidenced by Cronbach's alpha (Streiner, 2003). DASES Malay version Cronbach's alpha was 0.825, indicating this scale has good reliability (Hair et al., 1998). The value of the coefficient alpha is acceptable; hence, no item was omitted (Table 5).

Table 5. DASES - Cronbach's alpha if the item deleted.

	Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q1	64.3800	261.628	0.464	0.660	0.814
Q2	65.4000	254.857	0.569	0.653	0.808
Q3	64.6000	271.714	0.265	0.424	0.825
Q4	64.0400	258.733	0.557	0.646	0.810
Q5	65.2600	264.237	0.357	0.553	0.820
Q6	65.1000	256.051	0.484	0.707	0.812
Q7	64.0200	249.530	0.625	0.697	0.804

Continued

Q8	64.6600	251.902	0.572	0.601	0.807
Q9	65.1600	255.484	0.504	0.735	0.811
Q10	65.3400	316.556	-0.372	0.612	0.864
Q11	65.3400	255.780	0.457	0.579	0.814
Q12	64.7200	255.308	0.477	0.745	0.813
Q13	65.1800	245.824	0.620	0.790	0.803
Q14	64.8400	248.872	0.598	0.789	0.805
Q15	64.8000	266.408	0.341	0.473	0.821
Q16	64.5600	245.476	0.578	0.831	0.806

4.5. Reliability

The questionnaire forms completed by the 50 residents were used for the analyses. The DASES had an overall Cronbach's coefficient alpha of 0.825. Values equal to or greater than 0.70 was considered satisfactory (Nunnally & Bernstein, 1994).

5. Discussion

The results of this study showed that the psychometric characteristics of the Malay version of the Drug Avoidance Self-Efficacy Scale are promising, as discussed below:

5.1. Translation and Content Validity

The translation and content validity of assessment tools determine their effectiveness and applicability in different cultural contexts. In the case of the DASES Malay version, the translation process went beyond linguistic translation. The goal was to ensure that the assessment tool was relevant and easy to understand in the Malaysian context. Specifically, adaptations were made to reflect cultural nuances and linguistic differences related to substance abuse.

The original DASES scale included the word "alcohol", which was removed in the Malay translation due to different substance abuse patterns in Malaysia compared to other countries. Alcohol consumption may not be a primary concern in Malaysia. Additionally, the word "stoned/loading" was replaced with "high" to align with Malaysian vernacular, where "high" signifies a state of trance associated with drug intoxication. These modifications underline the importance of cultural sensitivity in translation efforts to accurately capture intended meanings. Experts involved in the translation process recognized the necessity of these adjustments to ensure that the DASES Malay version remained culturally relevant and resonated with Malaysian individuals struggling with substance abuse. Despite these modifications, the translation process was meticulous in maintaining linguistic equivalence with the original scale, thus preserving the integrity of the instrument across different language versions.

Feedback from participants supported the clarity and understandability of the DASES Malay version, confirming its efficacy as a culturally adapted assessment tool. This study builds on this foundation by contextualizing the adapted instrument within the specific beliefs and values prevalent among residents of PUSPEN Sungai Besi, Selangor, enhancing its content validity. By rooting the assessment tool in the lived experiences and cultural contexts of its target population, the adaptation process ensures the relevance and applicability of the DASES Malay version while enhancing its capacity to capture nuanced aspects of substance abuse self-efficacy within the Malaysian context. Continued efforts to validate and refine culturally adapted assessment tools are essential for advancing research and intervention strategies aimed at effectively addressing substance abuse issues within diverse cultural settings.

5.2. Construct Validity

The DASES Malay version was found to have construct validity in this study through robust statistical analyses, indicating its effectiveness in capturing the underlying dimensions of substance abuse self-efficacy. The scale accounted for a substantial portion of the total variance (70.39%), exceeding the threshold deemed acceptable in previous research. For comparison, the original scale by (Martin et al., 1995) explained only 44.4% of the variance, suggesting an improvement in explanatory power with the adapted version. Additionally, although it would be ideal for all items to have a single-factor structure, the identification of four components in the component matrix suggests some complexity in the underlying construct. Nonetheless, this does not diminish the scale's validity. The DASES Malay version meets the criterion of high internal consistency, which (Streiner, 2003) emphasized. This is evident through a strong reliability coefficient of 0.825, which aligns with established guidelines for assessing scale consistency (Hair et al., 1998).

The convergence of results from variance explanation, factor analysis, and internal consistency assessment demonstrates the DASES Malay version's validity in measuring substance abuse self-efficacy in Malaysia. These findings give confidence in the scale's ability to accurately capture the intended construct, supporting its use in research and clinical practice. Hence, in overall, the statistical analyses conducted in this study provide empirical support for the construct validity of the DASES Malay version, affirming its reliability and effectiveness as a tool for assessing substance abuse self-efficacy. This validation lays a strong foundation for future research endeavours and interventions aimed at addressing substance abuse issues among Malaysian populations.

5.3. Internal Consistency

A reliability analysis was performed on the DASES Malay version, which resulted in a Cronbach's alpha coefficient of 0.825. This high value indicates a high degree of consistency among the items. This finding is based on established criteria for

reliability, as outlined by Hair et al. (Hair et al., 1998), which consider a coefficient above 0.80 as indicative of good reliability. It is worth noting that the original DASES scale, reported by Martin et al. (1995), had a slightly higher Cronbach's alpha coefficient of 0.91, emphasizing the measure's reliability.

Furthermore, recognized measurement development standards, such as those articulated by (Devellis, 2012; Yang & Green, 2011), indicate that a reliability level of 0.70 is appropriate for newly developed instruments. In light of these benchmarks, the Cronbach's alpha coefficient obtained in this study is greater than the minimum threshold, confirming the reliability of the DASES Malay version as a well-developed measurement tool. It indicates its consistency in evaluating substance abuse self-efficacy among Malaysian individuals. Such reliability is crucial for ensuring the accuracy of the instrument's measurements, thereby enhancing its usefulness in both research and clinical settings.

To conclude, the Cronbach's alpha coefficient for the DASES Malay version meets or exceeds established reliability thresholds, indicating that it is a reliable tool for assessing substance abuse self-efficacy. This consistency highlights the instrument's usefulness in advancing our understanding of substance abuse dynamics and informing targeted interventions in Malaysia.

5.4. Implication of the Findings

Drug abuse is a pressing concern on a global scale that has driven researchers to investigate the role of self-efficacy in curbing this issue (Citlik Saritas & Erci, 2019). Martin et al. (1995) identified the need for a self-efficacy scale that addresses drug-related challenges. This scale is essential in the prevention of substance abuse (Martin et al., 1995). The present study introduces the Drug Avoidance Self-Efficacy Scale in Malay, which is a potentially valuable instrument for assessing self-efficacy among Malaysians dealing with drug abuse issues. The scale has demonstrated statistically acceptable levels of both reliability and validity, indicating its potential utility in research and clinical practice (Citlik Saritas & Erci, 2019; Norozi et al., 2016). However, further investigation involving larger populations is necessary to fully evaluate the scale's effectiveness and generalizability within diverse contexts (Khazae-Pool et al., 2021).

It is crucial to consider that drug abuse is a complex issue requiring multidimensional approaches to mitigate its adverse effects (Sowicz et al., 2022; Thomasius et al., 2022). Therefore, the Drug Avoidance Self-Efficacy Scale in Malay might prove beneficial in efforts to curb drug abuse in Malaysia. This study's findings could provide vital insights for policymakers, clinicians, and researchers in the development of effective interventions for drug abuse prevention and treatment.

6. Conclusion

The present study has effectively demonstrated the reliability, content, and construct validity of the Malay version of the Drug Avoidance Self-Efficacy Scale (DASES). The results underscore the significance of this scale in collecting standardized data on

self-efficacy behaviour in substance abuse. Employing a methodology recognized by the scientific community allows for cross-linguistic comparisons that enhance our comprehension of substance abuse dynamics across different populations. Nonetheless, certain limitations must be acknowledged. The study was confined to patients with methamphetamine use in PUSPEN Sungai Besi, which limits the generalizability of the findings. The study's scope could be broadened by increasing the sample size to include all PUSPEN facilities in Malaysia. Furthermore, although internal consistency tests were employed to assess reliability, including test-retest analyses would provide a more comprehensive evaluation.

Despite these limitations, the DASES Malay version is a robust instrument for measuring participants' self-efficacy to resist drug use in various risk scenarios in the Malaysian context. The researchers anticipate that this validation will encourage further research on the self-efficacy of drug users in Malaysia and promote the development of more effective and evidence-based anti-drug programs.

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Conflict of Interest

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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