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Validation of CCAPS-Indo for Indonesian High School Students

¹Susi Fitri, ²Dede Rahmat Hidayat, ³Bagus Julian Hikmy

^{1,2,3}Guidance and Counseling, State University of Jakarta

*Corresponds email: susi.fitri@unj.ac.id

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Abstract

Mental health problems among Indonesian high school students may interfere with academic functioning, social adjustment, and overall well-being, yet schools still lack multidimensional instruments that are culturally appropriate for early identification. This study aimed to adapt and validate the Indonesian version of the Counseling Center Assessment of Psychological Symptoms (CCAPS-Indo) for use with high school students. The original CCAPS-62 was translated, back-translated, and reviewed for cultural relevance before psychometric testing. Data were collected from 450 students enrolled in senior high schools and vocational high schools in Jakarta, Indonesia. Construct validity was examined using second-order confirmatory factor analysis, while composite reliability and average variance extracted were used to evaluate reliability and convergent validity. The refined model retained 42 items across eight dimensions. Most model-fit indices indicated acceptable to good fit, including χ^2/df , GFI, CFI, TLI, NFI, IFI, RMSEA, and SRMR, although AGFI remained below the preferred threshold. Standardized loading factors for retained items ranged from 0.55 to 0.98, and composite reliability values ranged from 0.66 to 0.91. These findings suggest that the CCAPS-Indo demonstrates acceptable psychometric performance for assessing psychological symptoms among Indonesian high school students. The instrument may therefore be used as a school-based screening tool to support early identification and intervention, although further validation with broader and more diverse samples is still needed.

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1. Introduction

Mental health problems among high school students have become an important issue because they affect academic functioning, social adjustment, and overall well-being. High school students in Indonesia experience various mental health issues, including stress, anxiety, and depression (Kaligis et al., 2021). Recent studies also show that after the pandemic, many students reported increased fear (UNICEF, 2020), anxiety (Suryaatmaja, 2020; Fitria, 2020), sadness and emotional distress (Gloria, 2020), as well as a greater risk of emotional and behavioural problems (Wiguna et al., 2020). These findings indicate that the identification of socio-emotional and psychological problems among high school students is increasingly necessary.

The pandemic also has severely affected the household financial situation of most new and current college and university students; this implies most students will more than likely need more financial aid than expected (Scarborough, 2020). This is going to add extra strain on college and university resources. This challenge will continue to persist as long as (1) students feel dissatisfied with their online education experience and (2) their capacity to manage funds for education in the

present economic condition is minimal. The inability to face this challenge will have an impact on the socio-emotional of students.

We can assume that the pandemic has seriously impacted mental health problems. Deteriorating mental health among university students is a serious worldwide public health concern (Sujarwoto, Saputri, and Yumarni, 2023). In looking more specifically at college student mental health issues, there has been an apparent increase in the severity of psychological symptoms among High school students over the past decade in the United States and worldwide (Benton, Robertson, Tseng, Newton, and Benton, 2021 ; Hyun, Quinn, Madon, and Lustig, 2006; Kitzrow, 2003; Ratanasiripong, Sverduk, Prince, and Hayashino, 2012).

High school students in Indonesia also experience various mental health issues that influence their wellness; specific issues that Indonesia High school students have been found to encounter include stress, anxiety, and depression (Kaligis et al., 2021). Recent studies show that affect a pandemic, many students have reported symptoms of increases fear (UNICEF, 2020), anxiety (Suryaatmaja, 2020; Fitria, 2020), alertness and sad (Gloria, 2020), and increases the risk to experience emotional and behavioural problems (Wiguna, et al, 2020). Moreover, the high level of socio-emotional disorders among High School Students needs to identify.

One of the ways to help advance the literature in this area is to develop a measure of college student mental health. To address this research gap, the purpose of this study is to develop and validate the Indonesia version of the Counselling Centre Assessment of Psychological Symptoms–62 (CCAPS-62) (Locke, Bieschke, Castonguay, and Hayes, 2012; Locke et al., 2011), a psychological assessment instrument that is widely used with High School Students in the United States. We believe the development of this measure represents an important step in the effort to advance the counselling psychology profession in Indonesia. The lack of high accuracy instruments causes the evaluation process being carried out haphazardly. In consequence, mental health assessment for High School Students is urgently required, thus focusing on delivering an accurate treatment to High School Students with mental health issues becomes critical.

Research is needed to better understand the psychological symptoms and distress that Indonesian student's encounter. With increased understanding, a school counsellor in Indonesia can develop programs and services to meet the mental health needs of their students. Further, previously translated instruments have not been specifically designed to assess the various mental health issues that Indonesia faces; each instrument was developed as a one-dimensional, symptom-specific tool for the general population. Having an instrument in place that is multidimensional and psychometrically sound, free for use by the school counsellor, and pertinent to high school students' concerns, will help address the mental health needs of High school students in Indonesia. In addition, an established measure could be used to conduct mental health screenings with the general student body to assist with treatment referrals, needs assessment, and program implementation. Developing an instrument to assess Indonesian college students' mental health is a small step in advancing the currently limited counselling psychology profession in Indonesia.

CCAPS Originally developed by the staff at the University of Michigan counseling center in 2001, the CCAPS-62 is now used at more than 250 college and university counselling centers in North America to assess the psychological symptoms of college students: the CCAPS-62. The CCAPS-62, which is free for use by college counselling centre, was designed to assess key domains of college student's mental health concerns (CCMH, 2012a, 2014; Locke et al., 2011). The eight subscales of the CCAPS-62 include Depression, Generalized Anxiety, Social Anxiety, Academic Distress, Eating Concerns, Family Distress, Hostility, and Substance Abuse. In addition, it includes an overall Distress Index that provides a quick assessment of the respondent's general psychological distress.

Since its development, several empirical studies have been conducted with consistent findings supporting the CCAPS-62's psychometric properties and clinical applications to the college student population (Boswell, McAleavey, Castonguay, Hayes, and Locke, 2021; Castonguay, 2013; Graceffo, Hayes, Chun-Kennedy, and Locke, 2012; Lockard, Hayes, and Graceffo, 2013; Lockard, Hayes, McAleavey, and Locke, 2012; Locke, McAleavey, et al., 2012; Martin, Hess, Ain, Nelson, and Locke, 2012; McAleavey et al., 2012; Nordberg, Hayes, McAleavey, Castonguay, and Locke, 2013). Due to its specificity for college students, its strong psychometric

properties, and its availability for free use by college counseling centers, the CCAPS-62 has the potential as an instrument to measure psychological distress in Indonesian students.

To this end, an Indonesian translation that is psychometrically sound and culturally valid needs to be developed. Although mental health problems among Indonesian adolescents have increasingly been reported, multidimensional instruments that are specifically adapted and validated for Indonesian high school students remain limited. Existing instruments tend to assess only specific symptoms or are not designed for the school context. Therefore, adapting and validating the CCAPS-62 is important because it offers a more comprehensive assessment across multiple domains of psychological symptoms relevant to high school students.

The importance of this research is underscored by the rising prevalence of mental health issues among High School Students in Indonesia, as highlighted by previous studies showing a significant impact on academic performance and overall well-being. Given the lack of culturally relevant assessment tools, there is an urgent need for effective instruments to identify these conditions early. The objectives of the present study are to a) translate the CCAPS-62 into Indonesian, ensuring cultural relevance; (b) assess the internal consistency, test-retest reliability, and factor structure of the Indonesian version (CCAPS-Indo); (c) evaluate the convergent validity of the CCAPS-Indo to confirm its applicability in this context.

2. Methods

2.1 Participants

This study involved 450 Indonesian high school students from eight schools in Jakarta Province, Indonesia. Participants were recruited through school counselors from each school. The sample consisted of students from both general senior high schools and vocational high schools. The inclusion criteria were that participants had to be active high school students, willing to participate voluntarily, and able to complete the questionnaire fully. Before completing the survey, participants were presented with informed consent information on the first page of the Google Form, and only those who agreed were directed to continue. Demographic data collected included gender, school type, and family socioeconomic background. As shown in Table 1, 250 participants were female (55.56%) and 200 were male (44.44%). In terms of school type, the sample was evenly distributed between general senior high schools and vocational high schools, with 225 students (50%) from each category.

2.2 Data Collection

2.2.1 Instrument of Collecting Data

This study employed two main instruments: a demographic questionnaire and the Indonesian version of the Counseling Center Assessment of Psychological Symptoms (CCAPS-Indo). The demographic questionnaire was used to obtain participants' background information, including gender, school type, and family socioeconomic background. The main instrument, CCAPS-Indo, was adapted from the original CCAPS-62 after permission had been obtained from the Center for Collegiate Mental Health (CCMH).

The adaptation process followed translation and back-translation procedures involving six professionals who were bilingual in English and Indonesian and bicultural in Indonesian and Western contexts. Before the translation process, the authors reviewed the original items to ensure their cultural relevance for Indonesian adolescents. In the substance use subscale, several alcohol-related items were considered less contextually relevant for Indonesian high school students. Therefore, limited wording adaptations were made to reflect substance-related behaviors that are more recognizable in this population, particularly smoking-related expressions. These adaptations were intended to maintain the broader construct of substance-related problems while improving contextual relevance. As a result, the number of items was reduced from 62 to 60. The CCAPS-Indo uses a five-point Likert-type scale ranging from 0 (not at all like me) to 4 (extremely like me).

2.2.2 Techniques for Collecting Data

Data were collected through an online survey administered via Google Forms. Potential participants were recruited through school counselors from each participating school. Before

completing the questionnaire, participants were presented with informed consent information on the first page of the survey. Only those who agreed to participate were directed to the next page to complete the questionnaire.

After the data collection process was completed, responses were screened for completeness and response quality. Incomplete responses, missing data, or response patterns indicating possible random answering were excluded from further analysis. This procedure was applied to ensure that only valid responses were included in the psychometric evaluation of the instrument.

2.3 Data Analysis

The collected data were analyzed to examine the psychometric properties of the Indonesian version of the Counseling Center Assessment of Psychological Symptoms (CCAPS-Indo). Construct validity was evaluated using second-order confirmatory factor analysis (CFA) with LISREL. This model was selected to assess the relationship between observed items, first-order factors, and the higher-order construct represented by the instrument. Previous studies have shown that the CCAPS model can be adequately tested using second-order CFA.

Several goodness-of-fit indices were used to assess model fit, including χ^2/df , GFI, AGFI, CFI, TLI/NNFI, NFI, IFI, RMSEA, and SRMR. Item validity was examined based on standardized loading factors and t-values. Items with loading factors of 0.50 or higher were considered acceptable indicators of the latent construct. In addition, composite reliability (CR) and average variance extracted (AVE) were calculated to evaluate internal consistency and convergent validity. A CR value of 0.60 or above was considered acceptable, while AVE values were interpreted together with CR to assess the adequacy of construct reliability.

3. Results

The psychometric evaluation of the CCAPS-Indo was conducted using second-order confirmatory factor analysis (CFA). Figure 1 illustrates the final measurement model of the CCAPS-Indo.

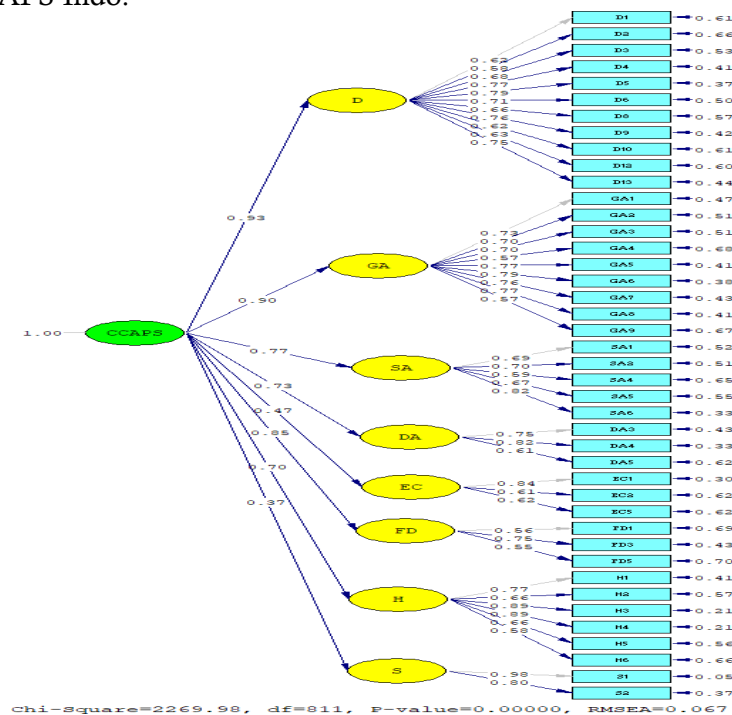


Figure 1. Second-Order CFA Measurement Model of the CCAPS-Indo

The measurement model is presented in Figure 1. Based on the CFA results, several items were excluded from the final model because their loading factors were below 0.50, namely D7, D11, SA3, SA7, DA1, DA2, EC3, EC4, EC6, EC7, FD2, FD4, FD6, H7, S3, and S4. The goodness-of-fit indices of the refined model are presented in Table 2.

Table 2. Goodness-of-Fit Indices of the Refined CCAPS-Indo Model

<i>Model</i>	<i>Cut-off Value</i>	Result	conclusion	source
χ^2/df	$2 \leq \chi^2/df \leq 3$	2,79	Good Fit	(Jöreskog and Sörbom, 1993)
GFI	$0.80 \leq GFI \leq 0.9090$	0.80	Good Fit	(Schermelleh-Engel, Moosbrugger, and Müller, 2003)
AGFI	$0.85 \leq AGFI < 0.90$	0.76	Poor Fit	(Schermelleh-Engel et al., 2003)
CFI	≥ 0.97	0.97	Good Fit	(Schermelleh-Engel et al., 2003)
TLI/NNFI	≥ 0.90	0.97	Good Fit	(Wijanto, 2008)
NFI	≥ 0.95	0.95	Good Fit	(Hu and Bentler, 1995)
IFI	≥ 0.90	0.97	Good Fit	(Wijanto, 2008)
RMSEA	≤ 0.08	0.067	Good Fit	(Steiger, 2007)
SRMR	≤ 0.10	0.065	Acceptable Fit	(Hu and Bentler, 1995)

After model refinement, the goodness-of-fit indices indicated that the overall model showed an acceptable to good fit. As presented in Table 2, seven indices met the good-fit criteria, namely $\chi^2/df = 2.79$, $GFI = 0.80$, $CFI = 0.97$, $TLI/NNFI = 0.97$, $NFI = 0.95$, $IFI = 0.97$, and $RMSEA = 0.067$. In addition, $SRMR = 0.065$ indicated an acceptable fit, while $AGFI = 0.76$ remained in the poor-fit category. These findings suggest that, although not all indices reached the ideal threshold, the refined model was generally adequate and acceptable for further psychometric evaluation of the CCAPS-Indo.

Table 3. Standardized Loading Factors and t-Values of the Retained Items

No.	Item	Loading factor	T-Value (>1.96)	Description
1	D1	0.62	**	
2	D2	0.58	10.22	Significant
3	D3	0.68	11.61	Significant
4	D4	0.77	12.64	Significant
5	D5	0.79	12.94	Significant
6	D6	0.71	11.94	Significant
7	D8	0.66	11.25	Significant
8	D9	0.76	12.58	Significant
9	D10	0.62	10.77	Significant
10	D12	0.63	10.93	Significant
11	D13	0.75	12.42	Significant
12	GA1	0.73	**	
13	GA2	0.7	13.61	Significant
14	GA3	0.7	13.61	Significant
15	GA4	0.57	10.98	Significant
16	GA5	0.77	15.06	Significant
17	GA6	0.79	15.46	Significant
18	GA7	0.76	14.79	Significant
19	GA8	0.77	15.11	Significant
20	GA9	0.57	11.07	Significant
21	SA1	0.69	**	
22	SA2	0.7	12.43	Significant
23	SA4	0.59	10.60	Significant
24	SA5	0.67	11.91	Significant
25	SA6	0.82	14.06	Significant
26	DA3	0.75	**	

27	DA4	0.82	13.80	Significant
28	DA5	0.61	11.08	Significant
29	EC1	0.84	**	
30	EC2	0.61	9.62	Significant
31	EC5	0.62	9.64	Significant
32	FD1	0.56	**	
33	FD3	0.75	9.77	Significant
34	FD5	0.55	8.18	Significant
35	H1	0.77	**	
36	H2	0.66	13.34	Significant
37	H3	0.89	18.92	Significant
38	H4	0.89	19.00	Significant
39	H5	0.66	13.43	Significant
40	H6	0.58	11.67	Significant
41	S1	0.98	**	
42	S2	0.8	8.98	Significant

Table 3 shows that the retained items had standardized loading factors ranging from 0.55 to 0.98. All retained items exceeded the minimum threshold of 0.50, indicating that they contributed adequately to their respective latent constructs. Most items also showed t-values greater than 1.96, supporting the statistical significance of the item-factor relationships. Several items, including D1, GA1, SA1, DA3, EC1, FD1, H1, and S1, did not display t-values because they were specified as reference indicators in the model. Overall, the results support the validity of the retained items in measuring the intended constructs.

Table 4. Standardized Loading Factors and t-Values of the CCAPS-Indo Dimensions

No.	Item	Loading factor	T-Value (>1.96)	Description
1	D	0.93	12.77	Significant
2	GA	0.90	14.85	Significant
3	SA	0.77	12.05	Significant
4	DA	0.73	11.94	Significant
5	EC	0.47	8.12	Significant
6	FD	0.85	9.94	Significant
7	H	0.70	12.46	Significant
8	S	0.37	7.22	Significant

Table 4 indicates that most dimensions contributed adequately to the higher-order CCAPS construct. Depression, General Anxiety, Social Anxiety, Academic Distress, Family Distress, and Hostility showed loading factors above 0.50, indicating satisfactory contributions. In contrast, Eating Concern and Substance had lower loading factors, although both remained statistically significant. This suggests that while these two dimensions were retained, their contributions to the higher-order construct were weaker than those of the other dimensions.

Table 5. Composite Reliability and Average Variance Extracted of the CCAPS-Indo Dimensions

Aspects	CR	AVE
Depression (D)	0.91	0.50
General Anxiety (GA)	0.90	0.51
Social Anxiety (SA)	0.82	0.50
Academic Distress (DA)	0.77	0.54
Eating Concern (EC)	0.74	0.50
Family Distress (FD)	0.66	0.39
Hostility (H)	0.88	0.56
Substance (S)	0.88	0.80

As shown in Table 5, the composite reliability values ranged from 0.66 to 0.91, indicating acceptable internal consistency across all dimensions. Most AVE values were at or above 0.50, suggesting adequate convergent validity. However, Family Distress showed a lower AVE value (0.39), although its CR value remained acceptable. Overall, these results support the reliability of the CCAPS-Indo, while also indicating that some dimensions may require further refinement in future studies.

4. Discussion

The results of this study highlight an urgent need to develop mental health assessment tools that genuinely reflect Indonesian cultural realities, especially for high school students. The successful validation of the Counseling Center Assessment of Psychological Symptoms–Indonesian version (CCAPS-Indo) represents an important contribution to the field, offering mental health practitioners a reliable foundation for understanding students' psychological well-being within their lived cultural context.

Grounding the CCAPS-Indo in the biopsychosocial model reinforces the idea that mental health emerges from the interplay of biological, psychological, and social dimensions. This framework is particularly relevant for adolescents, whose well-being is shaped by family relationships, school climate, peer dynamics, and broader societal expectations (Bronfenbrenner, 1979). By adopting a multidimensional assessment approach, the CCAPS-Indo provides a more holistic picture of students' emotional experiences, enabling teachers, counselors, and psychologists to design interventions that are precise, empathetic, and contextually sensitive.

Integration With Previous Research

Growing evidence shows that mental health concerns among adolescents have intensified in recent years, particularly during the COVID-19 pandemic. Research in Indonesia and across the world indicates that prolonged isolation, disruptions in learning, and heightened uncertainty have contributed to increased levels of stress, anxiety, and depression among students (Gonzalez et al., 2021; Sujarwoto, Saputri, and Yumarni, 2023). The CCAPS-Indo allows schools and counselors to monitor these shifts systematically, providing an early-warning mechanism that supports timely and effective intervention.

School-based mental health efforts have also gained recognition for their impact. Studies consistently show that early identification and accessible support within the school environment lead to improved emotional resilience, stronger social functioning, and enhanced academic performance (Weist et al., 2018). With its cultural adaptation and strong psychometric foundation, the CCAPS-Indo equips schools with data-driven insights to better align mental health services with the diverse needs of their students.

Advantages and Novel Contributions

This study offers notable advancements by contextualizing the CCAPS for Indonesian adolescents, a population that has received limited attention in previous research. Prior validation studies of the CCAPS focused largely on university students, creating a gap in tools suitable for younger populations. The present findings address this gap by establishing a validated version of the instrument for high school students.

One of the most meaningful outcomes is the emergence of a eight-factor structure for the 42-item CCAPS-Indo. This differs substantially from the original eight-factor model found in Locke et al.'s (2011) U.S. sample, underscoring how cultural and developmental factors shape the expression and interpretation of psychological symptoms. This result echoes broader literature emphasizing the importance of culture in shaping how individuals understand, communicate, and cope with emotional distress (Kirmayer et al., 2011).

Indonesian adolescents are exposed to a range of contextual pressures, including demanding academic expectations and socioeconomic uncertainty, which may increase their vulnerability to psychological distress. Within this context, the CCAPS-Indo may help identify symptom patterns that are more consistent with students' everyday experiences, including anxiety, depressive symptoms, academic distress, and interpersonal difficulties during adolescence.

Contributions and Implications

The implications of this research are significant. With the limited availability of college counseling centers in Indonesia, the CCAPS-Indo can serve as a valuable needs assessment tool for the broader high school student population. College administrators can utilize this multidimensional instrument to conduct surveys, identifying specific mental health issues and tailoring programs and services accordingly. For instance, establishing counseling centers on campuses could directly address the psychological needs of students.

The CCAPS-Indo can also facilitate follow-up assessments and post-treatment evaluations. By monitoring changes in subscale scores over the course of treatment, particularly for initially elevated scores, counselors can effectively gauge progress and adjust interventions as needed.

Limitations and Recommendations

Despite these contributions, the study has limitations. The low CFI indicates potential areas for model improvement, suggesting that future research should explore additional factors or adaptations that may enhance the instrument's fit. Furthermore, the study's sample was limited to Jakarta, which may affect the generalizability of the findings to other regions in Indonesia. Future researchers are encouraged to replicate this study in diverse settings and populations, investigate the long-term efficacy of the CCAPS-Indo, and explore its application in various educational contexts. Such efforts could further refine the instrument and broaden its impact on mental health assessment in Indonesia.

While the CCAPS-Indo has demonstrated validity and reliability, it is essential to acknowledge the limitations inherent in the study. The sample primarily consisted of students from Jakarta, which may limit the generalizability of the findings to rural or less urbanized areas of Indonesia. Future research should aim to replicate the study across diverse geographical and socio-economic settings to enhance the robustness of the CCAPS-Indo. Additionally, ongoing evaluation of the CCAPS-Indo's predictive validity over time will be crucial. Longitudinal studies could assess whether the tool effectively captures changes in mental health symptoms throughout an academic year or in response to significant life events contexts.

5. Conclusions

This study adapted and examined the psychometric properties of the Indonesian version of the Counseling Center Assessment of Psychological Symptoms (CCAPS-Indo) for high school students. The findings showed that the instrument demonstrated acceptable psychometric performance, as reflected in the overall model fit, satisfactory item loadings, and acceptable composite reliability across dimensions. Although some dimensions showed weaker contributions than others, the overall results support the use of CCAPS-Indo as a multidimensional instrument for assessing psychological symptoms among Indonesian high school students.

The findings imply that CCAPS-Indo can be used as a school-based screening tool to help counselors identify students' mental health problems earlier and design more appropriate support services. However, further validation with broader and more diverse samples is recommended to strengthen the generalizability of the instrument.

6. Declaration of Conflicting Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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