ORIGINAL ARTICLE

Cross-cultural Adaptation and Psychometric Properties of the Situational Self-awareness Scale in Indonesia: Adapting a Positive Psychosocial Tool for Postpartum Women

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ABSTRACT

Introduction: Situational self-awareness is a natural process in which we compare our daily situations to our internalized ideals, adopting appropriate changes to eliminate discrepancy. Objectives: This study aimed to adapt, validate and establish the reliability of the Situational Self-Awareness Scale (SSAS) questionnaire in Indonesian for postpartum women. **Methods:** Iterative mixed approaches were used in the current investigation. The data collection process has three stages: translation, validation, and reliability. Contextual relevance, acceptability of phrasing and content validity were assessed using the Content Validity Index (CVI). The factor structure of SSAS was determined using confirmatory factor analysis (CFA). The relationships between the items were determined using Pearson correlation analysis. Reliability was assessed using Cronbach's alpha coefficient and test-and-retest data. **Results:** The CVI values ranged from 0.87 to 1.00. The Pearson correlation coefficients ranged between the nine items from 0.412 to 0.611 ($p<0.05$). CFA has shown that the three-factor model has adequate fitness factors, using five commonly reported fitness statistics, RMSEA=0.048, SRMR=0.071 and CFI=0.79. Each factor had a standardized factor loadings greater than 0.4, ranging from 0.42 to 0.69. The Cronbach alpha for the Indonesian SSAS was 0.748. **Conclusion:** The SSAS is a valid and reliable instrument for assessing situational self-awareness in Indonesia. Additional research should be performed to modify and evaluate the SSAS in different samples and social contexts to confirm factor consistency.

Keywords: Cross-cultural adaptation, Psychometric properties, Situational Self-Awareness, Postpartum women

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INTRODUCTION

Self-awareness has been considered a major treatment for psychological distress and a road to self-improvement for psychologically healthy people by practitioners and researchers. In general, the concept of "self-awareness" refers to a person's ability to be aware of both their thoughts and feelings and their interaction with others (1,2). The theoretical notion of self-awareness can be operationalized in a variety of ways depending on the study question. Consider the contrast between situational self-awareness and dispositional self-awareness suggested by personality - based psychologists (3). In addition to health and wellbeing, self-awareness has a substantial impact on all aspects functioning. (4,5). Situational self-awareness is a natural process in which we compare our daily situations to our internalized ideals, adopting appropriate changes to eliminate discrepancy (6). By contrast, dispositional self-awareness refers to a person's attribute tendency to think on and contemplate through their own psychological mechanisms and internal states, as well as their connections with others (7). Nevertheless, this difference has been contested, with much more contemporary researchers demonstrating that public and private self-consciousness are subdomains of self-awareness instead of discrete types of self-awareness (1).

The specific association between self-awareness and outcomes such as psychological well-being depends on which of the various measurements of this situational

self-awareness is used (8). As a measure of private self-consciousness, Grant, Franklin, and Langford developed the Self-Reflection and Insight Scale (9) to examine internal state awareness. The Mindful Attention Awareness Scale evaluates individual mindfulness that has been used to establish broad favorable associations between awareness and social - emotional competence and performance (3). The Situational Self-Awareness Scale (SSAS) was used to cross-validate four standard laboratory methods to measure public and private self-awareness in people over time and across different situations. The SSAS should be beneficial for studying self-awareness and, more broadly, for assessing hypotheses that assume self-focus as a mediating or moderating variable. Due to the transient nature of self-awareness, the SSAS taps only whether a person is self-aware at a given time. As there are currently no measures available in Indonesia to examine the concurrent validity of SSAS; thus, this study aimed to adapting cross-culturally the SSAS questionnaire in Indonesian postpartum women.

MATERIALS AND METHODS

In this study, iterative mixed approaches were used to carry out the instrument's translation, validation, and reliability testing. Qualitative and quantitative approaches used in cross-cultural research using translated instruments, such as participant feedback, pilot tests, expert panels, and cognitive interviews (10)

Sample
Participants had to be at least 18 years old, postpartum women, and capable of reading and writing well. More variables and indicators complicate sample size calculations for confirmatory factor analysis (CFA) (11). Some research suggests a sample size of 5-10 people per item (12). This study included 310 postpartum women (response rate=88.6%). This study included postpartum women who visited a general hospital in Indonesia's prenatal and pediatric clinics.

Data collection
IRB approval was granted for this study (0135/KEPK STIKEP PPNI JABAR IX 2021). Online surveys were used to avoid direct contact while data was being gathered due to the COVID-19 pandemic. A gift card was provided as a thank you for their time and participation, and they were made aware of the goals of the study and how it would be conducted.

Instrument
SSAS was developed by (13). The SSAS can be used to analyze naturally occurring oscillations in public and private self-awareness. A total of 9 items measures private, surrounding, and public self-awareness. A seven-point scale ranged from 1 (strong disagreement) to 7 for each item (strongly agree). A higher score denotes greater situational self-awareness. Following a Principal Components Analysis with varimax rotation, the 31 items were reduced into three factors, which accounted for 44% of the total variation in the data.

Phase I: Translation Process and Cross-Culture Adaptation
The Indonesian SSAS questionnaire was adapted for use among postpartum women following the guideline developed by (14). Linguistic experts, two multilingual translators, one with a PhD in nursing from an international university, translated the instrument into Bahasa Indonesian first (T1). Two multilingual translators were involved in the second step of merging the first translations step (T1 and T2). T-12 was renamed as a result of expert agreement. With the original English version, a translator used the T-12 version to re-translate the questionnaire into English. Experts in psychometrics, healthcare, linguistics, and back-and-forward interpreters were invited in the fourth stage for expert panel review. The expert committee decided that the English and Indonesian versions should be semantically, idiomatically and experientially, and conceptually, identical. Equivalence between languages and cultures can be measured using this 5-point Likert scale (5-completely culturally relevant to not 1-culturally relevant). Overall item clarity and cultural relevancy were assessed across all respondents using this classification approach. These percentages were 91.2% and 93.5%, respectively.

We utilized the Content Validity Index to evaluate the translated instrument's content, relevance, cultural relevancy, and appropriateness (15). Three nursing faculty members and two clinical practitioners were invited to review the questionnaire in Bahasa. Each question on the questionnaire was given a numerical value by a group of experts who were supposed to review and score it. The preliminary final instrument was scored on a Likert scale of four points (1-irrelevant to 4-extremely relevant). The CVI was calculated for each individual item (16). The CVI was calculated using Aiken's V formula $V = s / [n (c-1)]$ (17), where V is the Aiken validity coefficient, s is the rating scale's value minus 1, c is the rating scale's highest score, and n is the total number of experts. A CVI of 0.70 or higher was considered significant (18)

Phase II: Validation
Construct validity
To describe the sample's characteristics, descriptive statistics were used in the analysis. The factor structure of SSAS was determined using confirmatory factor analysis. RMSEA, SRMR, and CFI are measurement fit indices (19). If the root mean square error is less than 0.06 and the standard deviation less than 0.08, it's considered a good fit. For an excellent fit, the CFI

should be greater than 0, whereas for an acceptable fit, the CFI should be lower than 0.08. (20). In this study, Pearson correlation analysis were employed to examine the correlations between items (21).

Phase III: Reliability
Reliability is the degree to which a measurement is devoid of errors (22).

Internal consistency
Internal consistency is a concept that relates to "the degree to which elements are connected" (22). It was determined using Cronbach's alpha coefficient (23). This has been accomplished for the entire instrument as well as the various areas; 0.70–0.90 indicates strong internal consistency, while 0.70–0.90 indicates poor internal consistency.

Test-retest
The 310 women took the test and the retest. The time between the initial application of the instrument and the second application of the instrument was fifteen days. The intra-class correlation coefficient was used to examine the results of the initial and second tests (ICC). Indicators of high confidence are those above 0.9, while those between 0.75 and 0.90 suggest moderate; those between 0.5 and 0.75 suggest low, and those less than 0.5 suggest poor reliability (24).

RESULTS

About 310 pregnant and postnatal women were subjected to psychometric testing at a general public hospital, which included both prenatal and postnatal clinics. The mean age was 31.56 years (standard deviation: 5.37 years). The majority of participants had completed their secondary education but were unemployed or earning less than the regional minimum wage (Table I).

Content validity results
The CVI values ranged from 0.87 to 1.00. The lowest CVI score was 0.87 for one item (numbers five), while the highest CVI score was 1.00 for items two and four (Table S1). It was concluded from this that the instrument used fulfilled the content validity test requirements.

Confirmatory factor analysis results
The Pearson correlation coefficients ranged between the nine items from 0.412 (p<0.05) to 0.611, which demonstrated sufficient independence in the items (Table II).

CFA has shown that the three-factor model has adequate fitness factors, using five commonly reported fitness statistics, RMSEA=0.048, SRMR=0.071 and

Table I : Demographic characteristics

Demographics	Confirmatory sample
	N=310, (%)
Age (years old), Mean ± SD	31.56±5.37
Educational level	
Secondary and below	134 (43.2)
Above secondary level	176 (56.8)
Working status	
Employed	125 (40.3)
Unemployed	185 (59.7)
Monthly income	
Below minimum regional salary	170 (54.8)
Above minimum regional salary	140 (45.2)

Table II : Empirical Data Correlation Matrix of SSAS (n=310)

Items	1	2	3	4	5	6	7	8	9
1	0.453**								
2	0.458**	0.533**							
3	0.437*	0.422**	0.561**						
4	0.501**	0.439*	0.405*	0.450*					
5	0.437**	0.537**	0.367*	0.565**	0.452**				
6	0.611**	0.425**	0.621*	0.439**	0.554*	0.424**			
7	0.432**	0.421**	0.576*	0.441**	0.521*	0.481**	0.440**		
8	0.516**	0.453**	0.426*	0.457**	0.553*	0.452**	0.427**	0.434**	
9	0.419**	0.445**	0.516*	0.438**	0.528**	0.463**	0.415**	0.422**	0.412**

Note: Correlation between raw survey scale score values using the Pearson correlation coefficient. * $p<0.05$; ** $p<0.001$.

CFI=0.79. Figure 1 depicts the two-factor model with squared multiple correlation (SMC) values. Each factor had a standardized factor loadings greater than 0.4, ranging from 0.42 to 0.69 (Figure 1). The loadings on all indicator variables were more outstanding than 0.30, which is considered significant (25,26). The latent variables have been used as the proportion of the variance represented by a relating variable latent per index variable (25) to measure the reliability. SMC was calculated for all indicator variables, with the highest being 0.453 and the lowest being 0.362.

Reliability

The Cronbach alpha for the Indonesian SSAS was 0.748, which was a good result. Cronbach's alpha values for the domain was 0.721 (private awareness), 0.762 (surrounding awareness), and 0.696 (public awareness) (Table III). The test-retest using intraclass correlation showed 0.78 95% CI=0.62-0.85), indicating that the SSAS was a reliable tool.
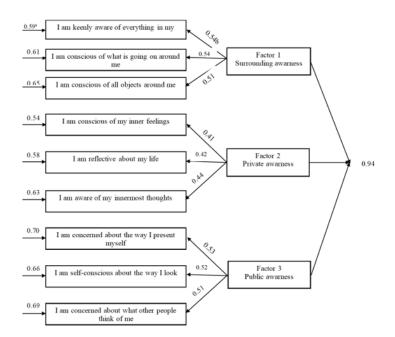

Figure 1 : The SSAS-Indonesian Measurement Model for the Three-Factor Model. a: Measurement Error b: Standardized Factor Loadings.

Table III : Cronbach's alpha: total scale and sub-scale

SSAS	Total item	Cronbach alpha
Private awareness	3	0.721
Surrounding awareness	3	0.762
Public awareness	3	0.696
Total	9	0.748

Note: SSAS: Situational Self-Awareness Scale

DISCUSSION

The current study is the first to translate and validate the SSAS in Indonesian, employing a sample of Indonesian postpartum women. The SSAS possessed favorable psychometric qualities, including satisfactory internal consistency, test-retest reliability, and factor analysis-determined construct validity. This discovery corroborates the findings of the initial investigation (13). Additionally, the study's findings suggest that the SSAS structure of hope is appropriate for use with postpartum women from a variety of cultural backgrounds, including low- and middle-income countries. The SSAS, with its favorable psychometric features, is an invaluable instrument for doing research and developing programs in Indonesian healthcare settings. The SSAS could be used to examine the effect of programs aimed at increasing awareness and improving health outcomes at the system level, such as improving the quality of healthcare and professional development (27), smartphone apps (28), and strategic planning enhancements (29). It is crucial to recognize that situational self-awareness is not a cure for health inequities and that implementing it without a resource foundation is expected to result in improved health outcomes. Previous research suggests that illustrating to people the importance of awareness can amplify the impact of wellbeing and poverty-alleviation efforts (30,31), and the SSAS is a valid instrument to employ in combination with such work.

In the current work, a three-factor model was independently discovered. The three components of "public self-awareness," "private self-awareness," and "knowledge of one's immediate surroundings are separate, according to previous research (13). However, a questionnaire like the Self-Awareness Outcomes Questionnaire contains four dimensions (32). Different samples and settings may have an impact on how people define or experience self-awareness, resulting in differences in the structure of self-awareness assessment. The automatic comparison of our current behaviors to our internalized norms allows us to make corrections where necessary to reduce inconsistencies. Situational self-awareness (6). Having the ability to distinguish between public and private self-awareness is critical since the psychological and behavioral repercussions of these two states are distinct.

Limitations

The study's design has to be taken into consideration. To begin with, this study only included postpartum women in its sample, which was drawn from a convenience sample. As a result of the non-probability sampling, future research may have to be conducted in other Indonesian contexts to better represent the overall population. Furthermore, the results could have been tainted by response bias. It is possible that respondents may have inflated their responses in the SSAS due to social bias, which happens when individuals answer questions with answers that are more socially acceptable. This risk was mitigated by administering the survey in private areas and ensuring that respondents had no prior knowledge of survey enumerators before answering to the questionnaire. The enumerators were trained to read and reread every question whenever respondents requested clarification on the meaning of research questions, so that enumerators' possible varying interpretations did not bias replies.

CONCLUSION

The SSAS is a valid and reliable instrument for assessing situational self-awareness in Indonesia. Additionally, the study demonstrates that cross-cultural adaptation and validation of situational self-awareness are possible, and the method used can serve as a foundation for future changes in low-resource settings. Due to its strong psychometric features, SSAS can be used to generate relevant evidence that aids in evaluating health programs for Indonesian postpartum women. Additional research should be performed to modify and test the SSAS for use with additional samples and social contexts in order to confirm the observed factor consistency. This current study on the psychometric properties of the SSAS should be used to strengthen future research on the ability to assess and influence situational self-awareness in low- and middle-income countries, enabling more robust evidence-based projects to impact situational self-awareness and health outcomes.

ACKNOWLEDGEMENT

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