

Cultural adaptation, translation and validation of Sinhala and Tamil versions of Mental Health Literacy Scale

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Abstract

Background

Mental Health Literacy (MHL) refers to the “knowledge and beliefs about mental disorders that help their recognition, management, or prevention”. It is a key determinant of mental health. Although several tools are available to assess MHL, commonly used methods like vignette interviews are time-consuming and lack a scale-based scoring system. Most available tools lack psychometric data, and none measure all attributes of mental health literacy. The Mental Health Literacy Scale (MHLS), a 35-item comprehensive questionnaire, was developed to address these issues. Currently, there are no validated scales for Mental Health Literacy in Sri Lanka.

Aims

This study aimed to culturally adapt, translate, and validate MHLS into Sinhala (MHLS-S) and Tamil (MHLS-T), thus filling the gap for a suitable tool to evaluate MHL in Sri Lanka.

Methods

Two bilingual experts independently carried out

forward and backward translations. Cultural adaptation was conducted using the Delphi method. A multidisciplinary panel performed face and content validation. Reliability was assessed using a test-retest approach. The same questionnaire was administered to a sample of 25 purposely selected university students over a two-week interview.

Results

All experts rated all the items in the questionnaire in both Sinhala and Tamil between 7 and 9. The experts' suggestions were incorporated into MHLS-S, and there were no suggestions for questions in MHLS-T. Reliability values for MHLS-S and MHLS-T were above 0.9.

Conclusion

The MHLS-S and MHLS-T attributes showed excellent reliability and validity in measuring mental health literacy among the Sinhala and Tamil-speaking populations in Sri Lanka.

SL J Psychiatry 2025; 16(2): 28-31

Introduction

Mental health literacy is the knowledge and beliefs of mental disorders which aid their recognition, management or prevention (1). However, it is far more comprehensive than the definition suggests, encompassing components that help identify mental illness, ways of finding mental health information, knowledge about risk factors, causes of mental illness, available professional help, and attitudes that promote appropriate help-seeking. One of the key determinants of mental health is mental health literacy. It can potentially improve not only individual health but also population health (2).

There are several tools to assess mental health literacy. However, many difficulties exist with the current mental health literacy rating scales (3). A vignette interview is a commonly used tool to evaluate mental health literacy (1). Nonetheless, it is time-consuming and lacks a scale-based scoring system. Most available tools robust psychometric data, and none of them measure all attributes of mental health literacy (3).

The Mental Health Literacy Scale (MHLS) is a 35-item comprehensive questionnaire developed to address the above shortcomings. The scale evaluates knowledge across various areas of mental health, help-seeking, and

attitudes towards mental health. It was first developed in Australia by Casey et al. in 2015 (4). The scale has demonstrated good content, and structural validity, as well as internal and test-retest reliability among the Australian residents in the sample where it was tested.

Rating scales cannot be adequately utilized if not validated for culture and the respective language. The lack of a validated rating scale may also contribute to the lack of data on mental health literacy. Therefore, validation of the tool is crucial for researchers studying mental health literacy.

Therefore, the objectives of this study are to culturally adapt, translate, and validate MHLS for the Sinhala-speaking population (MHLS-S) and the Tamil-speaking population (MHLS-T) in Sri Lanka.

Methods

The forward-backwards translation method was employed to translate MHLS into Sinhala and Tamil. Forward translation was carried out independently by two bilingual experts, whose mother tongues are Sinhala and Tamil, respectively, and who are also fluent in English. They each translated the original English version of the MHLS scale into Sinhala and Tamil. Conceptual equivalence was prioritized over literal translation.

Two additional experts proficient in Sinhala, Tamil, and English translated the previously prepared Sinhala and Tamil versions back into English. Another expert, skilled in both languages, compared these versions with the original English one for linguistic similarity. For areas of confusion, the entire panel of translators engaged in discussion and conducted back-and-forth retranslations to reach consensus.

The Delphi process was employed to culturally adapt the translated tools. Two expert panels were used for the Sinhala and Tamil versions, each comprising two Consultant Psychiatrists, a Consultant Community

Physician, a Consultant in Medical Education, and a health Psychologist/Senior Lecturer in Health Psychology. The responses of agreement were scored on a '0' ('not suitable at all') to '9' ('extremely suitable') point scale. Additionally, they were asked to suggest any extra items or areas they considered relevant for measuring mental health literacy in Sri Lanka. All items in the questionnaires for both Sinhala and Tamil languages were rated 7 to 9 by all experts.

The judgmental validity was evaluated through face and content validation by a multidisciplinary panel consisting of five representatives from the target population (university students), who were independent of the panels involved in the translation and cultural adaptation. They were shown the culturally adapted tool to assess the likelihood that it produces information of real relevance to what was intended to be measured (face validity), and to determine whether the tool appropriately measured all component elements. This process was conducted independently for the Sinhala and Tamil versions during a focus group discussion.

The reliability of the scale for this research group was evaluated through test-retest reliability. After two weeks, the same questionnaire was administered to a sample of 25 purposely selected university students, and the reliability was analysed using the Intraclass Correlation Coefficient (ICC). ICC values below 0.5 were regarded as poor reliability, between 0.5 and 0.75 as moderate reliability, from 0.75 to 0.9 as good reliability, and above 0.90 excellent reliability (5).

Results

All experts rated all the items in the questionnaires in both Sinhala and Tamil between 7 and 9. The experts' suggestions were incorporated into MHLS-S, and there were no suggestions for questions in MHLS-T. Reliability values for MHLS-S and MHLS-T were above 0.9.

Results are summarized in Table 1.

Table 1. Reliability values of the scales

	Category of scores (Total MHLS/Attributes)	Intraclass correlation coefficient	95% Confidence Interval		Sig(p)
			Lower bound	Upper bound	
Total MHLS Attributes		0.994	0.986	0.997	0.000
	Recognition of disorders	0.985	0.965	0.993	0.000
	Knowledge on how to seek mental health information	0.982	0.959	0.992	0.000
	Knowledge about gender being a risk factor	0.931	0.844	0.970	0.000
	Knowledge on self-help methods	0.959	0.906	0.982	0.000
	Knowledge on seeking professional help	0.955	0.898	0.980	0.000
	Attitudes towards mental illness and mentally ill patients	0.997	0.993	0.999	0.000

Discussion

This study aimed to culturally adapt and validate the Sinhala and Tamil versions of the Mental Health Literacy Scale (MHLS-S and MHLS-T) for use in the Sri Lankan context. The translation process adhered to internationally accepted guidelines, including forward and backwards translation, synthesis, and expert review. All items in both versions received high ratings for clarity and relevance, ranging from 7 to 9 on a 9-point scale, indicating excellent content validity. Minor revisions recommended by experts were incorporated into the MHLS-S, while the MHLS-T required no modifications.

The original MHLS, developed in Australia, has demonstrated strong psychometric properties, including good internal consistency, structural validity, and test-retest reliability. In the present study, the reliability of the total MHLS and its six subscales was excellent. The overall Intraclass Correlation Coefficient (ICC) for the total score was 0.994 (95% CI: 0.986-0.997, $p < .001$), indicating exceptional test-retest stability over a two-week period. Subscale ICCs ranged from 0.931 (knowledge about gender as a risk factor) to 0.997 (attitudes towards mental illness), all of which were comfortably above the accepted threshold of 0.70 for good reliability. These figures surpass those reported in several international validations. For example the Japanese and Chinese adaptations of the MHLS reported Cronbach's alpha values between 0.76 and 0.89, and ICCs from 0.77 to 0.79 (7,8). The higher ICCs observed in this present study suggest particularly strong measurement stability and internal consistency in the Sinhala and Tamil versions.

The highest reliability was observed in the attitude's subscale (ICC=0.997), indicating a strong level of internal agreement on attitudes towards mental illness in the Sri Lankan context. Conversely, the lowest – but still excellent – ICC was recorded in the domain assessing knowledge about gender as a risk factor (ICC=0.931). This may reflect greater variability in cultural perceptions of gender and mental health, pointing to an area for further qualitative investigation.

Overall, the findings indicate that both the MHLS-S and MHLS-T are psychometrically sound tools for assessing mental health literacy in Sri Lanka's two major language groups. The superior reliability metrics observed in this study, compared to those in high-income countries, underscore the effectiveness of the cultural adaptation process. These tools can be effectively used in both research and public health initiatives to improve mental health literacy and reduce stigma among the Sri Lankan population.

Future research should focus on examining the factor structure of the translated scales using exploratory and confirmatory factor analyses, as well as on assessing

convergent and discriminant validity by correlating MHLS scores with related constructs such as help-seeking behaviour, stigma, and mental health outcomes.

Strengths and limitation

This study presents several notable strengths. It addresses a significant gap by culturally adapting and validating the MHLS for the Sinhala and Tamil languages. The translation and cultural adaptation processes were conducted using a standard process that employed forward-backwards translation and the Delphi method with a multidisciplinary panel of experts. Both face and content validity were assessed with expert and layperson input, ensuring the tool's relevance and acceptability. Psychometric properties were excellent, with Intraclass Correlation Coefficients (ICCs) exceeding 0.9 for all domains, surpassing those reported in validations from other countries.

However, the study has limitations. Reliability testing was conducted with a relatively small and homogeneous sample of 25 university students, which limits the generalizability of the results. Broader population groups, including older adults and individuals from rural or less literate backgrounds, were not included. Factor analysis and assessment of convergent, discriminant, and criterion validity were not performed, leaving questions about the scale's structural and predictive validity. Future research should aim to validate the scale in more diverse populations and explore its relationships with related constructs such as help-seeking behaviours, stigma and mental health outcomes.

Conclusion

The MHLS-S and MHLS-T attributes showed excellent reliability and validity in measuring MHL among the Sinhala and Tamil-speaking populations in Sri Lanka.

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