



■ Original Article

A Reliability Study of the Malay Version of the Malaysian Ministry of Health's Adolescent Client Satisfaction Questionnaire among Adolescents Attending Health Clinics in Northeastern Malaysia

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Background: The need for client feedback in assessing healthcare services is widely recognized. However, little is known about the satisfaction of adolescent clients utilizing healthcare services in Malaysia. To the best of our knowledge, there is no validated instrument to measure the satisfaction of adolescent clients attending health clinics in Malaysia. This cross-sectional study aimed to determine the reliability of the Malay version of the Malaysian Ministry of Health's Adolescent Client Satisfaction Questionnaire among adolescents attending health clinics in northeastern Malaysia.

Methods: A cross-sectional study was conducted in January 2019 among adolescents aged 10–19 years attending four designated health clinics in the northeastern state of Peninsular Malaysia. The test for Cronbach's α was performed to determine the internal consistency reliability.

Results: There were a total of 85 adolescent clients involved in this study. The mean age of respondents was 15.6 years. The majority of respondents were female, Malay, students, and had attained a secondary level of education. The mean total satisfaction score was 78.35. The internal consistency reliability according to the Cronbach's α of the domain was 0.854, which is considered highly reliable. The corrected item-total correlation for the domain was acceptable as it was ≥ 0.4 .

Conclusion: The Malay version of the Malaysian Ministry of Health's Adolescent Client Satisfaction Questionnaire has excellent internal consistency reliability. Therefore, it may be recommended as a tool to measure the satisfaction level among adolescents attending health clinics in Malaysia.

Keywords: Reliability; Malay Version; Adolescent; Patient Satisfaction; Malaysia

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INTRODUCTION

The World Health Organization (WHO) has defined adolescents as a population group aged between 10 and 19 years, which can be further categorized into early, middle, and late adolescence.^{1,2} Adolescence is a time of opportunity, but also one of risk. It presents a window of opportunity because actions could be taken during this period to set the stage for healthy adulthood and to reduce the likelihood of problems in the years that lie ahead. For instance, prevention of cardiovascular diseases of adulthood can be achieved through the development of healthy eating and exercising habits in adolescence. However, it is also a time when mortality and morbidity is increased due to injuries, substance abuse, nutritional problems, high-risk behavior, mental health issues, and sexual and reproductive health issues.³

Due to burgeoning health issues among adolescents, adolescent health services focus on catering to acute healthcare needs, responding to emerging health needs, and managing chronic health conditions.⁴ The most common problem faced by many health facilities worldwide is the underutilization of health services by adolescents. This is due to a number of reasons—a lack of knowledge on the part of adolescents; legal, cultural, and logistical barriers; high costs; and most prominently, poor quality of clinical services and unwelcoming services.⁵ Recognizing that adolescents have specific healthcare needs and face various barriers in seeking and receiving healthcare, WHO has introduced adolescent-friendly health services and developed criteria for how health services can be made youth-friendly.⁵

In response, the Malaysian Ministry of Health decided to strengthen its provision of adolescent-friendly health services by incorporating the WHO-defined criteria in all healthcare facilities nationwide since 2009.² In addition, the Malaysian Ministry of Health also developed the Adolescent Clients' Satisfaction Questionnaire in 2009, suited to all age categories of adolescents in Malaysian settings to measure the satisfaction level of adolescents utilizing healthcare facilities in Malaysia. This specific questionnaire for adolescent satisfaction was incorporated as Appendix 7 in the "Engaging the adolescent module using HEADSS framework" published by the Malaysian Ministry of Health in 2009.² The questionnaire was developed and validated by a panel of experts in the Ministry of Health comprising of public health physicians, family medicine specialists, pediatricians, child psychologists, and paramedics.² As the national language of Malaysia is Malay and English has been widely used by the Malaysian population (English Proficiency Index score of 59.32%),⁶ the Adolescent Client Satisfaction Questionnaire was developed into both English and Malay versions.² Apart from the availability of bilingual versions, other advantages include brevity and simplicity, as it contains only five questions. The scales are applicable in research, clinical practice, school health settings, and in the community population.

However, despite advocacy by the Ministry of Health to use this questionnaire to assess the satisfaction level of adolescents attending healthcare facilities in Malaysia, there has not yet been a well-published reliability study of the questionnaire. Therefore, this study

aimed to determine the reliability of the Malay version of the Malaysian Ministry of Health's Adolescent Client Satisfaction Questionnaire among adolescents attending health clinics in northeastern Malaysia to advocate it more extensively and confidently in all healthcare facilities in Malaysia.

METHODS

This study was conducted in Kelantan state, situated in the north-east of Peninsular Malaysia. Consent from the Malaysian Ministry of Health was sought to use this questionnaire from the "Engaging the adolescent module using HEADSS framework" publication and validate the Malay version. It consists of an adolescent report that measures the satisfaction level of adolescents aged ten to nineteen. This questionnaire has a single satisfaction domain containing five items that assess (1) rapport between the healthcare provider and adolescent, (2) effectiveness of healthcare provider in approaching the adolescent, (3) confidentiality and privacy of treatment or counseling session, (4) compliance of the adolescent to follow-up sessions, and (5) promoting health services to peer. The questionnaire uses a 5-point response scale (1, very low satisfaction; 5, very high satisfaction). Items are cumulatively scored and converted to percentages so that a higher percentage indicates a higher satisfaction level (instrument in Appendix 7 in the "Engaging the adolescent module using HEADSS framework").²

A cross-sectional study was conducted in January 2019 among adolescents attending four randomly selected health clinics in Kelantan. The inclusion criteria were Malaysian adolescents aged 10 to 19 years old who attended the recruited health clinics. Adolescents who were unable to understand the Malay language were excluded from this study.

The sample size of internal consistency for the Cronbach's α was calculated in an iterative process using Stata ver. 14.0 for Windows software (Stata Corp., College Station, TX, USA). For a domain with five items, with the expected Cronbach's α at 0.8 and the lower bound of Cronbach's α at 0.73 with a 95% confidence interval, and an additional 20% drop-out rate, the required sample size was 85. A multistage sampling method was used for adolescent recruitment. Initially, four health clinics were randomly selected out of 281 clinics in Kelantan. Then, 85 adolescents were proportionately sampled based on average daily adolescent attendances in the clinics. At the clinic level, a systematic sampling method was applied to select the adolescents in which every third person of attending adolescents was selected.

During the data collection, the adolescents together with their parents or guardians had the study rationale explained to them and informed consent was obtained before they answered the self-administered questionnaires. The authors were present during the data collection to ensure any doubts or enquiries were clarified.

We used IBM SPSS Statistics ver. 22.0 (IBM Corp., Armonk, NY, USA) for data entry and analysis. The demographic profiles of the adolescents were described using the mean, standard deviation (SD), frequency, and percentage. We examined the mean and SD of the single

domain to assess the item analysis. To determine the internal consistency reliability of the domain, the analysis for Cronbach's α was performed. The item's item-total correlation was assessed. A Cronbach's α >0.7 was deemed to show acceptable internal consistency reliability.^{7,8)}

This study was approved by the Medical Review and Ethical Committee from the National Institute of Health, Malaysian Ministry of Health (NMRR-18-2838-44398 [IIR]) and by the Research and Ethics Committee, Universiti Sains Malaysia (USM/JEPeM/18100582).

RESULTS

There were a total of 85 adolescents involved in this study. Their mean age was 15 years (SD=2.44). More than half of the respondents were female, and the majority of the respondents belonged to the Malay race. A substantial proportion of the respondents attended formal education until secondary school and most of them were students. Details are shown in Table 1.

The mean total satisfaction score was 78.35 (SD=14.96). The internal consistency reliability based on the Cronbach's α of the satisfaction domain was 0.854. In general, the corrected item-total correlation for the domain was acceptable as it was ≥ 0.4 . A detailed analysis is shown in Table 2.

Table 1. Sociodemographic characteristics of adolescents included in the study (n=85)

Characteristic	Value
Age (y)	15.60±2.44
Gender	
Male	32 (37.6)
Female	53 (62.4)
Race	
Malay	72 (84.7)
Others	13 (15.3)
Education level	
Primary	11 (12.9)
Secondary	59 (69.4)
Tertiary	15 (17.7)
Occupation	
Student	79 (92.9)
Working	6 (7.1)

Values are presented as mean±standard deviation or number (%).

DISCUSSION

This study reveals the preliminary reliability of the Malay version of the Malaysian Ministry of Health's Adolescent Client Satisfaction Questionnaire in measuring the satisfaction level of adolescents attending health clinics in Malaysia. The results showed excellent internal consistency, with a Cronbach's α value of 0.854 in the satisfaction domain. It is suggested that a Cronbach's α of 0.7–0.8 denotes excellent internal consistency.^{7,8)} A comparison of the internal consistency of a similar questionnaire is impossible since this was the first validation study for the Malaysian Ministry of Health's Adolescent Client Satisfaction Questionnaire.

Regarding its usefulness in a cross-country comparison of adolescent clients' satisfaction questionnaire, good internal consistency (exceeded 0.7) was also reported for the American English version of adolescents' satisfaction questionnaire.⁹⁾ A similar finding was also observed in the validation study for the Swedish version of the adolescents' satisfaction questionnaire, in which Cronbach's α for the total score was 0.95, indicating excellent internal consistency reliability.¹⁰⁾

In general, the corrected item-total correlation for the domain in this study was acceptable as it was ≥ 0.4 . Two validation studies in the United States also reported a similar finding—all items met or exceeded the 0.4 standard for the corrected item-total correlation.^{9,11)}

The satisfaction level of adolescents in our study was poor compared to the study in Sweden, as indicated by a lower mean of the total score. Much older adolescents (aged 16 to 24 years) were included in the Swedish study. Better comprehension of the items among the older group of adolescents in the Swedish study might have affected their satisfaction level, as proven by Litt and Cuskey¹²⁾ in 1984, who reported that a higher satisfaction score was associated with older adolescents.

The present findings in this reliability study have several potential limitations. Test-retest reliability was not performed. No comparison was analyzed between adolescents attending health clinics and adolescents attending different settings such as a hospital, school health setting, or community setting. In addition, the sample size in this study was relatively smaller than that in other standard reliability studies,⁹⁻¹¹⁾ which might affect the external validity of the findings. Therefore, we recommend a future study with larger sample sizes comparing the findings between different types of settings, including adolescent clients in hospital and outreach settings; additionally, test-retest analysis

Table 2. Scale descriptive, internal consistency reliability score, and corrected total item correlation

Domain/items	Mean±standard deviation	Corrected total item correlation	Cronbach's α
Satisfaction domain			
Total score	78.35±14.96		0.854
Items			
Item 1: Are you comfortable with the interviewer (healthcare provider)?		0.473	
Item 2: Do you understand what he/she is talking about?		0.718	
Item 3: Do you feel comfortable in sharing information with him/her?		0.735	
Item 4: Would you like to come again next session for follow-up?		0.729	
Item 5: Would you recommend your friend that you think is having problems to come to this clinic?		0.694	

should be carried out.

Since the adolescents were all coming from a single state within peninsular Malaysia, it is uncertain whether the findings may be generalized to the rest of Malaysia. However, the standard Malay language was used, and it is likely that there are no major differences with other states in Malaysia. The Malay language is also widely used in other nations of Southeast Asia region (Indonesia, Singapore, and Brunei). Therefore, this Malay version may benefit a large number of adolescents in this region.

In conclusion, the Malay version of the Malaysian Ministry of Health's Adolescent Client Satisfaction Questionnaire has excellent internal consistency reliability. Given the absence of any well-published reliability studies on this particular questionnaire since its advocacy by the Ministry of Health, it may now be widely recommended as a tool to measure satisfaction level among adolescents attending health clinics in Malaysia.

CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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