

TRANSLATION AND CONTENT VALIDITY TESTING OF THE THAI VERSION OF THE KIDSCREEN-52 FOR CHILDREN AND ADOLESCENTS

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ABSTRACT

This study aimed to translate the KIDSCREEN-52 for Children and Adolescents into Thai and to examine content validity. The forward-backward translation procedure was conducted following international guidelines. A panel of three experts in occupational therapy, pediatrics, and psychologist assessed the content validity of the translated items. The Item-Objective Congruence (IOC) index was calculated for each item. All 52 items demonstrated IOC values ranging from 0.66 to 1.00, which exceeded the acceptable threshold (≥ 0.50). The results indicated that the Thai version of the KIDSCREEN-52 for Children and Adolescents has satisfactory content validity for evaluating health-related quality of life (HRQOL) in children and adolescents. Further psychometric testing is recommended to confirm reliability and validity.

Keywords: KIDSCREEN-52, Translation, Content Validity, IOC, Health-Related Quality of Life

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INTRODUCTION

Background and Challenges

Quality of life (QOL) is a multidimensional construct that encompasses physical, psychological, social, and environmental well-being (Revicki et al., 2014). In children, the concept of health-related quality of life (HRQOL) is particularly important, as childhood represents a critical developmental stage where physical growth, emotional regulation, and social relationships are rapidly evolving. Assessing HRQOL provides insights that extend beyond clinical indicators, capturing lived experiences such as school participation, peer interactions, and family relationships, all of which strongly influence children's health and development. Such assessments can also reveal hidden issues, including stress, exposure to violence, or bullying, that may not be apparent through traditional clinical evaluation but have long-term impacts on mental health (KIDSCREEN Group, 2006; Rajmil et al., 2019).

Globally, several standardized HRQOL measures have been developed for children, among which the KIDSCREEN-52 for Children and Adolescents is one of the most widely used. Designed for children and adolescents aged 8-18 years, it was created through a European collaborative project and has been validated in multiple countries (Ravens-Sieberer et al., 2005). The instrument covers diverse dimensions of well-being and exists in both self-report and parent-proxy versions, ensuring perspectives from both children and caregivers. Its robust psychometric properties, established through classical test theory and item response theory, have made it a benchmark tool in pediatric HRQOL research. Currently, KIDSCREEN-52 has been translated into more than 30 languages, enabling cross-cultural comparison and application across different settings (Ravens-Sieberer et al., 2008, 2014).

In Thailand, some HRQOL tools have been translated and adapted, including the Pediatric Quality of Life Inventory (PedsQL™) and condition-specific measures such as those for cerebral palsy and asthma (Poachanukoon et al., 2006; Sritipsukho et al., 2013; Tantilipikorn et al., 2013). While these instruments provide useful insights, they have limitations in covering the full spectrum of children's health and psychosocial functioning. Importantly, a validated Thai version of the KIDSCREEN-52 has not yet been developed, despite its international recognition and comprehensive coverage of HRQOL domains.

To address this gap, the present study aimed to translate the KIDSCREEN-52 for Children and Adolescents for children and adolescents into Thai and to examine its content validity through expert review. Establishing a culturally adapted version is a crucial step to ensure the tool reflects the lived experiences of Thai children and adolescents, supporting both research and practice in child health and development.

Objective: To translate and examine content validity of the KIDSCREEN-52 for Children and Adolescents

METHODS

Study Design

This study was designed to translate KIDSCREEN-52 for Children and Adolescents into Thai and to explore content validity.

1) Instrument

The KIDSCREEN-52 for Children and Adolescents is a standardized instrument designed to assess health-related quality of life (HRQOL) in children and adolescents aged 8-18 years. It consists of 52 items across 10 dimensions, including physical well-being, psychological well-being, moods and emotions, self-perception, autonomy, parent relations and home life, social support and peers, school environment, financial resources, and bullying. Both self-report and proxy-report versions are available; in this study, the children's self-report version was used (Ravens-Sieberer et al., 2005).

2) Translation Procedure

The translation followed international guidelines for cross-cultural adaptation of self-report measures (Beaton et al., 2000; Wild et al., 2005). Two bilingual translators independently performed forward translations into Thai. A synthesis version was prepared by the research team and reviewed by an expert committee to resolve semantic and cultural discrepancies. Two independent translators, blinded to the original instrument, performed back-translations into English. The back-translated version was compared with the original to ensure conceptual equivalence.

3) Expert Panel

The expert panel played a crucial role in ensuring the cultural and conceptual validity of the instrument. It consisted of three professionals representing occupational therapy, pediatrics, and child psychology fields that collectively encompass physical, emotional, and social aspects of child development. The occupational therapist had over five years of clinical experience with children with developmental disabilities, the pediatrician specialized in child health and preventive care, and the psychologist had expertise in emotional and behavioral assessment in youth populations. Their combined perspectives provided a comprehensive evaluation of the instrument's relevance to Thai children's lived experiences of health and quality of life, reinforcing the credibility of the content validity findings.

4) Content Validity Assessment

Each expert independently assessed all 52 items for relevance to HRQOL constructs using a 3-point rating scale (-1 = not relevant, 0 = uncertain, +1 = clearly relevant). Item-Objective Congruence (IOC) indices were calculated following Rovinelli and Hambleton's (1977) method. An IOC value of ≥ 0.50 was considered acceptable for retention (Polit & Beck, 2006).

5) Data Analysis

IOC values were computed for each item and summarized by dimension. Items with low IOC scores would be revised or removed. However, no items required elimination in this study. Results were presented as ranges and mean IOC values across dimensions.

RESULTS

The forward-translation and back-translation of the KIDSCREEN-52 for Children and Adolescents were successfully completed following the recommended translation process. Minor linguistic adjustments were made to ensure cultural appropriateness without altering the meaning of the original items. For illustration, Table 1 presents selected examples of forward-backward translation from three different dimensions.

All 52 items were evaluated for content validity by a panel of three experts. The Item-Objective Congruence (IOC) indices ranged from 0.66 to 1.00, with mean values across dimensions exceeding the recommended threshold of 0.50 (Polit & Beck, 2006). No items required removal or major revision. Table 2 summarizes the IOC values by dimension.

Table 1 Example of forward-backward translation (selected items)

Item (Original)	Forward Translation (Thai)	Backward Translation (English)	Adjustment
Physical Activities and Health: “Have you felt full of energy?”	คุณรู้สึกกระลับกระลงหรือไม่?	Did you feel energetic?	No Change
General Mood: “Have you felt sad?”	คุณเคยรู้สึกเศร้าหรือไม่?	Have you felt sad?	No Change
About Yourself:			

Item (Original)	Forward Translation (Thai)	Backward Translation (English)	Adjustment
Have you been worried about the way you look?	คุณเคยกังวลเกี่ยวกับรูปลักษณ์ภายนอกของตันเอง หรือไม่?	Have you been worried about your appearance?	คุณเคยกังวลเกี่ยวกับรูปร่างหน้าของตันเองหรือไม่?

Table 2 Summary of IOC values by dimension

Dimension	Number of Items	IOC range	Consideration
Physical Activities and Health	5	1.00	Acceptable
Feelings	6	1.00	Acceptable
General Mood	7	0.66-1.00	Acceptable
About Yourself	5	0.66-1.00	Acceptable
Free Time	5	1.00	Acceptable
Family and Home Life	6	0.66-1.00	Acceptable
Money Matters	3	1.00	Acceptable
Friends	6	0.66-1.00	Acceptable
School and Learning	6	0.66-1.00	Acceptable
Bullying	3	1.00	Acceptable

SUMMARY

The Thai version of the KIDSCREEN-52 for Children and Adolescents demonstrated excellent content validity, with IOC values well above the accepted threshold. The results confirm that the translated instrument is linguistically appropriate for use in Thai children and adolescents.

DISCUSSION

This study aimed to translate the KIDSCREEN-52 for Children and Adolescents and to examine its content validity. The forward-backward translation process ensured both semantic and conceptual equivalence with the original version. Minor linguistic modifications were made to enhance cultural appropriateness and clarity in the Thai context. For example, the item “*Have you felt full of energy?*” was adapted to “*คุณรู้สึกกระฉับกระเฉงหรือไม่?*” instead of “*คุณรู้สึกมีพลังงานเต็มเปี่ยมหรือไม่?*” to better reflect common Thai expressions of physical well-being. These adjustments ensured that the Thai version of the KIDSCREEN-52 accurately captured local interpretations of well-being without altering the intended construct.

The high IOC values (0.66-1.00) across all dimensions confirmed strong agreement among experts regarding the relevance of each item, exceeding the recommended threshold of 0.50 (Polit & Beck, 2006; Rovinelli & Hambleton, 1977). These findings indicate that the Thai version of the KIDSCREEN-52 for Children and Adolescents demonstrates excellent content validity.

The results are consistent with previous cross-cultural adaptation studies of the KIDSCREEN-52 for Children and Adolescents in other languages, such as Japanese, Greek, Korean, and Turkish versions, which also reported high content validity and cultural adaptability (Ravens-Sieberer et al., 2008, 2014). Importantly, the adaptation of the KIDSCREEN-52 for Children and Adolescents into Thai fills a gap in available HRQOL instruments for children. While other Thai HRQOL tools exist (e.g., PedsQL™), they do not capture all dimensions of children’s quality of life as comprehensively as the KIDSCREEN-52 for Children and Adolescents (Sritipsukho et al., 2013; Tantilipikorn et al., 2013; Poachanukoon et al., 2006).

LIMITATIONS

While this study successfully established the translation of the KIDSCREEN-52 for Children and Adolescents Thai version with excellent content validity, certain limitations should be acknowledged. The research primarily focused on translation procedures and expert-based evaluation of content validity; therefore, further psychometric testing including reliability, concurrent validity, and known-group validity is required before the instrument can be widely implemented in research and clinical practice. Such validation will ensure that the Thai KIDSCREEN-52 for Children and Adolescents not only demonstrates linguistic and cultural equivalence but also possesses strong measurement properties across diverse populations. Moreover, the reliance on expert opinion, although rigorous, may introduce subjective bias, and the absence of cognitive interviews with children limits understanding of how respondents interpret particular items. Future studies should expand the sample to include children from varied socioeconomic and clinical backgrounds and employ advanced statistical analyses, such as confirmatory factor analysis, to enhance the generalizability and precision of the instrument.

CONCLUSION

The Thai version of the KIDSCREEN-52 for Children and Adolescents was successfully translated, demonstrating excellent content validity with IOC values ranging from 0.66 to 1.00. This indicates that the instrument is linguistically and culturally appropriate for assessing health-related quality of life in Thai children and adolescents. The adapted questionnaire can serve as a valuable tool for clinicians, educators, and researchers in both healthcare and community settings. Future studies should focus on examining reliability and another's validity to further establish its psychometric robustness.

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Data Availability Statement: The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

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