

ORIGINAL ARTICLE

MALAYSIAN PARENTS' FEEDBACK ON THREE PROXY-RATED ASSESSMENTS USED IN PEDIATRIC REHABILITATION

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ABSTRACT

Assessing a child's functional abilities and limitations can provide useful information for occupational therapists to develop individualised intervention plans. Usually paediatric assessments require parents to rate their child on different domains of health and functional performance. To do so, parents need to be able to understand the assessment content and instructions to rate their child accurately. The primary purpose of this study was to examine if parents in Malaysia understood the content and instructions of three assessments: the Sensory Profile Caregiver Questionnaire (SP), the Sensory Processing Measure Home Form (SPM) and the Behaviour Rating Inventory of Executive Function Parent Form (BRIEF). The secondary purpose was to examine perceptions about the clarity and relevancy of each of the items in each assessment. Thirty parents, recruited using convenience sampling, completed a survey about the assessments. In general, the parents indicated no problems or only minor problems in understanding the content and instructions of all three assessments. The parents also provided comments to improve the clarity of the assessment items. Comments were primarily related to the terms or jargon language used. Elaborations of the terms or jargon were later provided based on the parents' comments. All three assessments were identified as relevant to be used in the Malaysian population. The results suggest that all three assessments can be used by parents and are suitable to be implemented by occupational therapists working with children in Malaysia.

Keywords: Parent-rated assessments, Malaysian children, Face validity, Cross-cultural relevancy

INTRODUCTION

In occupational therapy and other health care disciplines, assessment is used to understand and identify a child's strengths, abilities, interests and problems¹ for intervention planning². Assessment can be performance-based and therapist rated, or proxy-rated by teachers or parents, to provide information on the child's function³. In paediatric rehabilitation, assessments are used in describing children's behaviours and sensory integration functions which require parent rating. This includes the Sensory Profile Caregiver Questionnaire (SP)⁴, the Sensory Processing Measure Home Form (SPM)⁵, and the Behaviour Rating Inventory of Executive Function Parent Form (BRIEF)⁶. The SP reports children's sensory experience leading to behavioural outcomes. The SPM assesses processing function, praxis and social participation in children. The BRIEF reports behaviours and executive function of children either in home or in school settings.

Parent-rated assessments are suitable strategies to obtain information about children as parents have detailed understanding of their children and regular opportunities to observe their behaviour. The process of completing

assessments also enables parents to become more aware of their children's abilities, needs and problems. Eiser and Morse⁷, in a systematic review of 14 studies, support the use of parent-rated assessments since parents are well positioned to judge the performance of their children. Input from parents can also be beneficial to obtain a more in-depth assessment of the child and support informed decision making and intervention implementation^{8,9}. As such, this collaborative process can ensure that the therapy implemented is meaningful and beneficial for both the child and parents.

To ensure parents can accurately complete the standardised assessments, it is imperative that they understand the content and instructions of the assessments. Most standardised assessments are developed for use in English speaking countries (i.e. United States, United Kingdom and Australia)¹⁰ including the three assessments. In Malaysia, English is a second language which is compulsory in the Malaysian education system starting in primary school and continuing in secondary school¹¹, and university institutions. Even though English is common in Malaysia, there may be concepts, sentences, jargon or terms used in the parent-rated assessments that may not be understood, or interpreted differently, by

people living in Malaysia. Additionally, previous studies have found that children's cognitive, social and emotional functioning varies depending on their culture, environment, values and experiences¹². Consequently, it is important to ensure that the SP, SPM and BRIEF are culturally relevant as this may affect perceptions during assessment rating¹³. The objective of this study was to identify: i) the parents' understanding of assessment instructions and content; and ii) the clarity and relevancy of each item in the assessment reflecting the behaviours of their children. In this study, clarity relates to the questions being clear or easy to understand. Relevancy relates to items being suitable to describe children in a Malaysian context. Internal consistencies of the three assessments were also reviewed.

METHODS

Participants

Thirty Malaysian parents from the Selangor region in Malaysia with typical children attending pre or primary school, aged 6 to 12, were recruited using convenience and snowball sampling through a network of occupational therapists in the region.

Instruments investigated for validity

The three self-rated assessments used in this study were the SP⁴, SPM⁵ and the BRIEF⁶. All three assessments are not available in Malay version. The SP contains 125 items which are grouped into three major sections: i) sensory processing; ii) modulation; and iii) behavioural and emotional responses. The SP is rated on a 5-point Likert scale ranging from 1= always, 2= frequently, 3= occasionally, 4= seldom and 5= never. Internal consistency of SP is α : 0.47-0.91 with a test-retest reliability of ICC: 0.65-0.76 and validity: established content, construct, convergent and discriminant validity. The SPM Home Form consists of 62 items and is rated on a 4-point Likert scale consisting of 1= always, 2= frequently, 3= occasionally and 4= never. Internal consistency of SPM is α : 0.75-0.96 with a test-retest reliability of ICC: ≥ 0.94 and validity: established content and construct validity. The BRIEF Parent Form consists of 86 items designed to assess behaviours, executive and cognitive function. Assessment items are rated on a 3-point Likert scale of 1= never a problem, 2= sometimes a problem and 3= often a problem. Internal consistency of BRIEF is α : 0.80-0.98 with a test-retest reliability of ICC: 0.76-0.85 and validity: established content and criterion validity.

Procedure

Parents who agreed to participate provided written consent and their home address. The

three paediatric assessments and associated surveys were then mailed to their home address. The survey was developed by adopting the content validation survey described in Liuet al.¹⁴ and was based on the classical test theory. The content validation survey looked at the relevance and representativeness of the items in the Interact Short Form for people with profound intellectual disabilities using a 5-point Likert scale.¹⁴

The survey enabled parents to comment on the assessments. A four-point Likert scale was used to assess the parents' overall understanding of the instructions and content of each of the three assessments. Rating options were: 1= not at all a problem; 2= minor problem with understanding; 3= moderate problem with understanding; and 4= serious problem with understanding. Space was provided to enable parents to list assessment items that they felt lacked clarity or were not relevant to describe the behaviours of their child. Parents were asked to return the completed survey within two weeks, via pre-paid envelopes, to the primary researcher.

Ethical approval

Ethics approval was obtained from the Western Sydney University Human Ethics Committee (H10816) in Australia and the Economic Planning Unit, Prime Minister's Department (UPE: 40120019/3128) in Malaysia.

Data analysis

Descriptive data using frequencies (n) and percentages (%) were produced to assess understanding of the assessment instructions and contents. Participants provided recommendations to improve the clarity and relevancy of the assessment items through comments provided in the form. The internal consistency of SP, SPM and BRIEF was explored using the Cronbach's alpha (α) coefficient.

RESULTS

Participants' demographic data

Thirty parents participated in the study (Table 1). All 30 parents responded to the survey. The average age of parents was 41.4 years (SD = 5.0). The majority of parents were female (83.3%), Malay (93.3%), with almost 40% having a bachelor degree or higher level education. The average age of the children was 8.6 years (SD = 1.9). There were twice as many boys than girls. Twenty-five of the children were attending primary school (83.3%) and five were at pre-school. Of the 30 children recruited, the internal consistency of the three assessments using the Cronbach's alpha (α) for the SP, the SPM and the BRIEF were 0.92, 0.82 and 0.87 respectively.

Table 1: Participant demographics (N=30)

	Parents			Children	
		N (%)	Mean (SD)		N (%)
Age Range	21-30 years	0		6 - 12 years	30 (100.0)
	31-40 years	14 (46.6)	41.43 (5.04)		8.63 (1.88)
	41-50 years	16 (53.4)			
Gender	Male	5 (16.7)			20 (66.7)
	Female	25 (83.3)			10 (33.3)
Ethnicities	Malay	28 (93.3)			28 (93.3)
	Chinese	1 (3.3)			1 (3.3)
	Indian	1 (3.3)			1 (3.3)
Education/ School Type	Pre-school				5 (16.7)
	Primary				25 (83.3)
	Secondary	11 (36.7)			
	Diploma	7 (23.3)			
	Bachelor	10 (33.3)			
	Degree	0			
	Masters	1 (3.3)			
	Degree				
	Doctorate	1 (3.3)			

Ratings on assessment instructions and content
Overall, parents were able to understand the instructions and content of the three assessments with approximately 50% reporting only minor problems. No parent reported moderate or serious difficulty with any aspect of the assessment instructions or content (Table 2).

For the SP, 53.3% of parents reported no problems in understanding the assessment instructions, and 43.3% reported no problems in understanding the content. Fifty percent of parents had no problems in understanding the instructions and content of the SPM. For the BRIEF, 53.3% of the parents had no difficulties understanding the instructions and 50% had no problems with the content.

Clarity and relevancy of the assessments item
Four comments were made by the parents on the clarity of assessment items in the SP. Parents identified that the phrases 'tune-in' (Item 6), 'roughhousing' (Item 19), 'sluggish' (Item 74) and 'on the go' (Item 90) were difficult to understand (Table 3). No comments were made regarding the relevancy of the SP items suggesting the items were appropriate to describe children in Malaysia.

One comment was made about the clarity of the SPM items. This related to the term 'teeter-totters' (Item 56) (Table 3). No comments were made regarding the relevancy of the SPM, which indicated the appropriateness of the assessment to describe Malaysian children.

Five comments were made by the parents on the clarity of the BRIEF items. These were 'follow-through', (Item 35), 'blurts', (Item 49), 'sloppy',

(Item 60), 'couch potato', (Item 71) and 'fidgety', (Item 81) (Table 3). No comments were made regarding the relevancy of the items within the BRIEF.

DISCUSSIONS

Malaysian parents identified minimal difficulties in using the three paediatrics assessments: the SP, SPM and BRIEF. Only minor problems were established regarding the understanding of the instructions and the content of all three assessments evaluated. The problems identified were typically related to the clarity of the assessments involving terms or jargon used in the assessment items. These terms may be interpreted differently by parents in different cultures and where English is not the first language of the parents. However, jargon used to describe activities and behaviours can be easily addressed by providing examples to enhance their understanding of the terms. This finding is consistent with previous work by Mackenzie¹⁵ who identified that English language terms used are minor issues in assessment delivery and can easily be adapted and defined. For example, feedback from the current study was used to provide further definition of the terms (i.e. the term 'roughhousing' was explained as to be involved in a rough kind of play). Parents expressed no concerns about the relevancy of the assessments items to describe their children. This indicates that the three assessments were perceived as relevant and culturally suitable to describe the behaviour and performance of the children which is an important consideration for the cultural utility of assessment tools¹³.

Table 2: Participants' feedback on assessments

Item		Not at all a problem	Minor Problem	Moderate Problem	Serious Problem
Sensory Profile Caregiver Questionnaire	Instructions	53.3%	46.7%	-	-
	Content	43.3%	56.7%	-	-
Sensory Processing Measure Home Form	Instructions	50.0%	50.0%	-	-
	Content	50.0%	50.0%	-	-
Behavior Rating Inventory of Executive Functioning Parent Form	Instructions	53.3%	46.7%	-	-
	Content	50.0%	50.0%	-	-

Table 3: Explanation of the terms/jargon used to improve clarity and relevance to Malaysian parents

Assessments	Item number	Terms/Jargon used in original assessment	Explanations to provide for the Malaysian parents
Sensory Profile Caregiver Questionnaire	6	Tune in	To pay attention to someone or something
	19	Roughhousing	To be involved in a rough kind of play
	74	Sluggish	To display little movement or activity or slow in performing or respond to stimulation
	90	On the go	To proceed or to go on with certain activities
Sensory Processing Measure Home Form	56	Teeter totters	A playground equipment also known as seesaw or in Malay language 'jongkangjongket'
Brief Behavior Rating Inventory of Executive Function Parent Form	35	Follow through	To continue with something until it is complete.
	49	Blurts	To utter or say something suddenly and impulsively
	60	Sloppy	Untidy or lack of neatness
	71	Couch potato	Being lazy or spending too much time sitting or lying down
	81	Fidgety	A movement of someone nervous or restless or uneasy or unable to relax

Previous studies have also confirmed the relevancy of these assessments in other cultures. Kayihan, Akel¹⁶ developed a Turkish version of the SP and tested the reliability and validity for Turkish children. Another study by Benjamin, Crasta¹⁷ validated the use of SP with children with developmental disorders in India.

The BRIEF has also been validated and translated in other countries including Netherlands¹⁸, Norway¹⁹, Portugal²⁰ and France²¹. According to Huizinga, Smidts¹⁸, the Dutch version of the BRIEF was found to be suitable to be implemented in the Dutch population. A study by Roth, Erdodi²² showed the scoring of the BRIEF across the United States was similar to other English-speaking countries. The current study

supports the finding of Roth et al²² about the utility of the BRIEF in other cultures.

The English versions of the paediatric assessments were not problematic for the parents who participated in the study. This may be due to the parents' ability to understand English, as English is the second language and used as the formal mode of communication in Malaysia^{11,23}. Further, as Malaysia is a multi-ethnicity population with various spoken languages, it is relevant to focus on the use of English language that is internationally accepted. This was supported by Romli, Mackenzie²⁴ suggesting that English instruments from an international context are feasible to be administered in Malaysia.

LIMITATION

The study only included 30 parents in the Selangor region and, consequently, cannot be considered representative of the Malaysian population. Furthermore, most parents in this study had a high level of education, which could explain why the included parents experienced no major problems in using the English version of the assessments. However, their English literacy level should be properly assessed before they participated in the study.

RECOMMENDATION

Future research can include more participants and all regions in Malaysia. In addition, future studies can translate and validate the assessments into 'Bahasa Malaysia' for wider use in Malaysia. Hence, future studies can also investigate the psychometric properties of the assessments that have not been established internationally (i.e. SP: criterion validity, responsiveness, floor and ceiling effects and interpretability; SPM: criterion validity, convergent validity, responsiveness, floor and ceiling effects and interpretability; BRIEF: construct validity, convergent validity, responsiveness, floor and ceiling effects and interpretability).

CONCLUSIONS

This study suggests that the English versions of the SP, SPM and BRIEF may be applicable to be used with Malaysian parents who understand written English. The minor challenges experienced in the language used for some assessment items can be addressed by providing descriptive examples. It can be concluded that all three assessments are applicable to be used and rated by parents with similar characteristics as the sample in this study. These findings can assist Malaysian occupational therapists in the assessment stage to identify the functional abilities and limitations of children and use this information to develop individualised intervention plans.

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COMPETING INTEREST

All authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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