

Cross-cultural adaptation and reliability of Child-Initiated Pretend Play Assessment (ChIPPA)

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Abstract

Background. Play is an indication of a children's development. **Purpose.** Organize a culturally adapt the Child-Initiated Pretend Play Assessment to Brazilian population. **Method.** Translation and cultural adaptation procedures consisted of translation, synthesis, back translation, author's approval, and pretest of the assessment. For the pretest, 14 typically developing children were assessed. Was evaluated the use of play materials, duration of the assessment, and reliability. **Findings.** Play materials and duration of the assessment were appropriate for Brazilian children. Analysis of intra-rater reliability showed good agreement ranging from 0.90 to 1.00. Inter-rater reliability showed good to moderate agreement for five items ranging from 0.76 to 0.59. Four items showed chance to poor agreement ($\rho = -0.13$ to 0.50). **Implications.** Results of the pretest indicate the Brazilian version of the ChIPPA is potentially useful for Brazilian children. ChIPPA training in Portuguese in Brazil with play observation feedback is recommended to improve inter-rater reliability.

Abrégé

Description. Le jeu est un indicateur du développement de l'enfant. **But.** Créer une version du Child-Initiated Pretend Play Assessment (ChIPPA) adaptée culturellement à une population brésilienne. **Méthodologie.** Les procédures de traduction et d'adaptation culturelle comportaient les étapes de la traduction, la synthèse, la traduction inversée, l'approbation de l'auteur et le test préliminaire de l'évaluation. À l'étape du prétest, 14 enfants ayant un développement type ont été évalués. L'utilisation de matériel ludique, la durée de l'évaluation et la fiabilité de l'évaluation ont été évaluées. **Résultats.** Le matériel ludique et la durée de l'évaluation étaient adéquats pour des enfants brésiliens. L'analyse interjuges a montré une bonne concordance allant de 0,90 à 1,00. La fiabilité interjuges a montré une concordance de bonne à modérée pour cinq items, allant de 0,76 à 0,59. Quatre items ont montré une concordance s'étendant de concordance aléatoire à faible concordance ($\rho = -0,13$ à 0,50). **Conséquences.** Les résultats du prétest indiquent que la version brésilienne du ChIPPA pourrait être utilisée auprès d'enfants brésiliens. Pour améliorer la fiabilité interjuges du ChIPPA, les auteurs recommandent que les examinateurs suivent une formation en portugais sur le ChIPPA au Brésil, accompagnée d'une rétroaction face à l'observation du jeu chez les enfants.

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Within occupational therapy practice, it is not uncommon for therapists to apply assessments developed in a different culture to clients in their own culture. For example, Brown, Rodger, Brown, and Roever (2005) reported that Canadian and Australian therapists extensively used assessments developed in the United States of America. Health professionals frequently use assessments developed in other countries without considering the cultural relevance (Reichenheim & Moraes, 2007), and this use of assessments from other cultures may result in cultural disadvantage to clients (Anastasi & Urbina, 1997). Cultural disadvantage occurs when an assessment that was developed to reflect behaviour in one culture is used to assess an individual within another culture. The result can be that an individual might be assessed as having a problem or delay when in fact that individual can meet responsibilities and perform tasks as expected within his or her own culture (Anastasi & Urbina, 1997). Cultural disadvantage in assessment testing was recognized as early as 1910 (Anastasi & Urbina, 1997) and is relevant today as social and political developments occur across the globe and therapists' case loads become more multicultural (Rasmussen, Lloyd, & Weilandt, 2005). An example of this is research by Hickey, Froude, Williams, Hart, and Summers (2000), who found that, even with Australian language changes, the American Miller Assessment for Preschoolers (Miller, 1988) may not accurately reflect development performance of Australian children. Mainstream mental health assessment and screening tools continue to be used to evaluate Indigenous people without appropriate consideration of cultural differences, resulting in test bias, inappropriate application of normative data, or depletion of test construct validity and reliability (Thomas, Cairney, Gunthorpe, Paradies, & Sayers, 2010). Cultural adaptation of assessments for minority groups within a country may also be necessary, for example, within the United States of America norms were developed for African American and Hispanic children for the Draw a Person (Naglieri, 1988) assessment (Anastasi & Urbina, 1997). The principle constructs and assumptions of an assessment are not the same across cultures or subcultures, and, therefore, changes are needed when assessments from one culture are used in another culture (Reichenheim & Moraes, 2007).

Cross-cultural multicenter studies encourage cultural translation and adaptation of assessments in all health professions (Benetton & Lancman, 1998). The World Health Organization (1995) recommends cultural translation and adaptation of existing assessments to create new tests. Such a process allows communication between different researchers and comparison of data collected worldwide after ensuring cross-cultural validity. It is faster and cheaper than developing new assessments (Anastasi & Urbina, 1997). Parameters to consider when culturally adapting an assessment are language, test content (such as understanding the purpose of the test materials), and speed (time taken for test) (Anastasi & Urbina, 1997).

A specific method to reach equivalence between the original and the adapted versions of an assessment, called cross-cultural adaptation, is necessary for an assessment to be used in another culture. The term "cross-cultural adaptation" encompasses a process that looks at both language (translation) and cultural adaptation issues of one instrument for use

in another setting (Beaton, Bombardier, Guillemin, & Ferraz, 2000).

There are different theoretical approaches and methods for cross-cultural adaptation, and they share many similarities (Reichenheim & Moraes, 2007). This paper presents a study on the cross-cultural adaptation of an Australian play assessment to a Brazilian population. The use of Beaton et al.'s (2000) stages for cross-cultural adaptation of assessments is well accepted within the Brazilian research community, and clear to implement (see Reichenheim & Moraes, 2007; Souza, Magalhães, & Teixeira-Salmela, 2006); it was the methodology chosen for this study.

Beaton et al. (2000) suggested that the cross-cultural adaptation process of an assessment consists of six stages. These stages are (1) early translation, when two translators with specifically identified skills on the topic to be cross-culturally adapted translate the content into the new language; (2) translation synthesis, in which the two translations are merged and overseen by a mediator; (3) back translation to the original language by two independent translators; (4) analysis committee, in which the translators from the first and third stages work on one final translation; (5) the author reviews the adapted version of the assessment and gives feedback to the analysis committee; (6) pretest, when the cross-cultural adapted version is trialed with a group of people from the culture of interest.

Play assessment within a cultural context

In Brazil, cross-cultural adaptation for play assessments has occurred for the assessment protocols of the *Modèle Ludique* ("Evaluation of the Play Behavior" and "Initial Interview with Parents") (Sant'Anna, Blacovi-Assis, & Magalhães, 2008) and the Revised Knox Preschool Play Scale (Pacciullo, Pfeifer, & Santos, 2010). These play assessments give information on the play abilities of children with physical handicaps and developmental levels of play, respectively. Neither of these assessments measure pretend play or the child's ability to self-initiate play ideas. The Child-Initiated Pretend Play Assessment (ChIPPA) (Stagnitti, 2007) is an assessment of the quality of a child's ability to self-initiate pretend play. Self-initiated pretend play is associated with increased language skill, ability to negotiate with peers, increased ability to understand concepts, use of symbols in play, and self-organization of play time (Stagnitti, 2009).

Within pediatric occupational therapy practice in Brazil, a child's play ability is the focus of therapy intervention because play is valued as important in itself and is understood to be an indication of children's development, their learning about themselves, their world, and an expression of who they are (Cruz & Emmel, 2007; Cruz & Pfeifer, 2006). The ChIPPA provides information on the elaborateness and complexity of a child's play and also measures a child's ability to self-initiate play ideas, sustain play for up to 30 minutes (for 4- to 7-year-old children), and demonstrate cognitive play skills such as logical sequential thought, use of abstract symbols in play (e.g., a box as a car), and the child's play style (e.g., narrative play style or mathematical play style). In Australia, research with the ChIPPA has found that children's scores on the ChIPPA are related to their social competence (Uren & Stagnitti, 2009), dis-

criminate between typically developing children and children with pre-academic problems (Stagnitti, Unsworth, & Rodger, 2000), and are predictive of children's language and narrative retelling of a story (Stagnitti & Jellie, 2006).

The Health Ministry of Brazil recommends that health care services to children should be alert not only to aspects of growth but also to aspects of development, which include behaviours related to maturation, psychomotor performance, social interaction, and psychic functioning, thus integrating socialization, language, and play (Brasil Ministério da Saúde, 2002). Since the research on the ChIPPA reflected these values, adapting the ChIPPA for use in Brazil was regarded as potentially useful for occupational therapy practice. The two aims of the research presented in this paper were to translate and culturally adapt the ChIPPA for a Brazilian population and then to test the intra- and inter-rater reliability of the Brazilian version of the ChIPPA with Brazilian children.

Method

Cross-Cultural Adaptation

Beaton et al.'s (2000) method for cross-cultural adaptation includes five stages related to translation and adaptation of the assessment, with the sixth stage involving testing with a small sample (called pretest). These six stages in the cross-cultural adaptation of the ChIPPA are explained below.

First stage: Early translation.

Translation of the assessment from English to Portuguese was carried out by two translators: one was an occupational therapist and the other was an English teacher. The occupational therapist was an experienced pediatric therapist with over 20 years' experience. She belonged to a research group that had experience in the cross-cultural adaptation of other pediatric assessments to Brazil.

Second stage: Translation synthesis.

Stage Two was the synthesis of both translations into one, which was called the common translation. As the Portuguese translations had some minor variations, an independent observer was included in this stage to mediate variations in the translations. The observer was a final-year undergraduate occupational therapy student who was bilingual and had previous experience with pediatric assessment. The common translation was decided by the two translators after the observer's feedback on any differences in the translations. Guidelines used to determine the common translation were the translated text had to be grammatically accurate Portuguese and Portuguese words appropriate to pediatric practice.

Third stage: Back translation to the original language.

Two English-speaking native translators who had English as their first language and who had not read the original text translated the assessment (the common translation from Stage 2) from Portuguese back into English. This stage is to evaluate the new Portuguese version.

Fourth stage: Analysis committee.

This committee was composed of the two translators from the first stage and the two translators from third stage who put together the common Portuguese version and the English backtranslated version of the assessment and designed its pre-final version. The pre-final version was in English and was based on consensus of the four translators.

Fifth stage: The author reviews the adapted version of the assessment.

The pre-final version was sent to the author of the ChIPPA assessment. The author checked the English pre-final version to see if she agreed with it and to give permission for Brazilian professionals to use it.

Sixth stage: Pretest.

The assessment is applied to a small sample in a quasi-experimental design. For this stage, the assessment was examined for the combination of play materials for Brazilian children, the duration time of the testing, and reliability.

Thus, the six stages (Beaton et al., 2000) incorporate the parameters of language (Stages 1 to 5) and test content and speed (Stage 6). These items are recommended by Anastasi and Urbina (1997) when culturally adapting an assessment.

Pretest Trial

Participants.

The sample was obtained using convenience sampling. Fourteen children with no motor, sensorial, or cognitive impairment participated in the trial. There were five males and nine females. The children were recruited from day-care centres, elementary schools, and preschools that were located in two cities in Brazil. One of the cities had a population of 50,000 (a city in a rural area), and the other city had a population of over 600,000 (urban area). Both cities were in the northwest of São Paulo State, 300 km from São Paulo city. The children were from middle class. Parents signed an informed consent allowing their children to participate in the trial. The children were divided into two groups; the first group consisted of 4 three-year-old children (2 girls and 2 boys) and the second group consisted of 10 four- to seven-year-old children (7 girls and 3 boys).

Instrument.

The Child-Initiated Pretend Play Assessment (ChIPPA) (Stagnitti, 2007) is a standardized norm-referenced assessment developed in Australia that has reported reliability (Stagnitti & Unsworth, 2004; Swindells & Stagnitti, 2006) and validity (Stagnitti et al., 2000; Uren & Stagnitti, 2009). Assumptions underlying the ChIPPA are that play is valuable in itself, it is a cognitive skill, and it is child initiated. It evaluates four- to seven-year-old children's ability to self-initiate and sustain elaborate and complex pretend play for 30 minutes and for three-year-old children, 18 minutes. It examines pretend play both in terms of conventional-imaginative and symbolic play, which are categories established by the author of the ChIPPA (Stagnitti et al., 2000). Conventional-imaginative play is play

in which a child plays with commercially available toys and relates the toys to each other (for example, the child puts animals in a truck, pushes the truck, and takes the animals out of the truck). Symbolic play is play in which a child plays with unstructured objects and relates these objects to each other while imposing meaning onto them (for example, a box, a tin and a cone are balanced on each other to make a lighthouse and a stick that represents a person “walks” to the lighthouse to check the light). To administer the assessment, the examiner and child sit on the floor in front of a “cubby” house, which is made of two adult chairs with a sheet thrown over them to resemble a type of “play house.” In Brazil, “cubby house” translates as “cabana,” and setting up such a structure is familiar to Brazilian children. As a child-initiated assessment, the examiner invites the child to play with the play materials but does not tell the child what or how to play; he or she does not give any suggestions or directions to the child about the use of the play materials (Stagnitti, 2007). The four- to seven-year-olds have a 15-minute conventional-imaginative play session and a 15-minute symbolic play session. Each 15-minute session is divided into three five-minute segments. In the first five minutes, the play materials are introduced to the child and the child is encouraged to engage with the play materials. In the second five minutes, the examiner brings in a second doll and models five predetermined play actions as often as possible without interfering with the child’s play. During the final five minutes, the examiner ceases to model actions with the doll and, if needed, encourages the child to continue playing without giving directions on what to play.

There are three items that are scored: the percentage of pretend play actions (PEPA), which shows the child’s ability to organize play actions logically and in sequence; the number of object substitutions (NOS), which indicates the child’s capacity

to use an object and pretend that it is something else; and the number of imitated actions (NIA), which indicates whether the child has difficulty initiating play ideas and imitates the examiner’s modeled play actions (Stagnitti, 2007). Each of these items is scored for each session of the ChIPPA (see Table 1). To score PEPA, every action of the child is coded according to four categories: behavioural (nonplay actions), functional (single play actions), repetitive actions (scored when play actions are repeated without the play developing), and elaborate (functional actions that are developed into a logical sequence of actions, often resulting in a play narrative). PEPA is calculated as the proportion of elaborate actions over total actions. NOS is scored as the number of objects used in substitution for something else (e.g., the stick is a spoon). NIA is scored in the middle segment of each ChIPPA session and is the number of times a child copies the examiner’s play actions.

The prepublication version of the ChIPPA was used in this study. Following the ChIPPA author’s specific instructions, the play materials were based on the standard play materials, which are in the now-published Australian version of the assessment (Stagnitti, 2007). The toys for the conventional-imaginative play session for three-year-old children are shown in Figure 1. These toys are truck, trailer, dolls, farm animals, and tea set. For the four- to seven-year-old children, the play materials for the conventional-imaginative play session are shown in Figure 2. These were a truck, trailer, dolls, wrench, farm animals, and fences. The play materials for the symbolic play session are shown in Figure 3 for the three-year-olds and in Figure 4 for the four- to seven-year-olds. For the three-year-olds the play materials were boxes, tin, cone, sticks, cloth, cloth “doll”; the four- to seven-year-olds had the same play materials with the addition of three pebbles.

Table 1
The ChIPPA Items (Abbreviations and Descriptions)

Item abbreviation	ChIPPA item description
PEPA conventional-imaginative	Elaborateness of pretend play using conventional imaginative play materials
PEPA symbolic play	Elaborateness of pretend play using unstructured play materials
PEPA combined	Total score of the elaborateness of pretend play using both conventional-imaginative and unstructured play materials
NOS conventional-imaginative	Number of object substitutions using conventional-imaginative play materials
NOS symbolic	Number of object substitutions using unstructured play materials
NOS combined	Total number of object substitutions achieved throughout the play assessment using both sets of play materials
NIA conventional-imaginative	Number of imitated actions using conventional-imaginative play materials
NIA symbolic	Number of imitated actions using unstructured play materials
NIA combined	Total number of imitated actions throughout the play assessment

Note. PEPA = Percentage of pretend play actions; NOS = Number of object substitutions; NIA= Number of imitated actions

Data collection.

Ethical approval was given by the Clinical Hospital of Ribeirão Preto Medical School. Information on the study was given to local day-care centres, elementary schools, and preschools. Parents who were interested in the study gave consent for their children to be assessed and filmed. The children were evaluated in a neutral setting, such as a room in a school, with no other children around.

The ChIPPA was administered according to the manual of the ChIPPA, and each child's play assessment was filmed. Each child's filmed assessment was on an individual DVD. For reliability training, each examiner viewed the 74-minute ChIPPA Instructional DVD up to three times. The ChIPPA Instructional DVD is in English and the examiners' first language was Portuguese.

Each child's ChIPPA assessment was recorded individually following the manual administration instructions and the ChIPPA instructional DVD. The conventional-imaginative play session was administered first, followed by the symbolic play session. The ChIPPA assessments were administered by an undergraduate student of occupational therapy and supervised by a professor in occupational therapy.

Two examiners independently scored each child's filmed play assessment according to the Brazilian version of the ChIPPA guidelines. Each child's filmed play assessment was scored twice by the two examiners independently, and each examiner had a three-month interval between scoring sessions. On the second scoring session, the examiners randomized the order of the filmed play assessments. Observations were made of the children's reactions and engagement with the play materials.

Data analysis.

The translation of the ChIPPA into Portuguese followed the five stages recommended by Beaton et al. (2000). Children's reactions to the play materials and how they combined the play materials were noted. As the ChIPPA is a timed assessment, records were kept of whether each child could play for the specified duration of the assessment. Spearman's correlation coefficient was used to calculate intra- and inter-rater reliability for each item on the ChIPPA and alpha was set at 0.05 (Siegel & Castellan, 2006). Spearman's coefficient was used for a non-parametric analysis as the sample was small (Pacciuolo et al., 2010). Portney and Watkins (2000) agreement levels were used to interpret the reliability coefficients. That is, coefficients below 0.50 were regarded as poor reliability, coefficients from 0.50 to 0.75 were regarded as moderate reliability and coefficients above 0.75 were regarded as good reliability.

Results

Translation (Stages 1 to 5)

Semantic technical issues.

The "Score Sheet for 3-Year-Old Children," "Score Sheet for 4-to 7-Year-Old Children," and "Clinical Observation Sheet for 4-to 7-Year-Old Children" were cross-culturally translated from the republication version of the ChIPPA manual. Some items that were translated from English to Portuguese in the first stage

were modified in the fourth stage of the cross-cultural translation in order to achieve semantic equivalence. For example, the name of the assessment was changed after the Analysis Committee agreed on the term to obtain semantic equivalence to the title of the original version.

Ensuring clarity of meaning.

Some words in the adapted version were semantically equivalent even though they were different from the original version. For example, one word in the clinical observation sheet (original version), "developmentally," was replaced by "development" in the adapted version in English sent to the author because of the idiomatic equivalence and because the word "developmentally" does not exist in Portuguese.

On the clinical observation sheet, "play style" is one of the items, and play style is based on the pattern of scores from the ChIPPA. One of the play styles is termed "The 12-inch doll syndrome," which describes a pattern of play for girls, in particular, who score well in the conventional-imaginative play session but do not score well in the symbolic play session. All children identified with this play style spoke extensively about their Barbie® dolls (Stagnitti, 2007). The idiomatic expression "12-inch doll" after the translation into Portuguese did not make sense to Brazilian researchers, so they asked the author the correct interpretation of that expression to make a conceptual equivalence possible. The author said she was talking about a Barbie®-type doll (a 12-inch doll), which guided the researchers to the right translation.

There was an item in the clinical observation sheet (original version) related to Australian children's experiences that could not be applied to Brazilian children. The object of that item was to observe if the child used templates for his or her stories while playing, and it mentions as an example the child's telling part of the story of "Thomas, the Tank®," a story not known in Brazilian culture. This item was modified to read "The child tells part of a story and/or children cartoons." Thus, the object of the observation was maintained and could be applied to the Brazilian culture, preserving experience equivalence.

The author had a sentence that read, "The child consistently uses developmentally young play themes," which in the adapted version was replaced by a similar sentence: "The child consistently uses play themes with immature development." This modified sentence maintained the original meaning and allowed interpretation of the item for a Brazilian population.

Pretest (Stage 6)

Play materials (test content).

The toys used in the Australian version were tested for gender neutrality and developmental appropriateness (Stagnitti, Rodger, & Clarke, 1997). The conventional imaginative toys resemble a farm set. Brazil is a country strongly influenced by farming. There was discussion within the Analysis Committee about replacing the sheep in the conventional-imaginative play session because sheep are not very common in Brazil; however, Brazilian children know the animal from TV and books and so the sheep were maintained. There were no difficulties with the cross-cultural adaptation of the symbolic play materials, which



Figure 1. Play material for the conventional-imaginative session for 3-year-old children.



Figure 3. Play materials for the symbolic play sessions for 3-year-old children.



Figure 2. Play material for the conventional-imaginative session for 4- to 7-year-old children.



Figure 4. Play materials for the symbolic play session for 4- to 7-year-old children.

were clarified by a description and the explanatory ChIPPA Instructional DVD.

The reactions of the Brazilian children to the play materials indicated that they understood the purpose of the play materials for the conventional/imaginative play and could combine the toys together to create a play scene. For example, they pretended the animals were alive and placed animals in the truck to give them a ride. Boys and girls enjoyed playing with all of the toys. For example, the girls used the wrench in their play and the boys used the dolls. For the symbolic play materials, boys and girls enjoyed playing with the materials and they combined the objects to create houses, beds, tables, and eating implements for the cloth “dolls.” One child of four years combined his symbolic play materials with some toys of the conventional-imaginative play session. The manual instructions allow combination of the play materials if the child requests this and it enables the play to continue. One girl did not choose to play with the doll because her play narrative focused on the animals only.

Duration of assessment time.

All children (100%) in both age groups completed the assessment time. That is, the three-year-old children sustained their play for 18 minutes, and the four- to seven-year-old children sustained their play for the 30-minute timeframe of the

Table 2
Intra-rater Reliability Correlations

Categories		Coefficient	P
PEPA	Conventional-imaginative	0.92	0.00
	Symbolic	0.94	0.00
	Combined	0.97	0.00
NOS	Conventional-imaginative	1.00	0.00
	Symbolic	0.97	0.00
	Combined	0.95	0.00
NIA	Imaginative-conventional	1.00	0.00
	Symbolic	0.90	0.00
	Combined	0.95	0.00

Note. PEPA = Percentage of pretend play actions; NOS = Number of object substitutions; NIA= Number of imitated actions.

Table 3
Inter-rater Reliability Correlations

Categories		Coefficient	P
PEPA	Conventional-imaginative	-0.13	0.67
	Symbolic	0.59	0.003*
	Combined	0.21	0.48
NOS	Conventional-imaginative	0.76	0.002*
	Symbolic	0.54	0.05*
	Combined	0.58	0.03*
NIA	Imaginative-conventional	0.45	0.11
	Symbolic	0.50	0.07
	Combined	0.55	0.04*

Note. PEPA = Percentage of pretend play actions; NOS = Number of object substitutions; NIA = Number of imitated actions.

* Significant at the alpha 0.05

ChIPPA. Anastasi and Urbina (1997) state that the duration of an assessment should be a consideration in cross-cultural adaptation as different cultures have different tempos of daily life, including motivation to hurry and values attached to speed. In the case of the ChIPPA, Brazilian children's tempo of play was similar to that of Australian children.

Intra-rater reliability.

There was good agreement for intra-rater reliability for 7 items of the ChIPPA (0.90 to 0.97). There was perfect agreement for conventional-imaginative NOS and conventional-imaginative NIA. Table 2 shows Spearman's correlations for intra-rater agreement for each ChIPPA item.

Inter-rater reliability.

There was good agreement for 1 item and moderate agreement for 4 items (symbolic PEPA, symbolic NOS, combined NOS, and NIA) for inter-rater reliability. Symbolic NIA was not significant at $\rho = 0.50$, indicating a possible chance agreement. In 3 items there was poor agreement. Table 3 shows Spearman's correlations between two examiners for each ChIPPA item.

Discussion

If an assessment is to be applied in different cultures, its items must not only be linguistically well translated but also go through cultural adaptation in order to maintain the validity of its content (Beaton et al., 2000; Sant'Anna et al., 2008). The translation and adaptation of the ChIPPA followed the guidelines suggested by Beaton et al., (2000) and some changes were necessary after the initial translation (1st and 2nd stages) to be sensitive to the Brazilian culture. The play materials used in the Brazilian version of the ChIPPA were based on the Australian set of play materials. The Brazilian children recognised the play materials, understood the purpose of the play materials, and combined them to create play scenes. For example, the children placed animals in the truck, built fences, and incorporated the doll to drive the truck with the animals. Males and females played with all the play materials, indicating gender neutrality for the conventional-imaginative and symbolic play sessions.

Children's play with the toys related to rural themes (cows, pigs, chickens, trucks, and fences), which are part of Brazilian

children's play culture. Even children who do not have a rural experience have contact with this world through children's literature, for example with books by Monteiro Lobato which center on *Sítio do Pica-pau amarelo* (small farm); through the comic books of Chico Bento (a character of Monica's gang, who lives on a farm); or even by television programs, such as *Co-co-ri-có*, in which the boy Julio lives on a farm with his grandparents and several animals (cows, chickens, horse, parrot, etc.) that communicate verbally. Gosso, Moraes, and Otta (2007), who studied the pretend play of Brazilian children, also found that the children played with farm animals. In Gosso et al.'s study, some of the children were from São Paulo city, and in the current study children were from cities in São Paulo state. All children in the current study showed pretend play ability, combined the play materials into play scenes, and could sustain their play for the timed duration of the Brazilian version of the ChIPPA. Therefore, the ChIPPA play materials and length of assessment time were appropriate for use with Brazilian children.

Reliability is the first aspect to be investigated in a new tool (Atkinson & Nevill, 1998). Reliability is concerned with consistent results between raters and requires data to be collected under the same, or similar, conditions (Thomas & Nelson, 1996). The cross-cultural adapted Brazilian version of the ChIPPA showed good-to-perfect agreement for intra-rater reliability, indicating that raters were consistent with their own scoring. Inter-rater reliability showed lower agreement for elaborate play scores, particularly for the conventional-imaginative play. The reason for this lower reliability was raters' disagreement in the scoring of functional actions and elaborate actions. For example, one rater scored functional actions for a child lining up the animals while the other rater scored it as elaborate actions, interpreting the actions as creating a play scene. This identifies issues in training to teach raters how to distinguish functional play actions from elaborate play actions within the conventional-imaginative play session.

Other studies report good inter-rater reliability for the ChIPPA (Stagnitti et al., 2000; Swindells & Stagnitti, 2006). Swindells and Stagnitti reported that seven hours of training was given prior to the inter-rater reliability testing. Stagnitti et al. (2000) reported training the examiners for more than 20 hours for their study (personal communication, March 29, 2010). For the current study, the Portuguese-speaking examiners watched the 74-minute, English-language ChIPPA Instructional DVD up to three times. The training of examiners in this study was less than half the time of the other studies and was in a different language.

It is recommended that the Brazilian-based professional training for the ChIPPA administration and scoring be carried out in Portuguese and include feedback to examiners on their observations of a child's play. Observer training is recommended by many authors to improve reliability (Streiner & Norman, 1998). For Brazilian occupational therapists, observer training for play ability is an important part of practice. The analysis of how the child plays provides valuable information regarding cognitive, motor, and social skills, and such observations inform the development of individualised treatment plans (Pfeifer, 2009).

Study Limitations

In performing the cross-cultural adaptation of the ChIPPA, the pretest trial had a small sample. Brazil has many regions with distinct cultures in each region. Therefore, this study can only be generalised to one region of Brazil as the sample was recruited from one region and one socio-economic group. The translation process followed Beaton et al.'s (2000) stages, and even though a final-year student was used as the observer in Stage 3, this person was chosen because of her ability in languages. The prepublication version of the ChIPPA was used in the study as this was what was available at the time. The published version has a more detailed explanation of scoring, which was not available at the time of this study. The DVD used to train raters is the same as the published version. The additional detail in the published version of the ChIPPA manual will be translated and used in future training of raters.

Conclusion

The proposed stages for translation and adaptation were followed for cross-cultural adaptation of the Child-Initiated Pretend Play Assessment (ChIPPA). Brazilian children were able to combine the play materials in meaningful ways during the full play session. The pretest showed that the Brazilian version has good intra-rater reliability. Moderate to good inter-rater reliability for 5 items of the ChIPPA was found. Non-agreement for 3 items between two raters suggests that it is necessary to improve training for using the Brazilian version of the ChIPPA, with the inclusion of observer training and further explanation of scoring details. Further studies with larger samples are needed to validate the ChIPPA for the Brazilian population in different parts of the country.

This study is an important preliminary study for reliability and eventual validation of the ChIPPA for Brazilian children. The ChIPPA provides a different understanding of play compared to other available assessments as it measures how children self-initiate their play and the complexity of their play.

Key Messages

- Cultural adaptation of already existing assessments can highlight changes necessary so children are not disadvantaged by inappropriate use of assessments from another culture.
- The process used for translation of the ChIPPA was useful in understanding meaning across languages and differences between cultures that needed further refining.
- The materials and time used by ChIPPA were appropriate for Brazilian children
- Training in this assessment in Brazil is recommended for inter-rater reliability.

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