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Feature Article

An investigation of the quality of pretend play ability in children with cerebral palsy

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***Background*:** *Cerebral palsy (CP) describes a group of permanent disorders in the development of movement and posture due to non-progressive disturbances during foetal or infant brain development that can result in activity limitations, including engagement in pretend play.*

***Methods*:** *Twenty children aged four to seven years with spastic CP participated in this descriptive qualitative study. The Child-Initiated Pretend Play Assessment (ChIPPA) clinical observations were analysed from five categories: Time, Interaction with the examiner, Imitation, Theme and Story.*

***Results*:** *Seventy per cent (70%) of the children completed the assessment (Time), and 90% of children interacted socially with the examiner during the play (Interaction with the examiner). All children initiated their pretend play without requiring examiner demonstration (*Imitation*). Sixty per cent (60%) of the children were appropriate to their stage of development for* Theme*. Finally, 60% of the children set up a scenario, but did not develop a narrative (*Story*).*

***Conclusion*:** *Qualitative aspects of the children's pretend play performance were satisfactory, showing typical play indicators in all the categories, except for 'Story'. 'Story' represents more complexity in a child's pretend play ability. Therefore, a play intervention is suggested to stimulate and expand the pretend play ability of preschool children with CP.*

KEY WORDS *assessment, Cerebral palsy, occupational therapy, preschool children, pretend play.*

Introduction

Cerebral palsy (CP) is the most common cause of childhood disability and the severity of the limitations of gross motor functions in these children is highly variable, from some walking independently with or without auxiliary devices, to others who use motorised wheelchairs or need to be transported by an adult (Trabacca *et al.*, 2012). It is estimated that 80% of the children with CP have some difficulties with movement, with the type of cerebral palsy classified according to the most dominant clinical characteristic, such as, spastic, dyskinetic and ataxic (Brasil, 2013). Besides motor disorders, children with CP frequently present with disturbances of sensation, perception, cognition, communication and behaviour, and epilepsy and secondary musculoskeletal problems (Rosenbaum *et al.*, 2007).

In order to participate in different activities in their social and physical environments, children with CP need to overcome barriers in their environment (Imms, 2008). One of these barriers is motor impairment, which can create difficulties for the child in exploration of the environment and objects. Exploration is a fundamental and initial skill in the process of play and for independence in participation for daily and scholarly activities (Ciasca, Moura-Ribeiro & Tabaquim, 2006). The exploration of toys through play provides stimulus to the development of motor, social, emotional, cognitive and language skills for preschool-aged children (Cruz & Emmel, 2007). Children with CP present motor disability and may have fewer sensorimotor experiences, decreasing opportunities to play (Pfeifer, Pacciulio, Santos, Santos & Stagnitti, 2011; Silva, Cunha, Pfeifer, Tedesco & Sant'Anna, 2016).

Play is a universal (Smith, 2010) and important activity for a child and is necessary for healthy brain

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development (Nielsen, 2012). Play has been defined as a spontaneous, naturally occurring activity with objects that engages attention and interest (Lifter, Mason & Barton, 2011). Through play, children interact in different situations with toys, peers and adults, thereby stimulating competencies in motor, cognitive and social-emotional skills. Moreover, it is fundamental for children's self-understanding, learning about the world they live in and is an expression of who they are (Cruz & Emmel, 2007).

One of types of play which children engage in is the pretend play, which is a play ability characterised by three important cognitive attributes: using an object as something else, using and attributing properties to objects, and referring to absent objects or actions (Stagnitti, 2007). Self-initiated pretend play is associated with the development of cognitive skills, language skills, ability to negotiate with peers, ability to understand concepts, use of symbols in play and self-organisation of playtime (Stagnitti, 2009). The cognitive development through pretend play has been linked to self-regulation and the ability to take initiative (Nicolopoulou, Barbosa de Sá, Ilgaz & Brockmeyer, 2009). In occupational therapy, play is viewed as valuable in itself and the child's play ability should be the focus of therapy. Additionally, play is increasingly being recognised by researchers, politicians and adults in general, as evidence of intellectual achievement and emotional wellbeing (Whitebread, Basilio, Kuvalja & Verma, 2012).

Considering the importance of the self-initiated pretend play to the development of children, there is little information on the self-initiated pretend play abilities of children with CP in the literature. Pfeifer, Pacciulio *et al.* (2011) investigated the relationship between the level of motor severity and the ability to pretend play, and examined the inter- and intra-rater reliability of the data collected using the Child-Initiated Pretend Play Assessment (ChIPPA). Hsieh (2012) examined the affective expressions and imagination in children with CP as a function of ordinary versus adaptive pretend play, using the Affect in Play Scale-Brief Rating. Both of these studies consider the ability of a child to self-initiate play.

The ChIPPA is a norm-referenced standardised assessment of a child's quality of self-initiated pretend play in two play sessions. In the first session, the child's conventional-imaginative play ability is assessed by how the child uses toys such as people, animals, fences and vehicles. The second session assesses the child's symbolic play ability by how the child uses unstructured play objects such as a cardboard box, tea towel, pebbles, a piece of dowel and a cloth doll (Stagnitti, 2007).

During the assessment, the examiner scores the child's elaborate play (actions that include symbolic thinking, involve decentration and are part of a logical sequence of play actions), the object substitution (when a child uses an object in the play and represents that object as something else), and the number of imitated actions (when a child imitates the actions of the examiner) (Stagnitti, 2007). Subsequently, a Clinical Observations Form is also filled in presenting the quality of the child's pretend play (Stagnitti). The Clinical Observations Sheet is a detailed recording of clinical observations made during the play sessions, and provides detailed indicators of typical play skills and deficits in play skills (Stagnitti).

While Pfeifer, Pacciulio, *et al.* (2011) had reported pretend play ability for children with CP using the ChIPPA, the clinical observations form was not analysed in their study. The present study adds to the studies of Pfeifer, Pacciulio, *et al.* and Hsieh (2012) by describing the quality of the pretend play ability of children with CP by using the Clinical Observations form of the ChIPPA.

On the Clinical Observations form, further aspects of the quality of a child's play are noted as indicating typical play or deficits in play. For example, the items on the Clinical Observations form relate to the child's ability to play for the length of the assessment, if a story was developed in the play, or if the child engaged with the examiner. When interpreting a child's ChIPPA play scores, the clinical observations are used in conjunction with the norm scores to interpret the child's ability to self-initiate their play.

The clinical observations add knowledge about specific play behaviours that were observed in typically developing children and children with developmental issues during the development of the assessment (Stagnitti, 2007). The objective of the present study was to gather more information about the self-initiated pretend play abilities of children with CP, through analysis of the Clinical Observations form of the ChIPPA.

Methods

The aim of this study was to describe the quality of self-initiated pretend play ability of children with CP aged four to seven years, using the Clinical Observation form of the ChIPPA. This study used a cross-sectional, descriptive qualitative research design, with data collected from June 2015 to March 2016 after the Ethics approval of the institution (Protocol no. 727.276/HC-FMRP).

Participants

Twenty children aged between four to seven years with spastic CP participated in the study. Table 1 describes the background information of these children.

To determine the physical ability of the children, the Gross Motor Function Classification System – Extended and Revised (GMFCS E & R) (Silva, Pfeifer & Funayama, 2013) and Manual Ability Classification System (MACS) (Silva, Funayama & Pfeifer, 2015) were

TABLE 1: *Subjects and family demographic information*

Variables	CP (n = 20)
Age, mean ± SD (months)	63.75 ± 12.0
Minimum	48 months
Maximum	84 months
Gender (n)	
Boys	13
Girls	7
Diagnosis (%)	
Unilateral	50% (10)
Hemiplegia	50% (10)
Bilateral	50% (10)
Diplegia	35% (7)
Quadriplegia	15% (3)
GMFCS E&R	
Level I	30% (6)
Level II	50% (10)
Level III	5% (1)
Level IV	10% (2)
Level V	5% (1)
MACS	
Level I	50% (10)
Level II	35% (7)
Level III	15% (3)

GMFCS E & R = Gross Motor Function Classification System – Extended and Revised; MACS = Manual Ability Classification System.

used. They both are characterised as a five-level ordinal scale that shows, in descending order, the level of independence and functionality of children with CP.

Instrument

For the play assessment, the Child-Initiated Pretend Play Assessment (ChIPPA) was used, which was cross-culturally adapted to Brazil (Pfeifer, Queiroz, Santos & Stagnitti, 2011). The ChIPPA is a norm-referenced standardised assessment tool developed to assess the ability to self-initiate pretend play in children aged three to seven years 11 months. Its administration takes 18 minutes for three-year olds, and 30 minutes for children aged four to seven years 11 months. Both symbolic play and conventional-imaginative play are assessed within the ChIPPA. Standardised materials are used for each session. It is administered so that the child has the freedom to spontaneously develop ideas and start playing when they are ready (Stagnitti, 2007).

The ChIPPA provides information about the elaborateness and complexity of a child's play such as logical sequential thought; a child's ability to self-initiate and sustain play; and cognitive play skills such as use of abstract symbols in play (e.g. a box as a car). The pattern of scores indicates the child's play style (Pfeifer, Queiroz, *et al.*, 2011).

For the ChIPPA administration, the examiner and the child sit on the floor in front of a 'cubby house' that is made with two adult chairs and a sheet thrown over them to simulate a type of 'play house', and the examiner presents the play materials and invites the child to play without giving any instructions or directions (Stagnitti, 2007). The ChIPPA administration allows play assessment for children with physical immobility. In this study, in order to make children to feel comfortable, the therapist provided the best position to allow the child's engagement with the play materials, and when needed the child was allowed to sit on a chair in front of a table, or supports were used for the child to comfortably maintain a sitting posture on the floor.

According to the instruction manual for ChIPPA administration, there are specific administration procedures for each assessment session. For four to seven years 11-month-old children, the session is divided into two sessions of 15 minutes. Conventional-imaginative play is assessed using the toys in the first 15-minute session, and symbolic play is assessed using the unstructured play materials in the second 15-minute session. Each 15-minute session is divided into 3 × 5 minute segments. In the first 5 minutes, the child is invited to play with the toys or play materials with no other instructions; in the second five minutes, the examiner models five set play actions; and in the last five minutes, the examiner stops modelling any play actions and the child is encouraged to continue playing (Stagnitti, 2007).

The play actions during both sessions are registered in the score sheet. For each play session of the ChIPPA, the child is scored on the elaborateness of their play (called percentage of elaborate play actions – PEPA), the number of object substitutions (NOS), and the number of times a child imitates actions (NIA) (Stagnitti, 2007). There is also a Clinical Observations sheet for the ChIPPA, which allows for a detailed register of the two sessions and examiner comments to indicate whether the items were performed as Typical Indicators or Deficit Indicators of Play. These indicators (clinical observations) along with the quantitative evaluation (score sheet) contribute to the therapist's recommendations about the child's play (Stagnitti).

For this study, the items on the Clinical Observations were the focus of the child's play ability. The items on the clinical observations sheet are related to: the playtime (i.e. if the child completes the time expected in both sessions); the self-organisation of play (e.g. if the child needed the examiner to model actions in order to organise their play); if the child used play themes in a simple and repetitive way, and whether there was evidence of narrative in symbolic play or whether the narrative for conventional-imaginative play was limited and repetitive (the narrative is assessed by logical

sequential play actions, not by verbal communication); if they used the doll as an active participant in the play; if there was difficulty in extending the narrative; if they asked what to do several times; if they copied stories from books or multimedia as opposed to creating an original play story; if they engaged with the examiner; if they referred to absent objects and attributed properties to objects or personages; and if the child talked about the play as they played (Stagnitti, 2007).

Procedure

The data collection occurred in two public rehabilitation centres in a municipality of the State of São Paulo with approximately 700 thousand inhabitants. When parents attended the rehabilitation centres, they were informed about the study and invited to include their children in the study. The parents, who consented to their child's participation, signed a consent form after giving them time to read the plain language statement.

The children received treatment at these centres and were assessed on the day when they attended health professional appointments. The children were filmed individually in a neutral and quiet environment. The play assessment involves setting up a play area and is administered in such a manner that the children were not aware of being assessed.

Data analysis

The contribution of the ChIPPA Clinical Observations to play assessment provides qualitative information about the quality of the child's self-initiated play. So far, there has been no study that has analysed the clinical observations in detail with children with CP.

The ChIPPA Clinical Observation for children aged four to seven year and 11 months has 17 items which refer to the quality of a child's play. The items are scored 'yes' or 'no' which indicate if the child's play reflected 'typical indicators of play' or 'play deficits' (Stagnitti, 2007).

In the present study, the items on the Clinical Observations were placed into five categories: Time, Involvement with the examiner, Imitation, Theme and Story. Table 2 presents the clinical observations items distributed in each category.

TABLE 2: *Items on the clinical observations placed into each category*

Categories	Items from the clinical observations
Time	• The child finishes each segment of play (i.e. each three- or five-minute segment). • The child extends play.
Involvement with the examiner	• The child emotionally engages the examiner during the play sessions.
Imitation	• The child copies modelled actions to the extinction of the child's own ideas. • Child initiates pretend play ideas before the modelling segment. • The child asks what to do several times. • The child uses templates for stories during the play
Theme	• The child consistently uses developmentally young play themes. For example, the child only uses simple domestic themes in repetitive manner. • The child shows evidence of play themes in the conventional play session and the symbolic play session.
Story	• The child develops a play story after setting up a scenario. • The child has a narrative in the conventional functional play session. • The child has a narrative in the symbolic play session. • The play narrative is in short bursts. • The child uses a doll as an active participant in play. • There is evidence of reference to absent objects and property attributes. • The child brings in toys from the other set of play materials. • The child talks about the play throughout the play session.

Results

Time

For children aged four to seven years, it is expected that the child will complete the time in both sessions (15 minutes with each set of play materials for the conventional-imaginative play and for the symbolic play). For children aged four to seven years, the assessment takes 30 minutes to complete. The time of the ChIPPA is shortened when the children demonstrate that they wish to finish the play. If children finish before 30 minutes, it is considered a deficit in play and is registered as such on the Clinical Observations sheet. Children who have difficulty self-initiating and extending

their play find 15 minutes of play a long time. The symbolic play session requires more abstract thought from the child, including substitution of play materials with objects and the skill to understand the concept and the use of symbols during the play (Stagnitti, 2009), which is related to cognition and competence development (Nicolopoulou *et al.*, 2009).

Regarding the engagement in playtime, 70% of the children completed the two play sessions (conventional-imaginative and symbolic), which means that of the 20 children assessed, 14 finished every play segment (i.e. each five-minute segment of the each fifteen play session). Of the children who did not utilise all their time, the majority did not complete the symbolic play session. Moreover, 65% of the children extended their play, in general, considering both sessions. Extending play is defined as increasing time engaging in play and indicates that the child can think of play ideas and carry out these play ideas. Children who do not extend play present with difficulty in self-initiated play, instead their play presents as repetitive actions or non-play actions, for example, reproducing play actions to the point where they are 'stuck' in the play or the play was not extended (e.g. lining up all the animals continually without any overriding story or purpose).

Interaction with the examiner

The majority of children (90%) interacted socially with the examiner during the play and engaged emotionally with the examiner during play sessions, e.g. asking what to do, playing games, telling stories to the examiner, or even directing him or her to play. It is important to remember that the examiner is passive during a ChIPPA assessment with the interactions being in response to the child or encouraging the child to continue engaging with the toys or play materials. The result shows that for this category, most of the children exhibited Typical Indicators of Play expected for their age group. Through preschool age, there are expectations that children will interact with peers during the play, that is, socialisation is expected with children beginning to engage in cooperative and peer negotiations.

Imitation

The administration of the ChIPPA requires the examiner to model five play actions in the middle of each session, without disrupting the child's play. At the preschool stage of development, it is expected that children can self-initiate their own play ideas. Children are expected to self-initiate play ideas and contribute these ideas when playing with peers, friends and siblings. Some children may find it difficult to self-initiate ideas in play, and so they may rely on reciting parts of stories, or mimicking the examiner's statements or imitating the examiner's modelled actions, and these children are more likely to score higher for the number of imitated actions. Imitating the examiner's actions to the extinction of the child's own ideas is a play deficit and demonstrates that the child does not have ideas of what to play.

In this study, the results of the imitation category showed that all children could initiate their own play ideas of pretending without needing to imitate the examiner's demonstration. Only one child asked the examiner what to do several times, but did self-initiate ideas. Another child did not engage in the play in the beginning of the symbolic session, and consequently, the examiner modelled the actions before five minutes elapsed, which stimulated the child to self-initiate ideas and continue playing with the play materials.

Theme

For preschool children, it is expected that they incorporate different roles and characters during the play. Children who struggle with play ability may have difficulty in developing play ideas and present themes below the level expected for their age group. The children in this study developed themes related to those suggested by the toys of the conventional-imaginative session (farm, animal transport, etc.), and found playing with the unstructured objects during symbolic play session more challenging.

For theme, 60% of the children showed play scenes to their stage of development. It means that only eight children consistently used immature play themes for their development stage, e.g. using repetitive and simple household themes. In the conventional-imaginative play session, 70% of children showed evidence of using play themes, and in the symbolic play session, 65% of children developed play themes. The children played with the conventional-imaginative play materials according to their function, that is, the children set up a farm, carried the animals with the doll driving the truck, or turned the truck into a train and the fences into rails and took the animals by train to another location.

In this category, some children were observed to have themes of play at a younger level than expected for their age group. In the symbolic session, the themes were more varied, for example, some children introduced domestic themes such as singing a lullaby to the doll, putting it in bed, feeding it, making food; others played music, conducted experiments, constructed objects and only one child played with a fictional theme (bad wolf).

Story

From the analysis of the story category, the data showed that 60% of the children organised a scenario with the play materials, but did not develop a story after this process.

For example, in the conventional-imaginative play session, children created a farm scenario but did not

continue playing with the toys to construct a story. The development of a story in the play was observed through the child's organisation of the scene and playing logically and sequentially with the toys or symbolic materials, where an unfolding logical sequence of events could be observed. Some children did not verbalise as they played. A narrative was performed by 50% of the children in the conventional-imaginative session and 55% in the symbolic session.

Children who requested toys from the other session (40%) did so primarily by taking the set of toys from the conventional-imaginative session to the symbolic session. This is a play deficit in the Clinical Observations, as the unstructured objects in the symbolic play session require a child to impose meaning on the objects, whereas the toys in the conventional-imaginative session can be used literally, for example, a truck can be pushed. Including the unstructured objects of the symbolic session into the conventional-imaginative session is a higher level of play (indicated by typical play on the Clinical Observations) as children are required to impose meaning on the objects and integrate them with the toys. During assessment, swapping toys between sessions is not encouraged but if a child can only continue playing by combining toys, then the examiner can allow it and the scoring is adjusted accordingly.

Most children (60%) used the doll as an active participant in the play. A small percentage (35%) of children assigned attributes to the characters, such as happy or sad or good or bad. Moreover, there was evidence of reference to abstract objects by 80% of children, such as milk / juice within the cup (during symbolic play, using the tin or cone like a cup), demonstrating representational thought for the vast majority of children. Finally, 65% of the children talked about their play during the sessions.

Discussion

The play performance of the majority of the children in the present study was within expectations for their age, with the children presenting with Indicators of Typical Play in the categories 'theme', 'time', 'examiner involvement' and 'imitation'. The 'story' category was found to have a large percentage of children presenting with difficulties in relation to the development of a narrative during the play. It was found that children could set up a play scene, but did not develop a story after this process (e.g. the creation of a farm scenario without extending the play to include a story). The development of a narrative during play demonstrates that the child organises thought and creates ideas (Stagnitti, Unsworth & Rodger, 2000). This means the more complex the play of the child, the longer their narratives (Stagnitti, 2007). The narrative in play can occur through language, and also through non-verbal communication (Goulart & Sperb, 2003), which occurred with some children in this study.

For children with physical disability, all appropriate handling and positioning is carried out so that the child was comfortable and able to access the play materials. If the child does not have skills to handling the play materials, the examiner is allowed to move it for the child, following him/her command (Stagnitti, 2007).

In this study, all children were positioned in the best way possible to maximise their involvement with the play materials (some preferred to sit in a chair and play over the table). None of the children needed to ask the examiner to move the play materials because all children had the ability to use the hands, as they were classified by MACS I to III (see Table 1).

A previous study by Pfeifer, Pacciulio, *et al.* (2011) used the ChIPPA for children with CP aged three to six years, 35% of the children showed typical play styles, which were identified by the pattern of scores in elaborating actions in the play and the number of substitutions of objects and ability to initiate play. Sixty-five per cent (65%) of children in the Pfeifer, Pacciulio, *et al.* study presented with a pattern of play that indicated difficulties in play ability. However, it should be considered that the study by Pfeifer, Pacciulio, *et al.* analysed the score sheet and play patterns. In contrast, the result from the analysis of the Clinical Observations with the children with CP in the present study found that all the children presented with some Indicators of Typical Play. The Clinical Observations provide rich information on the quality of a child's play contributing to the scores of elaborate play, object substitution and imitated actions (O'Connor & Stagnitti, 2011).

Clearly, the development patterns of the motor behaviours of children with CP vary according to the severity of the condition. The Gross Motor Function Classification System (GMFCS) are widely used and validated measure to describe gross motor development patterns of children with CP. Some GMFCS items are particularly useful to indicate motor delays (Voorman, Dallmeijer, Knol, Lankhorst & Becher, 2007).

In the Pfeifer, Pacciulio, *et al.* (2011) study, all children who performed well were the children who had less motor impairment (GMFCS levels I–III), whereas children who performed poorly were at GMFCS level V. Therefore, it is important to consider that the severity of the motor limitation impacts on a child's ability to engage in play spontaneously (Pfeifer, Pacciulio *et al.*). In the present study, most children presented with independent gait and so were more mobile than children in the sample of Pfeifer, Pacciulio, *et al.* This suggests that the severity of motor impairment can affect the quality of a child's spontaneous engagement in play. Furthermore, the children in the current study, whose motor impairment was more severe, took longer to perform the play actions, nevertheless these actions were elaborate indicating an ability to engage in a higher

level of play. Elaborate play is a cognitive play skill and cognitive development is more related to pretend play than motor development (Whitebread, Coltman, Jameson & Lander, 2009).

The study by Hsieh (2012) found that adaptive pretend play can promote more role-pretending behaviours and a sense of environmental control as it enables children with CP to manipulate play materials within their environment. Therefore, finding ways to keep toys and play materials within the reach of a child gives the child with physical or sensory disabilities control over toy activation and manipulation, and fuels both motivation and a sense of intrinsic control (Liso, 2010). Environmental factors rather than personal factors were the best determinants of frequency of participation in preschool children in the study by Rosenberg, Bart, Ratzon and Jarus (2013), further evidencing the importance of a stimulating environment and giving adequate opportunities to a child to engage in free play. An environment that allows children with CP to activate toys and self-initiate their own play contributes to a child's participation in play, an important occupation of childhood.

The motor disorders of children with CP limit playing as the patterns of gripping and adjusting an object in their hands may be inadequate to handle toys, limiting the play interactions (Ferland, 2016). Despite this they present curiosity, pleasure, and initiative, having interested in any play, although they may need specific resources to facilitate the play in the natural environment (Rocha, Desidério & Massaro, 2018).

The clinical observations included in the ChIPPA allows the occupational therapist to assess and analyse the typical play skills and deficits in the play ability of children and this information can be used to guide the therapist in setting up play activities within a supportive environment for children with CP to engage in free play, offering the opportunity to choose, explore, create and to respond to change.

This current study found that children with CP do have many abilities in pretend play, which can provide valuable information through the analysis of how the child plays in relation to cognitive, motor and social competence (Nicolopoulou *et al.*, 2009). Thus, play behaviour assessment is useful to occupational therapists to analyse and plan interventions (Sant'Anna, Blacovi-Assis & Magalhães, 2008). The ChIPPA is an assessment that is a reliable and valid measure of a child's ability to self-initiate pretend play, making it possible for the occupational therapist to target play abilities and to plan strategies for interventions of children (Stagnitti & Unsworth, 2004).

The result of the current study using the Clinical Observations form showed the quality of the strengths and difficulties in pretend play of children with CP, making it possible for the occupational therapist to propose an intervention plan tailored to these children. Considering that a large percentage of the children in the current study presented with deficits regarding the development of story, a play intervention could be used to stimulate and expand the stories of preschool children with CP.

Limitations of the study

The size was 20 children. In this study, this number of children was what could reasonably be recruited during the period of the study (Adler & Adler, 2012). However, as this is a descriptive study, a sample of 20 children with cerebral palsy, can still give valuable information about their pretend play. Another limitation is related to the inclusion/exclusion criteria as there is an absence of information about intellectual impairment and communication deficits in children of the sample and that can be a factor affecting the results of the study considering that these impairments can have an impact on the ability to narrate a story. It is suggested that new studies about clinical observations of children with CP could consider these aspects.

Conclusion

Pretend play is the more mature form of play for the child as it is challenging and gives the child a quality of life concerning social communication with peers, practice in using language, and development of abstract thought (Vygotsky, 1984). Play is an important occupation of childhood and preschool children should spend a lot of time physically engaged in pretend play as this contributes towards their wellbeing, and development in language and social skills (Sunderland, 2007; Whitebread *et al.*, 2009).

Play is a universal topic in early intervention (Lifter, Foster-Sanda, Arzamarski, Briesch & McClure, 2011). Three significant findings for children with disabilities are reported in a review of the play research over the last 25 years: (i) Children with disabilities demonstrate delays in play compared to typically developing children; (ii) Play is a functional goal for children with disabilities and (iii) Interventions to increase play skills of children with disabilities is effective (Lifter, Mason, *et al.*, 2011). Therefore, it is important that therapists feel empowered to reliably assess pretend play skills in children with disabilities not only in the home but also in multiple settings and then be able to offer an intervention according to the child's needs (Martin, 2014).

Overall, in the present study, the children were found to have many strengths in their play. In the 'theme', 'time', 'examiner involvement' and 'imitation' categories, they demonstrated Indicators of Typical Play, as they had their own ideas and started the play without imitating the examiner, used appropriate themes (could set up play scenes), interacted with the examiner and completed the time of the assessment. In the 'story' category, the results indicated that children presented

difficulties in relation to the narrative, as most of them did not develop a story after creating a scenario. In that way, a play intervention would be recommended in order to stimulate and expand their pretend play stories and narrative.

Key points for occupational therapy

- The ChIPPA is a relevant assessment that can be applied in occupational therapy research and practice.
- The ChIPPA provides information on the quality of play of children with cerebral palsy.
- Children with CP were found to have many typical indictors of play.

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Ethics approval

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