

Review Article

Knowledge production on occupational therapy and childhood occupations: a literature review

Produção de conhecimento sobre terapia ocupacional e ocupações infantis: uma revisão de literatura

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How to cite: Folha, D. R. S. C., & Della Barba, P. C. S. (2020). Knowledge production on occupational therapy and childhood occupations: a literature review. *Cadernos Brasileiros de Terapia Ocupacional*, 28(1), 227-245. <https://doi.org/10.4322/2526-8910.ctoAR1758>

Abstract

Introduction: Childhood occupations are central to understanding child development as an occupational development. **Objective:** This study aimed to identify how occupational therapists have approached children as occupational beings and which occupations have been described as children's typical occupations. **Method:** We searched the Web of Science, Eric, Sage and CAPES Portal of Periodicals databases for this literature review, using the descriptors 'children's occupations', 'occupational development' and 'occupational therapy', between 1997 and 2016. Data were analysed using the content analysis technique. **Results:** We identified 38 articles, of which 21 were selected for analysis, based on four classifications involving: 1) theoretical foundations for the study of children's occupations; 2) childhood occupations and typical development; 3) childhood occupations and atypical development; and 4) occupational therapy interventions to enhance the participation of children in occupations. Quantitative studies predominated, and most studies reflected the perspective of family members on child occupations. **Conclusion:** The relationship between child development and children's occupations involves occupational development. The existing limited research and reviews into children's occupational development, as well as the absence of Brazilian studies in this area, reveal opportunities for further research to provide greater knowledge concerning occupational therapy and childhood occupations.

Keywords: Child Development, Occupational Therapy, Scholarly Communication.

Received on July 29, 2018; 1st Revision on Jan. 18, 2019; Accepted on Apr. 16, 2019.



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Resumo

Introdução: As ocupações infantis são fundamentais para a compreensão do desenvolvimento infantil enquanto um desenvolvimento ocupacional.

Objetivo: Este estudo objetivou identificar como os terapeutas ocupacionais tem abordado as crianças enquanto seres ocupacionais. **Método:** Trata-se de um estudo de revisão da literatura, do tipo estado da arte. Foi realizada busca pelos descritores “children’s occupations”, “occupational development” e “occupational therapy” nas bases de dados Web of Science, Eric, Sage e Portal de Periódicos da CAPES, no horizonte temporal de 1997 a 2016. A análise de dados ocorreu por meio da técnica de Análise do Conteúdo. **Resultados:** Foram encontrados 38 artigos, dos quais 21 foram selecionados para análise, realizada a partir de quatro categorias temáticas: 1) Fundamentos teóricos para o estudo das ocupações infantis; 2) Ocupações infantis e desenvolvimento típico; 3) Ocupações infantis e desenvolvimento atípico; e 4) Intervenções de Terapia Ocupacional para potencializar a participação de crianças em ocupações. No que se refere aos tipos de estudos encontrados, predominaram os estudos empíricos e, destes, predominaram os de abordagem quantitativa. A maioria refletiu a perspectiva de familiares sobre as ocupações infantis. **Conclusão:** A intrínseca relação entre desenvolvimento infantil e ocupações infantis reforça a crença no desenvolvimento ocupacional. A incipiente presença de pesquisas sobre a participação de crianças em práticas educacionais, de revisões sobre ocupações infantis e a ausência de estudos brasileiros nos achados expressam lacunas a serem contempladas em estudos posteriores e indicam demandas para a produção de conhecimento sobre Terapia Ocupacional e ocupações infantis.

Palavras-chave: Desenvolvimento Infantil, Terapia Ocupacional, Comunicação Acadêmica.

1 Introduction

Occupational therapists consider the interaction of people with their environments and the occupations in which they engage to develop interventions that will enable people to perform their occupations as they want to do, need to do or are expected to do.

Occupations are human actions routinely performed and endowed with purposes and meanings. They are subjective, non-reproducible and continuous experiences in people’s lives, with personal and cultural meanings (Yerxa, 1993; Clark & Zemke, 1996).

Occupational therapists understand that human identities are constituted from what people do, since childhood (Asbjørnslett et al., 2015). Child occupations can therefore be understood as intentional actions that children perform in the course of their development. Insofar as they engage in occupations with family, friends or other people, they built the occupational repertoire that will allow them to develop their roles as a child who plays, studies, communicates with others and takes care of themselves (Mandich & Rodger, 2006). Thus, participation in children’s occupations contributes to the physical, cognitive, social and affective development of the child

and directly influences the health and well-being of children and the family (Mandich & Rodger, 2006; Dunford & Bannigan, 2011).

Childhood care is one of the most structured and developed areas of action in Occupational Therapy, and although Occupational Therapy recognizes that child occupational engagement is both process and outcome of development, Humphry (2002) agrees that prevailing in the profession, the vision of children as beings in development, rather than occupational beings, which is not enough to differentiate the specificity and sustain the practices of the profession.

We hold the view that occupational therapists, as specialists in occupations who are, or should be, need theories that help them to understand child development through participation in occupations (Humphry & Wakeford, 2006). From this need, we highlight the occupational perspective adopted in this study.

1.1 An occupational perspective on childhood

An occupational perspective opens an approach to seeing human activities and daily occupations as integral to all people and contexts, which suggests the benefits of studying and understanding the daily lives of children with typical and atypical development and their families, as well as their participation in occupations that are significant in their cultural context and community (Asbjørnslett et al., 2015).

According to Davis & Polatajko (2006), theories of developmental psychology have historically assisted occupational therapists in their work in childhood, providing theoretical and practical support for this understanding and intervention with child development. However, because they are derived from Psychology and not from Occupational Therapy, they do not focus on participation in occupations and do not analyze human development in its close relationships with occupational performance. Thus, they do not respond to the need to visualize the occupations and to guide the interventions and objectives in occupational terms (Davis & Polatajko, 2006; Lawlor, 2003).

The perspectives of developmental psychology have historically assisted occupational therapists in their work in the field of childhood, but do not respond to the need to highlight the significance of occupations and to guide interventions and goals in occupational terms (Davis & Polatajko, 2006). Therefore, a definition of development better targeted to the occupational perspective of childhood development would focus on occupational development, defined as the processes of “[...] gradual change in occupational behaviours over time and results from the growth and maturation of the person in interaction with the environment” (Canadian Association of Occupational Therapists, 1997, p. 40), or the “[...] systematic process of transformations in occupational behaviour over time, on the level of occupation, the person and the species” (Davis & Polatajko, 2006, p. 137).

The child's occupational behaviour could then be understood as the result of the interactions between child-environment-occupation, in a dynamic and complex process, of experiences and opportunities to constitute a set of occupations that are part of a person's life at a given moment, called the occupational repertoire (Njelesani et al., 2017).

As a result of the need for occupational therapists to develop interventions focused on the integral care of children and their families (Nucci et al., 2017), this study aimed to carry out a literature review on children's occupations in relation to Occupational Therapy, to identify how occupational therapists have approached children as occupational beings.

2 Methodology

To attain the objectives outlined in this study, we opted for a literature review, using a state-of-the-art review approach, based on content analysis. State-of-the-art reviews tend to deal with more current issues in contrast to other review methods, combining retrospective studies and current approaches. They may offer new perspectives or highlight areas for future research and tend to provide comprehensive coverage of the existing literature (Grant & Booth, 2009).

Defined as bibliographic, they aim to bring together the challenge of mapping and discussing a certain academic production in different fields of knowledge, trying to answer which aspects and dimensions have been highlighted and privileged in different times and places, and in which forms and in which conditions have certain master's dissertations, doctoral theses, publications in periodicals and communications in annals of congresses and seminars been produced. They are also recognised for carrying out an inventive and descriptive methodology of academic and scientific production on the subject under investigation, in the light of relevant categories and aspects characterised as such in each individual work and in collected studies, under which the phenomenon has been analysed (Ferreira, 2002, p. 258).

In these studies, the systematisation of the findings has been carried out using a narrative method and data analysis has been performed based on the studies identified and the priorities determined for future research (Grant & Booth, 2009).

Grant & Booth (2009) have highlighted the potential of this type of review for those seeking to identify potential opportunities for contemporary research. Ferreira (2002) has pointed out the benefits in organising a set of information and results already obtained that facilitates distinguishing between different perspectives, identifying repetition or areas of contestation, and helping determine gaps or bias within a particular field. State-of-the-art reviews are advised when researcher seems to experience the feeling of not knowing about the profile of studies and research in an area of knowledge (Grant & Booth, 2009; Ferreira, 2002).

Ferreira (2002) commented that a researcher undertaking a state-of-the-art review is involved in two distinct phases: 1) the first phase is one in which the researcher interacts with the academic production through the quantification and identification of bibliographic data. This work aims to map the production within a defined period, in years, places, and production areas. The researcher is dealing with objective and concrete data located in the bibliographical indications that refer to the research. In this effort to organise relevant publications, it becomes possible to perceive the

frequencies, the growth or the decline of publications, the target audience of research on a certain subject, the places where research has been produced and the relations between these elements, and; 2) the second phase is one in which the researcher considers the possibility of creating an inventory for the publications identified, as well as reflecting on trends, emphases, methodological and theoretical choices, similar or differentiating approaches taken among the works themselves, in the writing of a report on this particular area of knowledge. At this point the researcher aims to answer, in addition to the questions 'when', 'where' and 'who' in relation to the production of research in a given period and place, the further questions 'what' and 'how' to enable a more informed consideration.

Ferreira (2002) also described different ways of conducting state-of-the-art research, involving: a) research conducted from abstracts published in institutional catalogues, ignoring all related limitations; b) research conducted from a single source, such as a database, and; c) research conducted using abstracts initially and then examining the works in full.

For this state-of-the-art review, the initial search was in databases, followed by reading of selected abstracts to select the relevant studies, and then, based on specific inclusion and exclusion criteria, texts were accessed to provide a more informed analysis.

The survey was conducted in the Web of Science, Eric, Sage and CAPES Portal of Periodicals databases. These databases were selected for their concentrated pool of occupational therapy publications, and for their indexing of authoritative journals covering the topic areas of occupational therapy and childhood, from 1997 to 2016. The descriptors used for the search were 'children's occupations' AND 'occupational development' AND 'occupational therapy'.

From the identification of the articles in the databases, reference and summary information was extracted for a database structured in Word for Windows, where all the results were catalogued. The searches found 38 articles. After reading the abstracts, 17 papers were excluded for the following reasons: repetition ($n = 3$), non-availability ($n = 4$ originally, but reduced to 3 after 1 repeat count identified), articles in the modality "comments" ($n = 1$) and book presentations ($n = 2$) and approach of subjects not related to the present study, as: occupations and use of caregivers' time ($n = 3$), physiological effects of exposure of children to pesticides ($n = 1$), and professional career aspects ($n = 4$). Therefore, 21 articles were selected for analysis.

Data analysis was performed using thematic content analysis (Bardin, 2011), which comprised three steps. First, a 'content survey' for each article was carried out, aiming to identify relevant material for analysis, which involved reading the article summaries. Second, there was an 'in-depth study of the material', which involved reading the 21 selected articles and extracting the data for analysis, including: bibliographic references, objectives, types of research (whether quantitative or qualitative studies, reviews, or theoretical studies), the methods used, the adopted perspective (whether of families, children, therapists or teachers) and principal findings. The third step involved assessing the 'significance of results', and it occurred through critical and reflexive analyses of the extracted data and testing it against pertinent references to enable an informed discussion of the research findings.

After data were organised, data analysis was performed using the Content Analysis Technique (Bardin, 2011), giving rise to four thematic categories into which the results were grouped, namely: 1) Theoretical foundations for the study of children's occupations (n = 3); 2) Child occupations and typical development (n = 3); 3) Child occupations and atypical development (n = 5), and; 4) Occupational therapy interventions to increase the participation of children in occupations (n = 10).

3 Results

Table 1 shows the results of the research, highlighting the year and publication period, the institutional affiliations of the authors, the methodology used, and the thematic category: **1) Theoretical foundations for the study of children's occupations; 2) Child occupations and typical development; 3) Child occupations and atypical development; and 4) Occupational therapy interventions to increase the participation of children in occupations.**

Table 1. Results found, classified according to authorship, year of publication, periodical, authors' affiliation, methodological approach and category.

Authors (Year)	Journal	Authors' Institutional Affiliation (Country)	Methodology	Thematic Category
Rodger & Ziviani (1999)	Journal of Disability, Development and Education	Australia	Theoretical study	4
Hwang et al. (2002)	Occupation, Participation and Health	United States of America	Quantitative	4
Humphry (2002)	American Journal of Occupational Therapy	United States of America	Theoretical study	1
Lane & Ziviani (2002)	Occupation, Participation and Health	Australia	Quantitative	4
Lawlor (2003)	American Journal of Occupational Therapy	United States of America	Theoretical study	1
Larson (2004)	American Journal of Occupational Therapy	United States of America	Theoretical study	2
Humphry & Wakeford (2006)	American Journal of Occupational Therapy	United States of America	Theoretical study	2
Humphry & Wakeford (2008)	Infants and Young Children	United States of America	Theoretical study	1
Long et al. (2009)	Australian Occupational Therapy Journal	Australia	Quantitative	4
Hutton (2009)	British Journal of Occupational Therapy	England	Qualitative	4
Dunn et al. (2009)	Physical & Occupational Therapy in Paediatrics	United States of America	Quantitative	3
Bar-Shalita et al. (2009)	Physical & Occupational Therapy in Paediatrics	Israel	Quantitative	4

Authors (Year)	Journal	Authors' Institutional Affiliation (Country)	Methodology	Thematic Category
Chantry & Dunford (2010)	British Journal of Occupational Therapy	United Kingdom	Review	3
Rodger & Vishram (2010)	Physical & Occupational Therapy in Paediatrics	Australia	Quantitative	4
Dionne & Martini (2011)	Canadian Journal of Occupational Therapy	Canada	Quantitative	4
Fallon & MacCobb (2013)	British Journal of Learning Disabilities	Ireland	Qualitative	3
Fingerhut (2013)	American Journal of Occupational Therapy	United States of America	Quantitative	4
Graham et al. (2014)	British Journal of Occupational Therapy	England	Qualitative	3
Tonkin et al. (2014)	Canadian Journal of Occupational Therapy	Canada	Review	3
Muhlenhaupt et al. (2015)	Infants and Young Children	United States of America	Theoretical study	4
Bartie et al. (2016)	Occupational Therapy International	South Africa	Qualitative	2

For the types of studies found, 9.5% (n = 2) were literature reviews, 33.33% (n = 7) were theoretical studies, and 57.1% (n = 12) were qualitative or quantitative studies, of which 66.66% (n = 8) were quantitative and 33.33% (n = 4) were qualitative.

Concerning the perspectives adopted within the quantitative and qualitative studies (n = 12), 33.33% (n = 4) reflected the perspective of relatives on the children's occupations; 25% (n = 3) reflected the perspective of children; 16.66% (n = 2) reflected both the perspective of family members and children; 16.66% (n = 2) reflected the perspective of occupational therapists; and 8.33% (n = 1) reflected a teachers' perspective.

The first category, **1) Theoretical foundations for the study of children's occupations**, brought together three theoretical studies that addressed the basic references for the understanding and study of occupations in childhood. Humphry (2002) sought to examine the assumptions adopted in paediatric practice and proposed a conceptual model of dynamic processes underlying the development of children as occupational beings. That study proposed a model for thinking about child development that addressed changes in the levels of child occupations, and focussing on different levels over time.

Lawlor's study (2003) aimed at exploring theoretical and developmental bases to interpret child engagement in activities typically considered as those of a child. As a result, Lawlor suggested a need to modify the study of children's occupations to the

study of 'social being in occupations' as a way to improve understanding of children's experiences.

In turn, Humphry & Wakeford (2008) aimed to present a model of practice in occupational therapy for children and suggested the profession redefine itself through a professional approach to developing daily activities, rather than relying on a child development approach. They considered that clinical reasoning and activity analysis should identify the activities of children in their natural environments, and on the quality of their involvement in those environments.

The category titled 2) Child occupations and typical development also brought together three articles, aimed at addressing children's occupations from the perspective of the typical development of children. The theoretical study carried out by Larson (2004) aimed to approach work as a neglected child occupation. The author considered that this neglect has been due to the conditions of child exploitation in the 19th century, which meant that work was not conceived as an occupation that should be experienced in childhood. In spite of this, the author considered that it could potentially be positive for the education and the career definition desired by children in the future.

The theoretical study of Humphry & Wakeford (2006) sought to problematise theoretical-methodological references for the approach to development and children's occupations. The authors suggested an occupational-centred approach through examining alternative ways of thinking about the development process, and demonstrated how a child development perspective imported from other disciplines (mostly from developmental psychology) focuses on individual change and dominates the literature on occupational therapy.

The research by Bartie et al. (2016) aimed to identify opportunities for play in 5- and 6-year-old children living in an area of low economic development in a city in South Africa. This was qualitative research, using a phenomenological approach, and was focused on the experiences of six children playing, who were observed and whose relatives were interviewed. The children showed that they could create opportunities to play individually and collectively in domestic environments, but mainly in the open air, involving the imaginative use of items found in the community as toys. It was found that the children did not need expensive toys to engage in meaningful and symbolic play, despite the unfavourable socio-economic context and the limitations of their area.

In the third category, **3) Child occupations and atypical development**, five studies addressed children's occupations in relation to atypical development.

The quantitative study by Dunn et al. (2009) sought to examine the patterns of participation in household chores of children aged between 3 and 5 years old, who either had or did not have Attention Deficit Hyperactivity Disorder (ADHD). The researchers applied measurements to identify patterns of participation in household chores of 44 families with children between 3 and 5 years old, 22 families with one child with ADHD and 22 families of children who did not have ADHD. The findings identified that children with ADHD commonly demonstrate difficulties in participating in family occupations, such as household tasks, due to their care needs and behaviour.

Chantry & Dunford (2010) aimed to establish how computerised assistive technologies can affect the participation of children with multiple and severe disabilities in occupations. It involved a systematic review of the literature, in which 27 articles were analysed. The categories of analysis were structured on the basis of the Occupational Performance Model and identified that assistive technologies can promote inclusive education for children with disabilities in regular schools. These technologies can function as alternative tools for learning, and access to the curriculum, as well as providing children with new opportunities to discover their learning potential and facilitating social interactions within the classroom. They also identified that assistive technologies contribute to new opportunities for joining, facilitating social interactions, autonomy and independence, as well as promoting and developing the childish tendency to play.

The research by Graham et al. (2014) aimed to explore what the parents of children with cerebral palsy mean by playing and using it as a resource in therapy and at home. Based on a qualitative, interpretative and descriptive approach, 7 (seven) families of children with Cerebral Palsy (CP) were interviewed to understand the understanding of playing with their relatives. The results pointed to a concept of playing according to the conventional idea of what children with typical development do. However, as a result of living with children with CPs, the family members demonstrated to expand this understanding, recognizing different ways of playing, according to the activities they referred to as playing with children with disabilities.

The study by Fallon & MacCobb (2013) sought to explore the choice of children with learning difficulties, in terms of their free play-related occupations, and to describe the behaviours of these children when they were not playing. The study also aimed to establish an inter-rater reliability using the Revised Knox Preschool Play Scale. This descriptive study involved the participation of 5 children with atypical development, without a specific diagnosis. Observations were conducted in school time concerning their play behaviour, and the Knox Preschool Play Scale was applied. An observation tool was used to compile a record of 'non-playing' behaviour. The results assessed both play and non-playing behaviour, with the latter divided into passive behaviours and repetitive behaviours. Of a total of 26 toys available for free play, the 5 children only played with sensory motor objects and interacted with or manipulated a maximum of 4 toys, which suggested a repertoire of restricted and impoverished play and the need for adult mediation to foster play behaviour.

The research by Tonkin et al. (2014) analysed the literature on experiences based on the participation of children and adolescents with disabilities in activities outside of formal school activities. It was a scoping review that reviewed research on children involving at least one child with motor or cognitive impairment. They analysed 32 articles and 3 systematic reviews. The authors highlight as main result the influence of the perceptions that the children and young people had about their participation in the daily occupations about their participation in other occupations, evidencing a direct relation of these perceptions with the participation patterns of the same ones.

Finally, the category that brought together most studies, **4) Occupational therapy interventions to increase the participation of children in occupations**, covered effects or noted aspects concerning interventions of occupational therapists in the domain of children's occupations. Of these, 3 studies were theoretical, 4 dealt with the

development of instruments to evaluate the participation of children in occupations by occupational therapists and 3 were intervention studies.

The theoretical study of Muhlenhaupt et al. (2015) aimed to present an occupational therapy perspective to services designed to improve families' ability to care for and increase the participation of their children in domestic and community settings. It was a theoretical study that analysed the training of occupational therapists for work within the early intervention phase in the United States. The results highlighted two groups of competences that occupational therapists working with early intervention needed to develop: specific skills of occupational therapists (disciplinary competencies) and general competencies (inter-professional skills, to facilitate effective early intervention teamwork alongside other team members). They emphasised that paediatric occupational therapy disciplinary competences formed an integral and distinctive aspect to involving children in daily activities in natural environments through which they could gain experience, learn and develop. The other required competence pertained to the development of inter-professional competence.

The research by Long et al. (2009) sought to obtain information about the nature of the communications that occurred in the Paediatricots¹ discussion group, and to determine whether topics and issues raised were in line with current practice trends for therapists working with children. A retrospective analysis of the discussions was performed, and the 2,104 messages exchanged within this group were analysed. The communications were categorised through descriptive statistics, identifying the topics involving the greatest to the least discussion, ranging from: a) performance components for children's competences, which formed the majority of correspondence; b) task demands; c) environmental factors, and; d) approaches to subsidise practices.

The research by Rodger & Ziviani (1999) aimed to review how occupational therapists viewed play and to describe how their views had evolved, to generate a change of focus for intervention through introducing a model of play as an occupation, and to describe various forms of evaluation and occupational therapy using play. They identified that occupational therapists considered play as an important occupation in the life of every person and as a field for the development of competences (Canadian Association of Occupational Therapists, 1997). They presented a frame of reference for the understanding of play and an analysis of this frame of reference from the perspective of occupational therapy.

Regarding work that concerned evaluations of children's occupations, the Fingerhut (2013) study aimed to describe the development of a family-centred tool, known as Life Participation for Parents (LPP). This was a quantitative study comprising 162 families of children with special needs who had each received 15 paediatric interventions in clinics. The results, drawn from psychometric data that has been considered effective in helping to evaluate parent satisfaction on the occupational involvement of their children, suggested ample possibilities to help occupational therapists in structuring family-centred interventions.

¹Paediatricots is an Australian discussion group, an email network of professionals and students interested in occupational therapy use in childhood.

Bar-Shalita et al. (2009) described the process of constructing a questionnaire for Participation in Child Occupations (PICO-Q) and for determining its primary psychometric components. The questionnaire comprised 22 items for assessing the level, satisfaction and frequency of performance in respect of children's participation in daily occupations in a variety of environments. A total of 41 mothers of children with sensory modulation disorder answered the questionnaire to verify its validity within this population. The results showed that the PICO-Q was an easy-to-apply questionnaire capable of evaluating the participation of children living and participating in the community, covering the daily activities and routines of children and differentiating between children with and without participation restrictions.

Lane & Ziviani (2002) aimed to discuss the development of an evaluation method concerning computer mouse use by children, the Test of Mouse Proficiency (TOMP). The procedures adopted for the construction of the test, and the required tasks of the children to be performed, were described. The study considered that a computer mouse can be one of a child's most manipulated instruments in interactions with computerised technologies, and that the Mouse Proficiency Test would help facilitate occupational therapists to mediate the relationship between the children's audience and technology.

Hwang et al. (2002) sought to examine the validity of the School Function Assessment (SFA), through a study of 64 children, 29 of whom were non-disabled, 18 had learning difficulties, and 17 had cerebral palsy. The results highlighted the validity of the SFA in assessing the involvement of children in school activities, and suggested that this could be an instrument for occupational therapists to use in school settings.

Concerning the intervention studies, 3 studies referred to occupational therapy activities aimed at increasing the participation of children in occupations. The Hutton (2009) study aimed to describe the results of a pilot project evaluation of paediatric occupational therapy intervention in two primary schools. This pilot project was called Occupational Therapy into Schools (OTiS) and aimed to develop occupational therapy practices that focussed on all children within the context of the school. This study reported positive results related to acquiring improved knowledge and skills to enhance children's school experience.

Rodger & Vishram (2010) sought to explore patterns in global and specific strategies used, as well as the types of organising approaches and the time dimension in tasks performed, in children with Asperger's Syndrome during an intervention that was based on Cognitive Orientation to daily Occupational Performance (CO-OP). They adopted a descriptive method and an exploratory case study, involving two children with Asperger's Syndrome, who had benefited from structured occupational therapy and who were evaluated based on CO-OP. The results provided some partial information on strategies that could allow children with Asperger Syndrome to achieve social and organisational goals.

Dionne & Martini (2011) aimed to determine the effectiveness of the FTP (Floor Time Play) approach with a child with autism. They developed a case study from observations and data recorded in the diary of the child's parent, with descriptions of the intervention sessions of the FTP at home. The results identified that the FTP approach provided increased interactions with the child with autism in its

environment, and provided a limited degree of evidence that the FTP approach could be effective in guiding occupational therapy interventions with people with autism.

4 Discussion

Table 1 shows that no Brazilian study was found, based on the descriptors mentioned in the methodology. It is possible to hypothesize this absence, because the databases chosen for this study do not index Brazilian journals until the date of data collection, or because the keywords used prioritized the term occupation, which historically does not correspond to the most used in the scenario of national scientific production. However, in the course of the discussion, Brazilian research will be carried out to discuss some children's activities, which may be related to the perspective of the studies found in this review.

Table 1 also shows the predominance of the family perspective confirmed the centrality of the family in childcare practices (Krameck & Nascimento, 2015) and highlighted the significance of practice development centred on the family (Serrano, 2007; Sukkar et al., 2017).

The limited presence of children as protagonists in the research suggests the need to increase their participation, since their involvement would foster a listening to children's voices and an understanding of perspectives from children's points of view and experience. Research on the experiences of children has been very limited, and the voices of children with disabilities, specifically, have been marginalised and ignored by researchers (Asbjørnslett et al., 2015; Carpenter & McConkey, 2012; Scott, 2008). An important consequence of this marginalisation has been that children with disabilities have been seen in research as research objects and not as participants (Greene & Hill, 2006; Asbjørnslett et al., 2015). In an attempt to enlarge the participation of children, occupational therapists need to consider practices that are consistent with what is most significant for children (Wiseman et al., 2005).

Teachers appeared as participants in only one study, which indicates a limited presence of teachers as participants in occupational therapy research in the international arena. This fact suggests the beginning of a recognition of education as a structuring occupation of children's daily life and signals that teachers can be seen as effective collaborators in achieving positive results in a teaching environment. Some national studies already mention experiences of Occupational Therapy that involved teachers in the Brazilian context (Trevisan & Della Barba, 2012; Sant'Anna, 2016; Gebrael & Martinez, 2011; Folha & Monteiro, 2017).

About the thematic categories devised in this review, they identify the contents most frequently addressed in the studies detected.

Studies designed to investigate the theoretical foundations for the study of children's occupations were strongly represented in the review sample. It is considered that this finding is due to the tendency and relevance of producing a secure and intellectually credible knowledge base within occupational therapy to support professional practices and strengthen a specific field of study that facilitates professional recognition of occupational therapy (Davis & Polatajko, 2006; Humphry, 2002; Humphry & Wakeford, 2008).

For Humphry & Wakeford (2008), children's occupations are central to their well-being and development because they involve the activities with which children connect and learn in the context of their natural environments. For these authors, when these children run the risk of not getting involved in occupations that are appropriate to their age group, occupational therapists should seek to provide the necessary conditions for this involvement.

The baseline frameworks for practices play the role of organizing a subject's knowledge of its premises. Therefore, speaking, studying and intervening in children's occupations requires the development and adoption of theoretical perspectives that are capable of fostering an occupational understanding of childhood and of motivating occupational therapists to plan interventions to promote children participation in occupations and not focus on acquisitions related to performance skills (Davis & Polatajko, 2006; Humphry, 2002).

Studies aimed at discussing children's occupations in children with typical and atypical development were also representative of the practice of Occupational Therapy with the two publics, so that favoring participation in occupations is shown as a demand for two publics (Case-Smith, 2001). This result, therefore, corroborates the fact that childhood is thought from an occupational perspective (Humphry, 2002; Wiseman et al., 2005).

The work carried out through occupational therapy interventions reflects the care function of the profession, as observed in previous research (Debeer, 1987; Madill et al., 2010) and allows reflection on four main points emerging from this review, namely: 1) the predominance of empirical studies; 2) the relationship between child development and occupations, which suggests the importance of occupational development; 3) the centrality of playing in the occupational therapeutic approach of childhood, and; 4) the significance of education as a structuring occupation within children's daily lives.

The predominance of empirical studies, particularly of quantitative approaches, is linked to a general predominance of research whose purpose is to investigate and demonstrate the efficacy of an intervention, resource, technique or evaluation instrument, and reflects a tendency to expect investigations and scientific publications to provide evidence in support of professional practices (Gutman, 2008).

The frequent relationship between child development and childhood occupations refers to an intrinsic relation between development and occupation (Lawlor, 2003; Humphry, 2002; Humphry & Wakeford, 2006, 2008), which is fundamental for occupational therapists working in the field of childhood. This relationship underpins the concept of occupational development (Davis & Polatajko, 2006; Wiseman et al., 2005) and connects with what Case-Smith (2001, p. 72) stated in asserting that "the child learns occupations more through interaction with his environment than through the emergence of a certain scenario that reflects the neuromaturational principles".

Play has been a widely discussed theme as a childhood occupation (Bartie et al., 2016; Graham et al., 2014; Fallon & MacCobb, 2013; Dionne & Martini, 2011). The results of this review indicate that play is the main occupation of children, as derived from the recognition of occupational therapists of the key role of play in childhood. Other studies also suggest the centrality of play for childhood and the significant role of play in the field of occupational therapy (Sant'Anna, 2016).

Education has been considered an occupation in some studies (Hwang et al., 2002; Hutton, 2009). The elaboration and use of SFA suggests a similar conclusion but does not make it, since it involves a protocol centred on a list of skills that the child must present or develop to participate in a context (Hwang et al., 2002). Nevertheless, SFA could be used as an evaluation protocol and serve as a basis for occupational therapists to develop and strengthen an occupational perspective of education. It is important to emphasise the need to expand evidence-based research in this respect and to focus on education as a childhood occupation. There have been studies that appear to consider that the occupational perspective confirms a link between approaching a child as an occupational being and of viewing education as an occupation (Dunford & Bannigan, 2011; Gartland, 2001; Case-Smith et al., 2001; Law et al., 2006; Ziviani & Muhlenhaupt, 2006).

Concerning the contexts of performance of occupations, considering that the practice of occupational therapy is based on the understanding of interactions between a child and his or her occupations, and of the environments in which the child is involved (Case-Smith, 2001), specific places were often mentioned in the studies detected, mainly the home, the community and the school.

The home, as the primary environment for learning and carrying out children's occupations, has been considered the most powerful context for providing care, because it is the immediate environment for children. Home and school are the environments that children are located within and in which they engage in occupations, providing contexts that are structuring for development and participation (Black et al., 2017; Britto et al., 2017). The community is a fundamental environment for research and intervention within the wider world of a child's engagement, because in it the child develops social participation, leisure, play and other eminently social occupations (Case-Smith, 2001; Bartie et al., 2016).

The school provides a formative context and the demands related to the occupation of education are part of the demands regarding children's occupations (Case-Smith, 2001; Rodger & Ziviani, 1999). It is essential that occupational therapists are immersed in this context and able to contribute to favouring the involvement of children in educational practices (Muhlenhaupt et al., 2015; Dunford & Bannigan, 2011; Gartland, 2001).

Occupational therapeutic outpatient settings were not mentioned in any of the studies found, with no study reporting on the possible influences of hospital settings and their development in terms of children's occupations, or assessing how these occupations are performed in those environments that often create a new daily life for children. Hospital contexts have been mentioned as environments where occupational therapists tend to mediate daily occupations and the construction of new childhood.

We highlight contributions to the Brazilian scenario, which was not represented in the results of this review. The approach of childhood from an eminently occupational perspective may potentiate the interventions already carried out in Brazil that emphasize components of performance or participation in a particular child occupation, such as play.

The use of concepts based on this perspective, such as "occupational development" and "child occupations", can promote dialogue and increase the visibility of Brazilian

research in the international scenario, making our practices recognized, disseminated and referenced in other national studies and international organizations.

Similarly, the publication of Brazilian authors in international journals can also give this visibility to national surveys, allowing Brazilian studies to be located in databases that index relevant Periodicals of Occupational Therapy and allowing future review studies to locate them, and insert them into future research and analysis.

Finally, it is emphasized that the shift in the look of child development towards child occupations, proposed by Humphry & Wakeford (2008), translates into a potent perspective to base clinical practice and research on Occupational Therapy in childhood, so to strengthen the specificity of Occupational Therapy in services, teams and scientific research with this public.

5 Conclusions

This state-of-the-art review aimed to identify how occupational therapists from other countries have addressed children as occupational beings and which occupations have been described as occupations typical of the infantile public. All efforts were made to carry out a complete literature review; but there are, as in every study, limitations. The limitations of this type of review are common to any “transversal” method of research, since they correspond to a sample in time (Grant & Booth, 2009). However, by including a large number of articles and basic literature in this review, it is expected that the conclusions drawn will be substantiated (Dunn et al., 2009), since the databases chosen for use in this review were selected for indexing diverse and relevant periodicals in the field of Occupational Therapy.

It is not considered that the use of keywords in English has excluded Portuguese language articles, for example, since all articles published in this language must, necessarily, be accompanied by a title, abstract and descriptors also in English. Therefore, the choice of English as a search language was not considered a limitation in this study.

Emphasis was given in this review to the term “child occupations”. Possible articles that address a particular type of child occupation such as play, self-care or education may have been excluded from the findings because the descriptors do not contemplate them individually. However, it is important to note that this was a methodological choice to identify if and how occupational therapists have understood the category of “child occupations” in their research, since it is argued for the adoption of this one to improve Occupational Therapy practices with the children's public.

Some considerations can be made from the results presented here. The theoretical studies aimed at subsidizing the practices of occupational therapists in child care have been strongly present, which indicates the concern of occupational therapists to be grounded in the development of child care practices. Playing plays a prominent role, among the studies found, showing itself as the main occupation performed by children, structuring the daily life of children.

At the same time, the absence of Brazilian studies in the findings suggests that the perspective of integral attention to childhood has not been contemplated in Brazil and suggests that more dialogues can be made with the production of international knowledge on occupational development and children's occupations.

Another pertinent consideration refers to the intrinsic relationship between child development and children's occupations, which suggest and reinforce the belief in the concept of occupational development, corroborating with an occupational perspective of childhood, considered here as a powerful guide to Occupational Therapy practices.

The family perspective has been very present in the researches, which reaffirms the centrality that the family occupies in the care of children, but also points to the need to involve children more in the researches that aim to talk about themselves. The incipient presence of research on the participation of children in educational practices can express a gap in approaching education as a child occupation.

It was also noted the low frequency of revisions on children's occupations, which demands the efforts of occupational therapists who work with and research on childhood, in order to provide subsidies to feed back their practices.

The categories structured to classify the studies found were used to characterize the production of knowledge about Occupational Therapy and children's occupations. It is suggested that new studies with other descriptors, involving other databases and developing other forms of classification be performed, for the comparison of results and the construction of knowledge in this field.

It was not intended here to judge any form of approach to childhood or childhood occupations, it was only sought to explain how occupational therapists have appropriated the discussions in this field and to argue for the adoption of an occupational perspective considered potent to sustain studies, research and practices that contemplate the perspective of integral attention to childhood (Nucci et al., 2017).

References

- Asbjørnslett, M., Engelsrud, G. H., & Helseth, S. (2015). How children with disabilities engage in occupations during a transitional phase. *Journal of Occupational Science*, 22(3), 320-333.
- Bardin, L. (2011). *Análise de conteúdo*. São Paulo: Edições 70.
- Bar-Shalita, T., Yochman, A., Shapiro-Rihtman, T., Vatine, J. J., & Parush, S. (2009). The Participation in Childhood Occupations Questionnaire (PICO-Q): a pilot study. *Physical & Occupational Therapy in Pediatrics*, 29(3), 295-310.
- Bartie, M., Dunnell, A., Kaplan, J., Oosthuizen, D., Smit, D., van Dyk, A., Cloete, L., & Duvenage, M. (2016). The play experiences of preschool children from a Low-socio-economic rural community in Worcester, South Africa. *Occupational Therapy International*, 23(2), 91-102.
- Black, M. M., Walker, S. P., Fernald, L. C. H., Andersen, C. T., DiGirolamo, A. M., Lu, C., McCoy, D. C., Fink, G., Shavar, Y. R., Shiffman, J., Devercelli, A. E., Wodon, Q. T., Vargas-Barón, E., & Grantham-McGregor, S. (2017). Early childhood development coming of age: science through the life course. *Lancet*, 389(10064), 77-90.
- Britto, P. R., Lye, S. J., Proulx, K., Yousafzai, A. K., Matthews, S. G., Vaivada, T., Perez-Escamilla, R., Rao, N., Ip, P., Fernald, L. C. H., MacMillan, H., Hanson, M., Wachs, T. D., Yao, H., Yoshikawa, H., Cerezo, A., Leckman, J. F., & Bhutta, Z. A. (2017). Nurturing care: promoting early childhood development. *Lancet*, 389(10064), 91-102.
- Canadian Association of Occupational Therapists – CAOT. (1997). *Enabling occupation: an occupational therapy perspective*. Ottawa: CAOT.
- Carpenter, J., & McConkey, R. (2012). Disabled children's voices: the nature and role of future empirical enquiry. *Children & Society*, 26(3), 251-261.

- Case-Smith, J. (2001). Development of childhood occupations. In J. Case-Smith (Ed.), *Occupational therapy for children* (pp. 71-94). Missouri: Mosly.
- Case-Smith, J., Rogers, J., & Johnson, J. H. (2001). School-based occupational therapy. In J. Case-Smith (Ed.), *Occupational therapy for children* (pp. 757-779). Missouri: Mosly.
- Chantry, J., & Dunford, C. (2010). How do computer assistive technologies enhance participation in childhood occupations for children with multiple and complex disabilities? A review of the current literature. *British Journal of Occupational Therapy*, 73(8), 351-365.
- Clark, F., & Zemke, R. (1996). *Occupational science: the evolving discipline*. Philadelphia: F.A. Davis.
- Davis, J., & Polatajko, H. (2006). The occupational development of children. In S. Rodger & J. Ziviani (Eds.), *Occupational therapy with children: understanding children's occupations and enabling participation* (pp. 136-157). Malden: Blackwell Publishing.
- Debeer, F. (1987). Major themes in occupational therapy: a content analysis of the Eleanor Clarke Slagle lectures, 1955-1985. *The American Journal of Occupational Therapy*, 41(8), 527-531.
- Dionne, M., & Martini, R. (2011). Floor time play with a child with autism: a single-subject study. *Canadian Journal of Occupational Therapy*, 78(3), 196-203.
- Dunford, C., & Bannigan, K. (2011). Children and young people's occupations, health and well being: a research manifesto for developing the evidence base. *World Federation of Occupational Therapists Bulletin*, 64(1), 46-52.
- Dunn, L., Coster, W. J., Orsmond, G. I., & Cohn, E. S. (2009). Household task participation of children with and without attentional problems. *Physical & Occupational Therapy in Pediatrics*, 29(3), 258-273.
- Fallon, J., & MacCobb, S. (2013). Free play time of children with learning disabilities in a noninclusive preschool setting: an analysis of play and nonplay behaviours. *British Journal of Learning Disabilities*, 41(3), 212-219.
- Ferreira, N. S. (2002). As pesquisas denominadas "estado da arte". *Educação & Sociedade*, 23(79), 257-272.
- Fingerhut, P. E. (2013). Life Participation for parents: a tool for family-centered occupational therapy. *The American Journal of Occupational Therapy*, 67(1), 37-44.
- Folha, D. R. S. C., & Monteiro, G. S. (2017). Terapia ocupacional na atenção primária à saúde do escolar visando a inclusão escolar de crianças com dificuldades de aprendizagem. *Revista Interinstitucional Brasileira de Terapia Ocupacional*, 1(2), 202-220.
- Gartland, S. (2001). Occupational therapy on preschool and childcare settings. In J. Case-Smith (Ed.), *Occupational therapy for children* (pp. 731-755). Missouri: Mosly.
- Gebrael, T. L. R., & Martinez, C. M. S. (2011). Consultoria colaborativa em terapia ocupacional para professores de crianças pré-escolares com baixa visão. *Revista Brasileira de Educação Especial*, 17(1), 101-120.
- Graham, N., Truman, J., & Heather, H. (2014). An exploratory study: expanding the concept of play for children with severe cerebral palsy. *British Journal of Occupational Therapy*, 77(7), 358-365.
- Grant, M., & Booth, A. (2009). A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal*, 26(2), 91-108.
- Greene, S., & Hill, M. (2006). Researching children's experience: methods and methodological issues. In S. Greene & M. Hill (Eds.), *Researching children's experience: approaches and methods* (pp. 1-22). London: Sage.
- Gutman, S. A. (2008). Research priorities of the profession. *The American Journal of Occupational Therapy*, 62(5), 499-501.
- Humphry, R. (2002). Young children's occupations: explicating the dynamics of developmental processes. *The American Journal of Occupational Therapy*, 56(2), 171-179.
- Humphry, R., & Wakeford, L. (2006). An occupation-centered discussion of development and implications for practice. *The American Journal of Occupational Therapy*, 60(3), 258-267.

- Humphry, R., & Wakeford, L. (2008). Development of everyday activities: a model for occupation-centered therapy. *Infants and Young Children*, 21(3), 230-240.
- Hutton, E. (2009). Occupational therapy in mainstream primary schools: an evaluation of a pilot project. *British Journal of Occupational Therapy*, 72(7), 308-313.
- Hwang, J. L., Davies, P. L., Taylor, M. P., & Gavin, W. J. (2002). Validation of school function assessment with elementary school children. *OTJR: Occupation, Participation and Health*, 22(2), 48-58.
- Krameck, K., & Nascimento, G. C. C. (2015). A orientação à família de pessoas com deficiência visual como recurso de intervenção do terapeuta ocupacional. *Revista de Terapia Ocupacional da Universidade de São Paulo*, 26(1), 128-135.
- Lane, A., & Ziviani, J. (2002). Enabling computer access: introduction to the test of mouse proficiency. *OTJR: Occupation, Participation and Health*, 22(3), 111-118.
- Larson, E. A. (2004). Children's work: the less-considered childhood occupation. *The American Journal of Occupational Therapy*, 58(4), 369-379.
- Law, M., Petrenchik, T., Ziviani, J., & King, G. (2006). Participation of children in school and community. In S. Rodger & J. Ziviani (Eds.), *Occupational therapy with children: understanding children's occupations and enabling participation* (pp. 67-90). Malden: Blackwell Publishing.
- Lawlor, M. C. (2003). The significance of being occupied: the social construction of childhood occupations. *The American Journal of Occupational Therapy*, 57(4), 424-434.
- Long, S., De Jonge, D., Ziviani, J., & Jones, A. (2009). Paediatricots: utilisation of an Australian list serve to support occupational therapists working with children. *Australian Occupational Therapy Journal*, 56(1), 63-71.
- Madill, H., Brintnell, S., & Stewin, L. (2010). Professional literature: one view of a national perspective. *Australian Occupational Therapy Journal*, 36(3), 110-119.
- Mandich, A., & Rodger, S. (2006). Doing, being and becoming: their importance for children. In S. Rodger & J. Ziviani (Eds.), *Occupational therapy with children: understanding children's occupations and enabling participation* (pp. 115-135). Malden: Blackwell Publishing.
- Muhlenhaupt, M., Pizur-Barnekow, K., Schefkind, S., Chandler, B., & Harvison, N. (2015). Occupational therapy contributions in early intervention: implications for personnel preparation and interprofessional practice. *Infants and Young Children*, 28(2), 123-132.
- Njelesani, J., Pontes, T., Davis, J., & Polatajko, H. (2017). Test construction of the Occupational Repertoire Development Measure-Parent (ORDM-P). *The American Journal of Occupational Therapy*, 71(4), 1-1.
- Nucci, L. V., Nunes, A. C., Folha, D., Marini, B., Ramos, M., & Della Barba, P. (2017). A produção de conhecimento em terapia ocupacional na perspectiva da atenção integral à criança: relatos de um grupo de pesquisa. *Revista Interinstitucional Brasileira de Terapia Ocupacional*, 1(5), 693-703.
- Rodger, S., & Vishram, A. (2010). Mastering social and organization goals: strategy use by two children with asperger syndrome during cognitive orientation to daily occupational performance. *Physical & Occupational Therapy in Pediatrics*, 30(4), 264-276.
- Rodger, S., & Ziviani, J. (1999). Play-based occupational therapy. *International Journal of Disability Development and Education*, 46(3), 337-365.
- Sant'Anna, M. M. M. (2016). *Formação continuada em serviço para professores da educação infantil sobre o brincar* (Tese de doutorado). Universidade Estadual Paulista, Marília.
- Scott, J. (2008). Children as respondents: The challenge for quantitative methods. In P. Christensen & A. James (Eds.), *Research with children: perspectives and practices* (pp. 87-109). New York: Routledge.
- Serrano, A. M. (2007). *Redes sociais de apoio e a sua relevância para a intervenção precoce*. Porto: Porto Editora.

- Sukkar, H., Dunst, C. J., & Kirkby, J. (2017). Family systems and family-centred practices in early childhood intervention. In H. Sukkar, C. J. Dunst & J. Kirkby (Eds.), *Early childhood intervention: working with families of young children with special needs* (pp. 3-14). New York: Routledge.
- Tonkin, B. L., Ogilvie, B. D., Greenwood, S. A., Law, M. C., & Anaby, D. R. (2014). The participation of children and youth with disabilities in activities outside of school: A scoping review. *Canadian Journal of Occupational Therapy, 81*(4), 226-236.
- Trevisan, J., & Della Barba, P. S. C. (2012). Reflexões acerca da atuação do terapeuta ocupacional no processo de inclusão escolar de crianças com necessidades educacionais especiais. *Cadernos de Terapia Ocupacional da UFSCar, 20*(1), 89-94.
- Wiseman, J. O., Davis, J. A., & Polatajko, H. J. (2005). Occupational development: towards an understanding of children's doing. *Journal of Occupational Science, 12*(1), 26-35.
- Yerxa, E. (1993). Occupational science: a new source of power for participants in occupational therapy. *Journal of Occupational Science, 1*(1), 3-9.
- Ziviani, J., & Muhlenhaupt, M. (2006). Student participation in the classroom. In S. Rodger & J. Ziviani (Eds.), *Occupational therapy with children: understanding children's occupations and enabling participation* (pp. 241-260). Malden: Blackwell Publishing.

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Débora Ribeiro da Silva Campos Folha: text conception, literature survey, data sistematization and categorization, analysis elaboration, sources organization, text writing.
Patrícia Carla de Souza Della Barba: research idealization and guidance, analysis elaboration, text review. All authors approved the final version of the text.

Funding Source

Universidade do Estado do Pará (UEPA).

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