

Bringing together different teaching degrees to promote the practice of motor activity in an Early Childhood Education public school.

RUTE ESTANISLAVA TOLOCKA¹, ADEMIR DE MARCO², KELLY CRISTINA FREIRE SIQUEIRA³

¹Departament Faculty of Health – FACIS, Methodist University of Piracicaba-UNIMEP, São Paulo, BRAZIL

²Departament Faculty of Physical Education, State University of Campinas-UNICAMP, São Paulo, BRAZIL

³Departament Faculty of Health – FACIS, Methodist University of Piracicaba-UNIMEP, São Paulo, BRAZIL

Published online: January 31, 2019

(Accepted for publication December 12, 2018)

DOI:10.7752/jpes.2019.s1021

Abstract:

Brazilian laws for education offer the presence of teachers with different backgrounds to work in schools of Early Childhood Education (ECE) and official documents suggest the practice of motor activities; however, schools of Early Childhood Education offer routines with few opportunities for such practice. The purpose of this study is to establish a dialogue between educators and Physical Education (PE) teachers to promote motor activities in schools of ECE. This is an action research involving four school teachers, their students, the school coordinator and three teachers of Physical Education. The teachers met on a weekly basis for a joint planning and there were four encounters with the parents; 52 systematic sessions and 40 free practice sessions were also offered during two semesters. The activities were registered in a field journal and in pictures. Children practiced motor skills such as walking, running, groveling, crawling and balancing with or without music and manipulated objects stimulating their sensory pathways. In their statements, educators said that the lack of knowledge on motor activity and child development inhibited them in the provision of these, and Physical Education teachers reported they had little experience with this age group. The dialogues enabled the provision of motor activities and the improvement of knowledge and experiences. It is concluded that interdisciplinarity can stimulate the practice of motor activities at this school level.

Keywords: Early Childhood Education; Child; Motor activity; Interdisciplinarity

Introduction

Since the Education for All movement has brought to light the need to include children in formal education as a possibility to reduce poverty (UNESCO, 1990), the concern with early childhood education is growing in the world. In Brazil, early childhood education has become the first stage of basic education with the Law of National Educational Bases and Guidelines (BRASIL, 1996).

From then on, documents were produced to support the activities to be carried out. The National Curriculum Frameworks for Early Childhood Care and Education (ECCE) (BRAZIL, 1998) and the National Guidelines for Early Childhood Education - NGECE (BRAZIL, 1998, 2010) propose quality didactic practices for children from 0 to 5 years of age that foster physical, affective, intellectual, linguistic and social development and include motor activities with music and dance, suggesting the provision of motor activities to children.

Studies have shown that mobility is a need and a right of the child (Ginsburg, 2007), since it assists in the acquisition of motor skills, (Gagen & Getchell, 2006; Willian, 2008) improving motor performance (Ré, 2011), affective aspects (Galvão, 2001) and social interaction (Krebs, 1995).

According to Santos *et al.* (2009) and Souza *et al.* (2010) the low stimulation of motor development has been causing developmental delays, and those delays may bring consequences to other areas of behavior. Studies have pointed to the relationship between learning disability and motor development (Clark *et al.*, 2015; Libertus & Violi, 2016).

There are also indications that the acquisition of a new motor skill may influence the language of developing infants (Libertus & Violi, 2016). In addition, children who have learned to walk earlier, performed better on cognitive tests at the beginning of old-age (Madsen; Mortensen, 2015; Murray, 2007) proving, therefore, the connections between the different aspects of development.

However, literature also shows that in the daily routine of children's institutions, the moments of playing and carrying out motor activities within the school are scarce. Most of the time is spent in activities of care, often accentuating the time of sleep and actions to organize the children (Tolocka *et al.*, 2009; Tolocka; Brolo, 2010).

In Brazil, there are still no guidelines or recommendations for planning motor activities for infants. There is a lack of studies, indicating the need for further research in this area to investigate the amount of motor activities and the sedentary behavior in preschool environments (Coelho, 2017; Barbosa *et al.*, 2016).

The importance of child mobility has also been called for by the World Health Organization (WHO, 2010), which advocates the daily promotion of motor activity at an early age in the lives of children, as a way of preventing and maintaining health and quality of life.

The need to perform motor activities at school has raised the debate about the scope of work of Physical Education (PE) at this school level. On the one hand, there is a consensus that motor activities are essential for the full development of the child. On the other hand, at this school level, it is not intended the segmentation of knowledge in different subjects. In addition, the Physical Education teacher has little contact with the children, in that they only meet once or twice a week to develop activities isolated from the other activities of the school.

Interdisciplinary work can be a solution to modify this context. Among the changes in the National Educational Bases and Guidelines Law with Decree No. 12796/13, is the establishment of different teaching credentials to work at this school level, seeking the interdisciplinarity between them (BRASIL, 1996). In childhood education it is necessary to avoid the disciplinary model, characteristic of the other levels of Basic Education.

In this way, a possibility of interaction between professionals with the different teaching degrees is open to promote actions that stimulate the full development of the child. Rather than maintaining specific activities of a particular course, the joint work can be carried out to meet the growing demand for this school level. It is understood here by interdisciplinarity, the joint work of different fields of knowledge in search of new knowledge. Nevertheless, studies to promote motor activities in schools, developed jointly by professionals with different teaching degrees, are also scarce.

To meet this demand, the present study aimed to establish dialogues between PE teachers and educators, building a proposal for joint activities that allow the practice of motor activities in an Early Childhood Education (ECE) school.

Materials and Methods

Participants.

Participating in the study were four teachers from nursery and kindergarten classes, their respective students, twenty children from six months to four years of age, the parents, the school coordinator and three Physical Education teachers.

Procedures

It is an action research (Trip, 2005) carried out in a public school of ECE (Early Childhood Education), of an inland city of the state of São Paulo. The study was carried out based on the interest of the teachers and the coordination of the school, along with the decision of the researchers to carry out this investigation, determining by this mutual choice the convenience character of the research. In this way, the research was conducted to provide motor activities for children.

The study was approved by the Research Ethics committee of a higher education institution, with report No. 2058026/2017 and authorized by the management of the Early Childhood Education school. Parents and teachers, as well as the coordinator signed the Term of Free and Informed Consent – (TFIC) authorizing the study. In order to analyze the routine of the ECE school prior to the implementation of the program, *on-site* visits (*in loco*) were carried out to evaluate the site and observe the activities that were being conducted, which were recorded in a field journal (Minayo, 1998) and in photos. Data were also extracted from the "time schedule" table, posted on the board of the ECE school, as well as information obtained in a meeting with the teachers and the coordinator of the school.

All program activities were planned jointly by the team through weekly pedagogic encounters. The activities with the children were planned according to the needs of the age group served and divided by themes, taking into account motor, psychological and cognitive aspects (Lent, 2001; Piaget, 1970).

There were also meetings with the parents to present the project objectives and discuss the child's development and the progress of the activities.

The program lasted for one academic year. In the first semester, the themes developed were: a) Imitation of animals and b) Exploitation of materials. In the second half of the year, the theme was "Exploration of body and material possibilities". Systematized activities were carried out in two weekly sessions, which included body activities with music and free practice sessions on the other days. All encounters were also registered in a field journal.

Results

The *in loco* visits and the interviews with classroom teachers and parents before the beginning of the program pointed to the lack of systematized motor activity, with few opportunities for experiences of gross motor skills. As a result, a specific room was set up for the motor practice in the room that was once only meant for sleep and it was established that the program would have systematic sessions with motor practice, twice a week.

There were nine team meetings in the first half of the year and 16 meetings in the second half. In the first semester the dialogues among professionals focused on the routine of the School of Early Childhood Education and the importance of encouraging children to move actively, stimulating their natural skills,

interacting with music and materials appropriate to each age group. They also discussed the activities carried out and the possible ways of parental involvement. In the team meeting in the second semester, were analyzed the children's behavior in relation to motor activities as well as the experiences of the team in the conduction of motor practices. Parental involvement was also discussed, and activities were developed for parents to do with their children.

In the first semester, 20 sessions were held, and in the second semester, 32 sessions with both the nursery and the kindergarten class, respecting the needs and possibilities of the age group. The free practice motor activities were performed in 40 sessions in a joint work of the Physical Education teacher and the classroom teacher.

Body experiences were carried out, with the use of instrumental songs and children's songs, with rhymes, and use of diverse materials. In the first semester, in the nursery class, the motor activities most experienced were to sit without support, which occurred in 20 sessions, picking up/grabbing (19) and running (18), respecting the child's time for the motor acquisition of these skills. They also recorded practices of activities that involved crawling (11); throwing (eight); walking (seven), catching (four), kicking (three) and rolling (two). In the nursery class, the activities performed/number of days where they occurred were: running (16); grabbing/picking up (14); jumping (10); crawling (eight), catching (eight), drumming (seven), creeping (six), balancing (six), kicking (four) throwing (four); rolling (three).

In the second semester, walking, running, crawling, creeping, and balancing skills were observed in all sessions, although not all children performed them on the same day, because the locomotion occurred according to the possibility of the child. Crawling activities referred to a children's song, whose theme was the displacement of animals that crawl. There were also 14 sessions where there were actions of throwing and eight sessions where the children experienced catching objects. The rolling activity was observed in only one class. In addition to these motor skills, in all sessions different positions of the child were observed in the space, standing, lying in the supine and dorsal decubitus in three supports and four supports.

In both semesters choreography experiences were recorded, with movements associated to the rhythm and lyrics of the songs, stimulating the body perception and body language of the children, as well as establishing contact with others.

The materials used were: raffia curtain; cat mask; white and black ball; cloth doll; stuffed animals; tunnel; toy with wheel; rattles; cardboard boxes; fabrics; colored balls, small Styrofoam balls 8cm in diameter and cones. In the second semester the materials were cardboard bags, colored hula hoops, colored fabrics, mats, fabric tunnel, colored balls, bag tied with marbles, cardboard boxes, rattles, tambourines, sensorial mat, alligator puppet.

In the free practice activities in kindergarten, field journal registrations showed that they were carried out with the same themes of the systematic sessions, apart from the inclusion of playground games such as tag, statue and charades. In the nursery, free practice activities focused on exploring materials and repeat the movements made with music in the systematized sessions. It was reported that there were interactions between the children, the teachers and the researchers in the activities proposed in the free practice sessions.

The activities carried out with the parents occurred in four encounters. The first one was dedicated to present and explain the purposes of the motor activities project and collect the parents' opinions on the implementation of the same.

In the second encounter, during the event, there was a presentation of the activities carried out in the program with the children, with imitation of animals and body experiences such as crawling and rolling. Parents were able to experience such activities together with their children and there were moments of joy and interaction between them, even though some parents (three) of the nursery chose not to participate and continued to play with the baby on their lap.

In the third and fourth encounters, parents experienced the exploration of materials with their children, using the materials proposed with them, with movements that accompanied the rhythms of instrumental songs and children's songs with rhymes.

Thus, these encounters provoked interaction between parents and children, resulting in moments of affection and fun, as well as opportunities for parents to know the activities carried out in the motor activity project of the ECE school.

Among the positive aspects of the program were: the importance of analyzing motor practices at the meetings; the establishment of a specific time and place for the practice of motor activity; the importance and contributions of dialogues between the holders of teaching degrees for structuring the planning of daily activities. On the downside, there were a lot of repeated activities with the children, which occurred due to the repetition of the same activity in the free practice sessions and the systematized sessions. It was recommended that there be more variability of activities in the free practice sessions, without ceasing to focus on the practice of gross motor skills.

Discussion

The proposal of a joint work between classroom teachers and Physical Education (PE) teachers fits within the context pointed out by studies about the lack of motor activity in the school and the risks of a

sedentary lifestyle and associated diseases (Krebs, 1995; Santos *et al.*, 2009). At the same time, knowledge about the relationship between the level of motor development in the first years of life and the performance in different domains of lifelong behavior is already available (Coelho, 2017, Clark, 2015).

The project arose during the discussion on the change in the Law of Guidelines and Bases - LDB (BRAZIL, 1996), establishing different teaching degrees to act at that school level and the curricular organization in disciplines, which has been causing concern in a "schooling" model in Early Childhood Education, that is structured in disciplines and with a limited knowledge approach (Ayoub, 2005).

The approach of classroom teachers and Physical Education (PE) teachers held in this action research, led to the verification that in the routine of activities, there was time for pedagogical practices including 'play', which enhanced the child's imagination and language. However, these activities focused on fine manipulation, and although there was no intention to teach basic motor skills such as bouncing, jumping, crawling, balancing, running and rolling, there was a desire to offer such activities, although the basic training of classroom teachers made it difficult to plan, implement and assess these motor practices.

On the other hand, such dialogue also enabled to verify that Physical Education (PE) teachers had little experience to work with this age group. Although they had the theoretical knowledge about the development, needs and motor practices of this age group, they needed the intervention of classroom teachers to relate to children, especially in the nursery, and articulate the themes developed in other school hours.

Encounters among team members as well as joint activities with children were essential so that all actions could be carried out together, as the dialogue favors the establishment of relationships, complementarity and convergence in interdisciplinary work (Fazenda, 2006). Moreover, practical experience reveals difficulties and possibilities that have not always been anticipated in previous dialogues, bringing the challenge to overcome difficulties and explore new possibilities.

The joint work between professionals of Pedagogy and Physical Education promoted dialogues that enabled the joint administration of pedagogical practices, seeking interdisciplinarity, offering integration, dialogue and complementarity between them and enabling a mutual and meaningful learning (Fazenda, 2008).

The use of different materials allowed the child to withdraw important information from the environment, favoring the processes of brain plasticity, since they stimulate sensory pathways (Lent, 2001). Moreover, it was observed that children experienced different motor skills, that there was an increase in the use of motor skills and in the range of options for ways to move around, contributing to the development of basic motor skills. Nonetheless, this study has the limitation of not performing systematized assessments of motor skill levels before and after the program.

Conclusion

The presence of professionals with different teaching degrees in Early Childhood Education schools can be used to carry out joint activities, inserting Physical Education teachers in the school context and not just on a few days or times. Different knowledges from different teaching degrees can complement each other and contribute to the search and construction of more integrated knowledge, capable of providing experiences that optimize the full development of the child.

In this study, the team composition with classroom teachers, coordination and Physical Education teachers, along with the collaboration of the parents, allowed the children to experience basic motor skills, which were well accepted by them, showing that the presence of the Physical Education teacher should not be seen as an additional curricular component in Early Childhood Education, but rather as a facilitator to provide the necessary motor activities to children in an age range of crucial importance to their full development.

Conflict of interest. The authors state that there is no conflict of interest.

Funding Agency: National Council for Scientific and Technological Development (CNPQ); Proposal Submission Form (FAP)

References:

- Ayoub, E. (2005). Narrando experiências com a educação física na educação Infantil. *Revista Brasileira de Ciências do Esporte*, 6(3), pp. 143-158.
- United Nations Educational, Scientific and Cultural Organisation (UNESCO) (1990). *Declaração Mundial sobre Educação para Todos: satisfação das necessidades básicas de aprendizagem* Jomtien. (Available at <http://unesdoc.unesco.org/images/0008/000862/086291por.pdf>).
- Barbosa, S. C. *et al* (2016). Ambiente escolar, comportamento sedentário e atividade física em pré-escolares. *Revista Paulista de Pediatria*, 34(1), pp. 301-308.
- BRAZIL. (2010). Ministério da Educação. Secretaria de Educação Básica. Diretrizes Curriculares Nacionais para a Educação Infantil. Brasília. (Available at <http://portal.mec.gov.br/index.php>).
- BRAZIL. (1998) Ministério da Educação e do Desporto. Secretaria de Educação Fundamental. *Referencial curricular nacional para a educação infantil*/ Ministério da Educação e do Desporto, Secretaria de Educação Fundamental, 3, Brasília: MEC/SEF.
- BRAZIL. (2013). *Resolução n.º 12796 de 4 de abril de 2013*. Altera a lei de Diretrizes e Bases da Educação Nacional de 20 de dezembro de 1996. Brasília.

- Coelho, V.A.C. (2017). *Entre a casa e a escola: prática de atividades físicas e desenvolvimento infantil* (Tese de doutorado). Programa de Pós-Graduação em Ciências do Movimento Humano, Universidade Metodista de Piracicaba, Piracicaba, SP, Brasil.
- Fazenda, I.C.A. (2008). *Didática e interdisciplinaridade*. Campinas: Papirus.
- Fazenda, I.C.A. (Org.). (2006). *Interdisciplinaridade na Educação Brasileira- 20 anos*. 1ed: Criarp.
- Galvão, I. (2001). Expressividade e emoção: ampliando o olhar sobre as interações sociais. *Revista Paulista de Educação Física*, supl. 4, pp. 15-31.
- Gagen, L.; Getchell, N. (2006). Using ‘Constraints’ to Design Developmentally Appropriate Movement Activities for Early Childhood Education. *Early Childhood Education Journal*, 34(3), pp. 227-232.
- Ginsburg, K. (2007). The Importance of play in promoting healthy child development and maintaining strong parent-child bonds. *Jornal Pediatrics*, 119, pp. 182-191.
- Krebs, R. J. (1995). *Urie Bronfenbrenner e a ecologia do desenvolvimento humano*. Santa Maria: Casa Editora.
- LenT, R. (2001). *Cem bilhões de neurônios: conceitos fundamentais de neurociência*. São Paulo: Atheneu, pp. 209- 311.
- Libertus, K.; Violi, D. A. (2016). Sit to talk: relation between motor skills and language development in Infancy. *Frontiers in Psychology*, 7(75).
- Madsen, F.T.; Mortensen, E.L. (2015). Infant developmental milestones and adult intelligence: A 34-year follow-up. *Early Human Development*, 91(7), pp.393-400.
- Minayo, M.C. (1998). *O desafio do conhecimento: pesquisa qualitativa em saúde*. São Paulo: Hucitec.
- Murray, G. K. et al. (2007). Infant developmental milestones and subsequent cognitive function. *Annals of Neurology*, 62(2), pp. 128-136.
- Piaget, J. (1970). *A construção do real na Criança*. Rio de Janeiro: Zahar, p. 360.
- Poranen-Clark, T. et al. (2015). Infant motor development and cognitive performance in early old age: the Helsinki Birth Cohort Study. *Age*, 37(3), p. 9785.
- Ré, A. H. N. (2011). Crescimento, maturação e desenvolvimento na infância e adolescência: implicações para o esporte. *Motricidade*, 7(3), pp. 55-67.
- Santos, D. C. C; et.al. (2009). Desempenho motor grosso e sua associação com fatores neonatais, familiares e de exposição à creche em crianças até três anos de idade. *Revista Brasileira de Fisioterapia*, 13(2), pp. 173-179.
- Souza, C.T; et.al. (2010). Avaliação do desempenho motor global e em habilidades motoras axiais e apendiculares de lactentes frequentadores de creche. *Revista Brasileira de Fisioterapia*, 14(4), pp. 309-315.
- Tolocka, R. E.; Brollo, A. L. (2010). Atividades físicas em Instituições de ensino infantil: uma abordagem bioecológica. *Revista Brasileira de Cineantropometria e Desempenho Humano*, 12(2), pp. 140-147.
- TOLOCKA, R. E. et al. (2009). Como brincar pode auxiliar no desenvolvimento de crianças pré-escolares. *Licere*, 12(1), pp. 30 – 51.
- Trip, D. (2005). Pesquisa-ação: uma introdução metodológica. *Educação e Pesquisa*, 31(3), pp.443-446.
- Williams, H. G. et al. (2008). Motor skill performance and physical activity in preschool children. *Obesity*, 16(6), pp.1421-1426.
- World Health Organization. (2010). *Global Recommendations for Physical Activity and Health*. Geneva, Switzerland: World Health Organization.