







Original Article

Relationship between the sociodemographic profile and motor competence of children

Relação entre o perfil sociodemográfico e a competência motora de crianças

Luciana Ferreira^a , Vânia de Fatima Matias de Souza^a , Francieli Ferreira da Rocha^a ,
Pamela Norraila da Silva^a , Francielle Cheuczuk^b , José Luiz Lopes Vieira^c 

^aUniversidade Estadual de Maringá – UEM, Maringá, PR, Brasil.

^bCentro Universitário Fundação Assis Gurgacz – FAG, Cascavel, PR, Brasil.

^cUniversidad Católica del Maule – UCM, Talca, Chile.

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Abstract

Objective: To verify the relationships established between individual and environmental factors in the motor competence of children aged 06 to 10 years. **Method:** This is a quantitative study supported by descriptive and inferential statistics. The following collection instruments were used: Bruininks-Oseretsky Motor Proficiency Test and Home Observation for Measurement of the Environment - Middle Childhood. **Results:** The analyses indicated the influence of environmental constructs on the development and maintenance of children's motor competence, elucidating the fact that the appropriate home environment is a protective factor for the development of this competence. Children residing in adequate homes were 66% more likely to have motor competence on average. Another fact highlighted was due to the disparity in the level of motor competence between the sexes, with emphasis on the fact that girls aged 9-10 years who live in households classified as unsuitable, located in the central region of the city, studying in public schools presented motor competence values below the expected for their age. **Conclusion:** The sociodemographic profile of children who presented the best chances for higher motor proficiency included boys aged 6-7 years old, living in households classified as adequate, located in neighborhoods outside the central region, and studying in private schools.

Keywords: Child Development, Motor Skills, Motor Disorders, Child, Preschool.

Resumo

Objetivo: Verificar as relações estabelecidas entre os fatores individuais e ambientais na competência motora de crianças de 06 a 10 anos de idade. **Método:** Trata-se de um estudo de caráter quantitativo, sustentado na estatística descritiva e inferencial. Os seguintes instrumentos de coleta foram utilizados: Teste de Proficiência Motora de

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Bruininks-Oseretsky e Home Observation for Measurement of the Environment - Middle Childhood. **Resultados:** As análises indicaram a influência dos constructos ambientais no desenvolvimento e manutenção da competência motora das crianças, elucidando o fato de que o ambiente domiciliar adequado é um fator de proteção para o desenvolvimento dessa competência. Crianças residentes em casas adequadas apresentaram em média 66% mais chances de terem competência motora. Outro fato evidenciado deu-se em razão da disparidade no nível de competência motora entre os sexos, com destaque para o fato de que meninas com idade entre 9 e 10 anos que residem em domicílios classificados como não adequados localizados na região central da cidade e que estudam em escolas públicas apresentaram valores de competência motora abaixo do esperado para sua idade. **Conclusão:** O perfil sociodemográfico de crianças que apresentaram as melhores chances para uma proficiência motora mais alta foi de meninos com idade entre 6 e 7 anos que residem em domicílios classificados como adequados localizados em bairros e que estudam em escolas privadas.

Palavras-chave: Desenvolvimento Infantil, Destreza Motora, Transtornos Motores, Pré-escolar.

Introduction

From a perspective of the child's integral development, it is observed that motor competence is linked to the ability to perform motor skills such as running, kicking and jumping proficiently (Gallahue et al., 2013). This ability is established as one of the relevant domains for children in early life for their cognitive (Grantham-McGregor et al., 2007) and social-emotional (Piek et al., 2008) development. On the other hand, low levels of motor competence can lead some children and young people to resign themselves to a sedentary lifestyle (Gaul & Issartel, 2016) and to the so-called “diseases of civilization” (Melnik et al., 2015).

Failure to achieve efficiency in fundamental motor skills sometimes results in a motor proficiency barrier that leads to the exclusion of the child from the practice of physical activities, isolating them from playing, interacting and socializing through movement and their gestures, restricting the development of specialized movements applied to games, sports, dance activities, in addition to leading to a scarce engagement in physical activities throughout their lives (Costa et al., 2021; Stodden & Goodway, 2007). Although, historically, motor competence has been perceived as a characteristic of the individual, a complex of factors act interdependently in an interactive process between the individual's biological restrictions and the environment (Gallahue et al., 2013).

Studies show that the level of motor competence of Brazilian children is lower than expected for their age, even when assessed using different instruments, as explained by Marramarco et al. (2012), using the Test of Gross Motor Development – Second Edition (TGMD-2); Montoro et al. (2016), using the Movement Assessment Battery for Children - Second Edition (MABC-2) and Franca et al. (2017), measuring through the Developmental Coordination Disorder Questionnaire – Brazilian (DCDQ-BR).

Another factor related to discussions in the field of motor competence refers to associations between the level of motor competence and gender, with boys tending to be more proficient in controlling objects and gross motor skills (Barnett et al., 2016), while

girls demonstrate better performance in fine motor skills (Morley et al., 2015). Significant differences between the sexes have not been indicated between balance skills and the coordination of arm and leg movements (Pahlevanian & Ahmadizadeh, 2014). However, studies indicating inconsistent results from which boys exhibit higher scores for object control and locomotor skills, or even high scores in balance, sometimes for girls (Venetsanou & Kambas, 2016), sometimes for boys (Yengde et al., 2017).

Differences in performance between motor competence and age have also been studied in the literature (Yengde et al., 2017), when Morano et al. (2020) observed that seven-year-old children have better motor competence compared to six-year-old children. Logan et al. (2014), in turn, reported inconsistent results between the increase in motor competence levels with advancing age. However, the studies carried out still have gaps in relation to individual variables, such as the association of age and gender with the motor competence of school-age children.

In the environmental context, studies show that children living in low-income communities, without the restrictions of apartments and condominiums, are free to experience different motor experiences, which ends up stimulating the acquisition of fine and gross motor skills; however, biological factors (malnutrition/high risk for malnutrition) may act with greater influence, limiting its development (Saccani et al., 2013). For Huston & Bentley (2010), the region where the child lives is considered an important factor, but it depends on other more proximal behaviors to exert influences on the people who live there, since the housing and behavioral characteristics influence the quality of the stimulus within home and nearby. When analyzing motor competence according to geographic region, Nobre et al. (2017) reinforce the importance of the context in which the child is inserted and its relationship with motor development, reporting that those in a situation of social risk present motor delays.

The home environment is considered the first context in which the child is inserted, and this is the space that configures where they can explore and obtain opportunities for stimulation (Ferreira et al., 2021). Although studies have reported a positive influence of the home environment on early motor development (Zanella & Rezer, 2015), little progress has been made in understanding how the home is related to motor development in children over five years old and of school age.

Regarding the school environment, the great importance of the physical environment for the development of the child's potential is undeniable. In recent years, attention to free areas in schools has increased, with the quantity and quality of care/maintenance and equipment associated with children's quality of life (Nascimento & Orth, 2008). These authors compared the motor performance of students from a public school with that of students from a private school in the city of Pelotas and concluded that the students did not present significant differences (Santos et al., 2013). On the other hand, Dumith et al. (2010) found that the type of school had an influence on motor performance, demonstrating that students from the private network had higher mean values.

Based on these considerations and noting that studies focus on only one of the factors that influence children's motor competence, this study aims to integrate individual and environmental factors in order to answer the following problem question: "What personal attributes and environments provide better chances for a child to acquire a better motor competence?"; more specifically, to verify the relationships established between individual and environmental factors in the motor competence of children from 06 to 10 years old.

Methods

Sample

The study sample consisted of students from 6 to 10 years of age, of both sexes, enrolled in public and private schools in the early years of elementary school in the city of Maringá-PR.

The sample calculation was carried out based on data from the Maringá Department of Education, according to the number of children enrolled in the 49 public schools, and from the website of the National Institute of Educational Studies and Research Anísio Teixeira (INEP), according to the number of children enrolled in the 34 private schools in the same municipality.

Thus, the elementary education of the municipal network of Maringá had a total “n” of 16,335 children aged between six and 10 years, while the total “n” of children enrolled in private schools was 7,362.

After this survey, it was necessary to carry out a sample calculation to establish the necessary number of children from 6 to 10 years old that represented the city of Maringá. For this purpose, a 95% confidence interval was used, assuming a prevalence of 50% for the sample based on the formula elaborated by Motta (2006):

$$no = \frac{[(z)^2 * p * (100 - p)]}{EA^2} \quad (1)$$

The following formula was applied to correct the study population:

$$n = \frac{no}{1 + \left(\frac{no}{N}\right)} \quad (2)$$

The municipal schools were selected through a random raffle carried out with the participation of 49 (forty-nine) schools. The draw involved eight schools, obeying the criterion of geographical proportionality (northeast, northwest, southeast and southwest). The north and south poles were divided from Avenida Colombo (horizontal line), while for the division of the east and west poles, Avenida Morangueira (vertical line) was used. The choices were based on the geographic location of the avenues. Out of a total of 34 (thirty-four) private schools, only five agreed to participate in the study.

Terms of Free and Informed Consent (TCLE) were delivered to all children enrolled in elementary school at the schools participating in the study. The following inclusion criteria were applied: return of the TCLE signed by the guardians and attendance and acceptance of the child to participate in the evaluations on the scheduled days. Children with special needs were also evaluated, but their results were not part of the analyses.

Therefore, 476 children enrolled in public schools and 231 children enrolled in private schools in the city of Maringá participated in this study, totaling 707 children.

Table 1 presents the sociodemographic profile of the 707 children evaluated.

Table 1. Demographic profile of participants.

Variable		Total	Percentage
Sex	Boys	332	47.0
	Girls	375	53.0
Age	6 years	71	10.0
	7 years	135	19.1
	8 years	185	26.2
	9 years	199	28.1
	10 years	117	16.6
Home environment	Adequate	356	50.4
	Below adequate	351	49.6
Type of school	Public	476	67.3
	Private	231	32.7
Place of residence	Center	103	14.6
	District	417	59.0
	Periphery	187	26.4

Source: Elaborated by the authors

Measuring instruments

The Bruininks-Oseretsky-BOT-2 Motor Proficiency Test (Bruininks & Bruininks, 2005) was applied to assess the participants' motor competence. The BOT-2 assesses four areas: Fine Hand Coordination, Hand Coordination, Body Coordination/Control, and Strength and Agility. At the end of the test, the child is classified according to their motor competence as: “Well above average”, “Above average”, “Average”, “Below average” or “Well below average”. For this study, the “Well above average” and “Above average” groups, as well as the “Below average” and “Well below average” groups, were merged, with the following classifications remaining: “Above average”, “Average” and “Below average”.

To assess the quality and quantity of stimulation and support available for development in the home environment, the Home Observation for Measurement of the Environment - Middle Childhood (HOME - MC) inventory was applied to children aged six to 10 years (Caldwell & Bradley, 2003). This instrument assesses the quality and quantity of stimulation and support available for development in the home environment. HOME - MC consists of direct observation of the home environment and interaction between the caregiver and the child, associated with a brief structured interview with the caregiver. The questionnaire consists of 59 items, each scored as yes (1 point) or no (0 point), related to the aspect in eight subscales: 1) caregiver responsiveness; 2) physical environment; 3) learning materials; 4) active stimulation; 5) promotion of maturity; 6) emotional climate, 7) parental involvement and 8) family participation. At the end, the items scored for each subscale are summed, followed by the total raw score.

For the household data of the family, parents and guardians were asked, together with the Free and Informed Consent Form, to answer a questionnaire with personal data to identify the child, date of birth, gender and type of school (private or public) they attend. After identifying their residences, the place of residence was divided into three areas. The

first is the central area (downtown), made up of the original zones of the city plan. The second is the area of the districts (neighborhood), zones and gardens that were formed around the center. The third is the area of zones and gardens (periphery) that are located outside the north and south contours of the city (Figure 1).

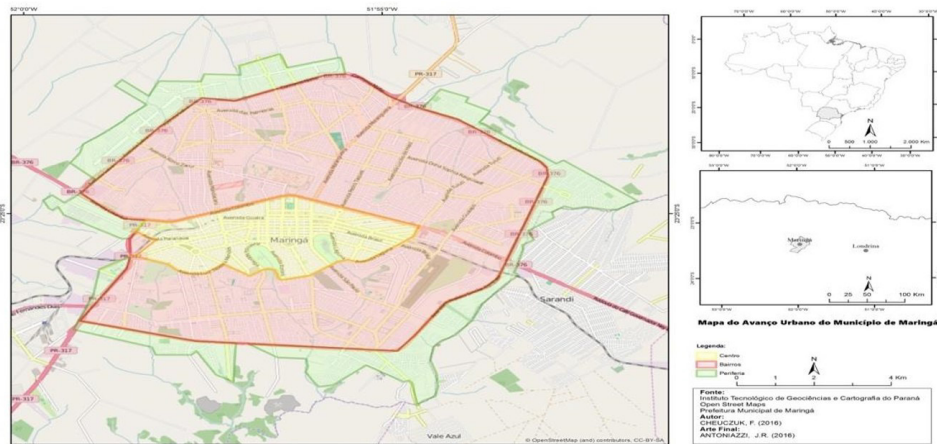


Figure 1. The city of Maringá-PR divided according to the study areas. Note: In yellow, is the region called “center”; in red, “districts”; in green, “periphery”. Source: Technological Institute of Geosciences and Cartography of Paraná.

Procedures

This study is part of the project entitled “Analysis of the influence of the biological context on the motor development of children between 6 and 10 years of age”, submitted and approved by the Permanent Committee on Ethics in Research with Human Beings of Faculdade Assis Gurgacz under opinion no. 1,444,225.

As procedures, the researchers first contacted the Department of Education to request authorization to carry out the research and, later, with the directors and teachers of public and private elementary schools - initial years. After authorization, delivery dates were scheduled for signing the Free and Informed Consent Form by the parents of students who agreed to participate in the research.

Data were collected during two phases. In Phase 1, researchers assessed Motor Competence at the child's school. In Phase 2, parents/guardians were visited at their homes according to their availability, scheduled in advance via telephone, and answered the HOME-MC scale.

Statistical analysis

The analysis was based on a descriptive and inferential statistical approach. In the descriptive approach, the distribution of absolute and relative frequencies for categorical variables was carried out. For inferential statistics, the Chi-square test was used and, when necessary, Fisher's exact test was used to investigate proportional differences in the prevalence of motor competence based on sociodemographic variables. Multinomial Logistic Regression (crude and adjusted analysis) was used to examine the associations of motor competence (dependent variable) with sociodemographic variables. For modeling

the regression analysis, only the variables that presented a significance level equal to or less than 0.20 for association with motor competence in the Chi-square test were considered, inserted simultaneously in a single block, without removal after analysis. Each exploratory variable that presented $p < 0.05$ in the Wald test was considered as associated with the outcome of the study. The model fit was verified using the Hosmer-Lemeshow test.

Results

Table 2 presents the results of the univariate analysis of the association between sex, age, home environment, type of school and place of residence and motor competence. All variables showed statistically significant associations ($p < 0.05$) with motor competence. There was a higher prevalence of low motor competence in public schools than in private ones, in houses not suitable for the development of motor competence than in suitable houses, in children who live in the periphery in relation to children who live in the center and in the districts, and among girls compared to boys (Table 2).

Table 2. Univariate analysis of the association between sex, age, home environment, type of school and place of residence, and children’s motor competence.

VARIABLES	Motor competence			χ^2	P
	Low f (%)	Average f (%)	High f (%)		
Sex					
Male	55 (16.6)	250 (75.3)	27 (8.1)	28.443	<0.001*
Female	120 (32.0)	244 (65.1)	11 (2.9)		
Age					
6 years	15 (21.1)	52 (73.2)	4 (5.7)	9.651	0.002*
7 years	29 (21.5)	98 (72.6)	8 (5.9)		
8 years	38 (20.5)	133 (71.9)	14 (7.6)		
9 years	47 (23.6)	142 (71.4)	10 (5.0)		
10 years	46 (39.3)	69 (59.0)	2 (1.7)		
Home environment					
Below adequate	121 (34.5)	222 (63.2)	8 (2.3)	43.416	<0.001*
Adequate	54 (15.2)	272 (76.4)	30 (8.4)		
Type of school					
Private	38 (16.5)	167 (72.3)	26 (11.3)	31.917	<0.001*
Public	137 (28.8)	327 (68.7)	12 (2.5)		
Place of residence					
Center	21 (20.4)	77 (74.8)	5 (4.8)	5.260	0.022*
District	99 (23.7)	288 (69.1)	30 (7.2)		
Periphery	55 (29.4)	129 (69.0)	3 (1.6)		

Note: *Significant association – $p < 0,05$; χ^2 = Chi-square test; f=frequency; P = probability value

The results referring to the multiple crude and adjusted analyzes (reference category: low) showed similarities that can be seen in Table 3. After adjusting the data, it was found that male children, younger in age, who study at a private school and who live in private

districts are more likely to have high motor competence. The home environment (home) suitable for the development of motor competence was observed as a protective factor, that is, children from suitable homes are 85% more likely to have high motor competence.

Table 3. Multinomial logistic regression analysis between motor competence (reference category: low) and sex, age, home environment, type of school and place of residence.

VARIABLES	Motor competence			
	Average		High	
	OR (CI 95%) [†]	OR (CI 95%) ^{††}	OR (CI 95%) [†]	OR (CI 95%) ^{††}
Sex				
Male	2,24 [1.55-3.22] *	2.60 [1.77-3.83] *	5,36 [2.48-11.57] *	7.18 [3.15-16.36] *
Female	1	1	1	1
Age				
6 years	2.31 [1.17-4.58] *	2.82 [1.35-6.03] *	6.13 [1.02-39.91] *	11.19 [1.65-75.95] *
7 years	2.25 [1.29-3.93] *	2.57 [1.41-4.66] *	6.35 [1.26-31.99] *	8.75 [1.61-47.52] *
8 years	2.33 [1.39-3.92] *	2.16 [1.25-3.72] *	8.47 [1.81-39.63] *	6.83 [1.38-33.68] *
9 years	2.01 [1.24-3.31] *	1.80 [1.07-3.04] *	4.89 [1.02-23.56] *	4.09 [0.81-20.73] *
10 years	1	1	1	1
Home environment				
Below adequate	0.36 [0.25-0.53]	0.34 [0.23-0.51]	0.12 [0.05-0.28]	0.15 [0.06-0.38]
Adequate	1	1	1	1
Type of school				
Private	1.84 [1.23-2.76] *	1.25 [0.80-1.95]	7.86 [3.61-16.92]	3.65 [1.55-8.61] *
Public	1	1	1	1
Place of residence				
Center	1.56 [0.88-2.78]	1.34 [0.71-2.55]	4.37 [0.96-19.90]	2.38 [0.47-12.08]
District	1.24 [0.84-1.83]	1.24 [0.80-1.94]	5.56 [1.62-19.04] *	4.10 [1.07-15.79] *
Periphery	1	1	1	1

Note: OR = odds ratio. CI = confidence interval. [†]Crude analysis; ^{††}Analysis adjusted for all variables. *p< 0,05; Multinomial Logistic Regression.

It was found that boys were more likely to have motor competence on average compared to girls, as well as younger children compared to 10-year-old children (Table 3). The home environment (home) suitable for the development of motor competence is also observed as a protective factor, that is, children from suitable homes are 66% more likely to have motor competence on average and the best option for better motor competence is associated to the house being located in the districts region.

Discussion

The relationships established in childhood through the “social network” (Flôres et al., 2019) are presented as effective constructs of the child’s development process, since motor, affective-social and cognitive actions are significantly expanded through different experiences, leading to the learning of new movements. In this perspective, the convivial environment

expands the opportunities for interaction and experiences, creating diversified opportunities for the development of the child's skills and abilities in their development process.

The motor experiences and the experiences provided were presented as preponderant factors in the findings of the researched sample, since it was evidenced that the children with greater chances of a high motor competence were the boys aged between 6 and 7 years living in households classified as suitable, located in neighborhoods and studying in private schools. Although Nobre et al. (2016) found results with no significant difference between genders in relation to motor competence, studies by Hardy et al. (2012), Silva et al. (2017) and Silveira et al. (2014) corroborate the results found here: lower prevalence of motor competence in girls than in boys.

These differences can be explained by the different levels of physical activity performed by boys and girls, demonstrating that boys had significantly higher levels of physical activity and sports participation than girls and, culturally, boys are more encouraged to practice sports compared to girls, who are little encouraged (Valentini et al., 2014). The girls, on the other hand, are guided to practice manual activities involving dolls and educational toys (Cherney & London, 2006), as well as to a greater attribution of domestic and family work (Valentini et al., 2014).

Regarding gender, observations related to different motor opportunities and experiences linked to cultural and social relations in relation to different forms of instruction and familiarization with specific situations in relation to the type of task to be performed can also be presented. Linked to this fact, it is observed, in the child's culture, the increasingly early inclusion of interest in games, playing and experiences associated with the technological universe, bringing to light the establishment of a paradigm about motor opportunities. The residential environment, the house, is constantly being modified, becoming an increasingly diversified space for access and opportunity for experiences for the child, both in relation to gender and age.

Regarding age, Yengde et al. (2017) observed that six-year-old children have motor competence superior to that of eight-year-old children. Silva & Dounis (2014) reported that 10-year-old children presented results classified in the low normal profile, with difficulties found in the components of spatial organization and fine motor skills, compared to that of nine-year-old children, who presented a medium normal profile. However, these results are not consistent, for example, Logan et al. (2014) observed an increase in motor competence levels with advancing age and Valentini (2002) reported that 10-year-old children demonstrate higher locomotor performance than children in the age group of five to nine years.

The results of this study show that these relationships of high motor competence occur for younger and male children, demonstrating that motor competence does not always follow a linear sequence, and there may be a compromise in some of its components, varying between people in the which refers to the degree of motor difficulty, as also demonstrated by Silva & Dounis (2014).

Plausible explanations for the differences found may be related to the restricted opportunities in Brazil for children to develop gross and fine motor skills (Valentini et al., 2014). According to Valentini et al. (2014), specifically in Brazil, public professional services and opportunities to participate in early intervention programs are restricted. However, other factors also interfere with the performance of motor competence, such as daily life routines, sociocultural factors of each population (Valentini et al., 2014) and the intrinsic motivation

of each child (Bardid et al., 2016). The results found in this study may be linked to their own experiences arising from playful and fundamental activities typically related to childhood, which can contribute to the development of these components to the detriment of others (Medina-Papst & Marques, 2010), that is, younger children dedicate most of their time to playing and exploring the environment, typically being more active. However, as highlighted by Abreu et al. (2008), older children have spent excessive hours in front of a screen, using more electronic games or performing activities developed in small spaces, which end up limiting the broad experimentation of their movement, and all these factors can influence their level of motor competence. Therefore, the development of these skills does not depend only on changes resulting from age and sex, but also on opportunities for motor practice in the environments where the child lives (Souza et al., 2014).

When addressed to context parameters (home, place of residence and school), research has indicated that adequate motor competence occurs in stimulating environments with strong contextual support (Barnett et al., 2013; Mori et al., 2013). Therefore, an appropriate environment can promote improvements in motor skills (Barnett et al., 2013; Mori et al., 2013). These studies concluded that houses with higher scores of stimulating qualities are related to better motor and cognitive behaviors (Caçola et al., 2015). Thus, in a suitable home environment, the child experiences companionship and family integration, the emotional climate and responsiveness, and these components reinforce the notion that experiences and stimuli can be a significant factor in children's motor competence (Haydari et al., 2009).

These findings corroborate Silva et al. (2017), who found better results for motor competence in children living in suitable environments, with a greater variety of parental stimuli and materials for fine and gross motor skills. Soares et al. (2015) found in the literature that inadequate environments or environments with little stimulation may have a negative relationship with motor competence, and warn that the lack of opportunities for stimuli in environments can compromise motor competence, since the availability of materials, objects and games contribute to improving motor competence.

Regarding the school environment, Queiroz et al. (2016) and Cotrim et al. (2011) demonstrated that children from private schools had superior motor competence compared to those attending public schools, specifically in object control skills and general motor performance. Cotrim et al. (2011) emphasized that children from private schools have more adequate opportunities, such as specific content, instruction and appropriate location, access and availability of material and equipment, which favored full motor development; on the other hand, children from public schools who do not have a favorable environment and a systematized and structured opportunity for the development of motor skills may be lagged in motor terms, and the lack of infrastructure, reduced spaces and lack of materials minimize the possibilities of high motor competence. In this regard, it is essential that children have a school environment suitable for their development, with more materials, ample space and infrastructure that offers better quality for students, thus providing opportunities for better motor skills.

On the other hand, the profile of children who presented chances for poorer or lower motor proficiency was that of girls aged between 9 and 10 years old who live in households classified as not suitable located in the central region of the city and who study in public schools. Brazilian children present motor proficiency below the expected levels for their age, as pointed out by Caçola et al. (2016) and Spessato et al. (2013). Regarding low motor

competence, research indicates that children of parents with low income are more likely to face precarious conditions at home, in several domains, compared to children of parents with higher income (Holupka & Newman, 2011).

Studies show that socioeconomic level, structural characteristics of the home, access to teaching materials and efforts on the part of parents are important factors in providing an enriching childhood experience (Bradley & Corwyn, 2016). The ability to purchase equipment and invest in extracurricular activities that involve sports and/or motor activities can impact motor competence scores (Temple et al., 2016). In addition, environments of higher socioeconomic status may also allow parents to have more time and availability to encourage and participate in motor activities with their children (Fairclough et al., 2009).

A negative finding is the lack of affordance and the impoverishment of opportunities for playing and leisure around the location of the children's residence (Krebs et al., 2011). In this regard, the region of "districts" was the one that provided the best structural chances (because it contains sports centers/sports courts, squares/playgrounds, gyms for the elderly, clubs/private sports schools) for the development of motor competence. And, as much as children from regions farther from the center play in spaces outside their home, parents prefer that they attend closed spaces, such as houses, condominiums, shopping malls and school (Krebs et al., 2011), to have greater control over them (Chaves & Melo, 2013). In contrast, Zajons et al. (2008) found that children who lived in neighborhoods had low motor development compared to children who lived in the center. In this sense, it is possible to highlight the need to invest in public policies in the outskirts that guarantee safety in open places suitable for children's leisure and that reverts in motor opportunities for children, offering a favorable environment for them to explore.

Limitations of this study include its cross-sectional design, not allowing causal inferences, and the lack of detailed measurement of children's activities outside the school context. For new studies, it is suggested that children be evaluated in a longitudinal design, with different methodologies (quantitative and qualitative) in relation to the use of spaces in the neighborhood, either through observation with a field diary or photographic record.

The practical implications are based on the need to assess the home environment, including socioeconomic status, with the aim of improving the health and well-being of the child. As future prospects, we highlight the development of new instruments that can assess the affordance for motor competence within the contexts of neighborhood, school, sports schools (sports participation); studies using the subscales of the tests used in this study (HOME) and statistical models in which it is possible to include more variables (numerical, categorical and nominal) together.

Conclusion

Based on the results found and aiming to verify which personal and environmental attributes provide better chances for children from 6 to 10 years of age to acquire better motor competence, it was possible to establish two different profiles: one for children who presented a classification of medium or high motor competence and another for children who had a low or poor profile in their motor competence.

The profile of children who had the best chances for a higher motor proficiency was boys aged between six and seven years old who lived in households classified as adequate, located in neighborhoods and who studied in private schools. The profile of children who

presented chances for a poorer or lower motor proficiency was girls aged between 9 and 10 years old who live in households classified as not suitable, located in the central region of the city and who study in public schools.

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Author's Contributions

Luciana Ferreira is primarily responsible for writing the article. From the design of the project to its submission to the ethics committee, the Department of Education, schools, parents and preschoolers involved. Participated in collections, preparations of results, spreadsheets and statistical analyses. Finally, she wrote the initial version of the article and participated in its revisions and final formatting. Francielli Ferreira da Rocha and Francielle Cheuczuk participated in the collection, preparation of spreadsheets, results and statistical analyses, literature review and final revisions. Pâmela Norraila da Silva participated in carrying out the collections, preparing the spreadsheets of results and statistical analyses, and in the final revisions. Vânia de Fátima Matias de Souza participated in the textual review of the article, checking the results, updating the references and building its final version. José Luiz Lopes Vieira was the supervisor of the doctoral thesis that evolved in the construction of the article, guiding the entire methodological process from the initial idea to the final wording of the article. All authors approved the final version of the text.

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Corresponding author

Luciana Ferreira

e-mail: lferreira2@uem.br

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