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# MOBILITY DEPENDENCE OF CHILDREN FROM 1ST TO 4TH GRADE IN PORTUGUESE SCHOOLS

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***Abstract****. The mobility dependence appears to be associated with less autonomy in children who spend less time playing alone or being with friends in playful situations. Our intention is to study the dependence of mobility of children in the 1st cycle of education in an urban environment with ages between 6 and 12 years old. The sample consisted of 186 children of both genders of which 95 were female and 91 were male. A multiple response questionnaire was used, and the statistical analysis used was descriptive frequency, crosstabs and inferential analysis. Children who practiced more physical activity are those in the 2nd grade: 70.8% (34), below these are the 3rd grade: 67.9% (36), with the 4th grade having 64.8% (35) and finally the 1st grade with 58.1% (18). In total 66.1% (123) engaged in physical activity and 33.9% (63) did not exercise in any sports club or municipal facilities. We have come to some conclusions, with regards to school transportation, almost all students are moving with motorized transportation where the majority cannot go out without family going with them to any activity, and we have also concluded that the female gender is more active than the males.*

**Keywords:** *mobility dependence; physical activity, 1stcycle of education.*

## Introduction

The reduction of independent mobility, also appears associated with a lower autonomy of mobility. Because of life routines, autonomy and youth mobility in an urban context, children spend less time on the street either alone (home - school) or accompanied by friends in playful situations. There is a direct relationship between the autonomy of mobility and cognitive representation of the child's physical space, playing, physical activity and social relations (Neto, 1999; 2004).The daily lives of young people today are very schematic, turning to electronic video games, television, and computer games (Piéron, 1998; Vasconcelos &Maia, 2001). Young people have sedentary lifestyles, but it is up to society to stimulate and diversify physical activity (Cosco, 2006) for a better social, emotional and cognitive development. Physical activity is important to achieve a healthy lifestyle, it is increasingly clear that it benefits both individual health and public health (Ott et al., 2000; Schaalma et al., 2000).

Regarding mobility and gender, several studies indicate that male children are more active than the female, enjoying greater autonomy and freedom to play more in open spaces (Granville et al., 2002; Rissoto & Tonucci, 2002; O'Brien, 2003; Kytta, 2004).

According to mobility and agestudies, as the child grows, it also increases the operating limit in relation to home, public spaces and places that are beyond the family border (Christensen and O'Brien, 2003). When they become older, children become not only more mobile by themselves, but also more independent emotionally and socially, experiences with the environment in children and young people, reflect the attitudes and values of their families and the social and cultural background in which they operate (Nordstrom et al., 2002).

The street is the central space of separation between childhood and puberty / youth; it is in this space that the child adjusts their own growth.

## Materials and methods

The main objective was to analyze the dependence of children of the 1st cycle of basic education in terms of mobility for the practice of physical activity. We used a descriptive study in order to describe how children play daily, as well as their dependenceon mobility and what kind of "freedom" they have to go and play in the street with friends. We had a sample of 183 children of both genders (90/ 49.2%male) (93 / 50.8% female), 10.2% (19) were 6 years of age; 20.4% (38) were 7 years old; 26.9% (50) were 8 years old; 23.7% (44) were 9 years old; 15.6(29) 10 years of age; 1.1% (2) 11 years of age and 0.5% (1) 12 years of age. A direct questionnaire with multiple choice questions was applied based on Correia (2006).Students who practice physical activity (66.1%); Students of the 2nd grade are the ones who ride bicycles more (93.8%), mostly with their families (52.3%).

Students travelled to school mostly by car (73.3%) and students of the 1st grade were the ones who use mostly car transportation to go to school.

| Gender | Age | N | No by group |
|---|---|---|---|
| Female | 6 | 10 | 93<br>50.8% |
| | 7 | 19 | |
| | 8 | 25 | |
| | 9 | 22 | |
| | 10 | 15 | |
| | 11 | 2 | |
| Male | 6 | 9 | 90<br>49.2% |
| | 7 | 19 | |
| | 8 | 25 | |
| | 9 | 22 | |
| | 10 | 14 | |
| | 12 | 1 | |
| 183 | | | |

Fig. 1. Sample characterization

*Variables.* This is a descriptive study that aims to describe how children play daily today, as well as their dependence in mobility. For the analysis and processing of the data collected was used computerized SPSS Statistics (Statistical Package for Social Sciences) version 21 in English. The statistical treatment used was the descriptive frequency and crosstabs. We defined as dependent variables, physical activity levels, dependence of mobility and as independent variables, gender, age, school year and place of residence.

**Results**

Table 1. Representation values of daily activities that influence children's mobility to physical practice

| Parents let you play outside with friends? | | |
|---|---|---|
| No % | Yes % | Percentages % |
| 23,1 | 76,9 | Near home – 36,6<br>Places further – 18,8<br>Depends – 21,5 |
| Is there any place in the neighborhood where you may not be with friends? Why? | | |
| 37,1 | 62,9 | Places with traffic – 19,4<br>Poorly attendance places– 3,2<br>Insecurity – 10,2<br>Unknown – 16,1<br>Don´t know – 17,7 |
| Do you ever visit friends? How do you go? | | |
| 10,2 | 89,8 | On foot – 31,2<br>By car – 38,2<br>By bicycle – 19,9<br>Other – 1,6 |
| Do you ever go walking with other children? Where? | | |
| 43 | 57 | Public gardens or places – 40,9<br>Sport facilities – 12,4<br>Clubs – 5,9 |
| When you go to some place, even accompanied by adults, can you cross the street alone? Which is the location where you were further away from home alone? | | |
| 33,9 | 21,0 | On my street – 28,5<br>Near my street– 31,7<br>Other places further – 18,3<br>Don´t know – 14<br>Other places far away from home – 4,8<br>Nowhere – 2,2 |
| Depends – 45,2 | | |
| Which location further away from home did you go with friends on foot? | | |
| 33,9 | 21,0 | On my street – 19,9<br>Near my street – 22,6<br>Other places further – 17,2<br>Don´t know – 9,7<br>Other places far away from home – 5,9 |
| Depends – 45,2 | | |

| | | |
|---|---|---|
| | | Nowhere – 24,7 |
| Is there some space in the location outside your neighborhood, where you usually go often? What is this space? | | |
| 25,3 | 74,2 | Public garden – 11,3<br>Football field – 17,7<br>kindergarten – 23,1<br>Near a coffee shop – 2,2<br>Other – 20,4 |
| With whom you usually go? | | |
| 25,3 | 74,2 | Family – 49,5<br>Alone – 7,5<br>Friends – 17,7 |
| Do you live far from the school? How do you go? | | |
| 53,8 | 45,2 | On foot – 22<br>By car – 62,4<br>Public transportation– 13,4<br>Others – 1,1 |
| Can you go to school with friends or alone? | | |
| 76,3 | 23,1 | - |
| Do you practice some physical activity in a club or in other place (grade)? | | |
| 41,9 | 58,1 | 1st grade |
| 29,2 | 70,8 | 2st grade |
| 32,1 | 67,9 | 3st grade |
| 35,2 | 64,8 | 4st grade |

**Discussions and conclusions**

Children who practice more physical activity are in the 2nd grade 70.8% (34), followed by the 3rd grade 67.9% (36), the 4th grade 64.8% (35) and finally the 1st grade with 58.1% (18). In general 66.1% (123) engage in physical activity and 33.9% (63) do not exercise even in a club or municipal facility.

Compared to the study of Correia (2006) 34% did practiced physical activity and 66% did not practice. Its observable changes since 2006 until the present study regarding the students who practice physical activity in a club or sports facilities.

Serrano (2003) conducted the same study and the results obtained were 24.3% practiced some sport and 75.7% did not practice any sport in sports clubs. According to the study conducted in the city of Viseu by Monteyo (2013) 14.1% of children practice physical activity 1 time per week, 42.4% practice 2 times a week, 27.3% practice 3 times a week and 16.2% perform physical activities more than 3 times per week, and in this study, results differ statistically.

According to the study of Lopes (2013) it was found that 149 (90.3%) young people have bikes, but only 65 (39.4%) are allowed to ride a bike, although children have different ages we found that the number of students who cannot ride a bike is larger (n: 72 / 43.6%), even these children were older regarding the ones in our study. In general, students ride their bikes mostly on the street 67.8% (116), then 19.03 (33) ride their bikes in the park / public garden and finally 12.9% of students ride their bikes in other places not mentioned in this questionnaire.

In another study by Correia (2006), most students 70% also rode bicycles in the street, and the same percentage 13% rode bicycles in the park / public garden and/or other places. From 2006 until now there has been an increase in students who have rode a bike in the parks / public gardens.

The mobility dependence level decrease: some data allow us to state that the autonomy in movement of children in urban areas has declined significantly in recent years (pathways, perception of physical space and action possibilities (Serrano, 2003; Mallet andNeto, 2004; O'Brien andJones Rustin, 2000; Arez andNeto, 1999; Vercesi, 1999; Kitta, 1995; Van der Spek andNoyon, 1995; Neto and Marques, 2004).

According to Rosario et al. (2013) regarding to transport used to go to school found that 60.6% of children used the car, 21.2% walked to school, 6.1% moved on foot and by car, 12.1% by bus, although the study sample has different ages and a different city found that the studies converge with each other, yet, the most popular means of transport to travel to school is by car.

The study highlights the lack of mobility in urban areas (low density) as they move mostly by car and most students are not given autonomy to cross the road alone. We must admit an environment type "Glasshouse", the childis familiar with the environment, but mainly through parental assistance without authorization to explore that same environment independently.

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