



Online Publication Date: 01 June 2009

## ORIGINAL RESEARCH

### STUDY ON THE PRESCHOOL CHILD'S MOTRICITY, AS AN EXPRESSION OF COMMUNICATION BY MEANS OF THE LANGUAGE OF MOVEMENTS

Stancu Maura, PhD<sup>1</sup>

<sup>1</sup>University of Pitesti

**Key-words:** communication, motricity, preschool children

**Abstract:** The preschool period is a life stage characterized by increasing development of the cognitive, social and affective functions, and also by the maturation of the corporal schema. Motor competencies are also acquired; we can thus witness how children get increasing control over their body and movements ( Tiberiu Mircea , 2006, pg. 113-115).

To investigate the peculiarities of physical activity in preschool children, we have conceived a semi-structured questionnaire assessing various aspects: sport practicing habits, preferred games, physical well-being, and parent involvement. The questionnaire was completed by children's parents, giving the poor self-repot abilities at this age.

The questionnaire was applied on a sample of 150 subjects. The evaluated children were both boys and girls, aged 3 to 6 years, and had different social backgrounds. Along with demographics, anthropometric measures were obtained, which fit into the normal limits for this age.

School and family factors were equally cited as influencing physical exercising. As far as family is concerned, the most notable conclusion is that parents have a poor knowledge of the physical competencies of their children and are not very interested in enhancing this knowledge. This was proved by the great number of "do not know" answers when asked to estimate results on four motor tasks. Parents who can estimate those parameters tend to encourage more their children in practicing sport compared to parents who do not ( $p>0,05$ ).

**Introduction:** the whole expression of the human being has as permanent and fundamentally structural component the body movement; there exists no matter and spirit in the absence of movement. From a neuro-psychic point of view, each motor act is the result of some nervous information, as well as that of motor commands at brain level, to which a psychic "superstructure" is added, this superstructure being highly influenced by the cognitive, affective, motivational, will-related factors. As a consequence, either simple or complex, movement is based on a set of conditionings. It is to be considered not only as a cause, but also as effect, movement is both a process and a finality in itself. The following famous psychologists subscribed to the idea that the motor act is found at the basis of the development of the human psychic system: Wallon, Clapared, Paillard, Golu, Mitrofan, Epuran, Horghian and others.

"The body movement represents the structural element of any relational system", as sustained by Dragnea A, Bota A, 1999, pg. 249. Enlarging this very idea, we might say that the two elements- communication and behavior, represent objective forms of manifestation of the human personality in general, and of the pre-school children in particular, in a complex relational context. The motor behavior is considered by everyone around as a communication source, a manner of passing on and receiving information. Not only the psychic manifestation, but also the motor one, are essential forms of individual adjustment to the bio-physical and social environment.

In the special field of interest literature, one can find enhanced the existence of three main communication forms: the verbal, para-verbal and non-verbal one. One has to also underline that 7% of information is transmitted verbally, while 38% is passed on para-verbally and a percent of 55 is reserved to the non-verbal communication (movement, gestures, posture, mimics...).

The symbolic game and later on, the rules based game, is predominant inside the pre-school child activity manifesting his or her personality “during” and “through” games.

The educators, as well as parents must properly gather information form these games. Here are some aspects to be monitored:

- ✓ The corporal schema – the corporal image, posture adjustment, orientation, knowing the body parts, spatial-temporal organization;
- ✓ laterality;
- ✓ spatial-temporal orientation;
- ✓ the position of the head, trunk, limbs;
- ✓ gestures;
- ✓ posture.

The child that does not play is just as suggestive element for his future development of some neurotic nature attitudes.

**The purpose of the present study:** is that of emphasizing that by means of the motor behavior, the pre-school child send precious information to his parents, and based on these pieces of information one can take corrective, amelioration, development measures in due time.

**The study hypothesis:** 1) The children practicing a sport activity on a regular basis are more effort resistant than the others;

2) The time dedicated to playing differs in function of the kindergarten type: the ones with normal schedule versus the ones with a longer program;

3) The parents who are more encouraging of their children with regards to the practice of physical exercises also tend to spend more time playing with them.

**Subjects:** 150 questioned parents (75 from the kindergartens with a normal program and 75 parents form the long hours kindergarten), the pre-school children for whom the questionnaires were filled in, with the mention that they were aged in between 3 and 6 years.

**Methods:** scientific documentation, observation, the documents analysis, the investigation, research instruments: the questionnaires, the statistic method, the graphic method.

**The work methodology:** The “ Pre-school child and motor activities” elaborated questionnaires comprised a number of 23 opinion, factual, filter and other types of questions. According to its name, the sample group targeted the pre-school population, the questionnaires being filled –in by 150 parents. The absence of some answers determined us to eliminate 50 questionnaires.

With the help of the SPSS program, the gathered data was elaborated, then followed the descriptive, co-relational analysis, after which we could properly interpret the subject’s answers.

**Data interpretation:** Question no 1, evaluating the necessity of practicing physical exercises, determines the following table: Yes-90%; No-5%; I don’t know-5% (see figure no 1)

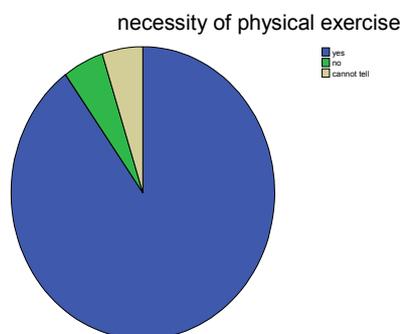
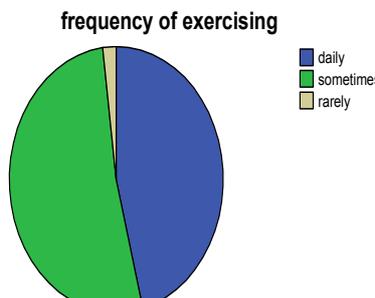


Fig. no. 1 The graphical representation of evaluating the necessity of practicing physical exercises

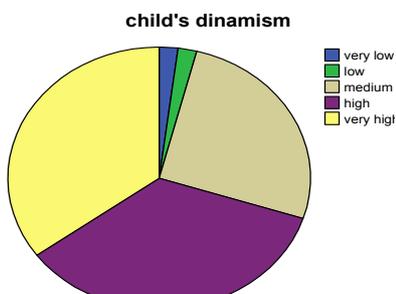
At question no 2, testing the pre-school child’s implication in the practice of physical exercises, the next situation is to be observed: Yes-46%; No-2%; Sometimes-52% (see figure no 2).



**Fig. No. 2 The graphical representation of the frequency of physical exercise practice**

As expected, question no 3 “How do you appreciate your child’s dynamism?”, made 70% of parents consider their children to be energetic or very energetic, as can be seen in graphic no 3.

Question no 4 presents computer games and dynamic games as equally preferred by children (37,4% versus 37,3%).



**Fig. no. 3 Graphical representation of appreciation of the children’s dynamism**

As for the following questions, soliciting a certain quantification (of time, distances, no of executions, no of cm for the long jump from standing) we have more interesting answers, especially through the presented extremes:

-the time allocated to playing the favorite game (question no 5) presents a minimum of 15’ and a maximum of 60’. In the next table a few indicators of the central tendency are illustrated.

Valid	100
Missing	0
Mean	87,85
Median	60,00
Mode	30
Std. Deviation	77,610

**Tabelul nr.1 Indicators of the median tendency regarding the time spent playing the favorite game.**

-the distance of running without stopping: minimum. 10 m, maximum 1000 m .

running distance (metres)	Valid	100
	Missing	0
Mean		95,45
Median		50,00
Mode		50
Std. Deviation		152,634

**Table no. 2 Indicators of the median tendency regarding the distance ran without stopping**

- Number of correct push-up-s executed: minimum 0, maximum 20.

	Valid	100
	Missing	0
Mean		1,75
Median		,00
Mode		0
Std. Deviation		3,053

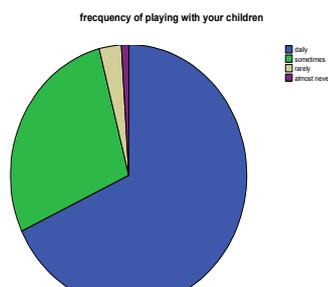
**Table no.3 Indicators of the median tendency regarding the number of correctly executed push-up-s**

- for the long jump from standing : minimum 0 cm. maximum 175 cm.

The long jump from standing	Valid	100
	Missing	0
Mean		46,25
Median		40,00
Mode		0
Std. Deviation		39,920

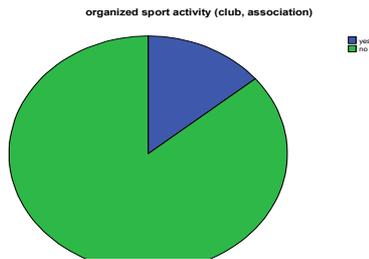
**Table no. 4 Indicators of the median tendency regarding the long jump from standing**

When asked if they do play with their children, (question no 8), parents answered the following way: on a daily basis– 68% ; sometimes– 28%; rarely – 3%; no – 1,8% ;



**Fig. no. 4 The graphical representation of the frequency of playing with one’s child**

The next question is the filter question no 9, showing that 15% of children are involved in a physical activity organized inside a sport association, sport club (see figure no 5).



**Fig. No. 5** The graphical representation of the number of children practicing or not physical exercises in an organized manner

As listed sports, we may mention: ballet, dance, swimming.

From an anthropometric point of view, children aged in between 3 and 6 years can be categorized as per the next table:

- we have a minimum of 80 de cm and a maximum of 160 cm for height;

Height/cm.	Valid	100
	Missing	0
Mean		110,54
Median		110,00
Mode		100
Std. Deviation		12,755

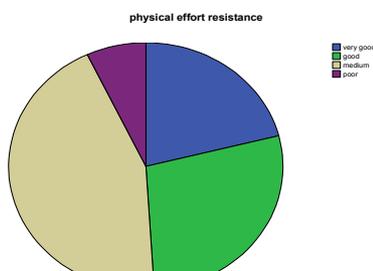
**Table no. 5** Indicators of the median tendency regarding the children’s height

- for weight, the minimum is of 12 kg. , while the maximum is of 37 kg.

kg	Valid	100
	Missing	0
Mean		21,07
Median		20,00
Mode		22
Std. Deviation		5,127

**Table no. 5** Indicators of the median tendency regarding children’s weight

The answers at question no 19 lead to the following table of the parents’ estimation of their children’s resistance to effort: Very Good: 21%; Good: 28%; Average: 44%; Gets tired easily: 7% (see figure no 6).



**Fig. no.6.** The graphical representation of the parents’ estimation with regard to their children’ effort resistance

One very next important aspect to be underlined is that of parents encouraging children to practice physical exercises during spare time: Very Much: 25%; Much: 28%; Average: 42%; A little: 3%; Very little: 2%, as one can notice from the next graphics.

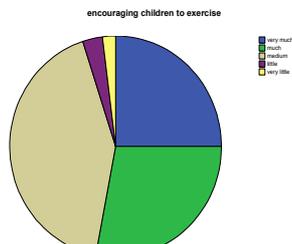


Fig. No 6 The graphical representation of children being encouraged to exercise

With a direct view to confirming the research hypothesis, the Chi-Square test has been used for evaluating the degree of association of two or more categorical values.

**Hypothesis no. 1** The value of p for the Pearson Chi-Square test being smaller than the alpha 0.05 level, the null hypothesis is rejected, and the research hypothesis is confirmed: there is a much higher incidence of children implied in an organized physical activity, not to mention that these children are more effort resistant than others, as illustrated in graphic no 7.

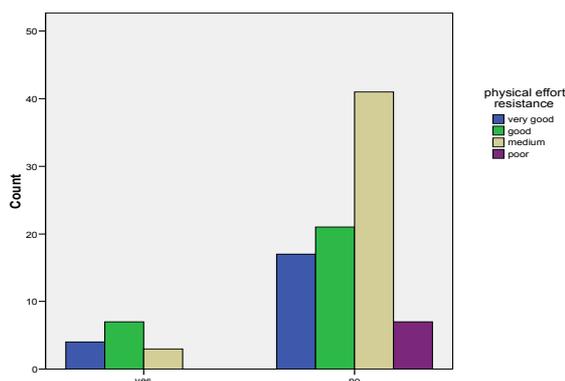


Fig. No 7. The graphical representation of the correlation between the „effort resistance” and practicing an organized physical activity items.

With the scope of confirming the **second hypothesis** (the time dedicated to playing is dependant on the kindergarten type: normal program kindergartens and longer program kindergartens), we have used the Chi-Square test of underlining the association degree of variables 1 and 6, the result not being statistically significant. Thus, the null hypothesis is accepted, the data in our possession not being sufficient enough.

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16,976	20	,655
Likelihood Ratio	21,578	20	,364
Linear-by-Linear Association	,501	1	,479
N of Valid Cases	100		

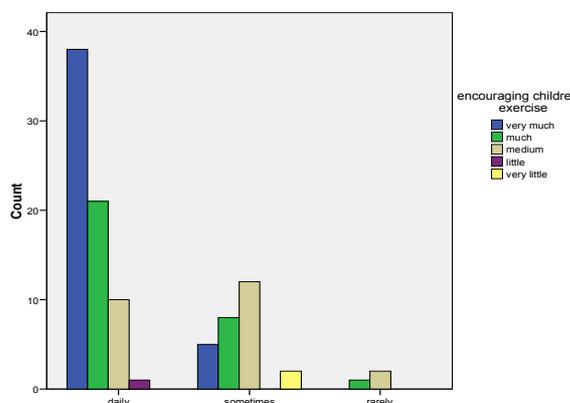
Table no.6. The Chi- Square test ( of checking the association degree of variables 1 and 6)

For testing **hypothesis no 3**, we had to put together the analysis of items 8 and 20, by using the Chi-Square test. The p value for the Pearson Chi-Square test being smaller than the 0.05 alpha level, the hypothesis is

declared null and the first research hypothesis is confirmed: there is a high incidence of parents playing with their children and encouraging them to practice physical exercises, as illustrated in the next graphic.

**Table no. 7 The results of the correlation analysis between items 8 and 20**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22,705(a)	8	,004
Likelihood Ratio	23,750	8	,003
Linear-by-Linear Association	17,074	1	,000
N of Valid Cases	100		



**Fig. no .7. The graphical representation of the correlation between items 8 and 20**

**Conclusions:** 1) When the parent, educator, as receiver of the information transmitted by the child’s motor behavior, manages to objectively analyze the elements of this behavior, this very parent or educator also extracts data on his or her health condition, affectivity, mental status, cultural environment etc.

2) Following the objective analysis of this data, amelioration, correction, development and similar measures can be taken in due time.

3) the parents participating in different sport activities next to their child succeed in getting to better know their child and , at the same time, to establish positive emotional relations.

**Bibliography:**

Dragnea A., Bota A., 1999, *Teoria activităților motrice*, Editura Didactică și Pedagogică București, pg. 249.  
 Stancu M., Amzăr L., 2008, *Locul și rolul educației fizice în viața familiei contemporane*, Editura Universitaria Craiova.  
 Stănescu M., 2002, *Educația fizică pentru preșcolari și școlari mici*, Editura SEMNE.  
 Tiberiu Mircea , 2006, *Child and Adolescent Developmental Psychopathology*, volume I, Timisoara, Artpress Publishing House , pg. 113-115.