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THIRD LEVEL OF DOCTORAL STUDIES
DOCTORAL THESIS SUMMARY

***THE MODEL OF EDUCATION AND DEVELOPMENT
OF SOCIAL AND MOTOR ABILITIES OF CHILDREN
FROM 4 TO 6 YEARS OF AGE***

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Abstract

The children have their needs to move and to do exercises. They should exercise everyday to coordinate limbs and body muscles to move in the best way their body. Children needs more than ever to move and play, because his mental development is directly connected with “his motor development”. When his “motor development” is not normal, there can be not an intellectual development, affective and social. In this point of view, we think to explore in actual motor abilities and social level of the children in the age 4-6 years old.

For our study realization, was selected 60 children from four Tirana city preschool. Children was separated in two groups. In the experiment group was implemented the education program with gymnastic basic elements which was applied in twelve weeks, twice a week for an hour.

Gymnastic program was built in a specific way and was adapted for 4-6 years old children.

The children who were part of this program had the opportunity to exercise with different gymnastic elements, with games and social skills. The control group followed a free program under the educators supervision exploiting the preschools infrastructure.

Motor ability was evaluated through a group of motor tests from contemporary literature as below: Reaction time test, coordination test (eye-hand), body test, agility test, static and dynamic balance test, muscular endurance test, explosive power test, muscular strength test and flexibility test.. Social and problems skills was evaluated by evaluation of behavior degree questionnaire for children of preschool and primary age. Collected data, in the begin, middle and in the end of tests and questionnaires were under a statistical processing by IBM SPSS package, version number 22. T- test is used to see if there are significant changes between control and experiment group skills along the tests phases. This test is used also to see the differences between dependent and independent variables. F criteria is used to tell the importance of dependent and independent variables relation. Pearson’s Product-Moment coefficients is used to evaluate all the relations between dependent variables.

The results highlighted significant statistical improvements of experiment group in dynamic and static balance, in agility, in explosive power and muscular endurance. Statistical changes was evidenced in both genders (girls and boys) in all tests, as in the first and in the second phase.

Comparing with boys, was evidenced a girls better performance tendency in static balance and eye-hand coordination tests. Significant statistical improvements showed experiment group in social behavior indicators and in problematic behaviors. The children that showed good skills in social behavior had better performance in motor ability, while the children with high evaluation in behavior problems indicators had a lower performance in some of motor tests.

Gymnastic program has an impact in motorskills education and development, but this impact in not the same in all skills because it is limited by maturity effect, especially by fine motor skills.

Key Words: Gymnastic, motor ability, social ability, motor tests, evaluation questionnaire.

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1. INTRODUCTION

The childhood years represent one of the most important stages in the human development. The thesis in which human development is compared with a 10 floors building is already accepted by many scholars, in which eighth first floors represent the age till 6 years old. To have a normal child development needs for sure the stimulation of external environment factors. Children with disabilities or those with social problems, as the normal child, have physical and psychological needs to live and develop their best potential.

The children have their needs to move and to do exercises. They should exercise everyday to coordinate limbs and body muscles to move in the best way their body. This is one of the reasons why physical activity represent an essential part of the children education program. Through this activity, children have all the possibilities to discover and recognize themselves, to develop constantly moving skills which are inseparably connected with their child world and which creating their personality are valid for the present and future. *The children learn from their life experience and curious nature, so they appear in school with a very considerable training and experience formed in theirs families or friends [27]. All type of children have their special methods to learn. An effective learning process have to be adapted individual characteristics and to be built over what the children knows and need to learn. Is also important to understand the way how the child learns.*

Children learn through the moving fields interaction with the other fields which are: knowledge, social and emotional. In this way, physical education through moving experience focused in moving skills contributes in children full development [57].

Pedagogical sciences that handle the movement, consider it as a very important education tool. In this point of view, education and in particular the movement at preschool ages draws attention of many specialists and scholars, based on the pedagogical masterpiece to build and develop learning process in a creative way .

Preschool age, without doubt, is one of the most important periods that needs a special attention. The curiosity of the child in this age is a really treasure, which allows to discover in few years all the world around him. The child pay attention in details, in which adults do not recognize them. He join looking, hearing and touching things.

In this period children needs more than ever to move and play, because his mental development is directly connected with “ his motor development”. When his “motor development” is not normal, there can not be an intellectual development, affective and social. In this point of view, we think to explore in actual motor abilities and social level of the children in the age 4-6 years old. Based on our confirmations, we think also that this study will serve to improve the movement field in the preschool children, considering that the education and “motor skills” as a very important factor in movement development to create opportunities to practice social skills connected with childhood world, talent and their entertainment potential, which are valid to build their personalities in the present and future. Combination of theoretical with practical character and study conclusions will serve the teachers of physical education which works with preschool ages.

THE PURPOSE OF THE STUDY

The purpose of the study is to test the efficiency of this motor and social model-education through a gymnastic program for preschool children.

OBJECTIVE OF STUDY

This study object was the impacts supervision of gymnastic program to improve the motor and social skills in preschool children.

For the realization of our study, have selected 60 children from four Tirana's preschools city, that seems to be the bigger city, center of economic, social, administrative, culture, academic, industrial, medial of Albania, with purpose to have a big representation of all social-economics layers.

The children are separated in two equal groups. In the experiment group will be implemented the education program with basic gymnastics elements, which will last twelve weeks, twice a week for an hour. Gymnastic program is build in a specific way to adjust from age 4 to 6. Children which will be part of this program will have the possibilities to practice with different gymnastics elements, games and social skills. They will have always the same leader and the same persons which will keep their data bases. For any change, in the end of twelve weeks program, data will recollect. In this study dependent variables are motor and social skills while the independent variables are the participation in the gymnastic program and also subjects gender. Control group, will follow a free program by using preschool infrastructure under educators supervision.

Motor abilities will be evaluated by a tests battery. Social skills and behavioral problems will be evaluated by a evaluation questionnaire for preschool and pre-primary children. To control the impact of private or public preschools status, experiment group will be represented by a special representative. In the same way will be act for preschool control groups. In this way, we think that our collected data will give us possibilities to compare public and private preschools.

HYPOTHESIS

Based on literary information and this study purposes and objectives, the hypothesis follows as below:

1. Expected significant benefits in the aspect of children “motor skills” which are included in this experimental program
2. Including the characteristics of biological age and the perception form of the experimental program there are significant statistical changes in the motor between the gender.
3. Expected significant benefits in children social skills aspect which are included in this experimental program.
4. Expected significant statistical changes in the social skills between the gender.

2. REVIEW OF LITERATURE

Development is very complex and universal process, when the development fields must pass from a simple stage to the most complicated one and to integrate with each other [58].

It is a product of social-emotional, cognitive and biological fields. The growth refers to quantitative changes which are comparable with a rate.

Growth and development is general process of organism maturity that advance in a progressive way from conception moment to adult age. All the educators or fields specialists which works with preschool children must know and understand their typically changes since birth to eight years old, atypical changes, also to understand the benefits that come from educators interventions. [14].

Growth and development are represented by many physic, psychic, social, emotive and cultural factors that in general are genetic factors. Some of this growth and development indicators from one side are very connected with each other and with genetic factors, and from the other side they are connected with external factors too.

Children development theories help us to understand them better and to know what are the best ways in which they can learn and the relations with development factories.

Early developments of the motor skills at children is a prediction of the cognitive abilities in the early 'age [46]. The researches suggests that games and motor skills contribute in creating a relation during the first years of child growth. Children with lower coordination abilities tend to be involved less in friendships, games [8]. A study of the motor and coordinative skills in children discovered that, eye-hand coordination and small muscle control improves rapidly at the age of 3-5. [52] The development of fine motor skills depends on growth, and specifically on bone growth. Coordination improves with age and girls are better off than boys in coordination. [11].

Reaction ability improves with the age of the child. Physical exercises have an impact on the ability to react according to a study that focuses on this ability. [34] In another study, gender differences were reported in children aged five, where boys appeared better than girls in reaction tests [22]. Reaction ability and movement control are largely dependent on age [26] and slows down to the third age [21].

Non-subsistence influences the ability of the reaction by lowering it. Nonresponsiveness and lack of preparation for a response to a particular task significantly reduces the reaction.

Physical activity improves the dynamic equilibrium of children aged 4 years. [56] The static balance has a linear improvement performance trend ranging from 2 to 12 years of age and under 6 years of age to both sexes fail to maintain an equilibrium when one perform with closed eyes. Children ages 4-6 are attempting to integrate a variety of sensory information obtained from sensory systems (visual, vestibular and somatosensorial), which are involved in maintaining equilibrium. During the process of information integration, the balance often conflicts with the sensory income information [2]. The girls often appear better than boys in the dynamic and static equilibrium [25]. As the static and dynamic equilibrium improves with age and girls have better performance than boys over the age of 4 to 17 [11].

Children who are more active and have better physical performance are thought to have better muscle flexibility [44]. Interfering with a nine-month sports program significantly improves the flexibility of children of the age of four. [56] Interference decreases during the absence of activity, but can be restored to the same level or improved by exercising [36].

Girls have a better flexibility than boys from the age of five to the adult age, it is said to be due to the muscular size and length of the limbs and the types of activity they participate.

3. METHODOLOGY

Recognize in details motor and social skills, allows to define which is more clear and efficiently methodology in skills evaluation for this age.

In contemporary literature about the social and motor abilities control are defined a diversity control models which are very believable. To do the right tests choice we aren't based just on contemporary study of experiment age that we are examining, but we are based also on some essential, important, believable, validity and objective criteria. Based on methodological criteria for test selection, we have select a group of motor tests from contemporary literature as below: Reaction time test, coordination test (eye-hand), body test, agility test, static and dynamic balance test, muscular endurance test, explosive power test, muscular strength test and flexibility test. Also, for social evaluation skills we have selected PKBS (Merrell) which is adapted for preschool children behavior for which we think that have done a very good evaluation.

We selected 60 children from four Tirana's preschools city. The children are separated in two equal groups. In the experiment group will be implemented the education program with basic gymnastics elements, which will last twelve weeks, twice a week for an hour. Gymnastic program is build in a specific way to adjust from age 4 to 6. Children which will be part of this program will have the possibilities to practice with different gymnastics elements, games and social skills. They will have always the same leader and the same persons which will keep their data bases. For any change, in the end of twelve weeks program, data will recollect. In this study dependent variables are motor and social skills while the independent variables are the participation in the gymnastic program and also subjects gender. Control group, will follow a free program by using preschool infrastructure under educators supervision.

4. STATISTICAL ANALYSIS

Statistical methods play an essential role in this study, through which we managed to verify our hypotheses raised at the beginning of the study.

The data collected from the testing and questionnaires at the beginning, the middle and the end of the intervention program were collected and subjected to statistical processing, through the IBM SPSS package, version 22.

The dependent variables in this study are motor skills and social skills, while independent variables are participation in the education program through gymnastics and gender of subjects.

Descriptive statistics is used for a summary information of the individual assessment of the first and second phase tests for each participant.

The T-test is used to see if there are significant differences between the control and experiment group motor and social capabilities during the first test phase. It is also used to see the differences between dependent and independent variables.

Criterion F is used to show the importance of linking the variables dependent on independent variables

Pearson's Product-Moment Coefficients are used to evaluate links between all dependent variables.

The repeated ANOVA is used to see the effect of time processed data.

5. RESULTS AND DISCUSSIONS

Achieved results from informative statistical processing (IBM SPSS , 22 -th version) for measured data in each subject, we confirm again the hypothesis at the beginning of this study that movement activity modeling in this age in function of education and movement develop skills is in the right way.

Motor Ability

In case of the achieved results from subjects in which gymnastic program with simple elements was applied for 12 weeks, the changes are significant.

Differences in motor ability after program in experiment group N=30						
Motor Ability	Second phase		First phase		T-test	p
	Mean	Std	Mean	Std		
Reaction time	37.74	1.25	38.09	1.62	-1.74	0.093
Handactioncube positioning (sec)	43.13	2.52	45.63	3.10	-6.92	0.000
Handaction,postcards distribution (sec)	39.80	1.75	41.63	1.96	-7.60	0.000
Kicking ball (m)	6.30	0.25	5.80	0.26	10.10	0.000
Hand-eyeaction,pushthe needle thread	4.00	0.74	3.67	0.80	3.01	0.005
Static balance	14.40	2.06	17.90	1.67	-10.17	0.000
Dynamic balance 6 cm	2.50	0.22	1.56	0.24	30.52	0.000
Dynamic balance 4.5 cm	1.87	0.18	1.14	0.21	22.00	0.000
Jumping right-left 15 s	8.73	2.21	6.83	1.80	10.85	0.000
Flexibility	1.61	0.91	-1.17	1.31	19.54	0.000
Long standing jump	68.93	9.78	59.33	9.63	16.77	0.000
Muscular endurance	8.30	1.70	3.90	0.89	16.33	0.000

p<0.001; p<0.01; p<0.05

Table 1

Differnces in motor ability in control group. N=30						
Motor Ability	Second phase		First phase		T-test	p
	Mean	Std	Mean	Std		
Reaction time	37.86	1.36	37.96	1.44	-0.67	0.506
Handactioncube positioning (sec)	43.75	3.31	44.63	3.18	-4.45	0.000
Handaction, postcards distribution (sec)	41.21	1.85	42.02	2.31	-3.59	0.001
Kicking ball (m)	5.94	0.19	5.88	0.21	3.70	0.001
Hand-eyeaction,push the needle thread	3.77	0.73	3.71	0.65	0.57	0.573
Static balance	17.15	1.52	17.46	1.55	-2.32	0.028
Dynamic balance 6 cm	1.68	0.26	1.59	0.23	4.47	0.000
Dynamic balance 4.5 cm	1.25	0.13	1.19	0.10	3.66	0.001
Jumping right-left 15 s	7.33	2.06	6.97	1.75	3.00	0.005
Flexibility	-0.58	0.94	-1.08	1.14	4.67	0.000
Long standing jump	62.1	8.74	60.93	8.97	1.85	0.075
Muscular endurance	4.5	1.09	4.1	0.76	4.39	0.000
p<0.001; p<0.01; p<0.05						

Table. 2

Based on statistical processing results in the table 1, 2 it seems a difference of results between first and second phase of all the tests. Before the program implementation, for reaction time results was any significant change as per control and experiment children group.

In the end of 12 weeks program, there is a small increase in the experiment group children performance, but in the control group children performance have a decrease, a sign that shows a general improvement of the indicators. The concentration absence is another factor that can be helpful in the test results. Distraction affect in the reaction ability by lowering it. Distraction and a tasks answer failure slows down the reaction.

Differences between groups in motor ability after the programm N=60									
Motor Ability	Experiment		Control		Time				
	Mean	Std	Mean	Std	T-test	P	F	P	Effect
Reaction time	37.7	1.3	37.9	1.36	-0.37	0.72	1.85	.167	.061
Handactioncube positioning (sec)	43.1	2.5	43.8	3.31	-0.81	0.42	33.64	.000	.541
Handaction, postcards distribution (sec)	39.8	1.8	41.2	1.85	-3.05	0.00	32.5	.000	.533
Kicking ball (m)	6.3	0.3	5.9	0.20	6.20	0.00	56.87	.000	.666
Hand-eyeaction,push the needle thread	4	0.7	3.8	0.73	1.23	0.22	3.36	.042	.105
Static balance	14.4	2.1	17.1	1.52	-5.90	0.00	53.29	.000	.652
Dynamic balance 6 cm	2.5	0.2	1.7	0.26	13.26	0.00	383.03	.000	.931
Dynamic balance 4.5 cm	1.9	0.2	1.3	0.13	15.60	0.00	229.49	.000	.890
Jumping right-left 15 s	8.7	2.2	7.3	2.06	2.54	0.01	56.24	.000	.664
Flexibility	1.6050	0.9	-0.6	0.94	9.17	0.00	177.39	.000	.862
Long standing jump	68.9	9.8	62.1	8.74	2.85	0.01	82.23	.000	.743
Muscular endurance	8.3	1.7	4.5	1.01	10.51	0.00	147.10	.000	.838
p<0.001; p<0.01; p<0.05									

Table 3.

In the first phases test (before the gymnastic program intervention) the subjects of control and experiment groups needed more time in the postcards distribution. Postcards distribution average time is the same in the both groups.

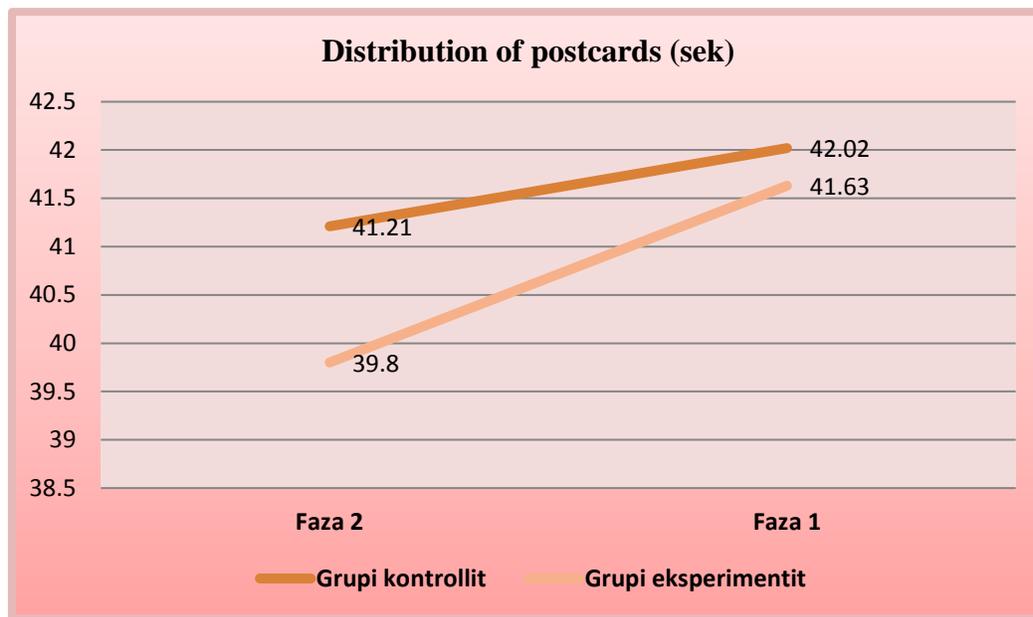


Figure 1.

After the intervention program it seems an improvement in the distribution postcards time in both groups, but the most significant improvement seems in the experiment group. In the table number 3. seems clearly a significant difference between groups ($t=-3.05$, $p=.000$).

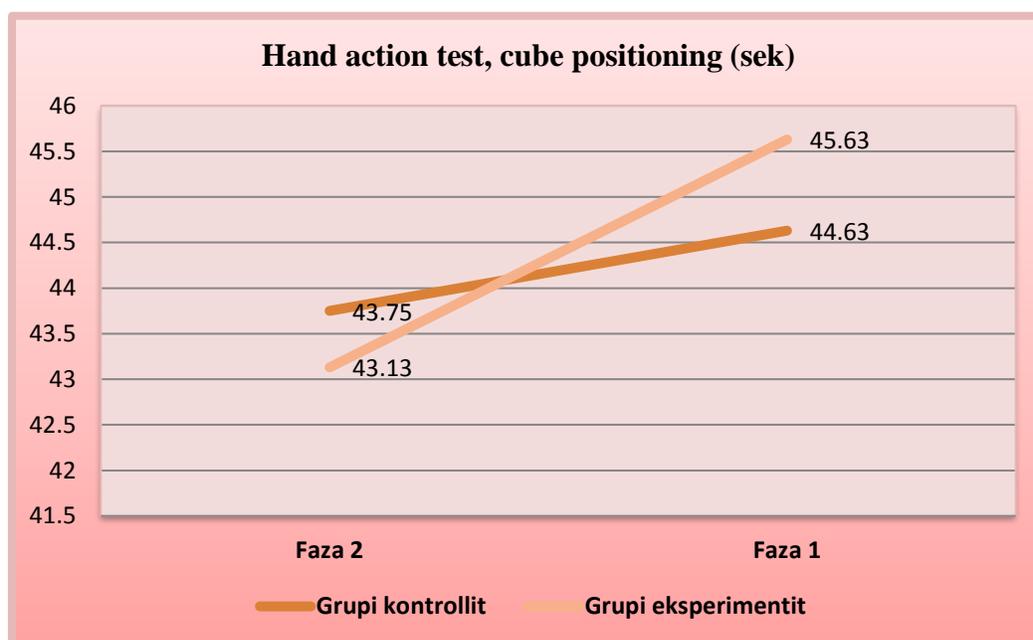


Figure 2.

In the hand action test, cube positioning, as in the first and in the second phase seems that there is no change between groups, figure number 2. Even though in the second phase the majority of subjects are improving, there is not an improve in the decrease average time in the both groups. The results of our study confirm the conclusions of study number [52] in wich hand-eye coordination and small muscles control improves rapidly in the 3-5 age.

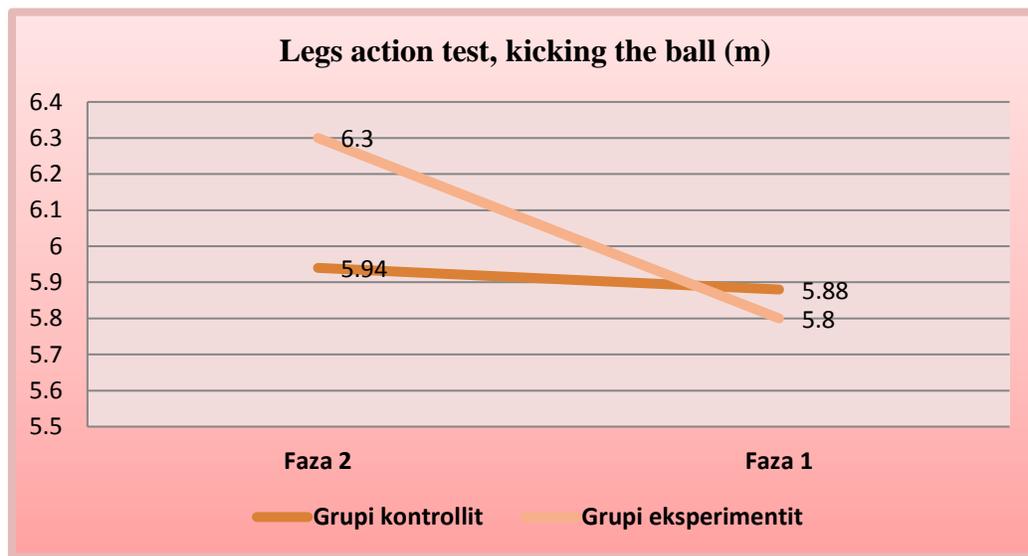


Figure 3.

Based on the figure number 3, it seems that in the first phase of legs action test, kicking the ball, has no significant statistical changes between two groups (experiment-control).

This changes presented in the second phases results ($t=6.201$, $p=.000$), where the subjects of experiment group had an increase in the average distance of balls jump, while in the control group had not significant changes,.

In the first phase, between the subjects of experiment and control groups, there are no significant statistical changes in the performance of the proof to push the needle thread.

In the second phase, it seems a small improvement in the both groups performance, which is not reflected in the final result. Is proved that the skill of coordination eye-hand improves as it grows, which is based in some other study [25].

The results of static balance test in the first phase shows that there is no significant change between control and experiment group. After the intervention program with basic gymnastic elements, the changes between groups become more significant ($t=-5.901$, $p=.000$).

Significant statistical changes between control and experiment groups we will recognize in both dynamic balance tests. ($t=13.26$, $p=.000$); ($t=15.61$, $p=.000$); Our study results are in the same direction with [58] study. 'Physical activity improves children dynamic balance at the fourth age.'

Significant statistical changes between groups will recognize in suppleness ($t=9.17$, $p=.000$); in agility and left-right jumps. In 15 seconds ($t=2.54$, $p=0.01$); in long jump ($t=2.85$, $p=0.01$); muscular stability ($t=1.01$, $p=.000$).

The motor abilities were improved considerably in the end of gymnastic program. The result can be the same in both genders and the children will be developed considerably, if it will be selected the right activity for this age.

Based on the first phases tests of statistical processing results, it seems significant changes between the experiment groups gender. Those are noticed in cubes positions ($t=-3.46$, $p=0.02$); dynamic balance ($t=-6.48$, $p=.00$), agility ($t=-3.37$, $p=0.02$); standing long jump ($t=-4.58$, $p=.000$).

Significant changes are also noticed in all motor abilities in both genders between first and second phase (girls and boys). There is a considerable improve in the second phases results, which are reflected in significant statistical changes between both genders. Those changes are reflected in static balance ($t=-2.03$, $p=0.05$); dynamic balance ($t=-3.05$, $p=0.005$); in explosive power ($t=-3.92$, $p=0.001$); in flexibility ($t=-2.38$, $p=0.026$). This is attributed to activity role in increasing or decreasing gender differences.

Both genders can perform in the same way, if in preschool age they get all the same education form. The differences between genders are very small in this age. Differences between genders in strength at 3-6 age are small, they begin to appear in teenage [10]. The changes in the second phase between genders, can be as result of selected activity type influence because our study results shows differences along of testing performance. Our study results reinforce the study conclusion 'Skills of power measurements shows that boys are better than girls in every group age [15].

Social competence

Based on statistical processing results in the table number 4, 5 it seems a difference between first and second phases result in all tests of experiment group, while in the control group just in interaction and independence social.

Before the program implementation, as per control and experiment children group, the results of behavior degree questionnaire did not have any significant statistical change.

In the end of twelve weeks program, there are significant differences between groups in all their indicators. In social behavior indicators results seems a growing up trend and a trend that comes down in children social problems in the experiment group indicators. In the control group have changes in results of social behavior and social problems, which are not presented in final result.

In the first phases test (before of gymnastic program intervention) the results of control group subjects are better in social interaction, social intervention and social independence, while experiment groups results are better in social problems indicators (lower points).

After program intervention, in the social skills indicators of experiment group seems an improvement of results, while positive or negative changes in control group are inconsiderable to influence in final result. This is reflected in results of t-test between both groups.

Differences in social competence after program in experiment group.

Social competence	Second phase		First phase		T-test	p
	Mean	Std	Mean	Std		
Social cooperation	28.77	2.94	25.90	3.41	9.73	0.00
Social interaction	23.13	3.10	19.63	4.11	9.22	0.00
Social indipendece	26.00	2.29	25.50	2.64	2.72	0.01
Social skills total	77.90	7.90	71.03	9.21	13.31	0.00
Self-centre/explosive	4.97	2.99	6.47	2.70	-12.04	0.00
Attention problems/overactive	5.37	3.79	8.10	3.67	-15.85	0.00
Antisocial/aggressive	2.63	2.74	3.13	2.60	-2.92	0.01
Total externalizing problem	12.97	9.35	17.70	8.81	-12.35	0.00
Social withdrawal	3.53	2.58	5.00	3.24	-6.89	0.00
Anxiety/somatic problems	4.10	1.79	5.50	2.58	-6.28	0.00
Total Internalizing problem	7.63	4.15	10.50	5.65	-7.01	0.00
Total Problem Behaviour	20.60	12.81	28.20	13.73	-10.67	0.00

p<0.001; p<0.01; p<0.05

Table 4.

Differences in social competence after program in control group.						
Social competence	Second phase		First phase		T-test	p
	Mean	Std	Mean	Std		
Social cooperation	27.83	4.58	27.17	3.93	1.62	0.12
Social interaction	22.60	3.36	23.20	3.62	-2.83	0.01
Social indipendece	26.40	2.57	26.00	2.82	2.35	0.03
Social skills total	76.83	9.27	76.37	8.97	0.98	0.34
Self-centre/explosive	7.47	5.70	7.53	4.16	-0.09	0.93
Attention problems/overactive	7.30	4.37	7.50	3.59	-0.44	0.67
Antisocial/aggressive	5.23	6.11	5.33	6.00	-0.90	0.38
Total externalizing problem	20.00	15.44	20.37	13.02	-0.33	0.74
Social withdrawal	5.77	5.35	6.17	5.12	-1.75	0.09
Anxiety/somatic problems	6.60	4.67	7.30	4.21	-1.91	0.07
Total Internalizing problem	12.37	9.92	13.47	9.24	-1.86	0.07
Total Problem Behaviour	32.37	25.06	33.83	21.98	-0.95	0.35
p<0.001; p<0.01; p<0.05						

Table 5.

Differences in social competence between gender, before program in experiment group N=30						
Social competence	Girl (16)		Boy(14)		T-test	p
	Mean	Std	Mean	Std		
Social cooperation	27.69	2.47	23.86	3.23	3.61	0.001
Social interaction	22.75	2.44	16.07	2.30	7.71	0.000
Social indipendece	27.06	2.14	23.71	1.94	4.49	0.000
Social skills total	77.50	5.06	63.64	7.02	6.12	0.000
Self-centre/explosive	4.94	1.39	8.21	2.81	-3.97	0.001
Attention problems/overactive	6.06	2.11	10.43	3.74	-3.87	0.001
Antisocial/aggressive	1.81	1.64	4.64	2.71	-3.40	0.003
Total externalizing problem	12.81	4.81	23.29	9.14	-3.85	0.001
Social withdrawal	4.25	2.70	5.86	3.68	-1.35	0.190
Anxiety/somatic problems	5.56	2.58	5.43	2.68	0.14	0.891
Total Internalizing problem	9.81	5.14	11.29	6.28	-0.70	0.492
Total Problem Behaviour	22.63	9.82	34.57	15.08	-2.53	0.019
p<0.001; p<0.01; p<0.05						

Table 6.

Based on results of table number 6, there seems significant changes between genders in experiment groups first phases questionnaire. They were noticed in social interaction, ($t=-3.61$, $p=0.001$); in social action ($t=-7.71$, $p=0.000$), social independence ($t=4.49$, $p=0.000$); selfish ($t=-3.97$, $p=0.001$); attention problems ($t=-3.87$, $p=0.001$); antisocial/aggressive ($t=-3.40$, $p=0.003$); general behavior problems ($t=-2.53$, $p=0.019$).

It seems significant changes in all behavior indicators between first and second phases questionnaire in both genders (boys and girls). There is a considerable improvement in the second phases results, which are reflected in significant statistical changes between both genders. The girls had an improvement in all social behavior indicators, while boys had an improvement in behavior problems indicators. Girls were appreciated better than boys in all behavior degrees. Except in social attraction and anxiety boys had a better evaluation.

The intervention program with gymnastic elements has affected in boys behavior. Statistical processing results, showed that evaluation of social problems indicators had a significant decrease of subjects in risk. Also in this subjects were evidenced better evaluations for social behavior indicators.

To define the relationship between social and motor abilities we used the correlation coefficient Pearson. Results from statistical processing shows that only in 6 cases is a significant relation between variables of both sets.

Best performance in motor abilities had the subjects with good skills in social behavior, while lower performance in some of motor tests had the subjects with high evaluation in problem behavior indicators.

Dynamic balance ability has a negative direction correlation with social action. ($r=-.36^{**}$, $p=0.00$); social independence ($r=-.48^{**}$, $p=0.00$), and general social behavior evaluation ($r=-.37^{**}$, $p=0.00$).

Static balance ability has a positive direction correlation with social interaction ($r=.41^{**}$, $p=0.00$); social action ($r=.37^{**}$, $p=0.00$); social independence ($r=.39^{**}$, $p=0.00$) and general social behavior evaluation ($r=.11^{**}$, $p=0.01$).

Agility has positive correlation with social action ($r=.29^{**}$, $p=.02$); social independence ($r=.27^{**}$, $p=.04$) and general social behavior evaluation ($r=.58^{**}$, $p=.05$). Power has a positive correlation with social action ($r=.29^{**}$, $p=.03$); social independence ($r=.39^{**}$, $p=.00$); and general social behavior evaluation ($r=.28^{**}$, $p=.03$). Hand action, cubes position has a negative direction correlation with social interaction ($r=-.37^{**}$, $p=.00$); social action ($r=-.51$, $p=.00$), social independence ($r=-.43$, $p=.00$) and the total of social behavior evaluation ($r=-.49^{**}$, $p=.00$).

Children with focus problem have not good results with coordination skill. Children with good results in social competence have show a good performance in balance ability.

6. CONCLUSIONS

- Our study and our experience results, confirm our hypothesis in this age education and motor skills, are not just depended from maturity (body developments, neuromuscular systems, cardio respirator system development and endocrine glands function) but also by activity type that children decided to be part of because it can be determinant in their improvement.
- Studys results shows that gymnastic program has an impact in motor abilities education and development, but this impact in not the same in all abilities because it is limited by maturity effect, especially by elegant motor ability. Fine motor skills development depends by growth, and especially by bone developoment.
- Results evidenced statistical changes in both genders (girls and boys) in all performed tests in first and second phase. It seems girls tendency to perform better than boys in eye-hand coordination and static balance tests.
- Results evidenced significant statistical improvements of experiment groups in social skills indicators and in reducing problematic behaviors.
- Intervention program with gymnastic elements has affected also in boys behavior. Results of statistical processing showed that there was a significant decrease in evaluation of social problems indicators of subjects in risk. Also in these subjects were evidenced good evaluations on social behavior indicators.
- Achieved results from statistical processing, shows that in some indications is a significant relation between social and motor skills.

Childrens who showed good skills in social behavior had a good performance in motor skills, while childrens with high rating in social problems indicators had a lower performance in some of motor tests.

- Through this study we offer some rational solutions with movement and social character, using a variety tools that gymnastic contains accompanied by some educational and entertainment methods.

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