

## A Supplemental Program for Children Aged 6 to 9 with Motor Performance Deficit

*Assem Saber Rashed Hammoudy*

Methodology and Curricula Department,  
Faculty of Physical Education, Assiut University, Assiut, Egypt

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**Abstract:** Play and movement help the child acquire expression, ideas, feelings and concepts. The importance of play and movement at this stage is due to the fact that they enable the child to feel that s/he has control over his/her body, his/her environment and the outside world. Therefore, educators of pre-school and primary school children must plan and design programs which involve different types of experiences aiming at overall and integrated development. Not giving motor education sufficient importance in the educational plans by teachers will one day result in the children suffering from severe deficits in motor abilities, adjustment and behavior. Supplemental motor programs, which allow children to play and move, are among the most effective and successful educational methods which aim at achieving integrated development of the child and overcoming the consequences of lack of movement. The present research aims at constructing a supplementary program to facilitate reaching motor adaptation and development of motor performance in children with motor performance deficit. To achieve this objective, the researcher used the descriptive method to set the bases for the design of the suggested program and its goals, objectives and components. The researcher also adopted the experimental method on 15 groups using the pre-post test. The research population involved 15 public and experimental primary schools in Assiut. The research sample involved 225 male and female pupils in the first three grades (15 pupils from each school). The implementation of the suggested program lasted for 12 weeks. To collect data for the present study, the researcher used interviews and observation to detect children with motor performance deficit through the application of a checklist for the detection of children with motor performance deficit. He also used the Purdue Perceptual-Motor Scale and the suggested supplementary program. Results indicated that there were statistical significant differences ( $P = 0.05$ ) in the variables of balance and posture and body image and differentiation in favor of the post-test.

**Key words:** Supplemental program % Children performance % 6 to 9years

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### INTRODUCTION

Childhood is the most important stage in human life. At this stage the child's abilities develop and their talents become obvious and this stage the child is easy to be influenced, guided and shaped. Therefore, childhood care and attention to its activities are among the most important influences that contribute to the progress of societies.

Werner [1] points out educators of pre-school and primary school children must plan and design programs which involve different types of experiences aiming at overall and integrated development.

Psychologists argue that playing and movement help the child acquire expression, ideas, feelings and concepts. The importance of play and movement at this stage is due to the fact that they enable the child to feel that s/he has control over his/her body, his/her environment and the outside world [2].

Kruber [3] argue that not giving motor education sufficient importance in the educational plans by teachers will one day result in the children suffering from severe deficits in motor abilities, a deficit in adjustment by 40% and a deficit in behavior by 45%.

In their book "Spiel-Spass-Sport Fuer Kinder" Koschel and Brinkmann [4] point out that is to be hoped that many children will be able to exercise their motor

activity at this age; therefore, we find that the most important thing that pre-school and primary school children need is large and wide halls to intensify their physical activity so that the child's body at this stage starts feeling, coexisting, understanding, motor communication and understanding all that is related to his/her body and the bodies of others. This is considered an essential part of the maturity and development of the child because the need for movement decreases considerably as a result of the prevention of movement or lack of movement because of the setting of rules that complicate movement or lack of places available and appropriate for movement.

Supplemental motor programs, which allow children to play and move, are among the most effective and successful educational methods which aim at achieving integrated development of the child. Gallhue [5] argues that movement is one of the main motives for the development of the child. This natural tendency for movement is one a teaching method, an approach to the world of childhood and an effective educational medium for improving the child's motor, mental and social development.

Consistent with previous literature [4, 6-9], the researcher argues that besides the negative social and psychological effect on the development of the child's personality, children also experience other symptoms as a result of lack of movement, which the researcher calls deficit in motor performance and children gradually become victims of lack of movement.

Through designing the supplemental program in this research, the researcher aspires to go beyond a deeper and broader concept than motor education. The program of the present research is rich with various perceptual and cognitive experiences, which develop the child's observations, concepts, creative abilities and perception of dimensions and directions, such as sense of balance, place and time and which help him/her acquire all levels of knowledge and, therefore, get accustomed to logical behavior, problem solving and making evaluative judgments [10].

The researcher finds that due to the lack of movement, sensory symptoms appear on the body. Some of these symptoms appear on the muscular system, as the muscles that are not aroused can not substantiate or protect the spine or the curvature of the feet. Some appear on the cardio-respiratory system, as its development continuously declines and it operates in an irregular manner. Some others appear on the nervous system and motor ability, as the sense and nerves which are not

trained in variable movements work in an irregular and maladaptive manner. There are also general symptoms which are obvious when there is lack of movement, such as muscular dystrophy, lack of perseverance, lack of coordination among the parts of the body, poor concentration and endurance, fatigue and unwillingness for movement.

The researcher thinks that the most important thing that primary school children with motor performance deficit need is supplemental programs which are carried out away from the physical education class to intensify their activity and movement so that the children's bodies start feeling, coexisting, understanding, motor communication and understanding all that is related to their bodies and the bodies of others.

To overcome the consequences of lack of movement in primary school children, the researcher conducted this research through designing a supplementary remedial physical and motor program aiming at treating all problems which he classified under the term "deficit in motor performance", as this program is important and is urgently needed because of the following:

- C The obvious neglect of physical and motor education classes by children in the first three grades, the absence of specific implementable physical and motor education programs and the resulting deficit in motor performance.
- C Classrooms in the first three grades of primary education have become rooms for teaching children on desks aligned in the classrooms, neglecting physical and motor education with its various activities which are based on play and movement.
- C The suggested program, along with the suspense and excitement it involves and its fulfillment of children's educational, psychological and social needs, represents an important and vital aspect of the development of children's behavior.
- C When we conclude that childhood is one of the most important and most sensitive stages in man's life and when the educational and guidance methods using play and movement during this stage are proper, we will take pride in the resulting ripe product and if this stage is neglected, the result will be sorrowful ingratitude, corruption and misbehavior.
- C We, as educators, are faced with this question: Shall we wait until problems and disasters emerge as a result of children's lack of movement, or do we have to realize that education of the young is useful when carried out at leisure and it is not so when carried out in old age.

Previous literature and research is highly important due to the facts, information and statistical procedures and manipulations it contains and the results it has reached, which are considered the scientific repertoire which researchers use.

Therefore, the researcher surveyed the Arabic and foreign literature or research which dealt with physical activities and motor education programs with the aim of solving children's motor problems in order to reach the literature and research relevant to the topic of the present research. The researcher tried to keep away from the weaknesses of previous literature and make use of only its positive aspects. This means that the researcher did not depend entirely on previous literature and research; rather he benefited by the research visions and methodology. Through the review of previous literature, the researcher concluded this research area is a recent one because he did not find any single similar to his own study, but he reached Arabic and foreign studies that are partially related to the topic of his. These foreign studies are not enough, as this area requires more serious and objective research to avoid the limitations and to help address this area from different angles and support the theoretical foundation to move forward towards generalization. However, the researcher benefited from previous Arabic and foreign studies.

**Objective of the Study:** This research aims at constructing a supplementary program to facilitate reaching motor adaptation and development of motor performance in children with motor performance deficit.

**Research Question:** The present research will attempt to answer the following question:

- C Does the suggested supplementary program serve to achieve motor adjustment through physical arousal and develop motor performance in children with motor performance deficit?

#### **Research Terminology**

**Motor Performance Deficit:** It is a kind of physical deficit due to the prevention of movement and it has general symptoms such as poor concentration, fatigue and unwillingness for movement and sensory symptoms that affect the muscles, the cardio-respiratory system, the nervous system and motor ability despite the child's strong need for play, movement and motor arousal necessary for children's physical, motor, social and psychological growth.

**The Supplemental Program:** It is a specialized advanced and graded program that is designed in the form of an integrated program based on sound scientific foundations to be added to the core educational motor and sports training programs for the treatment of deficiencies and shortcomings in the original program. It develops the psycho-motor drive, imparts the ability to build the positive features of personality and conforms with the abilities, skills and experiences of learners or trainees.

**Children with Motor Performance Deficit:** They are those children who have lost their desire for movement due to the prevention of movement or those who suffer from physical disorders. These children display signs which may signal a deficit in behavior, performance or endurance or display a kind of maladjustment or suffer from an obvious increase in weight.

#### **MATERIALS AND METHODS**

**Methodology:** To identify the reality of the physical education program of the primary stage and the implementation resources including teachers, tools, equipment and implementation methods, the researcher used the descriptive method to set the bases for the design of the suggested program and its goals, objectives and components. To achieve the objectives of the research, the researcher adopted the experimental method on 15 groups using the pre-post test.

**Research Population and Sample:** The research population involved 15 public and experimental primary schools in Assiut, Egypt. The research sample involved 225 male and female pupils in the first three grades (15 pupils from each school). To control for the variables that the researcher sees may affect the motor performance, he matched the groups for chronological age, height and weight. Chronological age was calculated in months and the researcher obtained it from the school records. Height was calculated in centimeters using a restameter and weight was measured in kilograms using medical scales. The researcher used the Purdue Perceptual-Motor Scale to match the sample under study.

**Data Collection Tools:** To collect data for the present study, the researcher used interviews and observation to detect children with motor performance deficit through the application of a checklist for the detection of children with motor performance deficit. He also used the Purdue Perceptual-Motor Scale and the suggested supplementary program.

**The Detection of Children with Motor Performance Deficit Checklist:**

The researcher prepared a set of items in form of a checklist to detect the children with motor performance deficit. This checklist helps in selecting the research sample of children after making sure that they have deficits in the performance of movement patterns. It also helps in determining the content of the supplementary program appropriate for the treatment of these deficits. The researcher and his assistants put down these data in the observation card as the children carried out the physical and motor education activities without making the children heed this observation. The researcher deliberately repeated the observation to make objective judgments on the motor performance of children.

To validate the Detection of Children with Motor Performance Deficit Checklist in its initial format, which consisted of 120 items, the researcher presented it to some specialized experts to identify the relevance of each statement to the variable under which it was classified and the clarity of its formulation. The result was that the fifth aspect (i.e., the mental aspects) was excluded and some of its items were incorporated into the fifth aspect (i.e., the psychological aspect) and the third aspect (i.e., the social aspect). Also some statements were modified and some others were omitted, so in the light of the experts' opinions, there were 105 statements. After administering the checklist to a sample of 750 children, some statements were omitted. The percentage of agreement among the experts was 0.87, which indicates the validity of the checklist.

A statistical program was developed to calculate the validity coefficients of the items using the computer. The validity scores of the items of the scale were calculated using the program designed for that purpose. The statements which were not significant were excluded and the scale, in its final format, contained 75 statements.

**The Purdue Perceptual-motor Scale:** This scale was developed by Newell C. Kiphart and Eugene G. Roach in the United States of America, in light of the concepts put forward by Kephart in his theory of perceptual-motor abilities. This scale is used as a tool to diagnose the perceptual-motor problems of the children who are kinetically and academically retarded. It is administered individually and involves 11 subtests, each having 31 items and each item is given 4 points according to the performance level. It covers five main areas as follows:

The first area is balance and posture and it includes the Walking Board Test and the Jumping Test.

The second area is body image and differentiation and it includes:

- C Identification of Body Parts,
- C Imitation of movements,
- C Obstacle Crossing,
- C Angles in the Snow and
- C Kraus-Weber Test.

The third area is perceptual-motor match. Two tests are used to measure this area. They are:

- C The Chalkboard Test and
- C The Rhythmic Writing Test.

The fourth area is optical control and the fifth area is form perception.

Because the scale is intended to identify the children with motor performance deficit and measure the perceptual-motor abilities of the children under study, the researcher excluded the last three areas as they are related to academic retardation and confined himself to the first and second areas which are sufficient to achieve the research objective.

The scale has a registration list which determines the points obtained by the child in the various items of the scale and thus the problems which s/he faces can be determined. The scale has plausible degrees of validity and reliability when applied to the Egyptian society, through the study of Rashed [11].

The researcher conducted a pilot study on a sample of 15 male and female pupils from the first three grades of elementary education to calculate validity and reliability coefficients through internal consistency by calculating the coefficients of the items of the scale along with those of the entire scale. It has been shown that these coefficients are all positive and significant at 0.01 and this consistency is an indication of the validity of the construction of the scale. The researcher also calculated the coefficients self-validity coefficients through by the square root of the value of reliability coefficient and through the statistical manipulations he concluded that the tabular value of (R) at 0.05 = 0.514 and that correlation between the tests used and the total sum of the entire scale ranged between 0.68 and 0.94, which is greater than its tabular value at 0.05.

To find the reliability coefficient of this scale, the researcher re-administered the scale, under the same conditions [12], on a sample of 15 pupils from the first three grades of elementary education and calculated the correlation between the pre-test and post-test on the same sample and with an interval of 15 days. Thus, the tabular value of (R) at 0.05 = 0.514 and the calculated value of (R) is greater than the tabular value of (R) at 0.5, which shows

the reliability of the test. The self-validity coefficient ranged between 0.90 and 0.95, thus indicating the validity of the test.

**The Suggested Supplementary Program:** Based on the results of the observation and interviews with officials and the review of previous literature, the researcher developed a questionnaire which included 16 bases for the design and formation of the suggested supplementary program and 13 educational goals. Then the researcher presented the bases and objectives of the program to 10 specialized experts to give their opinions on the suitability of the bases and objectives of the program. Consistency among the experts' opinions on the bases of the program design and formation ranged from 64% to 100% and the researcher settled for a percentage of 70% and, therefore, the bases which did not receive the predetermined percentage were excluded (i.e., bases No. 3, 4, 8 and 10). Thus, program had only 12 bases.

Consistency among the experts' opinions on the educational goals of the program ranged from 76% to 100%. No goal was excluded and thus there were 13 educational goals for the design and the formation of the suggested supplementary program.

The researcher made the modifications suggested by the experts. Thus, the questionnaire on the bases of the design and formation of the suggested program and its educational goals are valid for the purpose for which it was designed. (Appendix 1)

Based on the results of the questionnaire on the bases and educational goals of the programs, the researcher designed a questionnaire on the behavioral educational objectives of the program. He distributed them so that every three objectives came together to select the content of their module, using the tripartite division (cognitive objectives, affective objectives and psycho-motor objectives). He also laid the foundations for the training period of supplementary program and its administration to children. The researcher presented the questionnaire to 7 specialized experts to give their opinion on it.

Consistency among the experts' opinions on the educational goals of the program ranged from 71.43% to 100%. No goal was excluded and thus there were 10 cognitive objectives, 10 affective objectives and 10 psycho-motor objectives distributed to 10 educational modules. Consistency among the experts' opinions on the foundations for the training period of supplementary program ranged from 88.57% to 100%. No modifications were made in these foundations. Thus, the foundations of training of the suggested supplementary program were valid and viable (Appendix 2).

**Content of the Suggested Supplementary Program:** The researcher designed and formulated the content of the suggested supplementary program in its initial format in such a way as to suit the requirements of primary school children with motor performance deficit and in the light of the educational goals and objectives and the bases reached by the researcher for the design and formation of the program. The suggested supplementary program included 10 educational modules designed in the light of the foundations of training of the suggested supplementary program and the educational goals of the module.

The program was presented to 5 specialized experts and the researcher did the following:

- C Adding some activities which enrich the module and achieve its objectives.
- C Modifying the content of some educational games involved in the objectives.
- C Omitting some applied activities because they are difficult for children with motor performance deficit.
- C Recommending the addition of applied models to the program through pictures and video, if available.

Thus, the suggested supplementary program was valid and viable.

**Scientific Manipulations of the Suggested Supplementary Program:** To ensure the validity of the proposed program, the researcher piloted some of the activities of the modules of the proposed supplementary program on a representative sample of the research population not included in the main sample and the researcher found that:

- C The content of the modules of the program was suitable for the training period.
- C The teaching and training methods were suitable.
- C The tools used were suitable and adequate.
- C The children understood the activities and were interactive when they were trained in them.
- C The activities involved in the modules were suitable for the children.
- C The foundations of the training period were suitable and adequate for achieving the educational and training objectives.
- C The tools included in each module were suitable, but the researcher suggested that backup tools should be available to cover lost or damaged tools at implementation.
- C The children understood the activities and interacted with them and with one another.

C Those who implemented the program were good at implementation.

**The Pre-Test:** After matching the groups in each selected school, the researcher and his assistants administered the pre-test.

**Implementation of the Program:** After the researcher assured himself of the results of the pre-test, he his assistants implemented of the suggested supplementary program, which lasted for three months.

Guidelines and Instructions that Were Taken into Consideration during the Implementation of the Program:

C Encouraging the children to engage and participate in the program willingly.

C Performing different types of motor and physical activities to get acquainted with a large number of tools and devices.

C Introducing the tools and devices so that the children get familiar to them, specially the usual tools and devices in which the hands are used such as balls, tires, ropes, boxes and mattresses.

C Stimulating the children to identify their motor performance abilities.

C The first classes involved motor and physical activities to enable the children to use their special abilities such as maintenance of balance and adaptation to the devices and equipment.

**The Post-Test:** The researcher and his assistants administered the post-test under the same conditions and using the same tools of the pre-test with the aim of collecting, classifying and tabulating data to present and interpret results.

Appendix 1: Questionnaire Form

Bases of Designing and Formulating the Suggested Supplemental Program and its Educational Goals for Children Aged 6 to 9 with Motor Performance Deficit (After presenting it to the experts)

Bases of Designing and Formulating the Suggested Supplemental Program and its Educational Goals for Children with Motor Performance Deficit

Serial No.	Bases of Designing and Formulating the Suggested Program
1	The program revolves around play and movement which target the physical and motor aspects of children.
2	The supplemental program involves play and laughter with the help of devices with and without specific rules.
3	The program is based on the true needs required to solve the motor problems experienced by children with motor performance deficit.
4	The program is to involve kinds of motor performance which help children restore self-confidence and form positive relationships with their bodies.
5	The program is to include the psychological motivation activities as a kind of work to be executed and to secure the children's engagement in the program.
6	The program should provide activities that can help children overcome motor performance deficit.
7	The activities of the suggested supplemental program should be diversified to motivate children throughout the period of the program.
8	The supplemental program should be planned and constructed to be administered to children aged 6 to 9, boys and girls.
9	Using educational methods that suit the abilities, aptitudes and experiences of children with motor performance deficit.
10	Providing multi-faceted experiences and tools.
11	The program should be designed in a developed and ascending manner to suit children with motor performance deficit and satisfy their desires and needs.
12	Providing the place and resources required for the implementation of the supplemental program.

Educational Goals of the Supplemental Program Suggested for Children with Motor Performance Deficit

Serial No.	Goals
1	Helping the child acquire social relationships with the teacher and peers as a result of the social interaction provided by the program.
2	Helping the child acquire the elements of physical and motor fitness needed for this age.
3	Stimulating the psychological motivation of the children participating in the program.
4	Facilitating the achievement of motor adjustment through physical arousal and the development of children's motor performance.
5	Developing the motor performance required to engage children in physical and motor activities.
6	Making the child believe in the importance of play, movement and educational games.
7	Helping children acquire some basic motor skills which contribute to the development of motor perception.
8	Making children recognize the importance of small and alternative tools which substitute for physical and motor activities.
9	Helping children master different methods for using small and alternative tools.
10	Developing motor situations from week to week and enhancing perception.
11	Helping children acquire knowledge and information about the body and how it moves and about the importance of the body for motor performance.
12	Eliminating children's fear of practicing physical and motor activities.
13	Developing the risk-taking ability and enhancing psychological motivation.

Appendix 2: Questionnaire Form

The Bases and Educational Goals of the Suggested Supplemental Program for Children Aged 6-9 with Motor Performance Deficit (After presenting it to the experts)

Educational Objectives of the Suggested Supplemental Program for Children Aged 6-9 with Motor Performance Deficit

Unit	Educational Objectives Suggested for the Unit
Unit 1	Cognitive Objective: To recognize the importance of spontaneous sports. Affective Objective: To acquire social relationships with the teacher and peers. Psychomotor Objective: To acquire balance and jumping skill.
Unit 2	Cognitive Objective: To recognize the importance of educational and motor sports. Affective Objective: To realize that his/her ability to practice educational and motor sports is associated with his/her performance ability. Psychomotor Objective: To develop adaptability in children.
Unit 3	Cognitive Objective: To identify different physical aspects. Affective Objective: To acquire courage and cooperation. Psychomotor Objective: To acquire some basic motor skills.
Unit 4	Cognitive Objective: To recognize the importance of small and alternative tools in play. Affective Objective: To acquire self-confidence. Psychomotor Objective: To know different ways of using small and alternative tools.
Unit 5	Cognitive Objective: To recognize body parts and express his/her feelings. Affective Objective: To acquire courage. Psychomotor Objective: To develop motor situations and perception.
Unit 6	Cognitive Objective: To recognize the importance of his/her body in motor performance. Affective Objective: To break the fear barrier in children. Psychomotor Objective: To acquire rope jump and rope vault skills.
Unit 7	Cognitive Objective: To recognize different methods for maintaining balance. Affective Objective: To develop risk-taking skill. Psychomotor Objective: To acquire standing and moving balance.
Unit 8	Cognitive Objective: To get acquainted with new motor sports. Affective Objective: To enhance psychological motivation. Psychomotor Objective: To acquire the jumping skill and the physical fitness elements it requires.
Unit 9	Cognitive Objective: To know how to perform jumping. Affective Objective: To develop the risk-taking ability and break the fear barrier. Psychomotor Objective: To acquire the jumping and body control skills.
Unit 10	Cognitive Objective: To know how to perform throwing and identify the different ways for moving objects and tools. Affective Objective: To develop courage and risk-taking in children. Psychomotor Objective: To acquire the throwing and accuracy skills.

Foundations for the Training Period of the Suggested Supplemental Program for Children Aged 6-9 with Motor Performance Deficit

Unit	Educational Objectives Suggested for the Unit	Period
Warm-up Period	Creating an atmosphere of trust and performing movements with free and spontaneous sports.	10 min.
Play Period	Developing the idea of play which suits children, whether individually or in groups.	20 min.
Modification and Development		
Period	Developing and deepening the idea of a certain sport and achieving the psychomotor objective.	10 min.
Conclusion	Bringing children back to their normal condition.	5 min.

**RESULTS AND DISCUSSION**

Table 1 shows that F-value at 0.05 = 1.74. This means that the calculated T-value is less than its tabular value and this confirms the convergence of the levels of the groups on the post-test.

Table 2 shows that tabular T-value at 0.05 = 1.645. It also shows that there are statistically significant differences between the mean scores on the pre-and post-tests in favor of the post-test, as calculated T-value ranged between 40.47 and 78.85, which is greater than its tabular value.

The results concerning the significance of the differences between the fifteen experimental groups on the pre-post tests in the variable of balance and posture indicate that there are statistically significant differences (P = 0.05) in favor of the post-test in the variable of balance and posture (forward, backward and sideward walking on the bar and jumping). The researcher attributes this to the positive effect of the program, which contains some fitness, adjustment and stretching movements and competitive exercises among children, all of which serve balance and posture for children so that they can perform movements naturally. This is consistent with the study of

Table 1: Analysis of variance between the groups under study on the post-test (N = 225)

Items			Source	Sum of Squares	Degree of Freedom	Mean Squares	F-Value
Balance and Posture	Walking on the low bar	Forward	Between groups	1.716	14	0.123	0.489
			Within groups		52.667	210	0.251
	Backward	Between groups	1.582	14	0.113	0.261	
		Within groups	91.067	210	0.434		
	Sideward	Between groups	3.662	14	0.262	0.688	
		Within groups	79.867	210	0.380		
Body Image and Differentiation	Jumping Test	Between groups	6.596	14	0.471	0.988	
		Within groups	100.133	210	0.477		
	Identification of Body Parts	Between groups	3.360	14	0.240	0.609	
		Within groups	82.800	210	0.394		
	Imitation of Movement	Between groups	3.929	14	0.281	1.038	
		Within groups	56.800	210	0.270		
	Crossing Obstacles	Between groups	1.982	14	0.142	0.265	
		Within groups	112.267	210	0.535		
	Kraus-Weber	Between groups	1.529	14	0.109	0.439	
		Within groups	52.267	210	0.249		
	Angles in the Snow	Between groups	0.889	14	0.0639	0.247	
		Within groups	54.00	210	0.257		

Table 2: Significance of the differences between the mean scores of the experimental groups on the pre-post test as a whole in the tests under study (N = 225)

Items	Pre-test		Post-test		Difference between the two means	T-Value		
	M	SD	M	SD				
Balance and Posture	Walking on the Low Bar	Forward	1.173	0.39	3.409	0.493	-2.236	*-78.85
		Backward	1.120	0.326	3.102	0.643	-1.982	*-42.06
		Sideward	1.111	0.315	3.262	0.611	-2.151	*-45.06
	Jumping Test		1.000	0.00	2.862	0.690	-1.862	*-40.47
Body image and Differentiation	Identification of Body Parts		1.422	0.495	3.480	0.620	-2.058	*-69.45
	Imitation of Movement		1.142	0.350	3.418	0.521	-2.276	*-53.58
	Crossing Obstacles		1.000	0.00	2.942	0.714	-1.942	*-40.79
	Kraus-Weber		1.200	0.401	3.604	0.490	-2.404	*-56.22
	Angles in the Snow		1.476	0.501	3.578	0.495	-2.102	*-47.04

Table 3: Percentage of improvement on the experimental groups on the post-test (N = 225)

Items / Variables	Pre-Test	Post-Test	Percentage of Improvement		
Balance and Posture	Walking on the Low Bar	Forward	1.173	0.409	-2.236
		Backward	1.120	1.102	-1.982
		Sideward	1.111	3.262	-2.151
Body image and Differentiation	Jumping Test		1.000	2.862	-1.862
	Identification of Body Parts		1.422	3.480	-2.058
	Imitation of Movement		1.142	3.418	-2.276
	Crossing Obstacles		1.000	2.942	-1.942
	Kraus-Weber		1.200	3.604	-2.404
	Angles in the Snow		1.476	3.578	-2.102

Mansour [13], where results indicate that structured motor programs for children have a positive effect on the motor development and skills of the child. Zhang and Zhang [14] indicate that "depriving the child of perceptual-motor experiences at an early age hampers the growth of his perceptual-motor abilities in the future." The researcher maintains that the variable of balance and posture is an extension of the child's basic motor skills that require specific and successive activities through the program modules.

The results concerning the significance of the differences between the pre-post tests in the variable of body image and differentiation indicate that there are statistically significant differences (P = 0.05) in favor of the post-test in the items "imitation of movement, crossing obstacles, Kraus-Weber and angles in the snow". The researcher attributes this to the availability of experienced assistants to follow up the children's performance and help to correct mistakes, besides the diversity of activities of the program, which motivated the

children to improve and develop their performance during attempting to imitate the assistants, as the child at this stage tends imitate and engage in motor activities through the modules of the regular continuous program. In addition, the program included motor activities associated with attitudes and competition. The child, at this stage, adores competition and exploration of his surrounding environment and this is what was included in the educational games which the program included and which the researcher used in the introductory part of the modules of the program.

**Recommendations:** Through the results reached in this study, the researcher recommends the following:

- C Administering of the suggested supplementary program to primary school children with motor performance deficit.
- C Use the detection of children with motor performance deficit checklist to identify the children who need the suggested supplementary program.
- C Using some of the activities of the suggested supplementary program in motor and physical education lessons carried out by children in the first three grades of primary education for the prevention of the symptoms of recession and lack of movement.
- C Using Purdue perceptual-motor scale to diagnose the motor problems experienced by primary school children.

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