

Attentional control and its relationship to several fundamental motor skills in children aged 5 to 6 years

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Abstract

The search includes the following terms: The significance of the research resides in attentional control and its relationship to some basic motor skills in young children (5-6) years old. It was discovered that there is a need to explore the relationship between attentional control modifiers and some motor skills through the researchers' firsthand observation of children's basic motions and personal interviews with specialists in the field of kindergarten. For children (5-6) years old, the researchers believe that the sources of hesitation and fear of injury are among the main reasons affecting attentional control, and thus the latter affects the performance of basic skills, and thus the goal of the research is to identify attentional control in children (5-6) years old. And, in order to determine the relationship between attentional control and some fundamental motor skills, and in light of the research purpose, the researchers hypothesized: There is no relationship between attentional control and certain basic motor skills for children (5-6) years old.

To achieve the research's purpose, the research areas and tools were established, as well as how much the research instruments were used to get the results and where they were presented, examined, and debated. As a result, the researchers arrived at the study's conclusions and suggestions.

Key words

Attentional control is a group of processes that occur within the learner's brain to complete motor, perceptual, or cognitive tasks. It consists of three processes: attention, selection, and control.

The two researchers use experimental method, as the group of student's research in the first study year of institute of physical education in Erbil. In the year (2008-2009) the number of them (132 students) were distributed into (4) sections and selected a sample of the research intentionally, if the two researchers will select three sections (branches) contained (16) students in each group, and represented means of the research physical and skillful tests in hand-ball. The two researchers took equivalence separation of three groups in the variables which play an effective role on experimental variable. And after the resolution of data statistically by using test (C) for similar samples and test (V) also test (LSD) reaching a group of conclusions. The most important one is excellence of separation of second experimental group which was taught with station style in accordance with cooperative learning on separation of the first control group which was taught according the observed (the

imperative) style in the skills (the aiming, the handing over, and the taking over, the racket (racquet). The two researchers recommended on significance of using station style in accordance with cooperative learning in teaching specific (particular) skill of hand-ball which its better than station style according to the self-learning and the imperative style.

Introduction to the research and its significance

The advancements gained in various aspects of life were not by chance, but were the result of efforts made by scientists and specialists in academic and applied fields, who used a scientific methodology aimed at enhancing the capacities and skills of individuals at all levels. As a result, physical exercise is one of the pillars of greatness and advancement that demonstrates perfect constancy. Between the mind and the body to do the skill, as for the relationship between the mental aspect and physical performance, educators are interested in the level of communication between physical abilities, skill aspects, and mental abilities.

Basic motor skills are a precondition for most sports-related skills, and failing to acquire and master these skills acts as a barrier to the development of sports-related motor skills, as (Farida Othman 1984) verifies that "it is difficult for an individual to become successful in sports." Motor performance in the game of basketball, for example, if his basic skills in throwing, standing, dribbling, and running do not reach the maturity level, there is a skill barrier between the growth patterns of the basic motor skills stage and patterns of the stage of gaming skills, as confirmed by Shafiq Hassan 1989 that if the child was unable to develop Basic motor skills in pre-school, this will cause the youngster to have tremendous difficulty mastering athletic abilities during childhood and adolescence, which is referred to as the 'competence barrier.'

The significance of the research is clear in understanding the relationship between children's attentional control characteristics and their basic motor skills.

Problem of the research

It was discovered that there is a need to study the relationship between attentional control modulators and some basic motor skills for children (5-6) years old through the researchers' personal observation of basic movements of children and personal interviews with specialists in the field of kindergarten, as the researchers believe that the sources of hesitation and fear of injury are among the main causes Affecting attentional control, and thus the latter afflict.

Objectives of research

- Determining the attentional control of youngsters (5-6) years old using a scale designed for that purpose.
- Determining the link between attentional control and some basic motor skills in children aged 5 to 6 years.

Research hypothesis

For youngsters aged 5 to 6, there is a statistically significant relationship between attentional control and some basic motor skills.

Subjects of investigation

The human field of youngsters (5-6) years old, the center of the Babil province

The time span is from 1/8/2021 to 5/1/2022.

Methodology of Research

The descriptive strategy in a survey style was used by the researchers for its suitability to the nature of the study, based on the nature of the research topic and its objectives. If the descriptive approach is regarded as the most appropriate approach for studying the correlational relationships between variables and revealing the individual circumstances between them, as well as for analyzing and describing the phenomenon under consideration, and if the descriptive approach is one of the scientific research methods concerned with the study of the phenomenon as a whole, In fact, it is concerned with accurately describing and expressing a quantitative and qualitative representation. The qualitative statement describes and clarifies the phenomenon's qualities, whereas the quantitative expression gives a number to demonstrate the amount of this phenomenon, its magnitude, or the degree to which it is connected to other occurrences.

The research community and the sample

The children of the Babil Governorate Center who are registered in the government kindergartens in the Babil Governorate Center represent the research community, and their number is ().

Techniques for conducting field research

First, the attentional control scale.

After reviewing the sources and references on the subject, the attentional control scale developed by (Raida Misbah al-Dokki) was chosen, which is constituted of a five-point scale (always apply, apply often, apply sometimes, apply seldom, never apply) and the degrees of alternatives are (5-4-3-2-1). The greatest degree of the scale (100) and the lowest degree of the scale (20), and a theoretical average (60).

To validate the scale's validity for the members of the research sample, the researchers - presented the scale to a panel of experts and professionals in the fields of psychology, sports psychology, testing, and measurement to voice their opinions and ideas regarding the scale's validity.

- On June 8, 2021, the scale will be applied to a sample of (100) children with the goal of conducting a statistical analysis of the scale's segments and calculating the discriminating capacity and internal consistency of the segments discriminating ability.

To test the discriminatory ability of the scale items, the two peripheral groups method were used, which is one of the most appropriate methods for distinguishing the items, as the scores were arranged of the items from lowest to highest and assigned a percentage of 27 percent of the higher scores and the same percentage of the lower scores, and this percentage represents the highest volume of the items. Time-based differentiation For equal (independent) samples, the T-test was employed to compare the arithmetic means of the upper and lower groups. After processing the data, the findings showed that all of the segments were distinct since the calculated t values were more than the tabular value, as shown in the table below.

A table showing the discriminatory power of the items of the attentional control scale.

	The upper group		The lower group		The calculated value of T	function
	A	Y	A	Y		
1.	4.18	0.60	2.11	0.44	10.454	significant
2.	4.75	0.87	1.56	0.95	9.273	significant
3.	3.98	0.70	2.62	0.47	6.044	significant
4.	4.17	0.69	2.41	0.46	7.963	=
5.	4.41	0.58	2.16	0.77	8.754	=
6.	4.26	0.89	1.89	0.71	7.796	=
7.	3.92	0.56	1.45	0.53	12.048	=
8.	4.23	0.74	2.18	0.83	6.902	=
9.	3.86	0.66	1.62	0.92	7.417	=
10.	4.25	0.90	1.96	0.43	8.609	=
11.	3.93	0.51	1.58	0.53	11.989	=
12.	3.88	0.69	1.26	0.86	8.343	=
13.	3.81	0.58	1.54	0.75	8.972	=
14.	3.89	0.94	1.26	0.81	7.945	=
15.	3.72	0.88	1.48	0.65	7.671	=
16.	4.21	0.74	1.53	0.79	9.273	=
17.	3.86	0.66	1.62	0.92	7.417	=
18.	3.95	0.72	1.66	0.51	9.744	=
19.	4.15	0.78	2.16	0.59	7.624	=
20.	3.92	0.56	1.45	0.53	12.048	=

Intrinsic coherence

The internal consistency coefficient is used to determine the extent of the scale items' homogeneity, and to verify the homogeneity of the items for the attentional control scale after adjustments, the researchers extracted the value of the consistency coefficient by using the correlation coefficient (Pearson) between the item scores and the overall scale score for all members of the sample numbers, and the results showed that all of the items had a degree of consistency.

A table showing the internal consistency of the segments of the attentional control scale.

N	Relations hip of the segment to the total score	Statistica l signifi cance	segme nt sequen ce	segmen t relation ship	Relationshi p of the segment to the total score	Segmen t sequenc e	Segmen t relation ship to degree	Statistical significanc e
1	0.886	significa nt	8	0.866	Significant	15	0.777	Significant
2	0.834	=	9	0.854	=	16	0.795	=
3	0.853	=	10	0.872	=	17	0.792	=
4	0.857	=	11	0.884	=	18	0.766	=
5	0.836	=	12	0.853	=	19	0.789	=
6	0.755	=	13	0.892	=	20	0.785	=
7	0.794	=	14	0.886	=			

Psychometric characteristics:

A- Apparent honesty: This level of honesty was confirmed by expert and specialist agreement on the items of the Attention Control Scale.

b- Structured honesty: The association of each segment with the entire sum of the scale validated this sort of honesty (internal consistency).

C- Re-testing for stability: the study instrument was applied to a stability sample of (10) students, and it was re-applied after (16) days. After statistically processing the data using the simple correlation coefficient (Pearson) between the two applications, the computed (t) value (0.82) occurred, indicating the scale's stability.

The (Al-Facro-Nbacher) equation was used to the individual scores of the stability sample to extract stability, and the value of the reliability coefficient was (0.85), which is a positive sign of the scale's stability.

Fundamental motor skills

Following a personal conversation with kinetic education specialists and the use of scientific sources, the following basic motor skills of children (5-6) years old were determined:

abilities to move (jumping, running and jumping on one foot, partridge, jumping)

Non-transitional abilities (balance, rolling, climbing, twisting)

Handling and maneuvering abilities (throwing, holding, kicking, receiving)

Questionnaire experiment

An exploratory experience is required to detect: Obstacles encountered by the researcher during the application of the scale.

Calculating the time it takes to answer the attentional control scale items.

- The effectiveness of the supporting work team (1) - The scientific foundations of the scale

The researchers conducted exploratory experiment tests on a sample of (10) youngsters major experience in order to achieve accurate and dependable data.

The major experiment was carried out by the two researchers on (10/11/2021) on the main research sample of (100) children, using the research equipment indicated by:

Scale of attention control

Tests of fundamental motor skills (jump, balance, throw)

Statistical methods

To analyze the research findings, the researchers employed a statistical software designed for the social sciences.

Displaying the findings and discussion

This chapter includes the presentation, interpretation, and discussion of the research findings, as shown in Table (1), where the sample members have a moderate distribution in the variables investigated, where the skew coefficient does not exceed (+1), indicating the moderation of the distribution of the research sample members, and the standard deviation values indicate Adequate sample size.

table(1)

displays a statistical description of the findings of individuals and the study sample in the variables studied.

variables	Arithmetic mean	Mediator	standard deviation	skew modulus	distribution
Transitional skill	3.7	3.5	0.627	0.956	moderate
Non-transitional skill	3.4	3.5	0.542	0.553	=
manipulation skill	3.9	4	0.356	0.842	=
attentional control	71	66	11.661	0.643	=

Table (2) shows the statistical significance of the differences between the arithmetic mean and the hypothetical mean of the measure of attentional control in the research sample, where the calculated value reached 511.6, indicating that there are statistically significant differences in

favor of the research sample's arithmetic mean, indicating that the sample has some degree of attentional control.

Table No. (2) displays the discrepancies between the mean and the hypothetical mean in the research sample using the arithmetic mean, standard deviation, and significant t value.

variables	hypothetical mean	Arithmetic mean	standard deviation	Calculated value of T	Statistical significance
attentional control	60	71	11.661	6.511	significant

Table (3) depicts the association between attentional control and basic motor skills variables in children (5-6) years old, where the results showed a statistically significant correlation with direct trends.

Table (3) displays the correlation coefficient values between abilities and attentional control in the research sample.

Skills	R value calculated with control	R1 tabular value	Statistical significance
Transitional skill	0.682	0.275	Direct significant
Non-transitional skill	0.715	0.257	=
manipulation skill	0.769	0.275	=

□ Below the 0.05 significance threshold and with a degree of freedom of 1.

The researchers credit this link to the fact that whatever activity the youngster engages in demands effort, and hence on performance in any skill or physical activity he engages in. The same is true of transitional skills, as they necessitate a special effort from both a physical and intellectual standpoint, and control between these two variables, as well as the desire to compete in performance between children, that is, the desire to obtain excellence, and the spirit of high competition between them, causes children to focus on external and internal stimuli.

For example, performing a processing skill necessitates numerous processes, including (ascending, jumping, swinging, and flying). Because of his physical attention control and the quantity of information and intellectual work he has stored, the youngster must be able to quickly shift in attention requirements and the technique of delivering the skill effectively. As a result, (talking about attention requirements) demands double effort. The more prepared the youngster is via mastery of the skill, the greater the chances of investing effort and distributing it in accordance with the skill needs)

Furthermore, the attentional control theory highlights that the efficiency of effort distribution is dependent on the sequence of goals for the skill and its clarity, as well as the logical architecture of its organization, and the second is the sequence of motives and incentives. As

a result, attentional control is dependent on these two systems. Attentional control, as there is a child who performs the skill stages in a non-sequential manner for the skill stages, since attentional control must take into consideration the requirements of converting from one movement to another, or bring out a complete balance of performance.

Furthermore, attentional control necessitates an ability of attention related with the child's consciousness when performing. This is generated by (a chain linking stimuli and reactions. As a result of this connection, behavior is established that is dependent on feedback and is associated with old information in the individual while relating it to new information. This link deepens and thus becomes The organization of attention has improved.

Conclusions and suggestions

Conclusions

There is a considerable disparity in the attentional control of children aged 5 to 6.

For youngsters aged 5 to 6, there is a statistically significant relationship between attentional control and fundamental motor skills.

Recommendations

- Taking advantage of the findings of current research by institutions involved with child care
- Prepare customized exercises that clarify the subject to improve attentional control.
- Performing comparable study on various samples and categories.

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