

# **The reality of the split and selective attention of young players in some clubs of the Middle Euphrates in Taekwondo, according to the technology of the RehaCom system**

**Diaa Fadel Abbas <sup>(1)</sup>, Prof. Dr. Shaima Ali Khamis <sup>(2)</sup>**

<sup>(1)</sup> PhD. Student. Faculty of Physical Education and Sports Sciences / University of Babylon, Iraq.

<sup>(2)</sup> Faculty of Physical Education and Sports Sciences / University of Babylon, Iraq.

[deahaaltaee@gmail.com](mailto:deahaaltaee@gmail.com) , [shaimaa.ali@uobabylon.edu.iq](mailto:shaimaa.ali@uobabylon.edu.iq)

## **Abstract**

The purpose of the study was to application of split and selective attention tests mediated by the RehaCom system to young players in some clubs of the Middle Euphrates in Taekwondo, and recognition the level of these two types of attention they have, and the researchers adopted the descriptive approach in the survey method on a sample of young Taekwondo players for the sports season (2020-2021) of (120) players. Of them (52) players were chosen (43,333%) by the random method of the main application sample, and from them (10) players were selected (8,333%) by the random method of the exploratory experiment sample. Head of conducting exams in research for the period between (2/8/2021) until (3/23/2021), After applying the tests of the RehaCom system by conducting the main survey on them, the results were processed by the Statistical Package for the Social Sciences (SPSS) (V26) to make the conclusions and recommendations that the ability to divided attention was at an acceptable level for young Taekwondo players with a variation at this level among them, and that the ability to selective attention It was at a level acceptable to them also and at this level between them, and it is necessary to increase the interest in supporting the trainers' knowledge of the importance of selective and divided attention and its role in the positive impact on young players, and it is necessary for Taekwondo sports clubs to work on finding a cooperation formula to benefit from the expertise of academics in sports psychology.

## **Introduction:**

The actual need for the specifics of the taekwondo game in improving the mental and mental aspects calls for the need for it to be available to Taekwondo players in the training environment and competitions, as its importance cannot be overlooked for these requirements that impose requirements for the availability of measuring tools to reach scientific facts without speculation or personal judgment. Attention is defined as “directing the individual’s feeling or mental perception to a new behavioral situation through some variety of stimuli in preparation for the behaviors that need to be managed”<sup>(1)</sup>. Intentional attention is deliberately choosing a specific stimulus and focusing on it, such as listening to a song or speech, so that attention towards other sources is suppressed, while unintended attention occurs in an involuntary way, such as responding to an external or internal stimulus in a sudden (attention to a loud voice, Or an intense odor ... others), "and attention is seen as an emotional process represented in focusing awareness or feeling in a specific stimulus without other stimuli, and paying attention to it selectively and intentionally while it is treated, and the attention process can be subconscious (automatic) When the intense practice of some stimuli and the familiar processes "<sup>(2)</sup>. it is an optional process that may be intentional or unintended as" attention directs awareness towards the stimuli concerned so that they become accessible to the senses .. which is the mutual relationship between the learner and the surroundings and that Attention is closely related to thinking and observation. (Osama, 2000)<sup>(3)</sup>, as split attention is "the brain's ability to pay attention to different stimuli at the same time, and the response to different demands from the environment, divided attention is the type of simultaneous attention that allows us to process information and carry out tasks successfully. This cognitive skill is very important because it allows us." Effectiveness in our daily life, as well as the divided awareness of attention as the basic visual abilities in the awareness of the multiple variables in play and the speed in making the appropriate decision to perform the motor duty. "(Mujahid, 2015)<sup>(4)</sup>, as“ Studies and research have confirmed that the individual can perform several tasks simultaneously and see The scientist (Daniel) stated that "the individual can perform several tasks at the same time and that the division or expansion of attention depends on the resources required by the situations or tasks. Therefore, little control with few resources that the individual needs to perform

these tasks enables the individual to perform several tasks in At the same time, the process of divided attention takes place within three stages of attention as a cognitive process, and these stages are the environmental stimuli to move to the stage (detecting the senses), the stage of recognizing the stimulus, and the stage of response to Exciting until the response occurs. “(Mohammed, 2009) <sup>(5)</sup>.

As for Selective attention: It is a form of voluntary or intentional attention in which attention is directed and selected for a specific stimulus from among the stimuli located in the individual's domain, selective attention requires mental effort and requires a strong motivation for the individual to exert effort in attention for a longer period. In this type, stimuli do not impose themselves on the individual. Rather, the individual's attention stems from his will, so it depends on directing his attention to something. ”<sup>(6)</sup>, as“ selective attention occurs if it is related to one of the subjective factors mentioned above, as well as the presence of mental or cognitive determinants The degree of intelligence, cognitive structures, the degree of sensitivity of the information processing system and its capacity for the individual, all of this is related to the speed of perception of the stimuli, the acquisition of information, coding and processing, and then referring to the memory of the short and then the long term. ”( Mohammed, 2009)<sup>(5)</sup> Also,“ stimulating attention has a positive effect on stimulating memory in The brain increases perceptions, especially auditory and visual perception, and helps prepare the mind to accept or mobilize information, store and retrieve it in a way that allows or helps the required response appear, and this activation appeals to The type and strength of the stimulus or the sedative that the individual receives, and advanced psychological studies confirm in this regard that activation can occur whether it is forced or desired by the individual, except that the brain cannot be forcibly activated and desirable responses obtained, but rather the organizer of the training environment must create the conditions for activation by moving away Forcing, whatever the type of activation that affects the receptors of that activation. ”<sup>(7)</sup>.

### **Research problem:**

Despite the continuous researchers' repeated discussions with some coaches of the Middle Euphrates clubs in Taekwondo in training and tournaments during the special preparation period and competitions, it was found that many phenomena need a field study to describe them by adopting the results of psychological laboratory tests that are more accurate and objective, which calls for The need to find solutions to this problem because it is not possible to judge its

level without these objective tests, to be considered one of the problems that require finding solutions in the field of sports training, to support the observation of this problem academically to address it by adopting scientific methods as to the research problem in an attempt by the researchers to answer the question Next: What is the reality of the divided and selective attention mediated by the RehaCom system among young players in some clubs of the Middle Euphrates in Taekwondo?.

### **Research Aim:**

The goal of the research is to apply split and selective attention tests mediated by the RehaCom system to young players in some clubs of the Middle Euphrates in Taekwondo, and to identify the level of these two types of attention in them.

### **Research Methodology:**

The determinants of the current problem imposed the adoption of a descriptive approach in the survey method among researchers, which is defined as “the approach that describes a phenomenon according to a specific research plan that includes describing phenomena, gathering facts and information about them, evaluating these phenomena in the light of what they should be, in light of more appropriate criteria, and suggesting steps She should be. ”<sup>(8)</sup>.

### **Community and sample research:**

The research community, which used researchers to solve the research problem, imposed that young Taekwondo players be bound by (8) clubs in the Middle Euphrates in four Iraqi governorates, and they are officially registered in the Central Federation records for the sports season (2020-2021), which is 120 players. Where (52) players were selected (43,333%) by the random method of the main application sample, and (10) players were selected (8,333%) by the random method of the exploration sample.

### **Experimental procedures:**

#### **Measurement and procedures:**

The two researchers depend on the measurement of split and selective attention by the RehaCom system<sup>(9)</sup>. As they were tested by the RehaCom Cognitive System, which is one of the most important modern psychological laboratory systems with high accuracy for objective measurement, it is a diagnostic and treatment tool, and particularly appropriate tests can help to identify weaknesses or cognitive deficiencies,

and this system consists of A set of tests and units are (examination units, training programs) as follows:

### **1- Split attention test:**

- Test objective: to measure split attention in more than one task or multiple tasks and activities simultaneously in a short period of time.
- Devices and Assistants: RehaCom Cognitive System, specialist in laboratory psychometrics.
- Description of the test and procedures: This test measures the split attention process accurately, as it is designed with a high degree of honesty, and in which the laboratory must respond to auditory and visual stimuli in a parallel manner represented by tasks, namely:
  - Visual task: In this part of the tasks, a square appears on the screen containing (5) circles, all with a hole from one side of the perimeter, and the locations of the holes may change, but the circles do not change, and the tester must click and react on the keyboard when one of the five circles is displayed within the square Closed.
  - Auditory task: The tester hears two simultaneous high and low frequency sounds, with the appearance of the circles, and the tester must react as quickly as possible just hearing the sound in the form of a tone that is repeated twice in a row. The tester begins with an exercise, and in order to pass it successfully, the subject must interact with the relevant audio and visual stimuli, after which the actual test begins, and the tester must also note the shape displayed on the screen, which consists of five circles with holes in the changing positions when the circuit is closed, and press The OK button simultaneously, the high and low beeps are displayed alternately, and when the same tone sounds twice in a row then only the response is a reaction by clicking (OK).
- Time test: Exam time: (3) minutes, except for the training phase.
- Data analysis and recording : Two types of Z-values are calculated:
  - Z-value of split auditory attention: It is calculated by the standard value of the number of reactions and omissions, and it refers to the number of missing responses for the auditory, even, and identical stimuli.

- Z-value of split visual attention is the number of times of visual impairment, that is, the number of interactions missing a relevant visual stimulus.
- Maximum score for the test: (100) and the hypothetical mean (50).
- Measurement unit: degree.

## 2- **Selective attention test:**

- Test objective: to measure selective attention with the ability to react in an appropriate manner under time pressure, and in real time and to control behavioral impulses when other stimuli appear, and it is necessary to control or control the reaction caused by the external stimulus in favor of the behavior that it controls internally.
- Devices and Assistants: RehaCom Cognitive System, specialist in laboratory psychometrics.
- Description of the test and procedures: This test measures the process of selective attention by focusing attention on the apparent stimulus that needs a selective reaction, that is, to react to a stimulus or not to do any reaction, as a central point is displayed in the middle of the screen at random intervals, and displayed on The screen alerts with horizontal lines or vertical lines, and when the alarm with horizontal lines appears on the subject, press the (OK) button as soon as possible, while he does not make any reaction towards the alarm that appears with vertical lines, as the tester is required in this test:
  - The tester should direct the gaze to the central point in the middle of the screen.
  - The tester should press the (OK) button as soon as possible when displaying the alarm with horizontal lines.
  - The tester should not respond when a stimulus is presented with vertical lines.
- Time test: Exam time: (2) minutes, except for the training phase.
- Data analysis and recording: Two types of Z-values are calculated:
  - Z-value of the variable (reaction speed): calculates all the averages of the reaction time of the relevant stimuli.
  - Z-value of a variable (response control): counts the number of reactions to unrelated stimuli.
- Maximum score for the test: (100) and the hypothetical mean (50).

- Measurement unit: degree.

The two researchers set out to conduct the exploratory experiment in the specialized psychiatric laboratory at the University of Al-Qadisiyah, as the tests in it have the foundations and scientific transactions, as they were applied to (52) players. And documenting the survey procedures, as this survey continued in Al-Qadisiyah Governorate for the period from (2/8/2021) until (3/23/2021), and after each test player had completed his answer; His results were recorded in paper forms and the researchers verified that the results were processed using the Statistical Package for the Social Sciences (SPSS) version (V26), to process data for each of the percentage values, the arithmetic mean, the standard deviation, and the mean difference between the arithmetic and hypothetical means, and a (t-test) for a sample one.

### Results and discussion:

It is evident from the results of table (1) that the mean values of both the split and selective attention tests mediated by the RehCom system for young players were greater than the hypothetical mean for each of them, and that the statistical difference between these two mean is significant according to the significance of the value (t-test) for one sample, As the young players had an acceptable level for the two types of attention that were measured separately by the RehaCom system, and the researcher attributes the emergence of these results to descriptive features to their nature as Taekwondo players. Many mental distractions that require resistance by defining attention and directing it towards the division of more than one stimulus or focusing to select the stimulus that requires priority in response, so that it would be a positive reflection on the emergence of this level of attention of both types to add this to the nature of the game and its positive role in supporting their characteristics.

Table (1) shows the statistical parameters of the split and selective attention level tests by the Rehacom system compared to its hypothesis mean

RehaCom Test System	Hypothetical Mean	Arithmetic mean	standard deviation	Average difference between the two medians	Calculated (t) value	Sig level	Sig type
Split attention	50	64.52	9.143	14.519	11.452	0.000	Sig
Selective attention	50	67.69	5.554	17.692	22.972	0.000	Sig

Where: N= (52) , error rate (sig) of (0,000) is less (0,05), A degree of freedom (51), the unit of

measure is (degree).

(Wilmore. and Costill, D)<sup>(10)</sup> believes that “when the body responds to external stimuli, complex chemical reactions and simple electrical charges occur, transmitted rapidly in the nerve fibres Axons,” followed by another nerve message mediated by another stimulus and so on millions and after millions of these The electrical nerve impulses are released every second during the conscious and unconscious life of a person, they are directed to and from the brain, muscles and glands, and as a result of the compatibility and linking of millions of these electrical nerve messages in the cerebral cortex and the organization of the cerebellum for them. <sup>(10)</sup> “Also, the signals that enhance the functioning of the brain were divided by Muhammad Mahmoud into three types according to their intensity as follows:“ Below the minimum threshold signals: these are the signals whose intensity is less than the lower threshold and thus do not cause arousal or response later except in cases of combination. In phonation and time, and signals of a lower threshold: they are signals whose intensity has reached the lower threshold or the lower limit of intensity, and thus cause excitation and response later, and signals above the lower threshold: which are signals whose intensity is higher than the lower threshold, and which cannot cause excitability in the case of The presence of nerve tissue in an excited state. ”<sup>(11)</sup>, just as“there is no discussion about information processing without automatic or controlled testing. The robotic processing uses a series of nerves that become active in response to a specific stimulus and this activity does not need to be controlled. ” Dynamic in part of the subject, and it is the result of good learning, and the stimulus is either organized as a scheme, or sent directly to the correct response areas in the brain with limited processing. ”<sup>(12)</sup> any skill that the player tries to accomplish must be done through one of these three types of selective attention according to Marley's vision, which is selective attention within one sense by excluding unwanted stimuli and focusing on the desired only, and selective sensory attention within a group of senses: The selective process by receiving information through two or more channels and at the same time, and selective multiple sensory attention: It is by focusing attention on two or more stimuli that are received by different or multiple sensory channels at the same time. ( Byulteen, 2018)<sup>(13)</sup> Therefore, the need to pay attention to split and selective attention in Taekwondo does not lie in avoiding mental distraction only, but rather to adopt the identity of the most appropriate retrieval of perceived information that depends on attention, in order to achieve the skillful movement required in the fight, and failure in the attention

process means confusion for all movements and skills After processing the information, or more precisely, it means falsifying the memory with information that cannot be used, and the results of the responses by treating it appears unsatisfactory.

### **Conclusions and recommendations:**

#### **Conclusions:**

Results obtained in this work allow making some conclusions as follows:

- That the ability to split attention was at a level acceptable to young Taekwondo players with different levels among them.
- That the ability to selective attention was at a level acceptable to young Taekwondo players of varying levels.

#### **Recommendations:**

On the basis of the conclusions mentioned here, the following works are suggested:

- It is necessary to increase interest in supporting the coaches' knowledge of the importance of selective and divided attention and its role in the positive impact of young players.
- It is necessary for Taekwondo sports clubs to work on finding a cooperation formula to benefit from the expertise of academics in sports psychology.

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