



Some Mental Abilities & Their Impact On The Level Of Positive & Negative Defense Performance Of Advanced Boxers In The Sport Of Boxing

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ABSTRACT

The study aimed at identifying some mental abilities of the boxers sample, identify the extent of the relationship between some mental abilities and the level of punching performance in negative and positive defense, and compare the emergence of the relationship between each mental ability and each type of positive and negative punch defenses. The study used the analytical descriptive approach as the most appropriate method of scientific research for the nature of this study. The study sample consisted of (20) boxers from Baghdad Boxing Clubs, after applying the appropriate tests and analyzing the data, the study concluded that the mental abilities that have an effect on the level of performance of positive defense are (motor reaction, perception of the distance of the jump, concentration of attention), The mental ability (the motor reaction) is the ability that has the strongest relationship with the positive level, and that the kinetic response effectively contributes to the results of the tests for all types of positive and negative defenses, which contributes to the concentration of attention. In light of these results, the study recommended the need to pay attention to the mental capacity (movement reaction) by teachers and trainers in order to develop the level of performance in the positive and negative defenses in boxing, and the need to research other capabilities (physiological, psychological and physical) and to know their relationship to the level of performance of this activity.

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Inrtoduction:-

There is no doubt that there are many factors affect the athletic level of the individual, such as the physical skills, and psychological state. Mental abilities, including the broad meaning of the aforementioned cases, are considered an important and effective factor in determining the athletic level in many sporting activities.

It is known that the degree of mastery of the motor skills is not only related to the training qualifications, but is also related to the individual's ability to focus attention and the ability to consciously contribute to controlling his motor skills, and that the focus at some times must be completely (Uribe,2007).

In order to reach a state of mental and physical interconnectedness, all physical and mental energy must flow in one direction, attention is more important than focus; is a kind of narrowing attention to the competing boxer and fixing him to a specific stimulus such as positive defense, that is, the ambivalence of the punch and responding to it. The kinematic of the boxer and his rapid realization of understanding the kinematic duty to carry it out on the ring as well as his ability to respond to the stimuli surrounding him that are received by the sensory systems of the boxer (Farouk & Rizk, 2012). Therefore, it was natural for this difference to exist in the tests of the motor reaction and concentration of attention, in the same way we understand the lack of differentiation in the other tests (movement reaction - perception with the distance of the jump - attention shift), as it depends on psychological and physical abilities more than mere mental abilities. Boxing is a strong and violent sport that enjoys a certain class of athletes and followers with its individual performance, strength, courage and balance in movement on the ring, the skills of straight boxing, snatching and pulling are the backbone of the game, as is the other sporting events, which are an important aspect of it. The sport of boxing is a single combat game that contains high physical skill and strength (Nashwan&Nashwan, 2020). Thus, the skill needs continuous education and training, which leads us to mental capabilities as a key aspect in achieving learning, as it is no secret that intelligence, perception, attention and perception are among the basic determinants of the learning process. If mental abilities contribute to excellence, creativity and innovation, then their marked decrease leads to the retardation and deterioration of the individual's performance in a particular sector alone, and this is evidenced by that when drawing

a psychological scheme (profile) of a person's abilities, we notice that some abilities rise, and some of them fall into The middle range, and some others low, and this decrease would explain the individual's faltering in the exercise of activities indicative of those abilities. Hence, this study comes to reveal the mental capabilities of advanced boxers, and their impact on the level of positive and negative defense they have.

Purpose of statement

Each of the boxing skills is matched by mental abilities that are ensured in their development and advancement, there is no doubt that there is a remarkable weakness between the abilities in the level of some punching skills performance and this results from ignorance in the intensification of the learning process in a specific direction. The researchers believe that this is a problem worthy of attention for research. Therefore, knowing the extent of the relationship between each type of active and passive defense skill in boxing and each mental capacity for this skill on the other hand, and the percentage of its contribution, will certainly lead to the development of mental capacity performance at the level of defensive performance in boxing.

Based on that, the problem of the study revolves around identifying some mental capabilities and their impact on the level of positive and negative defense performance of advanced boxers who practice boxing in the closed hall of the College of Physical Education at the University of Baghdad in Iraq.

Significance of the study

The importance of the study lies in raising the skill level of the positive and negative defenses of boxers by identifying the obstacles between mental abilities and skills and knowing the effects of each other under the eyes of the training personnel to build a qualified boxer rises to the local and international levels.

Objectives of the study

The current study aims to achieve the following objectives:

1. Identify some mental abilities among boxers.
2. Knowing the extent of the relationship between some mental abilities and the level of punching performance in negative and positive defense.
3. Comparison the emergence of the relationship between each mental ability and each type of positive and negative punch defenses.

Hypothesis of the study

This study raises a main hypothesis that there is a statistically significant correlation between some mental abilities and the level of performance in positive and negative defense in boxing.

Limits of the study

Spatial boundaries: the closed sports hall in the College of Physical Education / University of Baghdad.

Temporal limits: the period from 11/1/2020 until 2/20/2020.

Human Frontiers: Advance boxers representing boxing clubs in Iraq.

Concepts of the study

Boxing: is an ancient art of self-defense that requires a great deal of strength and skill in punching, as well as intelligence in attack and defense, and for this, boxing is a sport in which art triumphs over strength (Nashwan&Nashwan, 2020).

Mental abilities: groups of mental activity centered around specific activities which gives them the characteristic of distinction, clarity and strength for some individuals and vice versa for others (Al-Tariri, 1995: 481). The researchers define mental abilities procedurally as the capabilities related to mental activity in boxers. For this study, the researchers will focus at the abilities related to motor reflexes, focus attention, attention shifting, and kinesthetic perception.

Kinesthetic perception: it is the reflection of external things that affect the moment of their direct presence in the individual, which occurs as a result of identical neural stimulation in the brain, and builds sensory-kinesthetic perception on a physiological basis (Boris & Micheal, 2003). The senses are caused by external stimuli that are directed to the different parts of the brain to create close neural connections (Allawi& Jalal, 1982: 402).

Passive defense: the boxer's defending completely, but he does not use the defense linking with counter punches during defense, but rather defense by arms, legs and torso only without responding to the opponent, and punching experts considered it negative (Arab, 2012: 33).

Positive defense: the boxer's complete defense accompanied by linking defense means with counter punches and answer punches, meaning that the boxer defends and directs counter or answer punches at the same time. Positive defense considered as one of the most successful defenses in boxing (Arab & Rabie 2014: 85).

Literature review

Boxing is based on a set of scientific foundations that are subject to the principles and laws of natural sciences (Nashwan, 2018), in addition to the tactical skills and mental abilities required by the speed of performance of the situation, its evaluation and analysis to choose the most appropriate solutions and implement them with accuracy, speed, and strength suitable for every situation during the fight (Beckett, 1990).

Boxing requires an integrated preparation of the various abilities, skills, and attributes; in order to reach the boxing goal in achieving victory and to demonstrate the technical level of

performance. These abilities include: Physical preparation that includes the development and development of the physical characteristics of boxing, technical preparation that includes the skill preparation which includes a set of basic defensive and offensive principles that form the boxer's kinematic and competitive skills and experiences through learning, comprehension and mastery, that means the method of counteracting movement, and the tactical preparation which includes the art of winning through the use of the boxer for all qualities And the abilities and skills that he possesses consciously depending on mental abilities and sound thinking, that is, it is a process of testing the motor skills in a specific situation (Hassanein, 1995), there is also willing and psychological preparation by preparing boxer in a way that helps him to mobilize his potential, mobilize his energies, control his emotions, and choose the appropriate tactical punching methods that achieve victory, develop self-confidence and enhance courage in the fight (Nashwan&Nashwan, 2020). As for the technical preparation, it includes boxer's ability to learn and master the basic defensive and offensive skills in boxing until they become integrated movement skills and experiences and consciously use them in tactical methods commensurate with the characteristics and features of the opponent in order to lead the fight and achieve victory, and the technical preparation consists of the skills preparation and the planning preparation (Schmidt &Wrisberg, 2008). In terms of skill preparation, it aims to teach boxer the basic motor skills of the art of boxing, mastering and stabilizing them in order to achieve a good level of performance. The skill set in boxing includes: standby stance, foot movement, punches, counter-punching, defensive methods, fist and fist position, target area, and pause, all of these skills require psychological training for

boxer to be able to relax, focus, balance and use the mind to visualize the fight and what punches he will direct to the opponent (Kaken, 2000).

Boxer uses a set of defensive means to repel the opponent's punches, the defensive means are divided into passive defense and positive defense, as for the passive defense, it represents all the defensive means used by the boxer to avoid the opponent's punches and prevent their effect, as the boxer repels the opponent's offensive punches with one of the defensive means with the shoulder or hand As for the positive defense, it is related to the means of passive defense with specific counter punches (Allawi& Jalal, 1982).

The types of positive defense punches are the answer punches that are used to prevent the opponent from following his attack and find loopholes for his injury after repelling his punches by negative defensive means. These punches can be used by linking them with all passive defense means and from all distances, the corresponding punches that are related to defensive means and are paid simultaneously with the opponent's punches. Offensive and all kinds of punches can be used to implement the opposite punch, but the left straight punch to the face is more a punch used by boxers as a counter punch to provide protection and safety against the opponent's offensive punches, as for the reciprocal punches, they are used during an attack by the opponent, whereby the boxer and the opponent punches simultaneously and includes the qualities of passive defense and positive defense at the same time (Murkus, 1994).

Mental aspect plays an important role in boxing, as this sport requires mental capabilities in addition to physical abilities, as boxer will not be able to improve his physical abilities without developing his mental skills, such as

mental perception, movement reaction, thinking, attention unit, intelligence, Recollection, anticipation, kinesthetic perception, focus of attention, and distribution of attention. In this study, the researchers will focus on motor reaction skills, attention focus, attention shifting, and kinesthetic perception.

(Hindawi,2006) tried to Identify the effect of a set of mental abilities on the level of performance in the simple attack of players who practice fencing, the study sample consisted of students of the third stage in the Faculty of Physical Education at the University of Al-Qadisiyah for the academic year (2005-2006), and the sample of the study consisted of (20) students represent (16.6%) of the total third stage students. After using appropriate statistical methods, the study revealed that the mental capabilities that have an effect on the level of performance in the simple attack with a rifle gun are (motor reaction, perception of jump distance, intelligence, intensity of attention, concentration of attention), and that mental ability (movement reaction) is the ability that has the strongest relationship to the level of Performing a simple attack with a hookah weapon, and that the kinetic reaction contributes effectively to the results of the tests for all types of simple attack with a hookah weapon, while (attention acuity) contributes to the results of the simple attack by changing the direction only, and the study recommended the need to pay attention to the mental ability (the kinetic reaction) before. Instructors and trainers for the purpose of improving the level of performance in the simple attack with rifle gun.

(Alsherbini,2010) designed a program to develop mental abilities that addresses the high or weak level in some deception skills in boxing for juniors under (18) years old, the experimental approach has been used to test the effect of pre and

post measurement, the sample was deliberately chosen from young players under (18) years old at Tarsana Sports Club, among those registered in the Egyptian Boxing Federation for the training season (2008-2009). The sample size was (23) boxers. The study revealed that there are statistically significant differences between the averages of the pre and post criteria at a level of significance (0.05) in the skill of the ability to relax in favor of the mean of the post measurement, a statistically significant differences between the mean of the pre and post criteria at a level of significance (0.05) were found in the skill of attention concentration in favor of the average dimensional measurement, and the presence of statistically significant differences between the average of the two tribal standards in all dimensions of the mental perception skill at a significance level of (0.05) in favor of the average post measurement. The study recommended guiding the importance of developing mental abilities as one of the factors to improve the performance of deceptive skills in the sport of boxing, and the use of a sports psychologist and coordination between him and the trainer for the success of the training process.

(Almashrafawi,2014) dealt with the most important physical tests represented by kinetic velocity, strength in the arms, kinematic tests of agility and compatibility for boxing middle Euphrates club boxers, to explore the relationship between physical, motor and mental variables on the one hand, and the level of skill performance on the other hand, and finding equations predictive of the level of skill performance through the most important physical, movement and mental variables of Iraqi club boxers for applicants (the light category). The study sample consisted of (32) boxers from the Euphrates Club, the results of the study concluded that there are three variables

that withstood the final predictive equation, which is (concentration of attention, agility, and speed of movement). In light of this, the study recommended that every coach train his boxers simultaneously on focus and own agility, motor and speed to adjust their skill performance.

Study procedures

Methodology

The researchers used the descriptive approach due to its relevance to the nature of the study problem, since this approach revolves around collecting information that can later be analyzed and interpreted, and then draw conclusions from it (Ibrahim &Salih, 2004).

Population of the study and it's sample

The study population was chosen from boxers of Baghdad clubs, the study sample was chosen randomly, it consisted of (26) boxers who were applied to the exploratory experiment were excluded, so that the final sample was (20) boxers, representing (16.6%) of the study population, As the sample is defined as

that part of the community that is selected according to scientific rules and methods that properly represent the community (Mahjoub,2001:305).

Methods of collecting data

1. Various references dealt with the subject of the study.
2. Tests and measurements designed especially for the current study.
3. Expert opinion.
4. SONY 8 mm video camera.
5. Calculator type (P4).
6. Forms for evaluating skill performance.
7. Auxiliary work team.

Determine mental abilities questionnaire

After reviewing the sources dealt with mental abilities, the researchers prepared a questionnaire to survey the opinions of experts and specialists on determining the most important mental capabilities for boxing. This questionnaire was presented to the aforementioned experts and through the results, the abilities that did not get 80% or more were excluded.

Table(1)

Shows percentages of mental abilities values based on expert opinion

| No. | mental capacities | Percentages | Choice |
|-----|------------------------|-------------|--------|
| .1 | Visualization | %70 | x |
| .2 | Motor reaction | %90 | √ |
| .3 | Thinking | %50 | x |
| .4 | Attention acuity | %85 | x |
| .5 | Cleverness | %80 | x |
| .6 | Memory | %20 | x |
| .7 | Expectation | %70 | x |
| .8 | Kinesthetic perception | %80 | √ |
| .9 | Focus attention | %85 | √ |
| .10 | Shifting attention | %60 | √ |

Hence, the following mental abilities were selected:

Motor reaction - Attention acuity- Focus attention- shifting attention - kinesthetic perception.

Skill performance evaluation questionnaire

The researchers intended to photograph the research sample during its performance of the three types of active

defense and passive defense using a video camera type (SONY), using the system (Pal), and then transferred it to the CD and displayed it using the computer to two experts in the boxing game to evaluate the skill performance of boxers. By filling in the form prepared by the researchers, taking into account that there are three international referees in boxing, where three forms are submitted for each expert, and the expert fills out the form by giving a score from (1-5), noting that number (5) represents better performance and number (1) represents lower performance.

Mental abilities tests

1. Motor reaction

The purpose of the test: measure reaction speed.

Tools: an electronic device for measuring reaction speed - a chair.

Performance specifications: The tester sits on the chair, puts his foot on the pedal of the device and asks him to press the pedal when the red light appears on the device panel in front of him and that he does not respond to the green or yellow light, when the required signal appears, the electronic clock starts working, so the laboratory presses the pedal and the signal disappears and stops. The work of the watch thus records the time for the speed of the reaction taken.

Scoring method: Three attempts are given to the tester, recording the best and the least in time.

2. Borden-Infimov test to measure the manifestations of attention

Measurement components: This test is one of the most correct correction tests in the mathematical field and modified by (Nashwan & Arab, 2017), for the purpose of determining different aspects of attention such as (intensity - distribution - concentration - transformation).

This scale is a form that contains (32) lines of Arabic numbers, each line contains (40) numbers, so the scale contains (1280) numbers and the numbers in each line are composed of groups placed

in a codified manner and each group consists of (3-5) numbers. Different distribution and arrangement to ensure that they are not saved by the tester. Among the aspects of attention that the test fell on are:

Attention acuity test

Purpose of the test: measure the acuity of the player's attention.

Perform the test: The tester holds the scale paper in his hand and when he hears the word (start), he flips the scale paper at the moment the clock is turned on, and the laboratory starts searching and striking the number (97) in lines one after the other from left to right.

Test time: one minute only, and upon hearing the word (stop), the tester puts a vertical mark next to the numbers he stopped at.

Method of correction and extraction of results: The following semantics are extracted:

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The following semantics are extracted:

A- The number of numbers that have looked from the beginning to the word Stand.

S- The number of digits to be crossed out in the visible part.

B- The number of general errors (the number of dropped numbers from the crossed-out + the number of the numbers that were crossed out by mistake. The equation's validity factor =

$$(S-B) * 100$$

$$E = \text{-----}$$

S

$$\text{Attention sharpness} = \text{EXA}$$

Attention concentration test

Purpose of the test: measure the concentration of athlete's attention.

Method of performing the test: the same performance used in measuring the intensity of attention, but at the same time

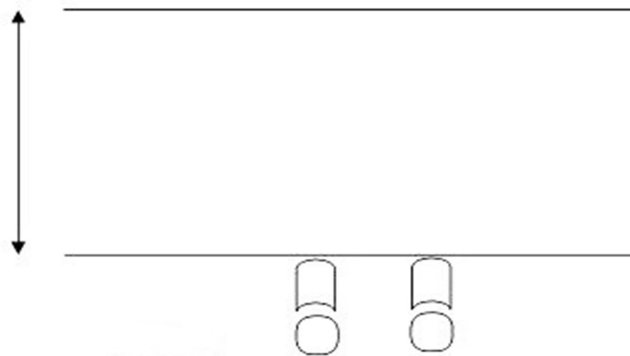
the signal is given to start the distraction device, which gives (60) sound accuracy per minute with a flash of light every (5) seconds, 12 flashes per minute, provided that the device is placed on One meter from the laboratory.

Test time: one minute only, upon hearing the word (stop), the tester puts a vertical mark next to the numbers he stopped at.

Method of correction and calculation of results: The following semantics are extracted:

- Net productivity when attention is measured in Quiet State = U1 -
- Net productivity when measuring attention acuity and attention acuity in the case of exciting situations = U2 -
- Concentration indication = difference between the two units. -
- Attention focus = U1 - U2. -

Jumping sensory-motor perception test



(1) Figure

A perceptual test indicates the distance of the jump

Pilot sample

An exploratory experiment was conducted on a sample of (6) boxers out of the study sample, in the presence of arbitrators, as this sample performed mental abilities tests under discussion on 3/1/2020 in the closed sports hall in the Baghdad University.

It is known that the exploratory experiment is “a process that aims to identify the negatives and positives that meet the researcher, so that it is a training for him to identify the difficulties facing

Purpose of the test: measure the perceptual ability to jump distance.

Tools: tape measure, blindfold, chalks.

Performance specifications: draw two lines on the ground, the distance between them is 1.50 cm, noting that the two lines are parallel, one of which is the starting line and the other is the target line. The tester stands on the starting line to estimate the distance of the target line, then blindfolds his eyes after (5) seconds, then he jumps with both feet together trying to reach the target line so that he touches it with his feet (Figure1).

Method of scoring: The distance between the heels of the tester's foot and the target line is calculated in (cm), noting that the final score is the sum of the two attempts, the smaller the distance indicates the presence of perception of the distance of the jump.

the application of tests in order to pass them, in addition to identifying the extent of the sample interaction to apply the tests as well as the time taken (Al-Mandalawi, 1989: 107).

The scientific basis for the tests

The researchers relied on the scientific foundations in finding the scientific weight of the test despite the fact that they are psychological tests confirming the sobriety of the tests scientifically.

Validity of the test

The validity of the test means its validity to measure what it put to measure, as the focus of attention test scored (91%), perception of the jump distance scored (91%), and the speed of the movement reaction scored (90%).

Stability of the test

Since the stability of the test means “giving the same results if it is re-applied to the same sample in two different periods and in similar circumstances. Therefore, the tests were performed on the pilot sample, then the same test was repeated after (7) days, after obtaining the results of the two tests using the simple correlation coefficient between them, It appeared that the tabular value at the degree of freedom was (6), the level of significance (0.05) is (0.622), which is smaller than its calculated value of (0.92) for the

distribution of attention, (0.92) for the focus of attention, (0.91) for the perception of the distance of the jump, and (0.90) for the motor reaction.

Objectivity of the test

The objective test is the test that gives the same results regardless of the difference of the correctors, by collecting the results of arbitrators and using the simple correlation coefficient, it was found that its value (0.98) is a high correlation indicating high objectivity.

The statistical means

1. Mean.
2. Standard deviation.
3. The percentage.
4. Pearson Simple Correlation.
5. Analysis of variance.
6. Contribution ratio (STEP-WISE).
7. Expatriation factor.

Table(2)
The values of the arithmetic mean and the standard deviations
For mental abilities and positive and negative defense

| No. | Variables | Means | Stvd.* | Measuring unit |
|-----|------------------------------------|--------|--------|----------------|
| .1 | Motor reaction | 1.201 | 0.487 | Per/second |
| .2 | Perception of jump distance | 8.551 | 2.227 | Per/ CM |
| .3 | Focus attention | 10.814 | 1.840 | degree |
| .4 | Positive defense | 3.411 | 0.883 | degree |
| .5 | Negative defense | 2.711 | 0.733 | Degree |

* Stvd: standard deviation

Previous table shows that the motor reaction scored a mean (1.201) per second and a standard deviation (0.487) per second, while the perception test for the distance of the jump obtained a mean of (8,551) per/cm and a standard deviation of (2.227) per/cm, the test of attention focus obtained a mean of (10.814) degrees and a standard deviation of (1.840) degrees, as for positive and negative defenses, the results of the evaluation of the skill performance of the tests showed that the positive defense skill obtained a mean of (3.411) degrees and a standard deviation (0.883) degree, while the passive defense

got a mean of (2.711) degrees and a standard deviation (0.733) degree.

To discuss these results, we must first discuss the values of means which, although most of them are close to the normal level, but this does not justify the small increase in the arithmetic mean for testing the movement reaction and testing of attention concentration.

The researchers attribute the reason for the high results of these arithmetic means to the research sample as it is distinct. ‘It is known that the degree of mastery of motor skills is not only related to training qualifications, but is also

related to the individual's ability to focus attention and the ability to consciously contribute to controlling his motor skills, as the focus at some times must be completely accomplished in order to reach a state of mental and physical cohesion, All physical and mental energy must flow in one direction” (Arab, 2012).

Attention is more important than focus; due that it is a kind of narrowing the attention of the competing boxer and fixing him on a specific stimulus, such as positive defense, the pair of punches and responding to it, the focus reflects the boxer's ability to direct attention and intensity (Dorthy&Bettel, 1984),

As for the response to the kinetic action of boxer and his rapid realization to understand the quantum kinetic duty to carry it out on the ring as well as his ability to respond to the stimuli surrounding him that are received by the sensory systems of the boxer. Proceeding from that, it was natural for this difference to exist in the tests of the motor reaction and concentration of attention, in the same way we understand the lack of differentiation in the other tests (motor reaction - perception of the distance of the jump - shifting attention) as it depends on psychological abilities more than mere mental abilities.

Discussion the link between mental abilities and types of positive and negative defenses:

Table(3)

The values of the correlations between mental abilities and types of positive and negative defenses

| Variables | negative defenses | positive defenses |
|-----------------------------|-------------------|-------------------|
| Motor reaction | *0,606 | *0.559 |
| Perception of jump distance | *0.544 | *0.466 |
| Focus attention | *0.599 | *0.516 |

*The tabular value at the degree of freedom (2-20) and the level of significance (0.05) is .(0.387)

It is clear from Table (3) that the value of the correlation coefficient between the motor reaction and the positive defense is (0.553) and it is greater than the tabular value at the degree of freedom (18) and the level of significance (0.05), which indicates the existence of a significant correlation relationship. As the positive defense in all its means is intended by the hand, the trunk, the foot and the squawk, but at the same time it is tied to counter punches and this type of defense is suitable for offensive encounters through which the boxer can grab the initiative after the attack by the opponent and control the leadership of the fight using all kinds of punches.

Proficiency in the use of defensive methods requires strong psychological and voluntary qualities in order to apply them

with various attacks. Self-confidence, a sense of security and courage are what enable the boxer to move within the range of the opponent's punches, relying on defensive means in the implementation of the counter-offensive plans (Arab, 2012: 33).

The same applies to the value of the correlation coefficient between the kinetic reaction and the passive defense, as it reached (0.706), which is greater than the tabular value of (0.387) for all the defensive means used by the boxer to avoid the opponent's punches and prevent their impact; where boxer repels the opponent's offensive punches with one of the defensive means with the shoulder or the open hand, or he moves backward, such as pulling or tilting the trunk, training

on passive defensive means is in order to master positive defensive methods.

As for the perception of the jump distance, the results of Table (3) showed that the correlation relationship is significant between this test and the positive defense; due to the calculated correlation value is (0.105), the researchers explain it that the estimation of the distance between the boxer is what determines the quality of the use of defenses against the punches directed by the opposite competitor and requires From a boxer to be good at positive defense.

The results also showed that the correlation between perception, jump distance and positive defense of 0.466 is significant, the researchers confirm that positive defense is a linking of the means of passive defense with specific counter punches. All the punches used by boxer in defending himself are considered positive defense means.

In terms Perception of the distance of the jump is expressed in linking the means of passive defense with specific

Discussing the contribution of mental abilities in the types of positive and negative defenses

Table(4)

The mental abilities that contribute to the results of the simple (direct) attack test

| Variable | F value Tabular | The computed F value | Contribution rate | correlation Value | Indication level |
|----------------|-----------------|----------------------|-------------------|-------------------|------------------|
| Motor reaction | 4.41 | 13.380 | 0.426 | 0.653 | 0.002 |

It appears from the above table that the motor reaction is the only mental ability that obtained a significant contribution rate, as the correlation value was (0.653), and the contribution percentage (0.426). After calculating its significance by testing (F), it appeared that the calculated value, which is (13.38), is greater than the tabular value (4.41).

This explains what we mentioned earlier that quick decision-making has the upper hand in determining the level of performance, thus determining the outcome of a simple direct attack, "as this mental capacity is most related to the

counter punches and not estimating the distance of the quantity between the boxer and his opponent, where the awareness of the distance is to avoid punching the opponent and use the appropriate defensive means.

As for the focus attention, the results of Table (3) showed that there is a correlation with both the negative defense and the negative defense is moral, the explanation for this is that the boxer needs a high degree of defense in controlling emotions, so that he executes his technical and planning skills without the influence of the forces that lead to distraction Mindfulness. Focus attention is a prerequisite for the success of important punching skills, as the two types of positive and negative defense are undoubtedly more complex skills than straight punches, snatching and gouging, as these two types require more stability and focus in directing attention and directing nerve energy towards a specific target.

development of the central nervous system, and thus to the speed of arousal (Ahmed, 1978: 22).

The reaction in boxing relied on boxer's awareness of the speed of understanding the motor duty to act in the ring with the opponent, i.e. his ability to respond to the opponent's punch since entering the stimulus (the punch) through the senses to a signal of the movement of the opposite or opposite punch, and when the boxer receives more than one punch at one time, then The reaction is called the combined reaction, so the appropriate

motor skill must be chosen to respond to the punches.

Table(5)
Mental abilities that contribute to both positive and passive defense

| Variable | F value Tabular | Freedom degrees | The computed F value | Contribution rate | correlation Value | Indication level |
|----------------|-----------------|-----------------|----------------------|-------------------|-------------------|------------------|
| Motor reaction | 4.41 | 1-18 | 17.839 | 0.498 | 0.706 | 0.001 |

It appears from Table (5) that the value of the simple correlation of the kinetic reaction with the results of the positive defense and the negative defense test is (0.706). Therefore the contribution ratio is the square of the correlation; (0.498), by treating the significance with the law of (F), it appears that the calculated value is (17.839) is greater than the tabular value (4.41), which means that the percentage of the contribution is significant.

The joining of mental ability (attention focus) is explained by what this ability is of great importance in complex motor skills, and the nature of the punching skill that requires high speed in the implementation of negative and positive defenses with the expectation of the opponent's reaction all this requires the boxer to have the effectiveness of the pair and step to Back or to the side.

Discuss the strength of the relationship between the variables

Table(6)
The strength relationship between the variables using the correlation coefficient and the alienation coefficient

| Variables | Negative defense | | Positive defense | |
|----------------------------|------------------------|-------------------------|------------------------|-------------------------|
| | Alienation coefficient | Correlation coefficient | Alienation coefficient | Correlation coefficient |
| Motor reaction | 0.708 | 0.706 | 0.757 | 0.653 |
| Perception of jumpdistance | 0.998 | 0.956 | 0.994 | 0.905 |
| Focus attention | 0.743 | 0.669 | 0.931 | 0.366 |

There is a common mistake that the strength of the relationship between two variables can only be measured by the correlation coefficient. The truth is that there are no specific criteria indicating whether the calculated correlation is strong or weak. Alienation denotes the characteristics that the two variables do not share, as it measures the opposite of what the calculated correlation measures. In the sense that to measure the relationship between two variables, we compare the correlation with the coefficient of alienation; where the higher the difference in favor of the correlation coefficient, the stronger the relationship. Hence, some researchers stated that we can accept

correlation (0.7) and above as a strong relationship (Allawi& Radwan,2000:208). From Table (6) it appears that the mental ability (the motor reaction has a stronger relationship with the positive defense, as it appeared in it that the value of the correlation coefficient of (0.706) is the highest value and the closest to the alienation coefficient.

If we compare the other values (positive and negative defenses), it appears that the values of the correlations appear clearly in front of the values of alienation, meaning that the non-common characteristics are much greater than the common characteristics, which indicates the weakness of the relationship between

them. While it appears that (the perception of the distance of the jump is close to the values of alienation for the types of defenses (positive and negative defenses) of (0.669), and also the value of its alienation of (0.743), which indicates the existence of a relationship that is close to the acceptable, because the value of the correlation coefficient is close to the accepted values of (0.7). This divergence confirms the close links between defenses and perception with the distance of the jump, as well as focus attention: as it appears that the positive defense has a correlation value of (0.669), also the value of its alienation of (0.743) indicates the existence of a relationship that is close to the acceptable; this is because the value of the correlation coefficient is close to the acceptable values of (0.7).

Conclusion

The researchers reached the following conclusions:

1. The mental abilities that have an effect on the level of performance of positive defense are (motor

reaction, perception of the distance of the jump, concentration of attention).

2. The mental ability (the motor reaction) is the capacity with the strongest relationship to the level of the positive defense.
3. Kinetic reaction actively contributes to the test results for all types of positive and negative defenses, which contributes to the concentration of attention.

Recommendations

In light of the above results, the researchers recommend the following:

1. The need to pay attention to mental capacity (motor reaction) by teachers and coaches for the purpose of developing the level of performance in the positive and negative defenses of boxing.
2. The necessity of researching other capabilities (physiological and physical) and knowing their relationship to the level of performance of this activity.

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