Relationship of speed of dynamic response and capabilities to the level of the counter-attack performance in fencing

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ABSTRACT

Fencer needs an important physical and dynamic capabilities, for example, balance, compatibility, accuracy, lounge motor speed, motor speed of arm armed, the ability of cognitive and compatibility of arm armed, the front leg, and other of capabilities. So, present study aimed to know the relationship of speed of dynamic response and capabilities to the level of the counter-attack performance in fencing. The study was conducted on twelve youth male fencing players. A descriptive design was used due to it is suitable to the nature of the research. Speed of dynamic response was measured by a mobility response test and compatibility was measured by compatibility among the eye and the hand test, whereas counter attack was measured by evaluate the time of suspension hit and counter-attack test. Statistical analysis showed a significant relation (p, 0.05) between dynamic response value of (2.7, ±0.22) and compatibility between eye and hand value of (11.2, ±1.82) and stop hit value of (8.85, ±1.78). Moreover, it appeared a significant relation (P, 0.05) among dynamic response value of (2.9, ±0.25) and compatibility between eye and hand value of (11.3, ±1.84) and a counter attack value of (8.87, ±1.80). Study concluded that players showed high correlation between speed of motor response and compatibility between eye and hand and stop hit time and counter-attack time in a subject research.

Keywords: **Dynamic responsive, compatibility, counter attack, fencing.**

1. Introduction

A player's acquirement of the physical and dynamic potentials related to the kind of skill being practiced characterizes an excessive importance in preparing the player for meeting the demands of the activity being practiced in the best form and it also aids the players to realize the motor duties required from them and it relies on the extent to which they have these physical and dynamic abilities (Clarke., 2003).

The physical, dynamic and skill demands of fencing competitions are high, involving the balance, compatibility, accuracy, lounge motor speed, motor speed of arm armed, the ability of cognitive and compatibility of arm armed, the front leg, and other of capabilities. Furthermore, speed of dynamic response and capabilities to the level of the counter-attack

performance, and are also affected by age, sex, level of training and technical and tactical models utilized in relation to the adversary (Abid Ali., 1997).

Speed of dynamic response and capability are considered an important elements when performing many of the different sports skills and it reflects the individual's ability to control his/her voluntary movements and skills that require dynamic response and capability. This does not usually need great strength or violent movements. As an alternative, they require a great capability of attention and a high degree of neuromuscular co-ordination; in addition to depending on needing a good sense of speed, distance and right timing estimation (Ibrahim., 2010).

Moreover, the speed of dynamic response and capability are closely linked to the mental demands of fencing. For this reason it is difficult to identify a significant relationship between any one physiological characteristic and performance, and performance is more likely to be affected by mental and neuro-physiological features. The researcher also noticed that speed of dynamic response, capability, and counter-attack performance are measured according to the sport's nature. In fencing, for example, it is done by directing the weapon's tip to the opponent's target so as to score a touch. Motor response requests for a high degree of efficiency concerning the work of neural systems and muscular in addition to monitoring the working muscles directed towards the opponent. Motor response and capability are connected with the visual cognizance and auditory, technical level and right probability of altering situation, as well as quick thinking, selecting the suitable response and motor speed of the armed hand (Jamal and Nahid., 2007).

Numerous studies have showed that physical and dynamic abilities are basic condition in fencing of advancing levels and have a relation to fencing skills. However, these abilities have a great importance in different situations and movements that may be fencer carried out during game play. Fencer works several offensive or defensive movements to penetrate the competitor to reach the specified target and these important skills are the counter-attack and stop hit which are the compatibility factor between the eye and the hand and the speed of motor response of the most important factors of success (Jaki, and Bill., 2000). Follow-through permanent vision and focus on motor responding as well as compatibility when the performance of the player being described as important bodily adjective and assistant in the performance skills of the game, especially stop hit and counter-attack time, which is one of the most important and accurate skills that need to availability of important elements for the success of such response and compatibility between the eye and the hand and performance (Mohamed and Usama., 2010).

The researcher understands that the physical demands related to the kind of activity being practiced should be improved through training methods suitable for that particular activity since improving the capability and motor response are considered the most important methods of developing counter attack and stop hit which was confirmed by previous studies indicating that motor response is one of the basic physical abilities of the player's performance. To our knowledge no study has investigated the relationship of speed of dynamic response and capabilities to the level of the counter-attack performance in fencing.

1. Methodology

Descriptive design method was used in present study due to it is suitable to the nature and target of the problem to be achieved.

2.1 Participants

The populations of this study were 12 male junior players in Al-Shoala Sports Fencing Club. The subjects were selected intentionally in order to achieve the objectives sought by the researcher to achieve them. Researcher has performed a homogenous among players as shown in table (1).

Table (1)
Shows homogenous of the subjects

Variables	Mean	SD	Mediator	Sprains coefficient
Age (years)	20.68	1.4	21	0.28
Training age (years)	2.9	0.11	2.9	-0.78
Mass (kg)	59.4	4.6	59.5	0.05
Height (cm)	159.9	5.1	159.5	- 0.054

2.2 Measurements

2.2.1 Motor response test

- The purpose of the test: measuring the estimated reactive and quickly move as a right way to respond to the exciting.
- Tools: Stopwatch, tape measure, marking tool (layout) on the ground.
- Test instructions: draw two parallel side lines in the length of 20 m and width 2 m to take trainer a squatting position as standby jogging mode at a point located halfway completely between the two side lines and raise the trainer one arm to top holding the stopwatch in his hand and then suddenly pointing his arm to the right or left with running time and the player responds by running at full speed in the direction until it reaches the reference to the side line then trainer shuts down time once you cross the Sideline player and if the player moves toward the wrong time left to work even remixes of direction and up to the right side line.
- Given (5) attempts for each direction (right or left), but in a random system until it clear that the direction is known to the players and given 20 sec rest between each attempt and others.
- Reads the time in every attempt to the nearest 1/10 a second then recorded average ten attempts (Mohammed, 2000).

2.2.2 Compatibility among eye and hand test

- Tools used: Chalk, a stopwatch, a tape measure.
- Description of performance: paint ten circles on the wall in diameter (5 cm) and the distance between the circle and the other (5 cm), and be numbered (1-10). Player standing in front of the wall as space suitable to be his arms initially beside the body, player begins put his arms on the circles in a compatible manner when right arm on the odd numbers left arm on the even numbers by successive way from top to bottom and then crisscross, repeat performance three consecutive times and given to the player two attempts and chosen the best.

- Recording Mode: Calculate the time that player takes in performance this test (Nuri, 2004).

2.2.3 Evaluate the time of suspension hit and counter-attack

Performance was assessed by three arbitrators skills * by giving them a Video CD and to fill out the information form prepared for this purpose pointing out how to assess and calculate degrees and by placing a degree of (10) and taking the arithmetic mean of the degrees (Ushraq., 2000).

2.3 Main experiment:

Experiment conducted on March 20, 2013 in Al-Shoala Sports Fencing Club.

2.4 Statistical analysis:

Results were processed by the statistical system spss as followed:
- Mean.
- Standard deviation.
- Coefficient sprains.
- Simple correlation coefficient.

3. Results and discussion

Show from the table (2) that the mean of the motor response (0.7) and its standard deviation (0.22). Mean of compatibility between arm and eye (11.1) and its standard deviation (1.82). Mean of stop hit (8.85) and its standard deviation (1.78).

The calculated value of the motor response (0.96), calculated value of compatibility between arm and the eye (0.80) and cross-tabulated value when degrees of freedom (10) under the level of significance (0.05) is equal to 0.57 and including the calculated value greater than the cross-tabulated value in mobility response and compatibility between hand eye so the indicative level is significant.

Table (2)
Shows the mean, standard deviation, calculated value, cross-tabulated correlation coefficient and the level of significance for the research variables

Tests used	Mean	SD	Calculated correlation coefficient	Tabulated correlation coefficient	Level of significance
speed of motor response	2.7	0.22	0.96	0.57	Significant
Compatibility between eye and hand	11.1	1.82	0.80		
stop hit	8.85	1.78	0.66		

Tabular value at the degree of freedom (10) under the level of significance (0.05) = 0.57

Table (3) shows that the mean of the speed of motor response (2.9) and standard deviation (0.25). The mean of the compatibility between eye and hand is (11.3), and standard deviation (1.84). The mean of the counter-attack time is (8.87) and standard deviation (1.80).

The calculated value of motor response (0.98) and the calculated value of the compatibility between the arm and the eye of (0.82) and cross-tabulated value when degrees of freedom (10) below the level of significance (0.05) is equal to 0.57 and including the calculated value greater than cross-tabulated value in response kinetics and compatibility between the eye and the hand so the indicative level is significant.

Table (3)
shows the mean value, standard deviation, calculated value, cross-tabulated correlation coefficient and the level of significance for the research variables

Tests used	arithmetic mean	Standard deviation	Calculated correlation coefficient	Tabulated correlation coefficient	Level of significance
Mobility response speed	2.9	0.25	0.98	0.57	Significant
Compatibility between eye and hand	11.3	1.84	0.82		
Beat stop	8.87	1.80	0.68		

Tabular value at the degree of freedom (10) under the level of significance (0.05) = 0.57

Researcher attribute the speed response to being one of main fundamental physical characteristics of the game, the player who characterized by quickly movement have an ability to record touches low as possible and win the competition, so the successful coach is that is has the ability to develop this ability through continuous training that leads diastole and systole the muscle, as well as joining, activity and indolence the muscular system (Turkish., 2004).

Qassim (1999) referred that term indicates the muscle responses resulting from the rapid exchange between muscle contraction and muscular extroversion. So fencing depends on changing the body movements from attack to defense or contrary by quickly action means fast response to a competitor.

As for the compatibility with an eye the researcher attributed to that fencer needs to compatibility in movements whether offensive or defensive movements. Player when playing performed in several movements at the same time and this needs broad compatibility and Allen (2003) said that compatibility is the integration of several movements with each other within a single frame is this method is ideal for the use of the human eye to guide the weapon to the target to ensure accurate recording.

4. Conclusions

Study concluded that players showed high correlation between speed of motor response and compatibility between eye and hand and stop hit time and counter-attack time in a subject research.

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Appendix (1) the performance of the counter- attack in fencing

T	Blow suspensions and counter-response	Smooth performance and speed		The timeliness of its performance		The success of the response	Failure to respond	Number of times repeated Balneal note that bout of only five touches					Total of ten degrees
		Class		Class		Class	Class	Class					
		1	2	1	2	1	Zero	1	2	3	4	5	
1	Counter-attack- time												
2	Beat - stop												