

## Rapid response training (Q.R.T) in some physical abilities and technique evolution for juniors' soccer players

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### Abstract

It demands different response situations, such as speed in attack or speed in defense for all team members, speed in decision-making and control of the ball, and creating better opportunities to achieve a state of superiority and victory over the V.S team. The importance of research appears in providing quick response training (Q R T) in order to contribute to strengthening some Physical abilities such as strength, speed, agility, passing and scoring skills. As for the problem of the research, it is observed that some players cannot make a quick decision, so they look at the goal and take time to make the decision and respond, which may cause the attack to fail and lose possession due to the loss of the element of surprise and confusion of the defenders. The research aimed to identify the effect of quick response training (Q R T) on some physical abilities and skill performance among junior soccer players and specialized school players aged (14-16) years, and to use quick response training (Q R T) training on the experimental group. It was concluded that adopting training Quick Response (Q R T) works to develop some of the physical abilities of emerging soccer players, and it was recommended that training programs be designed to develop the speed of motor response and accuracy of scoring and passing.

**Keywords:** Sports performance, self-control, motor skills, sports achievement, sports psychology.

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## Introduction

Soccer is one of the most famous and widespread sports in the world. It is a fast, dynamic game that is attractive and therefore extremely popular among young people. Developing the physical abilities and skill performance of emerging soccer players is considered crucial to ensuring their athletic growth and achieving their full potential in this sport, which is full of challenges. (Fadel & Kadem, 2021) Soccer is characterized by many and varied situations and situations, as it requires different situations of responses, such as speed in attack or speed in defense, for all members of the team. And speed in making decisions, controlling the ball, and creating better opportunities to achieve a state of superiority and victory over the V.S team. This, of course, only happens if the team meets those physical and movement requirements and the performance ends, or those attacks end with scoring goals to achieve victory, and this in turn is done with a kinetic response in the shortest possible time. (Kadhim & Mousa, 2024) That is, when performance is combined with speed of response for all team members to reach the desired goal, the team that is characterized by high speed of performance has greater chances of winning, and the best players in the world because of their great skill speed, especially in the field of passing and scoring, are able with that speed to control the ball. And to implement skills quickly, which is the most challenging form in soccer. (Kadhim & Majid, 2023) Therefore, the ability to move quickly and respond quickly to changes in the path of the ball or the movements of V.S players is essential in soccer. Hence the importance of research into providing quick response training (QR T) in order to contribute to enhancing some physical abilities such as strength, speed, agility, passing and scoring skills. (Nashwan & Allawi, 2021) Quick response training (Q R T) can help improve some of these abilities and thus respond effectively to changing situations by stimulating quick reactions and developing the ability to make quick decisions in certain situations. It can include a response to unexpected variables. The speed of playing the ball requires quick processing of decisions, and as such, the benefit in developing mental skills has become clear through these exercises.

## Problem of the study

The advanced skill level of the team's players will help to implement the game plans as best as possible and achieve their goals with the least effort and the shortest period of time. In the game of soccer, the opposing player is close to the player in possession of the ball and tries to cut it off. Here, the player must be characterized by quick processing of decisions and Rapid performance, and through the work of the field researcher and his observation of the junior teams, (Mousa & Kadhim, 2023) he often noticed that some players, when the player reaches a position that allows him to score, cannot make a decision quickly, so he looks at the goal and takes time to make the decision and respond, which may cause the attack to fail and lose possession. Due to the loss of the element of surprise and confusion of the defenders. All of this created for the researcher a problem that he tried to

study and find a solution to by using quick response training (Q R T) for emerging players, such as exercises to respond quickly to visual and auditory indicators of the presence of competitors, (Abdulhusein et al., 2024) or quick response training, exercises that challenge coordination between the hands and eyes and tracking vision to improve response time. It is an essential aspect of rapid response training. Athletes are exposed to different scenarios that force them to make decisions quickly and accurately. (Abdul Sahib et al., 2022) These exercises aim to train the brain to process information quickly and thus to develop some of the physical abilities and skill performance of junior soccer players.(Khlaif & Shnawa, 2022)

### **Aims of the study**

1 - knowing the quick response exercises (Q R T) and some of the physical abilities and skill performance of junior soccer players.

2- Identify the effect of quick response training (Q R T) on some physical abilities and skill performance among junior soccer players.

### **Hypotheses of the study**

1 - There are statistically significant differences between the pre- and post-tests in some physical abilities and skill performance among junior soccer players for the control and experimental groups, and in favor of the post-test.

2 - There are statistically significant differences in the post-tests in some physical abilities and skill performance of junior soccer players between the control and experimental groups and in favor of one of the two groups.

### **Fields of the study**

**Society:** the (14 – 16 years) Iraqi specialized schools

**Place :** fields in ministry of youth & sports (Iraq – Baghdad)

**Duration :** (2 / 8 / 2023 - 16 / 10 / 2023)

### **Study procedures**

researcher used the experimental method. The method is “the method followed by the researcher in his study of the problem to discover the truth”, which is an important method for solving a specific problem and reaching real results about performance from a scientific and practical standpoint.

### **Sample of the study**

The research society was chosen intentionally, and they are young players aged (14-16) years, players from specialized schools, and a sample of (18) players was chosen. The sample members were divided into two groups, control and experimental, randomly by drawing lots, with (9) players for each group.

### **Information & data collecting**

- Arabic and foreign sources.
- Questionnaire forms
- Experts and specialists
- Tests and measurement

### **Devices and tools used**

- Electronic stopwatch (2)
- Random shot device (3).
- One (1) laptop
- soccer goals (2)
- Balls (12)
- Signs
- Whistle
- Measuring tape

### **Define tests:**

#### **1- Explosive strength test.**

The aim of the test: to measure the explosive strength of the leg muscles.

Tools: chalk, measuring tape, board.

Description of the performance: A board is placed next to the tester and tester extends his arm to mark the point he reaches with a piece of chalk. When the signal is given, the tester

assumes a jumping position to reach the highest possible point and marks on board the maximum height the tester will reach.

Scoring: The distance between the first and second signals is measured, the number is recorded, two attempts are given to the player, and the best is counted.

## 2- Motor response speed test.

aim of the test: to measure the speed of the motor response of the legs

Tools used: stopwatch / tape / measuring tape

Test specifications: Two side lines are drawn at a distance of 6.4 m from the center line, which is 1m.long. The goalkeeper stands on the center line, the coach stands in front of him, raises the hand holding the stopwatch, and when pointing to one of the two directions, he runs in the direction determined by the coach, and same thing for both directions.

Scoring: The time taken is calculated from the signal until the goalkeeper crosses the side line completely. Ten attempts are given to each goalkeeper in both directions. A rest of 20 seconds is given between each attempt and the best attempt is recorded.

## 3- Agility test

Test of running between the blocks for a distance of 7 m:

The purpose of the test: to measure agility.

Tools: stop watch, 6 signs, measuring tape.

Description of the performance: The tester stands on the start line and when the signal is given, the tester begins to run quickly between the signs back and forth.

Recording: The time is recorded in seconds and to the nearest 1/100 microsecond that the laboratory took back and forth.

## 4- soccer passing test

Test name: “Bounce handling test on the wall for (20) seconds.”

Purpose of the test: to measure handling accuracy.

Used equipments :

- A smooth wall marked with an area of 1.30 meters x 2.20 metres, and a line is drawn in front of the wall at a distance of (5) metres.

- Legal soccer balls (3).

- Electronic stopwatch.

Description of the performance: After hearing the start signal, the player standing behind the starter hits the ball against the wall and hits it again after it bounces off the wall, and so on until the end of the test period (20) seconds.

Test instructions:

- The ball bouncing off the wall is only hit behind the starting line.

- If the ball goes out of the player's control, he takes one of the other two balls without stopping.

- The ball can be hit with any foot and any part of it.

Score calculation: The number of correct ball hits against the wall is recorded within (20) seconds.

### **5- Football scoring test**

Test name: Scoring after the ball bounces off a Swedish platform from a distance of (10) m

The aim of the test: to measure scoring accuracy.

Tools used: a soccer ball, a Swedish level, 3 meters long and 50 cm high, a goal divided into 5 sections using ropes, a whistle, and a registration form.

Method of performance: The tester stands with the ball at the center line, then passes the ball to the bench, which is on the side, allowing the ball to be returned and prepared for the tester at a person 10 meters away from the goal.(Ali et al., 2020) Then he scores a goal divided into steps, as in (3-2-1-). 2-3) Near column 3, on the sides (2) degrees and in the middle (1) degrees, outside the target zero

Scoring: The tester is given (3) attempts, and the score is calculated according to the location of the ball's entry

**Pretests:**

The researcher conducted pre-tests on players from specialized football schools on August 2, 2023. At 6 pm, he conducted the skill tests first, then the physical tests

skewness	.deviation	dian	an	n.unit	parameter
.09	2.14	0.5	38	cm.	<b>Explosive power</b>
.07	.06	16	5	Sec.	<b>Motor response</b>
.45	.56	.27	37	Sec.	<b>Agility</b>
.06	.84	4	4	mark	<b>Pass to drawing goal on wall</b>
.19	.76	6	3	mark	<b>Shooting speed</b>

**Quick response exercises (Q R T) for junior football players:**

- Implementing special exercises for a period of 8 weeks from 8/4/2023 until 10/2/2023, at a rate of two units per week, and the number of units reached 16 units.

The program was implemented within the skills preparation part of the main section, while the other stages and sections of the unit are trained with the control group.

- It is a specialized training method designed to improve an athlete's ability to respond quickly and effectively in dynamic and high-pressure conditions.

- Focuses on developing quick decision-making, under pressure from the opponent, and using the ball
  - Increasing nervous responses and improving the physical and mental characteristics necessary for quick and accurate response.
  - Rapid response training includes exercises and exercises that enhance speed and agility
- These include jogging exercises, lateral movements, and rapid changes in direction. Jogging exercises, lateral movements, and rapid changes in direction using the Random Shot device.
- Respond quickly to visual indicators. Rapid response training exercises include exercises that challenge hand-eye coordination and vision tracking to improve response time
  - Rapid decision-making exercises from different situations that force them to make decisions quickly and accurately. Rapid response exercises often simulate high-pressure situations.
  - Maintaining balance while changing direction quickly Rapid response drills often mimic high-stress situations
  - The researcher adopted high intensity
  - Increase repetition gradually
  - Performing handling and scoring exercises with stimuli and reaction devices - Performing with audio-visual stimuli devices using the Random Shot device)

#### **Posttests:**

The tests were applied on 10/4/2023 at six o'clock by the research sample, the control and experimental groups, in the place and with the same tools and conditions that were previously applied in the pre-test as much as possible.

#### **Statistical methods:**

The researcher relied on the statistical package (SPSS) to find statistics for the research variables.

- 1- Arithmetic mean.
- 2- The mediator.
- 3- Standard deviation.
- 4-Pearson correlation coefficient



4- T-test for correlated samples.

5- T-test for uncorrelated samples

Discussion of the results of the differences in physical abilities and skills between the control and experimental groups for the research variables:

The results of the differences between the experimental and control groups showed that the experimental group was superior in some of the physical abilities and skills of budding soccer players. (Abdul-Gani et al., 2024) The researcher believes that quick response training (QRT) plays a vital role in developing the physical abilities and skill performance of budding soccer players. (N.K. & A.S.A., 2020) These exercises should be an essential part of sports training programs to stimulate the comprehensive growth and development of athletes through performing and repeating special exercises in a manner that amounts to being above or close to the match or simulating the match, taking into account the change in the exercise and its multiplicity, as well as the player's drive towards skill performance and experience. (Al-fatlawi et al., 2023) What is new in these exercises makes the player perform the repetitions with confidence and a desire to perform better, and this is confirmed by both (- Luiselli K. James and Reed) "The high execution of the skill is achieved under conditions similar to the playing conditions, and the change in the shapes and types of stimuli in a complex way leads to Developing the player's skill in terms of speed and accuracy, (Abdulhusein et al., 2024) and (Ali Al-Attar & Jari, 2023) as deliberate practice for certain periods is to build fluency (speed and accuracy) and therefore this indicates that the direction of the indicator is towards the experimental group at the expense of the control group. And providing the player with the opportunity to perform quick response exercises (Q R T) during Repetitions allow him to correct paths and thus increase accuracy. Correct and continuous implementation of these exercises reduces response time, which adapts the player for this purpose. The physical abilities and skills of emerging football players improve, and the results are logical.(Easa et al., 2022)

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## Conclusions

- 1- Adopting quick response exercises (Q R T) works to develop some of the physical abilities of emerging football players
- 2- Adopting quick response exercises (Q R T) works to develop the explosive power of emerging football players
- 3- Adopting quick response exercises (Q R T) works to develop the response speed of emerging football players
- 4- Adopting quick response exercises (Q R T) works to develop motor agility among emerging football players
- 5- Adopting quick response exercises (Q R T) works to develop the handling skills of emerging football players
- 6- Adopting quick response exercises (Q R T) works to develop the scoring skill of emerging football players

## Recommendations

1. Design training programs to develop motor response speed and accuracy of scoring and handling
2. Paying attention to training the physical elements so that performance ranges from movement to skill
3. Generalizing the results to junior football coaches
4. Conduct similar studies for emerging football players

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