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The Effect of Defensive Tactics Exercises Based on the High-Press Strategy on Developing Some Basic Skills and Motor Response Speed in Youth Football

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Abstract

Defensive play forms the true foundation for success in football, as good defensive performance requires high organization and coordination among players to prevent opportunities for the opposing team. Through the researcher's work, it was observed that there is a variation in the performance of some basic skills, and one possible reason could be the players' inability to apply these skills during play. This led the researcher to identify a problem and attempt to address it through the implementation of defensive strategies. Implementing a high-press strategy is an essential part of basic game tactics. The experimental methodology was applied to a sample of (10) players and an equal control group, with pre-tests conducted in the specified tests and adjustments for equivalence. Then, for (6) weeks, a defensive strategy using the high-press approach was applied during two units, followed by post-tests. The researcher concluded that adopting defensive exercises based on the high-press strategy works to develop some basic skills and the speed of response in football for young players, and this achieves one of the sustainable development goals of the United Nations in Iraq which is (Good Health). The researcher recommended adopting defensive exercises according to the high-press strategy.

Keywords Defensive tactics exercises, High pressure.

Introduction:

Football, being one of the most popular and widespread sports globally, demands both technical and physical prowess. It's a game distinguished by a unique blend of physical, skilful, and mental capabilities. While the thrill of offense and scoring goals captures much attention, defensive play constitutes the true foundation for success in football. Some teams have relied on this strategy, securing championships and earning recognition. Good defensive play can indeed alleviate pressure on the goalkeeper. When the defense is strong, the goalkeeper can focus on stopping the few shots that come their way instead of facing constant attacks. Implementing a high-pressure strategy is a fundamental part of successful football team tactics. This strategy involves the defending team intensively pressuring the opposing team to prevent them from building attacks and regain possession of the ball in a high area of the field.

Defensive play requires strategy, tactics, and quick motor response. The team must collaborate perfectly in defense, coordinating pressure and covering sensitive areas. Good defensive performance requires high organization and coordination among players to prevent opportunities for the opposing team. Football is a game where the optimal balance between offense and defense is required. Good defensive play can be key to maintaining the team's balance and preventing opposing teams from scoring goals. If the defensive aspect is neglected, the team may suffer defeats even when it has a strong offense. Defensive play in football can serve as a crucial axis for achieving victory. It contributes to stabilizing the game, preventing the team from losses, and reducing fluctuations in performance. Stability enhances team confidence and success. It provides an opportunity for the team to capitalize on defensive momentum and quick motor response, as well as rapid counterattacks.

Once the ball is regained from the opposing team, the team should swiftly transition to the offense and exploit the absence of the opponent in good defensive positions. This requires players to demonstrate distinctive basic skills to gain an advantage. In addition to offense, defensive play reflects the essence of football and constitutes an integral part of successful team strategies. Teams proficient in defensive play increase their chances of winning and achieving success on the field. If players and coaches prioritize defensive play, they will win more matches and achieve better long-term performance. This research's significance arises from its aim to study the impact of defensive exercises on developing basic skills and the motor response speed of young players. By understanding how defensive exercises can play a pivotal role in improving the skills of young football teams, effective training strategies that enhance team performance on the field can be developed. The research problem in the field of football and skill development for young players presents significant challenges for coaches and those involved in developing young players. Through the researcher's work, it was observed that there is a variance in the performance of some basic skills, which may be due to players' inability to apply these skills during play. This observation led the researcher to address the issue by implementing defensive strategies, with the implementation of a high-pressure strategy being a fundamental part of basic game tactics. The use of high press is a defensive strategy aimed at preventing the opposing team from building effective attacks by exerting intense and high pressure on the opposing players when they possess the ball or when they attempt to build attacks from the back. It aims to achieve defensive superiority by preventing opposing teams from constructing effective attacks. However, a critical question remains regarding how this strategy affects the development of basic skills and the motor response speed of young

football players. This strategy aims to create a state of confusion in the opposing team's offensive organization and to intercept the ball. The development of skills and motor response speed in young football players is a vital component for effectively implementing the high-pressure strategy. The aim of the research is to develop defensive tactics drills based on the high-pressure strategy in football for youth players, and to assess the impact of these drills on enhancing some basic skills (tackling, dribbling, passing) in youth football. Furthermore, the research seeks to understand the effect of defensive tactics drills based on the high-pressure strategy on improving the agility in youth football players' motor responses. The research suggests that there are statistically significant differences between pre-test and post-test results in favor of the post-tests. Additionally, there are statistically significant differences between the experimental and control groups, favoring one of the groups in the post-tests in youth football.

Method and Procedures:

The nature of the study required the researcher to use the experimental method with a design involving both experimental and control groups. The experimental method is "the true test of relationships regarding cause or effect, representing the most genuine approach to solving many scientific problems both practically and theoretically. Additionally, it contributes to the advancement of scientific research in the humanities and social sciences, including sports" (5). The research population was identified from players at specialized schools in Baghdad for young footballers, and the sample was chosen randomly, totaling (20) players. This sample was divided into two groups: (10) players in the experimental group and (10) players in the control group. Table (1) illustrates the homogeneity of the sample.

Table .1 It shows the homogeneity of the sample

Variable	Measurement Unit	Athematic mean	Median	Standard Deviation	Skewness Coefficient
Training Age	Year	2.425	2.4	1.332	0.065
Chronological Age	Year	14.3	14	0.470	0.945
Mass	Kg	61.95	61	2.999	1.041
Height	Cm	172.7	172	7.873	0.023

Methods of data collection:

Arabic and foreign sources, questionnaires, experts and specialists, tests and measurements.

Devices and tools used in the research: Two electronic timers, one laptop, two football goals, 12 footballs, markers, a whistle, and measuring tape.

Identification of tests: To identify the most important basic skills, the researcher conducted a survey study of sources and references related to the topic of basic football skills.

Test Name: Ball Control Inside a Square with Measurements (2m x 2m) (2).

Purpose of the Test: To measure precision in stopping the ball using all body parts except the arms.

Required Equipment: 5 regulation-size footballs.

Procedures:

- A square measuring (2m x 2m) is drawn, which is the test area.
- A broad line measuring (3m) in length is drawn at a distance of (6m) from the test area, where the coach stands.

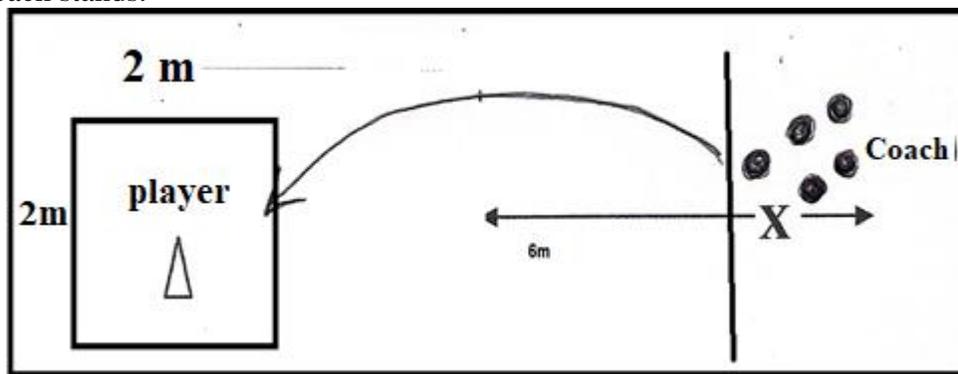
- Another broad line measuring (3m) in length is drawn at a distance of (1m) behind the test area, where the player stands, as illustrated in the figure.

Test Instructions:

- The coach throws the ball into the test area.
- The moment the ball is thrown by the coach into the test area, the player standing on the second line starts to attempt to stop (control) the ball inside the test area.
- Note that the highest score for the test is 10, and the lowest score is zero.

Scoring Method:

- Each player is given (5) attempts.
- Each correct attempt is awarded (2) points.
- An attempt is not considered correct in the following cases:
 - If the ball is stopped illegally.
 - If the ball is stopped legally but outside the square.



Figure(1)
It illustrates the ball control test

Test Name: Wall Rebound Handling Test for 20 Seconds (1).

Purpose of the Test: To measure handling accuracy.

Tools Used:

- Smooth wall marked with a 1.30-meter by 2.20-meter area, with a line indicating the front of the wall at a distance of 5 meters.
- 3 regulation-size footballs.
- Electronic timer.

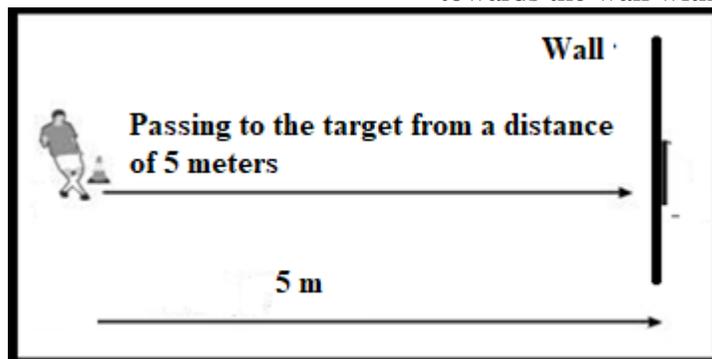
Performance Description: After hearing the start signal, the player standing behind the starting line kicks the ball against the wall and then hits it again after it rebounds off the wall, continuing

this process until the test duration of (20) seconds ends.

Test Instructions:

- The ball rebounded from the wall and must only be hit behind the starting line.
- If the ball goes out of the player's control, they should take one of the other two balls without stopping.
- The ball can be hit with any foot and any part of it.

Scoring: The number of correct ball strikes towards the wall within (20) seconds is recorded.



Figure(2)

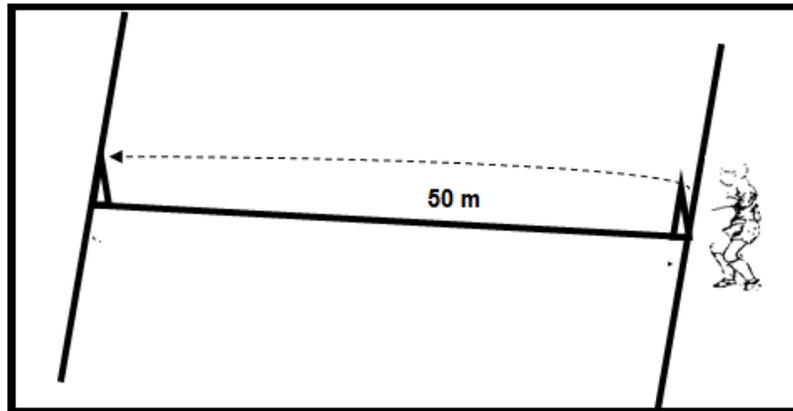
It illustrates the wall-passing test

Ball Rolling Test (8)

- **Test Name:** Ball Rolling Test for a distance of (50) meters with time measurement.
- **Purpose of the Test:** To measure the speed of performing the ball dribbling skill.
- **Equipment:** Footballs, stopwatch.
- **Performance Specifications:** The player stands with the ball behind the starting line.

Upon the start signal, they begin running, maintaining control of the ball between two lines up to the finish line (50m).

- **Measurement:** The player's time is recorded to the nearest second, from the start signal until they cross the finish line.



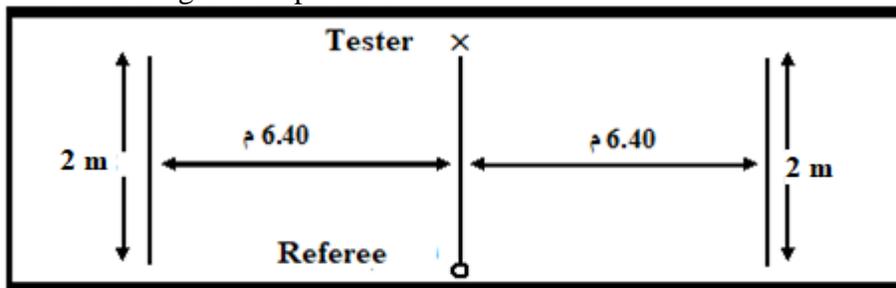
Figure(3)
It illustrates the ball-rolling test

Motor Response Speed Test:

- **Test Name:** Nelson Test (6)
- **Purpose of the Test:** To measure the motor response speed of the legs.
- **Equipment Used:** Stopwatch, adhesive tape, measuring tape.
- **Test Specifications:** Two lateral lines are drawn, each 6.4 meters away from a central line that is 1 meter long. The player stands on the central line, and the coach stands in front of them with a hand holding the stopwatch.

Upon the coach's signal towards one of the directions, the player runs in the direction indicated by the coach, and this is done for both directions.

- **Recording:** The time taken from the signal until the player crosses the lateral line completely is recorded. Each player is given ten attempts for both directions, with a 20-second rest between each attempt. The best attempt is recorded.



Figure(4)
It illustrates the motor response speed test for the legs

Field Research Procedures

Pilot Study: The pilot study was conducted on 6/07/2023, with a sample consisting of 3 players randomly selected from the research community. This pilot study aimed to assess the readiness of the research assistant team (as shown in Appendix 1 with their names) and to identify any problems and difficulties encountered by the researcher during the application of the tests.

Pre-test: The pre-tests were conducted on the research group with the assistance of the research assistant team on Thursday 8/07/2023, at the Ministry of Youth's stadium. Normal distribution and homogeneity were found in the research variables.

Normal Distribution:

Table .2 It shows the normal distribution

Variables	Measurement Unit	Athematic mean	Median	Standard Deviation	Skewness Coefficient
Ball Control	Score	6.500	6.500	0.827	0.000
Passing	Number	7.900	8	0.911	0.713
Rolling	Second	13.25	13	0.617	0.372
Response Speed	Second	3.094	3.12	0.205	1.711

Equivalence between the two groups

Table .3 Illustrates the equivalence between the two groups

Variables	Measurement Unit	Control Group		Experimental Group		Calculated T-value	Error Level	Significance
		Arithmeti c Mean	Standard Deviatio n	Arithmet ic Mean	Standard Deviatio n			
Ball Control	Score	6.40	0.843	6.600	0.842	0.530	0.602	Significant
Passing	Number	7.800	0.788	8.000	0.942	0.480	0.637	Significant
Rolling	Second	13.300	0.674	13.20	0.586	0.354	0.728	Significant
Response Speed	Second	3.104	0.220	3.084	0.200	0.212	0.834	Significant

The main experiment:

The researcher conducted the main experiment on Sunday, 10/07/2023, and concluded it on Monday, 22/08/2023, spanning 6 weeks. A defensive strategy using the high-pressure approach was implemented during two team training sessions per week to train tactical skills on Mondays and Wednesdays during the main part of the training. The number of training units in the main experiment reached 12 training units, and the researcher worked within the main section.

- The experimental sessions were conducted within a time frame ranging from 25 to 35 minutes of the main team training section.
- Quick performance within a short period was utilized.
- Training intensity ranged from moderate to high (75%-95%).
- An interval training method was employed.
- High pressing is typically executed from the front part of the field involving both the attacking and midfield players, either after

losing possession or after the opposing team receives the ball from the goalkeeper. The objective is to reduce the opponent's space and confine them to a smaller area.

- Players must cooperate and coordinate effectively to execute high pressing efficiently. Each player's role and targeted pressing zones should be predetermined.
- High pressing entails collective effort and working as a cohesive unit. Players must work together to disrupt the opponent's passes and deal with dribbles.
- High pressing should be executed at the appropriate time. The team must be aware of when to increase the pressure and when to retreat to defensive zones, timing is crucial.
- Space reduction: The primary goal of high pressing is to reduce the spaces in which opposing players can manoeuvre. This increases the likelihood of errors and opportunities to regain possession of the ball.

- **Control Group:** This group will use the exercise regimen followed by the team's coach.
- **Post-tests:** The researcher, along with the assistant team, conducted the post-tests on the research sample on Sunday, 25/08/2023, taking into account the same conditions related to the pre-tests.
- **Statistical Methods:** Statistical methods for social sciences (SPSS) were used to extract statistical results.

- Arithmetic Mean, Median, Skewness Coefficient, Standard Deviation, t-test for the significance of differences between means for related samples, and t-test for the significance of differences between means for independent samples.

Results:
Presentation and analysis of the results for the experimental group.

Table .4 It illustrates the arithmetic means, standard deviations, differences, and calculated t-values for the experimental group in the research in both pre-tests and post-tests.

Variables	Measurement Unit	Pre-test		Post-test		Differences	Standard Deviation of Differences	Calculated T-value	Error Level	Significance
		Arithmetic Mean	Standard Deviation	Arithmetic Mean	Standard Deviation					
Ball Control	Score	6.600	0.842	8.100	0.567	1.50	0.707	6.708	0.000	Significant
Passing	Second	8.000	0.942	10.88	1.269	2.90	0.737	12.429	0.000	Significant
Rolling	Score	13.20	0.586	12.50	0.559	0.70	0.188	11.739	0.000	Significant
Response Speed	Second	3.084	0.200	2.712	0.267	0.372	0.213	5.506	0.000	Significant

With a degree of freedom (9) and an error level of(0.05)

Presentation and analysis of the results for the control group.

Table .5 It illustrates the arithmetic means, standard deviations, differences, and calculated t-values for the control group in the research in both pre-tests and post-tests.

Variables	Measurement Unit	Pre-test		Post-test		Differences	Standard Deviation of Differences	Calculated T-value	Error Level	Significance
		Arithmetic Mean	Standard Deviation	Arithmetic Mean	Standard Deviation					
Ball Control	Score	6.40	0.843	7.200	0.788	0.800	0.421	6.00	0.000	Significant
Passing	Second	7.800	0.788	9.400	0.966	1.600	0.516	9.798	0.000	Significant
Rolling	Score	13.300	0.674	12.821	0.591	0.479	0.175	8.620	0.000	Significant
Response Speed	Second	3.104	0.220	3.003	0.237	0.101	0.125	2.553	0.031	Significant

With a degree of freedom (9) and an error level of (0.05).

The differences between the results of the control and experimental groups in the post-tests are presented.

Table .6 It shows the differences between the control and experimental groups in the researched variables

Seq.	Variable	Measurement Unit	Control Group		Experimental Group		Calculated T-value	Probability Value	Statistical Significance
			-Arithmetic Mean	± Standard Deviation	-Arithmetic Mean	± Standard Deviation			
1	Ball Control	Score	7.200	0.788	8.100	0.567	2.929	0.009	Significant
2	Passing	Second	9.400	0.966	10.88	1.269	2.896	0.010	Significant
3	Rolling	Score	12.821	0.591	12.50	0.559	1.246	0.229	Random
4	Response Speed	Second	3.003	0.237	2.712	0.267	2.571	0.019	Significant

Significant at a degree of freedom (18) with an error rate less than or equal to (0.05)

Discussion:

The results of the previous tables showed the extent of improvement in basic skills (ball control and passing) and motor response speed by comparing the experimental group with the control group in the post-test. However, the results for the dribbling skill were random between the two groups, achieving part of the research hypothesis. The researcher attributes this to the effectiveness of defensive exercises according to the high-press strategy in developing some basic skills and motor response speed, aiming to apply maximum pressure on the ball carrier. The strategy typically begins from the front part of the field with the participation of the attackers and midfielders, either after losing the ball or after the opposing team receives the ball from the goalkeeper. The goal is to reduce the opposing team's space for movement and confine them to a small area, which requires extra effort from the players. The researcher believes that mastering this skill depends on the player's technical abilities and experiences gained from training and competition. A player proficient in this skill can move the ball to a more advantageous position and can create openings in the opponent's ranks. "The coach can tailor the training program content to fit the skill level of the players, and the level of skills significantly determines the tactics that can be incorporated

into the training program" (7). Passing is closely linked to team play, and this is emphasized by Essam Abdul Khaleq when he stated, "Accurate passing at the right time is the foundation of team play, and team play is the true measure of a team's ability to perform strongly or weakly during a match" (3). Therefore, this style is considered a fundamental factor in team play. It also imposes the need for quick decision-making in passing due to the high pressure, as passing is "the reality of cohesion and connection between players in the same team and proof of the team's work as a single, cooperative group" (4). Moreover, the development of motor response speed results from the demands of the high-press strategy, which requires individuals in this group to develop their motor response speed. This requirement led to the rapid and effective improvement in the level of individuals in the experimental group in this test's results, which serves as an indicator of the development of some basic skills and response speed significantly. The results were logical.

Conclusions:

1. The use of defensive tactic exercises based on the high-press strategy contributes to the development of some basic skills (ball control and passing skills) in youth football.

2. The use of defensive tactic exercises based on the high-press strategy helps develop the motor response speed in youth football.

Recommendations:

1. Adopt the use of defensive tactic exercises based on the high-press strategy for training young football players.
2. Disseminate the results to coaches and conduct developmental courses for coaches about types of defensive tactical exercises.
3. Conduct similar studies on other samples.

Author's declaration:

Conflicts of interest: None

We confirm that all tables and figures in this article are ours and written by the researchers themselves.

Ethical-Clearance: this manuscript approved by local ethical committee of physical education and sport sciences college for women on (January /2024)

Author's contributions:

All contributions of this study were done by the researcher (A.N.) who get the main idea and work on writing and concluding also with number of experts, Haider Nawar and Ali Nadhim (Ministry of Education & Imam Al-Kadhumi College) in Statistics, Manal Bayat in revision, Inaam Ghalib in translating, Nasser Yasser in proofreading

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Exercise (1)

From the center of a football field with two goals, there are two groups: one on the attacking side and the other on the defensive side, each consisting of 4 players facing each other. Player A passes the ball to Player B and moves behind Player D. Then, Player B passes the ball to Player D, and the defensive players move towards the attacking players behind the midfield line, focusing on closing spaces for passes. Player C plays a long ball to Player A who is moving forward, then the defensive players cover him in a triangular shape. The ball

is then passed back, and the defensive players adjust their coverage accordingly. The attacking players try to switch the ball to the opposite side. The exercise ends after it is applied to the other side, and the defensive players adjust their coverage again in a triangular shape. The positions are then swapped, and the exercise is repeated.

Exercise (2)

Two groups of 4 players each, with half a field and two goals. The distance between the two groups is 25 meters, and between each player, it is 15 meters. The exercise begins with both groups starting together. Player A passes to Player B, then the defender covers. The defenders then adjust their coverage in a triangular shape. Player B passes to Player D, then the defenders adjust their coverage again in a triangular shape. The defender performs aerial coverage, and Player B drops the ball to Player C. Then, the defenders adjust their coverage again in a triangular shape. The defender performs aerial coverage, and Player C passes directly to Player D in the other group. Player E passes to Player A in the other group. Then, there is a positional change between the midfielders' C and E. The exercise is repeated after transitioning to the other side with a light jog.

تأثير تمارين الخط الدفاعية على وفق استراتيجية الضغط العالي في تطوير بعض المهارات الأساسية وسرعة الاستجابة الحركية بكرة القدم للناشئين
علي ناظم كوير
كلية الإمام الكاظم (ع) للعلوم الإسلامية الجامعة

أن اللعب الدفاعي يشكل الأساس الحقيقي للنجاح في كرة القدم إذ يحتاج الأداء الدفاعي الجيد إلى تنظيم وتنسيق عاليين بين اللاعبين لمنع الفرص للفريق المنافس. ومن خلال عمل الباحث لاحظ ان هناك تباين في اداء بعض المهارات الأساسية وقد يكون احد الاسباب هو عدم قدرة اللاعبين على تطبيق هذه المهارات اثناء اللعب كل ذلك ولد للباحث مشكلة حاول معالجتها من خلال تنفيذ خطط دفاعية و يعد تنفيذ استراتيجية الضغط العالي جزءاً أساسياً من تكتيكات اللعبة الأساسية إذ استخدم المنهج التجريبية على عينية تجريبية عددها (10) لاعب ومثلها ضابطة واجراء اختبارات قبلية في الاختبارات التي حددت واجراء التكافؤ ثم ولمدة (6) اسابيع تم تطبيق استراتيجية دفاعية بأسلوب الضغط العالي خلال وحدتين واجراء بعدها الاختبارات البعدية واستنتج الباحث ان اعتماد تمارين دفاعية على وفق استراتيجية الضغط العالي تعمل على تطوير بعض المهارات الأساسية وسرعة الاستجابة بكرة القدم للناشئين، وهذا ما يحقق احد اهداف التنمية المستدامة للامم المتحدة في العراق (الصحة الجيدة). واوصى باعتماد التمارين الدفاعية على وفق استراتيجية الضغط العالي