

The effect of applied exercises in the style of mini side games on the Strength characteristic by speed of female futsal players

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Abstract

The purpose of this paper is to develop exercises in the style of mini-side games for Strength characteristic by speed for female futsal players, and recognizing the effect of exercises in the style of mini-side games in developing the Strength characteristic by speed for female futsal players. The researchers used the experimental method for its suitability to the nature of the problem. The sample of the research was chosen by the intentional method represented by the (14) players of Al-Zawraa Sports Club for lounges and among the participants in the 2021-2022 sports season, and (6) female players were selected as a sample for the exploratory experiment, and the players were subjected to exercises in the style of (mini side games). S.SG prepared by the researcher, with a rate of (3) units per week. One of the most important results reached by the researcher is that: The exercises according to the style of mini side games applied by the experimental group had a positive effect on the level of the female futsal players and an improvement in the results of the pre and post-tests in terms of Strength characteristic by speed. One of the most important recommendations recommended by the researchers is that: Necessity of applying the exercises according to the style of mini side games by the coaches of the futsal teams, because of its good results in developing the Strength characteristic by speed of the futsal players, and necessity of re-applying the mini side games exercises on physical abilities that have not been studied and researched for female futsal players.

Introduction:

The development in the sports field, the progress in levels and the achievement of world records came as a result of many factors that came together to bring the athlete to an outstanding level in the physical aspect, including the use of various training methods that depended on diversity in the exercises that would raise the physical level of the players, and the game of futsal is the most popular in the world, which can be played in special places without the need for tools or special devices, and this game is one of the games that have witnessed a remarkable development in the performance of the players and their ability to provide distinct levels through their ability to provide the best skill level throughout the time of the match, which indicates the development of their different capabilities, so the speed characteristic of female futsal players is one of the important training topics that we seek to develop and which has an active role in preparing to achieve positive results for the game, and the new exercises with exercises in the style of (mini side games) that can be played from All ages, especially women, as it leads to an evolution in the level of performance, capabilities and abilities of female futsal players.

The importance of the research lies in the development of practical exercises in the style of mini-side games as a means to develop the strength characteristic of speed for the female futsal players, which will contribute to the development of the game, as well as being a study that serves the researchers and coaches of the game.

Research problem:

Reaching the level of sporting achievement in futsal football, which aims to achieve victory, requires the compatibility of very many requirements, including a high level of performance, interdependence and the overlap of physical abilities among them. And the methods and means that are used to develop this physical characteristic, and through the study and follow-up of the researcher to the women's sports teams in futsal football, he found that there is a difference in the training methods they use in developing the Strength characteristic by speed, each according to his belief in the best method, and they neglect the method of mini-side games in training. Despite being an important training method that works to develop the players' levels in a better way than the traditional training methods used in futsal football.

From here, the researcher found that this problem should be studied by developing practical exercises in the style of mini side games and trying to identify the extent of its impact on the development of the Strength characteristic by speed of female futsal players.

Research objective:

- Develop exercises in the style of mini-side games for Strength characteristic by speed for female futsal players.

- Recognizing the effect of exercises in the style of mini-side games in developing the Strength characteristic by speed for female futsal players

Research hypotheses:

- There are significant statistically significant differences between the results of the pre and post-tests of the experimental group in the Strength characteristic by speed of the female futsal players and in favor of the post-tests.

Research fields:

- Human field: Al-Zawraa Club's female futsal players and participants in the league for the 2021-2022 sports season.
- Time field: (14/11/2021) to (24/4/2022)
- Spatial field: Al-Zawraa Sports Club court.

Research methodology and field procedures:

Research Methodology:

The researchers used the experimental method for its suitability to the nature of the problem, its objectives and hypotheses.

Community and sample research:

The sample of the research was chosen by the intentional method represented by the (14) players of Al-Zawraa Sports Club for lounges and among the participants in the 2021-2022 sports season, and (6) female players were selected as a sample for the exploratory experiment, and the players were subjected to exercises in the style of (mini side games). S.SG prepared by the researcher, with a rate of (3) units per week.

Means, devices and tools used:

The researchers used the following means and devices:

- Arabic and foreign sources
- Personal interviews.
- international information network (Internet)
- observation and experimentation, a Dell laptop
- ANikon video camera, a photographic camera
- Casio electronic stopwatches).

Field Research Procedures:

identify the Strength characteristic by speed test for futsal football:

The researchers has identified a test to measure the speed characteristic of female futsal football players, as follows:

The test of sitting from lying down in (30)second (Hassanein. 2000).

- Purpose of the test: To measure the speed characteristic of the abdominal muscles.
- Devices and tools: stopwatch, mattresses (the test can be performed on the ground).
- Performance Specifications:
 - From a squatting lying position so that the hands are intertwined behind the head, provided that a colleague fixes the feet, and upon hearing the start signal, the tester bends the torso until he reaches the sitting position, followed by the rotation of the torso to the right side to touch the left knee with the right elbow, then return to the initial position, repeats Performance provided that the tester touches the right knee with the left elbow, and thus the laboratory repeats this action provided that the knees are touched by the elbow alternately, for the largest possible number of times in (30) seconds, as shown in the figure (1).
- General directions:
 - The laboratory must return to the initial position, touching the ground with the elbows after each attempt.
 - The hands must remain intertwined behind the head throughout the examination period.
 - You must not stop while performing the test.
 - The opposite knee should be touched with the opposite elbow in each repetition of the test.
 - Perform the maximum number of times in (30) seconds.
- Registration: The laboratory records the number of repetitions it has done in (30) seconds



Fig. (1) Shows the test of sitting from lying down

Scientific conditions for the tests:

The researcher conducted the exploratory experiment to verify the scientific transactions of the sitting test from lying in (30) seconds for the female futsal players in order to obtain the scientific bases for it.

As the researcher obtained (content honesty) through a questionnaire that was reviewed by experts and specialists to express their opinion on the proposed physical test to measure the strength characteristic of speed, and in order to calculate the stability of the test, the researcher conducted an exploratory experiment on (6) players from Al-Zawraa Sports Club for Futsal Sports and they were excluded from the main work sample, and the (test and retest) method was used, as the test was applied on December 5, 2021, and then the same test was re-applied on the same sample four days later, on December 11, 2021 AD, using Pearson's simple correlation coefficient between the scores in the first and second measurements, it was concluded that the test has high stability because the values calculated for it were of a significance level (Sig) (0.000), which is smaller than the value of the approved significance level (0.05) at the degree of freedom (4), and in order to identify the objectivity of sitting from lying in (30) seconds for the female futsal players, the value of the Pearson simple correlation coefficient was calculated between the scores of the first and second referees, and it was concluded that it has a high objectivity, given that the values of the significance level (Sig) for the test are (0.000), which is smaller than the values of the adopted significance level (0.05)

Pre-tests:

The researchers did pre-tests before starting the implementation of the training curriculum to test sitting from lying in (30) seconds for the female soccer players for the futsal and on the members of the experimental group sample. Shapiro-Wilk) for the sitting-from-prone test in (30) sec, whose value in the (Kolmogorov-Smirnov) test was (0.195) and its significance level values Sig (0.144), while its value in the (Shapiro-Wilk) test was (0.765) and its significance level values Sig (0.088) and given that the values of the significance level (Sig) for the test of sitting from lying in (30) s are greater than the level of significance approved, which is (0.05), which indicates that the data follow a normal distribution, so it is imperative for the researcher to use the parameter statistics, so it was used T-test for correlated and dependent samples.

Main experiences:

The researcher applied the vocabulary of the curriculum prepared and designed by her according to the S.S.G side mini-game exercises on the sample of the experimental group represented by Al-Zawraa Sports Club for female football players on the halls on Monday 3/1/2022 and on Al-Zawraa Sports Club stadium, and it took the implementation of the main experiment (methodology The training period is for two months and consists of (3 units) of training per week (Saturday - Monday - Wednesday) and the experiment ended on Saturday 5/3/2022.

Post-tests:

After the researcher completed the implementation of her training program according to the S.S.G side mini-game exercises on Monday 7/3/2022 AD, she conducted the post-test with the same procedures followed when conducting the pre-test, at the same time, on the same pitch and on the same sample, as well as the same auxiliary team.

Statistical means:

The ready program (IBM SPSS Statistics Ver 25) was used to extract the statistical treatments: (arithmetic mean, standard deviation, median, skew coefficient by moments method, Kolmogorov-Smirnov test, Shapiro-Wilk test for normal distribution, T-Test for correlated and unrelated samples independent, Pearson's simple correlation coefficient).

Results and discussion:

Presenting the results of the (T.test) test for the Strength characteristic by speed test for the experimental group in the pre and post-tests:

For the purpose of knowing the significant differences between the pre and post-tests in the Strength characteristic by speed test for the two experimental groups, the researcher used the (T. test) test for the linked and dependent samples, as shown in Table (1).

Table (1) Arithmetic means, standard deviations, and the calculated t-value for the two tests (pre and post) in the Strength characteristic by speed test for the experimental group

Test	Pre-test		Post-test		arithmetic mean of difference	standard deviation of differences	T value	Level sig	Type sig
	Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation					
sitting from lying down in (30) second	18.071	1.542	24.357	1.392	6.285-	0.549	11.449	0.000	sig

From the results presented in Table (1) it appears to us that the arithmetic mean value (for the sitting test from lying in (30) seconds) in the pre-test (18.071) with a standard deviation of (1.542), while the arithmetic mean in the post-test reached (24,357) with a standard deviation (1.392), and the calculated (T) value was (11.449) at the degree of freedom (13) and it has a significance level (Sig) of (0.000), which is smaller than the value of the approved significance level (0.05), which indicates the existence of significant differences Significance between the test, the pre-test and the post-test in favor of the (post-test), and the researcher attributes the improvement in the quality (strength characteristic by speed) for the female futsal players to the preference of the approach followed by designing exercises according to the style of mini-side games that are needed by the game of futsal football because it is considered a physical basis It is based on the skill performance of the game because the nature of the game and the method of skillful performance includes the speed of handling and receiving, as well as the speed of scoring and attacking towards the goal of the opposing team and the speed of returning to the defensive position. Speed is of the essence, as both serve the motor performance of the players , that the conclusion reached by the researcher is consistent with what was indicated by (al-Khashab and et al. 1999) “Since the strength characteristic by speed is always related to the type of sport and competition and its requirements, the special training for the development of the force distinguished by speed must be targeted To improve the level of the athlete’s performance in certain movements, and that gradation to reach the best level of performance has become an important role in training, and that gradation means the progression of the training plan from easy to difficult and from simple to complex.

It agrees with what was confirmed by (Buckley. 2013) “that the structured and programmed training and the use of types of intensity in training and the use of the optimal types of rest between repetitions lead to the development of achievement and that by repeating this the effectiveness of the Strength characteristic by speed increased, as the force distinguished by speed is a combination of explosive forces”, It agrees with what was indicated by (Abu Abdo. 2014) “Muscular strength is an element for developing speed, and muscular ability is related to speed to a small degree when the player encounters light resistance, but when the situation requires that the player perform quick movements against great resistance.” The relationship between force and speed is clear."

The researchers also considers that the Strength characteristic by speed d appears clearly in most of the movements of playing football for the halls, and the game requires the availability of this ability for the player, especially when performing repetitive movements performed with high speed and force at the same time, such as the rapid transition to cut the ball from the opponent or when using a performance force accompanied by a high frequency While running with the ball.

Conclusions and Recommendations

Conclusions:

- The exercises according to the style of mini side games applied by the experimental group had a positive effect on the level of the female futsal players and an improvement in the results of the pre and post-tests in terms of Strength characteristic by speed.

Recommendations:

- Necessity of applying the exercises according to the style of mini side games by the coaches of the futsal teams, because of its good results in developing the Strength characteristic by speed of the futsal players.
- Necessity of re-applying the mini side games exercises on physical abilities that have not been studied and researched for female futsal players.
- Necessity of re-applying the mini side games exercises on offensive and defensive skills in futsal, which have not been studied and researched.
- The necessity of re-applying the mini side saliva exercises for other age groups and for both sexes.

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