



Comparative study of some variables (skill performance, physical and motor abilities) before and after the league competitions for women's futsal players season 2023/2024

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Abstract

This study aimed to identify the impact of the Iraqi Women's Futsal League competitions for the 2023-2024 season on the level of skill performance and some physical and motor abilities of the players participating in the league competitions, i.e. a comparison between before and after the league competitions, as pre- and post-tests were conducted on a sample of 45 players participating in the Iraqi League, and the researcher processed the results of the raw tests and the study reached the significance of the results in skill performance and physical and motor abilities, which confirms the positivity of the impact of the Iraqi League on the players. In addition, playing matches continuously helps in developing the skill performance of the players, and the researcher recommends that the training curricula for coaches in the preparation stages include intensive matches in order to raise physical and skill capabilities.

Keywords: skill performance, futsal, Iraqi Futsal League.

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Introduction

Futsal is one of the games that has a great development in recent years. This development includes all aspects of the game, administrative, technical and organizational. This is clearly evident in the level of players' performance on the field. This progress is due to the use of a variety of modern sciences that contribute to the development of the training process for players, the result of which is raising the physical, skill, psychological and tactical capabilities of players. This is what we see noticeable as a result of the use of modern methods and foundations for education and training and the diversity in training methods according to modern scientific principles that have a clear impact on developing the level of the game and the performance of players in general and their physical, psychological, tactical and skill capabilities and characteristics in particular. This is due to the continuous scientific progress at the sports level, which is in the interest of sports competition.

The team's level in competition is a reflection of the players' abilities and level of training. In addition, the level of competition plays an important role in the development of the players and their various abilities, as well as their skill level and the Verheijen explaining the skill performance (Verheijen, the original guide to football periodisation, 2016).

Skill performance is the essence of the matches as it is considered the link between physical and tactical performance, as a good player uses his skills efficiently and competently when he is at the peak of his physical level and then he can use them in the tactical duty assigned to him by the coach. (Kadhim 2024) The higher the level of competition, the more players are forced to play with a higher technique that matches the level of competition (Talib Jasim, Hayder Hussein, and Saad Ibrahim 2022)

Playing at high levels, there is less space and less time for players to play and execute, which increases the difficulty of situations and forces players to play with high intensity (S. S. Ibrahim 2021), Given the fast-paced nature of futsal and the frequent transitions between defense and attack, this pushes players to play with high intensity and pushes their physical abilities to work at their maximum, which is confirmed by (Stevie Grieve, Nacho Garrido, 2014) It is that offensive and defensive play and the transition between them during the match forces players to work with 100% of their abilities, skill and tactical capabilities. The researcher sees through his knowledge and field experience in this field and based on the opinions of some experts specialized in the game, that playing in futsal is high intensity due to the speed of transition between the defensive and offensive side and the responsibility on the players in both cases, and this forces players to work with the anaerobic lactic system, and Moafaq Al Mola explain the importance of speed of play, Nowadays there is no place for slow layers in the modern football (Ali, Hameed, and Ibrahim 2020).

This is what a futsal player should be in terms of speed and a good level of physical abilities. From this concept, the importance of the research became clear to the researcher, as the research aims to identify the impact of the Iraqi Women's League competitions on the level of skill performance and some physical abilities of futsal players for the 2023-2024 season.

By referring to previous sources and studies, the researcher reviewed a number of studies in order to benefit and learn more concepts that support the content of this study, the study (Sérgio Adriano Gomes, 2024) refers that Coaches should consider the relative space to the players and not just the size of the field or the number of players. That is, the playing space must be proportional to the number of players in order to understand the physical and physiological requirements of the players, and the study (Hayder Talib Jasim, Abed, and Ibrahim 2023) confirmed that the competitions effects on abilities and develop most of the abilities for the players who are playing, while the study (Umberto C. Corrêa, Fernando A. M. Alegre, Andrea M. Freudenheim, Suely dos Santos, Go Tani, 2012, p. 185) says that the most types of use systems, basic duties and their characteristics for the system helps in adaptation and continued performance, and (Ali, 2024, p. 291) refers to the competitive training that used in experiment had a positive role in technical and tactical performance, and the researcher reviewed the study (S. S. Ibrahim 2021) lead to some forms to develop the acceleration with competitive style, and another study (Nahlah Sabeeh Obed, Shahad Marzoq, 2024, pp. 880-891) Paying attention to physical training that includes a level of performance from movements to skills, (S. S. Ibrahim, Ahmed, and Shehab 2024) Focusing on static strength training helps develop overall strength, (S. Ibrahim, Asleawa, and Farhan 2024). From the previous studies presented, the researcher sees the importance of the research in identifying the impact of the Iraqi Women's League competitions on the level of skill performance and some physical abilities of female futsal players for the 2023-2024 sports season.

Method

The researcher used the experimental method with a single-group design (before and after) to suit the nature of the research problem, (Lect Samer Saad Ibrahim, Salam Hantosh, and Talb Jasim n.d.) The experimental method is the only method that can be used accurately to choose hypotheses for relationships of the type "cause and effect", as the researcher usually controls one or more of the independent variables, and works to adjust the effect of other relevant variables to see the effect on the variables dependent on the independent variable.

The research community included the players of the clubs participating in the Iraqi League participating in the Futsal League for the season (2023-2024), numbering (7) clubs, which are (Al-Zawraa Sports Club, Al-Tun Kopri Sports Club, Maysan Oil Sports Club, Nineveh Girl Sports Club, Baladi Sports Club, Al-Amwaj Al-Mawsili Sports Club, Bint Iraq Academy).

The research sample was limited to (45) female players from three participating clubs, which are (Al-Zawraa Sports Club, Al-Tun Kopri Sports Club, Maysan Oil Sports Club), as the research sample chosen by the researcher intentionally represented (42.85%) of the total number of female players participating in the Iraqi Futsal League for the season.(2024-2023)

The researcher used a number of means of collecting information, such as Arab and foreign sources and observation, in order to measure the research variables, which are (skill performance, maximum strength, acceleration, strength endurance, agility).

- Skills performance test (عبدالطلب، 2016، صفحة 78).
- Fast Strength for Legs (درويش راجح الديلمي، أحمد عزت، 2012، صفحة 51)
- Standing Long Jump Test (HEDE, 2011, pp. 178-179)
- Single-Leg Squat (R+L) (Livengood AL, DiMattia MA., 2004, pp. 24-25).
- Accelerate 10 Meters test (Marques MC, Izquierdo M, 2014)
- Illinois Agility (Brukner, Peter, 2016, p. 144)

The researcher conducted the Pre-tests for the purpose of identifying the most important positive and negative points in performing the tests on 1st of September 2024, in addition to the fact that all tests are approved and standardized tests. The researcher also made sure that the sample was normally distributed through tests before starting the tests, and confirmed the data of sample and its distribution through the skewness factor, as shown in Table.(1)

Table (1) Descriptive Statistics

N	Subjects	Minimum Statistic	Maximum Statistic	Mean	St. Deviation	skewness
	Skills performance	0.29	1.16	0.62	0.178	0.354
	Fast Strength for Legs	4.90	7.15	6.18	0.676	0.354
	Standing Long Jump	1.90	2.90	2.34	0.325	0.354
	Single-Leg Squat (R)	15.00	75.00	35.66	16.082	0.353
	Single-Leg Squat (L)	15.00	75.00	36.66	18.799	0.353
	Accelerate 10 Meters	1.70	2.23	1.98	0.140	0.353
	Illinois Agility	16.63	20.23	18.59	1.020	0.353

Through the statistical description of the sample data in Table (1) for the researched ability and skills tests, we note that the sample is distributed normally, which confirms the continuation and conduct of tests for the research sample for the researched variables under study. The researcher also began the pre- research tests on 7, 8, 9, 10 of September 2025, while the post-tests were conducted on 3, 4, 5/10/2025, and the Iraqi League competitions continued for a period of 11 days.

Results

After statistical process of the sample data, the researcher reached the following results:

Table (2) Paired Samples Statistics

Subject		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Skills performance (Test 1)	.8378	45	.19081	.02844
	Skills performance (Test 2)	1.0453	45	.13314	.01985
Pair 2	Fast Strength Legs (Test1)	6.1878	45	.67690	.10091
	Fast Strength Legs (Test2)	6.4978	45	.81002	.12075
Pair 3	Standing Long Jump (Test 1)	2.3456	45	.32593	.04859
	Standing Long Jump (Test 2)	2.7811	45	.60587	.09032
Pair 4	Single-Leg Squat (R) Test 1	35.6667	45	16.08218	2.39739
	Single-Leg Squat (R) Test 2	47.0000	45	19.08117	2.84445
Pair 5	Single-Leg Squat (L) Test 1	36.6667	45	18.79918	2.80242
	Single-Leg Squat (L) Test 2	48.3333	45	19.68502	2.93447
Pair 6	Accelerate 10 Meters (Test 1)	1.9829	45	.14024	.02091
	Accelerate 10 Meters (Test 2)	1.8716	45	.18062	.02692
Pair 7	Illinois Agility (Test 1)	18.5982	45	1.02017	.15208
	Illinois Agility (Test 2)	17.5291	45	1.28704	.19186

Table (3) Paired Samples Correlations

Subject		N	Correlation	Sig.
Pair 1	Skills performance Test 2 & Skills performance Test 1	45	.265	.079
Pair 2	Fast Strength Legs Test1 & Fast Strength Legs Test2	45	.705	.000
Pair 3	Standing Long Jump Test 1 & Standing Long Jump Test 2	45	.230	.128
Pair 4	Single-Leg Squat (R) Test1 & Single-Leg Squat (R) Test 2	45	.562	.000
Pair 5	Single-Leg Squat (L) Test1 & Single-Leg Squat (L) Test 2	45	.588	.000
Pair 6	Accelerate 10 Meters Test1 & Accelerate 10 Meters Test 2	45	.367	.013
Pair 7	Illinois Agility Test 1 & Illinois Agility Test 2	45	.312	.037

Table (4) Paired Samples Test

Subject		Paired Differences					df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Skills performance (Test 2) - Skills performance (Test 1)	-.20756	.20169	.03007	-.26815	-.14696	-6.903	44	.000
Pair 2	Fast Strength Legs (Test1) - Fast Strength Legs (Test2)	-.31000	.58422	.08709	-.48552	-.13448	-3.559	44	.001

Pair 3	Standing Long Jump (Test 1) - Standing Long Jump (Test 2)	.43556	.61834	.09218	-.62133	-.24979	-4.725	44	.000
Pair 4	Single-Leg Squat (R) Test 1 - Single-Leg Squat (R) Test 2	11.33333	16.66515	2.48429	16.34010	-6.32657	-4.562	44	.000
Pair 5	Single-Leg Squat (L) Test 1 - Single-Leg Squat (L) Test 2	11.66667	17.48376	2.60632	16.91937	-6.41396	-4.476	44	.000
Pair 6	Accelerate 10 Meters (Test 1) - Accelerate 10 Meters (Test 2)	.11133	.18356	.02736	.05619	.16648	4.069	44	.000
Pair 7	Illinois Agility (Test 1) - Illinois Agility (Test 2)	1.06911	1.36995	.20422	.65753	1.48069	5.235	44	.000

Discussion

The researcher presented the result in tables.

From the tables (2), (3) and (4) for the (pre-) and post-tests of the research sample, they show the final image of the results of the physical and skill tests after statistical processing, we note that the results of the arithmetic means and (Sig) for the physical and skill tests, which are (skill performance, strength endurance for the legs, explosive strength for the legs, strength characterized by speed for the legs, acceleration 10 m, agility) are less than (0.05) for all tests, which indicates that there are differences between the pre- and post-tests, and they are significant differences considering the results (S. S. Ibrahim, Ahmed, and Shehab 2024)

The significance of the differences in skill performance is in the post-test due to the continuity of training for the players from the preparation to the competitions, all the way to the competitions, as the competition for the league championship and playing highly competitive matches in short times, While the researcher attributes the significance of the differences in the strength characterized by speed and strength endurance of the two men to the match factor and the strength of stops and physical clashes and (Easa, Shihab, and Kahdim 2022) says that the general endurance and strength endurance improved by frequency of training.(Haider Talb Jasim, Hantosh, and Ibrahim 2021)

In the 10-meter acceleration variable, the researcher attributes the significance of the differences to the fact that the transitions in futsal between defense and attack require a high level



of acceleration and deceleration in order to keep up with competitors, and this increases the characteristic of this ability(S. S. Ibrahim 2021).

Finally, in the agility variable, the significance of the differences is due to the level of play, which contains changing situations that force the players to change their body positions while running and speeding, and this explains by (Verheijen, Analysing football , 2024 , p. 24) Football situations depend on four factors, which are (positioning, timing, direction, speed), and the more ideal these factors are, the more success will be achieved for the player, and this is what the researcher agree with and that called (Action Football) .(Hayder Talib Jasim, Hussein, and Ibrahim 2021)

Depending on the results, the researcher concluded the following:

1. The organized competitions increase the physical level of players.
2. Playing games continually help players to improve their skills.
3. The intensity and frequency of games without rest effect negatively on the players conditions.

The researcher recommending

1. Make similar researches to compare between player abilities.
2. The training programs in preparation period contain of some games to improve the abilities of players.



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