

THE EFFECT OF SKILL EXERCISES USING AN INNOVATIVE EDUCATIONAL FIELD WITH A SENSORY ELECTRONIC SYSTEM IN DEVELOPING THE ACCURACY OF HANDLING AND SCORING SKILLS OF YOUTH FUTSAL PLAYERS

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ABSTRACT

The objective of this study was to create exercises in the innovative educational domain utilizing a sensory electronic system to enhance the precision of skills related to handling and scoring in futsal. Additionally, the study aimed to assess the influence of these exercises on the development of youth futsal players. The researchers posited various hypotheses, one of which was the presence of statistically significant disparities between the outcomes of the pre- and post-tests in relation to the research variables. The selection of youth players for the Baghdad group in the youth league for the 2022-2023 season was conducted by the researchers. The research community consisted of 90 players who were selected for the study. From the seven teams in the Baghdad group, two teams were chosen as a sample for the youth league. Each team had 10 players, resulting in two groups: an experimental group and a control group. The sample size was determined to be 22% of the total community. The experimental group underwent exercises related to educational innovative electronic sensor systems and auxiliary tools in the field. The main experiment lasted for 12 weeks, with an average of 12 educational units. Each unit lasted for 90 minutes. Subsequently, post-tests were administered to assess proficiency in futsal handling and scoring skills. The statistical software SPSS was employed to analyze the data obtained from both the pre- and post-tests. The study's findings encompassed several key conclusions, with the primary one highlighting the efficacy of the exercises created and implemented by the researchers in the innovative educational domain of the sensory electronic system. These exercises were found to be successful in enhancing the participants' abilities in handling and scoring. Consequently, it is recommended that the outcomes of this study be utilized to enhance the educational modules in futsal for youth clubs within the Baghdad Group.

Keywords: Skill Exercises, Innovative Educational, Sensory, Electronic System, Handling, Scoring, Futsal.

INTRODUCTION

Football is a highly popular sport that holds a prominent position among other sports worldwide (Balci et al., 2022). It has garnered significant attention and interest from individuals who possess expertise and proficiency in the field (Roberts, Rudd & Reeves, 2020). These individuals have dedicated their efforts to exploring the most effective scientific approaches and

methodologies through research and experimentation (Hyndman & Liguori, 2023). Their objective is to enhance the game, augment its appeal and enjoyment, and elevate the performance level of its participants (Fardilha, 2021). This is achieved by focusing on various aspects such as motor skills, technical abilities, strategic planning, psychological well-being, educational aspects, and more (Crawley, 2021). Each of these aspects possesses distinct methods of preparation and training (Behravan & Razavi, 2021). The youth group is widely recognized as a crucial and delicate age cohort in the lives of athletes, as it serves as a pivotal juncture in their careers (Lewis, 2023). It can either lead to success and advancement into the adult league or result in failure, frustration, and the loss of opportunities for which they have diligently strived (Blake & Solberg, 2023). Consequently, it is imperative to allocate attention to this age group in all its dimensions to foster the development of proficient players for the future (Roberts, Rudd & Reeves, 2020). A comprehensive and effective preparation of players from the initial phases of their training will significantly enhance their ability to perform optimally in the game at advanced levels (Staśkiewicz-Bartecka et al., 2023). Therefore, it is crucial to conduct research in order to identify skill exercises within a cutting-edge educational domain. These exercises may pertain to either an innovative or contemporary educational field. Subsequently, they should be incorporated into training and educational curricula, alongside the existing exercises and educational programs, to enhance the precision and scoring abilities of futsal players.

THE PROBLEM OF THE STUDY

The improvement of the quality of different sports necessitates stakeholders' consideration of both the positive aspects of their promotion and the negative aspects that need to be addressed (Ribeiro et al., 2020). The game of futsal is an example of a sport that has made significant advancements (Sekulic et al., 2019). These advancements were not haphazard or coincidental, but rather the outcome of systematic planning based on scientific principles (Spyrou et al., 2020). This planning involved the strategic utilization of research findings and studies conducted by nations striving for progress and development (Lago-Fuentes et al., 2020). The researchers, who possess expertise in this particular game, have identified a vulnerability in the utilization of devices or educational methods within the realm of education. This vulnerability pertains to the incorporation of innovative and contemporary trends in games and sports, which have a significant and influential impact on these activities. Surprisingly, this aspect has gone unnoticed by researchers in the training of futsal club players. Additionally, there is a deficiency in the precision of handling and scoring, which adversely affects the players' overall skill performance. To address this issue, it is imperative to rectify the accuracy of handling and scoring, as it directly impacts the players' skill development.

THE OBJECTIVES OF THE STUDY

1. Designing an innovative educational field to develop the accuracy of handling and scoring football halls.
2. Preparing and designing skill exercises within the innovative educational field to develop the accuracy of handling and scoring in futsal.

3. Identify the impact of skill exercises within the innovative educational field in developing the accuracy of handling and scoring in football halls.

The Hypotheses of The Study

1. "There are statistically significant differences between the results of the pre- and post-tests and for the experimental and control groups in the accuracy of handling and scoring in futsal".
2. The existence of statistically significant differences in the results of the post-tests in the accuracy of handling and scoring in football halls between the experimental and control research groups.
3. "The existence of statistically significant differences in the results of the post-tests between the two research groups in the accuracy of handling and scoring and in favor of the experimental group".

The Areas of The Study

Human field: Youth players in the first division futsal league.

Time Area: For the period from 19/9/2022 To 26/12/2022.

Spatial Area: Indoor futsal hall at the Ministry of Youth and Sports in Baghdad.

METHODOLOGY

Research Methodology

The researchers employed an experimental methodology that aligned with the inherent characteristics of the problem at hand, as well as the research objectives and hypotheses. Specifically, the researcher utilized a design involving two equivalent groups (control and experimental) with pre- and post-tests. This design ensured that both groups were entirely comparable in all aspects, except for the experimental variable that exclusively influenced the experimental group (Pandey & Pandey, 2021).

Community and Sample Research

The present study focused on the research community of young futsal players for the 2022-2023 season in the Baghdad group, consisting of seven teams. A deliberate and determined approach was taken to select a representative sample for the study. The sample was randomly chosen using a lottery method, resulting in the selection of two teams: the experimental team (police mechanisms) and the control team (Baghdad Municipality). The sample size consisted of 10 players from each team, representing approximately 22% of the total research community. The selection criteria for these players were based on their minimal absence, high level of commitment, and non-participation in any other sports activities, as indicated in Table 1.

Table 1: "Shows the number of teams of Baghdad group and the number of players in each team".

Control group		Experimental group	
Teams	Number of players	Teams	Number of players
Baghdad Municipality SC	10	Aliyat Al-Shorta SC	12
Al-Jaish SC	12	Al-Masafi SC	12
Al-Shorta SC	15	Al Dafr	14
		Al- Mror	15
Total	37	Total	53

Sample Homogeneity

"To assess the homogeneity of the research sample in relation to the variables of height, mass, and age of the students, the researchers employed the torsion coefficient". This coefficient was utilized to measure the degree of dispersion of the sample within a normal distribution. The obtained values ranged from 0.035 to -1.076, falling within the range of ± 3 standard deviations on the normal distribution curve. These results indicate a high level of homogeneity within the research sample, as depicted in Table 2.

Table 2: "Shows the values of the arithmetic mean, standard deviation and torsion coefficient".

Variables	Unit of measurement	M	SD	Torsion coefficient
Age	Month	199	8,02	4.03%
Height	CM	183.75	7.73	4.20%
Weight	Kg	69	6.14	8,89%
Training Age	Month	38.16	5.07	13.28%

Means of Data Collection:

In order for researchers to successfully conduct their experiments and fulfill their research objectives, it is necessary to employ various methods and tools. These tools refer to the resources utilized by researchers to gather data, address research inquiries, and accomplish their research aims (Roberts, 2020).

Therefore, he used the following research methods:

1. Arab and foreign sources.
2. Personal midwives.
3. Observation and experimentation.
4. Data collection form and unloading information for research.
5. Tests and measurements.

Tests Used In The Research:

1. Wall Feedback Passing Test (20) Seconds (Doewes, Elumalai & Azmi, 2023).
2. Scoring from a distance of (10) meters (Naser, & Ali, 2016).

Scientific Foundations of the Tests:

The scientific basis of the tests was determined by the researchers through doing the tests both immediately and after a period of five days. This approach was employed to assess the stability and reliability of the tests. The researchers ensured the integrity of the tests by employing self-report measures, as indicated in Table 3. Regarding objectivity, the results of the exploratory experiment indicate that the tests employed in the study were highly objective, as evidenced by the sample members' clear comprehension of the tests and their lack of self-evaluation.

Table 3: "Shows the statistical parameters of the tests (stability coefficient, self-honesty coefficient)".

Tests	Stability Coefficient	Honesty Coefficient
Passing	0.90	0.94
Scoring	0.88	0.90

Exploratory Study

On Thursday, September 15, 2022, the third exploratory experiment was conducted. The objective of this experiment was to assess the efficacy of the exercises developed by the researcher for the sensory electronic system. Specifically, the experiment aimed to determine their suitability for the research sample and how to effectively manage these exercises on the stations of the educational unit. Additionally, the experiment sought to identify the optimal number of stations that align with the duration of the main section of the educational unit, as well as the timings of each exercise on each station and the operational time of each station within the educational unit.

The main objective of conducting this exploratory experiment was as follows:

1. Identify the negatives that the researcher will face to avoid falling into them in the main experience.
2. Identify the time spent to perform each test.
3. Knowing the mistakes that the researcher may make and try to avoid or correct them.
4. Knowing the tools that are lacking in conducting tests.
5. Knowing the efficiency of the work team.
6. Identify the validity of the form for tests.
7. Identify the extent to which the sample absorbs the tests.

Pre- Tests:

The researchers conducted the pre-tests on Monday, 19/9/2022 in the closed sports hall at the Ministry of Youth and Sports, testing the accuracy of the performance of the passing and scoring skills.

Equivalence of the Two Research Groups

The researchers extracted the equivalence values of the experimental and control groups using the results of their tests obtained in the pre-test as shown in Table (4).

Table 4: "Shows the results of equivalence between the experimental and control groups of passing and scoring skills under study".

Variables	Unit of measurement	Control		Experimental		T	Sig
		M	SD	M	SD		
Passing	Number	7.30	1.76	5.6	1.85	-.224	.828
Scoring	Degree	7.70	1.63	5.8	1.88	1.06	.098

Program Implementation Steps

1. The researchers prepared special exercises for a period of (12) weeks by (1) educational units per week for (Wednesday) to be the total number of educational units (12) educational units.
2. The training program was implemented on Wednesday, 27/9/2022 until Wednesday, 14/12/2022, on the experimental group of (10) players.
3. The average time used in the exercises within the training unit (main section) was between (50-60) minutes.
4. The means of assistive training used in the application of special exercises varied and varied.
5. The total time of the exercises carried out during the training program (1080 minutes).

Post-Tests

The researchers conducted the post-tests after completing the educational curriculum and its (12) units on (Monday) 26/12/2022, taking into account all the circumstances, conditions and procedures of the pre-tests.

Statistical Methods

The researchers employed the Statistical Package for the Social Sciences (SPSS) to analyze and interpret the research data in accordance with the following statistical laws:

1. Simple correlation coefficient (Pearson).
2. Arithmetic means.
3. Standard deviation.
4. Torsion coefficient.
5. Percentage Law.
6. Law (T) for correlated samples.
7. Law (T) for independent samples.

RESULTS

Presentation, Analysis and Discussion of Results

"Presentation and analysis of the results of the pre- and post-tests of the experimental group":

In order to ascertain the distinctions between the pre- and post-tests in the tests being examined for the experimental group, the researchers employed the T-test for symmetrical samples, as indicated in Table 5.

Table 5: "Shows the mean and standard deviation values and test values (T) for the results of the pre- and post-tests for the research variables of the experimental group".

Variables	Unit of measurement	Pre-test		Post-test		T	Sig
		M	SD	M	SD		
Passing	Number	7.30	1.76	8.9	1.44	-2.516	0.033
Scoring	Degree	7.70	1.63	9.4	1.71	-2.684	0.025

"Discussing the results of the pre- and post-tests of the experimental group"

Upon examination of Table 5, it becomes evident that the variables under investigation in this study exhibit a notable disparity between the pre- and post-tests. Specifically, the post-test results demonstrate a significant improvement in the skill accuracy and scoring proficiency of the experimental group members in the domain of futsal. This finding suggests that the participants in the experimental group have experienced a substantial enhancement in their performance levels compared to their initial state prior to the commencement of the primary experiment. The reason for this development is attributed by the researchers to the skill exercises that were designed and prepared using the educational field in the audiovisual sensory electronic system. These exercises were found to have a significant impact on the performance of the experimental group sample. The experimental group was exposed to conditions simulating play, including continuous changes in passing and scoring angles. This aligns with the findings of Hermans and Engler (2010), who suggested that the effectiveness of skill exercises in enhancing player performance is heightened when these exercises are designed to replicate real game conditions, incorporating dynamic variations in passing and scoring angles. This is also in line with the earlier research conducted by Skubala and Burkett (2023), which demonstrated that exercises that closely simulate the conditions experienced by learners in actual competitive settings are highly effective in fostering the development of harmonious abilities and skills.

"Presentation and analysis of the results of the pre- and post-tests of the control group"

In order to assess the notable disparities between the pre- and post-tests in the tests being examined for the control group, the researchers employed the T-test for symmetrical samples, as depicted in Table 6.

Table 6: "Shows the values of the arithmetic mean, standard deviation and test values (T) for the results of pre- and post-tests for the research variables of the control group".

Variables	Unit of measurement	Pre-test		Post-test		T	Sig
		M	SD	M	SD		
Passing	Number	5.6	1.85	7.1	1.64	2.57	0.030
Scoring	Degree	5.8	1.88	7.7	1.68	2.63	0.027

"Discussing the results of the pre- and post-tests of the control group"

Based on the analysis of Table 6, it was observed that the control group exhibited notable variations in attaining statistically significant distinctions for the dependent variables being

investigated. Specifically, substantial differences were observed in the passing and scoring variables. The researchers ascribe the rationale for documenting the abilities of passing and scoring to the observed statistically significant disparities. It is noted that coaches prioritize these two skills in all training exercises due to their paramount importance in assessing and enhancing players' proficiency levels. This emphasis on passing and scoring may come at the expense of other skills and attributes. The researchers also attribute the observed differences to the substantial variation in the exercises related to passing and scoring within the training units and throughout the training curriculum of the control group.

"Presentation and analysis of the results of the post-tests of the two research groups"

The researchers employed the statistical test known as the law (T) to analyze the post-test results of both the experimental and control study groups across all variables of interest. This analysis aimed to determine which of the two groups had a greater impact. The findings are presented in Table 7.

Table 7: "Shows the values of the arithmetic mean, standard deviation and test values (T) for the results of the post-tests of the research variables for the experimental and control groups".

Variables	Unit of measurement	Control		Experimental		T	Sig
		M	SD	M	SD		
Passing	Number	7.1	1.64	8.9	1.44	4.75	0.000
Scoring	Degree	7.7	1.68	9.4	1.71	4.73	0.000

"Discussion of the results of the post-tests of the two research groups"

Upon examination of Table 7, it is evident that the post-test outcomes of the experimental group surpassed those of the control group across all variables investigated. This substantiates the efficacy of the exercises devised and developed by the researcher within the educational domain, utilizing a sensory electronic system. The application of said exercises to the experimental group sample resulted in their superior performance and outcomes in all dependent variables examined in this study. The researchers ascribe the superior performance of the participants in the experimental group in the domains of handling and scoring to the skill exercises developed and designed on the sensory electronic system. This system operates based on two attention systems, namely the goal-oriented system and the stimulus-oriented system, which collectively contribute to the enhancement of handling and scoring abilities. According to Aghili (2022), there are two attention systems that play a role in regulating control, focus, and attention. "The first system, known as the top-down system or goal-directed system, is influenced by expectations, information, and goals". The second system, referred to as the bottom-up system or stimulus-directed system, responds to salient stimuli. A deficiency in the interaction between these two systems can lead to a decline in the level of control, concentration, and attention. The exercises in question are known for their adaptability in terms of the diverse stimuli they present to the performer, requiring them to quickly switch and transition between different stimuli. This process aids in establishing and selecting a specific response from various possibilities. As noted by Orangi et al. (2021), cognitive flexibility involves the ability to switch

and transform, encompassing the identification and selection of a particular response from multiple simulations. Consequently, flexibility is distinguished by its diversity through the range of behaviors it encompasses. The superior performance of the experimental group in scoring and handling skills can be attributed to the comprehensive educational units provided to its members. These units were designed to emphasize the practical application of these skills by incorporating exercises that were closely aligned with the sensory electronic system. The experimental group members do not engage in any form or style of exercise. This finding aligns with the observations made by Rozi et al. (2023) in their study, which emphasized that the utilization of educational tools in the form of exercises facilitated consistent practice of skills, particularly in the areas of passing and scoring. The study found that engaging in these exercises led to a notable improvement in scoring accuracy and a mastery of various forms of passing. It is worth noting that these exercises were designed to closely resemble real performance scenarios and encompassed a range of gameplay variations. The effectiveness of these exercises was demonstrated by their ability to enhance accuracy and concentration in scoring and passing skills.

CONCLUSIONS

Based on the systematic examination, evaluation, and discourse of the findings, the subsequent deductions were derived:

1. The exercises devised and formulated by the researcher proved to be efficacious in enhancing the passing and scoring abilities of the research participants upon their implementation.
2. The study revealed that the implementation of the sensory electronic system in the educational area has demonstrated its efficacy in enhancing the participants' abilities to comprehend and achieve higher scores, as observed in the experimental group.
3. Research indicates that when exercises are designed to closely replicate the conditions experienced by learners in real competitive situations, including time constraints, they have a significant impact on the improvement of passing and scoring skills.

RECOMMENDATIONS

"Based on the conclusions reached by the researchers, they recommend the following":

1. Utilizing the findings of this study, it is imperative to include them into the formulation of the educational curriculum for youth clubs' futsal programs, with a specific focus on the Baghdad Group.
2. The integration of sensory electronic systems into exercise routines and their incorporation into the training protocols of futsal clubs has demonstrated significant efficacy in enhancing the proficiency of futsal players in passing and goal scoring, as supported by empirical evidence.
3. The potential for the development of additional assistive technologies to enhance various skills and abilities.

REFERENCES

1. Aghili, S. A. (2022). The Immediate Effects of High Carbohydrate and Caffeinated Drinks on Speed, Coordination, and Cognitive Function in Professional Futsal Players. *International Journal of Sport Studies for Health*, 5(1).
2. Al Behadili, H. J. H., & Kasim, M. A. (2022). Developing Ball Dribbling And Passing Skills Using The Integrative And Reciprocal Methods Of Emerging Footballers. *Eurasian Journal of Humanities and Social Sciences*, 11, 76-82.
3. Al Behadili, H. J. H., & Kasim, M. A. (2022). Effects Of A Training Program For The Plyometric On The Harmonic Abilities And Muscular Ability Of Football Players. *European Journal of Interdisciplinary Research and Development*, 6, 60-69.
4. Al Behadili, H. J. H., & Kasim, M. A. (2022). The Implications For Learning Of Transferring On Passing Skills In Junior Football Players. *Open Access Repository*, 8(9), 39-49.
5. Ali, H. F. S., & Kasim, M. A. (2022). The Effect Of An Educational Curriculum Using The Jigsaw Strategy To Learning Skills Of Volleyball For Secondary School Students. *European Journal of Interdisciplinary Research and Development*, 9, 160-168.
6. Ali, H. F. S., & Kasim, M. A. (2022). The Effect Of Using The Cooperative Learning And Blended Learning Method In Improving The Level Of Students Performance In Learning Volleyball For Secondary School Students. *American Journal of Interdisciplinary Research and Development*, 11, 231-242.
7. Balci, E. V., Tiryaki, S., Demir, Y., & Baloğlu, E. (2022). Digital leadership on Twitter: The digital leadership roles of sports journalists on Twitter. *International Journal of Organizational Leadership*, 11(Special Issue 2022), 21-35.
8. Behravan, I., & Razavi, S. M. (2021). A novel machine learning method for estimating football players' value in the transfer market. *Soft Computing*, 25(3), 2499-2511.
9. Blake, M., & Solberg, V. S. H. (2023). Designing elite football programmes that produce quality athletes and future ready adults: incorporating social emotional learning and career development. *Soccer & Society*, 1-16.
10. Crawley, N. (2021). *Examining psychosocial development in an elite English football academy: a holistic ecological approach* (Doctoral dissertation, Brunel University London).
11. Doewes, R. I., Elumalai, G., & Azmi, S. H. (2023). Validity and Reliability of the Young Futsal Specific Test Battery (Yfstb) To Measure the Skills Performance of Futsal Players. *Revista iberoamericana de psicología del ejercicio y el deporte*, 18(2), 238-240.
12. Fardilha, F. (2021). Exploring creative development in professional youth football academies through an integrative transdisciplinary lens.
13. Hermans, V., & Engler, R. (2010). *Futsal: Technique, tactics, training*. Meyer & Meyer Verlag.
14. Hussein, A. T., & Kasim, M. A. (2022). The Effect Of Applying The Strategy Of Educational Scientific Pillars On The Level Of Performance Of SWOMe Handball Skills Among Players Misan University. *American Journal of Research in Humanities and Social Sciences*, 15, 51-63.
15. Hyndman, N., & Liguori, M. (2023). 'Be a game changer and keep the ball rolling': Exploring linkages between football clubs, charitable foundations and doing good. *Accounting, Auditing & Accountability Journal*.

16. Jabbar, Q. M., & Kasim, M. A. (2023). Social Adaptation And Psychological Adjustment And Their Relationship To Defensive Skills In Volleyball For The Premier League. *European Journal of Interdisciplinary Research and Development*, 12, 134-143.
17. Kasim, M. A. (2022). Effects Of Together Learning On University Students To Achievement Motivation. *Open Access Repository*, 8(05), 57-65.
18. Kasim, M. A. (2022). Evaluation Implementing Cooperative Learning In Physical Education College Programs To Basic Handball Skills Learning In Universities Iraqi. *ResearchJet Journal of Analysis and Inventions*, 3(04), 289-297.
19. Lago-Fuentes, C., Rey, E., Padrón-Cabo, A., Prieto-Troncoso, J., & Garcia-Núñez, J. (2020). The relative age effect in professional futsal players. *Journal of human kinetics*, 72, 173.
20. Lewis, C. D. (2023). *What am I gonna do with my life?: exploring the transitional experiences of former Division 1 Black, male, first-generation college basketball and football student-athletes into the world of work* (Doctoral dissertation, University of Missouri--Columbia).
21. Naser, N., & Ali, A. (2016). A descriptive-comparative study of performance characteristics in futsal players of different levels. *Journal of sports sciences*, 34(18), 1707-1715.
22. Orangi, B. M., Yaali, R., Bahram, A., van der Kamp, J., & Aghdasi, M. T. (2021). The effects of linear, nonlinear, and differential motor learning methods on the emergence of creative action in individual soccer players. *Psychology of Sport and Exercise*, 56, 102009.
23. Pandey, P., & Pandey, M. M. (2021). *Research methodology tools and techniques*. Bridge Center.
24. Ribeiro, J. N., Gonçalves, B., Coutinho, D., Brito, J., Sampaio, J., & Travassos, B. (2020). Activity profile and physical performance of match play in elite futsal players. *Frontiers in Psychology*, 11, 1709.
25. Roberts, R. E. (2020). Qualitative Interview Questions: Guidance for Novice Researchers. *Qualitative Report*, 25(9).
26. Roberts, S. J., Rudd, J. R., & Reeves, M. J. (2020). Efficacy of using non-linear pedagogy to support attacking players' individual learning objectives in elite-youth football: A randomised cross-over trial. *Journal of sports sciences*, 38(11-12), 1454-1464.
27. Roberts, S. J., Rudd, J. R., & Reeves, M. J. (2020). Efficacy of using non-linear pedagogy to support attacking players' individual learning objectives in elite-youth football: A randomised cross-over trial. *Journal of sports sciences*, 38(11-12), 1454-1464.
28. Rozi, M. F., Resmana, R., Selviani, I., Okilanda, A., Sumantri, R. J., Suganda, M. A., & Suryadi, D. (2023). Imagery and Agility Training: How do They Affect the Reaction Ability of Futsal Goalkeepers?. *Physical Education Theory and Methodology*, 23(3), 325-332.
29. Salih, M. M. M., Hashim, R. S., & Kasim, M. A. (2021). Forecasting Achievement Sports through Cooperative Learning in Handball Training in Physical Education. *Annals of Applied Sport Science*, 9(3), 0-0.
30. Sekulic, D., Foretic, N., Gilic, B., Esco, M. R., Hammami, R., Uljevic, O., ... & Spasic, M. (2019). Importance of agility performance in professional futsal players; Reliability and applicability of newly developed testing protocols. *International journal of environmental research and public health*, 16(18), 3246.

31. Skubala, M., & Burkett, S. (2023). *Futsal: Skills, Strategies and Session Plans*. The Crowood Press.
32. Spyrou, K., Freitas, T. T., Marín-Cascales, E., & Alcaraz, P. E. (2020). Physical and physiological match-play demands and player characteristics in futsal: a systematic review. *Frontiers in psychology, 11*, 569897.
33. Staśkiewicz-Bartecka, W., Grochowska-Niedworok, E., Zydek, G., Grajek, M., Kiciak, A., Białek-Dratwa, A., ... & Kardas, M. (2023). Anthropometric Profiling and Changes in Segmental Body Composition of Professional Football Players in Relation to Age over the Training Macrocycle. *Sports, 11*(9), 172.