Proximus Journal of Sports Science and Physical Education
Volume 1, Issue 10, October 2024
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

THE EFFECT OF A TRAINING PROGRAM USING SKILL-BASED EXERCISES ON THE ENDURANCE OF PERFORMANCE IN YOUNG FOOTBALL PLAYERS

Assistant Professor Dr. Abdullah Mohammed Tayawi, College of Physical Education and Sports Sciences, University of Tikrit, Iraq.
dr.t.ay1970@tu.edu.iq

Abstract

Research Aim:

- The aim of this study is to evaluate the effects of a skill-based exercise training program on the endurance and physical and skill-based performance of young football players during games.
- To compare the results of the post-tests of performance endurance between the experimental and control groups, to assess the effectiveness of the new training program compared to the traditional program.

Research Hypotheses:

- The pre- and post-test findings of the experimental group show statistically significant variations in performance endurance, with the post-test results showing an improvement in performance endurance. This suggests that the training program utilizing skill-based exercises has an impact on enhancing performance endurance.
- The post-test findings of the experimental and control groups indicate statistically significant differences in performance endurance; the experimental group has improved more than the control group, presumably as a result of using skill-based activities.

Given the nature of the research problem, the experimental method with a pre-test and post-test design was employed by the researcher for both the experimental and control groups. Thirty-five youth football players from the Al-Alam Sports Club participated in the 2024 season made up the research sample. Using the SPSS software, the researcher employed the following statistical tools: skewness coefficient, Pearson's simple correlation coefficient, percentage, arithmetic mean, median, mode, standard deviation, T-test for related samples, and T-test for unrelated samples.

Research Findings:

- The experimental group players' performance endurance significantly improved as a result of the skill-based exercise training program, demonstrating the value of these exercises in improving young players' physical and skill-based performance.
- The typical training program did not result in a significant improvement in performance endurance for the control group. This suggests that the group should switch to new training regimens that prioritize skill and physical development.
- The outcomes unequivocally demonstrated the experimental group's superiority over the control group in terms of performance endurance, demonstrating the greater efficacy of skill-based exercises in enhancing athletic performance.

Keywords: skill-based exercises, performance endurance, young football players, training program, physical endurance.

Proximus Journal of Sports Science and Physical Education
Volume 1, Issue 10, October 2024
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

1. Research Overview:

1-1 Introduction and Research Significance:

One of the main goals of sports training is to bring players to the highest levels of performance to achieve the desired accomplishment in the specific activity or game, in line with the requirements of the sport and the players' needs across various physical, technical, tactical, and psychological aspects. The aim is to prepare players for competition in that specific activity. Football, as the most globally popular sport, requires special attention and continuous efforts from those involved in the sport. The search for ways and methods to raise performance levels and maintain them throughout the match has become a pressing necessity, especially since matches are characterized by their long duration, varying intensity levels from moderate to high and maximum, and a variety of movements, skills, and strategies that players must execute, depending on their positions on the field and the level of the opposing team, whether individually or as a team.

Performance endurance is one of the fundamental abilities that a football player seeks to develop throughout training. This ability represents the culmination of technical performance in harmony with the required physical attributes and capacities, manifesting in the execution of movements and skills efficiently and accurately, with the ability to maintain effective performance throughout the match.

Skill-based exercises play a vital role in training football players, as coaches rely on them to develop and solidify the essential skills that players need directly. These exercises positively contribute to enhancing the physical qualities associated with skill performance, enabling players to deliver outstanding performance and sustain it throughout the match. Hence, the importance of research lies in the use of skill-based exercises and their impact on improving performance endurance among young football players.

1-2 Research Problem:

Through the researcher's practical experience, both as a former football player and a coach for many years, and his observation of the youth football league in Salah al-Din Governorate (2024), he noticed a significant weakness in the overall performance of the players, especially during crucial moments of the matches. This weakness is not only limited to technical skills but also extends to the physical and psychological aspects that affect players' ability to maintain an elevated level of performance until the end of the match.

Additionally, the nature of football, which requires a wide range of physical effort from moderate to high and maximum levels, along with the integration of physical, technical, and tactical skills, imposes a requirement for players to have the endurance to sustain effective performance. However, it has been observed that many young players struggle to maintain these elevated levels of performance until the end of the match, with obvious signs of physical and mental fatigue, negatively affecting their ability to execute tactical tasks and apply basic skills efficiently.

Based on this reality, the researcher sees the necessity of preparing a training program that focuses on skill-based exercises directly related to performance endurance, aiming to improve players' ability to continue delivering elevated levels of technical and physical performance until the end of the match. Thus, the main question that this research seeks to answer emerges: Does skill-based exercise have an effective impact on performance endurance among young football players?

1-3 Research Objectives:

- to assess gains in young football players' physical and skill-based performance during games in order to ascertain the effect of a training regimen utilizing skill-based workouts on their performance endurance.

Proximus Journal of Sports Science and Physical Education
Volume 1, Issue 10, October 2024
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

- to evaluate how the experimental and control groups' performance endurance post-test results differed from each other in order to determine how successful the new training regimen was in comparison to the old one.
- To evaluate the impact of skill-based exercises on improving physical and technical capacities in an integrated manner, enhancing players' ability to sustain high performance throughout the match.
- To draw recommendations for implementing a skill-based training program that can be used to develop the level of young football players, focusing on balancing the enhancement of physical and technical efficiency.

1-4 **Research Hypotheses:**

- Indicating the impact of the training program utilizing skill-based exercises on enhancing performance endurance, there are statistically significant variations in performance endurance between the experimental group's pre-test and post-test results, favoring the post-test.
- The post-test findings of the experimental and control groups indicate statistically significant differences in performance endurance; the experimental group has improved more than the control group, presumably as a result of using skill-based activities.

1-5 **Research Fields:**

- **Human Field:** Young football players of the Al-Alam Sports Club.
- **location:** Al-Alam Sports Club football field.
- **Time:** From 1/7/2024 to 17/9/2024.

2. Research Methodology and Field Procedures:

2-1 **Research Methodology:**

Using the experimental approach, which is appropriate for the nature of the research problem, the researcher created experimental and control groups with pre- and post-testing.

2-2 **Research Population and Sample:**

A total of thirty-five young football players from Al-Alam Sports Club for the 2024 sports season made up the research population, which was carefully chosen. A lottery was used to randomly divide them into two groups (experimental and control), with goalkeepers, injured players, and non-participating players not included in the group. The player distribution details are displayed in Table (1).

Table (1): Study Participants, Sample, Disqualified Players, and Their Share

Population	Number	Percentage
Research Sample	24	75%
Goalkeepers	3	9.37%
Excluded Players	5	15.62%
Total	32	100%

2-3 Selecting the Tests for the Investigated Variable for the Youth Football Players of Al-Elm Football Club:

- **Test Selected for Endurance of Performance:**

Table (2): Percentage of Expert Opinions That Agree on the Most Critical Tests Identified for the Investigated Variable

Variable Under Investigation	Tests Nominated by Experts	Frequency of Agreement	Percentage Agreement (%)
Endurance of Performance	Barrow and Passing Test	6	85.71%

Proximus Journal of Sports Science and Physical Education
Volume 1, Issue 10, October 2024
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

2-4 Research Group Equivalency and Homogeneity

2-4-1 Homogeneity of the Research Groups:

As indicated in Table (3), the researcher performed a homogeneity assessment for the two research groups (experimental and control) in the variables of age, training age, height, and weight.

Table (3) Homogeneity of the Experimental and Control Research Groups

Variable	Measurement Unit	Mean	Standard Deviation	Median	Mode	Skewness Coefficient
Age	Years	17.866	0.438	17.65	17.7	0.269
Training Age	Years	4.208	0.739	4	4	-0.090
Height	cm	172.125	4.025	172	172	-0.213
Weight	kg	62.33	2.94	63.50	64	0.435

From Table (3), it is evident that the skewness coefficients range between ±1, indicating that the distribution of the research sample is normal.

2-4-2 Groups of Research Equivalency:

As indicated in Table (4), the researcher evaluated the equivalency of the experimental and control study groups with regard to the experimental variable, endurance performance.

Table (4): For the research variable under study, arithmetic means, standard deviations, computed T-values, sig values, and significance of differences are shown.

Statistics Variables	Unit	Control group		Experimental Group		Calcuulated T value	SIG	SIG
		M	SD	M	SD			
Endurance	**Sec**	**99,53**	**10,16**	**101,56**	**9,89**	**1,06**	**0,310**	**Unsig**

***Significant at a probability level of > (0.05)**

Table (4) makes it evident that the computed value of (t) is (1.06), and since (sig) is bigger than (0.05), this suggests that the variable under consideration is equivalent across the two groups and that there are no statistically significant differences.

2-5 Data Collection Methods:

The following techniques were used to gather data: tests, measurements, in-person interviews, content analysis, and questionnaires.

2-5-1 Measurements and Tests Relevant to the Research:

- Measurements: The measurements conducted by the researcher are: (total body height, body mass, age).
- Tests: The researcher relied on the test provided by Abd al-Razzaq Abdullah Ibrahim (2015).

2-6 Scientific Foundations of the Test:

Proximus Journal of Sports Science and Physical Education
Volume 1, Issue 10, October 2024
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

The researcher conducted scientific transactions for the tests based on the following data, and the test was previously administered to the same study population in the same field.

2-6-1 Reliability of the Test:

The researcher used the test-retest method while maintaining conditions as much as possible on the same individuals in the preliminary pilot sample, which consisted of (4) players. The tests were conducted on Monday (1/7/2024) and repeated on Sunday (7/7/2024). The simple Pearson correlation coefficient was calculated, showing an elevated level of reliability, as shown in Table (5).

2-6-2 Validity of the Test: To ensure the validity of the test in question, the researcher used types of validity as follows:

- Content Validity: To identify the tests particular to the endurance performance of young football players, a thorough listing of sources and scientific references specializing in (measurement, evaluation, and sports training) in football was used.
- Construct Validity: As indicated in Table (5), this sort of validity was obtained by taking the reliability coefficient's square root.

2-6-3 Objectivity of the Test:

Two judges (*) were trusted to record the test results concurrently in order to assure the test's objectivity. The results were then computed using the simple correlation coefficient. As seen in Table (5), the test's impartiality was confirmed by the findings, which indicated a strong correlation in the test.

Table 5: Objectivity, Validity, and Reliability Coefficients for the Study Variable

S	Test Subject to Research	Reliability	Construct Validity	Objectivity
1	Endurance Performance Test	0.90	0.94	0.92

2-7 Field Procedures Used in the Research:

2-7-1 Calculating the Duration and Count of Reps for Every Exercise:

In order to determine the duration and quantity of repetitions for every exercise utilized in the study, this process was applied to the second pilot sample, which comprised four players from the study sample.

2-7-2 Determining the Rest Periods Between Repetitions and Sets:

The high-intensity interval training method, which calls for incomplete rest in between repetitions—that is, when the pulse returns to (120–130) beats per minute, or roughly (90–180) seconds—was used to calculate the rest intervals between sets and repetitions for the experimental group.

2-8 Pilot Experiments:

2-8-1 First Pilot Experiment:

Four players from the research population participated in this experiment, which was carried out on January 7, 2024. Its goals were as follows:

1. To verify the suitability of the tools and devices used.
2. To identify administrative difficulties and errors that occur during the measurement process and attempt to avoid them.
3. On August 7, 2024, the identical experiment was conducted again on the same subjects in order to determine the test's scientific parameters.

2-8-2 Second Pilot Experiment:

This was conducted on the first pilot sample of (4) players to determine exercise times and set rest periods on 11/7/2024.

2-9 Final Procedures for the Research:

2-9-1 Conducting Pre-Test for the Variable Under Study:

Proximus Journal of Sports Science and Physical Education
Volume 1, Issue 10, October 2024
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

The pre-test for endurance performance was conducted on Sunday, 13/7/2024.

2-9-2 Implementing Skill Exercises:

The training program for the experimental group began on Sunday, 15/7/2024, and all units of the training program were completed for the experimental group by Thursday, 5/9/2024. The program was implemented concurrently with the training curriculum prepared by the coach for the control group, ensuring alignment of training schedules between the two groups to guarantee the accuracy and objectivity of the results.

2-9-3 Conducting Post-Test:

On Tuesday, 17/9/2024, the researcher used the same methodology as the pre-tests to conduct post-tests for both research groups (experimental and control) on the endurance performance of the players from Al-Alam Sports Club. This was done after the experimental group had finished their skill training and the control group had finished their specific training.

2-10 Statistical Methods:

The statistical techniques used by the researcher included skewness, t-tests for independent and linked samples, means, medians, modes, standard deviations, Pearson correlation coefficient, and percentages. The researcher used the Statistical Package for the Social Sciences (SPSS).

3- Presentation of Results and Discussion:

3-1 Presentation of Results:

3-1-1 Results of the Experimental Group's Pre- and Post-Endurance Performance are presented:

Table (6) The Means, Standard Deviations, Calculated t Values, and Significance Level for Pre-test and Post-test of Performance Endurance for the Experimental Group.

Statistics / Variables	Unit	Pre - Experimental		Post - Experimental		Calcuulated T value	SIG	SIG
		M	SD	M	SD			
Endurance	Sec	101,56	9,89	88,85	4,64	6,05	0,000	sig

Significant at a significance level of >0.05

According to Table (6), we can observe the following:

- The computed T value is (6.05) at a significance level of (0.000), which is less than (0.05), indicating that there are statistically significant differences between the means of the pre-test and post-test in endurance performance among the experimental group.

3-1-2 Presentation of the pre-test and post-test results of endurance performance for the control group:

Table (7) shows the means, standard deviations, calculated T values, and significance levels for the pre-test and post-test endurance performance of the control group.

Statistics		Pre - control	Post - control	Calcuulated T value	SIG	SIG

Proximus Journal of Sports Science and Physical Education
Volume 1, Issue 10, October 2024
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

Variables	Unit	M	SD	M	SD			
Endurance	Sec	99,53	10,16	96,14	10,37	3,72	0,003	sig

*Significant at a probability level of > (0.05)

- There are statistically significant differences between the means of the pre- and post-tests in endurance performance among the control group, as the calculated t-value was (3.72) at a probability level of (0.003), which is less than (0.05).

3-1-3 Presentation of Post-Test Endurance Performance Results for the Experimental and Control Groups:

Table (8): Means, Standard Deviations, Calculated t-Values, and Significance Levels for Pre- and Post-Endurance Performance of the Experimental Group.

Statistics Variables	Unit	Control Group		Experimental Group		Calcuulated T value	SIG	SIG
		M	SD	M	SD			
Endurance	Sec	96,14	10,37	88,85	4,64	2,86	0,015	sig

Significant at a significance level of > (0.05)

From Table (8), we can see the following:

- For the experimental and control groups, there are statistically significant differences in the post-test averages for endurance performance, as indicated by the computed value of (t) of (2.86) at a significance level of (0.01), which is less than (0.05).

3-2 Discussion of Results:

Based on the players in the experimental group's pre- and post-test findings, the researcher assigns the growth in the variable under examination (endurance performance), as indicated in Table (6). Furthermore, Table (8) shows that in terms of endurance performance, the participants in the experimental group fared better than those in the control group. The superiority is ascribed by the researcher to the sample's utilization of an appropriate training regimen that comprised targeted exercises inspired by the player's movements and skill set throughout the game. The players in the experimental group clearly benefited from this training, as seen by the notable variances.

The researcher believes that the development in the results of the variable under investigation in both Tables (6) and (8) indicates a positive effect of the training program (skill exercises), as these exercises relied on the skills frequently used in matches. (Abdul Fattah, 2003) confirms that performing ball drills gives the player an opportunity to develop their technical, physical, and tactical skills, noting that this type of training increases players' motivation (Abdul Fattah, 2003, p. 326).

Proximus Journal of Sports Science and Physical Education
Volume 1, Issue 10, October 2024
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

Furthermore, the activities have a good effect because the goals to raise performance quality and decrease errors are clearly defined. According to Hamad, "the continuous repetition of any exercise helps the player acquire new skills and experiences." Consequently, following the scientific progression in increasing training volume, whether through increasing repetitions when transitioning between small and medium training cycles, and the principles of sports training in terms of regulation and harmony between training load components (volume, intensity, and rest) help achieve the necessary adaptations. As stated on page 57 of (Awis Al-Jabali, 2000), "the correct progression in training load components allows for the required adaptations to occur."

The researcher points out that endurance performance represents the level of physical ability related to skill, which helps the player execute their duties during the match. (Abdullah Al-Lami, 2012) states that endurance performance "refers to the player's ability to repeat skillful and tactical performance in its correct technical form efficiently and energetically throughout the match time" (Abdullah Al-Lami, 2012, p. 25). Thus, it becomes clear that developing the skill aspect directly contributes to enhancing the physical qualities associated with it. (Al-Taqriti and Al-Hajar, 1986) clarified that "specific physical fitness is significantly correlated with skill fitness" (Al-Taqriti and Al-Hajar, 1986, p. 47), which leads to better execution of plans and duties.

The use of interval training methods also positively impacted achieving the desired results, as the players showed commitment and positive interaction with the skill exercises, which provided them with the opportunity to continually engage with the ball—a feature that football players cherish.

4- Conclusions and Recommendations

4-1 Conclusions:

- The players in the experimental group significantly improved their endurance performance as a result of the skill-based training program, demonstrating the value of this kind of exercise in developing young players' physical and skill performance.
- The control group, which underwent traditional training programs, did not show noticeable development in endurance performance, reflecting the need for this group to incorporate new training programs focusing more on skill and physical development.
- The outcomes amply shown that skill exercises were more successful in improving athletic performance than endurance performance, as the experimental group, which followed the training program (skill exercises), outperformed the control group in this regard.
- Players exposed to the skill training program benefited from it throughout the training period, reinforcing the idea that developing the skill aspect directly contributes to improving physical ability to sustain high performance throughout the match.

4-2 Recommendations:

- It is recommended to rely more on skill exercises in football training for youth categories, given their positive impact on improving endurance performance, and they should be included as a core part of training programs.
- Coaches are advised to implement interval training methods, as this approach has shown significant effectiveness in enhancing players' physical endurance; training loads should be adapted according to players' levels.
- Innovative training programs should be introduced that include a variety of skills and movements required in matches, focusing on developing both physical and skill aspects in parallel to ensure overall performance improvement.

Proximus Journal of Sports Science and Physical Education
Volume 1, Issue 10, October 2024
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

- Regular assessments of players' physical and skill performance are recommended to ensure continuous progress and to improve training programs based on the results of these assessments.
- Similar research is suggested for different age categories and varying skill levels in football to understand the impact of skill exercises on endurance performance in other age groups or in higher competitions.
- Coaches are encouraged to foster players' self-motivation through engaging skill exercises and continuous challenges to enhance long-term physical and skill performance.

References

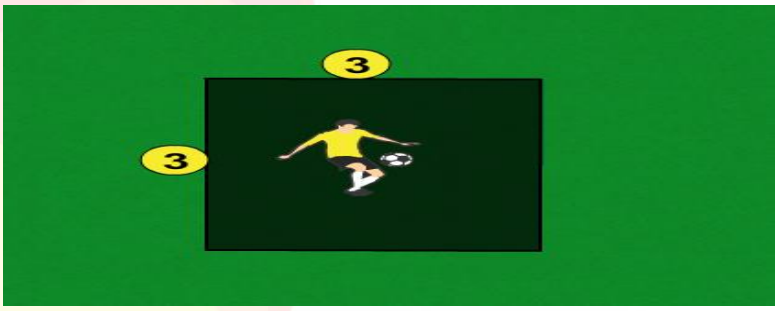
- Ibrahim, Abdul Razzaq Abdullah. (2015). *Building a Battery of Endurance Tests for Young Football Players in Salah al-Din Governorate.* Unpublished PhD dissertation, University of Mosul, College of Physical Education and Sports Sciences.
- Al-Hiyali, Mahmoud Hamdoon. (2016). *The Effect of Different Training Areas Based on Game Analysis on Complex Skill Performance, Aerobic and Anaerobic Capacities, and Fatigue Index in Young Football Players.* Unpublished PhD dissertation, College of Physical Education and Sports Sciences, University of Mosul.
- Al-Tiyawi, Abdullah Mohammed. (2015). *The Effect of Physical Exercises Using Proposed Ratios of Additional Weights on Several Physical and Skill Variables in Young Football Players.* Unpublished PhD dissertation, College of Physical Education and Sports Sciences, University of Mosul.
- Hamad, Mufti Ibrahim. (1994). *Defense and Building Attack in Football.* Dar Al-Fikr Al-Arabi, Cairo, Egypt.
- Hassan, Hashem Yasser. (2011). *Endurance Performance for Football Players.* Arab Community Library, Amman, Jordan.
- Al-Lami, Abdullah Hussein. (2012). *Football: Learning, Training, Strategies, Planning.* Printing Press of the Ministry of Higher Education and Scientific Research, University of Al-Qadisiyah, College of Physical Education.
- Abbas, Mohammed Khalil, et al. (2012). *Methods of Scientific Research in Education and Psychology* (4th ed.). Dar Al-Maysarah for Publishing and Distribution, Amman, Jordan.
- Abdul Fattah, Abu Al-Ala Ahmed, and Sid, Ahmed Nasr Al-Din. (2003). *Physiology of Physical Fitness.* Dar Al-Fikr Al-Arabi, Cairo, Egypt.
- Al-Jabali, Awis. (2001). *Sports Training: Theory and Application* (1st ed.). GMS Publishing and Distribution, Cairo, Egypt.
- Al-Taqriti, Wadi Yassin, and Mohammed Ali, Yassin Taha. (1986). *Physical Preparation for Women.* Dar Al-Fikr for Printing and Publishing, University of Mosul, Iraq.

Appendix (1): The Skill Exercises Used in the Training Program in the Research

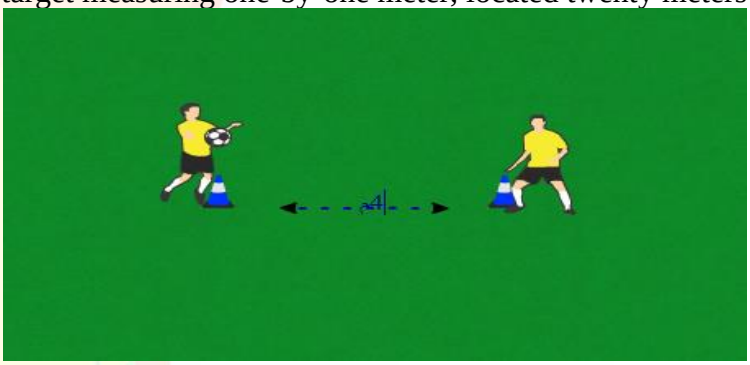
Exercise (1)

Objective of the Exercise: Ball control skill and various damping techniques.
Description of the Exercise: In a three-by-three-meter square, the player controls the ball and dribbles it with all parts of the body. When the coach blows the whistle, the player kicks the ball high to perform damping once with the foot, once with the chest, once with the thigh, and so on.

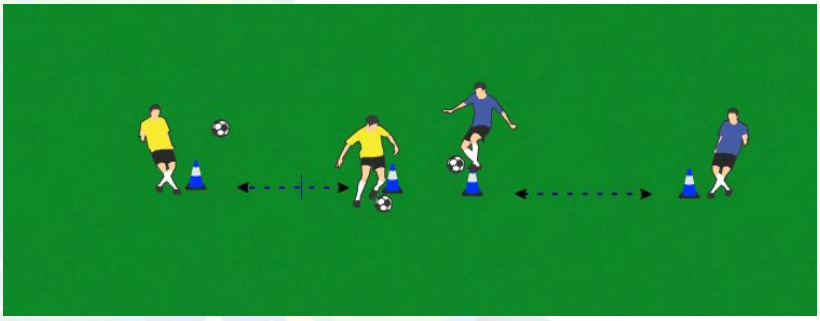
Proximus Journal of Sports Science and Physical Education
Volume 1, Issue 10, October 2024
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943



Exercise (2)
Objective of the Exercise: Ball rolling skill.
Description of the Exercise: Ten markers (cones) are set up, and the player rolls the ball between the markers using both feet back and forth. The distance between each marker is one meter, and the player passes the ball to a small target measuring one-by-one meter, located twenty meters away.



Exercise (3)
Objective of the Exercise: Control and passing.
Description of the Exercise: The player stands four meters away to receive the ball with the chest and pass it to the assisting player. This is done for ten repetitions, after which the two players switch roles.
Exercise (4)
Objective of the Exercise: Control and passing.
Description of the Exercise: Four players are involved, with the distance between Player 1 and Player 2 being twenty meters. Player 1 receives the ball from Player 3, turns with it, and passes it to Player 2. At the same time, Player 2 passes the ball to Player 4, who then turns with it and passes it back to Player 1. The duration of the exercise is 15 seconds.



Exercise (5)
Objective of the Exercise: Control, passing, and shooting.
Description of the Exercise: Six markers are placed with 1.5 meters between each. The two players

Proximus Journal of Sports Science and Physical Education
Volume 1, Issue 10, October 2024
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

exchange the ball by passing it between the markers. The player who receives the ball between the last two markers attempts to shoot at a goal of one meter from ten meters. This exercise is repeated for both players for a total of ten repetitions.

Exercise (6)

Objective of the Exercise: Rolling and shooting.

Description of the Exercise: In the penalty area, each player is assigned a specific number. The players roll the ball, and upon hearing their assigned number, they shoot at the goal. **Exercise (6)**

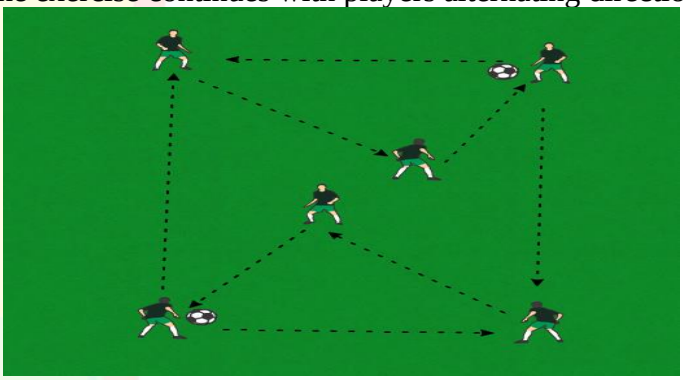
Objective of the Exercise: Rolling and shooting.

Description of the Exercise: In the penalty area, each player is assigned a specific number. The players roll the ball, and upon hearing their assigned number, they shoot at the goal.

Exercise (7)

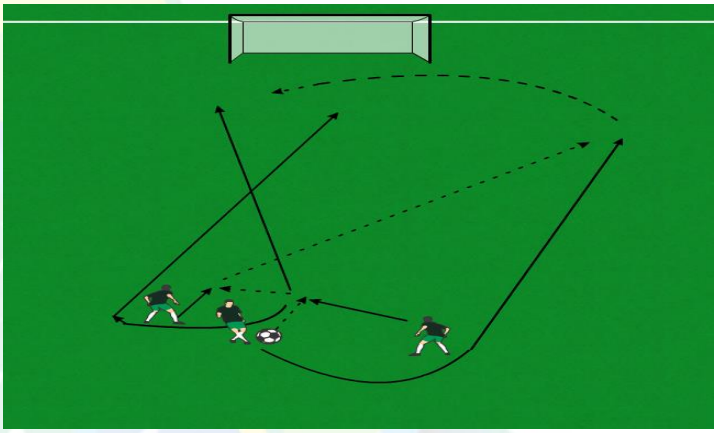
Objective of the Exercise: Passing and changing positions.

Description of the Exercise: Using two balls, Player 1 passes the ball to Player 2, who plays it directly to Player 3. Player 3 returns it with one touch to Player 1, who then passes it to Player 5. At the same time, Player 4 passes the ball to Player 5, who then passes it to Player 6. Player 6 returns the ball to Player 4, who then passes it to Player 2. The exercise continues with players alternating direction each time.



Exercise (8)

Objective of the Exercise: Three players in the center of the field exchange the ball and their positions. The ball is then played to the side, allowing the two players to move into position in the penalty area to receive the ball and attempt to shoot.



Intermediate Cycle 1 / Week 1 / Load Time in Minutes (88.10)

Proximus Journal of Sports Science and Physical Education
Volume 1, Issue 10, October 2024
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

Day	Exercise	Performance Intensity	Exercise Time (seconds)	Repetitions	Rest Time Between Repetitions (seconds)	Number of Sets	Rest Time Between Sets (minutes)	Rest Time Between Exercises (minutes)	Total Exercise Time (minutes)	Total Exercise Times in Training Units (minutes)
Saturday	Exercise 1	Ideal	35	4	70	1	3	3	8.50	27.20
	Exercise 2	Ideal	40	4	80	1	3	3	9.40	
	Exercise 3	Ideal	35	4	70	1	3	3	8.50	
Monday	Exercise 4	Ideal	40	3	80	2	3	3	15.20	31.30
	Exercise 5	Ideal	45	3	90	2	3	3	16.10	
Wednesday	Exercise 6	Ideal	35	4	70	1	3	3	8.50	29.00
	Exercise 7	Ideal	45	4	90	1	3	3	10.30	
	Exercise 8	Ideal	40	4	80	1	3	3	9.40	

Intermediate Course First Cycle / Week Two / Total Load Time (minutes): 101.55

Day	Exercise	Performance Intensity	Exercise Duration (seconds)	Number of Repetitions	Rest Time Between Repetitions (seconds)	Number of Sets	Rest Time Between Sets (minutes)	Rest Time Between Exercises (minutes)	Total Exercise Time (minutes)	Total Training Time (minutes)
Saturday	Exercise 1	Ideal	35	5	70	1	3	3	10.25	32.30
	Exercise 2	Ideal	40	5	80	1	3	3	11.40	
	Exercise 3	Ideal	35	5	70	1	3	3	10.25	
Monday	Exercise 4	Ideal	40	3	80	2	3	3	19.20	35.50

Proximus Journal of Sports Science and Physical Education
Volume 1, Issue 10, October 2024
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

	Exercise 5	Ideal	45	3	90	2	3	3	16.30	
Wednesday	Exercise 6	Ideal	35	5	70	1	3	3	10.25	32.95
	Exercise 7	Ideal	45	5	90	1	3	3	12.45	
	Exercise 8	Ideal	40	5	80	1	3	3	10.25	

Intermediate Course 1 / Week 3 / Load Time in Minutes (134.00)

Day	Exercise	Intensity	Duration (seconds)	Number of Repetitions	Rest Duration Between Repetitions (seconds)	Number of Sets	Rest Duration Between Sets (minutes)	Rest Duration Between Exercises (minutes)	Total Exercise Time (minutes)	Total Training Session Time (minutes)
Saturday	Exercise 1	Ideal	35	3	70	2	3	3	14.10	43.40
	Exercise 2	Ideal	40	3	80	2	3	3	15.20	
	Exercise 3	Ideal	35	3	70	2	3	3	14.10	
Monday	Exercise 4	Ideal	40	5	80	2	3	3	23.20	44.20
	Exercise 5	Ideal	45	4	90	2	3	3	21.00	
Wednesday	Exercise 6	Ideal	35	3	70	2	3	3	14.10	46.00
	Exercise 7	Ideal	45	3	90	2	3	3	16.30	
	Exercise 8	Ideal	40	3	80	2	3	3	15.20	

Intermediate Cycle One / Week Four / Load Time in Minutes (88.10)

Day	Exercise	Intensity	Exercise Time (seconds)	Number of Repetitions	Rest Time Between Repetitions	Number of Sets	Rest Time Between Sets (minutes)	Rest Time Between Exercises	Total Exercise Time (minutes)	Total Time of Exercises in Training

Proximus Journal of Sports Science and Physical Education
Volume 1, Issue 10, October 2024
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

					(seconds)			(minutes)		Units (minutes)
Saturday	Exercise 1	Ideal	35	4	70	1	3	3	8.50	27.20
	Exercise 2	Ideal	40	4	80	1	3	3	9.40	
	Exercise 3	Ideal	35	4	70	1	3	3	8.50	
Monday	Exercise 4	Ideal	40	3	80	2	3	3	15.20	31.30
	Exercise 5	Ideal	45	3	90	2	3	3	16.10	
Wednesday	Exercise 6	Ideal	35	4	70	1	3	3	8.50	29.00
	Exercise 7	Ideal	45	4	90	1	3	3	10.30	
	Exercise 8	Ideal	40	4	80	1	3	3	9.40	