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The effect of specific exercises using a balance ball to develop dynamic balance and learn the skills of dribbling and scoring in basketball for female students

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Abstract

The progress of nations in physical education relies on addressing present and future challenges to promote innovation and renewal in the educational environment capable of efficiently achieving cognitive and skill-based objectives. Basketball, as one of the important subjects, is endorsed by the Ministry of Education due to its direct relevance to human and societal life. This type of sport requires the practitioner to have the ability to quickly change directions, manoeuvre, jump, and defend the court. Therefore, playing this game demands varying levels of sensory systems in processing for skillful performance. Based on these premises, the importance of this study lies in providing empirical evidence on the significance of using educational tools to develop the attribute of dynamic balance, which supports the process of learning certain offensive skills in basketball. Therefore, the research problem lies in the fact that most female students suffer from a deficiency in physical, motor, and cognitive abilities. Part of this issue stems from the reliance on traditional teaching methods, along with the lack of modern devices and tools that assist in the skill-learning process for sports, including basketball. Consequently, the researchers decided to conduct this study to develop dynamic balance and learn the skills of dribbling and scoring in basketball for female students. The research aims to prepare specialized balance ball exercises to enhance dynamic balance and the learning of dribbling and scoring skills in basketball for female students. The research aims to develop specialized balance ball exercises to enhance dynamic balance and teach students the skills of dribbling and shooting in basketball. Additionally, it seeks to investigate the impact of these specialized balance ball exercises on the development of dynamic balance and the acquisition of dribbling and shooting skills in female students. The researchers adopted an experimental methodology using a single-group design. They deliberately selected a population of second-grade intermediate school students, numbering 40 students in total. The research sample comprised 20 students, with 5 students being excluded for the purpose of the pilot study. The sample represented 50% of the research population. The researchers utilized appropriate tests and processed the results using suitable statistical methods. They concluded that the exercises used had a positive effect on developing dynamic balance and learning the skills of dribbling and shooting among the sample group, and this achieves one of the sustainable development goals of the United Nations in Iraq which is (Quality Education). The researchers recommend the integration of dynamic balance exercises into basketball teams due to their proven positive outcomes.

Keywords | **Specialized exercises, dribbling, shooting.**

Introduction:

The world today is witnessing extensive changes and rapid scientific revolutions, primarily driven by the focus of scientists and researchers on learning and teaching processes. They are dedicated to developing students and equipping them with the necessary tools to keep pace with advancements in all branches of knowledge. This includes the field

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of sports, where the educational process has become characterized by innovation through the development of more effective methods and techniques for learning and mastery.

The advancement of nations in physical education should be based on addressing present and future challenges in order to develop and renew the educational environment, enabling the efficient achievement of cognitive and skill-based objectives. However, physical education in schools has remained rooted in traditional teaching methods, which affects the inability to acquire sports skills as required. Therefore, physical education lessons in schools, being the educational institution responsible for implementing curriculum content and overseeing it, necessitate the adoption of modern tools and resources in line with the current era, taking into consideration age levels, cognitive and physical abilities, and skills development, for success and progress within the educational systems of physical education lessons at all stages, including the formation of various specialized sports teams, including basketball teams.

Therefore, it was necessary to employ a set of exercises using a balance ball to assist the coach in developing the specific physical and motor skills required for skill learning among second-grade female students. The researchers adopted one of the modern auxiliary means, the balance ball, which is a sturdy half-sphere rubber ball affixed to a solid circular base made of non-slip synthetic fibers. This approach focuses on the body's ability to integrate visual, vestibular, and sensory systems along with kinetic balance, whether in static or dynamic offensive skills. The goal was to achieve precision in learning some offensive basketball skills, in addition to enhancing spatial awareness.

Basketball considered an important subject approved by the Ministry of Education due to its direct relevance to human life and society. This type of sport requires individuals practicing it to possess the ability to change directions rapidly, dribble, jump, and defend the court. Therefore, engaging in this game necessitates different levels of sensory processing systems for skillful performance. Based on the foregoing, the significance of the study, as emphasized by Imad Tumah Radhi, lies in providing research evidence for the importance of using assistive tools to enhance the development of motor balance as a supportive aspect of learning offensive basketball skills. One of the educational objectives is to improve the performance of learners through play and guide them to situations similar to actual gameplay (8).

A study conducted by Rasha and Liqa emphasizes the significance of adhering to the correct scientific methodology in the process of physical activity, as it constitutes a crucial indicator reflecting the level of achievement among athletes. In pre-planning, it is essential to address potential impediments in the work and tackle any problems that may arise during the training process, while also devising appropriate solutions. Furthermore, mastering skills, including dribbling and shooting, and applying them accurately are pivotal, as they undoubtedly contribute to the team's success (4).

However, through the observation conducted by the two researchers of some physical education lessons in schools and the identification of obstacles, as well as through interviews with educational curriculum specialists, supervisors, and teachers specializing in physical education, it became evident that most female students suffer from weaknesses in physical, motor, and cognitive abilities. **There are several reasons that can be attributed to this weakness, including:**

- The educational programs prepared by teachers for the physical education curriculum are weak, leading to a deficiency in physical, motor, and cognitive abilities when practicing sports, including basketball.
- The teachers lack the scientific or theoretical foundations on how to guide or employ learning and its educational applications to improve learning facilities.

In light of the urgent need to find ways to assist female learners in enhancing their intellectual, physical, and skill-based abilities, there is a call for

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a reevaluation of the educational process, moving away from traditional methods. This can be accomplished by reevaluating the educational approach and shifting away from traditional methods.

In addition to the non-utilization of modern devices and tools that facilitate the learning process of skills for sports, including basketball, and in light of the aforementioned, the problem of the study and research has been identified. Therefore, the researchers decided to investigate this problem and examine its various aspects because the problem is not only whether the student can learn the motor skills of basketball using traditional methods. The real problem lies in the extent of learning information and motor skill performance together through practical application and the use of kinesthetic learning methods and modern devices. This is considered a fundamental factor in the scientific, educational process aimed at ensuring the achievement of motor skill learning in sports, particularly offensive skills in basketball for female students.

The research aims to develop specialized exercises using the Bosu ball to enhance dynamic balance and facilitate the learning of offensive basketball skills for female students. Additionally, it seeks to understand the impact of these specialized Bosu ball exercises on the development of dynamic balance and the acquisition of offensive basketball skills among female students.

The researchers hypothesized that there are statistically significant differences between the pre-test and post-test of the research sample in terms of their level of dynamic balance and their learning of some offensive basketball skills for female students. Furthermore, statistically significant differences were found between the pre-test and post-test of the research sample in terms of their learning of some offensive basketball skills for female students.

The study encompassed the human domain of second-grade intermediate school female students at Al-Asala School for Girls for the academic year 2022-2023. The temporal domain covered the period from 16/10/2022 to 20/1/2023. The spatial domain was located in the Al-Asalah Girls' School Intermediate School playground in Baghdad, Al-Rusafa II District.

The method and procedures:

The researchers relied on the experimental approach using the single-group pretest-posttest design, as it is suitable for the nature of the research. Deobold Van Dalen states in his study that the researcher must choose an appropriate experimental design before conducting the study to test the validity of the results derived from his hypotheses (3). Additionally, Wajih Mahjoub's study indicates that experimentation is the deliberate and controlled alteration of specific conditions of an event, observation of the resulting changes in the event itself, and interpretation of these changes (14).

The researchers intentionally selected a population, Al-Asala School for Girls, comprising 40 second-grade intermediate school students. The research sample consisted of 20 students, with 5 students excluded for experimental purposes in the pilot study. The sample represents 50% of the research population. The researchers verified the homogeneity of the sample in terms of variables such as height, mass, and biological age. The table below demonstrates the sample's uniformity in these variables and measurements, presenting the mean, standard deviation, median, and skewness coefficient, as indicated in Table (1).

Table (1)
shows the homogeneity of the research sample in terms of the variables of length, mass, biological age, and training.

Variables	Unit of Measurement	Arithmetic Mean	Standard Deviation	Median	Skewness Coefficient
Height	cm	160.5	4.377	161.75	- 0.856

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Mass	**kg**	**55.25**	**4.708**	**56.5**	**- 0.796**
Biological Age	**year**	**16**	**2.802**	**16**	**0.000**

The skewness coefficient was used as its value indicated that all variables conform to the equilibrium curve, as Table (1) illustrates the torsion coefficient in the equilibrium curve extending between (±1).

Tests Used in Research:

- **Bass modified test for dynamic balance (Ali Saloum)** (7)

Purpose of the test: To measure the ability to jump accurately and maintain balance during and after the movement.

Required Tools: stopwatch, measuring tape, 10 markers measuring 1 inch by 4/3 inch each, to be secured to the ground.

Performance Description:

The distance between each mark is 1 meter. The participant starts at the first mark with their right foot and then jumps onto mark number (1) using their left foot's instep (ensuring complete coverage of the mark with the foot). They attempt to maintain balance in this position for the longest possible duration, with a maximum of five seconds. Afterwards, they proceed to jump to mark number (2) and stand on it using the instep of their right foot, aiming to maintain balance for as long as possible, with a maximum of five seconds. This process continues until they reach the tenth mark, following the same jumping and balance approach while alternating the jumping foot for each jump, as illustrated in the following diagram:

Registration:

Each participant is awarded ten points for each jumping attempt, five of which are given when they execute a proper jump. Proper execution requires landing on the footboard in a manner that covers the mark on the ground. The remaining five points are awarded to the participant for every second they manage to stay airborne after landing. Consequently, the total score for the test amounts to 100 points.

- **Straight Dribbling Test (Hashem Ahmed, (13)).**

Test Objective:

to measure the speed of straight dribbling.

Equipment used:

A basketball, a stopwatch, and a basketball court.

Procedures:

A starting line is drawn, and a finish line is marked 10 meters away, with a barrier at the end.

Performance Description:

The participant stands with the basketball behind the starting line. Upon the signal to start, the participant dribbles while running at the maximum speed towards the finish line. Upon reaching the barrier, the participant turns around it and returns to the starting line.

Recording:

The referee records the time it takes for the participant to complete the performance.

- **Free Throw Test (Faiz and Jasim)** (9)

Test Objective:

This test aims to measure free-throw shooting skills.

Equipment and Tools Used:

Basketball court, basketball, whistle.

Performance Method:

Each student has five attempts performed from behind the free throw line. The student must execute the free throws using any shooting technique of their choice.

Test Conditions:

- The examinee is allowed to make some test shots before starting the selection process for experimental purposes.
- Each examinee has the right to make twenty free throws.
- The maximum score is five points, with one point awarded for each successful throw.
- The shooting process must be conducted from behind the free-throw line.

Recording:

- One point is awarded for each successful shot, regardless of how it enters the basket.
- In the event that the ball does not enter the basket, a score of zero is recorded for that.

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The pilot study:

This pilot study is conducted to allow the researcher to gain practical experience in order to identify both the strengths and weaknesses that may emerge during the execution of the study. The primary goal is to address and mitigate any potential issues proactively, which could involve refining, eliminating, or modifying certain research procedures. Additionally, it aims to validate the proposed timeframe for the educational unit, assess the functionality of equipment and tools, and evaluate the appropriateness of the tests employed in the research. Furthermore, it assesses the researchers' and the research team's ability to execute and perform these tests effectively. Lastly, it involves an examination of the utilization of the Bosu ball. The researchers conducted an initial pilot study on a sample of five individuals from the research sample on Tuesday, 23/10/2022. The objectives of this study were as follows:

To determine the success of the tests in the curriculum and the suitability of the devices, tools, and support team.

To identify difficulties and obstacles that the researcher might encounter during the application of the exercises.

To assess the safety and suitability of the tools and devices used that the research sample would undergo.

To conduct an educational unit for the sample.

The pre-tests:

The researchers conducted the pre-test procedures on Sunday, 30/10/2022, at the basketball court of Al-Asala Girls' School for the research sample group. The tests were explained to the research sample to ensure the collection of all variables through their performance.

The Main Experiment:

After reviewing scientific sources and studies, the two researchers will prepare the core section of the educational modules with the aim of developing dynamic balance using the balance ball. The balance ball is recognized as an instructional tool for teaching balance within the field of physical education. According to Chan, it was originally conceived by David Wick in 1999. "The Bosu ball is described as a strong, half-spherical rubber ball affixed to a solid circular base made of non-slip fibers. The ball is marked with prominent lines, ensuring that it does not slip from the top or sides when fully rotated. It can be used and worked upon in all directions" (17). Additionally, the program included teaching the skills of dribbling and free throw shooting with a basketball to female students over a period of 10 weeks. This involved two units each week, as per the school schedule, with each educational unit lasting 45 minutes. A total of 25 exercises were utilized as indicated in Table 2, amounting to a total of 20 educational units throughout the program.

Table (2)
illustrates the sections of a single instructional unit and their time durations

Sections of the instructional unit	Time Duration
Preparatory Section:	**10 minutes**
Preparation and Greetings	**4 minutes**
General Warm-Up	**4 minutes**
Specific Warm-Up	

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Main Section: **Educational Aspect** **Practical Aspect**	**30 minutes** **6 minutes** **24 minutes**
Final Section: **Recreational Game.** **Cool-Down Exercises, followed by Departure.**	**5 minutes** **3 minutes** **2 minutes**

The Post-Test:

After the completion of the training period, the post-test was conducted on the research sample on Tuesday, 3/01/2023, taking into consideration the same conditions as the pre-assessment. The researchers ensured that the conditions for the post-test were identical to those of the pre-test in terms of time, location, and the same assisting team (in both the pre-test and post-test), as well as utilizing the same tools and equipment to maintain consistency in the variables to the best extent possible.

Results:

Table (3)
illustrates the pre-test and post-test results for the tests administered to the individuals in the research sample.

Seq.	Variables	Unit of Measurement	Post-test		Pre-test		D	MD	Calculated (t) value	Significance
			Standard deviations	Arithmetic mean±	Standard deviations	Arithmetic mean±				
1	Dynamic Balance	Degree	45.6	5.10	53.5	4.89	3.25	0.91	10.87	Significant
2	Straight Dribbling	Seconds	18.05	5.90	15.55	4.88	2.5	1.27	8.753	Significant
3	Free Throw	Degree	11.6	1.62	15.1	1.31	3.5	1.19	8.210	Significant

In statistical terms, when (Sig) > (0.05), the degrees of freedom (n - 1) = 20-1 = 19, and the significance level is (0.05).

Discussion:

The researchers, upon examining the results in Table (3), observed significant differences in the mean scores between the pre-test and post-test in the variables of dynamic balance and the skills of dribbling and free throw shooting for the research group. These differences favoured the post-test as compared to the pre-test. The researchers can attribute this improvement to the successful implementation of specialized exercises, following a scientific methodology that effectively enhanced the research sample's performance in the subsequent tests. The exercises prepared by the researchers, specifically targeting dynamic balance training, met the scientific criteria for efficacy. The advancement in training outcomes can be attributed to the nature of the exercises performed by the group, which were distinguished by their execution on a balance ball. This ball has two distinct sides: the upper convex side, also known as the oval side, is characterized by the presence of pressurized air within the rubber, providing a strong rebound effect. This aligns with Newton's second law of motion, which states that every action has an equal and opposite reaction. This principle is evident during exercises on the ball, which require the performer to maintain balance while executing movements. As noted by McArdle, "Exercises involving jumping and hopping in various directions contribute to maintaining balance despite the shifts in the body's center of gravity to the right, left, above, and below" (19). The exercises performed on this side of the ball aid in fostering confidence through the use of elastic ropes embedded in the ball to enhance the

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body's stability. Conversely, the ball's flat underside is characterized by instability, necessitating greater strength to maintain balance. This is accomplished by slightly bending the knees to lower the body's center of gravity and widening the base of support by increasing the distance between the legs. The study by Jian and Sahar confirms that the adopted educational approach and the constructivist learning model have had a positive impact on learning basic basketball skills (2). The researchers attribute this development to the organization of exercises and repetitions in the curriculum, as it plays a significant role in enhancing learning levels. Curriculum planning is fundamental to achieving educational objectives. As mentioned in the study by Dia Thamer and others, "A well-structured educational program significantly influenced the teaching of the studied skills and stimulated the learners' senses while avoiding boredom. This is particularly noteworthy considering that educational tools are more effective in the learning process. The use of multiple senses in the teaching process has actively contributed to stimulating their thinking, meaning that engaging more than one sense has played a part in skill teaching" (6). This conclusion is in line with the findings of Mahmoud H. Al-Hayali in his study, which indicated that focusing on sound scientific planning for all theoretical and practical aspects of the educational and training process had an effective impact on the moral development of the research sample. This resulted in significant outcomes due to the adoption of sound scientific planning for the training curriculum (11). The researchers attribute the significant differences between the pre-test and post-test to the nature of the exercises and the tools used in the training curriculum for the development of dynamic balance, which has improved the level of basketball players. The game of basketball is characterized by the presence of numerous fundamental skills that require the convergence of various physical and motor fitness components, including dynamic balance, to perform the skills correctly. High physical fitness, with its various elements, plays a significant and crucial role in enabling basketball players to reach the necessary athletic form for the game's requirements. Furthermore, a study by Widad and Ibtisam emphasized that dynamic balance becomes evident when executing all movements required by basic skills performance (15). The continuous and regular training of the research sample, which spanned ten consecutive weeks with a frequency of two sessions per week, played a significant role in achieving positive improvements in the internal systems of the students. Consequently, it led to the physiological adaptations intended in the dependent variables of the research. Undoubtedly, the researchers relied on the process of changing the exercise difficulty level through a gradual increase in the number of repetitions of physical exercises for the balance attributes, transitioning from one weekly cycle to another. This gradual increase was carried out methodically within specified time periods, allowing for adaptation to occur among the research sample of students, ultimately leading to the desired improvement in physical fitness levels. Consequently, it played a fundamental role in bringing about moral development in terms of balance. This is corroborated by the findings of Muhammad H. Alawi and Abu Alaa A. Abdul-Fattah in their study, where they emphasize that increasing the training load should be done gradually and at specific time intervals to allow for physiological adaptation. These intervals can range from weeks to months, and to achieve an increase in the training load, it is always preferable to progress by increasing one component of the training load (10). It is worth mentioning that allocating two sessions per week for a duration of 10 weeks' amounts to the implementation of 20 instructional units for dynamic balance exercises throughout the designated timeframe for implementing the prepared educational curriculum, in addition to using appropriate rest intervals between repetitions and different exercise sets. These rest intervals were sufficient for recovery and played

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a significant role in achieving positive improvements in the dynamic balance attribute of the students, which were notably evident. The differences between the pre-test and post-test measurements in offensive skills indicate an improvement in the performance level of these skills and all body movements that contributed to their execution. This improvement can be attributed to the educational resources that the individuals in this group were exposed to, which facilitated the learning of these skills according to the required and correct technical performance. Mervat Ali emphasized in her study that there is an effect of learning through observation in improving efficiency in learning skills to achieve skillful and cognitive goals to varying degrees (12). The researchers attribute the reasons for these differences in the research sample to the influence of the educational curriculum. Educational curricula aim to achieve objectives through repetition and practice, leading to an improvement in performance levels. Fabian Steinberg emphasizes that the basis of the learning process is the acquisition of a set of skillful abilities by the learner to enable them to reach a good level of performance in the skill they want to learn, as achieving and acquiring maximum efficiency in educational situations is attributed to the educational curriculum, as it is a method for organizing the study material on a gradual basis, allowing the learner to acquire it easily (18). The study conducted by Raad Abdul-Kadhum Jawad highlights the significance of providing students with the opportunity to express themselves through performance. This approach not only develops the skill of applause but also motivates students and immerses them in an atmosphere of cooperation and positive participation. It enables students to engage in various forms of communication, helping them build self-awareness and establish connections between their previous learning and new knowledge (5:91). Similarly, in the study by Wurood and Liqaa, they emphasize that the use of specialized and diverse exercises aimed at enhancing skill performance plays a crucial role in skill development. The variations in the beginnings and endings of exercises have an effective impact on skill enhancement (16). Furthermore, Alyaa and Intisar affirm that the players' ability to focus on selecting relevant information by concentrating on the processing of such information while ignoring unrelated information, in addition to their cognitive perception abilities as a complementary stage to attention and control, serves as evidence of the young players' correct awareness of performing basketball shooting skills. This reflects their mastery of cognitive organization. Additionally, the researchers attribute these moral differences to the young basketball players' ability to process information by reimagining and reinterpreting themselves, other players, and the court around them as organizational and planning processes within their cognitive structures (1).

Conclusions:

1. The specialized exercises using the Bosu ball, prepared by the researchers, had a positive impact on the individuals in the research sample.
2. The Bosu ball exercises demonstrated their effectiveness in developing the dynamic balance of the research sample.
3. The development of dynamic balance through Bosu ball exercises, as prepared by the researchers, contributed to learning offensive basketball skills by the research sample. This element added excitement and engagement to the exercises and encouraged continued training.

Recommendations:

1. The researchers recommend the necessity of incorporating dynamic balance exercises into the learning and training of basketball skills, given the positive outcomes they have demonstrated.
2. To adopt varied exercises for the attribute of balance due to their effectiveness in developing and improving dynamic balance in players.
3. The necessity of focusing on properly integrating physical attributes with the skill

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performance intended to be learned, to ensure an improvement in the level of skill performance.

Author's declaration:

Conflicts of interest: None

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

Ethical-Clearance: this manuscript approved by local ethical committee of physical education and sport sciences college for women on (August /2023)

Author's contributions:

All contributions of this study were done by the researchers (S.K. and I.U.) who get the main idea and work on writing and concluding also with number of experts, Riadh Mizhir (Physical Education and Sport Sciences college/ Mustansirya University) in Statistics, Khitam Mousa in revision, Inaam Ghalib in translating, Manal Bayyat in proofreading

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Appendix (1)
Educational Unit Model

The unit's sections	Duration	Activities and Events.		Observations and Assessment
Preparatory Section	**1 min**	**The Introduction (Administrative Section)**	**The attendance of the students and bringing the necessary devices and tools.**	**Emphasizing discipline when exiting the playground.**
General Warm-Up	**3 min**		**Running, jumping over the spot, touching the ground right and left, walking.**	

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Physical exercises targeting the arms and torso **Leg exercise**	**6 min**	**To develop in female students the ability to work collaboratively and in pairs with peers, and to enhance specific strength and speed.** **Developing explosive strength**	**- Standing, legs apart, back-to-back with a partner, and passing the ball sideways - Torso twisting (10 times).** **-Standing with legs apart and arms intertwined with a partner, pulling and pushing the arm 10 times.** **- Standing, jumping with bending and straightening of the knees, reaching upwards (10 times).** **- Standing, hands interlocked with a partner, fully bending the knees to a sitting position facing the partner, then straightening (10 times).**	**Observation of student performance and performance correction.** **Emphasizing the flexion and extension of the legs upward.** **Emphasizing sitting on the seat to achieve optimal performance.**
Main Section **Educational activity**	**30 min** **5 min**		**Teaching the students, the details of the dribbling skill by providing thorough explanations from the teacher and demonstrating the skill by one of the students.**	**Emphasizing the focus on the technique of dribbling skill, including the proper bending of the knees, keeping the ball close to the body, and concentrating on the opponent.**
Practical activity	**25 min**		**The exercise model is demonstrated in front of the female students by the teacher, followed by a student's performance. The students are then divided into groups to perform the tapping exercise.** **Tapping exercise performed while sitting (5 seconds) 10 times on a Bosu ball.** **Tapping exercise performed while standing (5 seconds) 10 times on a Bosu ball.** **Tapping exercise performed while moving (5 seconds) 10 times on a Bosu ball.** **Tapping exercise performed after standing on one foot on a Bosu ball (5 seconds) 10 times.**	**A comprehensive explanation of some exercises when performed, along with providing constructive feedback and emphasizing proper execution while correcting mistakes.**
Final Section	**5 min**	**Recreational Game**	**Performing the sports salute and then departing.**	**Departing quietly.**

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تأثير تمرينات خاصة باستخدام كرة التوازن لتنمية التوازن المتحرك وتعلم مهارتي الطبطبة و التهديف بكرة السلة للطالبات

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مستخلص البحث

إن تقدم الأمم في مجال التربية الرياضية اعتمد على تحديات الحاضر والمستقبل لغرض التطور والتجديد للبيئة التعليمية القادرة على تحقيق الأهداف المعرفية والمهارية بكفاءة وتعد لعبة كرة السلة من المواد الدراسية المهمة المعتمدة من قبل وزارة التربية لما لها من علاقة مباشرة بحياة الإنسان والمجتمع ، وأن هذا النوع من الرياضات يحتاج من القدم الممارسة لها قدرة سرعة تغيير الاتجاهات والمراوغة والقفز والدفاع عن الملعب لهذا فان ممارسة هذه اللعبة تتطلب مستويات مختلفة للأنظمة الحسية من المعالجات للأداء المهاري وبناءً على ما تقدم تكمن أهمية الدراسة بكونها تقدم دليلا بحثيا عن أهمية استخدام الوسائل التعليمية لتطوير صفة التوازن المتحرك المساند لعملية تعلم بعض المهارات الهجومية بكرة السلة ، لذلك تكمن مشكلة البحث في أن معظم الطالبات يعانن من ضعف القدرات البدنية والحركية والمعرفية والذي ويعود بعضه إلى اعتماد الطرائق التقليدية في التدريس إلى جانب عدم اعتماد الأجهزة والأدوات الحديثة والتي تساعد في عملية تعلم المهارات للألعاب الرياضية ومنها لعبة كرة السلة . لذلك ارتأت الباحثتان إجراء هذه الدراسة لتنمية التوازن الديناميكي وتعلم مهارتي الطبطبة و التهديف بكرة السلة للطالبات . وهدف البحث إعداد تمرينات خاصة بكرة التوازن في تنمية التوازن المتحرك وتعلم مهارتي الطبطبة و التهديف بكرة السلة للطالبات. والتعرف على أثر تمرينات خاصة بكرة التوازن في تنمية التوازن المتحرك وتعلم مهارتي الطبطبة و التهديف بكرة السلة للطالبات ، اعتمدت الباحثتان على المنهج التجريبي بأسلوب المجموعة الواحدة ، قامت الباحثتان باختيار مجتمع بالطريقة العمدية من طالبات الصف الثاني المتوسط والبالغ عددهم (40) طالبة , أما عينة البحث فبلغ عددهم (20) طالبة وقد تم استبعاد (5) طالبات لغرض التجربة الاستطلاعية , وتمثل العينة ما نسبته (50%) من مجتمع البحث, وقد استخدمت الباحثتان الاختبارات المناسبة وتم معالجة النتائج بالوسائل الإحصائية المناسبة. وخرجت الباحثتان بالاستنتاجات أن التمرينات المستخدمة تأثيراً ايجابياً في تنمية التوازن المتحرك وتعلم مهارتي الطبطبة والتهديف لدى أفراد عينة البحث، وهذا ما يحقق احد اهداف التنمية المستدامة للامم المتحدة في العراق (التعليم الجيد). وتوصي الباحثتان بضرورة تفعيل تمرينات التوازن المتحرك في فرق كرة السلة لما أثبتته من نتائج إيجابية.

الكلمات المفتاحية | **تمرينات خاصة ، الطبطبة ، التهديف**