



Impact of A Recreational Approach to Improve Shooting Accuracy Among Basketball Players

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Abstrak

This research aims to identify effect of a recreational program on improving shooting accuracy among basketball players. The researcher used experimental method using a single-group pre- and post-test design, as it is suitable for nature of research and its objectives. Sample was chosen randomly from basketball players, and main sample consisted of 12 players, in addition to a pilot sample used to conduct scientific procedures for tests used, consisting of 12 players, to achieve research objectives, the researcher designed a recreational program that included a set of games and recreational activities related to shooting skills in basketball, and it was implemented for 8 weeks at a rate of 3 units per week, and duration of unit was 60 minutes. The researcher used a set of shooting accuracy tests, which included free throw test, ladder shot test, stationary shot test, jump shot test, and test of shooting from several positions around the basket. Results showed statistically significant differences between pre- and post-measurements of experimental group in favor of post-measurement in all shooting accuracy tests under investigation, which indicates effectiveness of recreational program in improving shooting accuracy of basketball players. The researcher recommended necessity of employing recreational programs within training programs for basketball players, benefiting from competitive recreational activities in developing various basic skills, and conducting more similar studies on different age groups and skill levels.

Keywords: Recreational Program, Shooting Accuracy, Basketball

INTRODUCTION

Basketball is one of the most widespread team sports globally, characterized by its fast-paced performance and diverse competitive situations that require integration between physical, technical, tactical, and psychological aspects. In recent decades, the game has witnessed remarkable development in training and preparation methods, leading to a rise in technical performance level of players and an increase in demands of athletic competition. Skill mastery is one of the fundamental pillars for achieving excellence in basketball, as results of matches depend largely on players' ability to execute basic skills efficiently and accurately under different playing conditions. Wissam Hamid Al-Gharbawi (2019) states that shooting is one of the most important basic skills in basketball, as it is decisive factor in translating tactical and offensive performance into actual points that contribute to deciding results of matches. Shooting accuracy is not only

related to skill aspects, but is also affected by multiple physical, kinetic, and psychological factors, such as neuromuscular coordination, focus, attention, self-confidence, and ability to control movement. Many studies have confirmed that a high level of shooting accuracy is related to a higher level of offensive performance efficiency for team and improved chances of winning matches, which has led coaches and researchers to give this skill great attention when preparing various training programs. (Al-Gharbawi, 2019: 122)

Kamal Darwish and Muhammad Al-Hamahmi (2007) stated that with continuous development in sports training sciences, there has been a growing interest in using recreational programs as one of modern methods that contribute to improving athletic performance and developing basic skills in players. Sports recreation refers to a set of organized activities and games practiced in an atmosphere of fun, enjoyment, and motivation, which contributes to achieving educational, psychological, physical, and skill-related goals. Recreational programs are distinguished by their ability to break monotony associated with traditional training and increase players' motivation to participate effectively, which is reflected positively in level of motor learning and acquisition of various sports skills. (Darwish & Al-Hamahmi, 2007: 36)

Incorporating recreational games into training programs contributes to providing an attractive learning environment that helps players improve their coordination, cognitive, and motor skills. It also raises level of attention and focus during skill performance. These programs are particularly important in team sports, including basketball, as recreational activities help simulate real-life game situations in an enjoyable way, increasing chances of repeating and mastering skill performance without feeling fatigued or bored. Variety of recreational activities contributes to developing players' intrinsic motivation and enhances their desire to continue and persevere during training. (Ghanem, 2007: 18). Hakim (2025) explained development of shooting accuracy in basketball requires diverse training programs that take into account physical, skill and psychological aspects of players, and that use of modern training methods and techniques leads to improved shooting success rates and raising level of athletic achievement. Application of a training program based on innovative tools and methods has led to improved shooting accuracy in free throw and increased scoring rates among basketball players, which confirms importance of diversity in programs used to develop shooting

skills.

On other hand, recreational activities contribute to improving psychological state of players by reducing stress and pressure associated with training and competition, and increasing feelings of enjoyment and satisfaction during sports practice. It was also shown that a positive emotional state is closely related to improved skill performance, especially in fine motor skills that require a high degree of focus and control, such as shooting in basketball, integrating recreational activities into training process may represent an effective approach to improving shooting accuracy through simultaneous influence on psychological, physical, and skill-related aspects of players. (Auger , 2020: 28) Based on importance of shooting skills in achieving athletic success in basketball, and educational, psychological and motor characteristics of recreational programs that contribute to improving performance levels, need arose to study impact of a standardized recreational program on shooting accuracy among basketball players, to identify effectiveness of this type of program in developing skill performance, and to enrich sports field with scientific results that can be used in preparing future training programs for basketball players of different age groups and competitive levels.

Based on the researcher's field experience and continuous monitoring of basketball players' training and matches across various age groups, a clear disparity in shooting accuracy was observed among players. This directly impacts offensive performance and match results. It was also found that while many players possess acceptable levels of basic physical and technical skills, their ability to convert scoring opportunities into points through accurate shooting remains below expectations, particularly in situations requiring quick decision-making and performance under competitive conditions. By reviewing training programs implemented in some sports clubs, the researcher found that focus is often on traditional skill-based training that relies on repetitive, formulaic performance. This can, over time, lead to a decrease in players' enthusiasm and motivation, and limit effectiveness of training process in achieving continuous skill development. Furthermore, many of these programs lack diverse activities that would allow players to learn in an engaging and interactive environment.

A review of scientific studies and research has shown an increasing interest in using recreational programs to develop many physical, psychological and skill-related aspects in various sports activities, studies that have addressed use of recreational

programs to improve shooting accuracy among basketball players are still limited, especially in Arab environment, which indicates a scientific need to study this variable more deeply. From this standpoint, need arose to design a recreational program based on a set of organized recreational activities and games that suit characteristics of basketball players, and to identify its effectiveness in improving their shooting accuracy, which contributes to providing a more attractive and effective training style that can be used in developing training programs directed at this category of players.

This research aims to identify impact of a recreational program on improving shooting accuracy among basketball players through: Designing a recreational program that suits characteristics and needs of basketball players in sample. Identifying impact of recreational program on improving shooting accuracy among basketball players. Research hypothesis presence differences statistical function between pre-test and post-test research group experimental in accuracy of aiming for players basketball in favor of measurement next one.

RESEARCH METHODOLOGY

The researcher used experimental method because it was suitable for nature of research, and the researcher employed experimental design. Research population and sample includes community Search on players basketball. Research sample 24 basketball players, divided into 12 players for pilot study validation of tests in terms of validity and reliability, and 12 players for experimental group this is illustrated in Table (1).

Table 1. Numerical distribution of sample

Classification	Sample	Exploratory study sample		Experimental group	
		Repetition	Ratio	Repetition	Ratio
Basketball players	24	12	50 %	12	50 %

Statistical description of sample:

Table 2. Statistical implications of basic factors of sample

Variables	Measure ment unit	Mean	Standard deviation	Skewness coefficient	squamous coefficient
Age	Year	22.47	1.85	1.39	1.33
Height	cm.	183.71	2.89	0.42	0.84
Mass	Kg.	79.18	3.08	0.17-	0.96-
Training age	Year	9.20	2.74	1.78	1.24

Table (2) shows homogeneity of sample data in basic primary measurements, as the values of skewness coefficient range between (0.17- to 1.78), and this value is close to zero, squaring coefficient also reached between (0.96- to 1.33), and this means that fluctuation of the normal curve is considered acceptable and in average and is not fluctuating up or down, which confirms the similarity of research sample members in the primary measurements.

Measurements and tests used

The researcher reviewed previous studies and scientific references that addressed the study variables, consulted with experts, and then concluded the following:

Table 3. Aiming accuracy tests

Aiming accuracy tests	Measurement unit
Free throw shooting	Degree
Peaceful shooting	Degree
Shooting from a stationary position	Degree
Jump shooting	Degree
Shooting from multiple positions around the basket	Degree

Pilot Study

Pilot study was conducted from 18/3/2026 to 26/3/2026 on a sample of 12 players outside the main sample, this is to measure validity and reliability.

Scientific Procedures For Accuracy Tests Used

Validity: To determine the validity coefficients of the tests under investigation, the researcher employed the peripheral comparison method (known-groups validity). This approach was conducted by comparing the performance of participants who demonstrated the highest and lowest levels of ability. An exploratory sample consisting of 12 players was first administered the proposed tests. The test scores were then arranged in descending order and divided into quartiles. The highest quartile represented the superior-performance group, while the lowest quartile represented the inferior-performance group. The mean scores of these two groups were subsequently compared

using appropriate statistical analysis to determine whether significant differences existed between them. Significant differences in favor of the higher-performing group indicate that the tests possess satisfactory discriminant validity and are capable of distinguishing between individuals with different levels of performance. The results of this validity analysis are presented in Table 4, which illustrates the mean values, differences between groups, and the corresponding statistical indicators.

Table 4. Significance of differences between upper and lower quartiles in determining validity of differentiation in accuracy tests under investigation

Statistical implications Accuracy of aiming	Measurement Unit	Upper Quarters		Lower Quarters		Calculated (t) value	Sig. level
		Mean	St.d	Mean	St.d		
Free Throw Shooting	Degree	8.67	0.58	5.33	0.58	9.19	0.00
Peaceful Shooting	Degree	9.33	0.58	6.00	1.00	6.93	0.00
Shooting From A Stationary Position	Degree	8.67	0.65	6.00	0.25	7.42	0.00
Jump Shooting	Degree	8.33	0.74	4.67	0.95	9.90	0.00
Shooting From Multiple Positions Around The Basket	Degree	16.33	0.61	12.00	0.42	9.41	0.00

Tabulated t-value at a significance level of $(0.05) = 2.571$. Previous table showed significant differences between the upper and lower quartiles in aiming accuracy tests, where the value of (t) ranged between (6.93 : 9.90), which is higher than the tabulated value of (t), indicating validity of aiming accuracy tests.

Stability

Stability coefficient for aiming accuracy tests was determined. By using the application and reapplication method on the same sample of the exploratory study (12) players , tests were re- applicationed after (7) days from the first application to find the correlation coefficient between the first and second applications, as shown in Table (5).

Table 5. Reliability coefficient is determined by finding correlation coefficient between first application and reapplication in aiming accuracy tests

Statistical implications accuracy of aiming	unit of measurement	First application		Second application		Value of (R)
		Mean	St.d	Mean	St.d	
Free throw shooting	Degree	5.58	1.16	5.75	1.14	0.912
Peaceful shooting	Degree	6.33	1.25	6.50	1.05	0.937
Shooting from a stationary position	Degree	6.25	1.20	6.42	1.16	0.958
Jump shooting	Degree	4.92	1.00	5.08	0.99	0.892
Shooting from multiple positions around the basket	Degree	12.42	1.88	12.67	1.83	0.948

Tabulated value of (r) at a significance level of (0.05) = 0.553

Table (5) shows that there is a statistically significant correlation between first application and reapplication in accuracy tests, where calculated value of (r) ranged between (0.892: 0.958), which is greater than tabulated value of (t) at a significance level of 0.05, which indicates reliability of tests under investigation.

Program Recreational to improve aiming accuracy Proposal

First: overall goal of program: proposed recreational program aims to improve shooting accuracy of basketball players by using a variety of exciting, thrilling, and competitive recreational games and activities, which contributes to raising level of skill performance in shooting of all kinds. **Second:** program's sub-objectives: Improving accuracy of free throw shooting. Improving accuracy of peaceful aiming. Improving shooting accuracy from a stationary position. Improving aiming accuracy by jumping. Increasing players' motivation towards training. Adding an atmosphere of fun and excitement during training sessions. Developing a spirit of cooperation and positive competition among players. Reducing feeling of boredom resulting from traditional training.

Third: Foundations for building program: suitability of recreational activities for age group of the research sample, progression from easy to difficult. Taking into account individual differences between players. Providing security and safety measures. A variety of recreational activities and games. To achieve the element of fun and excitement, connection between recreational activities and shooting skills in basketball. Adhering to principles of appropriate training load. **Fourth:** Program duration: Program duration: 8 weeks. Number of units per week: 3 units. Total units: 24 units. Unit time: 60 minutes. **Fifth:** Time distribution of the recreational unit: Administrative tasks and player preparation 5 minutes. Recreational warm-up 10 minutes. Main section shooting-related recreational games 40 minutes. Finale and cool-down 5 minutes.

Sixth: Content of the main section: Weeks one and two: A shooting game involving aiming at coloured targets. Individual free throw competitions. Shooting inside suspended hoops. Group shooting races. Weeks three and four: Points Bank game. Shooting at moving targets. Peaceful shooting relay competitions. Shooting from multiple stations. Weeks five and six: Shooting by jumping after clearing the obstacles. King of Shooting game. Shooting competitions under time pressure. Shooting from different angles around basket. Weeks seven and eight: A mini-tournament for shooting. Team competitions in compound shooting, challenge of the top five positions. Timed and scoring competitions.

Seventh: Examples of recreational games used: **Game 1:** King of Free Throws: Objective: To improve accuracy of free throw. Equipment: Basketballs - Legal basket. Method of performance: players line up behind the free throw line. Each player makes five consecutive attempts, player is awarded one point for each successful shot, player with the highest total points wins. **Game 2:** Five-Position Challenge: Objective: To improve aiming from different positions. Equipment: Basketballs and floor markers. Method of performance: Five points are marked around the basket, player takes one shot from each point, Points are tallied to determine winner. **Game 3:** Peaceful Shooting Race: Objective: To improve peaceful aiming. Equipment: Basketballs and cones. Method of performance: player runs by dribbling between cones, performs a peaceful shot, returns quickly and hands the ball to the next player. **Game 4:** Shooting at colored targets: goal: To increase aiming accuracy and focus. Tools: Colored targets that are attached to the

board or basket. Method of performance coach specifies a particular color, player tries to hit the designated target while shooting, player is awarded extra points for accurate hits.

Eighth: Basic study: main study was conducted from 28/3/2026 to 2/6/2026, and researcher will explain this as follows: The study was conducted in three consecutive phases: pre-measurement, program implementation, and post-measurement. The pre-measurement was carried out on 28 March 2026, during which baseline data for all variables under investigation were collected from an exploratory sample of 12 players in Iraqi sports clubs using the selected research tests. Following the baseline assessment, the proposed recreational program was implemented with the experimental group of 12 players from 1 April to 31 May 2026, covering a period of eight weeks (two months). Upon completion of the intervention, post-measurements were conducted on 2 June 2026 using the same testing procedures to evaluate changes in the study variables. All data obtained from the pre- and post-tests were processed and analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive and inferential statistical analyses were performed as appropriate to examine the effectiveness of the proposed recreational program and determine the significance of differences between the pre- and post-intervention measurements.

RESULTS AND DISCUSSION

Presenting and discussing the hypothesis results

Table 6. Indication Differences Statistics Test (t) between pre-test and post-test in Shooting accuracy of basketball players in experimental group

Accuracy of aiming	Measurement unit	Pre-measurement		Post-measurement		Calculated (t) value	Sig. level
		Mean	St.d	Mean	St.d		
Free throw shooting	Degree	5.42	1.16	8.58	0.99	8.74	0.00
Peaceful shooting	Degree	6.25	1.06	9.17	0.83	9.26	0.00
Shooting from a stationary position	Degree	5.08	1.24	8.42	1.08	10.11	0.00
Jump shooting	Degree	4.83	1.03	8.08	0.90	9.57	0.00
Shooting from multiple positions around the basket	Degree	12.17	1.85	17.33	1.56	11.38	0.00

Value of (t) at a significance level of (0.05) = 2.201

Results of Table (6) show that there are statistically significant differences between the mean scores of the pre-test and post-test for the experimental group in favor of mean post-test in shooting accuracy shooting from the free throw, ladder shot, shooting from a standstill, shooting by jumping, shooting from several positions around the basket for football players, where the calculated value of “t” ranged between (8.74: 11.38). These results are consistent with the findings of Pojskić (2014) study indicated that using diverse and exciting training methods during training periods contributes to developing the skill performance of basketball players, especially skills related to shooting. Study explained that providing training situations that are competitive and exciting increases the players’ focus and supports the motor learning process, which leads to an improvement in level of skill achievement.

These results are consistent with the findings of Fatima Nabil Sultan's study (2021). Which indicated that the use of competitive activities and games leads to an improvement in basic basketball skills among young players, and that introducing an element of fun during training contributes to increasing motivation to practice and reduces the boredom associated with traditional training, which is reflected positively on the level of skill performance. These results are consistent with the findings of the study. Abdulkareem (2025) Which indicated that programs that combine psychological, physical and skill aspects lead to a greater improvement in level of athletic performance than traditional programs, as feeling of enjoyment and integration during athletic activity contributes to raising level of focus and attention and reducing psychological stress, which is reflected positively on the accuracy of skill performance in various sports.

These results are consistent with the findings of Asaad Ali Ahmed's study (2015). Study indicated that the use of games and activities based on interaction and positive competition within sports programs leads to improved basic motor skills and raises the level of motivation and commitment to participating in training. Study also showed that the diversity in training activities helps to increase the actual practice of the skill and improve quality of performance. The researcher attributes these results to effectiveness of proposed recreational program and its various games and recreational activities that were directly related to the different shooting skills in basketball. These activities contributed to increasing the number of times the skill was actually performed within a

framework characterized by fun, excitement and positive competition, which led to raising the level of focus and motivation among the players.

CONCLUSIONS

Proposed recreational program contributed to improving shooting accuracy of basketball players, experimental group members achieved a statistically significant improvement in free throw shooting accuracy after implementing program, recreational program led to an improvement in shooting accuracy of basketball players. Program contributed to improving accuracy of shooting from a stationary position and shooting by jumping among members of sample, players achieved a noticeable improvement in shooting accuracy from several positions around basket after implementing program, recreational activities and games used contributed to increasing players' motivation towards training and improving their skill performance level, recreational program has proven its effectiveness as one of modern methods that can be used to develop shooting skills among basketball players.

RECOMMENDATIONS

Proposed recreational program should be implemented in basketball training because of its positive impact on improving shooting accuracy. Attention should be given to integrating recreational activities and games into various training programs to develop basic basketball skills. Diversifying the training methods used and moving away from traditional methods that may lead to boredom and decreased player motivation. Using competitive recreational games as a means to increase motivation and improve skill performance level of players. Focus on developing different shooting skills free throw, handstand shooting, standing shot, jump shot through training situations that simulate competition conditions. Utilize proposed recreational program when preparing junior basketball training programs. Training courses and workshops were held for trainers to introduce importance of recreational programs and methods of employing them in training process. Providing necessary resources and tools to implement recreational activities within sports clubs and institutions in a way that contributes to raising efficiency of training process.

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