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## Gender and accuracy of penalty shot execution among handball players of federal college of education, Abeokuta

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### Abstract

This study examined the effect of players' gender (males and females) on accuracy of penalty shot execution in handball game. The study adopted an experimental design in a target population of handball players of Federal College of Education, Abeokuta and a sample of 35 handball players (19 male and 16 female). The instruments used for the study are Handball Penalty Shot Guide, balls of different sizes, scoring sheets, whistles, stopwatch, ropes and a handball field with its goal post (203 cm by 313 cm), a well ruled penalty area and a clearly marked penalty spot. Collected data were analyzed using mean, standard deviation and ANCOVA. The study results revealed that

- i) Accuracy of penalty shot execution is higher in male players than in female players.
- ii) Gender significantly influenced accuracy of penalty shot execution among handball players. It is recommended that players be assisted in setting realistic goals.

**Keywords:** Gender, penalty shot, handball, players

### 1. Introduction

Handball game is a competitive activity which different people struggle to win at all cost using their knowledge, skill, personality and other attributes for success, with both men and women struggle to outwit one another, with the intent to claim superiority over the other. (Onifade, 2010) <sup>[15]</sup>. Both old and young people got themselves involved in sport due to intrinsic and extrinsic factors (Dhurup & Garnett, 2011) <sup>[9]</sup>. The scholars stated that the level of the athlete involvement and participation is hinged on variables like gender, age, goals, interest, physical ability and some hereditary factors. They also noted that the proximity to achieve their aims and desire in sport depend solely on the ability to stay focused, concentrated and creating room for improvement of skill through physical training. Lopez, Gallegas & Extremera (2010) <sup>[13]</sup> asserted that in sport, both male and female gender compete seriously with one another not just for honors alone but also superiority and power of attainment. This factor account for why individuals (both male and female) set high goals that are realistic and not far from being achieved or attained.

Fadoju (2004) <sup>[1]</sup> affirmed that the issue of gender in sport has attracted attention of scholars not because of the biological and structural differences but the roles assumed by each of them. While some females were observed to have assumed specific roles exclusively reserved for male in certain circumstances, some men conversely put up the appearances of women in their dispositions to life (Lanre, 2009) <sup>[12]</sup>. Hornby (2010) <sup>[3]</sup> described gender as a fact of being a male or female, masculine or feminine. This definition clearly indicated that gender is an identity, a symbol or class distinction of human races. It is an identity that differentiates sexes in terms of anatomical, physiological and biological structures (Adelekan, 2017) <sup>[2]</sup>. This identity has made individual classes to be very unique in terms of performance, ability and orientation. Hoe (2007) <sup>[10]</sup> observed that male gender is more superior to female gender in gross motor activities and physical activities that require risk-taking, while the female was described to be better in fine motor activities. He asserted that females are passive, submissive, private, natural and cooperative. These features according to him were attributed to their weakness, hence the inhibiting factors that place certain limitations on the female performances. While the male gender was observed to be aggressive, active, instrumental, goal

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oriented, organized, dominating and competitive in nature the female gender was noted for subtleness, anxiety prone, and emotional (Kubayi & Surujal, 2014) [11].

Awosika & Olusola (2014) [7] however opined that the factors that endeared male and female into sport includes variables like skill, excitement of competition, staying in shape, recognition, fitness, equipment, facilities and affiliation motives. These are regarded as intrinsic and extrinsic motivation. This perspective according to Fadoju (2004) [1] has made each of this gender to embark on goal setting in order to avoid failures in sport. Ogunyemi (2010) [17] averred that achieving success is contingent on well-defined goals which are realistic and tailored towards fulfilling specific purpose. Goal according to Fadoju (2004) [1] is the aspirations which an individual long for, which is above one with advancement at its end. He stated that to attain success in sport, realistic goals must be set to a level that is attainable i.e. high, moderate or low. He posited further that athletes who set high goals are regarded as optimistic, those with moderate or medium goals are regarded as realistic while those out of fear of failure who set low goals are described as self-protective who will be willing to shift blames on nature. Mugwedi & Mulibana, (2014) [14] however maintained that the propensity to attain a set goal therefore depends on athlete's ability and skill. Sequel to this statement the researcher has been motivated to examine influence of gender and goal proximity on accurate execution of penalty shot among handball players of Federal College of education, Abeokuta.

### 1.1 Statement of the Problem

Handball is a sport that requires high level of goal scoring and skill display for any team to emerge as winner. This greatly depends on accurate delivery of shots and self-determination on the part of the player/team to excel. Goal setting is believed to be one of the most intrinsic motivating factors that help athletes, students or individual to propel one towards having high performance in a task. If a high goal is set, an individual is reinforced to put in all that is required to attain at all cost. If the goals are realistic and attainable, the confidence and commitment of the person who set the goal will be built up to have good achievement. This was also believed to be capable of developing greater empathy in improving individual's performance in sport. Naturally speaking, different people irrespective of their ages or gender make good adjustment through setting and meeting their goals. These aspiration level at which each gender set their goals most times create opportunities for them to struggle and outwit one another in the accurate execution of complex motor activities (especially the kind required in this study). Each of these sexes at their best seeks opportunities and chances to attain at the expense of each other.

The researcher is therefore moved by this reason to carry out an investigation in examining effect of goal proximity and gender on accurate execution of penalty shot among handball players in Federal College of Education, Abeokuta.

### 1.2 Research Question

What is the effect of gender on mean score of penalty shot execution among handball players of Federal College of Education, Abeokuta?

### 1.3 Research Hypothesis

There is no significant main effect of gender (male and female) on accuracy of penalty shot execution among handball players of Federal College of Education, Abeokuta.

## 2. Methodology

### 2.1 Research design, Population and Sample

The study adopted an experimental design involving male and female handball players. The target population for this study consists of handball players of Federal College of Education, Abeokuta in the department of Physical and Health Education between 2018-2019 academic sessions.

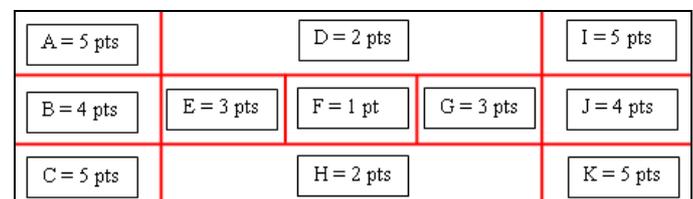
A purposive sampling technique was used to select thirty-five athletes (19 male and 16 female handball players) who took part in the study. The participants were purposely selected based on possession of similar characteristics. The samples were those that have been representing the college at various competitions in the past. Some of them were among the group prepared for NICEGA Game Programs.

### 2.2 Research Instrument

The instruments used for conducting the study are Handball Penalty Shot Guide (HPSG), 4 balls of different sizes (two 470 g ball with a circumference of 60 cm for males and two 400 g ball with a circumference of 56 cm for females), scoring sheets, whistles, stopwatch, ropes and a handball field with its goal post (length 203 cm by 313 cm), a well ruled penalty area and a clearly marked penalty spot (7 m from the goal post line). The Handball Penalty Shot Guide (HPSG) contains procedures used to instruct the students and collect data for the study.

### 2.3 Research Procedures

- The goal post was divided with ropes into 11 sections labeled A-K, representing the target areas within the goal post, such that each section is a target area of the goal post and is allotted a certain score point (ranging from 1-5) as shown in the diagram below.
- Each of the participants (males and females) was allowed to take 5 shots on goal from the penalty spot.
- The participants (player) may score by shooting the ball directly into the goal or bounces it one time directly into the goal.
- Each participant must shoot from the marked penalty spot or behind it.
- Participant may follow through across the penalty spot immediately after releasing the ball.
- If the participant exceeds or over steps the marked penalty spot before making the shot, zero or no score is awarded.



**Fig 1:** The study goal post with its labeled sections A-K and its allotted score points. The thick black lines represent the goal post while the thick red lines represent the ropes used to divide the goal post into sections A-K indicated with thin black rectangle.

- If the ball bounces two or more times before it enters the goal line, zero or no score is awarded.
- If the ball hits the goal post (cross bar) without entering the goal post, zero or no score is awarded.
- If the participant shoots the ball before the sound of whistle, zero or no score is awarded.
- Correct size of ball should be used by male and female players, where the reverse occurs; zero or no score is

awarded.

- xi) The points scored by the participants depend on the section of the goal post on which they shoot the ball. The goal post sections and their respective score points are: Sections A, C, I, K = 5 points each; Sections B, J = 4 points each; Sections E, G = 3 points each; Sections D, H = 2 points each; Sections F = 1 point. The maximum score for any participants is 25 points while the minimum is zero (0) point.

## 2.4 Procedure for Data Analysis

The data collected from the study was analyzed using mean, standard deviation and Analysis of Covariance (ANCOVA). All hypotheses were tested at 0.05 alpha level of significance.

## 3. Results and Discussion

### 3.1 Research Question

What is the effect of gender on mean score of penalty shot execution among handball players of Federal College of Education, Abeokuta?

**Table 2:** Summary of ANCOVA on accurate execution of penalty shot among handball players

Source	Type III Sum of Square	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	131.401 <sup>a</sup>	4	32.850	5.584	0.002	0.427
Intercept	490.439	1	490.439	83.368	0.000	0.735
Pretest	5.888	1	5.888	1.001	0.325	0.032
Treatment	86.236	1	86.236	14.659	0.001	0.328
Gender	8.719	1	8.719	1.482	0.233	0.047
Error	176.484	30	5.883			
Total	4499.000	35				
Corrected Total	307.886	34				

a. R Squared = 0.427 (Adjusted R Squared = 0.350)

Table 2 shows the summary of ANCOVA on execution of penalty shot among handball players. The results showed that the significance of F (F-sig = 0.233) is lower than the value of F-cal (1.482) at 0.05 level of significance. This indicates that there is significant main effect of gender on accuracy of penalty shot execution among handball players ( $F_{(1,130)} = 1.482, p > 0.05$ ). Therefore, the stated null hypothesis that there is no significant main effect of gender on accuracy of penalty shot execution among handball players was rejected. This result may have been due to the masculine nature and energy of the male players which gives them the ability to perform a particular skill better than the female players. According to Asihel, Jones & Malcolm (2005) <sup>[6]</sup> human beings differ both in performance and development; therefore the differences are as a result of marked area of differences.

The table further revealed that the effect of treatment on accuracy of penalty shot execution among handball players was statistically significant,  $F_{(1,30)} = 14.659, p < 0.05$ . The table also showed that the 32.8% of the variance (Partial Eta Square,  $\eta^2 = 0.328$ ) experienced in during execution of the penalty shot among the players was accounted for by the treatment and this was considered to be of medium effect size.

**Table 3:** Estimated margin Means of accurate execution of penalty shot by Gender Dependent Variable: Posttest

Gender	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Male	19.632 <sup>a</sup>	2.320	14.000	25.000
Female	17.510 <sup>a</sup>	2.805	14.000	23.000

a. Covariates appearing in the model are evaluated at the following values: Pretest = 5.26.

The pairwise comparison of the mean score in table 3 shows a

**Table 1:** Mean scores of male and female handball players undergoing penalty shot execution

Group	N	Mean	S.D
Male	19	19.63	3.32
Female	16	17.51	2.81

The results presented in table 1 indicate the mean points and standard deviation of male and female handball players undergoing penalty shot execution. As shown in the table, the male handball players have a mean point of 19.63 while the female players have a mean point of 17.51. This implies that the accuracy of penalty shot execution is higher in male players than in female players. This may have been due to the masculine nature of the male players compared to the female players.

### 3.2 Research Hypothesis

There is no significant main effect of gender (male and female) on accuracy of penalty shot execution among handball players of Federal College of Education, Abeokuta.

mean difference of 2.122 between male players and their female counterparts which is significant at 0.05 level of significance.

## 4. Conclusion

From the above findings the null hypothesis was rejected which means that gender significantly influence the accuracy of penalty shot execution among handball players under study. This may have strictly depends on one's ability to have good focus and remaining concentrated.

## 5. Recommendations

Based on the findings, the following recommendations are hereby suggested:

1. The games' organizers and coaches should always involve male and female athletes in sport activities to improve their skill in specific motor activities, with specific focus on female players.
2. Athletes should be assisted in setting realistic goals that will not be difficult to attain and should be well motivated to boost their ego for good performances, as good reward for a successful attempt will further reinforce other subsequent performances.
3. Athletes and coaches should project for success with high commitment, dedication and diligence, and in the face of failure remain focus with a strong desire to achieve at a close range at all time.
4. Coaches, Sport psychologists and Athletes should always evaluate their performances in terms of skill acquisition, stay focus, improve on deficiencies and maintain good confidence in their abilities to give their best every time.

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