

## Biomechanical Elements of Running and Spilling Execution Component Differentiations in sexual direction in Football Players

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### **ABSTRACT**

The target of the review was to contrast among male and female footballers and respect to running and spilling factors bio-precisely. Twenty (ten male and ten female) bury university, thoroughly prepared football players were haphazardly chosen as subjects for the review. Age of the subjects went from 17 to 24 years. Information was gathered utilizing a computerized video recording framework and a two-layered investigation was finished utilizing Kinovea 0.8.15 programming. The information was processed as mean, Standard Deviation and 't' test and the speculation was tried at 0.05 degree of importance. As per our discoveries, the factors to be specific level ( $t=2.70$ ), weight ( $t=5.46$ ), normal time taken for crisscross run ( $t= - 4.55$ ), normal time taken for spilling ( $t=-7.03$ ), normal speed of crisscross run ( $t= 4.59$ ), normal speed of spilling ( $t=8.07$ ), proportion between normal time taken of spilling and crisscrosses print ( $t=-5.17$ ), proportion between normal speed of spilling and crisscross run ( $t=4.45$ ) were essentially divergent in male and female players.

#### **Key words:**

Spilling, Running, Football

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## INTRODUCTION

Spilling in football is a significant key expertise particularly in the third piece of a pitch or at the wings where most goes after occur. Spilling makes space in tough spots where the dribbler is stamped and strictly confidential by a safeguard and the dribbler can either score or make scoring chances after an effective spill. Nonetheless, in the event that spilling is ineffectively dominated and utilized, it might bring about the deficiency of ownership of football either when the ball is captured or when handled by a safeguard. A few players favor moving beyond players with speed, a few players go directly at their rivals and hope to go past them straightforwardly with kicking the ball through their legs though others might utilize bluffs, control, spryness, and speed increase to sidestep handles (1, 2, 3).

Spilling is the vital expertise in the event that a player needs to prevail at the most significant level of the sport of football. However viewed as an essential expertise, it is the most unique and energizing part in the game (4). A vital viewpoint for the football players is to comprehend the biomechanics of the spilling with running. By and large, the strength, speed and force of male players are higher than those of females; nonetheless, writing on biomechanical contrasts among guys and females with respect to spilling in football isn't accessible.

The goal of the review was to biomechanically think about the running and spilling factors in male and female footballers. It was speculated that there may be critical distinction in sexual orientation between the running skill and ability to spill in the chose factors.

## METHODOLOGY

Information was gathered utilizing a computerized video recording framework and two-layered examinations were finished utilizing Kinovea 0.8.15 programming. The conventions for the review comprised of three maximal transport crisscross runs for 20-meter distance and three maximal spills with soccer ball for 20-meter distance (Fig. 1). Six cones were put in an orderly

fashion, two meters from first cone to second, second to third, third to fourth, fourth to fifth and fifth to 6th likewise. Every one of the 20 meters transport crisscross run had nine turns. Runs were recorded by setting the camera 1.05 meter over the ground (around at hip level) and at 10 meters from the middle line.

The main cone was considered as the beginning line, staying five cones were set two meters separated in straight line from first cone to second, second to third, third to fourth, fourth to five and five to six in like manner. For run at the sign (GO), the subject beginnings crisscross run and wraps up at the beginning line. For spill likewise, at the sign (GO) the subject begins to spill around the cones in a crisscross way. It was finished by 10 guys and 10 female football players. The information was figured with mean, standard deviation and t-test. The speculation was tried at 0.05 degree of importance.

**Figure-1:** Course of Zigzag Sprint and Dribbling Performances



**Selection of Variables**

**Table1:** Abbreviation of the variables used in the study

S.No.	Name of Variables	Abbreviation	Unit
1	Height	H	Cm.
2	Weight	W	Kg.
3	Average Time Taken in Zigzag Sprint	AT	Sec.
4	Average Time Taken in Dribbling	AX	Sec.
5	Average Speed of Zigzag Sprint	ASZS	m/sec.
6	Average Speed of Dribbling	ASDB	m/sec.

7	Ratio between Average Time Taken of		
	Dribbling and Zigzag Sprint	R1	–
8	Ratio between Average Speed of Dribbling and		
	Zigzag Sprint	R2	–

**RESULTS**

Despite an expansion in the support of female players in the sport of football, not many examinations are accessible that contrast the presentation of female competitors and those of their male partners. In a fascinating paper, Barfield et.al. (5) analyzed kinematic in step kicking contrasts between first class female and male soccer players and their review showed that guys commonly kicked the ball quicker than the females and showed more prominent kinematic factors (5, 6). Male competitors are generally known to be quicker and more grounded than the females attributable to their assembled however female players are likewise noted to get better in speed while running and spilling.

In the current review, the factors in particular execution positioning (R)(t=-7.39), height (H) (t=2.70), weight (W) (t=5.46), normal time taken of crisscross run (AT) (t=-4.55), normal time taken of spilling (Hatchet) (t=-7.03), normal speed of crisscross sprint(ASZS) (t=4.59), normal speed of dribbling(ASDB) (t=8.07), proportion between normal time taken of spilling and crisscross run (R1) (t=-5.17), and proportion between normal speed of spilling and crisscross run (R2) (t=4.45) were viewed as fundamentally unique among male and female competitors at 0.05 level (Table II and Figure 2).

**Table-II: Descriptive Statistics of Male and Female Football Players**

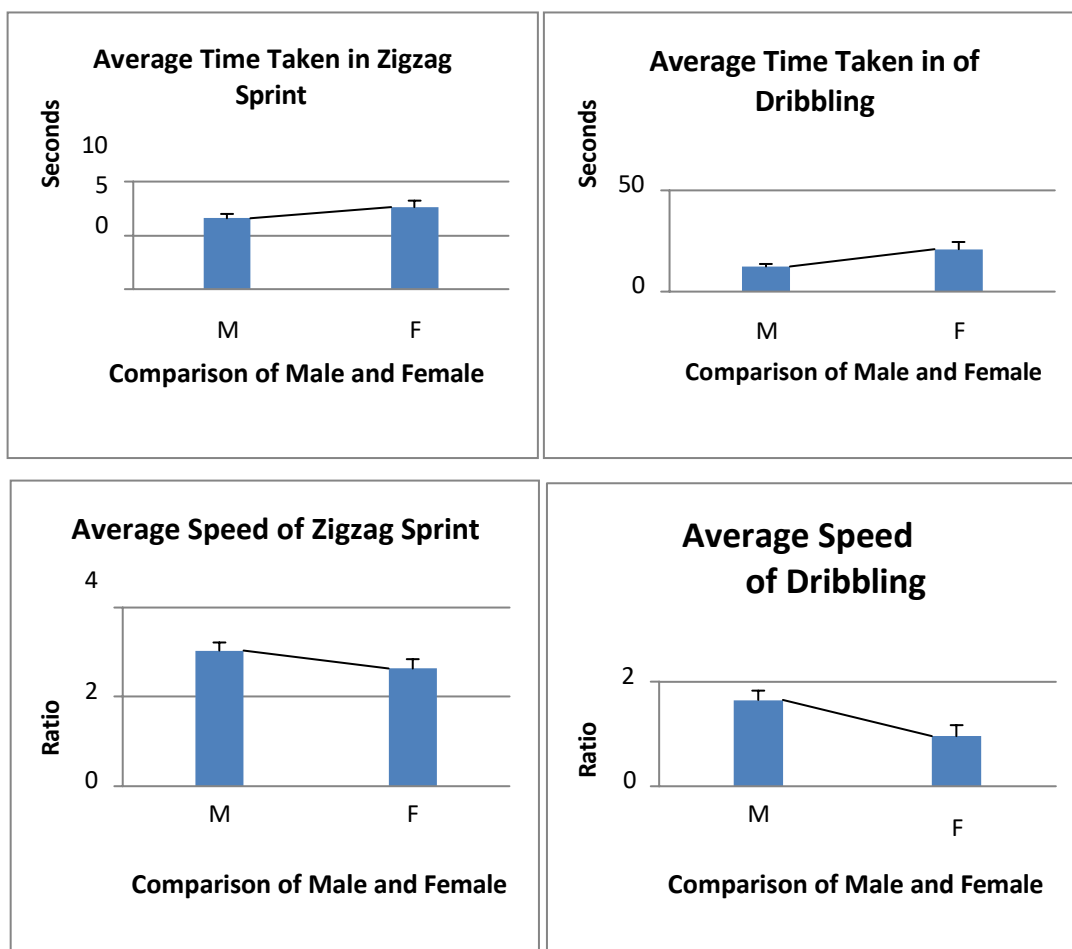
S. No.	Variables	Gender	Mean	Std. Deviation
1	H	M	170.20	4.24
		F	163.90	6.05
2	W	M	65.90	6.14
		F	51.40	5.74
3	AT	M	6.60	0.40
		F	7.63	0.60
4	AX	M	12.26	1.30
		F	20.82	3.62
5	ASZS	M	3.04	0.18
		F	2.64	0.21
6	ASDB	M	1.65	0.18

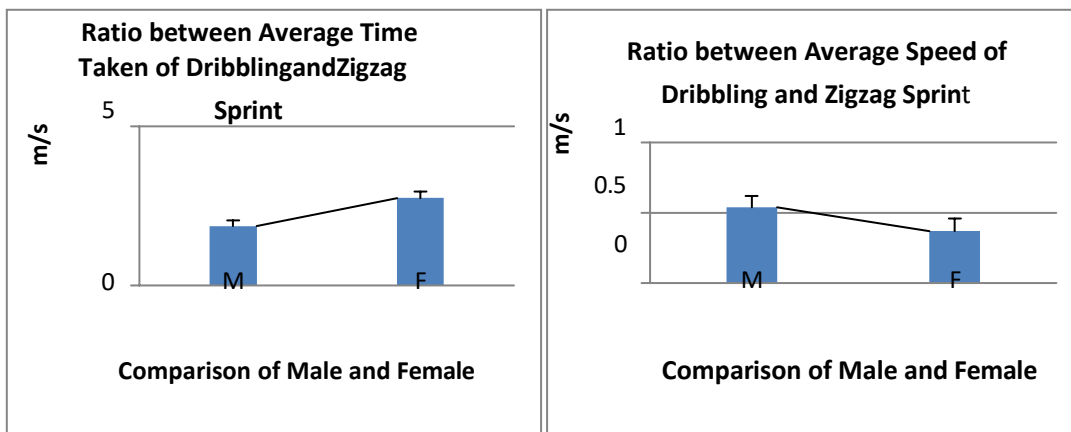
		F	0.96	0.21
7	R1	M	1.86	0.21
		F	2.74	0.50
8	R2	M	0.54	0.08
		F	0.37	0.09

N=20; Note: M=Male, F=Female

**Table - II** shows Mean and Standard deviation (M±SD) of the variables. Height (H) was 170.20±4.24 for male and 163.90±6.05 for female. Weight (W) was 65.90±6.14 for male and 51.40±5.74 for female, average time taken of zigzag sprint (AT) was 6.60±0.40 for male and 7.63±0.60 for female, average time taken of dribbling (AX) was 12.26±1.30 for male and 20.82±3.62 for female, average speed of zigzag sprint (ASZS) was 3.04±0.18 for male and 2.64±0.21 for female, average speed of dribbling (ASDB) was 1.65±0.18 for male and 0.96±0.21 for female, ratio between average time taken of dribbling and zigzags print (R1) was 1.86±0.21 of male and 2.74±0.50 for female and ratio between average speed of dribbling and zigzag sprint (R2) was 0.54±0.08 for male and 0.37±0.09 for female.

**Figure-2:** Graphical Presentations of Comparison of Male and Female Football Players





*N=20; Note:\*= Significant at 0.05 level, F ratio- two sets of degrees of freedom; one for the numerator and one for the denominator, Sig.- Significance att 0.05 level, df- degree of freedom, sig. (2 tailed)- statistically significant correlations between your two variables*

**Table –III: Gender Differences with Regard to Selected Biomechanical Variables of Sprinting and Dribbling**

As per Table-3, the factors in particular level (H) (t=2.70), weight (W) (t=5.46), normal time taken for crisscross run (AT) (t=-4.55), normal time taken of spilling (Hatchet) (t=-7.03), normal speed of crisscross run (ASZS) (t=4.59), normal speed of dribbling(ASDB) (t=8.07), proportion between normal time taken of spilling and crisscross run (R1) (t=-5.17), and proportion between normal speed of spilling and crisscross run (R2) (t=4.45) were critical at 0.05 level.

Variables	F	Sig.	't'	df	Sig. (2-tailed)	Mean Difference
H	2.48	0.13	2.70* 2.70	18.00 16.12	0.02 0.02	6.30 6.30
W	0.00	0.96	5.46* 5.46	18.00 17.92	0.00 0.00	14.50 14.50
AT	1.01	0.33	-4.55* -4.55	18.00 15.69	0.00 0.00	-1.03 -1.03
AX	7.45	0.01	-7.03 -7.03	18.00 11.28	0.00 0.00	-8.56 -8.56
ASZS	0.07	0.79	4.60* 4.60	18.00 17.75	0.00 0.00	0.40 0.40
ASDB	0.35	0.56	8.07* 8.07	18.00 17.54	0.00 0.00	0.69 0.69
R1	13.73	0.07	-5.17* -5.17	18.00 12.04	0.00 0.00	-0.88 -0.88
R2	0.05	0.84	4.45* 4.45	18.00 17.42	0.00 0.00	0.17 0.17

## DISCUSSION

The presentation of guys and females are genuinely comparable in speed or strength till they hit adolescence. A short time later, the testosterone levels assume a critical part, other than the normal little gathering size of leg muscles and lesser oxygen utilization by females because of normal more modest size of lungs. Likewise, on a normal, guys have higher hemoglobin content, around 150-160 mg/ml contrasted with 130-140 mg/ml for females (7, 8, 9, 10). These physiological contrasts could be adding to the less typical time taken by male players in run and spilling. Men likewise have longer legs than females and better response time as well (5, 6, 7). In any case, our review is quick to report that females perform better compared to guys in normal speed taken in running and spilling, in spite of the past reports that show guys normal better in speed since they regularly participate in normal type of 'blood doping' (lawfully).

## CONCLUSIONS

A massive distinction among male and female football players as to the running and it was seen to spill capacities. Male footballer players scored higher in normal time taken in Crisscross Run and Spilling and in the proportion between normal speed of Spilling and Crisscross Run. Female footballer player performed better concerning normal speed taken for Crisscross Run' and Spilling and in proportion between normal speed of spilling and crisscross run.

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