

Football Performance Test

Vincenzo Alberto Annese*, Tandiyo Rahayu, Soegiyanto M.S, Donny Wira Yudha Kusuma

Universitas Negeri Semarang, Indonesia

*Corresponding Author: annesevincenzoalberto.vaa@gmail.com

Abstract. This research on the professional football coach competency evaluation instrument was done because there was no existing instrument used to measure the test to select players' competence in India (female and male). Subjects in this study, 18 male and 18 female players from India from a professional sports club were involved respectively. The physical characteristics of the participants are shown in this experimental study. The players performed a battery of four tests during normal weekly training. The research was in the period between January and March 2022 in quantitative method research. Motor capacity in detail, the speed was analyzed with a 20 m Sprint, the strength with a counter-movement without using the arms (CMJ), the resistance with the "YoYo Intermittent Recovery Test - Level 1 "(YYIR1)," and coordination with a test characterized by running, slalom with the ball, jumping of the obstacle 20 meters plus 20 meters. Before each, the protocol was explained and the correct technique was demonstrated; the speed, endurance, and coordination tests. We can illustrate this research as the use of standardized tests for twelve with execution in the first two days of the week of the typical week preceding the game. This study leads to the awareness that the various tests carried out repeatedly over time can be useful if stimulated adequately for the continuous improvement of performance and therefore not only used for the purpose to understand the physical qualities of individual players.

Key words: Coach Competence; Motor Capacity; Physical Test; Performance.

How to Cite: Annese, V.A., Rahayu, T., Soegiyanto, M.S. Kusuma, D.W.Y. (2022). Football Performance Test. *ISSET: International Conference on Science, Education and Technology*, 1070-1075.

INTRODUCTION

This study investigated the perceptual and behavioral responses regarding obtaining the maximum football performance specific to motor capacities. Subjects in this study, 18 male and 18 female players from India from a professional sports club were involved respectively. The physical characteristics of the participants are shown in this experimental study. "The use of fitness tests in the laboratory and field assist in examining soccer players' capabilities for performance both at the amateur and elite levels. Laboratory tests provide a useful indication of players' general fitness. Accurate test results can be obtained with the use of a thorough methodology and reliable equipment" (M Svensson & B Drust, 2007).

The players performed a battery of four tests during normal weekly training. They were made in the period between January and March 2022. Each concerned a specific motor capacity. More in detail, the speed was analyzed with a 20 m Sprint, the strength with a counter-movement without using the arms (CMJ), the resistance with the "YoYo Intermittent Recovery Test - Level 1 "(YYIR1)," and coordination with a test characterized by running, slalom with the ball, jumping of the obstacle 20 meters plus 20 meters. "Since all jumping tests had high correlation coefficients with the principal component ($r = 0.76-0.87$), it was interpreted as the explosive

power factor. The CMJ test showed the highest relationship with the explosive power factor ($r = 0.87$), that is, the greatest factorial validity" (G Markovic, 2004).

We started with that speed, then moved on to strength, and endurance, and concluded with that coordination. Before each, the protocol was explained and the correct technique was demonstrated; the speed, endurance, and coordination tests were carried out on a synthetic grass surface, while the strength test was carried out on a natural grass surface. "This study could help practitioners and coaches to better design training by emphasizing the importance of combining adapted leg muscular power training with sprint running training programs for improving short-distance sprint performance" (Cronin, 2005).

We can illustrate this research as the use of standardized tests for twelve with execution in the first two days of the week of the typical week preceding the game; which can bring a general capacity to all the specific conditions listed in the research.

The skills sought in the tests are the capacity of endurance, speed, strength, and changing direction and coordination with the ball. The research serves to make people understand the importance of tests during the weekly preparation, in the central phase of the football season; after the tenth game of the men's

championship and the sixteenth game of the women's championship (for both teams to 16 teams).

We can say that the tests have stimulated much more resistance to recovery and much more speed of running and execution with improved quality. This study leads to the awareness that the various tests carried out repeatedly over time can be useful if stimulated adequately for the continuous improvement of performance and therefore not only used for the purpose to understand the physical qualities of individual players. "The shared variance between the single-leg vertical, horizontal, and lateral jumps for men and women was less than 50%, indicating that the jumps are relatively independent of one another and represent different leg strength/power qualities" (C Meylan, 2009). Future research is required to investigate the possible effect of training loads on physical development and the effect of fitness level on match performance between genders, competition standards, and age groups. "Extending the current research, these different approaches revealed the ambiguity of the diagnostics' prognostic relevance, representing both the usefulness and several pitfalls of nationwide diagnostics. Therefore, the present diagnostics can support but not substitute for coaches' subjective decisions for talent identification, and multidisciplinary designs are required" (O Honer, 2016). The statistically significant differences between men and women are many: height and weight, for example, are examples that are easy to observe. These, however, are partially significant. The specific power, that is the power expressed by the muscle mass divided by the total body mass, can benefit lighter people if equipped with sufficiently powerful muscles and the length of the levers is not necessarily an advantage if it is not accompanied by the right agility and coordination. "It is common in high-intensity team sports and can negatively affect an athlete's professional carrier, causing serious disruption in the performance" (V Candela, 2019). Which usually benefits the short-lived. More hidden differences are, for example, the levels of hemoglobin in the blood: for men, this is about 10% more than for women. On the other hand, under stress the female organism seems to consume a few percent less oxygen than the male one, canceling or almost canceling the different blood composition. Another significant difference lies in hormone levels, which are reflected in a greater amount of fat mass present

in the female body: even for athletes at the best of training, a man hardly drops below 6% fat mass and a woman below 12%. Below these values, the risk of damage to the body is real: this difference, however, represents a weight that women systematically carry with them when they tackle sports. "Female athletes have decreased knee separation distances on landing and acceleration; male athletes have a neutrally aligned lower limb position. A neuromuscular training program will significantly increase knee separation distance in female athletes" (FR Noyes, 2005). Another problem that men do not have is the menstrual cycle, which certainly creates problems for a good 10-15% of athletes in each race. As often happens when looking at the human body, it is difficult to identify a single cause for an effect, so probably the aspects we have mentioned so far are just some of the possible contributing causes of the differences in performance that exist between male and female athletes. "The authors believe that the concept of a "pubic joint" or "pubic dynamic complex" is fundamental to understanding the anatomy and pertinent pathophysiology in these patients. Many injuries can now be treated successfully" (WC Meyers, 2012). In many sports specialties, however, these differences are not really relevant. At the level of the muscle fiber, there is no anatomical difference, the difference in strength between the two sexes is to be found in the different % of muscle tissue (36% in women compared to 45% in men) and in the lower amount of testosterone, which exerts an excitatory effect on the neuromuscular system. "The current study sought to determine possible influences of anthropometry, body composition, and maturation on accumulated time of play and matches as the starter in young soccer players" (FM Clemente, 2021).

METHODS

In this study, 18 males from India and female players from an amateur sports club were involved respectively. The female subjects belonged to the "Juniors" category, while those opposed to the "Students" category. The physical characteristics of the participants are shown in the Experimental Study. The players performed a battery of four tests during normal weekly training. They were made in the period between January and March 2022. Each concerned a specific motor ability. I used a quantitative method for data analysis. More in detail, the speed was analyzed with a 20 m Sprint, the

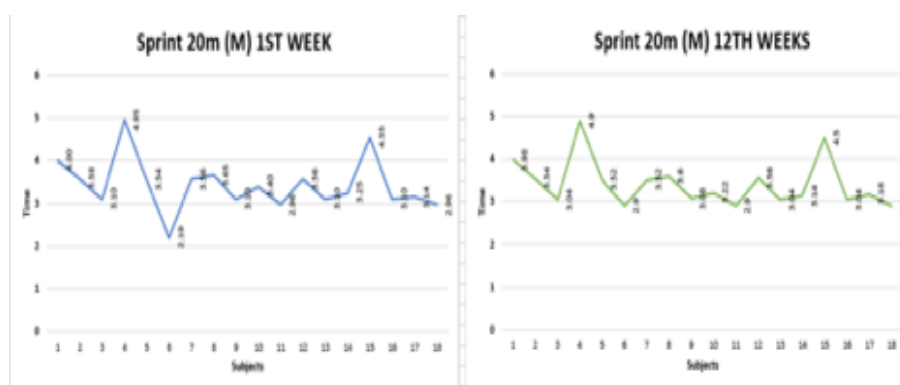
strength with a counter-movement without using the arms (CMJ), the resistance with the "YoYo Intermittent Recovery Test - Level 1 "(YYIR1)," and coordination with a test characterized by running, slalom with the ball, jumping off the obstacle. All tests were carried out at the beginning of the first training session, each once a week for each category of subjects. We started with that speed, then moved on to that strength, and endurance, and concluded with that coordination. Before each, the protocol was explained and the correct technique was demonstrated; the speed, agility, endurance, and coordination tests were carried out on a synthetic grass surface, while the strength test was carried

out on a natural grass surface. I'm States carried out in the complex through method manuals.

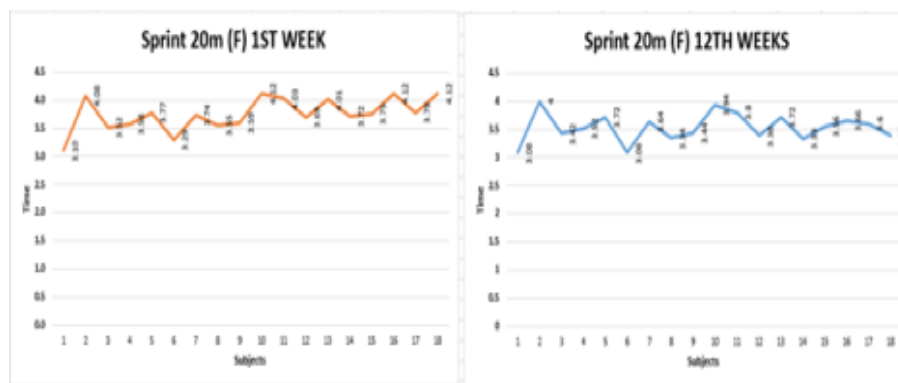
The present research aimed to understand if there are differences between the two kinds of football. It has been hypothesized, based on previous studies, that these should exist and the male gender would show higher values than the female gender counterpart. "The career performance trajectories of 5981 athletes (2837 females) competing in jump events from 2000 to 2019 were extracted from the World Athletics database" (G Boccia, 2020).

RESULTS AND DISCUSSION

SPRINT 20 mt:

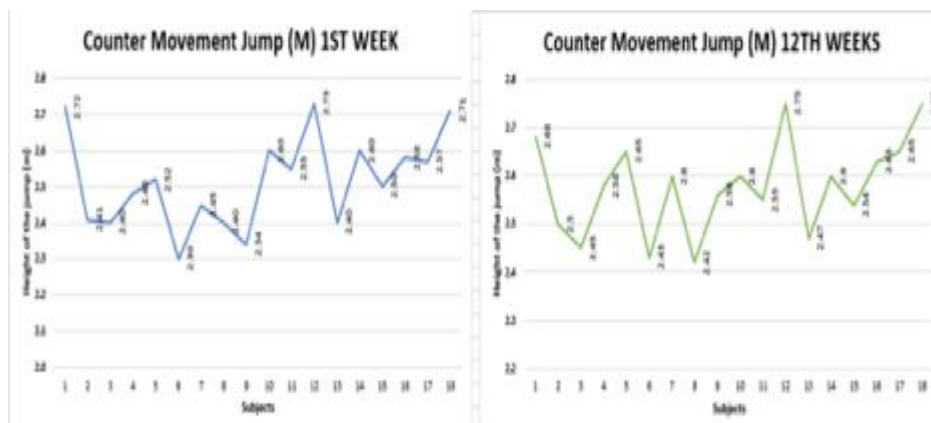


Average of Sprint 20m (M) on week 1 was 3.43 whereas on week 12 the average was 3.42. There was an improvement in speed of 0.01 average total.

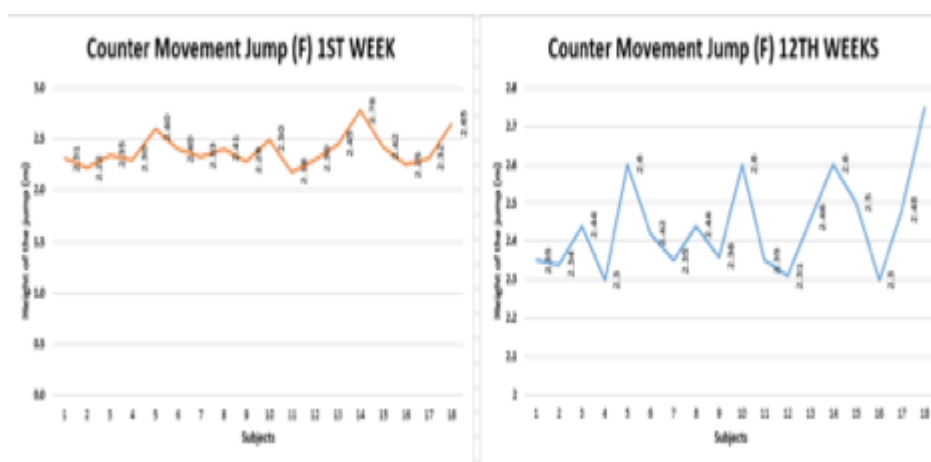


Average of Sprint 20m (F) on week 1 was 3.75 whereas on week 12 the average was 3.53. There was an improvement in speed of 0.22 average total.

CMJ:

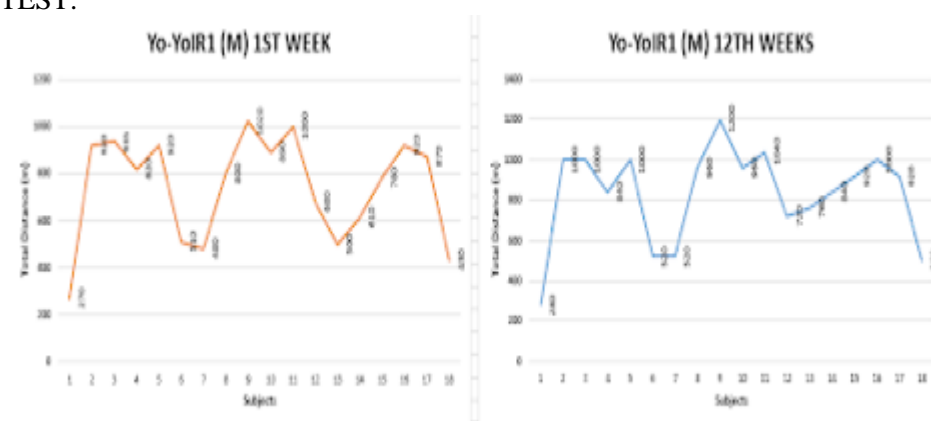


Average of Counter Movement Jump (M) on week 1 was 2.51 whereas on week 12 the average was 2.58. There was an improvement in height of jump of 0.063 average total.

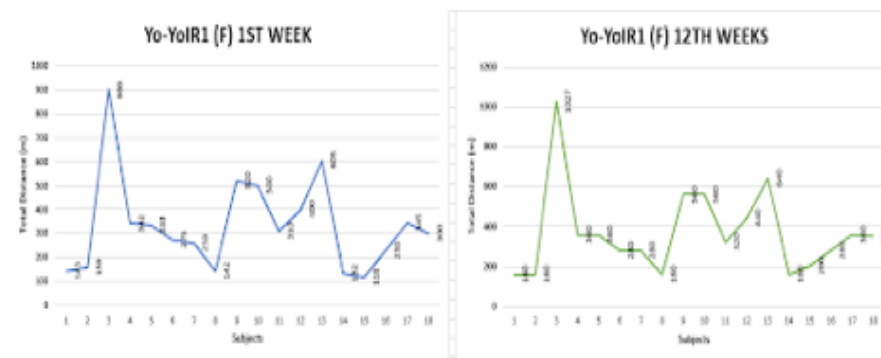


Average of Counter Movement Jump (F) on week 1 was 2.39 whereas on week 12 the average was 2.44. There was an improvement in height of jump of 0.05 average total.

YoYo TEST:

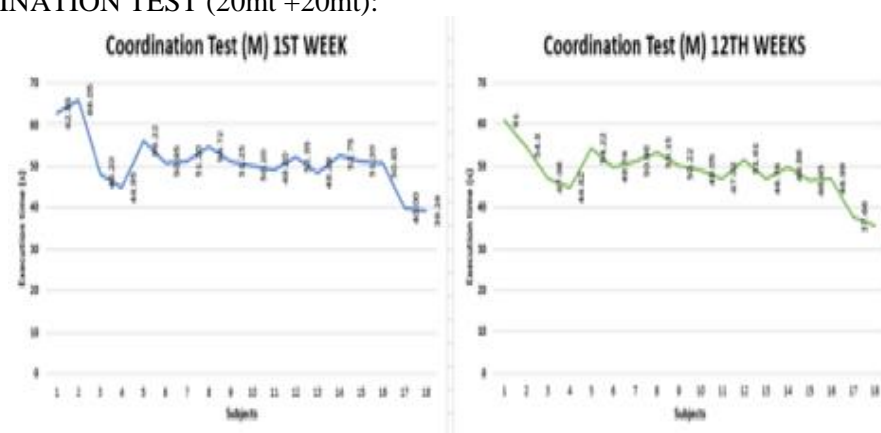


Average of Yo-YoIR1 (M) on week 1 was 742 whereas on week 12 the average was 832. There was an improvement in resistance of 90 average total.

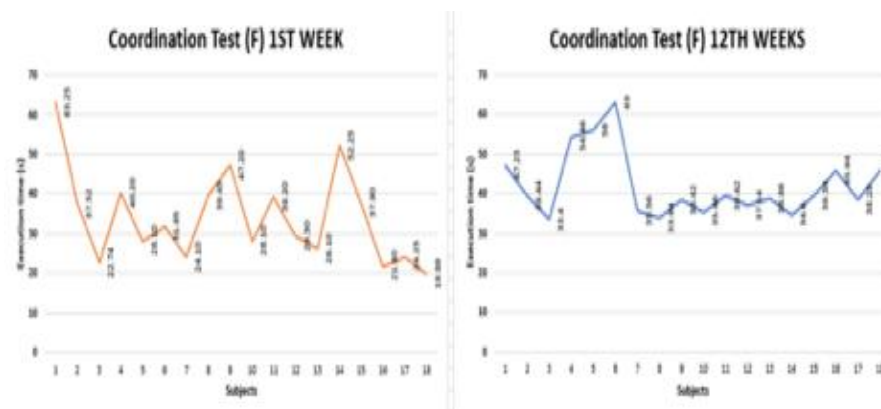


Average of Yo-YoIR1 (F) on week 1 was 334 whereas on week 12 the average was 370. There was an improvement in resistance of 36 average total.

COORDINATION TEST (20mt +20mt):



Average of Coordination Test (M) on week 1 was 51.14 whereas on week 12 the average was 48.72. There was an improvement in execution time of 2.42 average total.



Average of Coordination Test (F) on week 1 was 34.07 whereas on week 12 the average was 42.02. There was a setback in execution time of 7.96 average total.

CONCLUSION

This study investigated the perceptual and behavioral responses regarding obtaining the maximum football performance specific to motor capacities. Subjects in this study, 18 male and 18 female players from India from a professional

sports club were involved respectively. The physical characteristics of the participants are shown in this experimental study. The players performed a battery of four tests during normal weekly training. They were made in the period between January and March 2022. Each concerned a specific motor capacity. More in detail, the speed was analyzed with a 20 m Sprint, the strength with a counter-movement without using the arms (CMJ), the resistance with the "YoYo Intermittent Recovery Test - Level 1

"(YYIR1)," and coordination with a test characterized by running, slalom with the ball, jumping of the obstacle 20 meters plus 20 meters. We started with that speed, then moved on to strength, and endurance, and concluded with that coordination. Before each, the protocol was explained and the correct technique was demonstrated; the speed, endurance, and coordination tests were carried out on a synthetic grass surface, while the strength test was carried out on a natural grass surface. We can illustrate this research as the use of standardized tests for twelve with execution in the first two days of the week of the typical week preceding the game; which can bring a general capacity to all the specific conditions listed in the research. The skills sought in the tests are the capacity of endurance, speed, strength, and changing direction and coordination with the ball. The research serves to make people understand the importance of tests during the weekly preparation, in the central phase of the football season; after the tenth game of the men's championship and the sixteenth game of the women's championship (for both teams to 16 teams). We can say that the tests have stimulated much more resistance to recovery and much more speed of running and execution with improved quality. This study leads to the awareness that the various tests carried out repeatedly over time can be useful if stimulated adequately for the continuous improvement of performance and therefore not only used for the purpose to understand the physical qualities of individual players.

ACKNOWLEDGEMENT

Firstly, I would like to thank God for granting me this opportunity. It is with a heart of gratitude that I pursue this dissertation. There are many people that I owe much of their time and kind assistance to make this paper a reality. I became an international football coach and work in 10 different countries. I follow my instinct to be a part to improve football in the world. I hope this dissertation will create more improved processing in football performance.

REFERENCES

- C Meylan, T. M. (2009). Single-leg lateral, horizontal, and vertical jump assessment: reliability, interrelationships, and ability to predict sprint and change-of-direction performance. *Journal of Strength and Conditioning Research*.
- Cronin, P. M. (2005). Horizontal and vertical jump assessment: reliability, symmetry, discriminative and predictive ability. *Physical Therapy in Sport*.
- FB Ortega, J. R. (2008). *Physical fitness in childhood and adolescence: a powerful marker of health*. London: Int J Obes.
- FM Clemente, C. C. (2021). Exploring Relationships Between Anthropometry, Body Composition, Maturation, and Selection for Competition: A Study in Youth Soccer Players. *Frontiers in Physiology*, 1.
- FR Noyes, W. B. (2005). The Drop-Jump Screening Test: Difference in Lower Limb Control by Gender and Effect of Neuromuscular Training in Female Athletes. *The American Journal of Sports Medicine*.
- G Boccia, M. C. (2020). Performance progression of elite jumpers: Early performances do not predict later success. *Scandinavian Journal of Medicine & Science in Sports*, 1.
- G Markovic, D. D. (2004). Reliability and factorial validity of squat and countermovement jump tests. *Journal of Strength and Conditioning Research*, 1.
- H. Andersson, N. D. (2014). Applied physiology of female soccer. *Sports Medicine*, 1.
- JN Hopkins, W. B. (2017). Evaluation and treatment. *A Sports Hernia*.
- M Svensson & B Drust. (2007, February 18). <https://www.tandfonline.com/doi/abs/10.1080/002640410400021294>. Retrieved August 9, 2022, from <https://www.tandfonline.com:https://www.tandfonline.com>
- O Honer, A. V. (2016). Prognostic relevance of motor talent predictors in early adolescence: A group and individual based evaluation considering different levels of achievement in youth football. *J Sports Science*.
- R Lidor, G. Z. (2010). *Physical and physiological attributes of female volleyball players--a review*. *J Strength Cond Res*.
- T. Reilly, J. Bangsbo & A. Franks. (2000). Anthropometric and Physiological Predispositions for Elite Soccer. *Journal of Sports Science*, 18.
- V Candela, A. D. (2019). Hip and Groin Pain in Soccer Players. *National Library of Medicine*, 1.
- WC Meyers, E. Y. (2012). Understanding "Sports Hernia" (Athletic Pubalgia): The Anatomic and Pathophysiologic Basis for Abdominal and Groin Pain in Athletes. *Operative Techniques in Sports Medicine*, 1.