

Assessment of officiating demands on selected variables among state level soccer referees

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■ ABSTRACT

The purpose of the study was to analysis of officiating demands on selected physiological and biochemical parameters among with state level referees (n=10) with mean age (38.90±3.24) officiated West Zone inter university football tournaments. Global positioning technology (GPS) and heart rate monitoring devices were used to provide information relating to the time, speed, distance, position and heart rate during matches. The descriptive statistic of physiological variable showed that pre-match respiratory rate was (21.6±3.09) breath/min, half time respiratory rate (37.0±5.48) breath/min and post -matches respiratory rate (41.7±3.52) breath/min, respectively. Pre- match heart rate was (91.14±7.29) beat/min, half time heart rate (140.9±16.36) beat/min and post match heart rate (157.60±18.75) beat/min. Distance covered in first and second half were 2.71±0.38 km and 2.67±0.55 km, respectively with total distance of 5.38±0.71 km. Maximum speed achieved in first half was 12.93± 0.88 km/hour and in second half 13.54±1.50 km/hour. Pre- match and post- match blood glucose was 110.90±11.74 mg/dL and 123.90±15.93 mg/dL, respectively. Pre- match blood lactate was 14.1±15 mmol/L and post- match blood lactate was 23.07±3.74 mmol/L, respectively.

■ **Key Words** : Global positioning technology, Blood glucose, Blood lactate

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Given the enormous importance of football referees reflected in the almost universal tendency for die-hard fans to displace frustrations with the team onto their hapless shoulders – it is surprising that sports scientists have paid so little attention to their physical and biochemical status and performance (Abt, 2002). Soccer referees are being considered the 23rd player of a soccer game, and their importance is in ensuring that players uphold the laws of the game. Every competitive soccer match must be regulated by a referee, two assistant referees and a side-line official (fourth official). It has been estimated that each week of a complete season, 1.3 million referees take to the football pitch with the aim of regulating the behaviour of the players and enforcing the rules of the game (Gamble *et al.*, 2001). Given the low frequency of scoring in soccer match (approximately 2.7 goals

per- match), the decisions of a referee can have profound implications on the outcome of the game. With the introduction of the three points for a win rule and the increasing number of professional soccer teams being listed on the stock exchange, it is easy to understand the importance of winning or losing in modern professional soccer. Consequently, soccer referees are progressively embracing full time status (Helson and Bultynck, 2004).

■ METHODOLOGY

Ten Gujarat state referees with the mean age of 38.±3.24, officiated during the West Zone inter university football tournament held in 2009 at Gujarat, were selected as the subjects for this study. The selected physiological and biochemical variables for measuring officiating demand during