



TRACKING IMMEDIATE PHYSIOLOGICAL CHANGES PRE-POST SMALL SIDED SOCCER PLAY

S. Eswari*, N. Kodeeswaran**, S. Rajesh*** &
S. Senthil Kumaran****

* Assistant Professor, Department of Physical Education, GTN Arts and Science College, Dindigul, Tamilnadu

** Ph.D Research Scholar, Department of Physical Education, Bharathiar University, Coimbatore, Tamilnadu

*** Ph.D Research Scholar, Department of Physical Education, Annamalai University, Chidambaram, Tamilnadu

**** Director, Unicorn Fitness, Madurai, Tamilnadu

Cite This Article: S. Eswari, N. Kodeeswaran, S. Rajesh & S. Senthil Kumaran, "Tracking Immediate Physiological Changes Pre-Post Small Sided Soccer Play", International Journal of Multidisciplinary Research and Modern Education, Volume 7, Issue 1, Page Number 15-17, 2021.

Copy Right: © IJMRME, 2021 (All Rights Reserved). This is an Open Access Article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium provided the original work is properly cited.

Abstract:

The aim of the study was to find out the result of small sided soccer play on selected physiological variables. To achieve the idea of the study 10 male Inter-collegiate soccer Players were selected from GTN Arts and Science College, Dindigul, Tamilnadu. The subjects were dehydrated in two half consists of each half 10 minutes small sided soccer play. The age group of subjects ranged from 18-25 years. The study was delimited to the following variables Body temperature and Heart rate were tested difference between after completion of two half consists of each half 10 minutes small sided soccer match. To perform this analysis, the researcher used dependent 't' test to find out the significant difference between pre and post small sided soccer play. In this case to test the significance 0.01 level of confidence was utilized. It was found that there was a significant enhance in heart rate and body temperature after small sided soccer play.

Key Words: Soccer, Body Temperature, Heart Rate.

1. Introduction:

Five-a-side football is a variety of affiliation football, where each group fields five players (four outfield players and a goalkeeper). Different contrasts from football incorporate a more modest pitch, more modest objectives, and a diminished game span. Soccer as a sporting movement is far and wide among an assorted gathering of populaces. Soccer related exercises are utilized in actual instruction educational plans among all ages, as a preparation practice in a wide scope of sports to create wellness, just as strategic and specialized capacities for participants. So-called sporting soccer is normally completed as little sided games. Little sided games (SSG) are any games played with fewer than eleven part groups and on a more modest estimated field. SSG appear to be a mainstream option in contrast to the dull exercise modes generally utilized for the improvement of cardiovascular wellness. For example, states that utilizing SSG investment as an ordinary actual work improves holding among understudies and more established grown-ups, and is kept up more effectively.

Drying out suggests the insufficiency of water from the distinctive body fluid compartments, including the plasma, the water washing the cells. Water contains 50 to 70% of the human body. It fills in as a structure for compound reactions, temperature rule and oil for adults step by step water needs is evaluated at 1ml/kcal utilized. Sources consolidate all beverages and various non rewards food sources. The minerals are working in the body; it helps with understanding the nature and general manufactured properties of water. Water is the greatest piece of the human body, making up 50 to 70% of the body's weight. Thin muscle tissue contains about 73% water. Fat tissue is about 20% water. The fat substance developments in the body total body water lessen towards half. The body controls the proportion of water in each compartment essentially by controlling the electrolyte centres in each compartment. In game plan electrolytes separate into charged particles called particles. Water is pulled in to particles, similar to sodium, potassium, chloride, phosphate, magnesium and calcium. By controlling the improvements of particles all through the cell compartments the body keeps up the fitting proportion of water in each compartment. In this way the current investigation has been completed to contemplate the Tracking Immediate Physiological Changes Pre-Post Small-Sided Soccer Play.

2. Review of Related Literature:

Rajkumar (2020) Carryout the study to identify the effect of volleyball play on selected physiological variables. To achieve the purpose of the study 12 male inter-collegiate Volleyball players were selected from Department of Physical Education, Bharathiar University Coimbatore. The subjects were dehydrated in 5 Set Volleyball match. The age group of subjects ranged from 18- 28 years. The study was delimited to the following

variables, Body temperature and Heart rate were tested difference between after completion of 5 set Volleyball play. To execute this investigation, the researcher used dependent 't' test to find out the significant difference between pre and post Volleyball play. In this case to test the significance 0.01 level of confidence was utilized. It was found that there was a significant increase in heart rate and body temperature after Volleyball play.

Yanci et al (2014) the purpose of this study was to analyze the physiological response of wheelchair basketball (WB) players during the different bouts of a training task (4 vs. 4). Twelve WB players participated in this study (25.3 ± 2.4 years). Five sessions of the small-sided games (SSG) were performed, with 4 sets each session and a rest interval of 2 min between each one. Significant differences were found ($p < 0.05$) in heart rate peak (HR peak) in the last three bouts in comparison to the first (169.5 ± 12.47 , 170.78 ± 12.80 , 170.03 ± 11.78 vs. 167.19 ± 11.74 beat•min⁻¹). Mean HR (HR mean) showed a similar trend, but there were also significant differences ($p < 0.05$) between the second and third bouts (156.37 ± 12.04 vs. 158.21 ± 11.82 beat•min⁻¹). Body temperature remained constant during the first three bouts and showed a significant increase ($p < 0.05$) in the fourth bout. During the SSG, HR mean was similar to that obtained in other studies of official matches, so they could represent an adequate training task for improving WB performance. However, special attention should be paid to the number of bouts performed in the training sessions as the physiological response was not constant.

3. Methodology:

The aim of the study was to find out the result of small sided soccer play on selected physiological variables. To achieve the idea of the study 10 male Inter-collegiate soccer Players were selected from GTN Arts and Science College, Dindigul, Tamilnadu. The subjects were dehydrated in two half consists of each half 10 minutes small sided soccer play. The age group of subjects ranged from 18-25 years. The study was delimited to the following variables Body temperature and Heart rate were tested difference between after completion of two half consists of each half 10 minutes small sided soccer match. To perform this analysis, the researcher used dependent 't' test to find out the significant difference between pre and post small sided soccer play. In this case to test the significance 0.01 level of confidence was utilized. The researcher reviewed the available scientific literature from books, Journals, periodicals, research, papers and magazines and also taking into consideration the feasibility criteria of availability of instrument, the subsequent variable is appropriate to the current study.

3.1 Selection of Variables:

The investigator reviewed the available scientific literature from books, Journals, periodicals, research, papers, and magazines also taking into consideration the feasibility criteria of availability of instrument, the following variables are applicable to the current study. The certain variables are

- Body Temperature
- Heart Rate

3.2 Selection of Tests:

Table 1: Selection of Tests

S.No	Variables	Test Items/ Instrument	Unit of Measurement
1	Body Temperature	Thermometer	Fahrenheit
2	Heart Rate	Pulse Oximeter	Beat/Min

4. Results:

4.1 Results of Body Temperature:

Table 2: The Mean, Standard Deviation, difference between the Means, and 't' Ratio on Body Temperature of Pre-Post Small Sided Soccer play

Test	M	S D	D M	't' Ratio
Pre Test	96.88	0.67	2.48	7.47*
Post Test	99.36	0.85		

*Significance at 0.01 levels, (df= N-1) 10-1= 9 is 3.25.

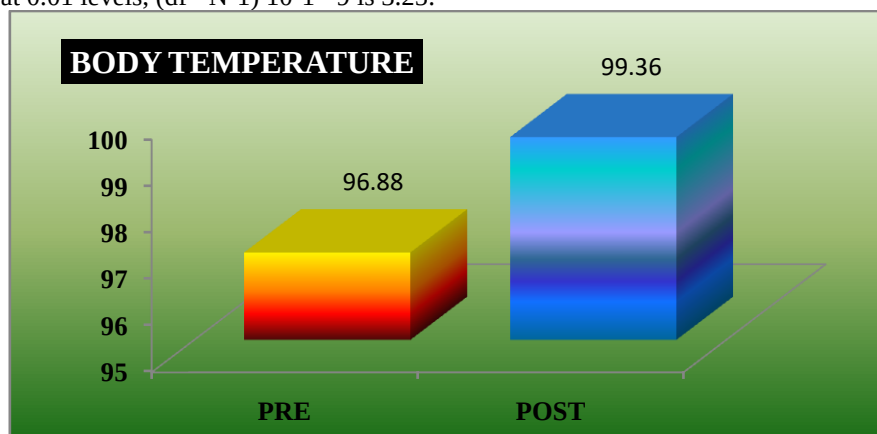


Chart 1: The Mean Values of Pre Test and Post Test on Body Temperature

Table 2 shows that the body temperature means of pre test and post test are 96.88 and 99.36 respectively. The obtained 't' value 7.47 and the table value is 3.25 at 0.01 level of confidence. Since the obtained 't' value is greater than the table value. It is concluded that there was a significant difference in body temperature between the pre and post small sided soccer play.

4.2 Results of Heart Rate:

Table 3: The Mean, Standard Deviation, difference between the Means, and 't' Ratio on Heart Rate of Pre-Post Small Sided Soccer play

Test	M	S D	D M	't' Ratio
Pre Test	71.64	2.63	14.16	16.68*
Post Test	85.80	2.88		

*Significance at 0.01 levels, (df= N-1) 10-1= 9 is 3.25.

Table 3 shows that the heart rate means of pre test and post test are 71.64 and 85.80 respectively. The obtained 't' value 16.68 and the table value is 3.25 at 0.01 level of confidence. Since the obtained 't' value is greater than the table value. It is concluded that there was a significant difference in heart rate between the pre and post small sided soccer play.

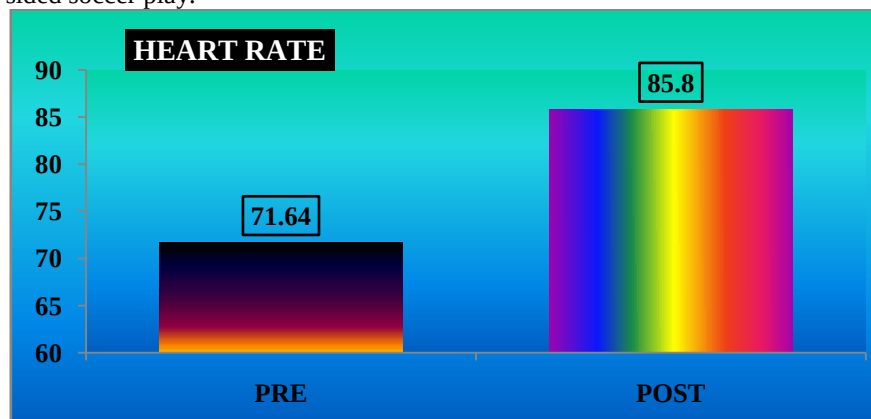


Chart 2: The Mean Values of Pre Test and Post Test on Heart Rate

5. Discussion on Findings:

From the analysis of the data the following findings may be drawn about the study. The result of the study reveals that there was a significant variance on body temperature and heart rate after the of small-sided soccer play. Due to the result of small-sided soccer play the body temperature and heart rate had appreciably increased. The findings of the present study had similarity with the findings of Rajkumar (2020) [1], Yanci J, Iturricastillo A and Granados, C (2014) [2]. The hypothesis states that there would be a significant increase in body temperature and heart rate due to the result of small-sided soccer play. The findings of this study reveal that there was a significant increase in body temperature and heart rate at 0.01 level of confidence, hence the hypothesis was accepted.

6. Conclusions:

The result of the study reveals that there was a significant variance on body temperature and heart rate after the small-sided soccer play. Due to the result of small-sided soccer play the body temperature and heart rate had significantly increased.

7. References:

1. Dr. M. Rajkumar (2020) Tracking Immediate Physiological Changes Pre-Post Volleyball Play. Bharathiar National Journal of Physical Education and Exercise Sciences, Vol. 11, No (2): Pg. 01-04.
2. Yanci J, Iturricastillo A and Granados, C (2014) Heart rate and body temperature response of wheelchair basketball players in small-sided games. International Journal of Performance Analysis in Sport, 14, 535-544.
3. David Watt. C (1998) "Sports Management and Administration", London: EGFN.
4. Layrlee Sherwod (1996) "Human Physiology", Los Angeles: West Publishing Company.
5. Melvin Williams. H (1995) "Nutrition for Fitness and Sports", USA: Brown & Bench Mark Publishers.
6. Patricia Isenman A. E, Stephen Johnson (1999) "Coaches Guide to Nutrition and Weight Control", Illinois: Leisure press.
7. Aaron Coutts and Ainta Sirotic (2004) "Post match Recovery Practices", Sports Coach, 27:2.
8. Antonio Tessitore et al., (2006) "Aerobic- Anaerobic Profiles, Heart Rate and Match Analysis in Old Basketball Players", Gerontology, 52: pp214-222.