TRACKING INSTANT PHYSIOLOGICAL CHANGES PRE-POST BASKETBALL PLAY

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ABSTRACT

The design of the study was to find out the result of basketball play on selected physiological variables. To achieve the idea of the study 10 male Youth School Basketball Players were selected from St. Britto Hr. Sec. School, Madurai. The subjects were dehydrated in four quarters Basketball match. The age group of subjects ranged from 14-16 years. The study was delimited to the following variables Body temperature and Heart rate were tested difference between after completion of four quarters Basketball match. To perform this analysis, the researcher used dependent 't' test to find out the significant difference between pre and post Basketball 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 Basketball play.

Keywords: *Basketball, Body Temperature, Heart Rate.*

1. INTRODUCTION

Basketball is based on short impacts of speed and agility. This gathers there is a brief relationship amongst pulse and stroke volume in picking the heart yield for players. Augmentations in inside heat level conceivably added to refreshed force execution in the secret occasions of the game; regardless, further effort affected hyperthermia, which may have added to the scene decrease in execution. The expansion in execution worked with the increase in inside warmth level. Drying out alludes to the deficiency of water from the different body liquid compartments, including the plasma, the water washing the cells. Water comprises 50 to 70% of the human body. It fills in as a form for compound responses, temperature guideline and grease for grown-ups day by day water needs is assessed at 1ml/kcal used. Sources incorporate all drinks and numerous non refreshments food sources. The minerals are working in the body; it assists with understanding the nature and general synthetic properties of water. Water is the biggest part of the human body, making up 50 to 70% of the body's weight. Slender muscle tissue contains about 73% water. Fat tissue is about 20% water. The fat substance expansions in the body absolute body water diminish towards half. The body controls the measure of water in every compartment basically by controlling the electrolyte focuses in every compartment. In arrangement electrolytes separate into charged particles called particles. Water is pulled in to particles, like sodium, potassium, chloride, phosphate, magnesium and calcium. By controlling the developments of particles all through the cell compartments the body keeps up the fitting measure of water in every compartment. Thus the present study has been carried out to study the Tracking Instant Physiological Changes Pre-Post Basketball 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 design of the study was to find out the result of basketball play on selected physiological variables. To achieve the idea of the study 10 male Youth School Basketball Players were selected from St. Britto Hr. Sec. School, Madurai. The subjects were dehydrated in four quarters Basketball match. The age group of subjects ranged from 14-16 years. The study was delimited to the following variables Body temperature and Heart rate were tested difference between after completion of four quarters Basketball match. To perform this analysis, the researcher used dependent 't' test to find out the significant difference between pre and post Basketball 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 AND TESTS

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
    1.   Body Temperature
    2.   Heart Rate

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 Basketball Play				
Test	**M**	**S D**	**D M**	**'t' Ratio**
Pre Test	97.28	0.67	2.26	6.75*
Post Test	99.54	0.85		

*Significance at 0.01 levels, (df= N-1) 10-1= is 3.25.
Table-2 shows that the body temperature means of pre test and post test are 97.28 and 99.54 respectively. The obtained 't' value 6.75 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 Basketball play.
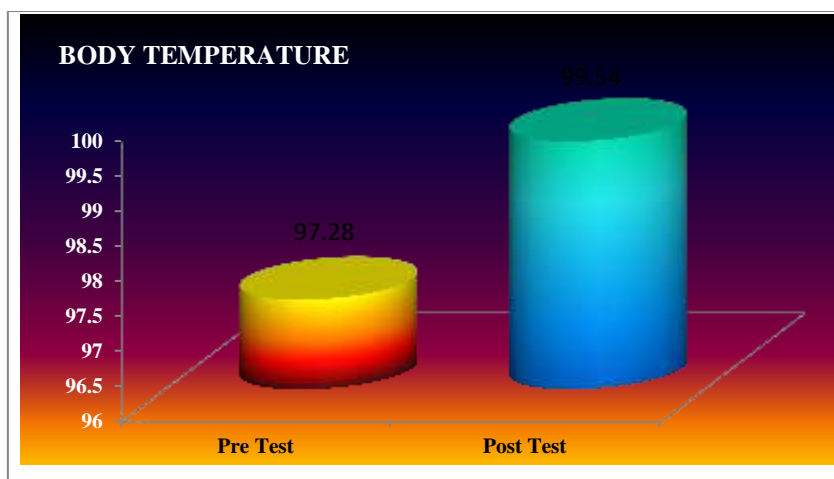
Chart-1: The Mean Values of Pre Test and Post Test on Body Temperature

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 Basketball Play				
Test	**M**	**S D**	**D M**	**'t' Ratio**
Pre Test	70.60	2.63	16.30	18.65*
Post Test	86.90	2.88		

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

Table-3 shows that the heart rate means of pre test and post test are 70.60 and 86.90 respectively. The obtained 't' value 18.65 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 Basketball play.
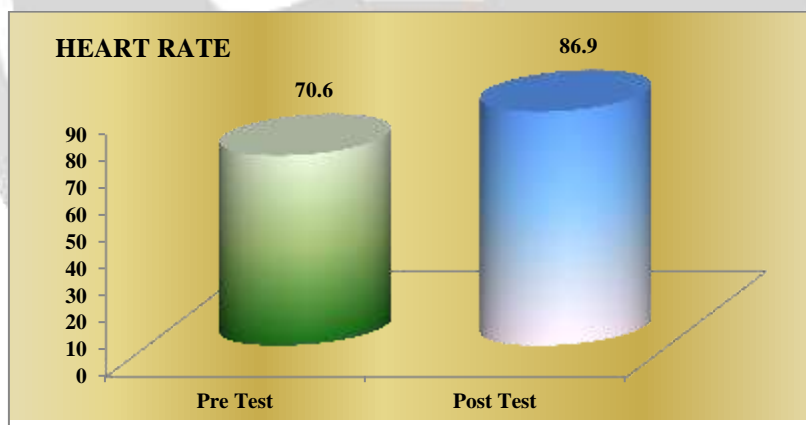

Chart-2: The Mean Values of Pre Test and Post Test on Heart Rate

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 basketball play. Due to the result of basketball play the body temperature and heart rate had appreciably increased. The findings of the present study had similarity with the findings of **Rajkumar (2020)**, **Yanci J, Iturricastillo A and Granados, C (2014)**. The hypothesis states that there would be a significant increase in body temperature and heart rate due to the result of basketball 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.

5.2 CONCLUSIONS

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

5.3 REFERENCES

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BIOGRAPHIES

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