



EFFECT OF WATER THERAPY ON TEMPERATURE REGULATION, RESTING HEART RATE AND BODY WEIGHT AMONG EARLY ADULTHOOD

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Abstract

The purpose of the study was to find out the effect of water therapy on temperature regulation, resting heart rate and body weight among adults. To achieve the purpose of the study 10 subjects were selected from the Department of Physical Education and Sports, Manonmaniam Sundarnar University, Tirunelveli. The selected subjects were aged between 21 to 27 years. The selected subjects were underwent water therapy for a duration of 10 working days. Temperature Regulation and Blood Pressure were selected as criterion variables for this study. During the training period, the experimental group took (drink) 1.25 litre of water every day in the morning up to 10 days. All the subjects involved in this study were carefully monitored throughout the training programme to be away from injuries. The training programme was scheduled for the morning between 5.30 am and 6.30 am. The collected data from the experimental group on pre and post experimentation were statistically analysed by using dependent t -test. In all the cases .05 level of significance was fixed to test the hypothesis. There was significant reduction on temperature and heart rate due to water therapy and insignificant difference was found on weight.

Key Words: Water, Temperature, heart rate.

Introduction

Water is an extremely essential part of any healthcare plan. The human body is essentially 75% water. Losing only 1-2% of your body's water can result in dehydration. Water not only suppresses appetite, but the more water a person drinks, the more the body releases the stored water (what we sometimes call 'retaining water'). After drinking cold water, the body will heat that water up to body temperature and expend calories in the process. Water is also an important ingredient in preventing constipation, and helping with diarrhea. Drinking enough water each day will help the digestive system work properly. Water is the human body's most important need. (Karen L Barker. 2003).

By drinking plenty of water each day, you help your body stay hydrated enough, so that it doesn't need to extract much water at all from the solid waste materials that are moving through the colon. Since the waste material keeps its water, it stays soft and pliable so that it's able to move through the colon at a much easier and faster rate. One of the important jobs of water is to help your kidneys remove wastes like uric acid, urea, and lactic acid. If you do not have enough water to dissolve the wastes then they cannot be removed effectively and you run the risk of kidney damage (Collins English Dictionary, 2003).

Purpose of the Study

The purpose of the study was to find out the effect of water therapy on temperature regulation, resting heart rate and body weight among early adulthood.

Methodology

Subjects

To achieve the purpose of the study 10 subjects were selected from the Department of Physical Education and Sports, Manonmaniam Sundaranar University, Tirunelveli. The selected subjects were aged between 21 to 25 years. The selected subjects were underwent water therapy for a duration of 10 working days.

Variables

Present study the following variables were selected.

TABLE I
SELECTION OF TESTS AND INSTRUMENTS

S.NO	VARIABLES	INSTRUMENTS	UNIT OF MEASUREMENTS
1	Temperature Regulation	Thermometer	Fahrenheit
2	Resting Heart Rate	Radial Pulse Method	Beats/min
3	Bosy Weight	Weighing machine	Kilograms

Training Programme

During the training period, the experimental group took (drink) 1.25 litre of water every day in the morning up to 10 days. All the subjects involved in this study were carefully monitored throughout the training programme to be away from injuries. They were questioned about their health status throughout the training programme. None of them reported with any injuries.

The training programme was scheduled for the morning between 5.30 am and 6.30 am. The collected data from the experimental group on pre and post experimentation were statistically analysed by using dependent –t- test. In all the cases .05 level of significance was fixed to test the hypothesis

Analysis of Data

Temperature

The mean and standard deviation values on temperature of experimental group at three different stages of tests have been analysed and presented in Table II.

TABLE II
THE SUMMARY OF MEAN AND DEPENDENT 't' - TEST FOR THE PRE AND POST TESTS ON TEMPERATURE

Group	Number	Mean (Fahrenheit)	Standard Deviation	t-value
Pre Test	10	99.4	0.78	3.54*
Post Test	10	97.5	0.86	

*Significant at .05 level. The Table value significant at .05 level with df 9 is 2.26.

The table II shows that the table values required for significant difference with df 9 at .05 level is 2.26. Since, the obtained 't'- ratio value 3.54 of experimental group on temperature is greater than the table value 2.26, it is concluded that the water therapy had significantly improved the temperature of experimental group.

Heart rate

The mean and standard deviation values on heart rate of experimental group at three different stages of tests have been analysed and presented in Table III.

TABLE III
THE SUMMARY OF MEAN AND DEPENDENT 't' - TEST FOR THE PRE AND POST TESTS ON HEART RATE

Group	Number	Mean (Fahrenheit)	Standard Deviation	t-value
Pre Test	10	76.20	5.52	4.14*
Post Test	10	64.10	3.45	

*Significant at .05 level. The Table value significant at .05 level with df 9 is 2.26.

The table III shows that the table values required for significant difference with df 9 at .05 level is 2.26. Since, the obtained 't'- ratio value 4.14 of experimental group on heart rate is greater than the table value 2.26, it is concluded that the water therapy had significantly improved the heart rate of experimental group.

Weight

The mean and standard deviation values on Weight of experimental group at three different stages of tests have been analysed and presented in Table VI.

TABLE VI
THE SUMMARY OF MEAN AND DEPENDENT 't' - TEST FOR THE PRE AND POST TESTS ON WEIGHT

Group	Number	Mean (Fahrenheit)	Standard Deviation	t-value
Pre Test	10	66.80	8.17	0.318*
Post Test	10	66.70	7.42	

The Table value significant at .05 level with df 9 is 2.26.

The table VI shows that the table values required for significant difference with df 9 at .05 level is 2.26. Since, the obtained 't'- ratio value 0.318 of experimental group on Weight is lesser than the table value 2.26, it is concluded that the water therapy had no significantly improved the weight of experimental group.

Discussion on Findings

The result of the study indicates that the experimental group had significantly improved the temperature, resting pulse rate and diastolic blood pressure and also there was no significant improvement on systolic diastolic pressure and weight.

It is inferred from the literatures and from the results of the present study that systematically designed water therapy develops the performance standard as the selected dependent variables are very important qualities for better performance in almost all sports and games. Hence, it is concluded from the results of the study that systematically and scientifically designed water therapy may be given due recognition and be implemented properly in the training programmes of all the disciplines in order to achieve maximum performance.

Conclusions

From the analysis of the data, the following conclusions were drawn.

There was significant difference on temperature regulation of adults due to the effect of water therapy.

There was significant difference on heart rate regulation of adults due to the effect of water therapy.

There was no significant difference on weight regulation of adults due to the effect of water therapy.

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