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Comarative study of height, weight, and vital capacity of the master swimmers and athletes

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Abstract
The purpose of the study was to compare the height, weight and vital capacity of master swimmers and athletes. In this study total 60 subjects 30 from each of swimmers and athletes who represented state level master championship held at Hanuman Vyayam Prasark Mandal, Amravati were selected as subjects by adopting Simple Random Sampling Method (SRS). The age of the subjects ranged from 30-60 years. The data pertaining to all the selected physical and physiological parameters were collected on swimming pool and athletic track of Hanuman Vyayam Prasark Mandal, Amravati by administering standard tests three times and the best were recorded as final data. The collected data were analyzed by using mean difference method, t- test statistical technique and to test the hypothesis the level of significance was chosen at 0.05. On the basis of the findings it was concluded that there was insignificant difference in the selected physical and physiological parameters between the master swimmers and athletes of different age group except the weight in the age group 46-60 which showed significant difference at 0.05 level of confidence.

Keywords: Master Swimmers**,** Vital capacity, Comarative Study

Introduction
Sports are as old as human society and it has achieved a universal status in modern society. Sports by their nature are enjoyable, challenging, all observing and require a certain amount of skill and physical condition which are based on one`s endurance.

Aquatic activities are very different from other athletic sports because they are performed in the water however, the characteristic required by an excellent swimmer are similar to those required by any other athlete except the characteristic must be emphasized in different body parts e.g., power is very important in court games and is equally important in swimming, but in court games the power must be primarily in legs while in swimming arm power is of paramount importance.

Statement of the problem
The problem is stated as "A comparative study of height, weight, and vital capacity of the master swimmers and athletes"

Purpose of the study
The purpose of the study was to compare the height, weight, and vital capacity of the master swimmers and athletes"

Significance of the study
The following would be the significance of the study:-

1) The findings of this study may help the teacher and coaches to predict the performance of master swimmers and athletes on the basis of *selected physical and physiological parameters*
2) The study may prove helpful in recommending special training and conditioning program on the basis of findings.
3) In screening the players for different games and sports activities.
4) The findings of the study would provide scope for further study.

Hypothesis
It was hypothesized that there might be insignificant difference in *selected physical and physiological parameters between the* master swimmers and athletes.

Delimitation(s)
The present study was delimited to the following aspects:-

1. Swimmers and athletes (male only) *who had represented state level master championship held at Hanuman Vyayam Prasark Mandal, Amravati.*
2. *Thirty master swimmers and thirty master athletes were selected randomly from the age group of 30-60 years.*

Limitations
The following were the limitations of the study:-

1) There was no control of researcher over the diet of the subjects.
2) No motivational devices were adopted to motivate or discourage the subjects during the experimentation.
3) Training background of the subjects was unknown to the scholar.

Design of the study
Thirty master swimmers and thirty master athletes who represented Maharashtra state level master championship held at Hanuman Vyayam Prasark Mandal, Amravati were selected as subjects the age of the subjects was ranging from 30 to 60 years. Simple Random Sampling (SRS) procedure was employed. *The data pertaining to all the selected physical and physiological parameters were collected on*

swimming pool and athletic track of Hanuman Vyayam Prasark Mandal, Amravati by administering standard tests three times and the best were recorded as final data.

Findings

The data collected on 30 subjects from each of Swimmers and athletes on *all the selected physical and physiological parameters* were computed *by using mean difference method, t- test statistical technique.* The result pertaining to these data have been depicted in the following table.

Table 1: Comparison of Means between the Height of Master Swimmers and Athletes in the Age Group of 30- 45 Years.

Group	Mean	S.D	M.D	S.E	Calculated `t`
Swimmers	169.07	10.99	2.4	3.45	0.70@
Athletes	166.67	7.55			

@ Not Significant at 0.05 level of confidence
Tabulated $t_{0.05}(28) = 2.048$

The findings of table 1 revealed that the calculated t 0.70 is less than the tabulated value $t_{0.05}(28) = 2.048$. Thus, there is no value of significant difference between the means of height of the swimmers and athletes, in the age group of 30-45 years. So, null hypothesis is accepted and alternative hypothesis is rejected.

Table 2: Comparison of Means between the weight of Master Swimmers and Athletes In the Age Group of 30- 45 Years.

Group	Mean	S.D	M.D	S.E	Calculated `t`
Swimmers	69.73	10.52	4.87	4.73	1.02@
Athletes	74.60	14.99			

@ Not Significant at 0.05 level of confidence
Tabulated $t_{0.05}(28) = 2.048$

The findings of table 1 revealed that the calculated t 1.02 is less than the tabulated value $t_{0.05}(28) = 2.048$. Thus, there is no value of significant difference between the means of weight of the swimmers and athletes, in the age group of 30-45 years. So, null hypothesis is accepted and alternative hypothesis is rejected.

Table 3: Comparison of Means between the Vital Capacity of Master Swimmers and Athletes in the Age Group of 30- 45 Years.

Group	Mean	S.D	M.D	S.E	Calculated `t`
Swimmers	460.34	107.95	25.67	38.42	0.67@
Athletes	434.67	102.39			

@ Not Significant at 0.05 level of confidence
Tabulated $t_{0.05}(28) = 2.048$

The findings of table 3 revealed that the calculated t 0.67 is less than the tabulated value $t_{0.05}(28) = 2.048$. Thus, there is no value of significant difference between the means of vital capacity of the swimmers and athletes, in the age group of 30-45 years. So, null hypothesis is accepted and alternative hypothesis is rejected.

Table 4: Comparison of Means between the Height of Master Swimmers and Athletes in the Age Group of 46- 60 Years.

Group	Mean	S.D	M.D	S.E	Calculated `t`
Swimmers	168.60	8.99	3.54	3.06	1.16@
Athletes	165.06	7.06			

@ Not Significant at 0.05 level of confidence
Tabulated $t_{0.05}(28) = 2.048$

The findings of table 4 revealed that the calculated t 1.16 is less than the tabulated value $t_{0.05}(28) = 2.048$. Thus, there is no value of significant difference between the means of height of the swimmers and athletes, in the age group of 46-60 years. So, null hypothesis is accepted and alternative hypothesis is rejected.

Table 5: Comparison of Means between the weight of Master Swimmers and Athletes In the Age Group of 46- 60 Years

Group	Mean	S.D	M.D	S.E	Calculated `t`
Swimmers	74.86	11.09	9.4	3.88	2.43*
Athletes	65.46	10.1			

* Significant at 0.05 level of confidence
Tabulated $t_{0.05}(28) = 2.048$

The findings of table 5 revealed that the calculated t 2.43 is more than the tabulated value $t_{0.05}(28) = 2.048$. Thus, there is value of significant difference between the means of weight of the swimmers and athletes, in the age group of 46-60 years. So, null hypothesis is rejected and alternative hypothesis is accepted.

Table 6: Comparison of Means between the Vital Capacity of Master Swimmers and Athletes in the Age Group of 46- 60 Years.

Group	Mean	S.D	M.D	S.E	Calculated `t`
Swimmers	451.00	83.88	38.34	45.96	0.84@
Athletes	412.66	156.98			

@ Not Significant at 0.05 level of confidence
Tabulated $t_{0.05}(28) = 2.048$

The findings of table 6 revealed that the calculated t 0.84 is less than the tabulated value $t_{0.05}(28) = 2.048$. Thus, there is no value of significant difference between the means of vital capacity of the swimmers and athletes, in the age group of 46-60 years. So, null hypothesis is accepted and alternative hypothesis is rejected.

Discussion

The present study was to compare the height, weight and vital capacity of master swimmers and athletes who represented state level master championship held at Hanuman Vyayam Prasark Mandal, Amravati.

It was raveled that, there is no significant difference in height, weight and vital capacity of swimmers and athletes in the age group of 30-45 years.

It was raveled that, there is no significant difference in height, and vital capacity of swimmers and athletes in the age group of 46-60 years.

But there is significant difference in weight of swimmers and athletes in the age group of 46-60 years.

Conclusion

Within the limitation and on the basis of the result of the study the following conclusion were drawn.

1. That there was no significant difference between height, weight and vital capacity of the master swimmers and athletes in the age group of 30-45 years.
2. That there was no significant difference between height and vital capacity of the master swimmers and athletes in the age group of 46-60 years.

3. But it was found that there is significant difference between weight of the master swimmers and athletes in the age group of 46-60 years.

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