

Body Mass Index, Blood Pressure Red Blood Cells and Hemoglobin among Female Ashwamedh Players

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Abstract

Ashwamedha is a Maharashtra state inter university sports festivals organized by each year in the Month of November organized by university simultaneously on behalf government of Maharashtra. Mostly There are five sports includes in this Tournaments Namely; Kabaddi, Kho-Kho, Basketball, Volleyball and Athletics in both sexes. The present study was undertaken with a view to “ study and compare the body mass index, blood pressure, hemoglobin and red blood cells of five groups male sportsperson namely; Kabaddi, Kho-Kho, Basketball, Volleyball and Athletics. The data was collected from 100 male Kabaddi, Kho-Kho, Basketball, Volleyball and Athletics players in Agriculture University Parbhani during Ashwamedha Tournament from 25 November to 30 November 2013. Mean Score (S.Ds.) age of Ashwamedha was 22.88 (7.33) years, mean score (S.Ds.) weight was 68.23 (16.40) Kg., mean score (S.Ds.) height was 175.98 (30.30) cm., their training mean score (S.Ds.) was 4.65 (1.09) days, their training duration mean score (S.Ds.) was 2.70 (.92) hours, their warm up mean score (S.Ds.) was 13.22 (3.66) minutes and competition mean score (S.Ds.) was 8.22 (1.90) in one year.

The study reveals that insignificant differences were found in Kho- Kho and basketball players and Kho-Kho and Athletics in Body Mass Index RBC, BP and Hb.

Introduction

There are Body mass index (BMI) is a reliable indicator of health and nutritional status of human being. Body Mass index also known as the “quettlet’s index” express the relationship between the two mostly widely used parameters to monitor linear and ponderal growth, viz., height and weight. BMI does not measure fat directly, but its has shown that BMI correlates to direct measures of body fat, such as by under water weighing and dual energy X-ray absorptiometry. There are several evidences are presented in the shapers of hypertensive processes begin in the childhood with numerous studies finding co-relates between Blood pressure levels from early to later childhood and from childhood to adulthood.

The major function of Red Blood cells is to transport hemoglobin, which in turn carries oxygen from the lungs to the tissue, so that the red blood cells are responsible for most of the buffering power of whole blood.

Hemoglobin concentration is an important diagnosis indicator for the well being of individuals. In the light of the above, the investigators become interested in determining the body mass index; Blood pressure, Red Blood Cell and Hemoglobin among Ashwamedha Players.

Methods

The present study was undertaken with a view to “study and compare the body mass index, blood pressure, haemoglobin and red blood cells of five group’s sportsperson namely; Kabaddi, Kho-Kho, Basketball, Volleyball and Athletics.

The sampling frame was included Kabaddi, Kho-Kho, Basketball, Volleyball and Athletics. Total 100 Ashwamedha Players were selected as sample size of the study. The study depends mainly on primary source of data. The data was collected from Kabaddi, Kho-Kho, Basketball, Volleyball and Athletics players in Agriculture University Parbhani during Ashwamedha Tournament from 25 November to 30 November 2013. In collecting the data, the researcher follow to ethical guidelines, principles, and standards for studies conducted with human beings. For measuring haemoglobin and red blood cells the blood sample taken from a vein. This procedure takes only a few minutes. Caregivers put a wide rubber strap around arm and tighten it. Skin was be cleaned with alcohol. A small needle attached to a special test tube was put into a vein in arm or hand. The tube has suction to pull the blood into it. When the tube is full, the rubber strap, needle and tube are removed. The caregiver pressed a piece of cotton where the needle was removed. The subject was asked to hold the cotton on the area for a few minutes to help stop the bleeding. Tape may then be put over the cotton on the arm.

Results

The results concerning this are presented in the form of tables where ever necessary. For the sake of convenience and methodical presentation of the results, following order has been adopted.

Table 1

Mean Scores and Standard Deviations of selected components of the Female Ashwamedha Players

Sr. No.	Components	Means Scores	Standard Deviation
1.	Age (Year)	23.30	7.87
2.	Weight (Kg)	57.20	15.22
3.	Height (cm)	144.12	23.43
4.	Training (days/week)	3.32	1.07
5.	Training duration (hours)	2.04	0.67
6.	Warm up (minutes)	11.23	2.99
7.	Competition in one year	4.34	1.11

Table-1, reveals that the mean scores and standard deviations of the selected components of the Female Ashwamedha Players

Mean Score (S.Ds.) age of the subject was 23.30 (7.87) years, mean score (S.Ds.) weight was 57.20 (15.22) kg., mean score (S.Ds.) height was 144.12 (23.43) cm., their training mean score (S.Ds.) was 3.32 (1.07) days, their training duration mean score (S.Ds.) was 2.04 (.67) hours, their warm up mean score (S.Ds.) was 11.23 (2.99) minutes and competition mean score (S.Ds.) was 4.34 (1.11) in one year

Table -2

Mean scores and standard deviation of body mass index among female Ashwamedha Players

Variable	Players	Number	Mean	S.D.
Body Mass Index	Kabaddi	20	19.18	3.12
	Kho-Kho	20	19.32	3.16
	Basketball	20	19.34	3.17
	Volleyball	20	19.43	3.21
	Athletics	20	18.98	3.01

Table – 2 Shows that **Mean scores standard deviation of body mass index among Female Ashwamedha Players of five sports discipline.** With regards to body mass index in **Kabaddi, Kho-Kho, Basketball, Volleyball and athletics player** they have obtained mean value were 19.18, 19.32,19.34,19.43 and 18.98 respectively.

Table-3

One way Analysis of variance of Body Mass Index among Ashamedha Players

Source of Variance	DF.	SS	MSS	F- ratio
Between Groups	4	0.42	0.10	.04 NS
Within Groups	95	201.43	2.12	

Table-3, indicates that insignificant difference of body mass index of female Ashamedha players in five sports discipline .The hypothesis of the study that, there would be no significant deference in Body Mass Index of different sports discipline inter-Varsity male Ashamedha players was accepted .

Table-4

Mean scores and standard deviation of Systolic Blood pressure among female Ashwamedha Players

Variable	Players	Number	Mean	S.D.
Systolic Blood pressure	Kabaddi	20	118.66	7.80
	Kho-Kho	20	119.09	7.98
	Basketball	20	118.32	7.64
	Volleyball	20	118.56	7.72
	Athletics	20	119.12	7.99

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Table – 4 Shows that Mean scores standard deviation of systolic blood pressure among female Ashwamedha Players of five sports discipline. With regards to Systolic Blood Pressure in **Kabaddi, Kho-Kho, Basketball, Volleyball and athletics player** they have obtained mean value were 118.66, 119.09, 118.32, 118.56 and 119.12 respectively.

Table-5
One way Analysis of variance of Systolic Blood Pressure among female Ashamedha Players

Source of Variance	DF.	SS	MSS	F- ratio
Between Groups	4	0.59	0.14	0.11 NS
Within Groups	95	116.17	1.22	

Table-5, indicates that insignificant difference of Systolic Blood Pressure of female Ashamedha players in five sports discipline. The hypothesis of the study that, there would be no significant difference in systolic blood pressure of different sports discipline inter-Varsity male Ashamedha players was accepted.

Table-6
Mean scores and standard deviation of Diastolic Blood Pressure among Female Ashwamedha Players

Variable	Players	Number	Mean	S.D.
Diastolic Blood pressure	Kabaddi	20	75.34	5.21
	Kho-Kho	20	74.99	5.01
	Basketball	20	75.67	5.28
	Volleyball	20	75.19	5.14
	Athletics	20	74.92	4.95

Table – 6 Shows that Mean scores standard deviation of Diastolic blood pressure among female Ashwamedha Players of five sports discipline. With regards to Diastolic Blood Pressure in **Kabaddi, Kho-Kho , Basketball , Volleyball and athletics player** they have obtained mean value were 75.34,74.99,75.67,75.19 and 74.92 respectively.

Table-7
One way Analysis of variance of Diastolic Blood Pressure among Ashamedha Players

Source of Variance	DF.	SS	MSS	F- ratio
Between Groups	4	0.43	0.10	0.09 NS
Within Groups	95	103.76	1.09	

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Table-7, indicates that significant difference of Diastolic Blood Pressure of female Ashamedha players in five sports discipline. The hypothesis of the study that, there would be no significant deference in Diastolic blood pressure of different sports discipline inter-Varsity male Ashamedha players was accepted.

Table-8
Mean scores and standard deviation of Hemoglobin among female Ashwamedha Players

Variable	players	Number	Mean	S.D.
Hemoglobin	Kabaddi	20	11.32	1.54
	Kho-Kho	20	11.76	1.59
	Basketball	20	11.67	1.64
	Volleyball	20	11.43	1.56
	Athletics	20	11.33	1.55

Table – 8 Shows that **Mean scores standard deviation of Hemoglobin among female Ashwamedha Players of five sports discipline.** With regards to Hemoglobin in **Kabaddi, Kho-Kho , Basketball , Volleyball and athletics player** they have obtained mean value were 11.32,11.76.11.67.11.43 and 11.33 respectively.

Table-9
One way Analysis of variance of Hemoglobin among Ashamedha female Players

Source of Variance	DF.	SS	MSS	F- ratio
Between Groups	4	0.32	0.08	0.07 NS
Within Groups	95	97.90	1.03	

Table-9, indicates that insignificant difference of Hemoglobin of Ashamedha players in five sports discipline. The hypothesis of the study that, there would be no significant deference in Hemoglobin of different sports discipline inter-Varsity male Ashamedha players was accepted.

Table-10
Mean scores and standard deviation of Red Blood Pressure among female Ashwamedha Players

Variable	players	Number	Mean	S.D.
Red Blood Cells	Kabaddi	20	4.15	1.05
	Kho-Kho	20	4.22	1.09

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	Basketball	20	4.28	1.11
	Volleyball	20	4.12	1.01
	Athletics	20	4.38	1.14

Table -10 Shows that **mean scores standard deviation of Red Blood Cells among Female Ashwamedha Players of five sports discipline.** With regards to Red Blood Cells in **Kabaddi, Kho-Kho, Basketball, Volleyball and athletics player** they have obtained mean value were 4.15,4.22,4.28,4.12 and 4.38 respectively.

Table-11

One way Analysis of variance of Red Blood Cells among female Ashamedha Players

Source of Variance	DF.	SS	MSS	F- ratio
Between Groups	4	0.28	0.07	0.06 NS
Within Groups	95	98.04	1.03	

Table-11 indicates that insignificant difference of Red Blood Cells of female Ashamedha players in five sports discipline. The hypothesis of the study that, there would be no significant deference in Red blood cells of different sports discipline inter-Varsity male Ashamedha players was accepted.

Conclusions

1. Insignificant difference of body mass index of female Ashamedha players in five sports discipline was found.
2. Insignificant difference of Systolic Blood Pressure of female Ashamedha players in five sports discipline.
3. Insignificant difference of Diastolic Blood Pressure of female Ashamedha players in five sports discipline.
4. Insignificant difference of Haemoglobin of Ashamedha players in five sports discipline.
11. Insignificant difference of Red Blood Cells of female Ashamedha players in five sports discipline.

Implication

The research may provide early information to help the students understand their physical fitness level. It will encourage them to be involved in sports. The information can be applied as criteria in selecting or choosing athletes. It is also a source to assist Physical Education Directors, Physical Educationist and coaches to be proactive and change their perspective in order to improve the athlete's performance. This research may inform policies and practices designed to improve student's health and improve learning, academic performance, Health outcomes and retention. Ultimately, the findings will increase the number of qualified physical education teacher sports trainers, and enhance the quality of health care in Varsity students. Therefore, this study will provide significance to both theory and practice in higher education and professional courses.

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