

A COMPARATIVE STUDY OF PHYSIOLOGICAL AND PSYCHOLOGICAL VARIABLES AMONG VEGETARIAN AND NON-VEGETARIAN RUNNERS

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Abstract:

The present investigation was to find out the comparative difference of physiological and psychological variables among vegetarian and non-vegetarian runners. To realize the main objective of the study 40 participants (20 Vegetarian and 20 Non-Vegetarian) from CRS University, Jind and K.U. Kurukshetra were selected. To obtain the data, Sphygmometer, Stethoscope, Exhale Barometer, Skin Fold Caliper and Bhardwaj's Aggression Questionnaire were administered on the participants. Obtained data was analyzed by using descriptive statistics and t-test. Descriptive statistics implied that data was more or less normal. T-tests have revealed that there were no significant differences on Blood Pressure, Exhale capacity, Fat percentage and Aggression among vegetarian and non-vegetarian runners. So, the present study suggests that large scale studies are required for more generalization.

Keywords: Blood Pressure, Exhale Capacity, Fat Percentage & Aggression.

Introduction:

In the present era, the major objectives of test and measurement are physical education is to allot the activity according to the ability of players. There are number of physiological variables, on which sports persons differ as well as these variables affected by intervening variables such as diet, amount of practice and so on. Hence, the present investigation is based on some physiological and psychological variables of runners which may be affected by nature of the food i.e. vegetarian and non-vegetarian. Blood pressure, exhale, fat percentage and aggression are includes as a physiological and psychological variables respectively. Blood pressure can be defined in terms of the pressure that blood exerts against the walls of the arteries (Singh *et. al.*, 2008). It is studied in relation to physical exercise, pattern of diet and so on. Exhale capacity is the total amount of air that can be forcibly

expire after a complete inspiration; also has been used frequently as a measure of adequacy of the respiratory system (David and Harvard, 1986). Fat percentage is simply the percentage of fat of body contains. It includes regulates body temperature, cushions and insulates organs and tissues and the main form of the body's energy storage. Aggression can be defined in terms of overt, often harmful, social interaction with the intention of inflicting damage or other offensiveness upon another individual.

Review of literature revealed that these physiological and psychological variables have been investigated in relation to vegetarian and non-vegetarian players. Khanna *et.al.* (2006) investigated the comparative difference between vegetarian and non-vegetarian in relation to exercise performance and found that prevalence of non-vegetarianism was high amongst Indian

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sports women than Lacto and Ovulate vegetarians. Some other researchers found that vegetarians had a significantly higher body weight, fat free mass, body fat and body mass index (Krawinkel, 2009 and Johnston, 2010). Fuhrman (2010) concluded that vegetarian diets are associated with several health benefits, but whether a vegetarian or vegan diet is beneficial for athletic performance has not yet been defined. Regarding the aggression, as a psychological variable, Grange (2010) investigated the aggression of Australian football athletes in context of types of aggression i.e. play, anger, power and thrill aggression. Whatever, none of the study has been conducted in the perspective of sample of Haryana. Hence, the present study is based on sample of Haryana.

Methods:

Sample: 40 runners were selected from the Chaudhary Ranbir Singh University, Jind and Kurukshetra University, Kurukshetra ranging in age from 20 to 24 years with the mean age of 22 years consisting of 20 vegetarian and 20 non-vegetarian runners.

Measures: Following measures were used for data collection.

Physiological measures:

1. Sphygmometer.
2. Stethoscope.
3. Exhale Barometer.
4. Skin Fold Caliper.

Psychological measure:

1. Aggression Scale (R.L. Bhardwaj, 1985). This scale consists of 28 items and having satisfactory psychometric properties.

Procedure:

The investigator contacted to all the participants personally in their respective departments and establishes a rapport with making them aware about purpose of the study. Then tests were administered strictly following the instructions specified in the respective their manuals.

Results and Discussion:

Obtained data was analyzed by applying descriptive statistics and t-test for find out the normalcy of data and comparative significant difference, respectively. Table shows that the

Vari ables	Gro ups	Me an	SD	M D	D F	O T	T T
SBP	VE	117	6.51	1.	3	0.	2.
	G	.00	.81	66	8	32	04
	NV	15.					
	EG	33					
DBP	VE	71.	7.53	2.	3	0.	2.
	G	5	7.45	5	8	09	04
	NV	74.					
	EG	00					
EC	VE	471	7.53	22	3	0.	2.
	G	.5	7.45		8	28	04
	NV	449					
	EG	.5					
FP	VE	16.	4.89	0.	3	0.	2.
	G	05	2.79	9	8	49	04
	NV	16.					
	EG	95					
AGG	VE	78	7.20	0.	3	0.	2.
	G	74.	6.80	40	8	35	04
	NV	6					
	EG						

Note: $t=.05p < 2.02$; $t=.01p < 2.71$

values of mean and SD are depicted that data is more or less normal. Regarding the

mean differences among these variables t-test was applied and found the mean differences and 't' values on 38 degree of freedom. The 't' values of Systolic Blood Pressure, Diastolic Blood Pressure, Exhale Capacity, Fat Percentage and Aggression are found 0.32, 0.09, 0.28, 0.49 and 0.30 respectively. Regarding these 't' values, tabulated 't' values are checked on .01 and .05 level of significance and depicting that none of the variables has been found significant. Some earlier studies also suggested the similar findings (Daigle *et.al.* 2010).

Conclusion:

The present investigation was based on to find out the comparative difference between vegetarian and non-vegetarian runners on Systolic Blood Pressure, Diastolic Blood Pressure, Exhale Capacity, Fat Percentage and Aggression on physiological and psychological variables respectively. Regarding these variables, among both the groups of runners, review of literature reveals that none of the variables is significant (Deriemaeker *et.al.* 2010 and Grange *et.al.* 2010). Similar findings have been founded by the present investigation.

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