STUDY OF PSYCHO – PHYSICAL CHARACTERISTICS OF VEGETARIAN AND NON-VEGETARIAN FEMALE SPORTSPERSONS IN RELATION TO THEIR LEVEL OF PARTICIPATION

A

Thesis

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By

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DECLARATION

I declare that the thesis entitled — "Study Of Psycho-Physical Characteristics of Vegetarian And Non-Vegetarian Female Sportspersons In Relation To Their Level Of Participation" has been prepared by me under the guidance of Dr. Manohar Lal, Professor, Department of Physical Education, G.H.G Khalsa college Gurusar Sadhar. No part of this thesis has formed the basis for the award of any degree or fellowship previously.

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CERTIFICATE

I certify that Mrs. Kiran has prepared her thesis entitled "Study of Psycho-Physical Characteristics Of Vegetarian And Non-Vegetarian Female Sportspersons In Relation To Their Level Of Participation" for the award of Ph.D. degree of Lovely Professional University, under my guidance. She has carried out the work at the School of Physical Education, Lovely Professional University, Phagwara, Punjab.

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ABSTRACT

Aim-

This study was conducted to compare the psycho-physical characteristics among vegetarian and non-vegetarian female sports persons of strength and endurance sports on the level of their participation.

Material and Method

It was a comparative study carried out on total numbers of 560 female subjects of hockey, football, boxing and wrestling game, in which 280 were vegetarians and 280 were non- vegetarians. Further there are three levels of participation state, intervarsity and national level of strength and endurance sports. To measure the psychological variables mental health and aggression respectively questionnaire constructed by Singh and Gupta and Prem Shankar Shukla was used. Flexibility was measured by the bent and reach test, muscular endurance was measured by sit up test, muscular strength was measured by the roger strength test, and cardiovascular endurance was measured by Harvard step test.

Statistical Tool

To carry out the results t- test was used to compare the means of vegetarian and non - vegetarians. Further to compare the all level of participation ANOVA was used. In case were results found significant Post –Hoc test was applied.

Results

- Study conclude that significant difference have been observed on the variables; aggression between vegetarian and non- vegetarian Hockey, Football, Boxing and wrestling state, intervarsity and national level players respectively. When compared the mean values of both the groups, it has been found that vegetarian hockey, football, boxing and wrestling state, intervarsity and national level female playershave performed significantly better on aggression.
- Further significant difference have been observed on the variable mental health of the vegetarian and non- vegetarian female sports persons of all games at all level of performance. When compared the mean values of both the groups, it has been found that vegetarian hockey, football, boxing and

wrestling state, intervarsity and national level female playershave performed significantly better on mental health.

- Significant difference has been observed on the variable flexibility. When compared the mean values of both the groups, it has been found that vegetarian hockey, football, boxing and wrestling state, intervarsity and national level female playershave performed significantly better on flexibility
- It was evident from the findings that there was significant difference found on the variable muscular endurance among vegetarian and non- vegetarian hockey , football , boxing and wrestling female players at state , intervarsity level and national level except players of hockey at national level. When compared the mean values of the both groups it has been found that vegetarian female hockey, football, boxing and wrestling state, intervarsity and national level players have performed significantly better on muscular endurance.
- It was evident from the findings that there was significant difference found on the variable muscular strength among vegetarian and non- vegetarian hockey, football, boxing and wrestling female players at state, intervarsity and national level. When compared the mean values of the both groups it has been found that non-vegetarian female players of all games at all levels have performed significantly better on left hand grip.
- It was evident from the findings of that there was insignificant difference found on the variable cardiovascular endurance among vegetarian and non-vegetarian hockey players at state, intervarsity and national level, football players at intervarsity level and national level, boxing players at state level and wrestling players at intervarsity level. When compared the mean values of the both groups it has been found that vegetarian female players of hockey, football, boxing and wrestling players have performed significantly better on cardiovascular endurance. These findings may be because of the nature of the games which demand the high level of cardiovascular endurance that why no difference was found between vegetarians and non- vegetarians.
- It was evident from the findings that there was significant difference found on the variable cardiovascular endurance among vegetarian and non- vegetarian football players at state level, boxing players at intervarsity and national level and wrestling players at intervarsity level. When compared the mean values of

the both groups it has been found that vegetarian female players of football, boxing and wrestling have performed significantly better on cardiovascular endurance.

Conclusion

It was concluded that vegetarian female sports persons are psychologically sound and non-vegetarian female sports persons shows better results on physical characteristics like muscular strength, right hand grip strength, left hand grip strength, leg strength and back strength than the vegetarian female sports persons.

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CHAPTER I

INTRODUCTION

'We are what we eat'-**Ludwig Feuerbach**

Healthy lifestyle choices can increase our physical and mental wellbeing. Just eating a balanced diet is not healthy living only. By eating a balanced diet, we headed towards a better and healthy lifestyle. Eating right is not a habit it is a life style. By eating right foods, we gain energy and nourishment that your body need to stay strong and healthy diet also helps to prevent and fight infectivity and diseases. What you have in your plate not only affects your health that also exerts a definite influence upon the mind. Everything we eat produces a sensation on the body and brain. The sensation created by food determines a specific mentality. Meat eating produces gross material reactions that develop the material or animal mental tendencies, whereas eating raw fruits and vegetables helps to reinforce and develop of the spiritual qualities.

Food is a basic need of all living beings. Just as we cannot live without air and water, we cannot live without food. Food gives us energy to carry out our daily activities and keep all the systems of the body functioning well. Food transport the nutritious components needed by human body to construct and renovate tissues and to normalize various functions.

Since food has so many functions to perform to keep us in good health, a study of the composition of various foods and the function performed by these components is essential if one has to enjoy good health.

The role of food is much more than just keeping us alive and healthy. It adds flavour and pleasure to life. The main functions of food are listed here.

- Physiological functions
- Psychological functions

Physiological functions

Providing energy- The body need energy to carry-out voluntary and involuntary work. Voluntary work includes all processes which are not under the control of our will such as digestion, respiration and circulation and go on continuously irrespective

of whether we are asleep or awake. Voluntary activities or activities which we wish to do such as walking, playing games, and working require energy, and the amount of energy required will depend on the nature of activity. The energy needed for these activities is supplied by oxidation of the foods we eat mainly carbohydrates and fats.

Body building and growth - It is one of the most important functions of food. An infant grows into a healthy adult by consuming the right kinds and amounts of food year after year.

Maintenance and repair – In the adult body, worn out cells are continuously being replaced by new ones. The daily wear and tear of cells needs to be maintained. Proteins, minerals and water are the main nutrients required for growth as well as maintenance of all the cells and tissues in the body.

Protective functions – Nutrients keep body cells in a healthy condition to ward off infection. They help in building up the body's resistance to disease and help the body recover rapidly from any infection. These functions are performed by vitamins and proteins.

Psychological functions-

We all have emotional needs such as need for love, attention and security. Food can play an important role in fulfilling these needs. A mother can express her love for her child by preparing the child's favorite meal. Food can be given as a reward for good behaviour or deprived as punishment for bad behavior.

People feel comfortable and secure when they are served food they have been used to consuming. Many people eat to relive anxiety and frustration, while some may eat less or refuse food when they are depressed and lonely.

Religious aspects of food

According to the Ayurveda, there are positive and negative attributes of diet. Holistic approach of healing is the main aspect of Ayurveda; it covers the diet factor in depth. Ayurveda has categorised personality traits into three different kinds, based on the food we eat:-

1. Satvic
2. Rajasic
3. Tamasic

Hinduism, oldest religion in the world, with a very rich customs and compilation of more than hundreds of saintly manuscripts followed all over Asian region for more than 5,000 years. According to Hindus all living beings are made by the creator hence they are sacred and are the pieces of God only, so all should be treated with admiration and kindness. Mostly Hindus are preferred to be vegetarian because of their belief in the purity of life. As the Yajur Veda says: "You must not use your God-given body for killing God's creatures, whether they are human, animal or whatever" *(*Yajur Veda, 12.32*).*

Buddhism in general does not disallow meat eating, while Mahayana Buddhism supporter of vegetarianism because of its benefits for developing compassion.

Christianity does not believe on any principle about diet —except that nothing is prohibited on religious reasons. Christianity is neither encouraged nor discouraged the meat eating. Christians peoples have right to make their own choices on diet; however, but there are some groups within Christianity that follow definite dietetic margins for various reasons.

Those who follow Islam, or Muslims, have the liberty of choose to be vegetarian or non-vegetarian for such medical reasons or for personal reasons, like the taste of meat. Islam never restricted people not to eat meat but a certain type of meat is allowed that is Halal.

There are many dietary restrictions in Jainism. The concept of vegetarianism in Jainism is come from the principle of nonviolence (ahimsa, literally "non-killing"). Vegetarianism is considered compulsory for everyone. They don't eat meat, fish, eggs, root vegetables or animal ingredients. In the Jainism diet is directly related to the religion.

Sikhism gives all the freedom to choose to the individual about what they want to eat and what they don't want to eat. According to the Guru Granth Sahib A Sikh is free to choose his diet there is number restriction on eating of meat but there is restriction on eating halal meat by a Sikh. Guru Gobind Singh, the tenth guru however, prohibited

"Amritdhari" Sikhs, or those that follow the Sikh Rehat Maryada the Official Sikh Code to consume non-vegetarian diet.

When we eat the flesh of a dead animal, we not only take in violence in our own spirit, but we can also become affected by the spirit of the dead animal. For us an animal have to sacrifice his life and feel pain. In the process of dying, a animal felt pain, struggled, cried, tried to escape to continue living as long as possible. Since it was killed in a cruel way, it died in fear, twinge, mental and emotional torture and struggle. Then it has to be cut into pieces, devastated, processed and served to end up on a plate, consumed in human delight. In human joy, one does not bother of the pain of the killed animals on the plate. Hence partaking in eating meat, one is not just taking and getting protein and nutrients, but the feelings of violence which develop in the animal from its unnatural death.

In the "Mahabharata" it is stated that the purchaser of flesh, seller and the eater all are considered as meat eaters. As the purchaser perform violence by his wealth, killer by killing the animal and the eater my enjoining its taste. There are three types of killing selling, eating and killing. ("Mahabharata," 115:40)

Similarly, Swami Dayananda, in his book "The Value of Values" stated that days we should treat others as we would like to be treated. Ahimsa and vegetarianism connected by swami by stating that we should not assume of somebody as our dinner if we do not want to be somebody else's dinner.

These are the some of the spiritual reasons, we have discussed here may have stemmed from the practical reasons people avoid from eating meat initially. Modern meat-eating Hindus will usually not eat beef or pork (which is rapidly changing), but eat all other kinds of meat.

There are many forms of vegetarian diets. Some diets come under the umbrella of vegetarian eating. The term vegetarian seems compact but is used more broadly than its true definition. The table below shows the different types of vegetarian diets that exist.

Table.1.1 Description of Different Types of Diets

TYPE	DESCRIPTION
Fruitarian	those who only rely on dry fruits and fruits for their diet
Macrobiotic	those who rely on only whole, raw, "natural" and "uncooked" grains and cereals.
Vegan	those who do not consume animal foods, and eggs.
Lacto-ovo-vegetarian	those who rely on milk, milk products and eggs for their diet.
Near-Vegetarian	those do not eat red meat, however includes poultry, beef extracts and fats, fish, eggs and dairy products.
Non-vegetarian	those who rely on animal food and eggs for their diet.

The main reason general population adopting vegetarian diets because of the cultural, religious and moral belief concerning about animal rights, health benefits and environmental issues. Athletes also do so for the same reasons similar to those of the general population. But some athletes may adopt a vegetarian or 'near-vegetarian' diet to fulfil the requirement of carbohydrate for physical activity or manage weight management. Especially sportswomen adopt vegetarianism as a method of avoiding red meat and/or restricting energy intake to manage a lean body composition favored in some sports such as distance running.

The achievement stories of athletes who are world champions and also vegetarians became a motivational factor for the other athletes to opt vegetarian diet–Martina Navratilova (Tennis), Dave Scott (vegan and five-times winner of the Hawaiian Ironman Triathlon) and Edwin Moses (Olympic Hurdling Champion). This fact sheet will help us to know why athletes choose a vegetarian diet, the nutritional issues that vegetarian athletes need to kept in mind and helpful tips for vegetarian athletes striving to maintain their health and optimise their performance in training and competition period.

It is concluded that an athlete can fulfill his nutritional needs by the vegetarian diet and can also perform well in the competitions.

Researches show that many athletes became much stronger runners almost immediately after becoming vegetarian. On other hand there are ample of world-class athletes (and not just endurance runners) that don't eat meat.

Cricket icon Sachin Tendulkar is a vegetarian. Vishwanathan Anand, the greatest chess player of India, is vegan. Anil Kumble the famous bowler of Indian cricket team is a vegan. Sushil Kumar, the grappler who won bronze at the 2008 Olympics and silver at the 2012 Olympics is a vegetarian by birth.

Vegetarian nutritional practices emerge to have a defending outcome from daily life diseases observed in many developed countries. There are lower death rates in vegetarians because of coronary artery disease. Risk of cancer, obesity and diabetes among vegetarian individuals is also low. (Snowdon & Phillips 1985). It not only diet that fully responsible for the health differences among vegetarian and non-vegetarian individuals, lifestyle can be another factor that can be responsible for the same. (Phillips & Snowdon 1985; Dwyer 1988; Thorogood et al. 1994). Till now, most of the nutritional research has been done on vegetarian women of different ages. Apparent food concerns of vegetarian diets are more applicable to women's than males), which make clears to a little level the cause for the focus. Generally, a vegetarian diet seems good to maximize game performance of players during preparatory and competition (American Dietetic Association 1997).

Even though several researches examining the health benefits of a vegetarian diet, but very few studies have investigated about athletic performance differentiations among vegetarians and non-vegetarians. Hanne et al. (1986) Number differences was found among aerobic or anaerobic capacities of forty-nine (Twenty-nine male; Twenty female) lacto-ovo-vegans and lacto-vegan's players, contrasted with forty-nine (Twenty-nine male; Twenty female) harmonized non-vegetarian athletic controlled group. Synder and colleagues (1989) reported parallel findings, number variations on the variable maximal oxygen uptake between 09 female players consuming a tailored vegetarian diet (< 100 g of red meat per week) and 09 female players consuming a mixed diet.

Nieman and some other (1989) evaluated anthropometric, hematologic and metabolic factors of nineteen elderly women vegans with twelve elderly non-vegans. Result of the study shows that vegan subjects had considerably lesser blood glucose and level

of cholesterol and likely to have a smaller amount of body fat than non-vegans. There is number difference were found on electrocardiographic variable among groups at sub-higher or higher workout loads. Further, number variations were established among groups for highest oxygen intake. In one more study, Nagel et al. (1989) sees no dissimilarity in performance among fifty athletes taking a lacto-ovo-vegan diet or sixty athletes taking a conservative Western diet during a thousand kilo-meters leg foot-race. Researchers prepared the diets to contain carbohydrates, fats and amino acids in the ratio 6:3:1 for both experimental groups. Some of total subjects from both group finished the race, there is no difference found between the finish time of both groups. Due to the religious reasons Indians in big number are fully vegetarian; meat does have its nutritional benefits. Vegetarian persons are aware about the health benefits of non-vegetarian diet like it is a best source of protein, it contains amino acids. But, the followers of vegan diet believe that they can fulfill their requirement from the vegetarian diet only.

Naini Setalvad (2013), food expert and health and obesity Consultant explains that no doubt that meat is a good source of protein, but it is not the only protein source. Vegetarians do not eat any type of meat and there is no such report that shows case of protein deficiency related to vegetarianism. There are various other sources of protein, such as legumes, pulses, bean, sprouts and even leafy greens. These food help maintain cholesterol as well as blood sugar levels. She further adds chemicals are used in the most of the meats we get today. Now animals are no longer kept in their native inhabitations. Artificial diets are given to the animals consisting of grains, soy and their feeds contain artificial coloring and chemicals. These artificial foods and chemicals not only harm animal's health but also the consumers. And thus, she believes, that one should rely on vegetarian sources of protein rather than meat. Excessive intake of meat, mainly red meat (mutton, beef and pork), can lead to elevated risk of heart disease and cancer. Risk of cardiovascular disease increase in the meat eaters by the sodium used in processed meat.

Lots of diseases can happen by consuming a non-vegetarian diet, which leads to increase in *Tama* component. The increase in the *Tama* component means increase in negative thoughts relating to various desires, greed, anger, etc. there is a direct correlation among the negative behaviour of the individual and non-vegetarian diet. On other hand vegetarian diet contains higher proportions of Sattva component which

is responsible the spiritual thoughts in the individual. By eating a more *Tama* dominant non vegetarian diet, a person is more attacks by negative energies in comparison to vegetarian individual. The reason behind it is that meat is food of demonic forces.

Every vitamin, every mineral and every food has a distinctive and definite effect on our bodies and so as on our mental functions, and at some level, on our attitudes also. The effect of improper nutrition and toxins can be observed on our brain very earlier than the any other system of the body. Brain reacts fast, as it is considered as the most sensitive part of the body. Just as number individuals have the same fingerprints, number two individuals have the same biochemistry. Yet, we are enough alike for general ingestion of food for common health of both mind and body. A person's diet has an effect on his mind because the soul acts or has an familiarity of pleasure or pain through the medium of the brain. Excitement, lethargy, sleep, lustfulness and attraction towards sensuality are some obstructions caused by dead food in the form of intoxication. And the intellect becomes unpredictable or weak by being influenced by the mind and the senses. And when the brain isn't clean, conscious, impartial and virtuous it cannot draw power and happiness from the "Holy Soul" and cannot differentiate properly between good and evil, right and wrong.

In the 1980s a new discipline behavioural toxicology came into existence to study the effect of toxic chemicals on the human behaviour. Many researches showed that human behaviour is very easily affected by toxic chemicals. Latest studies showed that use of pesticides gave birth to higher level of aggression, abnormal thyroid hormone level. An article in a February 1996 issue of the Journal of the American Medical Association, "Chemical Levels and Delinquent Behaviour," favours the link between heavy metals and chemicals in the body and behaviour problems cause by them in human behaviour like attention deficit disorder, violence, and criminal behaviour.

We should consume food that should be good for both physical and mental health. The Indian science regards food to give strength not only the body, but also to sustain the purity of mind and the soul. Just as alcohol affects the state of an individual's mind, so does every item of food and drink affects person's psyche. The very

inclination to kill an animal or bird for meal gives a self the affinity to commit violence. It condenses one's sympathy, compassion and kindness.

Physical fitness is synonym of state in good health, as that have an effect on the body ultimately affects the mind. If our body and mind are healthy than it will increase your physical and mental capacity to great vertical extent and let us cherish, enjoy and let us do what we want. Physical wellness enables us to perform with best of your physical and mental capacity and to relish life more happily. Physical fitness is the capability of the human to work at best possible effectiveness. A healthy person finishes the normal work of the day with enough energy stores to fulfil the other needs of routine life such as recreational sports and other leisure time activities. Physical fitness is the combination of health-related and skill-related elements, which are given below.

Table.1.2. Description of Components of Physical Fitness

Skill-Related	**Health-Related**
Speed	Cardiovascular endurance
Power	Muscular strength
Agility	Muscular endurance
Balance	Flexibility
Reaction time	Body composition
Coordination	

Cardio respiratory endurance is one of the most important components of health-related physical fitness. It is the capacity of the cardio respiratory system to transport oxygen and needed supplements to the functioning muscles and eliminate other elements while intensive workout. Physical work relies on the proper working of cardio-vascular system. Researchers say that if you want to keep your heart healthy and away from diseases you need to do daily exercise at least for 30 minutes. If we want to run, swim and cycle and other hard activities and want to enjoy your life fully for that we need good cardio vascular endurance.

Muscular strength is the capacity of a muscle to exert one maximal force against resistance. Some of the examples are short-timed, more power exertions such as moving heavy things from one place to another, lifting a heavy weight in gym, quick

jerk in the power lifting, hitting a football, running in a hockey match, doing more jump, and throw a javelin.

Muscular endurance is the capacity of a muscle to apply force again and again against a resistance.

Muscular endurance is considered by activities of long period but low intensity, such as performing long distance running, replications of push-ups or sit-ups. It is essential in day to day life physical work such as house chores, yard chores, and fun sports. Muscular endurance can be maintained by performing resistance training program.

Full range of motion of a joint is known as flexibility. Flexibility is needed for smooth, proficient momentum and muscle strain can affects the individual with good flexibility. Flexibility is location specific; you may vary range of flexibility in your different body parts. Touch your knees without bending your knees? To do so you need your hamstring to be flexible. You can stretch your arms and shoulder only if your arms and shoulder need to be flexible.

SIGNIFICANCE OF THE STUDY

Not much of the literature has been published on vegetarian and non-vegetarian sports persons, but not a single study has been conducted to find out the psycho-physical characteristics of vegetarian and non-vegetarian sports person of strength sports and endurance sports at different level of performance. So, the present study has been chosen to fill this gap.

This study may contribute towards promotion of sports performance in the following ways:

- The results of the study may be helpful to add the new dimensions of knowledge in the field of physical education and sports with special reference to diet habits.
- The outcome of this research may also be helpful for framing psychological and physical training.
- It may also contribute for the sports person to develop Psychological and Physical variables regarding competition.

- It may also educate the physical education teachers, coaches and physical trainers regarding the role played by those psychological variables in achieving more performance.
- The result of study may be beneficial for scanning of future potential sports person of strength sports and endurance sports on the basis of psychological and physical characteristics with references to nutrition.
- The finding of study may also provide materials for promotion of sports coaching.

STATEMENT OF THE PROBLEM:

The present problem is stated as "Study of Psycho-Physical Characteristics of Vegetarians and Non-Vegetarian Female Sports Person in relation to their level of Participation".

OBJECTIVES OF THE STUDY

The study was conducted to fulfil the following objectives.

1. To study the psychological and physical characteristics among vegetarians and non-vegetarians female sportspersons of endurance sports in relation to their level of participation
2. To study the psychological and physical characteristics among vegetarians and non-vegetarians female sportspersons of strength sports in relation to their level of participation.

HYPOTHESES OF THE STUDY:

The study has been conducted with the following hypotheses:

1. There will be a significant difference among the vegetarian and non-vegetarian female sportspersons of endurance sports in psychological and physical characteristics in relation to their level of participation.
2. There will be a significant difference among the vegetarian and non-vegetarian female sportspersons of strength sports in psychological and physical characteristics in relation to their level of participation.

DELIMITATIONS

- The study was restricted to a total sample of 560 female vegetarian and non vegetarian sports person.
- The study was further delimited to sports person of Endurance sports and strength sports as mentioned below
    - Endurance sports: Hockey and Football
    - Strength Sports: Boxing and Wrestling
- The study will be further delimited to sports person of state level, inter-university and national level.
- The study will be further delimited to following Psychological characteristics viz.
    - Aggression
    - Mental Health
    - Emotional stability
    - Over all adjustment
    - Autonomy
    - Security insecurity
    - Self-concept
    - Intelligence
- The study will be further delimited to following physical characteristics viz.,
    - Flexibility
    - Muscular Endurance
    - Muscular Strength (Leg, Hand and Back)
    - Cardio-Vascular Endurance

SCOPE OF THE STUDY

In earlier days, it was believed that non-vegetarian diet is superior to vegetarian diet. People used to think that non-vegetarian diet provides more strength and power and for good performance it is necessary to consume non-vegetarian diet. This study will help to compare the Psycho-physical characteristics of sports person of strength sports and endurance sports among vegetarian and non- vegetarian sportsperson and accordingly recommendations regarding diet can be given.

Vegetarians find it very difficult to gain muscle mass in spite of working out for hours in the gym, unless they consume non-vegetarian or soya proteins regularly (Greg

Crox, 1988). Above mentioned is also myth among the youngsters which can be verified after the analysis of the results of the study. Many parents and sports persons also think that to fulfil the protein requirement of the body one need to consume the non-vegetarian diet. Because of this myth some parents not allow their ward to opt sports and some individuals themselves not took sport as a profession as they think that it is necessary to consume non-vegetarian diet to be a sportsman. This study will help to discover the truth behind these myths so that vegetarian's individual doesn't need to become non-vegetarian to be a sportsperson and sportspersons not rely only on non-vegetarian diet for fulfilment of the protein requirement of their body. There is an acceptance that non-vegetarians have higher level of aggression in comparison to the vegetarians, but not so many researches support this. If we find from this study that non-vegetarians are more aggressive, then we can suggest them to opt those sports which need more aggression, this study will help in talent identification in sports, which is a big problem in India.

OPERATIONAL DEFINITION OF THE TERMS USED

Endurance sports – Are the category of sports in which physical exertion is given for long period of time.

Strength sports – Strength sports are subset of sports in which strength is the main fitness component.

Vegetarian: Those subjects consume eats foods only of plant origin are considered in vegetarian category

Non-vegetarian: Those subjects, who consume diet originated from plants and animals, are considered as non-vegetarians.

Aggression – Aggression is an attack or harmful action, especially an unprovoked attack by one individual against another

Mental health- State of psychological and mental wellbeing of an human is considered as mental health

Cardiovascular Endurance - Cardiovascular Endurance is the capability of the cardio-respiratory system to transport vital substances and oxygen to the functioning muscles and eliminate excess elements throughout energetic physical activity.

Muscular endurance- The capacity of a muscle to apply force again and again against a resistance is known as muscular endurance.

Muscular Strength- The capability of a muscle to apply highest force against resistance in one go is known as muscular strength.

Flexibility -Flexibility - Full range of motion of a joint is known as flexibility. For soft, resourceful momentum flexibility is an important component and it also beneficial to avoid muscle strains.

CHAPTER II

REVIEW OF RELATED LITERATURE

2.1 REVIEW RELATED TO AGGRESSION

Kumar and Kumar (2017) investigated the difference of physiological and psychological components between vegetarian and non-vegetarian runners. To execute the propose of the research total forty subjects (20 Vegetarian and 20 Non-Vegetarian) were taken as the sample. To acquire the data, Sphygmonometer, Stethoscope, Exhale Barometer, Skin Fold Caliper and Bhardwaj's Aggression Questionnaire were administrated on the participants. "t"-test was applied to analyze the data. Result of the study shows no relevant differences on Blood Pressure, Exhale capacity, Fat percentage and Aggression among vegetarian and non-vegetarian runners.

Gupta (2014) calculated the aggressive tendency among vegetarian and non-vegetarian girls. Research was carried by assuming that there would be significant difference exist between the both groups. Total number of hundred girls was taken as the subjects for the study through the purposive random sampling. To measure the aggressive tendency aggressive tendency scale by Preeti Tiwari (1996) was used. Data was analyzed by applying "t" test. Result of the above research shows that non-vegetarian girls showed more aggressive tendency as compared to vegetarian girls.

Mahhoodi et al. (2013) compared aggression between the male and female athletes of four sports including, football, volleyball, judo, and wushu. The data is collected through aggression questionnaire of Bredemeier, which includes three subparts of aggression general, instrumental, and hostile. Subjects had to answer 30 questions with a 4-point scale. After analysing data, large difference was found in the hostile behaviour of the adult athletes and of young athletes; we can say that young athletes, whether male or female, are more aggressive that of adult athletes. When comparison is made between the hostile behaviour of male and female athletes, male athletes are found more aggressive in comparison to the female athletes. But, as concerned to the adult athletes of both genders many differences was found in the aggressive behaviour.

Barien et al. (2012) examined the alcohol related aggression and antisocial behaviour in sportspersons and non-sportsperson**.** To collect the data questionnaire on alcohol consumption, aggression and anti-social were filled by the subjects. Subject also asked to report if the ever became the victim of such kind of aggression. Results of the study shows that sportsperson comparative to non-sportspersons displayed more aggressive behaviour like assaulted someone or damage property. More researches are needed to study the broad concept of sports.

Fishbein and Pease (2010) examined the speculative and procedural concerns describing relation between diet and aggressive behaviour. A number of areas were studied, like neuro- transmitting imbalances, lack of glucose in the blood and content of carbohydrates, body sensitivities, effect of food additives, and dietary elements. Experiments indicate that, some of the persons may be get, such situations as learning debility, bad repulse control, intellectual discrepancies, violent behaviour, hyper activeness, alcohol addiction and drug addiction because of diet. However, most of the studies about the connection between food intake and conduct are not sure about the effect of diet on reducing the aggression and anti-social behaviour.

2.2 REVIEW RELATED TO MENTAL HEALTH

Nieman (**2015)** reported that there are many side effects of meat eating like emotional and mental health problems. This report suggests that the women having meatless diet have unreliable health benefits but with drawbacks like depression, panic and obsessive-compulsive behaviour. Report presents a link between lack of animal proteins and a rise in emotional problem. The result of the report also reveals the correlation between red meat and cancer.

Messina (2015) assessed the diet and mental health of about 4100 subjects. The result of the study shows that 15% of the vegetarian subjects are suffered from depressive disorder but they adopted vegetarian diet after developing depression. The researcher concludes that there is number link between being vegetarian and being depressed. The researcher favours the benefit of vegetarian diet and deeply neglected that the cause of depression is vegetarian diet. The article advocates the health benefits of being vegetarian. Plant based diet improves mood and which is good for mental health. In short the researcher is with vegetarian diet and advocated that if you opt to be a vegetarian it’s good for your mental health.

Michalak et al. (2012) investigated the links among vegetarian diet and mental disorders. Data was collected through the interview and survey. To fulfil the purpose of the study 54 completely vegetarian and 190 predominantly vegetarian participants were compared with 387 2 non-vegetarian participants. Result of the study shows that vegetarians as compared to the non-vegetarians have higher level of anxiety disorders, depressive disorders and personality disorders. Study also tells that by adopting vegetarian diet subjects have tendencies to follow the one set of mental disorders. It is concluded that in western culture vegetarian diet is related to the higher risk of mental disorders.

Baines et al. (2006) compared the socio-demographic qualities, health standing and health facility taken by semi-vegetarians, vegetarians and meat eaters. For the cross-sectional analyses nine thousand and one hundred thirteen girls aged between 22 to 27 years were taken as subjects. The countable frequency was three and ten for meat eater and semi-vegan adolescent girls. Compared with non-vegans, semi- vegans were lesser seemingly and vegans a lot of fewer seemingly to consume the preventive pill. Vegetarian and semi vegetarian girls are more physically active and their BMI was also higher than the non-vegetarians. Though, the bigger descriptions of expelling issues and therefore the worse psychological state of those young girls are also of clinical significance.

Key et al. (1999) compared the mortality rates because of general illness of vegetarians with those of who eat meat with same conditions of living. An outline of these outcomes was reported before here we give further details of the findings. 76172 men and women were subjects were taken for the study. Vegetarians are the ones those who did not take any kind of meat (n = 27808). Ratio of mortality rates between age group16 to 89 years were got by Poisson regression and out comings of the study were adjusted according to age, gender, and frequency of smoking. To get the pooled estimates of all the studies together a random -effects model was used. Death from blood cardiac illness was twenty four percent less in vegans than in meat eaters. No big difference was found among vegetarians and meat eaters on deaths because of cardio-vascular disease, cancer of lung, abdominal, breast and prostate.

Haddad (1999) compared the dietary and nutritional patterns of vegetarians with the group of non-vegetarians. Result of the study shows that vegetarians consume food

with small portion of fat, saturated fat, and cholesterol but with more dietary fibre as compared to non-vegetarians. In male and female participants when the food and supplement intakes were calculated the quantity of copper, ascorbate, magnesium, folate and manganese was provided more by vegetarian diet. BMI of non-vegetarians was found higher than the vegetarians. In the vegetarians the quantity of white blood cells, t-cells, platelets and blood urea was found low but serum albumin concentrations found higher. On the immune factors no difference was found between the vegetarian and non -vegetarian groups.

Raben et al (1992) carried out a research on eight professional athletes to check the effect of a 1 month 2-week lacto-ovo-vegan diet and a 1month 2-week mixed diet on immune aspects, serum sex hormones and sports performance. Caloric and nutrient intake was controlled and prepared by the research for both types of diet pattern so that both groups get same amount of energy from carbs, fats, protein. Conclusion of the study tells that there is no notably difference found on all the variables except testosterone levels. Reduction in testosterone levels may the cause of high intake of fibre or sudden change in the diet pattern.

2.3 REVIEW RELATED TO HEALTH-RELATED COMPONENTS

Lynch and Johnston (2016) conducted a cross sectional study to compare maximal oxygen uptake and strength of professional long-distance vegetarian and omnivore adult's sportspersons. Maximal oxygen uptake was measured my measuring VO2 max through treadmill was used and to measure peak torque assessment was done through dynamometer. Diet pattern of the athletes were assessed by using 1 week recall method. Study concludes that vegetarian endurance athletes have better cardio-respiratory fitness. Number difference was found on the peak torque between both diet groups.

Singh and Silva (2014) conducted a research to find the difference between physical fitness level of vegetarian and non-vegetarian athletes. To conduct the study researcher, select the total 100 subjects. (50= Veg & 50= Non-Veg) aged between 20-30 years. Each group consist of 25 male and 25 female subjects. To measure the body composition height, weight and BMI was calculated, to measure the cardio-respiratory rate 3 min step test was used, to measure the muscular endurance 1 min abdominal curl test was employed and to measure the flexibility sit and reach test was employed.

No difference was found on the variable body composition but difference was found on the variables cardio respiratory and flexibility between vegetarian and non-vegetarian athletes.

Cherlita et al (2013) conducted a survey about health status and philosophy of **vegetarianism** of selected Iligan City senior citizens. For the study 100 subjects were taken in which seventy are meat-eaters and thirty are vegetarians. Results of the survey reveal that there is a positive impact of vegetarian diet on muscular strength and muscular endurance. Further vegetarian diet, which is more in fibres and low in fats also helpful in increasing cardiovascular endurance of the respondents. Results also show the positive effect of vegetarian diet on the health status of the subjects. The effect of vegetarian diet on ageing is neutral.

Tarandeep et al (2012) carried out a study on urban and rural school students to compare their physical fitness. 20 Subjects was taken as subjects to conduct study in which ten are urban girl students and ten are rural girl students. The outcome of the study concludes that rural students have higher level of the static strength as compared to the urban students. No difference was found on the following components viz. explosive strength, speed, and cardio respiratory endurance and flexibility among the urban and rural students.

Farmer (2009) compared nutrient consumptions of vegans, meat eaters, and dieters to specify that a feeder diet doesn't compromise on consumption of elements of balance diet. Vegetarians were people who deny having meat, poultry, or fish. Dieters were people who consumed five hundred kilocalories under calculable energy necessities. Results suggest that fibers, vitamins E, A, and C, thiamine, vitamin B, folic acid, calcium, Epsom salts and iron were found more in vegans as compared to non-vegetarians. Niacin, vitaminB12, and metallic element were less in the vegetarians; but entirely metallic element was less than the suggested nutritive value. Findings of the study suggest that a feeder diet can be beneficial for managing weight but with the wise consumption of all required nutrients.

Khanna et al. (2006) investigated frequency of vegetarianism and non-vegetarianism among female players and its relation with the performance and nutritional status. As subjects 64 female national athletes age group of 16-25 years has taken. To take out the research selected variables like body fat, height, weight and lean body mass were

assessed and daily diet intake pattern was also taken through twenty-four-hour recall method. Graded exercise was performed by the subject to measure the performance of the subjects. Outcome of the study shows that Indian female athletes prefer non-veg. non-vegetarians, lacto-vegetarians and ovo-vegetarians have increased level of body fat. On the variable carbohydrate and energy intake no difference was found among all the three groups. Non-vegetarians consume more B-complex, iron and absorption of hemoglobin in also high. Speed of recovery and endurance level was improved in meat in comparison to other groups.

2.4 REVIEW RELATED TO VEGETARIAN AND NON-VEGETARIANS

Appleby et al (2016) compared death rate between vegetarians and non-vegetarians. To conduct the study researcher, choose 60, 3310 vegetarian persons and 18,431 non-vegetarian persons through purposive random sampling. Result of the study shows significant difference in overall death rate between the vegetarian and non-vegetarian groups. Study shows that there was more risk of deaths in non-vegetarians due to cardiovascular diseases. There were more rates of respiratory diseases in women vegetarian subjects.

Peter et al (2013) compared nutritional intake and dietary pattern of vegetarian and omnivorous subjects. For the study sixty-nine vegetarian and sixty-nine non-vegetarian subjects of matching gender, age, lifestyle features and health status were selected through purposive sampling. The researcher adopted two methods to record dietary pattern, the Mediterranean diet score and healthy eating index-2010. Results of the study shows more nutrient compressed design among vegetarian and omnivorous subjects, closer to the present dietary recommendations for the vegetarians compared to the omnivorous subjects.

Fuhrman and Ferreri (2010) analyzed about health benefits of vegetarian diet and also discussed about how athletic performance is affected by vegetarian diet. Researcher advocates the benefits of vegan diet on overall health, lifespan, body immunity, cardiopulmonary fitness and these also promote athletic performance. In this article researcher discuss the problems of a vegan athlete and also their solution. To overcome these problems of a vegetarian athlete researcher recommended enhanced quantity of lentils, seeds and green veggies to fulfil the protein and caloric

needs. Researcher also suggest to the non-vegetarian athletes to plan their diet wisely so that their body can be fulfilled through nutrition so that they can perform better.

Karelis (2010) compared the sex hormonal and metabolic profiles of vegetarians and omnivores in the cross-sectional study. For the study sample of 41-omnivores and 21-vegetarian before and after climacteric women was taken. Vegetarians have increased level of SHBG, apolipoprotein A, and all over fiber consumption and have low level of apolipoprotein B, E2, unattached androgen, DHEA-Sulfate and body mass index as comparison to omnivores. Study concludes that before and after climacteric vegetarian females showed developed concentrations of SHBG, which shows that vegetarian intake more level of fibers. Vegetarian have the minor risk of emerging diabetes.

Cade et al. (2004) compared female vegetarians, meat-eaters and fish-eaters. Everyone 18% of the subjects is vegetarian. Thirty two percent of energy provided by fat, there is more consumption of vitamin and minerals. Those who eat meat are old in age and have developed body mass index (BMI) and consume iron, calcium, vitamin c, carbohydrate, fiber and calcium in small portion and in the case of vegetarians and fish eaters they consume protein, fat and saturated fat in small portion. Fish eaters have least BMI and mostly relay on the veggies and nutritional supplements. Results of the study conclude that fish eater as comparative to vegetarians and meat eaters have more intake of energy.

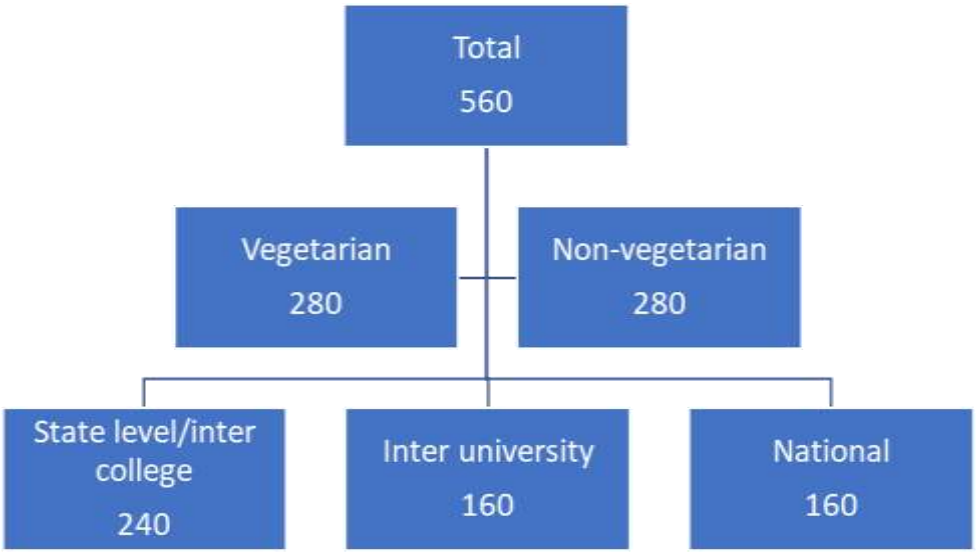
CHAPTER III

RESEARCH METHODOLOGY

Methods are important pre-requisite of any study. Descriptive method was selected to conduct the present study. It's necessary to provide the main points of gathering the data and technique followed during a particular study. Within the present investigation, an effort has been made to check psycho-physical characteristics of vegetarians and non-vegetarian sports person in reference to their level of participation. Additionally, selection of subjects, selection of variables, tools used and statistical technique employed are explicated in this section.

SELECTION OF SUBJECTS

Investigator for the present research adopted purposive random sampling procedure. The total numbers of sample present study comprises of 560 subjects including female vegetarian sports person=280 and female non-vegetarian sports person=280, those was between the age of 18-28 years.They were further divided into three groups according to their level of participation i.e State level sportspersons (N1= 240), Inter-varsity level sportspersons (N2=160) and National level sportspersons (N3=160) of Punjab state. Data was collected from different hockey, football, boxing and wrestling academies and SAI centres of Punjab.



SAMPLING DESIGN

Table. 3.1. The Game Wise And According To Level Of Performance The Distribution Of Subjects Is Shown In The Following

Sports		State Level		Inter-University Level		National Level	
		Veg	Non-Veg	Veg	Non-Veg	Veg	Non -Veg
Endurance Sports	**Hockey**	30	30	20	20	20	20
	Football	30	30	20	20	20	20
Strength Sports	**Boxing**	30	30	20	20	20	20
	Wrestling	30	30	20	20	20	20
Total		120	120	80	80	80	80
Grand Total		**560**					

SELECTION OF VARIABLES

With the consultation of the experts a possibility scrutiny was done on which of the variables may be preoccupied for the study, tools availability, subject's availability and time period that would be needed to conduct the study so that study can be conducted in a smooth manner and limited period of time. By keeping in mind all this, the subsequent psychological and physical characteristics were taken up for the investigation:

a) Psychological Variables
   i. Sports Aggression
   ii. Mental Health
b) Physical Variables
   i) Muscular Strength
   ii) Muscular Endurance
   iii) Cardio-pulmonary Endurance
   iv) Flexibility

RESEARCH TOOLS/INSTRUMENTS

1. To examine the sports aggression, standardized inventory created by Prof. A. K Shrivastava and P. Shukla (1988) was used.
2. To measure the mental health test battery published by Arun Kumar Singh and Alpana Sen Gupta was used.
3. To measure the Muscular strength Roger's strength test was applied
4. To measure the Muscular endurance Bent Knee Sit Ups Test was applied
5. To measure the cardio-pulmonary endurance Harvard step test was applied
6. To measure the flexibility, flexi-meter test was used.

TEST ADMINISTRATIONS

A) SPORTS AGGRESSION

To measure the sports aggression a standardized inventory created by Prof. A. K Shrivastava and P. Shukla was used. Description of the inventory is given below-

Sports aggression inventory consist of total number 25 items, in which 13 items are keyed "Yes" and 12 items are keyed "Number". The yes items are- 1,4,5,6,9,12,14,16,18,21,22,24 & 25 and the numbers items are 2,3,7,8,10,11,13,15,17,19,20 & 23.

Reading between 12-13 = average aggression

More than 12-13= more aggression

Lower than 12-13 = low aggression

Scoring –For every right response "1" score is awarded and for every wrong response "0" is awarded.

B) MENTAL HEALTH

To check the mental health of the vegetarian and non-vegetarian sports persons test battery published by Arun Kumar Singh and Alpana Sen Gupta was used to test the mental health of the subjects. The battery covers six areas of mental health containing a sum of 130 items. These areas are:

Emotional Stability

Over-all Adjustment

Autonomy

Security-Insecurity

Self-concept

Intelligence

Instructions: Instructions for every dimension were separate and were printed just before the items for the concerned dimension starts. There was no fixed deadline for the primary five parts. However, generally a traditional examinee took about 25 minutes in giving complete answers. Part VI was a speed test. the entire allotted time for this part was 10 minutes. Scoring: A scoring key was given in the manual. Each item was given one mark for right answer and zero for wrong answer. The scores of each dimension were added separately to have the dimensional scores and the sum of these scores gave the overall mental health scores.

Table.3.2 Reliability Coefficients of Mental Health Battery

S. No.	AREAS	TEST-RETEST RELAIBILITY	ODD EVEN RELAIBALITY
1	EMOTIONAL STABILITY	.876	.725
2	OVER-ALL ADJUSTMENT	.821	.871
3	AUTONOMY	.767	.812
4	SECURITY-INSEURITY	.826	.829
5	SELF-CONCEPT	.786	.861
6	INTELLIGENCE	.823	.791

Table.3.3 Validity of Metal Health Battery

S.No	AREAS	CONCURRENT VALIDITY
1	EMOTIONAL STABILITY	.673
2	OVER-ALL ADJUSTMENT	.704
3	AUTONOMY	.821
4	SECURITY-INSEURITY	.823
5	SELF-CONCEPT	.681
6	INTELLIGENCE	.601

C) MUSCULAR STRENGTH

To check the Muscular strength of the subject's researcher chooses the Roger's strength test. Roger's strength index is the sum of five strength tests-

1. Right hand grip
2. Left hand grip
3. Leg strength.
4. Back strength
5. Push ups

a) Right and left-hand grip strength test – To measure the right and left-hand grip hand dynamometer was used. To take the readings the tester ensures that the pointer is on zero and then asks the subject to hold the equipment and squeeze it with full force. Tester instructs the subject not to fold the elbow and not to touch the body with the testing hand. Three trials were given with each hand with one-minute rest in between squeezes.

Scoring –The greater reading out of three trials was recorded in kilograms considered as the score.

b. Leg Strength test- To test the leg strength of the subject's leg lift dynamometer was used. The subject was asked to stand with legs apart according to shoulder width. The bar was held in the centre at the level of pubis with palm facing downwards. The knees are flexed between 115 to 125 degrees. Subject was instructed to lift the bar of the dynamometer upwards so as to make his knees straight. Three trials were given with each hand with one-minute rest in between squeezes

Scoring –The maximum reading out of 03 trials was recorded in kilograms and considered as the score

c. Back strength test – To conduct the back-strength test back and leg dynamometer was used. The subject takes the standing position with the trunk slightly flexed forward and holds the bar in such a manner that one hand from above the bar and one hand from below the bar. The knees and back were kept straight throughout the lift and lift the bar upwards without jerk.

Scoring- The maximum reading out of 03 trials was recorded in kilograms considered as the score.

D) MUSCULAR ENDURANCE

Bent Knee Sit Ups Test – To check the muscular endurance of the subjects' bent knee sit ups test was used by the tester. The subject was directed to lie on their back with folded knees and with the hand behind the neck. Feet of the subject were held by the companion so that feet not leave the surface. On the 'go' command the timer starts the stopwatch and asks the subject to start the sits ups as many as he can in 60 sec. On the completion of the time stop command was given by the timer. Number of correctly done sit-ups was recorded.

Scoring- In sixty seconds numbers of sit-ups completed by the subject was the score of the test.

E) CARDIOVASCULAR ENDURANCE

Equipment's: Stair or stool 20 inches / 50.8 cm more, stopwatch, metronome.

Procedure: To conduct this test subject was asked to perform stepping on the stool with the metronome beats with the speed per minute 30 steps till he gets tired. When subject was unable to match the pace with metronome he is asked to sit and researcher then take the reading of heart beat between 1 to 1.5 minutes. For the long version of this test, two more pulse measures between 2 to 2.5 minutes, and between 3 to 3.5 minutes need to take.

Scoring: The fitness index score is decided by the subsequent equations. For instance , if the overall test time was 300 seconds (if completed the full 5 minutes), and the number of heart beats between 1-1.5 minutes was 90, between 2-2.5 it had been 80 and between 3-3.5 it had been 70, then the long form Fitness Index score would be: (100 x 300) / (240 x 2) = 62.5.

E) FLEXIBILITY:

Equipment – Flexi- meter

Procedure – Fix the Flexi meter on a chair or stool one and half foot more. Ask the subject to stand on the chair or stool and bend her back without bending her knees. Then tell her to push the Flexi meter down with her figure tips and stop at our maximum limit.

Scoring – The numbering on the rod were the head of the Flexi meter stopped by the subject will be the score.

STATISTICAL TECHNIQUE

To see the significance of difference between means of two group's researcher applied independent't' test. Analysis of variance (ANOVA) test was used to know the significance of difference among the vegetarian and non -vegetarian sportspersons at different level of performance further Post Hoc test was applied.

CHAPTER-IV

ANALYSIS OF DATA AND DISCUSSION OF FINDINGS

4.1 RESULTS AND INTERPRETATION

After analysis of data results has been presented in following sections/heading

As per first objective: *To **st**udy the psychological and physical characteristics of vegetarian and non-vegetarian female sports person of endurance sports in relation to their level of participation:*

- ✓ Results related to Comparison of psychological characteristics between vegetarian and non-vegetarian female sports person of endurance sports (i.e. hockey and football) at different level of participation
- ✓ Results related to Comparison of physical characteristics between vegetarian and non-vegetarian female sports person of endurance sports (i.e. hockey and football) at different level of participation
- ✓ Results related to Comparison of psychological characteristics among state level, inter university level and national level vegetarian and non-vegetarian female sports person of endurance sports, i.e. hockey and football.
- ✓ Results related to Comparison of physical characteristics among state level, inter- university level and national level vegetarian and non-vegetarian female sports person of endurance sports, i.e. hockey and football.

As per second objective: *To study the psychological and physical characteristics of vegetarian and non-vegetarian female sports person of strength sports in relation to their level of performance:*

- ✓ Results related to Comparison of psychological characteristics between vegetarian and non-vegetarian female sports person of strength sports (i.e. boxing and wrestling) at different level of performance
- ✓ Results related to Comparison of physical characteristics between vegetarian and non-vegetarian female sports person of strength sports (i.e. boxing and wrestling) at different level of performance
- ✓ Results related to Comparison of psychological characteristics among state level, inter university level and national level vegetarian and non-vegetarian female sports person of strength sports (i.e. boxing and wrestling).

- ✓ Results related to Comparison of physical characteristics among state level, inter university level and national level vegetarian and non-vegetarian female sports person of strength sports (i.e. boxing and wrestling).

4.1.1 Results related to Comparison of psychological characteristics between vegetarian and non-vegetarian female sports person of endurance sports (i.e. hockey and football) at different level of performance

Table.4.1: Comparison Of Aggression And Components Of Mental Health Between Vegetarian And Non-Vegetarian Female Hockey Players Of State Level

	Vegetarian (N=30)		Non-Vegetarian (N=30)					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Aggression	7.80	2.12	16.10	3.20	8.3	0.20	11.80	0.000
Emotional stability	11.96	1.88	9.76	2.36	2.2	0.48	3.99	0.000
Over-All adjustment	29.50	3.41	29.27	3.58	0.23	0.17	0.25	0.79
Autonomy	9.90	1.69	8.80	1.63	1.1	0.06	2.56	0.01
Security-Insecurity	11.23	1.38	9.77	1.59	1.46	0.21	3.81	0.00
Self-concept	12.17	2.78	9.43	1.68	2.74	1.1	4.61	0.00
Intelligence	20.53	3.62	18.20	3.29	2.33	0.33	2.61	0.01

Table.4.1. reveled that non-vegetarian female hockey players of state level were showing higher level of aggression in comparison to their counterparts, i.e, vegetarian female hockey players. However, vegetarian female hockey players were showing higher scores on emotional Stability, Over-all Adjustment, autonomy, Security Insecurity, Self-Concept and intelligence in comparison to their counterpart non-vegetarian female hockey players. The observed differences were significant on aggression(t=11.80, df=58,p< 05), emotional stability (t=3.99, df=58, p<.05), autonomy (t=2.56, df=58, p<.05), security insecurity (t=3.81, df=58, p<.05), self-

concept (t=4.61, df=58, p<.05) and intelligence (t=2.61, df=58, p<.05) among the vegetarian and non-vegetarian female hockey players. But in case of overall adjustment, the mean difference was found insignificant (p>0.5) between vegetarian and non-vegetarian female hockey players.

Table 4.2: Comparison of Aggression and Components of Mental Health between Vegetarian and Non-vegetarian Female Hockey Players Of Inter-University Level

	Vegetarian (N=20)		**Non-Vegetarian (N=20)**					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Aggression	7.95	2.48	17.10	3.49	9.15	0.22	9.55	0.00
Emotional stability	12.3	2.11	9.05	2.56	3.25	0.45	4.38.	0.00
Over-All adjustment	29.55	3.15	29.30	3.45	0.25	0.3	0.23	0.81
Autonomy	9.95	2.06	8.35	1.39	1.6	0.67	2.87	0.00
Security-Insecurity	10.75	1.77	9.55	1.28	0.57	0.49	2.45	0.01
Self –concept	12.45	1.61	8.90	1.97	3.55	0.36	6.24	.00
Intelligence	22.65	2.48	19.65	2.76	3.0	0.28	3.61	0.00

Table.4.2. reveled that non-vegetarian female hockey players of inter-university level were showing higher level of aggression in comparison to their counterparts, i.e, vegetarian female hockey players. The observed differences were highly significant, (t=9.55, df=38, p<.05) among the vegetarian and non-vegetarian female hockey players. However, vegetarian female hockey players were observed showing higher scores on emotional stability, over-all adjustment, autonomy, security insecurity, self-concept and intelligence in comparison to their counterpart non-vegetarian female hockey players. The observed differences were significant in emotional stability (t=4.38, df=58, p<.05), autonomy (t=2.87, df=58, p<.05), security insecurity (t=2.45,

df=58, p<.05), self-concept (t=6.24, df=58, p<.05) and intelligence (t=3.61, df=58, p<.05) among the vegetarian and non-vegetarian female hockey players. But in case of overall adjustment, the mean difference was found insignificant (p>0.5) between vegetarian and non-vegetarian female hockey players of intervarsity level.

Table.4.3: Comparison Of Aggression And Components Of Mental Health Between Vegetarian And Non-Vegetarian Female Hockey Players Of National Level

	Vegetarian (N=20)		**Non-Vegetarian (N=20)**					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Aggression	7.95	3.31	16.85	3.77	8.9	0.10	7.92	0.00
Emotional stability	12.5	2.28	8.85	2.66	3.65	0.38	4.72	0.00
Over-All adjustment	27.40	4.15	22.85	3.76	4.55	0.39	3.63	0.00
Autonomy	9.80	1.88	8.60	1.39	1.2	0.49	2.29	0.02
Security-Insecurity	11.45	1.79	9.40	0.94	2.05	0.85	4.53	0.00
Self-concept	12.95	1.93	11.40	2.37	1.55	0.44	2.26	0.02
Intelligence	21.95	2.89	18.55	3.43	3.4	0.54	3.39	0.00

Table.4.3. reveled that non-vegetarian female hockey players of national were showing higher level of aggression in comparison to their counterparts, i.e, vegetarian female hockey players (M=7.95, SD=3.31). The observed differences were highly significant, (t=7.92, df=38, p<.05) among the vegetarian and non-vegetarian female hockey players. However, vegetarian female hockey players were observed showing higher scores on Emotional Stability, Over-all Adjustment, autonomy, Security Insecurity, Self-concept and intelligence in comparison to their counterpart non-vegetarian female hockey players. The observed differences were significant in

emotional stability (t=4.72, df=38, p<.05), overall adjustment (t=3.63,df=38,p<05),autonomy (t=2.29, df=38, p<.05), security insecurity (t=4.53, df=38, p<.05), self-concept (t=2.26, df=38, p<.05) and intelligence (t=3.39, df=38, p<.05) among the vegetarian and non-vegetarian female hockey players.

Table.4.4: Comparison of Aggression and Components of Mental Health between Vegetarian and Non-vegetarian Female Football Players Of State Level

	Vegetarian (N=30)		**Non-Vegetarian (N=30)**					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Aggression	7.70	2.56	17.83	3.22	10.13	0.12	13.46	.000
Emotional stability	12.16	1.98	9.40	2.13	3.3	0.15	5.20	0.00
Over-All adjustment	27.80	4.39	24.73	4.70	3.07	0.3	2.61	0.01
Autonomy	9.50	1.20	8.93	1.39	0.57	0.19	1.69	0.09
Security-Insecurity	10.70	1.91	9.33	1.32	1.37	0.59	3.21	0.00
Self –concept	12.03	2.13	10.00	2.17	2.03	0.04	3.67	.000
Intelligence	22.33	1.83	17.67	3.40	4.66	1.57	6.62	0.00

Table.4.4. reveled that non-vegetarian female football players of state were showing higher level of aggression in comparison to their counterparts, i.e, vegetarian female football players. The observed differences were highly significant, (t=13.46, df=58, p<.05) among the vegetarian and non-vegetarian female football players. However, vegetarian female football players were observed showing higher scores on Emotional Stability, Over-all Adjustment, Autonomy, Security Insecurity, Self-concept and intelligence in comparison to their counterpart non-vegetarian female football players. The observed differences were significant in emotional stability (t=5.20, df=58, p<.05), overall adjustment (t=2.61,df=58,p<05), security insecurity (t=3.21, df=58,

p<.05), self-concept (t=3.67, df=58, p<.05) and intelligence (t=6.62, df=58, p<.05) among the vegetarian and non-vegetarian female football players. But in the case of autonomy mean difference was found insignificant(p>0.5) between vegetarian and non-vegetarian female football players of state level.

Table.4.5: Comparison Of Aggression And Components Of Mental Health Between Vegetarian And Non-Vegetarian Female Football Players Of Intervarsity Level

	Vegetarian (N=20)		**Non-Vegetarian (N=20)**					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Aggression	8.30	2.97	17.35	3.42	9.05	0.1	8.92	0.00
Emotional stability	11.90	1.94	10.00	1.97	1.9	0.03	3.06	0.00
Over-All adjustment	30.10	4.78	25.15	5.28	4.95	0.5	3.10	0.00
Autonomy	9.50	1.61	9.10	1.07	0.4	0.54	0.92	0.35
Security-Insecurity	11.20	1.82	9.75	1.45	1.45	0.37	2.78	0.00
Self concept	11.15	1.90	9.85	2.35	1.3	0.45	1.92	0.06
Intelligence	22.20	2.59	19.55	2.68	2.65	0.09	3.17	0.00

Table.4.5. reveled that non-vegetarian female football players of intervarsity level were showing higher level of aggression in comparison to their counterparts, i.e, vegetarian female football players. The observed differences were highly significant, (t=8.92, df=58, p<.05) among the vegetarian and non-vegetarian female football players. However, vegetarian female football players were observed showing higher scores on emotional Stability, over-all adjustment, autonomy, security insecurity, Self-concept and intelligence in comparison to their counterpart non-vegetarian female football players. The observed differences were significant in emotional stability (t=3.06, df=58, p<.05), overall adjustment (t=3.10,df=58,p<05), security

insecurity (t=2.78, df=58, p<.05), and intelligence (t=3.17, df=58, p<.05) among the vegetarian and non-vegetarian female football players. But in the case of autonomy and self-concept mean difference was found insignificant(p>0.5) between vegetarian and non-vegetarian female football players of intervarsity level.

Table.4.6: Comparison of Aggression And Components Of Mental Health Between Vegetarian And Non-Vegetarian Female Football Players Of National Level

	Vegetarian (N=20)		**Non-Vegetarian (N=20)**					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SED M**	**t value**	**Sig.**
Aggression	5.95	1.98	18.05	3.17	12.1	0.26	14.46	.000
Emotional stability	12.10	1.80	9.60	1.82	2.5	0.02	4.36	0.00
Over-All Adjustment	29.55	4.89	21.25	2.81	8.3	2.08	6.57	0.00
Autonomy	9.90	1.65	8.50	1.54	1.4	0.11	2.77	0.00
Security-Insecurity	11.20	1.24	9.95	1.23	1.25	0.01	3.19	0.00
Self-concept	11.50	2.42	9.10	1.59	2.4	0.83	3.71	0.00
Intelligence	21.35	3.34	19.20	2.93	2.15	0.41	2.16	0.03

Table.4.6. reveled that non-vegetarian female football players of national level were showing higher level of aggression in comparison to their counterparts, i.e, vegetarian female football players. The observed differences were highly significant, (t=14.46, df=38, p<.05) among the vegetarian and non-vegetarian female football players. However, vegetarian female football players were observed showing higher scores on emotional Stability, over-all adjustment, autonomy, security insecurity, self-concept and intelligence in comparison to their counterpart non-vegetarian female football players. The observed differences were significant in emotional stability (t=4.36, df=38,p<.05), overall adjustment (t=6.57,df=38,p<05), autonomy (t=2.77, df=38,

p=<05), security insecurity (t=2.3.19, df=38, p<.05),self-concept (t=3.71,df=38,p<05) and intelligence (t=2.16, df=38, p<.05) among the vegetarian and non-vegetarian female football players.

4.1.2 Results related to Comparison of physical characteristics between vegetarian and non-vegetarian female sports person of endurance sports (i.e. hockey and football) at different level of participation

Table.4.7 Comparison Of Physical Characteristics Between Vegetarian And Non-Vegetarian Female Hockey Players Of State Level

	Vegetarian (N=30)		**Non-Vegetarian (N=30)**					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Flexibility	19.50	4.27	15.73	3.49	3.77	0.5	3.73	.00
Muscular Endurance	52.83	7.26	46.70	8.26	7.03	2.00	3.50	.00
Right Hand Grip	24.56	3.39	30.86	4.26	6.33	.99	6.33	.00
Left Hand grip	24.23	5.29	32.93	4.04	8.70	1.21	7.15	.00
Back Strength	63.83	15.36	64.76	14.88	0.93	0.48	3.90	.00
Leg Strength	50.33	14.05	65.06	11.76	14.73	3.34	4.40	.00
Cardio-vascular Endurance	95.17	8.60	94.50	10.66	0.67	2.06	.27	.37

Table.4.7. reveled that vegetarian female hockey players of state level were showing higher level of flexibility, muscular endurance and cardiovascular endurance in comparison to their counterparts, i.e, non-vegetarian female hockey players. However, non-vegetarian female hockey players were observed showing higher scores on right hand grip strength, left-handgrip strength, back strength and leg strength in comparison to their counterpart vegetarian female hockey players. The observed differences were significant on variable flexibility (t=3.73,df=58,p<05), muscular endurance (t=3.50,df=58,p<05), right hand grip (t=6.33,df=58,p<05),left hand grip (t=7.15,df=58,p<05),back strength (t=3.90,df=58,p<05), and leg strength (t=4.40,df=58,p<05), among the vegetarian and non-vegetarian female hockey

players. But in the case of cardiovascular endurance mean difference was found insignificant (p>05) between vegetarian and non-vegetarian female hockey players of state level.

Table.4.8. Comparison of Physical Characteristics Between Vegetarian And Non-vegetarian Female Hockey Players of Intervarsity Level

	Vegetarian (N=20)		**Non-Vegetarian (N=20)**					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Flexibility	18.60	5.05	12.85	3.15	5.75	1.9	4.32	.00
Muscular Endurance	50.90	9.76	44.85	8.03	6.05	2.82	2.14	.03
Right hand grip	26.05	3.53	30.05	4.19	4.00	1.22	3.26	.00
Left hand grip	26.55	4.80	31.50	4.13	4.95	1.41	3.49	.00
Back strength	60.65	15.14	75.85	10.01	15.20	4.06	3.74	.00
Leg strength	67.20	9.63	83.00	11.23	15.80	3.30	4.77	.00
Cardio-vascular Endurance	99.60	6.18	97.05	9.95	2.55	3.77	0.97	.38

Table.4.8. reveled that vegetarian female hockey players of intervarsity level were showing higher level of flexibility, muscular Endurance and cardiovascular endurance in comparison to their counterparts, i.e, non-vegetarian female hockey players. However, non-vegetarian female hockey players were observed showing higher scores on right hand grip, left hand grip, back strength, leg strength in comparison to their counterpart vegetarian female hockey players. The observed differences were significant on variable flexibility (t=4.32,df=58,p<05), muscular endurance (t=2.14,df=58,p<05), right hand grip (t=3.26,df=58,p<05),left hand grip (t=3.49,df=58,p<05),back strength (t=3.74,df=58,p<05), and leg strength (t=4.77,df=58,p<05), among the vegetarian and non-vegetarian female hockey players. But in the case of cardiovascular endurance mean difference was found insignificant(p=.38), it indicates that in case of cardiovascular endurance insignificant

difference exist between vegetarian and non-vegetarian female hockey players of intervarsity level.

Table.4. 9. Comparison Of Physical Characteristics Between Vegetarian And Non-Vegetarian Female Hockey Players Of National Level

	Vegetarian (N=20)		**Non-Vegetarian (N=20)**					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Flexibility	14.17	5.47	14.80	3.67	6	1.9	**4.32**	**.00**
Muscular endurance	48.45	11.24	48.45	9.98	00	1.26	.00	1.0
Right hand grip	25.50	4.45	28.45	5.24	2.95	1.53	1.91	.06
Left hand grip	24.75	4.75	32.30	4.54	7.55	1.47	5.13	.00
Back strength	57.15	13.04	69.20	21.23	12.05	5.57	2.16	.03
Leg strength	64.55	12.53	69.30	18.70	4.75	5.03	.94	.35
Cardio-vascular endurance	99.60	5.60	94.65	11.13	4.95	5.53	1.78	.05

Table.4.9. reveled that vegetarian female hockey players of national level were showing higher level of Cardiovascular Endurance in comparison to their counterparts, i.e, non-vegetarian female hockey players Cardiovascular Endurance. However, non-vegetarian female hockey players were observed showing higher scores on flexibility, right hand grip, left hand grip, back strength, leg strength, in comparison to their counterpart vegetarian female hockey players. The observed differences were significant on variable flexibility ($t=4.32$, $df=38$, $p<05$), left hand grip ($t=5.13, df=38, p<05$), back strength ($t=2.16, df=38, p<05$), and cardiovascular endurance($t=1.78, df=38, p=05$) among the vegetarian and non-vegetarian female hockey players. But in case of muscular endurance($p=1.0$), right hand grip (.06) and leg strength (.35) insignificant difference exist between vegetarian and non-vegetarian female hockey players of national level.

Table.4.10. Comparison of Physical Characteristics Between Vegetarian And Non-vegetarian Female Football Players of State Level

	Vegetarian (N=30)		**Non-Vegetarian (N=30)**					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Flexibility	20.46	5.17	14.33	3.85	6.13	1.32	5.20	.00
Muscular Endurance	50.50	8.64	44.56	5.53	5.93	1.87	3.16	.00
Right-Hand Grip	23.93	2.89	30.70	4.26	6.76	.94	7.19	.00
Left -Hand Grip	24.66	5.19	31.70	4.45	7.03	1.24	5.62	.00
Back Strength	65.20	16.13	80.80	12.99	15.60	3.78	4.12	.00
Leg Strength	46.86	13.00	63.63	11.12	16.76	3.12	5.36	.00
Cardio-vascular Endurance	95.73	8.47	89.00	11.13	6.73	2.66	2.64	0.0

Table.4.10. reveled that vegetarian female football players of state level were showing higher level of flexibility ,muscular Endurance and cardiovascular endurance in comparison to their counterparts, i.e, non-vegetarian female football player .However, non-vegetarian female football players were observed showing higher scores on right hand grip, left hand grip ,back strength and leg strength in comparison to their counterpart vegetarian female football players. The observed differences were significant on variable flexibility($t=5.20, df=58, p<05$), muscular endurance ($t=3.16, df=58, p<05$), right-hand grip($t=7.19, df=58, p<05$),left hand grip ($t=5.62, df=58, p<05$), back strength ($t=4.12, df=58, p<05$), leg strength ($t=5.36, df=58, p<05$), and cardiovascular endurance ($t=2.64$, $df=58$, $p<05$) among the vegetarian and non-vegetarian female football players of state level.

Table.4.11. Comparison Of Physical Characteristics Between Vegetarian And Non-vegetarian Female Football Players Of Intervarsity Level

	Vegetarian (N=20)		Non-Vegetarian (N=20)					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Flexibility	17.20	4.87	14.40	2.62	2.8	2.25	2.26	.02
Muscular endurance	49.85	11.30	37.00	13.66	12.85	3.96	3.24	.00
Right hand grip	25.25	3.55	32.05	3.83	6.80	1.16	5.82	.00
Left hand grip	24.20	4.47	34.10	5.08	9.90	1.51	6.53	.00
Back strength	60.15	9.79	81.20	12.54	21.05	3.55	5.91	.00
Leg strength	64.60	12.70	71.65	9.23	7.05	3.512	2.00	.05
Cardio-vascular endurance	98.50	9.1	94.10	8.12	5.17	3.27	1.86	.06

Table.4.11. reveled that vegetarian female football players of intervarsity level were showing higher level of Flexibility, Muscular Endurance and Cardiovascular Endurance in comparison to their counterparts, i.e., non-vegetarian female football player. However, non-vegetarian female football players were observed showing higher scores on right hand grip, left hand grip, back strength, leg strength. in comparison to their counterpart vegetarian female football players. The observed differences were significant on variable flexibility ($t=2.26, df=58, p<05$), muscular endurance ($t=3.24, df=58, p<05$), right-hand grip ($t=5.82, df=58, p<05$), left hand grip ($t=6.53, df=58, p<05$), back strength ($t=5.91, df=58, p<05$), and leg strength ($t=2.00, df=58, p<05$) among the vegetarian and non-vegetarian female football players of intervarsity level. But in the case of cardiovascular endurance mean difference was found insignificant($p=.06$), it indicates that in case of cardiovascular endurance insignificant difference exist between vegetarian and non-vegetarian female football players of intervarsity level.

Table.4.12. Comparison Of Physical Characteristics Between Vegetarian And Non-Vegetarian Female Football Players Of National Level

	Vegetarian (N=20)		Non-Vegetarian (N=20)					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Flexibility	19.00	5.14	13.85	3.88	5.15	1.26	3.57	.00
Muscular Endurance	39.00	14.17	29.35	12.52	9.65	4.22	2.28	.01
Right hand grip	27.30	4.83	31.95	3.94	4.65	1.39	3.33	.00
Left hand grip	25.15	6.38	32.15	4.20	7.00	1.70	4.09	.00
Back strength	62.50	12.58	82.40	10.55	19.90	3.67	5.41	.00
Leg strength	67.95	10.47	87.10	9.40	19.15	3.14	6.08	.00
Cardio-vascular endurance	98.75	6.90	94.45	10.60	6.7	3.6	1.51	.63

Table.4.12. reveled that vegetarian female football players of national level were showing higher level of flexibility, muscular endurance and cardiovascular endurance in comparison to their counterparts, i.e, non-vegetarian female football player. However, non-vegetarian female football players were observed showing higher scores on right hand grip left hand grip, back strength, leg strength in comparison to their counterpart vegetarian female football players. The observed differences were significant on variable flexibility ($t=3.57, df=38, p<05$) , muscular endurance ($t=2.28, df=38, p<05$),right-hand grip($t=3.33, df=38, p<05$),left hand grip ($t=4.09, df=38, p<05$) , back strength ($t=5.41, df=38, p<05$) and leg strength ($t=6.08, df=58, p<05$) among the vegetarian and non-vegetarian female football players of national level. But in the case of variable cardiovascular endurance mean difference was found insignificant($p=.63$), it indicates that in case of cardiovascular endurance insignificant difference exist between vegetarian and non-vegetarian female football players of intervarsity level.

4.1.3. Results related to Comparison of psychological characteristics among state level, inter university level and national level vegetarian and non-vegetarian female sports person of endurance sports, i.e. hockey and football.

Table.4.13: Analysis Of Variance (ANOVA) Of Aggression Among Female Hockey Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian Players	Between Sample	.386	2	.193	.028	.972
	Within Sample	456.700	67	6.816		
	Total	457.086	69			
Non-Vegetarian Players	Between Sample	13.750	2	6.875	.575	.565
	Within Sample	801.050	67	11.956		
	Total	814.800	69			

Table.4.13. revealed that the statistical differences, when observed among the vegetarian female hockey players of state level, inter university level and national level found insignificant on the variable aggression, as the significance level is .972 (p = .000) is more than .05 level of significance. That means, the vegetarian female hockey players of different level of performance have not differ significantly from each other on the variable aggression.

In the case of non-vegetarian female hockey players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable aggression, as the significance level is.565 (p = .000) is more than .05 level of significance. That means, the non-vegetarian female hockey players of different level of performance not differ significantly from each other on the variable aggression.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table.4.14: Analysis Of Variance (ANOVA) Of Aggression Among Female Football Players At Different Level Of Participation

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian Players	Between Sample	60.893	2	30.446	4.706	.012
	Within Sample	433.450	67	6.469		
	Total	494.343	69			
Non-vegetarian Players	Between Sample	5.205	2	2.602	.244	.784
	Within Sample	715.667	67	10.682		
	Total	720.871	69			

Table.4.14. revealed that the statistical differences, when observed among the vegetarian female football players of state level, inter university level and national level found significant on the variable aggression, as the significance level is .012 (p = .000) is less than .05 level of significance. That means, the vegetarian female football players of different level of performance differ significantly from each other on the variable aggression.

In the case of non-vegetarian female football players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable aggression, as the significance level is.784 (p = .000) is more than .01 level of significance. That means, the non-vegetarian female football players of different level of performance not differ significantly from each other on the variable aggression.

Since f value was found significant in the case of vegetarian female football players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among vegetarian hockey players of different

level of performance. The results of Scheffe Post-hoc test for vegetarian female football players have been presented in Table 4.14 (a)

Since f value was found insignificant in the case of non-vegetarian female football players, therefore, no need to apply Scheffe Post-hoc test.

Table.4.14 (a): Multiple Comparisons through Scheffe Post Hoc Test For Comparison of Aggression Level among the Vegetarian Female Football Players of State Level, Inter-University Level and National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-.60000	.73425	.417	-2.0656	.8656
	National	1.75000*	.73425	.020	.2844	3.2156
Inter-University	State	.60000	.73425	.417	-.8656	2.0656
	National	2.35000*	.80433	.005	.7446	3.9554
National	State	-1.75000*	.73425	.020	-3.2156	-.2844
	Inter-university	-2.35000*	.80433	.005	-3.9554	-.7446

Table.4.14. (a). indicate a significant difference between vegetarian female football players of state level and national level (p=.020), and inter-University level and national level (p=.005). Intervarsity level vegetarian football players were more aggressive than state level and national level football players. However, insignificant difference has been observed between state level and intervarsity level vegetarian female football players (p=.417), which shows that intervarsity level players possess slightly more aggression in comparison to state level vegetarian female football players.

Table 4.15: Analysis Of Variance (ANOVA) Of Emotional Stability Among Female Hockey Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian Players	Between Sample	4.226	2	2.113	.495	.612
	Within Sample	286.117	67	4.270		
	Total	290.343	69			
Non-Vegetarian Players	Between Sample	11.833	2	5.917	.942	.395
	Within Sample	420.867	67	6.282		
	Total	432.700	69			

Table.4.15. revealed that the statistical differences, when observed among the vegetarian female hockey players of state level, inter university level and national level found insignificant on the variable emotional stability, as the significance level is .612 (p = .000) is more than .05 level of significance. That means, the vegetarian female hockey players of different level of performance not differ significantly from each other on the variable emotional stability.

In the case of non-vegetarian female hockey players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable emotional stability, as the significance level is.395 (p = .000) is more than .01 level of significance. That means, the non- vegetarian female hockey players of different level of performance also not differ significantly from each other on the variable emotional stability.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table.4.16: Analysis Of Variance (ANOVA) Of Emotional Stability Among Female Football Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	.876	2	.438	.118	.888
	Within Sample	247.767	67	3.698		
	Total	248.643	69			
Non-vegetarian Players	Between Sample	4.343	2	2.171	.543	.584
	Within Sample	268.000	67	4.000		
	Total	272.343	69			

Table.4.16. revealed that the statistical differences, when observed among the vegetarian female football players of state level, inter university level and national level found insignificant on the variable emotional stability, as the significance level is .888 (p = .000) is more than .05 level of significance. That means, the vegetarian female football players of different level of performance not differ significantly from each other on the variable emotional stability.

In the case of non-vegetarian female football players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable emotional stability, as the significance level is.584 (p = .000) is more than .01 level of significance. That means, the non -vegetarian female football players of different level of performance also not differ significantly from each other on the variable emotional stability.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table.4.17: Analysis Of Variance (ANOVA) Of Overall Adjustment Among Female Hockey Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	64.236	2	32.118	2.522	.088
	Within Sample	853.250	67	12.735		
	Total	917.486	69			
Non-Vegetarian Players	Between Sample	590.655	2	295.327	22.832	.000
	Within Sample	866.617	67	12.935		
	Total	1457.271	69			

Table.4.17. revealed that the statistical differences, when observed among the vegetarian female hockey players of state level, inter university level and national level found insignificant on the variable overall adjustment, as the significance level is .088 (p = .000) is more than .05 level of significance. That means, the vegetarian female hockey players of different level of performance not differ significantly from each other on the variable overall adjustment.

Since f value was found insignificant in the case of vegetarian female hockey players, therefore, no need to apply Scheffe Post-hoc test.

In the case of non-vegetarian female hockey players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the level of overall adjustment, as the significance level is.000 (p = .000) is less than .05 level of significance. That means, the non-vegetarian female hockey players of different level of performance differ significantly from each other on the level of overall adjustment.

Since f value was found significant in the case of non-vegetarian female hockey players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among non-vegetarian female hockey players of different level of performance. The results of Scheffe Post-hoc test for non-vegetarian female hockey players have been presented in Table 4.17 (b)

Table.4.17. (b): Multiple Comparisons Through Scheffe Post- Hoc Test For Comparison of Overall Adjustment Level Among The Non-Vegetarian Female Hockey Players Of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-.03333	1.03821	.974	-2.1056	2.0389
	National	6.41667*	1.03821	.000	4.3444	8.4889
Inter-University	State	.03333	1.03821	.974	-2.0389	2.1056
	National	6.45000*	1.13730	.000	4.1799	8.7201
National	State	-6.41667*	1.03821	.000	-8.4889	-4.3444
	Inter-university	-6.45000*	1.13730	.000	-8.7201	-4.1799

Table 4.17 (b): indicate a significant difference between non-vegetarian female hockey players of state level and national level (p=.000), and inter-University level and national level (p=.000). Inter-university non- vegetarian female hockey players have significantly more overall adjustment than state and national level non-vegetarian female hockey players. However, insignificant difference has been observed between state level and intervarsity level non-vegetarian female hockey players (p=.974), which shows that inter-university level players possess lightly more overall adjustment as comparison to state level vegetarian female hockey players.

Table 4.18: Analysis of Variance (ANOVA) of Overall Adjustment among Female Football Players at Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian Players	Between Sample	73.321	2	36.661	1.695	.191
	Within Sample	1449.550	67	21.635		
	Total	1522.871	69			
Non-vegetarian Players	Between Sample	192.405	2	96.202	4.882	.010
	Within Sample	1320.167	67	19.704		
	Total	1512.571	69			

Table.4.18. revealed that the statistical differences, when observed among the vegetarian female football players of state level, inter university level and national level found insignificant on the variable overall adjustment, as the significance level is .191 (p = .000) is more than .05 level of significance. That means, the vegetarian female football players of different level of performance not differ significantly from each other on the variable overall adjustment.

Since f value was found insignificant in the case of vegetarian female football players, therefore, no need to apply Scheffe Post-hoc test.

In the case of non-vegetarian female football players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable overall adjustment, as the significance level is. 010 (p = .000) is less than .05 level of significance. That means, the non-vegetarian female football players of different level of performance differ significantly from each other on the variable overall adjustment.

Since f value was found significant in the case of non-vegetarian female football players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among non-vegetarian female

football players of different level of performance. The results of Scheffe Post-hoc test for non-vegetarian female football players have been presented in Table 4.18 (b)

Table.4.18 (b): Multiple Comparisons through Scheffe Post- Hoc Test For Comparison of Overall Adjustment Level Among The Non-Vegetarian Football Players of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-.41667	1.28140	.746	-2.9744	2.1410
	National	3.48333*	1.28140	.008	.9256	6.0410
Inter-University	State	.41667	1.28140	.746	-2.1410	2.9744
	National	3.90000*	1.40371	.007	1.0982	6.7018
National	State	-3.48333*	1.28140	.008	-6.0410	-.9256
	Inter-university	-3.90000*	1.40371	.007	-6.7018	-1.0982

Table.4.18 (b) indicate a significant difference between non-vegetarian female football players of state level and national level (p=.008), and inter-University level and national level (p=.007). Intervarsity level non- vegetarian female football players have significantly more overall adjustment than state and national level players. However, insignificant difference has been observed between state level and intervarsity level non-vegetarian female football players (p=.746), which shows that inter-university level players possess lightly more overall adjustment in comparison to state level vegetarian female football players.

Table.4.19: Analysis Of Variance (ANOVA) Of Autonomy Among Female Hockey Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Sig level
Vegetarian players	Between Sample	.236	2	.118	.034	.966
	Within Sample	230.850	67	3.446		
	Total	231.086	69			
Non-vegetarian Players	Between Sample	2.436	2	1.218	.543	.583
	Within Sample	150.150	67	2.241		
	Total	152.586	69			

Table.4.19. revealed that the statistical differences, when observed among the vegetarian female hockey players of state level, inter university level and national level found insignificant on the variable autonomy, as the significance level is .966 (p = .000) is more than .05 level of significance. That means, the vegetarian female hockey players of different level of performance not differ significantly from each other on the variable autonomy.

In the case of non-vegetarian female hockey players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the level of autonomy, as the significance level is.583 (p =.000) is more than .01 level of significance. That means, the non-vegetarian female hockey players of different level of performance also not differ significantly from each other on the level of autonomy.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table 4.20: Analysis Of Variance (ANOVA) Of Autonomy Among Female Football Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	2.286	2	1.143	.538	.586
	Within Sample	142.300	67	2.124		
	Total	144.586	69			
Non-vegetarian Players	Between Sample	3.905	2	1.952	1.066	.350
	Within Sample	122.667	67	1.831		
	Total	126.571	69			

Table.4.20. revealed that the statistical differences, when observed among the vegetarian female football players of state level, inter university level and national level found insignificant on the variable autonomy, as the significance level is .586 (*p* .000) is more than .05 level of significance. That means, the vegetarian female football players of different level of performance no differ significantly from each other on the level of autonomy.

In the case of non-vegetarian female football players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the level of autonomy, as the significance level is.350 (p = .000) is more than .01 level of significance. That means, the non-vegetarian female football players of different level of performance also not differ significantly from each other on the variable autonomy.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table.4.21: Analysis Of Variance (ANOVA) Of Security Insecurity Among Female Hockey Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	5.205	2	2.602	.990	.377
	Within Sample	176.067	67	2.628		
	Total	181.271	69			
Non-Vegetarian Players	Between Sample	1.683	2	.842	.466	.630
	Within Sample	121.117	67	1.808		
	Total	122.800	69			

Table.4.21. revealed that the statistical differences, when observed among the vegetarian female hockey players of state level, inter university level and national level found insignificant on the variable security insecurity, as the significance level is .377 (p = .000) is more than .05 level of significance. That mean, the vegetarian female hockey players of different level of performance not differ significantly from each other on the variable security insecurity.

In the case of non-vegetarian female hockey players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable intelligence, as the significance level is.630 (p = .000) is more than .01 level of significance. That means, the non-vegetarian female hockey players of different level of performance also not differ significantly from each other on the variable security insecurity.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table .4.22: Analysis Of Variance (ANOVA) Of Security Insecurity Among Female Football Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	4.286	2	2.143	.723	.489
	Within Sample	198.700	67	2.966		
	Total	202.986	69			
Non-vegetarian Players	Between Sample	4.976	2	2.488	1.397	.255
	Within Sample	119.367	67	1.782		
	Total	124.343	69			

Table.4.22. revealed that the statistical differences, when observed among the vegetarian female football players of state level, inter university level and national level found insignificant on the variable security insecurity, as the significance level is .489 (p = .000) is more than .05 level of significance. That means, the vegetarian female football players of different level of performance not differ significantly from each other on the variable security insecurity.

In the case of non-vegetarian female football players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable security insecurity, as the significance level is.255 (p = .000) is more than .01 level of significance. That means, the non-vegetarian female football players of different level of performance also not differ significantly from each other on the variable security insecurity.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table 4.23: Analysis Of Variance (ANOVA) Of Self-Concept Among Female Hockey Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	7.376	2	3.688	.718	.491
	Within Sample	344.067	67	5.135		
	Total	351.443	69			
Non-vegetarian Players	Between Sample	71.305	2	35.652	9.118	.000
	Within Sample	261.967	67	3.910		
	Total	333.271	69			

Table.4.23. revealed that the statistical differences, when observed among the vegetarian female hockey players of state level, inter university level and national level found, insignificant on the variable self-concept, as the significance level is .491 (p = .000) is more than .05 level of significance. That means, the vegetarian female hockey players of different level of performance not differ significantly from each other on the variable self-concept.

Since f value was found insignificant in the case of vegetarian female hockey players, therefore, no need to apply Scheffe Post-hoc test.

In the case of non-vegetarian female hockey players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable self-concept, as the significance level is.000 (p = .000) is less than .05 level of significance. That means, the non-vegetarian female hockey players of different level of performance differ significantly from each other on the variable self-concept.

Since f value was found significant in the case of non-vegetarian hockey players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among non-vegetarian hockey players of different level of performance. The results of Scheffe Post-hoc test for non-vegetarian female hockey players have been presented in Table 4.23 (b)

Table.4.23 (b): Multiple Comparisons through Scheffe Post- Hoc Test for Comparison of Self-concept Level Among the Non-Vegetarian Hockey Players Of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	.53333	.57081	.353	-.6060	1.6727
	National	-1.96667*	.57081	.001	-3.1060	-.8273
Inter-University	State	-.53333	.57081	.353	-1.6727	.6060
	National	-2.50000*	.62530	.000	-3.7481	-1.2519
National	State	1.96667*	.57081	.001	.8273	3.1060
	Inter-university	2.50000*	.62530	.000	1.2519	3.7481

Table.4.23. (b) indicate a significant difference between non-vegetarian female hockey players of state level and national level (p=.001), and inter-University level and national level (p=.000). National level non-vegetarian female hockey players have significantly more self-concept than state level and inter-university level female non-vegetarian hockey players. However, insignificant difference has been observed between state level and intervarsity level non-vegetarian female hockey players (p=.353), which shows that state level players possess slightly more self-concept as comparison to intervarsity level non-vegetarian female hockey players.

Table.4.24: Analysis Of Variance (ANOVA) Of Self-Concept Among Female Football Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	9.826	2	4.913	1.060	.352
	Within Sample	310.517	67	4.635		
	Total	320.343	69			
Non-Vegetarian Players	Between Sample	10.350	2	5.175	1.202	.307
	Within Sample	288.350	67	4.304		
	Total	298.700	69			

Table.4.24. revealed that the statistical differences, when observed among the vegetarian female football players of state level, inter university level and national level found insignificant on the variable self-concept, as the significance level is .352 (p = .000) is more than .05 level of significance. That means, the vegetarian female football players of different level of performance no differ significantly from each other on the variable self-concept.

In the case of non-vegetarian female football players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable self-concept, as the significance level is.307 (p = .000) is more than .01 level of significance. That means, the non-vegetarian female football players of different level of performance also not differ significantly from each other on the variable self-concept.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table.4.25: Analysis Of Variance (ANOVA) Of Intelligence Among Female Hockey Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	58.405	2	29.202	2.987	.057
	Within Sample	654.967	67	9.776		
	Total	713.371	69			
Non-vegetarian Players	Between Sample	25.986	2	12.993	1.276	.286
	Within Sample	682.300	67	10.184		
	Total	708.286	69			

Table.4.25. revealed that the statistical differences, when observed among the vegetarian female hockey players of state level, inter university level and national level found significant on the variable intelligence, as the significance level is .057 (p = .000) is equal to .05 level of significance. That means, the vegetarian female hockey players of different level of performance differ significantly from each other on the variable intelligence.

In the case of non-vegetarian female hockey players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable intelligence, as the significance level is .286 (p = .000) is more than .05 level of significance. That means, the non-vegetarian female hockey players of different level of performance not differ significantly from each other on the variable intelligence.

Since f value was found significant in the case of vegetarian female hockey players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among vegetarian female hockey players of different level of performance. The results of Scheffe Post-hoc test for vegetarian female hockey players have been presented in Table 4.25(a)

Since f value was found insignificant in the case of non-vegetarian female wrestling players, therefore, no need to apply Scheffe Post-hoc test.

Table 4.25 (a): Multiple Comparisons Through Scheffe Post- Hoc Test For Comparison of Intelligence Level Among The Vegetarian Female Hockey Players of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-2.11667*	.90257	.022	-3.9182	-.3151
	National	-1.41667	.90257	.121	-3.2182	.3849
Inter-University	State	2.11667*	.90257	.022	.3151	3.9182
	National	.70000	.98872	.481	-1.2735	2.6735
National	State	1.41667	.90257	.121	-.3849	3.2182
	Inter-university	-.70000	.98872	.481	-2.6735	1.2735

Table.4.25. (a): indicate a significant difference between vegetarian female hockey players of state level and inter-university level (p=.022). Intervarsity level vegetarian female hockey players were significantly more intelligence than state level vegetarian female hockey players. However, insignificant difference has been observed between state level and national level vegetarian female hockey players (p=.121) and intervarsity level and national level vegetarian female hockey players (p=.481), which shows that intervarsity level players possess slightly more intelligence as comparison to national level, and national level players possess slightly more intelligence as comparison to state level vegetarian female hockey players.

Table.4.26: Analysis Of Variance (ANOVA) Of Intelligence Among Female Football Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	12.569	2	6.285	.965	.386
	Within Sample	436.417	67	6.514		
	Total	448.986	69			
Non-vegetarian Players	Between Sample	51.255	2	25.627	2.705	.074
	Within Sample	634.817	67	9.475		
	Total	686.071	69			

Table.4.26 revealed that the statistical differences, when observed among the vegetarian female football players of state level, inter university level and national level found insignificant on the variable intelligence, as the significance level is.386 (p = .000) is more than .05 level of significance. That means, the vegetarian female football players of different level of performance no differ significantly from each other on the variable intelligence.

In the case of non-vegetarian female football players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable intelligence, as the significance level is.074 (p = .000) is more than .01 level of significance. That means, the non-vegetarian female football players of different level of performance also not differ significantly from each other on the variable intelligence.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

4.1.4. Results related to Comparison of physical characteristics among state level, inter university level and national level vegetarian and non-vegetarian female sports person of endurance sports, i.e. hockey and football.

Table.4.27: Analysis Of Variance (ANOVA) Of Flexibility Among Female Hockey Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	361.880	2	180.940	8.697	.000
	Within Sample	1393.938	67	20.805		
	Total	1755.818	69			
Non-vegetarian Players	Between Sample	100.455	2	50.227	4.047	.022
	Within Sample	831.617	67	12.412		
	Total	932.071	69			

Table .4.27. revealed that the statistical differences, when observed among the vegetarian female hockey players of state level, inter university level and national level found significant on the variable flexibility, as the significance level is.000 (p = .000) is less than .05 level of significance. That means, the vegetarian female hockey players of different level of performance differ significantly from each other on the variable flexibility.

In the case of non-vegetarian female hockey players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable flexibility, as the significance level is.022 (p = .000) is less than .01 level of significance. That means, the non-vegetarian female hockey players of different level of performance also differ significantly from each other on the variable flexibility.

Since f value was found significant in both the cases, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired

means among vegetarian and non-vegetarian female hockey players of different level of performance. The results of Scheffe Post-hoc test for both types of players have been presented in Table 4.27 (a) and 4.27 (b).

Table.4.27. (a): Multiple Comparisons Through Scheffe Post Hoc Test For Comparison Of Flexibility Level Among The Vegetarian Female Hockey Players Of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	.90000	1.31672	.497	-1.7282	3.5282
	National	5.32500*	1.31672	.000	2.6968	7.9532
Inter-University	State	-.90000	1.31672	.497	-3.5282	1.7282
	National	4.42500*	1.44240	.003	1.5460	7.3040
National	State	-5.32500*	1.31672	.000	-7.9532	-2.6968
	Inter-university	-4.42500*	1.44240	.003	-7.3040	-1.5460

Table.4.27.(a) indicate a significant difference between vegetarian female hockey players of state level and national level (p=.000), and inter-university level and national level (p=.003). State level vegetarian female hockey players have significantly more flexibility than inter-university level and national level vegetarian female hockey players. However, insignificant difference has been observed between state level and intervarsity level vegetarian female hockey players (p=.497), which shows that intervarsity level players possess slightly more flexibility as comparison to national vegetarian female hockey players.

Table.4.27 (b): Multiple Comparisons through Scheffe Post Hock Test For Comparison Of Flexibility Level Among The Non-Vegetarian Female Hockey Players Of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	2.88333*	1.01703	.006	.8533	4.9133
	National	.93333	1.01703	.362	-1.0967	2.9633
Inter-University	State	-2.88333*	1.01703	.006	-4.9133	-.8533
	National	-1.95000	1.11410	.085	-4.1738	.2738
National	State	-.93333	1.01703	.362	-2.9633	1.0967
	Inter-university	1.95000	1.11410	.085	-.2738	4.1738

Table.4.27 (b) indicate a significant difference between non-vegetarian female hockey players of state level and inter-university level (p=.006). State level non-vegetarian female hockey players have significantly more flexibility than inter-university level non-vegetarian female hockey players. However, insignificant difference has been observed between state level and national level non-vegetarian female hockey players (p=.362) and inter-university and national level non-vegetarian female hockey players (p=.085), which shows that state level players possess slightly more flexibility as comparison to national level non-vegetarian female hockey players, and national level players possess slightly more flexibility as comparison to inter-university level non-vegetarian female hockey players.

Table.4.28: Analysis of Variance (ANOVA) of Flexibility among Female Football Players at Different Level of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	128.419	2	64.210	2.486	.091
	Within Sample	1730.667	67	25.831		
	Total	1859.086	69			
Non-Vegetarian Players	Between Sample	3.769	2	1.885	.149	.862
	Within Sample	848.017	67	12.657		
	Total	851.786	69			

Table.4.28. revealed that the statistical differences, when observed among the vegetarian hockey players of state level, inter university level and national level found insignificant on the variable flexibility, as the significance level is.091 (p = .000) is more than .05 level of significance. That means, the vegetarian hockey players of different level of performance no differ significantly from each other on the variable flexibility.

In the case of non-vegetarian hockey players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable flexibility, as the significance level is.862(p = .000) is more than .01 level of significance. That means, the non-vegetarian hockey players of different level of performance also not differ significantly from each other on the variable flexibility.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table 4.29: Analysis of Variance (ANOVA) of Muscular Endurance Among Female Hockey Players at Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	231.026	2	115.513	1.348	.267
	Within Sample	5742.917	67	85.715		
	Total	5973.943	69			
Non-Vegetarian Players	Between Sample	129.643	2	64.821	.851	.431
	Within Sample	5101.800	67	76.146		
	Total	5231.443	69			

Table.4.29. revealed that the statistical differences, when observed among the vegetarian hockey players of state level, inter university level and national level found insignificant on the variable muscular endurance, as the significance level is.267(p = .000) is more than .05 level of significance. That means, the vegetarian hockey players of different level of performance no differ significantly from each other on the variable muscular endurance.

In the case of non-vegetarian hockey players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable muscular endurance, as the significance level is. 431 (p = .000) is more than .01 level of significance. That means, the non-vegetarian hockey players of different level of performance also not differ significantly from each other on the variable muscular endurance.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table.4.30: Analysis Of Variance (ANOVA) Of Muscular Endurance Among Female Football Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	1809.893	2	904.946	7.208	.001
	Within Sample	8412.050	67	125.553		
	Total	10221.943	69			
Non- Vegetarian Players	Between Sample	2809.855	2	1404.927	12.693	.000
	Within Sample	7415.917	67	110.685		
	Total	10225.771	69			

Table.4.30. revealed that the statistical differences, when observed among the vegetarian football players of state level, inter university level and national level found significant on the variable muscular endurance, as the significance level is.000 (p = .000) is less than .05 level of significance. That means, the vegetarian football players of different level of performance differ significantly from each other on the variable muscular endurance.

In the case of non-vegetarian football players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable muscular endurance, as the significance level is.022 (p = .000) is less than .01 level of significance. That means, the non-vegetarian football players of different level of performance also differ significantly from each other on the variable muscular endurance.

Since f value was found significant in both the cases, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among vegetarian and non-vegetarian football players of different level of performance. The results of Scheffe Post-hoc test for both types of players have been presented in Table 4.30 (a) and 4.30 (b).

Table.4.30 (a): Multiple Comparisons Through Scheffe Post Hoc Test For Comparison of Muscular Endurance Level Among The Vegetarian Football Players Of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	.65000	3.23462	.841	-5.8063	7.1063
	National	11.50000*	3.23462	.001	5.0437	17.9563
Inter-University	State	-.65000	3.23462	.841	-7.1063	5.8063
	National	10.85000*	3.54335	.003	3.7775	17.9225
National	State	-11.50000*	3.23462	.001	-17.9563	-5.0437
	Inter-university	-10.85000*	3.54335	.003	-17.9225	-3.7775

Table.4.30(a). indicate a significant difference between vegetarian female football players of state level and national level (p=.001), and inter-University level and national level (p=.003). State level vegetarian female football players have significantly more muscular endurance than inter-university level and national level vegetarian female football players. However, insignificant difference has been observed between state and intervarsity level vegetarian female football players (p=.841), which shows that inter-university level players possess slightly more muscular endurance as comparison to national level vegetarian female football players.

Table 4.30 (b): Multiple Comparisons Through Scheffe Post Hoc Test For Comparison Of Muscular Endurance Level Among The Non-Vegetarian Football Players Of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	7.56667*	3.03707	.015	1.5047	13.6287
	National	15.21667*	3.03707	.000	9.1547	21.2787
Inter-University	State	-7.56667*	3.03707	.015	-13.6287	-1.5047
	National	7.65000*	3.32694	.025	1.0094	14.2906
National	State	-15.21667*	3.03707	.000	-21.2787	-9.1547
	Inter-university	-7.65000*	3.32694	.025	-14.2906	-1.0094

Table.4.30 (b) indicate a significant difference between non-vegetarian female football players of state and inter-university level (p=.015), state and national level (p=.000) and inter-University and national level (p=.025). State level female football players have significantly more muscular endurance than intervarsity and national level players, and inter-university level female football players possess more muscular endurance than national level players.

Table.4.31: Analysis of Variance (ANOVA) of Right-Hand Grip Strength Among Female Hockey Players At Different Level of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian Players	Between Sample	28.055	2	14.027	.992	.376
	Within Sample	947.317	67	14.139		
	Total	975.371	69			
Non-Vegetarian Players	Between Sample	70.405	2	35.202	1.702	.190
	Within Sample	1385.367	67	20.677		
	Total	1455.771	69			

Table.4.31. revealed that the statistical differences, when observed among the vegetarian hockey players of state level, inter university level and national level found insignificant on the variable right-hand grip strength, as the significance level is. 376 (p = .000) is more than .05 level of significance. That means, the vegetarian hockey players of different level of performance no differ significantly from each other on the variable right-hand grip strength.

In the case of non-vegetarian hockey players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable right-hand grip strength, as the significance level is. 190 (p = .000) is more than .01 level of significance. That means, the non-vegetarian hockey players of different level of performance also not differ significantly from each other on the variable right-hand grip strength.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table.4.32: Analysis Of Variance (ANOVA) of Right Hand Grip Strength Among Female Football Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	136.026	2	68.013	4.911	.010
	Within Sample	927.817	67	13.848		
	Total	1063.843	69			
Non-vegetarian Players	Between Sample	29.071	2	14.536	.885	.417
	Within Sample	1100.200	67	16.421		
	Total	1129.271	69			

Table. 4.32. revealed that the statistical differences, when observed among the vegetarian female football players of state level, inter university level and national level found significant on the variable right-hand grip strength, as the significance level is .010 (p = .000) is less than to .05 level of significance. That means, the vegetarian female football players of different level of performance differ significantly from each other on the variable right-hand grip strength.

In the case of non-vegetarian female football players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable right-hand grip strength, as the significance level is.417 (p = .000) is more than .05 level of significance. That means, the non-vegetarian female football players of different level of performance not differ significantly from each other on the variable right-hand grip strength

Since f value was found significant in the case of vegetarian football players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among vegetarian football players of different level of performance. The results of Scheffe Post-hoc test for vegetarian female football players have been presented in Table 4.32 (a)

Since f value was found insignificant in the case of non-vegetarian female football players, therefore, no need to apply Scheffe Post-hoc test.

\Table 4.32 (a): Multiple Comparisons Through Scheffe Post- Hoc Test For Comparison Of Right-Hand Grip Strength Level Among The Vegetarian Football Players Of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-1.31667	1.07424	.225	-3.4609	.8275
	National	-3.36667*	1.07424	.003	-5.5109	-1.2225
Inter-University	State	1.31667	1.07424	.225	-.8275	3.4609
	National	-2.05000	1.17678	.086	-4.3989	.2989
National	State	3.36667*	1.07424	.003	1.2225	5.5109
	Inter-university	2.05000	1.17678	.086	-.2989	4.3989

Table.4.32. (a). indicate a significant difference between vegetarian female football players of state level and national level (p=.003). Intervarsity level vegetarian female football players have significantly more muscular endurance than State level. However, insignificant difference has been observed between state level and intervarsity level female vegetarian football players (p=.225), and intervarsity level and national level female vegetarian football players (p=.086), which shows that national level players possess slightly more muscular endurance as comparison to state level vegetarian football players.

4.33: Analysis Of Variance (ANOVA) Of Left Hand Grip Strength Among Female Hockey Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	66.805	2	33.402	1.330	.271
	Within Sample	1682.067	67	25.105		
	Total	1748.871	69			
Non-vegetarian Players	Between Sample	24.705	2	12.352	.695	.503
	Within Sample	1191.067	67	17.777		
	Total	1215.771	69			

Table .4.33. revealed that the statistical differences, when observed among the vegetarian female hockey players of state level, inter university level and national level found insignificant on the variable left-hand grip strength, as the significance level is. 271 (p = .000) is more than .05 level of significance. That means, the vegetarian female hockey players of different level of performance no differ significantly from each other on the variable left-hand grip strength.

In the case of non-vegetarian female hockey players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable left-hand grip strength, as the significance level is. 503 (p = .000) is more than .01 level of significance. That means, the non-vegetarian female hockey players of different level of performance also not differ significantly from each other on the variable left-hand grip strength.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table .4.34: Analysis Of Variance (ANOVA) Of Left- Hand Grip Strength Among Female Football Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	9.026	2	4.513	.156	.856
	Within Sample	1938.417	67	28.932		
	Total	1947.443	69			
Non-vegetarian Players	Between Sample	72.836	2	36.418	1.737	.184
	Within Sample	1404.650	67	20.965		
	Total	1477.486	69			

Table.4.34. revealed that the statistical differences, when observed among the vegetarian female football players of state level, inter university level and national level found insignificant on the variable left-hand grip strength, as the significance level is. 856 (p = .000) is more than .05 level of significance. That means, the vegetarian female football players of different level of performance not differ significantly from each other at the variable left -hand grip strength.

In the case of non-vegetarian female football players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable left- hand grip strength, as the significance level is. 184 (p = .000) is more than .01 level of significance. That means, the non-vegetarian female football players of different level of performance also not differ significantly from each other on the variable left-hand grip strength.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table .4.35: Analysis Of Variance (ANOVA) Of Back Strength Among Female Hockey Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian Players	Between Sample	539.719	2	269.860	1.252	.292
	Within Sample	14437.267	67	215.482		
	Total	14976.986	69			
Non-Vegetarian Players	Between Sample	1474.083	2	737.042	2.922	.061
	Within Sample	16897.117	67	252.196		
	Total	18371.200	69			

Table.4.35. revealed that the statistical differences, when observed among the vegetarian female hockey players of state level, inter university level and national level found insignificant on the variable back strength, as the significance level is. 292 (p = .000) is more than .05 level of significance. That means, the vegetarian female hockey players of different level of performance not differ significantly from each other on the variable back strength.

In the case of non-vegetarian hockey players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the level of back strength, as the significance level is. 061 (p = .000) is more than .01 level of significance. That means, the non-vegetarian female hockey players of different level of performance also not differ significantly from each other on the variable back strength.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table .4.36: Analysis Of Variance (ANOVA) Of Back Strength Among Female Football Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	312.636	2	156.318	.846	.434
	Within Sample	12384.350	67	184.841		
	Total	12696.986	69			
Non-Vegetarian Players	Between Sample	31.543	2	15.771	.106	.900
	Within Sample	9998.800	67	149.236		
	Total	10030.343	69			

Table.4.36. revealed that the statistical differences, when observed among the vegetarian female football players of state level, inter university level and national level found insignificant on the variable back strength, as the significance level is. 434 (p = .000) is more than .05 level of significance. That means, the vegetarian female football players of different level of performance not differ significantly from each other on the variable back strength.

In the case of non-vegetarian female football players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable back strength, as the significance level is. 900 (p = .000) is more than .01 level of significance. That means, the non-vegetarian female football players of different level of performance also not differ significantly from each other on the variable back strength.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table .4.37: Analysis Of Variance (ANOVA) Of Leg Strength Among Female Hockey Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	4210.969	2	2105.485	13.465	.000
	Within Sample	10476.817	67	156.370		
	Total	14687.786	69			
Non-Vegetarian Players	Between Sample	3982.733	2	1991.367	10.216	.000
	Within Sample	13060.067	67	194.926		
	Total	17042.800	69			

Table.4.37. revealed that the statistical differences, when observed among the vegetarian hockey players of state level, inter university level and national level found significant on the variable leg strength, as the significance level is.000 (p = .000) is less than .05 level of significance. That means, the vegetarian hockey players of different level of performance differ significantly from each other on the level of leg strength.

In the case of non-vegetarian hockey players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable leg strength, as the significance level is.000(p =.000) is less than .05 level of significance. That means, the non-vegetarian hockey players of different level of performance also differ significantly from each other on the variable leg strength.

Since f value was found significant in both the cases, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among vegetarian and non-vegetarian hockey players of different level of performance. The results of Scheffe Post-hoc test for both types of players have been presented in Table. 4.37. (a) and 4.37. (b).

Table.4.37 (a): Multiple Comparisons Through Scheffe Post Hoc Test For Comparison Of Leg Strength Level Among The Vegetarian Hockey Players Of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-16.86667*	3.60983	.000	-24.0719	-9.6614
	National	-14.21667*	3.60983	.000	-21.4219	-7.0114
Inter-University	State	16.86667*	3.60983	.000	9.6614	24.0719
	National	2.65000	3.95437	.505	-5.2430	10.5430
National	State	14.21667*	3.60983	.000	7.0114	21.4219
	Inter-university	-2.65000	3.95437	.505	-10.5430	5.2430

Table.4.37. (a). indicate a significant difference between vegetarian female boxing players of state level and inter-university level(p=.000) and state level and national level (p=.000). Intervarsity level female hockey players have significantly more leg strength than level national level and state level female hockey players. However, insignificant difference has been observed between intervarsity level and national level female hockey players (p=.505), which shows that inter-university level players possess slightly more leg strength as comparison to national level vegetarian female hockey players.

Table.4.37. (b): Multiple Comparisons through Scheffe Post Hoc Test For Comparison of Leg Strength Level among the Non-Vegetarian Hockey Players of State Level, Inter-University Level and National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-17.93333*	4.03037	.000	-25.9780	-9.8887
	National	-4.23333	4.03037	.297	-12.2780	3.8113
Inter-University	State	17.93333*	4.03037	.000	9.8887	25.9780
	National	13.70000*	4.41505	.003	4.8875	22.5125
National	State	4.23333	4.03037	.297	-3.8113	12.2780
	Inter-university	-13.70000*	4.41505	.003	-22.5125	-4.8875

Table .4.37. (b) indicate a significant difference between non-vegetarian female boxing players of state level and inter-university level (p=.000), and inter-University level and national level (p=.003). Intervarsity level non-vegetarian female hockey non-vegetarian players have significantly more leg strength than level national level and state level non-vegetarian female hockey players. However, insignificant difference has been observed between state level female and national level non-vegetarian female hockey players (p=.297), which shows that national level players possess slightly more leg strength as comparison to state level non-vegetarian female hockey players.

Table.4.38: Analysis Of Variance (ANOVA) Of Leg Strength Among Female Football Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	6569.655	2	3284.827	21.887	.000
	Within Sample	10055.217	67	150.078		
	Total	16624.871	69			
Non-vegetarian Players	Between Sample	6635.026	2	3317.513	32.263	.000
	Within Sample	6889.317	67	102.826		
	Total	13524.343	69			

Table.4.38. revealed that the statistical differences, when observed among the vegetarian football players of state level, inter university level and national level found significant on the variable leg strength, as the significance level is.000 (p = .000) is less than .05 level of significance. That means, the vegetarian football players of different level of performance differ significantly from each other on the variable leg strength.

In the case of non-vegetarian football players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable leg strength, as the significance level is.000 (p = .000) is less than .05 level of significance. That means, the non-vegetarian football players of different level of performance also differ significantly from each other on the variable leg strength.

Since f value was found significant in both the cases, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among vegetarian and non-vegetarian football players of different level of performance. The results of Scheffe Post-hoc test for both types of players have been presented in Table 4.38 (a) and 4.38 (b).

Table.4.38 (a): Multiple Comparisons through Scheffe Post Hoc Test For Comparison of Leg Strength Level among the Vegetarian Football Players of State Level, Inter-University Level and National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-17.73333*	3.53645	.000	-24.7921	-10.6745
	National	-21.08333*	3.53645	.000	-28.1421	-14.0245
Inter-University	State	17.73333*	3.53645	.000	10.6745	24.7921
	National	-3.35000	3.87399	.390	-11.0825	4.3825
National	State	21.08333*	3.53645	.000	14.0245	28.1421
	Inter-university	3.35000	3.87399	.390	-4.3825	11.0825

Table .4.38. (a). indicate a significant difference between vegetarian female football players of state level and inter-university level (p=.000) and state level and national level (p=.000). National level vegetarian female football players have significantly more leg strength than inter-university level and state level vegetarian female football players. However, insignificant difference has been observed between intervarsity level and national level vegetarian female football players (p=.390), which shows that national level vegetarian female football players possess slightly more leg strength as comparison to inter-university level vegetarian female football players.

Table.4.38 (b): Multiple Comparisons Through Scheffe Post Hock Test For Comparison Of Leg Strength Among The Non-Vegetarian Football Players Of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-8.01667*	2.92725	.008	-13.8595	-2.1738
	National	-23.46667*	2.92725	.000	-29.3095	-17.6238
Inter-University	State	8.01667*	2.92725	.008	2.1738	13.8595
	National	-15.45000*	3.20664	.000	-21.8505	-9.0495
National	State	23.46667*	2.92725	.000	17.6238	29.3095
	Inter-university	15.45000*	3.20664	.000	9.0495	21.8505

Table. 4.38. (b). indicate a significant difference between non-vegetarian female ootball players of state level and inter-university level (p=.008), state level and national level (p=.000) and inter-University level and national level (p=.00). National level non-vegetarian female football players have significantly more leg strength than inter-university level and state level non-vegetarian female football players. Similarly, inter-university level football players have possessed more leg strength as comparison to state level non-vegetarian female football.

Table.4.39: Analysis Of Variance (ANOVA) Of Cardiovascular Endurance Among Female Hockey Players At Different Level Of Participation

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	336.933	2	168.467	3.257	.045
	Within Sample	3465.767	67	51.728		
	Total	3802.700	69			
Non-vegetarian Players	Between Sample	88.843	2	44.421	.395	.675
	Within Sample	7527.000	67	112.343		
	Total	7615.843	69			

Table.4.39. revealed that the statistical differences, when observed among the vegetarian female hockey players of state level, inter university level and national level found significant on the variable cardiovascular endurance, as the significance level is .045 (p = .000) is less than to .05 level of significance. That means, the vegetarian female hockey players of different level of participation differ significantly from each other on the variable cardiovascular endurance.

In the case of non-vegetarian female hockey players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable cardiovascular endurance, as the significance level is.675 (p = .000) is more than .05 level of significance. That means, the non-vegetarian female hockey players of different level of participation not differ significantly from each other on the variable cardiovascular endurance.

Since f value was found significant in the case of vegetarian hockey players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among vegetarian hockey players of different level of participation. The results of Scheffe Post-hoc test for vegetarian female hockey players have been presented in Table 4.39(a)

Since f value was found insignificant in the case of vegetarian female hockey players, therefore, no need to apply Scheffe Post-hoc test.

Table.4.39. (a): Multiple Comparisons through Scheffe Post- Hoc Test For Comparison of Cardiovascular Endurance Level among The Vegetarian Hockey Players of State Level, Inter-University Level and National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-4.43333*	2.07621	.036	-8.5775	-.2892
	National	-4.43333*	2.07621	.036	-8.5775	-.2892
Inter-University	State	4.43333*	2.07621	.036	.2892	8.5775
	National	.00000	2.27438	1.000	-4.5397	4.5397
National	State	4.43333*	2.07621	.036	.2892	8.5775
	Inter-university	.00000	2.27438	1.000	-4.5397	4.5397

Table.4.39.(a). indicate a significant difference between vegetarian female hockey players of state level and inter-university level (p=.036) and state level and national level (p=.036). National level and intervarsity vegetarian female hockey players have significantly more leg strength than state level vegetarian female hockey players. However, insignificant difference has been observed between intervarsity level and national level female hockey players (p=.1.00), which shows that intervarsity level vegetarian female hockey players possess equal leg strength as comparison to state level vegetarian female hockey players.

Table.4.40: Analysis Of Variance (ANOVA) Of Cardiovascular Endurance Among Female Football Players At Different Level Of Participation

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	143.969	2	71.985	1.049	.356
	Within Sample	4596.617	67	68.606		
	Total	4740.586	69			
Non-vegetarian players	Between Sample	478.236	2	239.118	2.294	.109
	Within Sample	6984.750	67	104.250		
	Total	7462.986	69			

Table.4.40. revealed that the statistical differences, when observed among the vegetarian female football players of state level, inter university level and national level found insignificant on the variable cardiovascular endurance, as the significance level is. 356 (p = .000) is more than .05 level of significance. That means, the vegetarian female football players of different level of participation were not differing significantly from each other on the variable cardiovascular endurance.

In the case of non-vegetarian female football players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the level of cardiovascular endurance, as the significance level is. 109 (p = .000) is more than .05 level of significance. That means, the non-vegetarian female football players of different level of participation were also not differed significantly from each other on the variable cardiovascular endurance.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

4.1.5 Results related to Comparison of psychological characteristics between vegetarian and non-vegetarian female sports person of Strength sports (i.e. boxing and football) at different level of performance

Table.4.41: Comparison Of Aggression And Components Of Mental Health Between Vegetarian And Non-Vegetarian Female Boxing Players Of State Level

	Vegetarian (N=30)		Non-Vegetarian (N=30)					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Aggression	7.2	2.9	16.7	3.1	9.5	0.03	11.98	.000
Emotional stability	11.13	2.08	10.70	2.02	0.43	0.06	0.81	0.41
Over-All adjustment	28.40	6.42	24.03	3.74	4.37	2.68	3.57	0.00
Autonomy	9.33	1.84	8.53	1.17	0.8	0.67	2.00	0.04
Security-Insecurity	11.17	1.68	9.33	1.30	1.84	0.38	4.72	0.00
Self -concept	12.10	2.16	9.67	2.56	2.43	0.4	3.97	0.00
Intelligence	21.60	2.22	19.13	2.96	2.47	0.74	3.65	0.00

Table.4.41. reveals that non-vegetarian female boxing players of state level were showing higher level of aggression in comparison to their counterparts, i.e., vegetarian female boxing players However, vegetarian female boxing players were observed showing higher scores on emotional stability, over-all adjustment ,autonomy, security insecurity ,self-concept and intelligence in comparison to their counterpart non-vegetarian female boxing players. The observed differences were significant on variable aggression($t=11.98, df=58, p<.05$), overall adjustment ($t=3.57, df=58, p<.05$), autonomy($t=2.00, df=58, p<.05$), security insecurity ($t=4.72$, $df=58$, $p<.05$), self-concept ($t=3.97$, $df=58$, $p<.05$) and intelligence ($t=3.65$, $df=58$, $p<.05$) among the vegetarian and non-vegetarian female football players. But in the case of emotional stability mean difference was found insignificant($p>0.5$) between vegetarian and non-vegetarian female boxing players of state level.

Table.4.42: Comparison Of Aggression And Components Of Mental Health Between Vegetarian And Non-Vegetarian Female Boxing Players Of Intervarsity Level

	Vegetarian (N=20)		Non-Vegetarian (N=20)					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Aggression	9.20	2.78	17.45	3.39	8.25	0.13	8.40	.000
Emotional stability	12.0	1.92	10.3	1.56	1.7	0.36	3.07	0.00
Over-All adjustment	29.60	3.76	25.10	5.10	4.5	1.34	3.17	0.00
Autonomy	10.15	1.56	8.75	1.80	1.04	0.06	1.90	0.06
Security-Insecurity	9.45	2.93	9.75	1.12	0.3	1.81	0.42	0.67
Self concept	12.10	2.47	9.70	2.08	2.4	0.39	3.32	0.00
Intelligence	21.45	2.09	17.70	3.70	3.75	1.61	3.94	0.00

Table.4.42. reveals that non-vegetarian female boxing players of intervarsity level were showing higher level of aggression in comparison to their counterparts, i.e., vegetarian female boxing players. However, vegetarian female boxing players were observed showing higher scores on emotional Stability, over-all adjustment, autonomy, security insecurity, self-concept and intelligence in comparison to their counterpart non-vegetarian female boxing players.

The observed differences were significant on variable aggression (t=8.40,df=58,p<.05),emotional stability (t=3.07,df=58,p<05),over all adjustment (t=3.17,df=58,p<.05), self-concept (t=3.32, df=58, p<.05) and intelligence (t=3.94, df=58, p<.05) among the vegetarian and non-vegetarian female football players. But in the case of autonomy and security-insecurity mean difference was found insignificant(p>0.5) between vegetarian and non-vegetarian female boxing players of intervarsity level.

Table.4.43: Comparison of Aggression And Components of Mental Health Between Vegetarian And Non-vegetarian Female Boxing Players of National Level

	Vegetarian (N=20)		Non-Vegetarian (N=20)					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Aggression	7.85	3.26	20.55	3.13	12.7	0.02	12.54	.000
Emotional stability	11.25	2.27	9.50	2.33	1.75	0.06	2.40	0.02
Over-All adjustment	30.10	4.70	22.20	6.72	7.9	2.02	4.30	0.00
Autonomy	10.00	1.37	8.65	1.56	1.47	0.17	3.19	0.00
Security-Insecurity	10.95	1.64	9.75	1.41	1.2	0.23	2.48	0.01
Self-concept	12.10	2.22	9.90	1.89	2.2	0.36	3.37	0.00
Intelligence	22.25	2.00	19.50	1.05	2.75	0.95	5.45	0.00

Table .4.43. reveals that non-vegetarian female boxing players of national level were showing higher level of aggression in comparison to their counterparts, i.e., vegetarian female boxing players. However, vegetarian female boxing players were observed showing higher scores on emotional stability, over-all adjustment, autonomy, security insecurity self-concept and intelligence, in comparison to their counterpart non-vegetarian female boxing players.

The observed differences were significant on variable aggression ($t=12.54, df=38, p<.05$), emotional stability ($t=2.40, df=38, p<05$), over all adjustment ($t=4.30, df=38, p<.05$),autonomy ($t=3.19, df=38, p<.05$),security insecurity ($t=2.48, df=38, p<.05$),self-concept ($t=3.37, df=38, p<.05$) and intelligence ($t=5.45, df=38, p<.05$) among the vegetarian and non-vegetarian female football players of national level.

Table.4.44: Comparison of Aggression And Components of Mental Health Between Vegetarian And Non-vegetarian Female Wrestling Players of State Level

	Vegetarian (N=30)		Non-Vegetarian (N=30)					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Aggression	7.76	2.34	17.03	3.64	9.27	0.23	11.71	.000
Emotional stability	11.70	1.76	9.76	1.73	1.93	0.02	4.27	0.00
Over-All adjustment	29.17	4.66	24.40	5.63	4.77	0.97	3.57	0.00
Autonomy	10.00	1.82	9.00	1.23	1	0.59	2.49	0.01
Security-Insecurity	11.17	1.53	9.60	1.13	1.57	0.4	4.50	0.00
Self concept	12.97	2.19	9.37	1.38	3.6	0.81	7.62	0.00
Intelligence	21.57	2.19	20.23	2.37	1.34	0.18	2.26	0.02

Table.4.44. reveals that non-vegetarian female wrestling players of state level were showing higher level of aggression in comparison to their counterparts, i.e., vegetarian female wrestling players. However, vegetarian female wrestling players were observed showing higher scores on Emotional Stability, Over-all Adjustment, Autonomy, Security Insecurity, Self-concept and Intelligence in comparison to their counterpart non-vegetarian female wrestling players.

The observed differences were significant on variable aggression ($t=11.71, df=58, p<.05$), emotional stability ($t=4.27, df=58, p<05$), over all adjustment ($t=3.57, df=58, p<.05$),autonomy ($t=2.49, df=58, p<.05$), security insecurity ($t=4.50, df=58, p<.05$),self-concept ($t=7.62, df=58, p<.05$) and intelligence ($t=2.26, df=58, p<.05$) among the vegetarian and non-vegetarian female wrestling players of state level.

Table.4.45: Comparison of Aggression and Components of Mental Health Between Vegetarian And Non-vegetarian Female Wrestling Players of Intervarsity Level

	Vegetarian (N=20)		Non-Vegetarian (N=20)					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Aggression	7.60	2.23	18.25	3.25	10.65	0.92	12.05	.000
Emotional stability	11.10	1.86	10.15	2.03	0.95	0.17	1.54	0.13
Over-All adjustment	29.35	5.24	23.40	5.54	5.95	0.3	3.48	0.00
Autonomy	10.25	1.11	9.10	1.33	1.16	0.22	2.85	0.00
Security-Insecurity	10.85	1.87	9.80	1.36	1.05	0.51	2.02	0.04
Self -concept	13.15	1.60	9.35	1.23	3.8	0.37	8.43	0.00
Intelligence	21.95	1.90	18.15	3.94	3.8	2.04	3.88	0.00

Table.4.45. reveals that non-vegetarian female wrestling players of intervarsity level were showing higher level of aggression in comparison to their counterparts, i.e., vegetarian female wrestling players. However, vegetarian female wrestling players were observed showing higher scores on emotional stability, over-all adjustment, autonomy, security insecurity, self-concept and intelligence in comparison to their counterpart non-vegetarian female wrestling players. The observed differences were significant on variable aggression ($t=12.05, df=58, p<.05$),overall adjustment ($t=3.48, df=58, p<.05$), autonomy ($t=2.85, df=58, p<.05$),security insecurity ($t=2.02, df=58, p<.05$),self-concept ($t=8.43, df=58, p<.05$) and intelligence ($t=3.88, df=58, p<.05$) among the vegetarian and non-vegetarian female wrestling players of intervarsity level. But in the case of emotional stability mean difference was found insignificant ($p>.05$) between vegetarian and non-vegetarian female wrestling players of intervarsity level.

Table. 4.46: Comparison of Aggression And Components of Mental Health Between Vegetarian And Non-vegetarian Female Wrestling Players of National Level

	Vegetarian (N=20)		Non-Vegetarian (N=20)					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t -value**	**Sig.**
Aggression	6.85	2.45	18.40	3.77	11.5	1.32	11.47	.000
Emotional stability	11.45	1.66	9.60	2.28	1.7	0.9	3.81	0.00
Over-All adjustment	29.45	3.85	21.90	4.48	7.3	0.61	5.58	.000
Autonomy	10.45	1.35	8.90	1.65	1.7	0.07	3.59	0.00
Security-Insecurity	11.35	1.39	9.30	0.92	2.05	0.47	5.50	0.00
Self -concept	11.50	2.52	9.75	2.43	1.75	0.09	2.23	0.03
Intelligence	21.15	3.08	17.85	4.31	3.3	1.23	2.78	0.00

Table 4.46. reveals that non-vegetarian female wrestling players of national level were showing higher level of aggression in comparison to their counterparts, i.e., vegetarian female wrestling players. However, vegetarian female wrestling players were observed showing higher scores on emotional stability, over-all adjustment, autonomy, security insecurity, self-concept and intelligence in comparison to their counterpart non-vegetarian female wrestling players. The observed differences were significant on the variable aggression ($t=11.47, df=38, p<.05$) ,emotional stability ($t=3.81, df=38, p<.05$) , overall adjustment ($t=5.58, df=38, p<.05$) , autonomy ($t=3.59, df=38, p<.05$), security insecurity ($t=5.50, df=38, p<.05$),self-concept ($t=2.23, df=38, p<.05$) and intelligence ($t=2.78, df=38, p<.05$) among the vegetarian and non-vegetarian wrestling players of national level.

4.1.6. Results Related To Comparison of Physical Characteristics Between Vegetarian And Non-vegetarian female Sports Person of Strength Sports (I.E. Boxing And Wrestling) At Different Level of Performance

Table .4.47: Comparison of Physical Characteristics Between Vegetarian And Non-vegetarian female Boxing Players of State Level

	Vegetarian (N=30)		Non-Vegetarian (N=30)					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Flexibility	20.43	4.43	17.50	4.79	2.93	0.36	2.46	.00
Muscular endurance	49.20	11.45	41.70	8.96	7.50	2.65	2.82	.00
Right hand grip	23.06	3.42	32.06	3.76	4.65	1.39	3.33	.00
Left hand grip	24.23	5.19	33.30	4.54	9.06	1.25	7.20	.00
Back strength	50.16	13.00	73.50	15.69	23.33	3.72	6.27	.00
Leg strength	65.13	11.61	76.03	16.28	10.90	3.65	2.98	.00
Cardio-vascular endurance	93.60	8.96	88.43	12.23	5.17	3.27	1.86	0.06

Table.4.47. reveals that vegetarian female boxing players of state level were showing higher level of flexibility, muscular endurance and cardiovascular endurance in comparison to their counterparts, i.e., non-vegetarian female boxing players .However, non-vegetarian female boxing players were observed showing higher scores on right hand grip ,left hand grip ,back strength ,leg strength in comparison to their counterpart vegetarian female boxing players. The observed differences were significant on the variable flexibility ($t=2.46, df=58, p<.05$) , muscular endurance ($t=2.82, df=58, p<.05$) , right hand grip ($t=3.33, df=58, p<.05$) , left hand grip ($t=7.20, df=58, p<.05$), back strength ($t=6.27, df=58, p<.05$) and leg strength ($t=2.98, df=58, p<.05$) among the vegetarian and non-vegetarian wrestling players of national level. But in the case of cardiovascular endurance mean difference was found insignificant($p>.05$), between vegetarian and non-vegetarian female boxing players of state level.

Table.4.48: Comparison of Physical Characteristics Between Vegetarian And Non-vegetarian Female Boxing Players of Intervarsity Level

	Vegetarian (N=20)		Non-Vegetarian (N=20)					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Flexibility	17.65	6.24	13.75	3.14	3.9	3.1	2.49	0.01
Muscular endurance	50.85	10.79	27.50	9.26	23.35	3.18	7.34	0.00
Right hand grip	23.90	3.69	32.20	4.13	8.30	1.24	6.68	.00
Left hand grip	24.85	6.34	33.05	4.63	8.20	1.75	4.66	.00
Back strength	55.25	13.84	75.75	15.88	20.50	4.71	4.35	.00
Leg strength	72.30	11.30	76.85	12.16	4.55	3.71	1.22	.22
Cardio-vascular endurance	99.45	6.84	90.15	11.47	9.3	4.63	3.11	0.00

Table. 4.48.reveals that vegetarian female boxing players of intervarsity level were showing higher level of flexibility, muscular endurance and cardiovascular endurance in comparison to their counterparts, i.e., non-vegetarian female football players However, non-vegetarian female boxing players were observed showing higher scores on right hand grip ,left hand grip , back strength ,leg strength in comparison to their counterpart vegetarian female boxing players. The observed differences were significant on the variable flexibility ($t=2.49, df=58, p<.05$) , muscular endurance ($t=7.34, df=58, p<.05$) , right hand grip ($t=6.68, df=58, p<.05$) , left hand grip ($t=4.66, df=58, p<.05$), back strength ($t=4.35, df=58, p<.05$) and cardiovascular endurance ($t=3.11, df=58, p<.05$) among the vegetarian and non-vegetarian wrestling players of national level. But in the case of leg strength mean difference was found insignificant($p>.05$), between vegetarian and non-vegetarian female boxing players of intervarsity level.

Table.4.49: Comparison Of Physical Characteristics Between Vegetarian And Non-Vegetarian Female Boxing Players Of National Level

	Vegetarian (N=20)		Non-Vegetarian (N=20)					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Flexibility	19.70	4.23	14.10	2.75	5.6	1.48	4.96	0.0
Muscular endurance	44.00	13.05	31.90	7.83	12.10	3.40	3.55	.00
Right hand grip	27.40	4.89	31.85	5.23	4.45	1.60	2.77	.00
Left hand grip	27.70	6.90	36.85	6.65	9.15	2.14	4.26	.00
Back strength	56.70	12.33	83.85	12.10	27.15	3.86	7.02	.00
Leg strength	63.70	12.48	81.05	13.55	17.35	4.12	4.21	.00
Cardio-vascular endurance	99.65	7.77	89.75	11.06	9.9	3.29	3.27	0.00

Table. 4.21. reveals that vegetarian female boxing players of national level were showing higher level of flexibility, muscular endurance and cardiovascular endurance in comparison to their counterparts, i.e., non-vegetarian boxing female players. However, non-vegetarian female boxing players were observed showing higher scores on right hand grip, left hand grip), back strength, leg strength in comparison to their counterpart vegetarian female boxing players. The observed differences were significant on the variable flexibility ($t=4.96, df=38, p<.05$) , muscular endurance ($t=3.55, df=38, p<.05$) , right hand grip ($t=2.77, df=38, p<.05$) , left hand grip ($t=4.26, df=38, p<.05$), back strength ($t=7.02, df=38, p<.05$), leg strength ($t=4.21, df=38, p<.05$) and cardiovascular endurance ($t=3.27, df=38, p<.05$) among the vegetarian and non-vegetarian boxing players of national level.

Table.4.50: Comparison Of Physical Characteristics Between Vegetarian And Non-Vegetarian Female Wrestling Players Of State Level

	Vegetarian (N=30)		**Non-Vegetarian (N=30)**					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Flexibility	21.90	4.55	14.30	4.32	7.6	0.23	6.62	.00
Muscular endurance	52.96	6.47	36.36	10.70	16.60	2.28	7.26	.00
Right hand grip	23.10	3.30	33.23	3.51	10.13	.88	11.51	.00
Left hand grip	26.13	6.48	33.83	8.40	5.70	1.46	3.87	.00
Back strength	55.63	15.79	82.90	11.94	25.00	3.92	6.36	.00
Leg strength	56.86	13.71	74.56	14.58	17.70	3.65	4.84	.00
Cardio-vascular endurance	96.93	9.37	85.93	13.14	11.24	3.57	3.78	0.00

Table.4.50.reveals that vegetarian female wrestling players of state level were showing higher level of Flexibility ,Muscular Endurance and Cardiovascular Endurance in comparison to their counterparts, i.e., non-vegetarian female wrestling players .However, non-vegetarian female wrestling players were observed showing higher scores on right hand grip, left hand grip back strength ,leg strength in comparison to their counterpart vegetarian female wrestling players. The observed differences were significant on the variable flexibility ($t=6.62, df=58, p<.05$) , muscular endurance ($t=7.26, df=58, p<.05$) , right hand grip ($t=11.51, df=58, p<.05$) , left hand grip ($t=3.87, df=58, p<.05$), back strength ($t=6.36, df=58, p<.05$), leg strength ($t=4.84, df=58, p<.05$) and cardiovascular endurance ($t=3.78, df=58, p<.05$) among the vegetarian and non-vegetarian wrestling players of state level.

Table.4.51: Comparison Of Physical Characteristics Between Vegetarian And Non- Vegetarian Female Wrestling Players Of Intervarsity Level

	Vegetarian (N=20)		**Non-Vegetarian (N=20)**					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Flexibility	20.95	5.16	15.35	4.08	5.6	1.08	3.80	.00
Muscular endurance	48.25	13.02	27.15	9.67	21.10	3.62	5.81	.00
Right hand grip	24.40	4.08	33.00	3.30	8.60	1.17	7.31	.00
Left hand grip	28.10	5.99	34.50	5.10	6.40	1.75	3.63	.00
Back strength	59.35	16.10	76.20	16.06	16.85	5.08	3.31	.00
Leg strength	58.75	15.25	69.90	20.43	11.15	5.70	1.95	.05
Cardio-vascular endurance	99.45	6.79	95.15	9.86	4.3	3..07	1.60	0.63

Table.4.51. reveals that vegetarian female wrestling players of intervarsity level were showing higher level of flexibility, muscular endurance and cardiovascular endurance in comparison to their counterparts, i.e., non-vegetarian female wrestling players flexibility, muscular endurance and cardiovascular endurance. However, non-vegetarian female wrestling players were observed showing higher scores on right hand grip, left hand grip, back strength, leg strength in comparison to their counterpart vegetarian female wrestling players. The observed differences were significant on the variable flexibility ($t=3.80, df=58, p<.05$),muscular endurance ($t=5.81, df=58, p<.05$), right hand grip ($t=7.31, df=58, p<.05$) , left hand grip ($t=3.63, df=58, p<.05$), back strength ($t=3.31, df=58, p<.05$) and leg strength ($t=1.95, df=58, p<.05$) among the vegetarian and non-vegetarian wrestling players of intervarsity level. But in the case of cardiovascular endurance mean difference was found insignificant ($p>.05$), between vegetarian and non-vegetarian female wrestling players of intervarsity level.

Table.4.52: Comparison Of Physical Characteristics Between Vegetarian And Non- Vegetarian Female Wrestling Players Of National Level

	Vegetarian (N=20)		Non-Vegetarian (N=20)					
Variables	**Mean**	**SD**	**Mean**	**SD**	**MD**	**SEDM**	**t value**	**Sig.**
Flexibility	17.75	4.77	16.40	4.30	1.35	0.47	.93	.35
Muscular Endurance	48.40	12.81	31.80	12.33	16.60	3.97	4.17	.00
Right hand grip	24.20	3.94	33.00	3.30	8.80	1.15	7.64	.00
Left hand grip	30.60	7.68	40.00	7.26	9.40	2.36	3.97	.00
Back strength	62.65	15.06	83.10	12.22	20.45	4.33	4.71	.00
Leg strength	69.80	13.78	87.05	9.40	17.25	3.73	4.62	.00
Cardio-vascular Endurance	99.55	6.64	91.10	10.79	4.3	3.07	2.98	0.00

Table.4.52. reveals that vegetarian female wrestling players of national level were showing higher level of flexibility, muscular endurance and cardiovascular endurance in comparison to their counterparts, i.e., non-vegetarian female wrestling players. However, non-vegetarian female wrestling players were observed showing higher scores on right hand grip, left hand grip, back strength, leg strength in comparison to their counterpart vegetarian female wrestling players. The observed differences were significant on the variable muscular endurance ($t=4.17, df=38, p<.05$),right hand grip ($t=7.64, df=38, p<.05$) , left hand grip ($t=3.97, df=38, p<.05$), back strength ($t=4.71, df=38, p<.05$) , leg strength ($t=4.62, df=38, p<.05$) and cardiovascular endurance ($t=2.98, df=38, p<.05$) among the vegetarian and non-vegetarian wrestling players of national level. But in the case of flexibility mean difference was found insignificant ($p>.05$), between vegetarian and non-vegetarian female wrestling players of national level.

4.1.7. Results related to Comparison of psychological characteristics among state level, inter university level and national level vegetarian and non-vegetarian female sports person of strength sports (i.e. boxing and wrestling).

Table 4.53: Analysis Of Variance (ANOVA) Of Aggression Among Female Boxing Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	46.826	2	23.413	2.575	.084
	Within Sample	609.117	67	9.091		
	Total	655.943	69			
Non - Vegetarian Players	Between Sample	181.605	2	90.802	8.725	.000
	Within Sample	697.267	67	10.407		
	Total	878.871	69			

Table.4.53. revealed that the statistical differences, when observed among the vegetarian female boxing players of state level, inter university level and national level found insignificant on the variable aggression, as the significance level is .084 (p = .000) is more than .05 level of significance. That means, the vegetarian female boxing players of different level of performance not differ significantly from each other on the variable aggression.

Since f value was found insignificant in the case of vegetarian female boxing players, therefore, no need to apply Scheffe Post-hoc test.

In the case of non-vegetarian female boxing players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable aggression, as the significance level is.000 (p = .000) is less than .01 level of significance. That means, the non -vegetarian female boxing players of different level of performance differ significantly from each other on the variable aggression.

Since f value was found significant in the case of non-vegetarian female boxing players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among non-vegetarian boxing players of different level of performance. The results of Scheffe Post-hoc test for non-vegetarian female boxing players have been presented in Table 4.53 (b)

Table 4.53 (b): Multiple Comparisons through Scheffe Post Hoc Test For Comparison of Aggression Level among the Non-Vegetarian Female boxing Players of State Level, Inter-University Level and National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-.68333	.93126	.466	-2.5421	1.1755
	National	-3.78333*	.93126	.000	-5.6421	-1.9245
Inter-University	State	.68333	.93126	.466	-1.1755	2.5421
	National	-3.10000*	1.02015	.003	-5.1362	-1.0638
National	State	3.78333*	.93126	.000	1.9245	5.6421
	Inter-university	3.10000*	1.02015	.003	1.0638	5.1362

Table.4.(b): indicates significant difference between non-vegetarian female boxing players of state level and inter-university level (p=.466), state level and national level (p=.000) and inter-University level and national level (p=.003). National level non-vegetarian female boxing players have significantly more aggressive than state and intervarsity level players. However, insignificant difference has been observed between state level and intervarsity level non-vegetarian female boxing players (p=.466), which shows that inter-university level players possess slightly more aggression as comparison to state level non-vegetarian female boxing players.

Table.4.54: Analysis Of Variance (ANOVA) Of Aggression Among Female Wrestling Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian Players	Between Sample	10.655	2	5.327	.968	.385
	Within Sample	368.717	67	5.503		
	Total	379.371	69			
Non-Vegetarian Players	Between Sample	28.826	2	14.413	1.126	.330
	Within Sample	857.517	67	12.799		
	Total	886.343	69			

Table.4.54. revealed that the statistical differences, when observed among the vegetarian female wrestling players of state level, inter university level and national level found insignificant on the variable aggression, as the significance level is .385 (p = .000) is more than .05 level of significance. That means, the vegetarian female wrestling players of different level of performance not differ significantly from each other on the variable aggression.

In the case of non-vegetarian female wrestling players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable aggression, as the significance level is.330 (p = .000) is more than .01 level of significance. That means, the non-vegetarian female wrestling players of different level of performance also not differ significantly from each other on the variable aggression.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table.4.55: Analysis Of Variance (ANOVA) Of Emotional Stability Among Female Boxing Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian Players	Between Sample	9.769	2	4.885	1.116	.334
	Within Sample	293.217	67	4.376		
	Total	302.986	69			
Non-Vegetarian Players	Between Sample	17.371	2	8.686	2.175	.122
	Within Sample	267.500	67	3.993		
	Total	284.871	69			

Table.4.55. revealed that the statistical differences, when observed among the vegetarian female boxing players of state level, inter university level and national level found insignificant on the variable emotional stability, as the significance level is .334 (p = .000) is more than .05 level of significance. That means, the vegetarian female boxing players of different level of performance not differ significantly from each other on the variable emotional stability.

In the case of non-vegetarian female boxing players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable emotional stability, as the significance level is.122 (p = .000) is more than .01 level of significance. That means, the non -vegetarian female boxing players of different level of performance also not differ significantly from each other on the variable emotional stability.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table.4.56: Analysis Of Variance (ANOVA) Of Emotional Stability Among Female Wrestling Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian Players	Between Sample	4.321	2	2.161	.693	.504
	Within Sample	209.050	67	3.120		
	Total	213.371	69			
Non-vegetarian Players	Between Sample	3.226	2	1.613	.408	.666
	Within Sample	264.717	67	3.951		
	Total	267.943	69			

Table 4.56. revealed that the statistical differences, when observed among the vegetarian wrestling female players of state level, inter university level and national level found insignificant on the variable emotional stability, as the significance level is .504 (p = .000) is more than .05 level of significance. That means, the vegetarian female wrestling players of different level of performance not differ significantly from each other on the variable emotional stability.

In the case of non-vegetarian female wrestling players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable emotional stability, as the significance level is.666 (p =.000) is more than .01 level of significance. That means, the non-vegetarian female wrestling players of different level of performance also not differ significantly from each other on the variable emotional stability.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table 4.57: Analysis of Variance (ANOVA) of Overall Adjustment Among Female Boxing Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	38.543	2	19.271	.685	.507
	Within Sample	1883.800	67	28.116		
	Total	1922.343	69			
Non-Vegetarian Players	Between Sample	86.619	2	43.310	1.651	.200
	Within Sample	1757.967	67	26.238		
	Total	1844.586	69			

Table.4.57. revealed that the statistical differences, when observed among the vegetarian female boxing players of state level, inter university level and national level found insignificant on the variable overall adjustment, as the significance level is .507 (p = .000) is more than .05 level of significance. That means, the vegetarian female boxing players of different level of performance no differ significantly from each other on the variable overall adjustment.

In the case of non-vegetarian female boxing players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable overall adjustment, as the significance level is.200 (p = .000) is more than .01 level of significance. That means, the non-vegetarian female boxing players of different variable performance also not differ significantly from each other on the level of overall adjustment.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table 4.58: Analysis Of Variance (ANOVA) Of Overall Adjustment Among Female Wrestling Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	1.033	2	.517	.024	.976
	Within Sample	1435.667	67	21.428		
	Total	1436.700	69			
Non-Vegetarian Players	Between Sample	75.000	2	37.500	1.334	.270
	Within Sample	1883.800	67	28.116		
	Total	1958.800	69			

Table.4.58. revealed that the statistical differences, when observed among the vegetarian female wrestling players of state level, inter university level and national level found insignificant on the variable overall adjustment, as the significance level is .976 (p = .000) is more than .05 level of significance. That means, the vegetarian female wrestling players of different level of performance no differ significantly from each other on the variable overall adjustment.

In the case of non-vegetarian female wrestling players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable overall adjustment, as the significance level is.270 (p = .000) is more than .01 level of significance. That means, the non-vegetarian female wrestling players of different level of performance also not differ significantly from each other at the variable overall adjustment.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table 4.59: Analysis Of Variance (ANOVA) Of Autonomy Among Female Boxing Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	10.769	2	5.385	1.993	.144
	Within Sample	181.017	67	2.702		
	Total	191.786	69			
Non-Vegetarian Players	Between Sample	.576	2	.288	.127	.881
	Within Sample	151.767	67	2.265		
	Total	152.343	69			

Table.4.59. revealed that the statistical differences, when observed among the vegetarian female boxing players of state level, inter university level and national level found insignificant on the variable autonomy, as the significance level is .144 (p = .000) is more than .05 level of significance. That means, the vegetarian female boxing players of different level of performance no differ significantly from each other on the variable autonomy.

In the case of non-vegetarian female boxing players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable autonomy, as the significance level is.881(p = .000) is more than .01 level of significance. That means, the non-vegetarian female boxing players of different level of performance also not differ significantly from each other on the variable autonomy.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table 4.60: Analysis Of Variance (ANOVA) of Autonomy Among Female Wrestling Players At Different Level of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	2.500	2	1.250	.541	.584
	Within Sample	154.700	67	2.309		
	Total	157.200	69			
Non-vegetarian Players	Between Sample	.400	2	.200	.103	.902
	Within Sample	129.600	67	1.934		
	Total	130.000	69			

Table.4.60. revealed that the statistical differences, when observed among the vegetarian female wrestling players of state level, inter university level and national level found insignificant on the variable autonomy, as the significance level is .584 (p = .000) is more than .05 level of significance. That means, the vegetarian female wrestling players of different level of performance no differ significantly from each other on the variable autonomy.

In the case of non-vegetarian female wrestling players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable autonomy, as the significance level is.902 (p = .000) is more than .01 level of significance. That means, the non-vegetarian female wrestling players of different level of performance also not differ significantly from each other at the variable autonomy.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table.4.61: Analysis of Variance (ANOVA) of Security Insecurity Among Female Boxing Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	38.519	2	19.260	4.358	.017
	Within Sample	296.067	67	4.419		
	Total	334.586	69			
Non-Vegetarian Players	Between Sample	2.976	2	1.488	.905	.409
	Within Sample	110.167	67	1.644		
	Total	113.143	69			

Table.4.61. revealed that the statistical differences, when observed among the vegetarian female boxing players of state level, inter university level and national level found insignificant on the variable security insecurity, as the significance level is .017 (p =.000) is less than .05 level of significance. That means, the vegetarian female boxing players of different level of performance differ significantly from each other on the variable security insecurity.

In the case of non-vegetarian female boxing players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable security insecurity, as the significance level is.409 (p =.000) is more than .01 level of significance. That means, the non-vegetarian female boxing players of different level of performance not differ significantly from each other on the variable security insecurity.

Since f value was found significant in the case of vegetarian boxing players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among non-vegetarian boxing players of different level of performance. The results of Scheffe Post-hoc test for vegetarian female boxing players have been presented in Table 4.61 (a)

Since f value was found insignificant in the case of non-vegetarian female boxing players, therefore, no need to apply Scheffe Post-hoc test.

Table 4.61 (a): Multiple Comparisons Through Scheffe Post- Hoc Test For Comparison of Security Insecurity Level Among The Vegetarian Boxing Players of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	1.71667*	.60683	.006	.5054	2.9279
	National	.21667	.60683	.722	-.9946	1.4279
Inter-University	State	-1.71667*	.60683	.006	-2.9279	-.5054
	National	-1.50000*	.66475	.027	-2.8268	-.1732
National	State	-.21667	.60683	.722	-1.4279	.9946
	Inter-university	1.50000*	.66475	.027	.1732	2.8268

Table 4.61 (a): indicate a significant difference between vegetarian female boxing players of state level and inter-university level (p=.006), state level and national level (p=.722) and inter-University level and national level (p=.027).National level vegetarian female boxing players have significantly more security insecurity than state level and inter-university level female vegetarian boxing players. However, insignificant difference has been observed between state level and national level female vegetarian boxing players (p=.417), which shows that national level players possess slightly more security insecurity as comparison to state level vegetarian female boxing players.

Table .4.62: Analysis Of Variance (ANOVA) of Security Insecurity Among Female Wrestling Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian Players	Between Sample	2.576	2	1.288	.504	.606
	Within Sample	171.267	67	2.556		
	Total	173.843	69			
Non-Vegetarian Players	Between Sample	2.543	2	1.271	.961	.388
	Within Sample	88.600	67	1.322		
	Total	91.143	69			

Table.4.62. revealed that the statistical differences, when observed among the vegetarian female wrestling players of state level, inter university level and national level found, insignificant on the variable security insecurity, as the significance level is .606 (p = .000) is more than .05 level of significance. That means, the vegetarian female wrestling players of different level of performance no differ significantly from each other on the variable security insecurity.

In the case of non-vegetarian female wrestling players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable security insecurity, as the significance level is.388 (p = .000) is more than .01 level of significance. That means, the non-vegetarian female wrestling players of different level of performance also not differ significantly from each other on the variable security insecurity.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table.4.63: Analysis Of Variance (ANOVA) of Self-concept Among Female Boxing Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	.000	2	.000	.000	1.00
	Within Sample	344.300	67	5.139		
	Total	344.300	69			
Non-Vegetarian Players	Between Sample	.705	2	.352	.069	.933
	Within Sample	340.667	67	5.085		
	Total	341.371	69			

Table.4.63. revealed that the statistical differences, when observed among the vegetarian female boxing players of state level, inter university level and national level found insignificant on the variable self-concept, as the significance level is 1.00 (p = .000) is more than .05 level of significance. That means, the vegetarian female boxing players of different level of performance not differ significantly from each other on the variable self -concept.

In the case of non-vegetarian female boxing players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable self-concept, as the significance level is.933 (p = .000) is more than .01 level of significance. That means, the non-vegetarian female boxing players of different level of performance also not differ significantly from each other on the variable self-concept.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table.4.64: Analysis Of Variance (ANOVA) Of Self-Concept Among Female Wrestling Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	34.283	2	17.142	3.723	.029
	Within Sample	308.517	67	4.605		
	Total	342.800	69			
Non-vegetarian Players	Between Sample	2.176	2	1.088	.373	.690
	Within Sample	195.267	67	2.914		
	Total	197.443	69			

Table.4.64. revealed that the statistical differences, when observed among the vegetarian female wrestling players of state level, inter university level and national level found significant on the variable self-concept, as the significance level is .029 (p = .000) is less than .05 level of significance. That means, the vegetarian female wrestling players of different level of performance differ significantly from each other on the variable self-concept.

In the case of non-vegetarian female wrestling players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable self-concept, as the significance level is.690(p = .000) is more than .01 level of significance. That means, the non-vegetarian female wrestling players of different level of performance also not differ significantly from each other on the variable self-concept.

Since f value was found significant in the case of vegetarian wrestling players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among non-vegetarian wrestling players of different level of performance. The results of Scheffe Post-hoc test for non-vegetarian female wrestling players have been presented in Table 4.64 (a)

Since f value was found insignificant in the case of non-vegetarian female wrestling players, therefore, no need to apply Scheffe Post-hoc test.

Table.4.64. (a): Multiple Comparisons Through Scheffe Post- Hoc Test For Comparison Of Self-Concept Level Among The Vegetarian Wrestling Players Of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-.18333	.61946	.768	-1.4198	1.0531
	National	1.46667*	.61946	.021	.2302	2.7031
Inter-University	State	.18333	.61946	.768	-1.0531	1.4198
	National	1.65000*	.67858	.018	.2955	3.0045
National	State	-1.46667*	.61946	.021	-2.7031	-.2302
	Inter-university	-1.65000*	.67858	.018	-3.0045	-.2955

Table 4.64 (a): indicate a significant difference between vegetarian female wrestling players of state level and inter-university level (p=.768), state level and national level (p=.021) and inter-University level and national level (p=.018). Intervarsity level vegetarian female wrestling players have significantly more self-concept than State level and national level vegetarian female wrestling players. However, insignificant difference has been observed between state level and intervarsity level vegetarian female wrestling players (p=.768), which shows that intervarsity level players possess slightly more self-concept as comparison to state level vegetarian female wrestling players.

Table.4.65: Analysis Of Variance (ANOVA) Of Intelligence Among Female Boxing Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	7.471	2	3.736	.829	.441
	Within Sample	301.900	67	4.506		
	Total	309.371	69			
Non-Vegetarian Players	Between Sample	37.276	2	18.638	2.336	.105
	Within Sample	534.667	67	7.980		
	Total	571.943	69			

Table.4.65. revealed that the statistical differences, when observed among the vegetarian female boxing players of state level, inter university level and national level found insignificant on the variable intelligence, as the significance level is.441 (p = .000) is more than .05 level of significance. That means, the vegetarian female boxing players of different level of performance no differ significantly from each other on the variable intelligence.

In the case of non-vegetarian female boxing players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable intelligence, as the significance level is.105(p =.000) is more than .01 level of significance. That means, the non-vegetarian female boxing players of different level of performance also not differ significantly from each other on the variable intelligence.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table.4.66: Analysis Of Variance (ANOVA) Of Intelligence Among Female Wrestling Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	6.405	2	3.202	.552	.579
	Within Sample	388.867	67	5.804		
	Total	395.271	69			
Non-Vegetarian Players	Between Sample	86.405	2	43.202	3.571	.034
	Within Sample	810.467	67	12.097		
	Total	896.871	69			

Table .4.66. revealed that the statistical differences, when observed among the vegetarian female wrestling players of state level, inter university level and national level found insignificant on the variable intelligence, as the significance level is .579 (p = .000) is more than to .05 level of significance. That means, the vegetarian female wrestling players of different level of performance not differ significantly from each other on the variable intelligence.

Since f value was found insignificant in the case of vegetarian female wrestling players, therefore, no need to apply Scheffe Post-hoc test.

In the case of non-vegetarian female wrestling players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable intelligence, as the significance level is.034(p = .000) is less than .05 level of significance. That means, the non-vegetarian female wrestling players of different level of performance differ significantly from each other on the variable intelligence.

Since f value was found significant in the case of non-vegetarian wrestling players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among non-vegetarian wrestling players of different level of performance. The results of Scheffe Post-hoc test for non-vegetarian female wrestling players have been presented in Table 4.66 (b)

Table.4.66 (b): Multiple Comparisons Through Scheffe Post- Hoc Test For Comparison of Intelligence Level Among The Non-Vegetarian Wrestling Players of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	2.08333*	1.00401	.042	.0793	4.0874
	National	2.38333*	1.00401	.020	.3793	4.3874
Inter-University	State	-2.08333*	1.00401	.042	-4.0874	-.0793
	National	.30000	1.09984	.786	-1.8953	2.4953
National	State	-2.38333*	1.00401	.020	-4.3874	-.3793
	Inter-university	-.30000	1.09984	.786	-2.4953	1.8953

Table.4.66.(b). indicate a significant difference between non-vegetarian female wrestling players of state level and inter-university level (p=.042), state level and national level (p=.020) and inter-University level and national level (p=.786). State level non-vegetarian female wrestling players have significantly more intelligence than intervarsity level and national level non-vegetarian female wrestling players. However, insignificant difference has been observed between intervarsity level and national level non-vegetarian female wrestling players (p=.786), which shows that intervarsity level players possess slightly more intelligence as comparison to national non-vegetarian female wrestling players.

4.1.8: Results related to Comparison of physical characteristics among state level, inter university level and national level vegetarian and non-vegetarian female sports person of strength sports (i.e. boxing and wrestling).

Table.4.67: Analysis of Variance (ANOVA) of Flexibility Among Female Boxing Players At Different Level of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	95.026	2	47.513	1.929	.153
	Within Sample	1650.117	67	24.629		
	Total	1745.143	69			
Non-vegetarian Players	Between Sample	220.321	2	110.161	7.388	.001
	Within Sample	999.050	67	14.911		
	Total	1219.371	69			

Table.4.67. revealed that the statistical differences, when observed among the vegetarian female boxing players of state level, inter university level and national level found insignificant on the variable flexibility, as the significance level is .153 (p = .000) is more than to .05 level of significance. That means, the vegetarian female boxing players of different level of performance not differ significantly from each other on the variable flexibility.

Since f value was found insignificant in the case of vegetarian female boxing players, therefore, no need to apply Scheffe Post-hoc test.

In the case of non-vegetarian female boxing players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable flexibility, as the significance level is.001 (p = .000) is less than .05 level of significance. That means, the non-vegetarian female boxing players of different level of performance differ significantly from each other on the variable flexibility.

Since f value was found significant in the case of non-vegetarian boxing players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among non-vegetarian boxing players of different level of performance. The results of Scheffe Post-hoc test for non-vegetarian female boxing players Have been presented in Table 4.67 (b)

Table 4.67 (b): Multiple Comparisons Through Scheffe Post- Hoc Test For Comparison of Flexibility Level Among The Non-Vegetarian Boxing Players of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	3.75000*	1.11472	.001	1.5250	5.9750
	National	3.40000*	1.11472	.003	1.1750	5.6250
Inter-University	State	-3.75000*	1.11472	.001	-5.9750	-1.5250
	National	-.35000	1.22111	.775	-2.7874	2.0874
National	State	-3.40000*	1.11472	.003	-5.6250	-1.1750
	Inter-university	.35000	1.22111	.775	-2.0874	2.7874

Table 4.67 (b) indicate a significant difference between non-vegetarian female boxing players of state level and inter-university level (p=.001), state level and national level (p=.003) and inter-University level and national level (p=.775). State level non-vegetarian female boxing players have significantly more flexibility than intervarsity level and national level non-vegetarian female boxing players. However, insignificant difference has been observed between intervarsity level and national level non-vegetarian female boxing players (p=.775), which shows that national level players possess slightly more flexibility as comparison to inter-university level non-vegetarian female boxing players.

Table.4.68: Analysis Of Variance (ANOVA) Of Flexibility Among Female Wrestling Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	213.871	2	106.936	4.642	.013
	Within Sample	1543.400	67	23.036		
	Total	1757.271	69			
Non-Vegetarian Players	Between Sample	53.550	2	26.775	1.481	.235
	Within Sample	1211.650	67	18.084		
	Total	1265.200	69			

Table.4.68. revealed that the statistical differences, when observed among the vegetarian female wrestling players of state level, inter university level and national level found significant on the variable flexibility, as the significance level is .013 (p = .000) is less to .05 level of significance. That means, the vegetarian female wrestling players of different level of performance differ significantly from each other on the variable flexibility.

In the case of non-vegetarian female wrestling players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable flexibility as the significance level is.235(p = .000) is more than .05 level of significance. That means, the non-vegetarian female wrestling players of different level of performance not differ significantly from each other on the variable flexibility.

Since f value was found significant in the case of vegetarian wrestling players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among vegetarian wrestling players of different level of performance. The results of Scheffe Post-hoc test for vegetarian female wrestling players have been presented in Table 4.68 (a)

Since f value was found insignificant in the case of non-vegetarian female wrestling players, therefore, no need to apply Scheffe Post-hoc test.

Table 4.68 (a): Multiple Comparisons Through Scheffe Post- Hoc Test For Comparison Of Flexibility Level Among The Vegetarian Wrestling Players Of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	.95000	1.38551	.495	-1.8155	3.7155
	National	4.15000*	1.38551	.004	1.3845	6.9155
Inter-University	State	-.95000	1.38551	.495	-3.7155	1.8155
	National	3.20000*	1.51776	.039	.1705	6.2295
National	State	-4.15000*	1.38551	.004	-6.9155	-1.3845
	Inter-university	-3.20000*	1.51776	.039	-6.2295	-.1705

Table 4.68(a): indicate a significant difference between vegetarian female wrestling players of state level and inter-university level (p=.497), state level and national level (p=.004) and inter-University level and national level (p=.039). State level vegetarian female wrestling players have significantly more flexibility than Inter-University level and national level vegetarian female wrestling players. However, insignificant difference has been observed between state and intervarsity level vegetarian female wrestling players (p=.497), and which shows that inter-university level players possess slightly more flexibility as comparison to national level vegetarian female wrestling players.

Table 4.69: Analysis of Variance (ANOVA) of Muscular Endurance Among Female Boxing Players At Different Level of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	523.236	2	261.618	1.894	.158
	Within Sample	9253.350	67	138.110		
	Total	9776.586	69			
Non-Vegetarian Players	Between Sample	2662.171	2	1331.086	17.394	.000
	Within Sample	5127.100	67	76.524		
	Total	7789.271	69			

Table.4.69. revealed that the statistical differences, when observed among the vegetarian female boxing players of state level, inter university level and national level found insignificant on the variable muscular endurance, as the significance level is .158 (p = .000) is more than to .05 level of significance. That means, the vegetarian female boxing players of different level of performance not differ significantly from each other on the variable muscular endurance.

Since f value was found insignificant in the case of vegetarian female boxing players, therefore, no need to apply Scheffe Post-hoc test.

In the case of non-vegetarian female boxing players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable muscular endurance, as the significance level is.000 (p = .000) is less than .05 level of significance. That means, the non-vegetarian female boxing players of different level of performance differ significantly from each other on the variable muscular endurance.

Since f value was found significant in the case of non-vegetarian boxing players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among non-vegetarian boxing players of

different level of performance. The results of Scheffe Post-hoc test for non-vegetarian female boxing players have been presented in Table 4.69 (b)

Table.4.69 (b): Multiple Comparisons Through Scheffe Post- Hoc Test For Comparison of Muscular Endurance Level Among The Non-Vegetarian Boxing Players Of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	14.20000*	2.52527	.000	9.1595	19.2405
	National	9.80000*	2.52527	.000	4.7595	14.8405
Inter-University	State	-14.20000*	2.52527	.000	-19.2405	-9.1595
	National	-4.40000	2.76630	.116	-9.9215	1.1215
National	State	-9.80000*	2.52527	.000	-14.8405	-4.7595
	Inter-university	4.40000	2.76630	.116	-1.1215	9.9215

Table.4.69(b). indicate a significant difference between non-vegetarian female boxing players of state level and inter-university level (p=.000), state level and national level (p=.000) and inter-University level and national level (p=.116). National level boxing players have significantly more muscular endurance than state and intervarsity level players. However, insignificant difference has been observed between intervarsity level and national level female football players (p=.116), which shows that state level players possess slightly more muscular endurance as comparison to inter-university level vegetarian football players.

Table.4.70: Analysis Of Variance (ANOVA) of Muscular Endurance Among Female Wrestling Players At Different Level of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	369.569	2	184.785	1.638	.202
	Within Sample	7559.517	67	112.829		
	Total	7929.086	69			
Non-Vegetarian Players	Between Sample	1030.426	2	515.213	4.320	.017
	Within Sample	7990.717	67	119.264		
	Total	9021.143	69			

Table.4.70. revealed that the statistical differences, when observed among the vegetarian female wrestling players of state level, inter university level and national level found insignificant on the variable muscular endurance, as the significance level is .202 (p = .000) is more than to .05 level of significance. That means, the vegetarian female wrestling players of different level of performance not differ significantly from each other on the variable muscular endurance.

Since f value was found insignificant in the case of vegetarian female wrestling players, therefore, no need to apply Scheffe Post-hoc test.

In the case of non-vegetarian female wrestling players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable muscular endurance, as the significance level is.017 (p = .000) is less than .05 level of significance. That means, the non-vegetarian female wrestling players of different level of performance differ significantly from each other on the variable muscular endurance.

Since f value was found significant in the case of non-vegetarian wrestling players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among non-vegetarian wrestling players of

different level of performance. The results of Scheffe Post-hoc test for non-vegetarian female wrestling players have been presented in Table 4.70 (b)

Table.4.70 (b): Multiple Comparisons Through Scheffe Post- Hoc Test For Comparison Of Muscular Endurance Level Among The Non-Vegetarian Wrestling Players Of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	9.21667*	3.15257	.005	2.9241	15.5092
	National	4.56667	3.15257	.152	-1.7259	10.8592
Inter-University	State	-9.21667*	3.15257	.005	-15.5092	-2.9241
	National	-4.65000	3.45347	.183	-11.5432	2.2432
National	State	-4.56667	3.15257	.152	-10.8592	1.7259
	Inter-university	4.65000	3.45347	.183	-2.2432	11.5432

Table.4.70. (b). indicate a significant difference between non-vegetarian female wrestling players of state level and inter-university level (p=.005), state level and national level (p=.152) and inter-University level and national level (p=.183). State level wrestling players have significantly more muscular endurance than intervarsity level and national level female wrestling players. However, insignificant difference has been observed between state level and national level female wrestling players (p=.116), and intervarsity level and national level female wrestling players which shows that national level players possess slightly more muscular endurance as comparison to inter-university level vegetarian wrestling players.

Table 4.71: Analysis Of Variance (ANOVA) Of Right Hand Grip Strength Among Female Boxing Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	236.905	2	118.452	7.526	.001
	Within Sample	1054.467	67	15.738		
	Total	1291.371	69			
Non-vegetarian Players	Between Sample	1.255	2	.627	.033	.967
	Within Sample	1257.617	67	18.770		
	Total	1258.871	69			

Table .4.71. revealed that the statistical differences, when observed among the vegetarian female boxing players of state level, inter university level and national level found significant on the variable right-hand grip strength, as the significance level is .001 (p = .000) is less than to .05 level of significance. That means, the vegetarian female boxing players of different level of performance differ significantly from each other on the variable right-hand grip strength.

In the case of non-vegetarian female boxing players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable right-hand grip strength as the significance level is.967(p = .000) is more than .05 level of significance. That means, the non-vegetarian female boxing players of different level of performance not differ significantly from each other on the variable right-hand grip strength.

Since f value was found significant in the case of vegetarian boxing players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among vegetarian boxing players of different level of performance. The results of Scheffe Post-hoc test for vegetarian female boxing players have been presented in Table 4.71 (a)

Since f value was found insignificant in the case of non-vegetarian female boxing players, therefore, no need to apply Scheffe Post-hoc test.

Table 4.71 (a): Multiple Comparisons Through Scheffe Post- Hoc Test For Comparison Of Right -Hand Grip Strength Level Among The Vegetarian Boxing Players Of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-.83333	1.14522	.469	-3.1192	1.4525
	National	-4.33333*	1.14522	.000	-6.6192	-2.0475
Inter-University	State	.83333	1.14522	.469	-1.4525	3.1192
	National	-3.50000*	1.25452	.007	-6.0040	-.9960
National	State	4.33333*	1.14522	.000	2.0475	6.6192
	Inter-university	3.50000*	1.25452	.007	.9960	6.0040

Table.4.71. (a). indicate a significant difference between vegetarian female boxing players of state level and inter-university level (p=.469), state level and national level (p=.000) and inter-University level and national level (p=.007). National level vegetarian female boxing players have significantly more right-hand grip strength than State level and Intervarsity level female vegetarian boxing players. However, insignificant difference has been observed between state level and intervarsity level female vegetarian boxing players (p=.469), which shows that state level players possess slightly more right-hand grip strength as comparison to intervarsity level vegetarian boxing players.

Table.4.72: Analysis Of Variance (ANOVA) Of Right-Hand Grip Strength Among Female Wrestling Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian Players	Between Sample	25.086	2	12.543	.905	.409
	Within Sample	928.700	67	13.861		
	Total	953.786	69			
Non-Vegetarian Players	Between Sample	.933	2	.467	.040	.960
	Within Sample	773.367	67	11.543		
	Total	774.300	69			

Table.4.72. revealed that the statistical differences, when observed among the vegetarian wrestling players of state level, inter university level and national level found insignificant on the variable right-hand grip strength, as the significance level is. 409 (p = .000) is more than .05 level of significance. That means, the vegetarian hockey players of different level of performance no differ significantly from each other on the variable right-hand grip strength.

In the case of non-vegetarian wrestling players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable right-hand grip strength, as the significance level is. 960 (p = .000) is more than .01 level of significance. That means, the non-vegetarian hockey players of different level of performance also not differ significantly from each other on the variable right-hand grip strength.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table 4.73: Analysis Of Variance (ANOVA) Of Left -Hand Grip Strength Among Female Boxing Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian Players	Between Sample	152.683	2	76.342	2.086	.132
	Within Sample	2452.117	67	36.599		
	Total	2604.800	69			
Non-Vegetarian Players	Between Sample	191.071	2	95.536	3.464	.037
	Within Sample	1847.800	67	27.579		
	Total	2038.871	69			

Table.4.73. revealed that the statistical differences, when observed among the vegetarian female boxing players of state level, inter university level and national level found insignificant on the variable left-hand grip strength, as the significance level is .132(p = .000) is more than to .05 level of significance. That means, the vegetarian female boxing players of different level of performance not differ significantly from each other on the variable left-hand grip strength.

Since f value was found insignificant in the case of vegetarian female boxing players, therefore, no need to apply Scheffe Post-hoc test.

In the case of non-vegetarian female boxing players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable left-hand grip strength, as the significance level is.037 (p = .000) is less than .05 level of significance. That means, the non-vegetarian female boxing players of different level of performance differ significantly from each other on the variable left-hand grip strength.

Since f value was found significant in the case of non-vegetarian boxing players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among non-vegetarian boxing players of

different level of performance. The results of Scheffe Post-hoc test for non-vegetarian female boxing players have been presented in Table 4.73 (b)

Table 4.73 (b): Multiple Comparisons Through Scheffe Post- Hoc Test For Comparison Of Left-Hand Grip Strength Level Among The Non-Vegetarian Boxing Players Of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	.25000	1.51600	.870	-2.7760	3.2760
	National	-3.55000*	1.51600	.022	-6.5760	-.5240
Inter-University	State	-.25000	1.51600	.870	-3.2760	2.7760
	National	-3.80000*	1.66070	.025	-7.1148	-.4852
National	State	3.55000*	1.51600	.022	.5240	6.5760
	Inter-university	3.80000*	1.66070	.025	.4852	7.1148

Table.4.73. (b). indicate a significant difference between non-vegetarian female boxing players of state level and inter-university level (p=.870), state level and national level (p=.022) and inter-University level and national level (p=.025). National level vegetarian female boxing players have significantly more left-hand grip strength than State level and Intervarsity level female vegetarian boxing players. However, insignificant difference has been observed between state level and intervarsity level female vegetarian boxing players (p=.870), which shows that state level players possess slightly more left-hand grip strength as comparison to intervarsity level vegetarian boxing players.

Table 4.74: Analysis Of Variance (ANOVA) Of Left- Hand Grip Strength Among Female Wrestling Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian Players	Between Sample	239.876	2	119.938	2.657	.078
	Within Sample	3024.067	67	45.135		
	Total	3263.943	69			
Non-Vegetarian Players	Between Sample	543.571	2	271.786	5.132	.008
	Within Sample	3548.500	67	52.963		
	Total	4092.071	69			

Table .4.74. revealed that the statistical differences, when observed among the vegetarian female wrestling players of state level, inter university level and national level found insignificant on the variable left-hand grip strength, as the significance level is .078 (p = .000) is more than to .05 level of significance. That means, the vegetarian female wrestling players of different level of performance not differ significantly from each other on the variable left-hand grip.

Since f value was found insignificant in the case of vegetarian female wrestling players, therefore, no need to apply Scheffe Post-hoc test.

In the case of non-vegetarian female wrestling players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable left-hand grip, as the significance level is.008 (p = .000) is less than .05 level of significance. That means, the non-vegetarian female wrestling players of different level of performance differ significantly from each other on the variable left-hand grip.

Since f value was found significant in the case of non-vegetarian wrestling players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among non-vegetarian wrestling players of

different level of performance. The results of Scheffe Post-hoc test for non-vegetarian female wrestling players have been presented in Table 4.74 (b)

Table.4.74 (b): Multiple Comparisons Through Scheffe Post- Hoc Test For Comparison Of Left-Hand Grip Strength Level Among The Non-Vegetarian Wrestling Players Of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-1.00000	2.10085	.636	-5.1933	3.1933
	National	-6.50000*	2.10085	.003	-10.6933	-2.3067
Inter-University	State	1.00000	2.10085	.636	-3.1933	5.1933
	National	-5.50000*	2.30136	.020	-10.0935	-.9065
National	State	6.50000*	2.10085	.003	2.3067	10.6933
	Inter-university	5.50000*	2.30136	.020	.9065	10.0935

Table.4.74. (b). indicate a significant difference between non-vegetarian female wrestling players of state level and inter-university level (p=.639), state level and national level (p=.003) and inter-University level and national level (p=.020). National level non-vegetarian female wrestling players have significantly more left-hand grip strength than State level and Intervarsity level female non-vegetarian wrestling players. However, insignificant difference has been observed between state level and intervarsity level female vegetarian wrestling players (p=.639), which shows that intervarsity level players possess more left-hand grip strength as comparison to state level vegetarian wrestling players.

Table 4.75: Analysis Of Variance (ANOVA) Of Back Strength Among Female Boxing Players At Different Level Of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian Players	Between Sample	599.369	2	299.685	1.755	.181
	Within Sample	11442.117	67	170.778		
	Total	12041.486	69			
Non-vegetarian Players	Between Sample	1336.500	2	668.250	3.042	.054
	Within Sample	14719.800	67	219.699		
	Total	16056.300	69			

Table.4.75. revealed that the statistical differences, when observed among the vegetarian female boxing players of state level, inter university level and national level found insignificant on the variable back strength, as the significance level is .181 (p = .000) is more than to .05 level of significance. That means, the vegetarian female boxing players of different level of performance not differ significantly from each other on the variable back strength.

Since f value was found insignificant in the case of vegetarian female boxing players, therefore, no need to apply Scheffe Post-hoc test.

In the case of non-vegetarian female boxing players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable back strength, as the significance level is.054 (p = .000) is equal to .05 level of significance. That means, the non-vegetarian female boxing players of different level of performance differ significantly from each other on the variable back strength.

Since f value was found significant in the case of non-vegetarian boxing players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among non-vegetarian boxing players of

different level of performance. The results of Scheffe Post-hoc test for non-vegetarian female boxing players have been presented in Table 4.75 (b)

Table 4.75 (b): Multiple Comparisons Through Scheffe Post- Hoc Test For Comparison Of Back Strength Level Among The Non-Vegetarian Boxing Players Of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-2.25000	4.27881	.601	-10.7905	6.2905
	National	-10.35000*	4.27881	.018	-18.8905	-1.8095
Inter-University	State	2.25000	4.27881	.601	-6.2905	10.7905
	National	-8.10000	4.68720	.089	-17.4557	1.2557
National	State	10.35000*	4.27881	.018	1.8095	18.8905
	Inter-university	8.10000	4.68720	.089	-1.2557	17.4557

Table.4.75. (b).indicate a significant difference between non-vegetarian female boxing players of state level and inter-university level (p=.601), state level and national level (p=.018) and inter-University level and national level (p=.089). National level boxing players have significantly more back strength than intervarsity level and national level female boxing players. However, insignificant difference has been observed between state level and national level female boxing players (p=.116), and intervarsity level and national level female boxing players which shows that national level players possess slightly more back strength as comparison to inter-university level vegetarian boxing players.

Table.4.76: Analysis Of Variance (ANOVA) Of Back Strength Among Female Wrestling Players At Different Level Of Performance

Types pf Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian players	Between Sample	633.776	2	316.888	1.445	.243
	Within Sample	14696.567	67	219.352		
	Total	15330.343	69			
Non-Vegetarian Players	Between Sample	657.171	2	328.586	1.854	.165
	Within Sample	11875.700	67	177.249		
	Total	12532.871	69			

Table.4.76.revealed that the statistical differences, when observed among the vegetarian wrestling players of state level, inter university level and national level found insignificant on the variable back strength, as the significance level is. 243 (p = .000) is more than .05 level of significance. That means, the vegetarian wrestling players of different level of performance no differ significantly from each other on the variable back strength.

In the case of non-vegetarian wrestling players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable back strength, as the significance level is.165(p = .000) is more than .01 level of significance. That means, the non-vegetarian wrestling players of different level of performance also not differ significantly from each other on the variable back strength.

Since f value was found insignificant in both the cases, therefore, no need to apply Scheffe Post-hoc test.

Table.4.77: Analysis of Variance (ANOVA) Of Leg Strength Among Female Boxing Players At Different Level of Performance

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian Players	Between Sample	880.476	2	440.238	3.172	.048
	Within Sample	9299.867	67	138.804		
	Total	10180.343	69			
Non-vegetarian Players	Between Sample	322.233	2	161.117	.771	.466
	Within Sample	13992.467	67	208.843		
	Total	14314.700	69			

Table.4.77. revealed that the statistical differences, when observed among the vegetarian female boxing players of state level, inter university level and national level found significant on the variable leg strength, as the significance level is .048 (p = .000) is less than to .05 level of significance. That means, the vegetarian female boxing players of different level of participation differ significantly from each other on the variable leg strength.

In the case of non-vegetarian female boxing players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable leg strength, as the significance level is.466 (p = .000) is more than .05 level of significance. That means, the non-vegetarian female boxing players of different level of participation not differ significantly from each other on the variable leg strength.

Since f value was found significant in the case of vegetarian boxing players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among vegetarian boxing players of different level of participation. The results of Scheffe Post-hoc test for vegetarian female boxing players have been presented in Table 4.77 (a)

Since f value was found insignificant in the case of vegetarian female boxing players, therefore, no need to apply Scheffe Post-hoc test.

Table 4.77 (a): Multiple Comparisons Through Scheffe Post- Hoc Test For Comparison Of Leg Strength Level Among The Vegetarian Boxing Players of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-7.16667*	3.40103	.039	-13.9551	-.3782
	National	1.43333	3.40103	.675	-5.3551	8.2218
Inter-University	State	7.16667*	3.40103	.039	.3782	13.9551
	National	8.60000*	3.72564	.024	1.1636	16.0364
National	State	-1.43333	3.40103	.675	-8.2218	5.3551
	Inter-university	-8.60000*	3.72564	.024	-16.0364	-1.1636

Table.4.77. (a). indicate a significant difference between vegetarian female boxing players of state level and inter-university level (p=.039), state level and national level (p=.674) and inter-University level and national level (p=.024). National level vegetarian female boxing players have significantly more leg strength than state level and inter-university level vegetarian female boxing players. However, insignificant difference has been observed between national level and state level female boxing players (p=.390), which shows that state level vegetarian female boxing players possess slightly more leg strength as comparison to national level vegetarian female boxing players.

Table.4.78: Analysis Of Variance (ANOVA) Of Leg Strength Among Female Wrestling Players At Different Level Of Participation

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian Players	Between Sample	2161.883	2	1080.942	5.370	.007
	Within Sample	13486.417	67	201.290		
	Total	15648.300	69			
Non-Vegetarian Players	Between Sample	3203.083	2	1601.542	6.797	.002
	Within Sample	15786.117	67	235.614		
	Total	18989.200	69			
	Within Sample	13060.067	67	194.926		
	Total	17042.800	69			

Table 4.78 revealed that the statistical differences, when observed among the vegetarian female wrestling players of state level, inter university level and national level found significant on the variable leg strength, as the significance level is.007 (p = .000) is less than .05 level of significance. That means, the vegetarian female wrestling players of different level of participation differ significantly from each other on the variable leg strength.

In the case of non-vegetarian female wrestling players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable leg strength, as the significance level is.002 (p = .000) is less than .05 level of significance. That means, the non-vegetarian female wrestling players of different level of participation also differ significantly from each other on the variable leg strength.

Since f value was found significant in both the cases, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired

means among vegetarian and non-vegetarian female wrestling players of different level of participation. The results of Scheffe Post-hoc test for both types of players have been presented in Table 4.78 (a) and 4.78 (b).

Table.4.78. (a): Multiple Comparisons Through Scheffe Post Hoc Test For Comparison Of Leg Strength Level Among The Vegetarian Wrestling Players Of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-1.88333	4.09563	.647	-10.0582	6.2916
	National	-12.93333*	4.09563	.002	-21.1082	-4.7584
Inter-University	State	1.88333	4.09563	.647	-6.2916	10.0582
	National	-11.05000*	4.48653	.016	-20.0052	-2.0948
National	State	12.93333*	4.09563	.002	4.7584	21.1082
	Inter-university	11.05000*	4.48653	.016	2.0948	20.0052

Table.4.78 (a). indicate a significant difference between vegetarian female wrestling players of state level and inter-university level (p=.647), state level and national level (p=.002 and inter-University level and national level (p=.016). National level vegetarian female wrestling players have significantly more leg strength than state level and inter-university level vegetarian female wrestling players. However, insignificant difference has been observed between intervarsity level and state level female wrestling players (p=.647), which shows that intervarsity level vegetarian female wrestling players possess slightly more leg strength as comparison to state level vegetarian female wrestling players.

Table 4.78 (b): Multiple Comparisons Through Scheffe Post Hoc Test For Comparison Of Leg Strength Level Among The Non-Vegetarian Wrestling Players of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	4.66667	4.43108	.296	-4.1778	13.5111
	National	-12.48333*	4.43108	.006	-21.3278	-3.6389
Inter-University	State	-4.66667	4.43108	.296	-13.5111	4.1778
	National	-17.15000*	4.85401	.001	-26.8386	-7.4614
National	State	12.48333*	4.43108	.006	3.6389	21.3278
	Inter-university	17.15000*	4.85401	.001	7.4614	26.8386

Table.4.78. (b). indicate a significant difference between non-vegetarian female wrestling players of state level and inter-university level (p=.296), state level and national level (p=.006) and inter-University level and national level (p=.001). National level non-vegetarian female wrestling players have significantly more leg strength than state level and inter-university level non-vegetarian female wrestling players. However, insignificant difference has been observed between state level and intervarsity level female wrestling players (p=.296), which shows that intervarsity level non-vegetarian female wrestling players possess slightly more leg strength as comparison to state level non-vegetarian female wrestling players.

Table 4.79: Analysis of Variance (ANOVA) Of Cardiovascular Endurance Among Female Boxing Players At Different Level Of Participation

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian Players	Between Sample	607.300	2	303.650	4.661	.013
	Within Sample	4364.700	67	65.145		
	Total	4972.000	69			
Non-vegetarian Players	Between Sample	41.033	2	20.517	.150	.861
	Within Sample	9163.667	67	136.771		
	Total	9204.700	69			

Table.4.79. revealed that the statistical differences, when observed among the vegetarian female boxing players of state level, inter university level and national level found significant on the variable cardiovascular endurance, as the significance level is .013 (p = .000) is less than to .05 level of significance. That means, the vegetarian female boxing players of different level of participation differ significantly from each other on the variable cardiovascular endurance.

In the case of non-vegetarian female boxing players of state level, inter university level and national level, when the statistical differences observed it has been found insignificant on the variable cardiovascular endurance, as the significance level is.861 (p = .000) is more than .05 level of significance. That means, the non-vegetarian female boxing players of different level of participation not differ significantly from each other on the variable cardiovascular endurance.

Since f value was found significant in the case of vegetarian female boxing players, therefore, Scheffe Post-hoc test was employed to study the direction and significance of differences between paired means among vegetarian boxing players of different level of participation. The results of Scheffe Post-hoc test for vegetarian female boxing players have been presented in Table 4.79 (a)

Since f value was found insignificant in the case of vegetarian female boxing players, therefore, no need to apply Scheffe Post-hoc test.

Table 4.79 (a): Multiple Comparisons Through Scheffe Post- hoc Test For Comparison of Cardiovascular Endurance Level Among The Vegetarian Female Boxing Players of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-5.85000*	2.32996	.014	-10.5006	-1.1994
	National	-6.05000*	2.32996	.012	-10.7006	-1.3994
Inter-University	State	5.85000*	2.32996	.014	1.1994	10.5006
	National	-.20000	2.55235	.938	-5.2945	4.8945
National	State	6.05000*	2.32996	.012	1.3994	10.7006
	Inter-university	.20000	2.55235	.938	-4.8945	5.2945

Table.4.79. (a). indicate a significant difference between vegetarian female boxing players of state level and inter-university level (p=.014), state level and national level (p=.012) and inter-University level and national level (p=.938). National level vegetarian female boxing players have significantly more cardiovascular endurance than state level and inter-university level vegetarian female boxing players. However, insignificant difference has been observed between intervarsity level and national level boxing players (p=.938), which shows that intervarsity level vegetarian female boxing players possess slightly more leg strength as comparison to state level vegetarian female boxing players.

Table.4.80: Analysis of Variance (ANOVA) Of Cardiovascular Endurance Among Female Wrestling Players At Different Level Of Participation

Type of Players	Source of variation	Sum of squares	Degree of freedom	Mean sum of squares	F-ratio	Significance level
Vegetarian Players	Between Sample	113.033	2	56.517	.888	.416
	Within Sample	4265.767	67	63.668		
	Total	4378.800	69			
Non-Vegetarian Players	Between Sample	1050.655	2	525.327	3.882	.025
	Within Sample	9066.217	67	135.317		
	Total	10116.871	69			

Table.4.80. revealed that the statistical differences, when observed among the vegetarian female wrestling players of state level, inter university level and national level found insignificant on the variable cardiovascular endurance, as the significance level is .013 (p = .000) is less than to .05 level of significance. That means, the vegetarian female boxing players of different level of participation not differ significantly from each other on the variable cardiovascular endurance.

Since f value was found insignificant in the case of vegetarian female wrestling players, therefore, no need to apply Scheffe Post-hoc test.

In the case of non-vegetarian female wrestling players of state level, inter university level and national level, when the statistical differences observed it has been found significant on the variable cardiovascular endurance, as the significance level is.861 (p = .000) is more than .05 level of significance. That means, the non-vegetarian female boxing players of different level of participation differ significantly from each other on the variable cardiovascular endurance.

Since f value was found significant in the case of non-vegetarian wrestling players, therefore, Scheffe Post-hoc test was employed to study the direction and significance

of differences between paired means among non-vegetarian wrestling players of different level of participation. The results of Scheffe Post-hoc test for non-vegetarian female wrestling players have been presented in Table 4.80 (b)

Table.4.80 (b): Multiple Comparisons Through Scheffe Post- Hoc Test For Comparison Of Cardiovascular Endurance Level Among The Non-Vegetarian Wrestling Players of State Level, Inter-University Level And National Level

(I) Level of Performance	(J) Level of Performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
State	Inter-University	-9.21667*	3.35803	.008	-15.9193	-2.5140
	National	-5.16667	3.35803	.129	-11.8693	1.5360
Inter-University	State	9.21667*	3.35803	.008	2.5140	15.9193
	National	4.05000	3.67854	.275	-3.2924	11.3924
National	State	5.16667	3.35803	.129	-1.5360	11.8693
	Inter-university	-4.05000	3.67854	.275	-11.3924	3.2924

Table.4.80. b. indicates a significant difference between vegetarian female wrestling players of state level and inter-university level (p=.008) Inter-university level non-vegetarian female wrestling players have significantly more cardiovascular endurance than state level and national level non-vegetarian female wrestling players. However, insignificant difference has been observed between state level and national level (p=129) and inter-university and national level female wrestling players (p=.275), which shows that national level non-vegetarian female wrestling players possess slightly more cardiovascular endurance as comparison to state level non-vegetarian female wrestling players.

DISCUSSION ON FINDINGS

The results of the study have been discussed under the following heading:-

A) The first objective of the study was to **st**udy the psychological and physical characteristics of vegetarian and non-vegetarian female sports person of endurance sports in relation to their level of participation:

I. Comparison of psychological characteristics between vegetarian and non-vegetarian female sports person of endurance sports (i.e. hockey and football) at different level of participation

A. Aggression

It was evident from the findings that significant differences have been observed on the variable aggression between vegetarian and non- vegetarian female hockey and football of state, intervarsity and national level, respectively. It has been found that vegetarian players of all sports have performed significantly better in aggression than non-vegetarian players. The outcome of the above results might be due to some motivational drive or psychological aid, diet and different coaching patterns. The above finding had been supported by the pervious study; consequences of meat protein on human behaviour (**Armando D' Elia, 2011**).meal high in meat proteins reduces tryptophan levels in the brain, and so leads to aggression, anxiety and propensity to fighting; whereas the more we rely on the fruits of the earth and follow vegetarian principles, the more positive is our behaviour. Our choice of food, then, influences our behaviour and emotions.

B. Mental Health

i. Emotional Stability

It was evident from the findings that there was significant difference found on sub-variable emotional stability among vegetarian and non- vegetarian female hockey and football players of state, intervarsity and national level. It has been found that vegetarian female hockey and football players of state, intervarsity and national level have performed significantly better on emotional stability. Outcome of the above results might be due to psychological guidance provided by the coach during training and maybe it is the influence of vegetarian diet. The above finding had been supported by the previous study diet and the mental health **(Helen Sands 2015).** Food

supplies the source of power for your brain as well as your body, and has a direct relationship to mental and emotional health and stability.

ii. Over All Adjustment

It was evident from the findings that there was significant difference found on sub-variable over all adjustment among vegetarian and non- vegetarian female hockey and football players at state, intervarsity and national level. However, there was insignificant difference exist among vegetarian and non-vegetarian hockey player of state and intervarsity level. It has been found that vegetarian players of hockey and football of different level of performance have significantly better on overall adjustment. Above findings had been supported by the study by **Oddy et al (2009)** examined the effects of dietary patterns on mental health in two groups of subjects ranging in age from 13 to 15 years old. The three-year study reviewed behaviour patterns of participants eating a Western diet of refined foods, sugary foods and red meats, and subjects eating a healthy diet, which included fresh fruit and leafy green vegetables. A higher percentage of negative behaviour patterns involving depression, aggression and delinquency were associated with participants consuming the Western-style diet. Subjects eating the healthy diet displayed better mental health outcomes.

iii. Autonomy

It was evident from the findings that there was significant difference found on sub-variable autonomy among vegetarian and non- vegetarian hockey and football players at State level, intervarsity and national level. However, there was insignificant difference exist among vegetarian and non-vegetarian football player intervarsity level. Further, it has been found that vegetarian female players of different level of performance have significantly better on Autonomy

iv. Security- Insecurity

It was evident from the findings that there was significant difference found on the sub-variable security-insecurity among vegetarian and non-vegetarian female hockey and football players at state, intervarsity and national level. It has been found that vegetarian female hockey and football of different level of performance have significantly better on security insecurity.

v. Self-concept

It was evident from the findings that there was significant difference found on the sub-variable self-concept among vegetarian and non- vegetarian female hockey and

football players at state, intervarsity and national level. However, there was insignificant difference exist among vegetarian and non-vegetarian football player of inter-university. Further, it has been found that vegetarian female hockey and football players of all level of performance except inter-university in football have significantly better on self-concept.

vi. Intelligence

It was evident from the findings that there was significant difference found on the sub-variable intelligence among vegetarian and non- vegetarian female hockey and football players at state, intervarsity and national level. Further, it has been found that vegetarian female hockey and football players of different level of performance have significantly better on intelligence. The findings of the study in case of mental health has been supported by the previous study of **Messina. (2015).** In this study researcher assessed the diet and mental health of about 4100 subjects. The article advocates the health benefits of being vegetarian. Plant based diet improves mood and which is good for mental health. In short, the researcher is with vegetarian diet and advocated that if you opt to be a vegetarian it's good for your mental health.

II. Comparison of physical characteristics between vegetarian and non-vegetarian female sports person of endurance sports (i.e. hockey and football) at different level of participation

A. Flexibility

It was evident from the findings that there was significant difference found on the variable flexibility among vegetarian and non- vegetarian female hockey and football players at state, intervarsity and national level. Further, it has been found that vegetarian hockey and football players of different level of performance have performed significantly better on flexibility. It may be the result of nature of game played by the players of both groups vegetarian and non-vegetarian. Above findings has been supported by the previous study **Singh and Silva (2014)** conducted to find the difference between physical fitness level of vegetarian and non-vegetarian athletes. No difference was found on the variable body composition but difference was found on the variables cardio respiratory and flexibility between vegetarian and non-vegetarian athletes.

B. Muscular Endurance

It was evident from the findings that there was significant difference found on the variable muscular endurance among vegetarian and non- vegetarian female hockey and football players at state, intervarsity level and national level. However, there was insignificant difference exist among vegetarian and non-vegetarian hockey player at national level. Further, it has been found that vegetarian female hockey and football players of state, intervarsity and national level players have performed significantly better on muscular endurance. It may be a result of vegetarian players being more likely to engage in muscular endurance exercises. Above findings has been supported by the result of **Cherlita et al. (2013).** They found that vegetarian diet has a positive impact on muscular endurance and muscular strength.

C. Muscular Strength

i. Right Hand Grip Strength

It was evident from the findings that there was significant difference found on the sub-variable right-hand grip strength among vegetarian and non- vegetarian female hockey and football players at state, intervarsity and national level. However, there was insignificant difference exist among vegetarian and non-vegetarian hockey player of national level. Further, it has been found that non-vegetarian female players of level of performance have performed significantly better on right hand grip strength.

ii. Left Hand Grip Strength

It was evident from the findings that there was significant difference found on the sub-variable left-hand grip strength among vegetarian and non- vegetarian female hockey, and football players at state, intervarsity and national level. Further, it has been found that non-vegetarian female players of level of performance have performed significantly better on left hand grip strength.

iii. Back Strength

It was evident from the findings that there was significant difference found on the sub-variable back strength among vegetarian and non- vegetarian female hockey and football players at state, intervarsity and national level. Further, it has been found that non-vegetarian female players of all level of performance have performed significantly better on back strength.

iv. Leg Strength

It was evident from the findings that there was significant difference found on the sub-variable leg strength among vegetarian and non- vegetarian hockey and football

players at state, intervarsity and national level. However, there was insignificant difference exist among vegetarian and non-vegetarian hockey player of national level and football players of intervarsity level. Further, it has been found that non-vegetarian female players of all level of performance have performed significantly better on leg strength. Muscular strength in non-vegetarians is more may be due to the presence of creatine in their body because creatine is only found in muscle meat **(Maughan,1995).** Above findings has been supported by the result of **Cherlita et al. (2013).** They found that vegetarian diet has a positive impact on muscular endurance and muscular strength

D. Cardiovascular Endurance

It was evident from the findings of that there was insignificant difference found on the variable cardiovascular endurance among vegetarian and non-vegetarian female hockey players at state, intervarsity and national level, football players at intervarsity level and national level. Further, it has been found that vegetarian female players of hockey and football players have performed significantly better on cardiovascular endurance. These findings may be because of the nature of the games which demand the high level of cardiovascular endurance that why no difference was found between vegetarians and non- vegetarians. The cause may have been a more gathering of plaque in the blood vessels of non-vegetarians, due to an amplified ingestion of meat products. Above findings has been supported by the previous study **Hanne et al (2009**). No difference found on the aerobic and anaerobic capacities of the habitual vegetarian and non-vegetarians. These results might be due to the difference in the training pattern of the athletes. Above findings has been supported by the result of **Cherlita et al. (2013).** They found that vegetarian diet has a positive impact on muscular endurance and muscular strength. Further vegetarian diet, which is more in fibres and low in fats also helpful in increasing cardiovascular endurance of the respondents.

III. Comparison of psychological characteristics among state level, inter university level and national level vegetarian and non-vegetarian female sports person of endurance sports, i.e. hockey and football.

A) Aggression

For Hockey Players

Insignificant differences have been found on the variable aggression from the table 4.13 among both vegetarian and non-vegetarian female hockey players at different level of participation. It has been observed from mean value that vegetarian and non-vegetarian state level female hockey players demonstrate better aggression as compared to their counterpart at the intervarsity and national female hockey players. The outcome of the result shows that state level female hockey players have low level of hostile behavior with the intention of inflicting damage upon another individual. These findings substantiate the assertion of study consequences of meat protein on human behavior **(Armando D' Elia 2011).**

For Football Players

Significant differences have been found on the variable aggression from the table 4.14 among vegetarian female football players at different level of participation. It has been observed from the mean value that vegetarian football players of national level demonstrate better aggression as compared to their counterpart at the state and intervarsity female football players. In the case of non-vegetarian group insignificant differences have been found on variable aggression among female football players at different level of participation.

In the case of non-vegetarian group has been observed from the mean value that non-vegetarian players of intervarsity level demonstrate better aggression as compared to their counterpart at the state and national level. It can be safely assumed that national level female football players were equally developed on ability to focus and unshaken by setbacks and failures and showing our indirect aggression in the form of hurting others by gossips, rum ours, internal murmurings.

B) **Emotional Stability**

For Hockey Players

Insignificant differences have been found on the variable of emotional stability from the table 4.15 among vegetarian and non-vegetarian female hockey players at different level of participation. It has been observed from mean value that vegetarian hockey players of national level demonstrate better emotional stability as compared to their counterpart at the intervarsity and state level female hockey players. However, in case of non-vegetarian group it has been observed from the mean value that state level female hockey players demonstrate better emotional stability as compared to intervarsity and national female hockey players.

For Football Players

Insignificant differences have been found on the variable of emotional stability from the table 4.16 among vegetarian and non-vegetarian female football players at different level of participation. It has been observed from mean value that vegetarian football players demonstrate better emotional stability as compared to their counterpart at the national and intervarsity level. However, in non-vegetarian group it has been observed from mean value that intervarsity level female football players demonstrate better emotional stability as compared to national and state female football players.

C. Over-All Adjustment

For Hockey Players

Insignificant differences have been found on the variable of over-all adjustment from the table 4.17 among vegetarian female hockey players and significant difference have been found among non-vegetarian players of different level of participation. It has been observed from the mean that vegetarian and non-vegetarian hockey players of intervarsity level demonstrate better over-all adjustment as compared to their counterpart at the state and national level.

For Football Players

Insignificant differences have been found on the variable over-all adjustment from the table 4.18 among vegetarian female football players and significant difference have been found among non-vegetarian players of different level of participation. It has been observed from mean value that vegetarian and non-vegetarian hockey players of

intervarsity level demonstrate better over-all adjustment as compared to their counterpart at the state and national level.

D. Autonomy

For Hockey Players

Insignificant differences have been found on the variable of autonomy from the table 4.19 among vegetarian and non-vegetarian female hockey players at different level of participation. It has been observed from the mean value that the vegetarian hockey players of intervarsity level demonstrate better autonomy as compared to their counterpart at the state and national level female hockey players. In case of non-vegetarian group, it has been observed from mean value that state level female hockey players demonstrate better autonomy as compared to the intervarsity and national level female hockey players.

For Football Players

Insignificant differences have been found on the variable autonomy from the table 4.20 among vegetarian and non-vegetarian female football players at different level of participation. It has been observed from the mean value that vegetarian football players of national level demonstrate better autonomy as compared to their counterpart at the state and intervarsity level. However, in case of non-vegetarian group it has been observed from the mean value that intervarsity level female football players demonstrate better autonomy as compared to their counterpart at the state and national level.

E. Security- Insecurity

For Hockey Players

Insignificant differences have been found on the sub-variable security-insecurity from the table 4.21 among vegetarian and non-vegetarian female hockey players at different level of participation. It has been observed from the mean value that vegetarian hockey players of national level demonstrate better security-insecurity as compared to their counterpart at the state and intervarsity level. However, in case of non-vegetarian group it has been observed from the mean value that state level female hockey players demonstrates better security-insecurity as compared to their counterpart at the intervarsity and national level.

For Football Players

Insignificant differences have been found on the sub-variable security-insecurity from the table 4.22 among vegetarian and non-vegetarian female football players at different level of participation. It has been observed from the mean value that vegetarian football players of intervarsity and national level demonstrate better and equal security-insecurity as compared to state level football players. However, in case of non-vegetarian group it has been observed from the mean value that national level football players demonstrate better security-insecurity as compared to state and intervarsity level.

F. Self-Concept

For Hockey Players

Insignificant differences have been found on the sub-variable of self-concept from the table 4.23 among vegetarian female hockey players at different level of participation. It has been observed from the mean value that vegetarian hockey players of national level demonstrate better self-concept as compared to their counterpart state and intervarsity level. In the case of non-vegetarian group significant differences have been found on the variable of self-concept among female hockey players at different level of participation. Further, it has been observed that mean value of the non-vegetarian hockey players of national level demonstrate better self-concept as compared to state and intervarsity level players.

For Football Players

Insignificant differences have been found on the sub-variable of self-concept from the table 4.24 among vegetarian and non-vegetarian female football players at different level of participation. Further, it has been observed from the mean value that vegetarian and non-vegetarian football players of state level demonstrate better self-concept as compared to their counterpart intervarsity and national level players.

G. Intelligence

For Hockey Players

Insignificant differences have been found on the sub-variable of intelligence from the table 4.25 among vegetarian and non-vegetarian male hockey players at different level of participation. It has been observed from mean value that vegetarian and non-

vegetarian hockey players of intervarsity level demonstrate better intelligence as compared to their counterpart state and national level players.

For Football Players

Insignificant differences have been found on the sub-variable intelligence from the table 4.26 among vegetarian and non-vegetarian female football players at different level of participation. It has been observed from mean value that vegetarian football players of state level demonstrate better intelligence as compared to their counterpart intervarsity and national level players. However, in case of non-vegetarian players it has been observed from the mean value that intervarsity level players demonstrates better intelligence as compared to their counterpart state and national level players.

IV. Comparison of physical characteristics among state level, inter- university level and national level vegetarian and non-vegetarian female sports person of endurance sports, i.e. hockey and football.

A. Flexibility

For Hockey Players

Significant differences have been found on the variable flexibility from the table 4.27 among vegetarian and non-vegetarian female hockey players at different level of participation. It has been observed from mean value that vegetarian and non-vegetarian hockey players of state level demonstrate better flexibility as compared to their counterpart intervarsity and national level players.

For Football Players

Insignificant differences have been found on the variable flexibility from the table 4.28 among vegetarian and non-vegetarian female football players at different level of participation. It has been observed from mean value that vegetarian football players of state level demonstrate better flexibility as compared to their counterpart intervarsity and national level football players. However, in case of non-vegetarian it has been observed from the mean value that intervarsity level football players demonstrate better flexibility as compared to their counterpart state and national level players.

B. Muscular Endurance

For Hockey Players

Insignificant differences have been found on the variable muscular endurance from the table 4.29 among vegetarian and non-vegetarian female hockey players at different level of participation. It has been observed from mean value that vegetarian hockey players of state level demonstrate better muscular endurance as compared to their counterpart intervarsity and national level players. However, in case of non-vegetarian it has been observed from the mean value that national level hockey players demonstrate better muscular endurance as compared to their counterpart state and intervarsity level players.

For Football Players

Significant differences have been found on the variable muscular endurance from the table 4.30 among vegetarian and non -vegetarian female football players at different level of participation. It has been observed from the mean value that vegetarian and non- vegetarian football players of state level demonstrates better muscular endurance as compared to their counterpart intervarsity and national level players.

C. Right Hand Grip Strength

For Hockey Players

Insignificant differences have been found on the variable right-hand grip strength from the table 4.31 among vegetarian and non-vegetarian female hockey players at different level of participation. It has been observed from mean value that vegetarian hockey players of intervarsity level demonstrate better right-hand grip strength as compared to their counterpart state and national level players. However, in case of non-vegetarian it has been observed from mean value that state level hockey players demonstrate better right-hand grip strength as compared to their counterpart intervarsity and national level players.

For Football Players

Significant differences have been found on the variable right-hand grip strength from the table 4.32 among vegetarian female football players at different level of participation. It has been observed from mean value that vegetarian football players of national level demonstrate better right-hand grip strength as compared to their counterpart state and intervarsity level players. In case non-vegetarian group

insignificant differences have been found on the variable right-hand grip strength among female football players at different level of participation. Further, it has been observed from mean value that football players of intervarsity level demonstrate better right-hand grip strength as compared to their counterpart state and national level players.

D. Left Hand Grip

For Hockey Players

Insignificant differences have been found on the variable left-hand grip strength from the table.4.33.among vegetarian and non-vegetarian female hockey players at different level of participation. It has been observed from mean value that vegetarian hockey players of intervarsity level demonstrate better left-hand grip strength as compared to their counterpart state and national level hockey players. However, in case of non-vegetarian group female hockey players of state level demonstrate better left-hand grip strength as compared to their counterpart intervarsity and national level players.

For Football Players

Insignificant differences have been found on the variable left-hand grip strength from the table.4.34. among vegetarian and non-vegetarian female football players at different level of participation. It has been observed from mean value that vegetarian football players of national level demonstrate better left-hand grip strength as compared to their counterpart state and intervarsity level players. However, in case of non-vegetarian group female hockey players of intervarsity level demonstrate better back strength as compared to their counterpart state and national level players.

E. Back Strength

For Hockey Players

Insignificant differences have been found on the variable back strength from the table 4.35 among vegetarian and non-vegetarian female hockey players at different level of participation. It has been observed from mean value that vegetarian hockey players of state level demonstrate better back strength as compared to their counterpart intervarsity and national level players. However, in case of non-vegetarian group female hockey players of intervarsity level demonstrate better back strength as compared to their counterpart state and national level players.

For Football Players

Insignificant differences have been found on the variable back strength from the table 4.36 among vegetarian and non-vegetarian female football players at different level of participation. It has been observed from mean value that vegetarian football layers of state level demonstrate better back strength as compared to their counterpart intervarsity and national level players. However, in case of non-vegetarian group it has been observed from mean value that hockey players of national level demonstrate better back strength as compared to their counterpart state and intervarsity level players.

F. Leg Strength

For Hockey Players

Significant differences have been found on the variable leg strength from the table 4.37 among vegetarian and non-vegetarian female hockey players at different level of participation. It has been observed from mean value that vegetarian and non-vegetarian hockey players of intervarsity level demonstrates significantly better leg strength as compared to their counterpart state and national level hockey players.

For Football Players

Significant differences have been found on the variable leg strength from the table 4.38 among vegetarian and non-vegetarian female football players at different level of participation. It has been observed from mean value that vegetarian and non-vegetarian football players of national level demonstrate significantly better leg strength as compared to their counterpart state and intervarsity level players.

G. Cardiovascular Endurance

For Hockey Players

Significant differences have been found on the variable cardiovascular endurance from the table 4.39 among vegetarian female hockey players at different level of participation. It has been observed from mean value that vegetarian hockey players of intervarsity and national level demonstrate significantly better cardiovascular endurance as compared to their counterpart state level players. In case of non-vegetarian group insignificant differences have been found on the variable cardiovascular endurance among female hockey players at different level of participation. It has been observed from mean value that non-vegetarian hockey

players of intervarsity level demonstrate better cardiovascular endurance as compared to their counterpart state and national level players.

For Football Players

Insignificant differences have been found on the variable cardiovascular endurance from the table 4.40 among vegetarian and non-vegetarian female football players at different level of participation. It has been observed from mean value that vegetarian and non-vegetarian football players of national level demonstrate better cardiovascular endurance as compared to their counterpart state intervarsity level players.

B) The second objective of the study was to study the psychological and physical characteristics of vegetarian and non-vegetarian female sports person of strength sports in relation to their level of participation:

i. Comparison of psychological characteristics between vegetarian and non-vegetarian female sports person of strength sports (i.e. boxing and wrestling) at different level of performance

A. Aggression

It was evident from the findings that significant differences have been observed the aggression between vegetarian and non- vegetarian female boxing and wrestling players of state, intervarsity and national level, respectively. It indicates that vegetarian players of all sports have performed significantly better on aggression than non-vegetarian players. The outcome of the above results might be due to some motivational drive or psychological aid, diet and different coaching patterns. The above finding. had been supported by the pervious study; consequences of meat protein on human behaviour (**Armando D' Elia, 2011**). meal high in meat proteins reduces tryptophan levels in the brain, and so leads to aggression, anxiety and propensity to fighting; whereas the more we rely on the fruits of the earth and follow vegetarian principles, the more positive is our behaviour. Our choice of food, then, influences our behaviour and emotions.

C. Mental Health

i. Emotional Stability

It was evident from the findings that there was significant difference found on emotional stability among vegetarian and non- vegetarian female boxing and

wrestling players of state, intervarsity and national level. It has been found that vegetarian boxing and wrestling players of state, intervarsity and national level have performed significantly better on emotional stability. Outcome of the above results might be due to psychological guidance provided by the coach during training and maybe it is the influence of vegetarian diet. The above finding had been supported by the previous study diet and the mental health **(Helen Sands 2015).** Food supplies the source of power for your brain as well as your body, and has a direct relationship to mental and emotional health and stability.

ii. Over All Adjustment

It was evident from the findings that there was significant difference found in the sub-variable over all adjustment among vegetarian and non- vegetarian boxing and wrestling players at state, intervarsity and national level. It has been found that vegetarian players of boxing and wrestling of different level of performance have significantly better on over all adjustment. Above findings had been supported by the study, the effects of dietary patterns on mental health (Oddy et al 2009) in two groups of subjects ranging in age from 13 to 15 years old. The three-year study reviewed behaviour patterns of participants eating a western diet of refined foods, sugary foods and red meats, and subjects eating a healthy diet, which included fresh fruit and leafy green vegetables. A higher percentage of negative behaviour patterns involving depression, aggression and delinquency were associated with participants consuming the Western-style diet. Subjects eating the healthy diet displayed better mental health outcomes.

iii. Autonomy

It was evident from the findings that there was significant difference found on the sub-variable autonomy among vegetarian and non- vegetarian boxing and wrestling players at State level, intervarsity and national level. It has been found that vegetarian female players of strength sports of different level of performance have significantly better on Autonomy.

iv. Security- Insecurity

It was evident from the findings that there was significant difference found on the sub-variable security-insecurity among vegetarian and non-vegetarian female boxing and wrestling players at state, intervarsity and national level. It has been found that vegetarian female boxing and wrestling of different level of performance have significantly better on security insecurity except interuniversity level players of boxing.

v. Self-concept

It was evident from the findings that there was significant difference found on the sub-variable self-concept among vegetarian and non- vegetarian female boxing and wrestling players at state, intervarsity and national level. It has been found that vegetarian female boxing and wrestling players of all level of performance have significantly better on self-concept.

vi. Intelligence

It was evident from the findings that there was significant difference found on the sub-variable intelligence among vegetarian and non- vegetarian female boxing and wrestling players at state, intervarsity and national level. Further, it has been found that vegetarian female boxing and wrestling players of different level of performance have significantly better on intelligence. The findings of the study in case of mental health has been supported by the previous study of **Messina. (2015).** In this study researcher assessed the diet and mental health of about 4100 subjects. The article advocates the health benefits of being vegetarian. Plant based diet improves mood and which is good for mental health. In short, the researcher is with vegetarian diet and advocated that if you opt to be a vegetarian it's good for your mental health.

II. Comparison of physical characteristics between vegetarian and non-vegetarian female sports person of strength sports (i.e. boxing and wrestling) at different level of performance

i. Flexibility

It was evident from the findings that there was significant difference found on the variable flexibility among vegetarian and non- vegetarian female boxing and wrestling players at state, intervarsity and national level. Further, it has been found that vegetarian boxing and wrestling players of different level of performance have performed significantly better on flexibility. It may be the result of nature of game played by the players of both groups vegetarian and non-vegetarian. Above findings has been supported by the previous study **Singh and Silva (2014)** conducted to find the difference between physical fitness level of vegetarian and non-vegetarian athletes. No difference was found on the variable body composition but difference was found on the variables cardio respiratory and flexibility between vegetarian and non-vegetarian athletes.

ii. Muscular Endurance

It was evident from the findings that there was significant difference found on the variable muscular endurance among vegetarian and non- vegetarian boxing and wrestling players at state, intervarsity level and national level. Further, it has been found that vegetarian female boxing and wrestling players of state, intervarsity and national level players have performed significantly better on muscular endurance. It may be a result of vegetarian players being more likely to engage in muscular endurance exercises. Above findings has been supported by the result of **Cherlita et al. (2013).** They found that vegetarian diet has a positive impact on muscular endurance and muscular strength.

iii. Muscular Strength

a. Right Hand Grip Strength

It was evident from the findings that there was significant difference found on the sub-variable right-hand grip strength among vegetarian and non- vegetarian female boxing and wrestling players at state, intervarsity and national level. Further, it has been found that non-vegetarian female players of level of performance have performed significantly better on right hand grip strength.

b. Left Hand Grip Strength

It was evident from the findings that there was significant difference found on the sub-variable left-hand grip strength among vegetarian and non- vegetarian female boxing and wrestling players at state, intervarsity and national level. Further, it has been found that non-vegetarian female players of level of performance have performed significantly better on left hand grip strength.

c. Back Strength

It was evident from the findings that there was significant difference found on the sub-variable back strength among vegetarian and non- vegetarian female boxing and wrestling players at state, intervarsity and national level. Further, it has been found that non-vegetarian female players of all level of performance have performed significantly better on back strength.

d. Leg Strength

It was evident from the findings that there was significant difference found on the sub-variable leg strength among vegetarian and non-vegetarian boxing and wrestling players at state, intervarsity and national level. However, there was insignificant

difference exist among vegetarian and non-vegetarian boxing players of intervarsity level. Further, it has been found that non-vegetarian female players of all level of performance have performed significantly better on leg strength. Muscular strength in non-vegetarians is more may be due to the presence of creatine in their body because creatine is only found in muscle meat **(Maughan,1995).** Above findings has been supported by the result of **Cherlita et al. (2013).** They found that vegetarian diet has a positive impact on muscular endurance and muscular strength

iv. Cardiovascular Endurance

It was evident from the findings of that there was insignificant difference found on the variable cardiovascular endurance among vegetarian and non-vegetarian female boxing and wrestling players at state, intervarsity and national level, football players at intervarsity level and national level. However, there was insignificant difference exist among vegetarian and non-vegetarian boxing players of state level. Further, it has been found that vegetarian female players of boxing and wrestling players have performed significantly better on cardiovascular endurance. These findings may be because of the nature of the games which demand the high level of cardiovascular endurance that why no difference was found between vegetarians and non-vegetarians. The cause may have been a more gathering of plaque in the blood vessels of non-vegetarians, due to an amplified ingestion of meat products. Above findings has been supported by the previous study **Hanne et al (2009**). No difference found on the aerobic and anaerobic capacities of the habitual vegetarian and non-vegetarians. These results might be due to the difference in the training pattern of the athletes. Above findings has been supported by the result of **Cherlita et al. (2013).** They found that vegetarian diet has a positive impact on muscular endurance and muscular strength. Further vegetarian diet, which is more in fibres and low in fats also helpful in increasing cardiovascular endurance of the respondents.

III. Comparison of psychological characteristics among state level, inter university level and national level vegetarian and non-vegetarian female sports person of strength sports (i.e. boxing and wrestling).

For Boxing Players

Insignificant differences have been found on variable aggression from the table 4.53 among vegetarian female boxing players at different level of participation. It has been observed from mean value that vegetarian boxing players of state level demonstrate better aggression as compared to their counterpart at the national and intervarsity players. In case of non-vegetarian group significant differences have been found on the variable of aggression among female boxing players at different level of participation. It has been observed from the mean value that non-vegetarian boxing players of state level players demonstrate better on aggression as compared to their counterpart at the intervarsity and national players.

For Wrestling Players

Insignificant differences have been found on the variable of aggression from the table 4.54 among both vegetarian and non-vegetarian female wrestling players at different level of participation. It has been observed from mean value that vegetarian wrestling players of national level demonstrate better aggression as compared to their counterpart at the intervarsity and state players. However, in case of non-vegetarian group it has been observed from the mean value that state level players demonstrate better on aggression as compared to their counterpart at the intervarsity and national players. The outcome of the result shows that state level female wrestling players have low level of hostile behavior with the intention of inflicting damage upon another individual.

B) Emotional Stability

For Boxing Players

Insignificant differences have been found on the variable emotional stability from the table.4.55. among vegetarian and non-vegetarian female boxing players at different level of participation. It has been observed from mean value that vegetarian boxing players of intervarsity players demonstrate better on emotional stability as compared to their counterpart at the state and national level players. However, in the case of non-vegetarian group it has been observed from mean value that non-vegetarian

boxing players of state level demonstrate better on emotional stability as compared to their counterpart at the intervarsity and national players.

For Wrestling Players

Insignificant differences have been found on the variable emotional stability from the table 4.56 among vegetarian and non-vegetarian female wrestling players at different level of participation. It has been observed from mean value that vegetarian wrestling players of state level female wrestling players demonstrate better on emotional stability as compared to their counterpart at the national and intervarsity level players. However, in the case of non-vegetarian group it has been observed from mean value that wrestling players of intervarsity level demonstrate better on emotional stability as compared to their counterpart at the state and national female wrestling players.

C. Over-All Adjustment

For Boxing Players

Insignificant differences have been found on the variable over-all adjustment from the table 4.57 among vegetarian and non-vegetarian female boxing players at different level of participation. It has been observed from mean value that vegetarian boxing players of national players demonstrate better on over-all adjustment as compared to their counterpart at the intervarsity and state level players. However, in the case of non-vegetarian group it has been observed from the mean value that boxing players of intervarsity level demonstrate better on over-all adjustment as compared to their counterpart at the state and national level players.

For Wrestling Players

Insignificant differences have been found on the variable over-all adjustment from the table.4.58. among vegetarian and non-vegetarian female wrestling players at different level of participation. It has been observed from the mean value that vegetarian wrestling players of national level demonstrate better over-all adjustment as compared to their counterpart at the intervarsity and state level players. However, in the case of non-vegetarian group it has been observed from the mean value that state level wrestlers demonstrate better on over-all adjustment as compared to their counterpart at the intervarsity and national level players.

C. Autonomy

For Boxing Players

Insignificant differences have been found on the variable autonomy from the table 4.59 among vegetarian female boxing players at different level of participation. It has been observed from mean value that vegetarian boxing players of intervarsity level demonstrate better on autonomy as compared to their counterpart at the state and national level players. However, in the case of non-vegetarian group it has been observed from the mean value that intervarsity level boxing players demonstrate better on autonomy as compared to their counterpart at the state and national level players.

For Wrestling Players

Insignificant differences have been found on the variable autonomy from the table .4.60. among vegetarian and non-vegetarian female wrestling players at different level of participation. It has been observed from mean value that vegetarian wrestling players of intervarsity level players demonstrate better on autonomy as compared to their counterpart at the state and national level players. However, in the case of non-vegetarian group it has been observed from the mean value that non-vegetarian of intervarsity level wrestling players demonstrates better on autonomy as compared to their counterpart at the state and national level players.

E) Security-Insecurity

For Boxing Players

Significant differences have been found on the variable security-insecurity from the table .4.61. among vegetarian female boxing players at different level of participation. It has been observed from mean value that vegetarian boxing players of state level demonstrate better on security-insecurity as compared to their counterpart intervarsity and national level players. In the case of non-vegetarian group insignificant differences have been found boxing players at different level of participation. However, in the case of non-vegetarian group it has been observed from mean value that non-vegetarian boxing players of intervarsity and national level demonstrate better on security-insecurity as compared to their counterpart state level players.

For Wrestling Players

Insignificant differences have been found on the variable security-insecurity from the table.4.62. among vegetarian and non-vegetarian female wrestling players at different level of participation. It has been observed from mean value that vegetarian wrestling players of national level demonstrate better on security-insecurity as compared to their counterpart state and intervarsity level players. However, in the case of non-vegetarian group it has been observed from mean value that non-vegetarian wrestling players of intervarsity level demonstrate better on security-insecurity as compared to their counterpart state and national wrestling players.

F) Self Concept

For Boxing Players

Insignificant differences have been found on the variable self-concept from the table.4.63. among vegetarian and non-vegetarian female boxing players at different level of participation. It has been observed from mean value that vegetarian boxing players of state, intervarsity and national level female boxing players demonstrate equal self-concept. However, in the case of non-vegetarian group it has been observed from mean value that non-vegetarian boxing players of national level demonstrates better on self-concept as compared to their counterpart state and intervarsity level players.

For Wrestling Players

Significant differences have been found on the variable self-concept from the table.4.64 among vegetarian female boxing players at different level of participation. It has been observed from mean value that vegetarian wrestling players of intervarsity level demonstrate better on self-concept as compared to their counterpart state and national level. However, in the case of non-vegetarian group insignificant differences have been found the variable of self-concept among female boxing players at different level of participation. It has been also observed from mean value that non-vegetarian wrestling players of national level female boxing players demonstrate better on self-concept as compared to their counterpart state and intervarsity level players.

G. Intelligence

For Boxing Players

Insignificant differences have been found on the variable intelligence from the table .4.65. among vegetarian and non-vegetarian female boxing players at different level of participation. It has been observed from mean value that vegetarian and non-vegetarian boxing players of national level demonstrate better intelligence as compared to their counterpart state and intervarsity level players.

For Wrestling Players

Insignificant differences have been found on the variable intelligence from the table .4.66. among vegetarian female wrestling players at different level of participation. It has been observed from mean value that vegetarian wrestling players of intervarsity level demonstrate better on intelligence as compared to their counterpart state and national level players. In the case of non-vegetarian group significant differences have been found in the variable intelligence among female wrestling players at different level of participation. It has been also observed from mean value that the non-vegetarian wrestling players of national level demonstrate better on intelligence as compared to their counterpart state and intervarsity level players.

IV. Comparison of physical characteristics among state level, inter university level and national level vegetarian and non-vegetarian female sports person of strength sports (i.e. boxing and wrestling)

A. Flexibility

For Boxing Players

Insignificant differences have been found on the variable flexibility from the table .4.67. among vegetarian female boxing players at different level of participation. It has been observed from mean value that vegetarian boxing players of state level demonstrate better on flexibility as compared to their counterpart intervarsity and national level players. In the case of non-vegetarian group significant differences have been found in the variable of flexibility among female boxing players at different level of participation. It has been observed from mean value that the non-vegetarian boxing players of state level demonstrate better on flexibility as compared to their counterpart intervarsity and national level players.

For Wrestling Players

Significant differences have been found on the variable flexibility from the table.4.68. among vegetarian female wrestling players at different level of participation. It has been observed from mean value that vegetarian wrestling players of state level demonstrate better on flexibility as compared to their counterpart intervarsity and national level players. However , in the case of non-vegetarian group insignificant differences have been found on the variable of flexibility among female wrestling players at different level of participation. It has been also observed from mean value that the non-vegetarian wrestling players of national level demonstrate better on flexibility as compared to their counterpart state and intervarsity players.

B. Muscular Endurance

For Boxing Players

Insignificant differences have been found on the variable muscular endurance from the table.4.69 among vegetarian female boxing players at different level of participation. It has been observed from mean value that vegetarian boxing players of intervarsity level demonstrate better on muscular endurance as compared to their counterpart state and national level players. However, in the case of non-vegetarian group significant differences have been found on the variable muscular endurance among female boxing players at different level of participation. It has been observed from mean value that non-vegetarian boxing players of national level demonstrate better on muscular endurance as compared to their counterpart intervarsity and national level players.

For Wrestling Players

Insignificant differences have been found on the variable muscular endurance from the table.4.70. among vegetarian female wrestling players at different level of participation. It has been observed from mean value that vegetarian wrestling players of state level demonstrate better on muscular endurance as compared to their counterpart intervarsity and national level players. In the case of non-vegetarian group significant differences have been found on the variable muscular endurance among female wrestling players at different level of participation. It has been also observed from mean value that the non-vegetarian wrestling players of state level demonstrate better on muscular endurance as compared to their counterpart intervarsity and national level players.

C. Right Hand Grip Strength

For Boxing Players

Significant differences have been found on the variable right-hand grip strength from the table.4.71. among vegetarian and non-vegetarian female boxing players at different level of participation. It has been observed from mean value that vegetarian boxing players of national level demonstrate better right-hand grip strength as compared to their counterpart state and intervarsity level players. However in the case of non-vegetarian group it has been observed from mean value that non-vegetarian boxing players of intervarsity level demonstrate better on right-hand grip strength as compared to their counterpart state and national level players.

For Wrestling Players

Insignificant differences have been found on the variable of right-hand grip strength from the table 4.72 among vegetarian and non-vegetarian female wrestling players at different level of participation. It has been observed from mean value that vegetarian wrestling players of intervarsity level demonstrate better on right-hand grip strength as compared to their counterpart state and national level players. It has been also observed from mean value that non-vegetarian wrestling players of state level demonstrate better on right-hand grip strength as compared to their counterpart intervarsity and national level players.

D. Left Hand Grip Strength

For Boxing Players

Insignificant differences have been found on the variable left-hand grip strength from the table.4.73. among vegetarian female boxing players at different level of participation. It has been observed from mean value that vegetarian boxing players of national level demonstrate better on left-hand grip strength as compared to their counterpart state and intervarsity level players. In the case of non-vegetarian group significant differences have been found on the variable left-hand grip strength among female boxing players at different level of participation. It has been observed from mean value that non-vegetarian boxing players of national level demonstrate better on left-hand grip strength as compared to their counterpart state and intervarsity level players.

For Wrestling Players

Insignificant differences have been found in the variable left-hand grip strength from the table.4.74. among vegetarian female wrestling players at different level of participation. It has been observed from mean value that vegetarian wrestling players of national level demonstrate better on left-hand grip strength as compared to their counterpart state and intervarsity level players. In the case of non-vegetarian group significant differences have been found on the variable left-hand grip strength among female wrestling players at different level of participation. It has been observed from mean value that non-vegetarian wrestling players of national level demonstrate better on left-hand grip strength as compared to their counterpart state and intervarsity level player**s.**

E. Back Strength

For Boxing Players

Insignificant differences have been found on the variable back strength from the table .4.75. among vegetarian and non-vegetarian female boxing players at different level of participation. It has been observed from mean value that vegetarian and non-vegetarian boxing players of national level demonstrate better on back strength as compared to their counterpart state and intervarsity level players.

For Wrestling Players

Insignificant differences have been found on the variable back strength from the table .4.76. among vegetarian and non-vegetarian female wrestling players at different level of participation. It has been observed from mean value that vegetarian and non-vegetarian wrestling players of national level demonstrate better on back strength as compared to their counterpart state and intervarsity level players.

F. Leg Strength

For Boxing Players

Significant differences have been found on the variable of leg strength from the table .4.77. among vegetarian female boxing players at different level of participation. It has been observed from mean value that vegetarian boxing players of intervarsity level demonstrate better on leg strength as compared to their counterpart state and national level players. In the case of non-vegetarian group insignificant differences have been found on the variable leg strength among female boxing players at different level of participation. It has been observed from mean value that non-vegetarian

boxing players of national level demonstrate better on leg strength as compared to their counterpart state and intervarsity level players.

For Wrestling Players

Significant differences have been found on the variable leg strength from the table.4.78. among vegetarian and non-vegetarian female wrestling players at different level of participation. It has been observed from mean value that vegetarian and non-vegetarian wrestling players of national level demonstrate better on leg strength as compared to their counterpart state and intervarsity level players.

G. Cardiovascular Endurance

For Boxing Players

Significant differences have been found on the variable cardiovascular endurance from the table.4.79. among vegetarian female boxing players at different level of participation. It has been observed from mean value that vegetarian boxing players of national level demonstrate better on cardiovascular endurance as compared to their counterpart state and intervarsity level players. In the case of non-vegetarian group insignificant differences have been found on the variable cardiovascular endurance among female boxing players at different level of participation. It has been also observed from mean value that non-vegetarian boxing players of intervarsity level demonstrate better on cardiovascular endurance as compared to their counterpart state and national level players.

For Wrestling Players

Insignificant differences have been found on the variable cardiovascular endurance from the table.4.80. among vegetarian female wrestling players at different level of participation. It has been observed from mean value that vegetarian wrestling players of national level demonstrate better on cardiovascular endurance as compared to their counterpart state and intervarsity level players. In the case of non-vegetarian group significant differences have been found on the variable cardiovascular endurance among female wrestling players at different level of participation. It has been also observed from mean value that non-vegetarian wrestling players of intervarsity level players demonstrate better on cardiovascular endurance as compared to their counterpart state and national level players.

TESTING OF HYPOTHESES

1. The hypothesis number-1 stated that there would be significant difference among the vegetarian and non-vegetarian sportspersons of endurance sports in psychological and physical characteristics in relation to their level of participation. the results obtained from the study revealed that significant difference was found on some of the psychological and physical characteristics among vegetarian and non-vegetarian hockey and football players, and difference among vegetarian and non-vegetarian female sportspersons of different level of participation (state, intervarsity and national) of endurance sports also found significant on some of the psychological and physiological characteristics. Therefore, hypothesis number-1 stands partially accepted in case of endurance sports.
2. The hypothesis number-2 stated that there would be a significant difference among the vegetarian and non-vegetarian sportspersons of strength sports in psychological and physical characteristics in relation to their level of participation. the results obtained from the study revealed that significant difference was found on some of the psychological and physical characteristics among vegetarian and non-vegetarian boxing and wrestling players, and difference among vegetarian and non-vegetarian female sportspersons of different level of participation (state, intervarsity and national) of strength sports also found significant on some of the psychological and physiological characteristics. Therefore, hypothesis number-2 stands partially accepted in case of strength sports.

CHAPTER-V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary

What you eat not only affects your health that also exerts a definite influence upon the mind. Everything we eat produces a sensation on the body and brain. The sensation created by food determines a specific mentality. Meat eating produces gross material reactions that develop the material or animal mental tendencies, whereas eating raw fruits and vegetables helps to reinforce and develop of the spiritual qualities.

The purpose of the study was to compare psycho-physical characteristics of vegetarian and non-vegetarian sports person of strength sports and endurance sports at different level of performance .The study was carried out on five hundred and sixty subjects of endurance sports – Hockey and football and strength sports – Boxing and Wrestling of different level state , intervarsity and national level. Subjects were selected from the different academies of Ludhiana, Amritsar and Fatehgarh sahib.

5.1. Objectives

The study was conducted to fulfil the following objectives.

1. To study the Psychological and Physical characteristics among Vegetarians and Non-Vegetarians Sportspersons of strength sports in relation to their level of participation.
2. To study the Psychological and physical characteristics among Vegetarians and Non-Vegetarians Sportspersons of Endurance sports in relation to their level of participation

5.2. Hypotheses:

The study has been conducted with the following Hypotheses:

1. It was hypothesized that there would be significant difference among the Vegetarians and Non-Vegetarians Sportspersons of strength sports in psychological and physical characteristics in relation to their level of participation
2. It was hypothesized that there would be significant difference among the Vegetarians and Non-Vegetarians Sportspersons of endurance sports in

psychological and physical characteristics in relation to their level of participation.

5.3 Methodology

Descriptive method was selected to conduct present study. In the present investigation, an attempt has been made to Study Psycho-Physical Characteristics of Vegetarians and Non-Vegetarian Sports Person in relation to their level of participation. The investigator for the present study was adopted purposive random sampling procedure. The total numbers of sample present study comprises of 560 subjects including female vegetarian sports person=280 and female non-vegetarian sports person=280, those was between the age of 18-28 years.They was further divided into three groups according to their level of participation i.e State level sportspersons (N1= 240), Inter-varsity level sportspersons (N2=160) and National level sportspersons (N3=160) of Punjab state. Data was collected from different sports hockey, football, boxing and wrestling academies and SAI centers of Punjab.

5.4 Sampling design

Sports		State Level		Inter University Level		National Level	
		Veg	Non-Veg	Veg	Non-Veg	Veg	Non -Veg
Endurance Sports	Hockey	30	30	20	20	20	20
	Football	30	30	20	20	20	20
Strength Sports	Boxing	30	30	20	20	20	20
	Wrestling	30	30	20	20	20	20
Total		120	120	80	80	80	80
Grand Total		560					

5.5 Selection of Variables

A feasibility analysis as to which of the variables could be taken up for the investigation, keeping in view the availability of tools, adequacy to the subjects and the legitimate time that could be devoted for tests and to keep the entire study unitary and integrated was made in consultation with experts. With the above criteria's in mind, the following psychological and physical characteristics were taken up for the investigation:

a) Psychological Variables
   i. Sports Aggression
   ii. Mental Health
b) Physical Variables
   i) Muscular Strength
   ii) Muscular Endurance
   iii) Cardio-pulmonary Endurance
   iv) Flexibility

5.6 Findings

5.6.1. Findings of descriptive statistics psychological characteristics of endurance and strength sports among vegetarian and non-vegetarian female sportspersons

Aggression

- It was evident from the findings that significant differences were found on the variable aggression between vegetarian and non- vegetarian hockey, football, boxing and wrestling players of state, intervarsity and national level players, respectively. When compared the mean values of both the groups, it has been found that vegetarian hockey, football, boxing and wrestling state, intervarsity and national level female players have performed significantly better on aggression. The outcome of the above results might be due to some motivational drive, diet and different coaching pattern.

Emotional stability

- It was evident from the findings that significant difference was found on the sub-variable emotional stability among vegetarian and non- vegetarian hockey, football, boxing and wrestling female players at State, Intervarsity and National level except boxing player of state level and wrestling players of

intervarsity level. When compared the mean values of the both groups it has been found that vegetarian hockey, football, boxing and wrestling female state, intervarsity and national players have performed significantly better on emotional stability.

Overall Adjustment

- It was evident from the findings that significant difference was found on the sub-variable over all adjustment among vegetarian and non- vegetarian hockey football, boxing and wrestling female players at State, Intervarsity and National level except hockey player of state and intervarsity level. When compared the mean values of the both groups it has been found that vegetarian hockey, football, boxing and wrestling female state, intervarsity and national players have performed significantly better on over all adjustment.

Autonomy

- It was evident from the findings that significant difference was found on the sub-variable of autonomy among vegetarian and non- vegetarian hockey, football, boxing and wrestling female players at State level, intervarsity and national level except the players of football and boxing of intervarsity level .When compared the mean values of the both groups it has been found that vegetarian female players have performed significantly better on autonomy.

Security Insecurity

- It was evident from the findings that there was significant difference found on the sub-variable of security insecurity among vegetarian and non- vegetarian hockey, football, boxing and wrestling female players at State, Intervarsity and National level except boxing players of intervarsity level. When compared the mean values of the both groups it has been found that vegetarian hockey, football, boxing and wrestling female state, intervarsity and national players have performed significantly better on security insecurity.

Self- Concept

- It was evident from the findings that there was significant difference found on the sub-variable self-concept among vegetarian and non- vegetarian hockey, football, boxing and wrestling female players at State, Intervarsity and National level except football players of intervarsity level. When compared the mean values of the both groups it has been found that vegetarian hockey,

football, boxing and wrestling female state, intervarsity and national players have performed significantly better on self-concept.

Intelligence

- It was evident from the findings that significant difference was found on the sub-variable intelligence among vegetarian and non- vegetarian hockey, football, boxing and wrestling female players at State, Intervarsity and National level. When compared the mean values of the both groups it has been found that vegetarian hockey, football, boxing and wrestling female state, intervarsity and national players have performed significantly better on intelligence.

5.6.2. Findings descriptive statistics of physiological characteristics of endurance and strength sports among vegetarian and nonvegetarian sportspersons

Flexibility

- It was evident from the findings that significant difference was found on the variable flexibility among vegetarian and non- vegetarian hockey, football and boxing and wrestling female players at State, Intervarsity and National level except players of wrestling of national level. When compared the mean values of the both groups it has been found that vegetarian hockey, football and boxing female state, intervarsity and national players have performed significantly better on flexibility.

Muscular Endurance

- It was evident from the findings that significant difference was found on the variable muscular endurance among vegetarian and non- vegetarian hockey and football female players at state, intervarsity level and national level except players of hockey, football, boxing and wrestling female players at state, intervarsity level and national level except players of hockey at national level. When compared the mean values of the both groups it has been found that vegetarian female hockey, football, boxing and wrestling state, intervarsity and national level players have performed significantly better on muscular endurance.

Right Hand Grip Strength

- It was evident from the findings that significant difference was found on the sub-variable right-hand grip strength among vegetarian and non-vegetarian hockey, football, boxing and wrestling female players at state, intervarsity and national level except hockey players of national level. When compared the mean values of the both groups it has been found that non-vegetarian female players of all games have performed significantly better on right hand grip strength

Left Hand Grip Strength

- It was evident from the findings that significant difference was found on the sub-variable left-hand grip strength among vegetarian and non- vegetarian hockey, football, boxing and wrestling female players at state, intervarsity and national level. When compared the mean values of the both groups it has been found that non-vegetarian female players of all games at all levels have performed significantly better on left hand grip strength

Back Strength

- It was evident from the findings that significant difference was found on the sub-variable back strength among vegetarian and non- vegetarian hockey, football, boxing and wrestling female players at state, intervarsity and national level. When compared the mean values of the both groups it has been found that non-vegetarian female players of all games have performed significantly better on back strength.

Leg Strength

- It was evident from the findings that significant difference was found on the sub-variable leg strength among vegetarian and non- vegetarian hockey, football, boxing and wrestling female players at state, intervarsity and national level except hockey player of national level and football, boxing and wrestling players of intervarsity level. When compared the mean values of the both groups it has been found that non-vegetarian female players of all games have performed significantly better on leg strength.

Cardiovascular Endurance

- It was evident from the findings that insignificant difference was found on the variable cardiovascular endurance among vegetarian and non- vegetarian

hockey players at state, intervarsity and national level, football players at intervarsity level and national level, boxing players at state level and wrestling players at intervarsity level. When compared the mean values of the both groups it has been found that vegetarian female players of hockey, football, boxing and wrestling players have performed significantly better on cardiovascular endurance. These findings may be because of the nature of the games which demand the high level of cardiovascular endurance that why no difference was found between vegetarians and non- vegetarians.

5.6.3 Findings of analysis of variance (ANOVA) of psychological characteristics among different levels of participation of Endurance and strength vegetarian and non- vegetarian female sportspersons

Aggression

- It was evident from the findings that insignificant differences were found on the variable aggression at different level of participation of hockey vegetarian and non-vegetarian, football non-vegetarian, boxing vegetarian wrestling vegetarian and non-vegetarian players.

Emotional stability

- It was evident from the findings that insignificant differences were found on the variable emotional stability at different level of participation of hockey vegetarian and non-vegetarian, football vegetarian and non-vegetarian, boxing vegetarian and non-vegetarian and wrestling vegetarian and non-vegetarian players.

Over All Adjustment

- It was evident from the findings that insignificant differences were found on the variable over all adjustment at different level of participation of hockey vegetarian, football vegetarian, boxing vegetarian and non-vegetarian and wrestling vegetarian and non-vegetarian players.

Autonomy

- It was evident from the findings that insignificant differences were found on the variable autonomy at different level of participation of hockey vegetarian and non-vegetarian, football vegetarian and non-vegetarian, boxing vegetarian and non-vegetarian and wrestling vegetarian and non-vegetarian players.

Security Insecurity

- It was evident from the findings that insignificant differences were found on the variable security insecurity at different level of participation of hockey vegetarian and non-vegetarian, football vegetarian and non-vegetarian, boxing non-vegetarian and wrestling vegetarian and non-vegetarian players.

Self- Concept

- It was evident from the findings that insignificant differences were found on the variable self-concept at different level of participation of hockey non-vegetarian, football vegetarian and non-vegetarian, boxing non-vegetarian and wrestling non-vegetarian players.

Intelligence

- It was evident from the findings that insignificant differences were found on the variable intelligence at different level of participation of hockey non-vegetarian, football vegetarian and non-vegetarian, boxing non-vegetarian and wrestling vegetarian players.

5.6.4. Findings of analysis of variance (ANOVA) of physical characteristics among different levels of participation of Endurance and strength vegetarian and non-vegetarian female sportspersons.

Flexibility

- It was evident from the findings that insignificant differences were found on the variable flexibility at different level of participation of football vegetarian and non-vegetarian, boxing vegetarian and wrestling non-vegetarian players.

Muscular Endurance

- It was evident from the findings that insignificant differences were found on the variable muscular endurance at different level of participation of hockey vegetarian and non-vegetarian, boxing vegetarian and wrestling vegetarian players.

Right Hand Grip Strength

- It was evident from the findings that insignificant differences were found on the variable right-hand grip strength at different level of participation of

hockey vegetarian and non-vegetarian, football non-vegetarian, boxing non-vegetarian and wrestling vegetarian and non-vegetarian players.

Left Hand Grip Strength

- It was evident from the findings that insignificant differences were found on the variable left -hand grip strength at different level of participation of hockey vegetarian and non-vegetarian, football vegetarian and non-vegetarian, boxing vegetarian and wrestling vegetarian players.

Back Strength

- It was evident from the findings that insignificant differences were found on the variable back strength at different level of participation of hockey vegetarian and non-vegetarian, football vegetarian and non-vegetarian, boxing vegetarian and non-vegetarian and wrestling vegetarian and non-vegetarian players.

Leg Strength

- It was evident from the findings that insignificant differences were found on the variable back strength at different level of participation of boxing non-vegetarian players.

Cardiovascular Endurance

- It was evident from the findings that insignificant differences were found on the variable back strength at different level of participation of hockey non-vegetarian, football vegetarian and non-vegetarian, boxing non-vegetarian and wrestling vegetarian players.

CONCLUSIONS

Comparison of psychological characteristics between vegetarian and non-vegetarian female sports person of endurance sports (i.e. hockey and football) at different level of performance

- It was concluded that significant difference was found on all the psychological variables among vegetarian and non- vegetarian hockey female players of state and intervarsity level except over all adjustment and on national level significant difference was found on all psychological variables.
- It was concluded that significant difference was found on all the psychological variables among vegetarian and non- vegetarian football female players of state except autonomy and intervarsity level except autonomy and self-concept and on national level significant difference was found on all psychological variables.

Comparison of physical characteristics between vegetarian and non-vegetarian female sports person of endurance sports (i.e. hockey and football) at different level of participation

- It was concluded that significant difference was found on all the physical variables among vegetarian and non- vegetarian hockey female players of state and intervarsity level except cardiovascular endurance and on national level significant difference was found on flexibility, left hand grip, back strength and cardiovascular endurance physical variables.
- It was concluded that significant difference was found on all the physical variables among vegetarian and non- vegetarian football female players of state and significant difference was found on all the physical variables among vegetarian and non- vegetarian football female players of intervarsity and national level except cardiovascular endurance.

Comparison of psychological characteristics among state level, inter university level and national level vegetarian and non-vegetarian female sports person of endurance sports, i.e. hockey and football.

Aggression

- It was concluded that after doing analysis of variance among hockey vegetarian and non-vegetarian players of different level of participation on the variable aggression insignificant differences were found in both vegetarian and non-vegetarian hockey female players.
- It was concluded that after doing analysis of variance among football vegetarian and non-vegetarian players of different level of participation on the variable aggression significant differences was found in vegetarian players and insignificant difference was found in non-vegetarian football female players.

Emotional stability

- It was concluded that after doing analysis of variance among hockey and football vegetarian and non-vegetarian players of different level of participation on the variable emotional stability insignificant differences was found in both vegetarian and non-vegetarian hockey and football female players.

Over all adjustment

- It was concluded that after doing analysis of variance among hockey and football vegetarian and non-vegetarian players of different level of participation on the variable overall adjustment significant differences was found in non-vegetarian hockey and football female players.

Autonomy

- It was concluded that after doing analysis of variance among hockey and football vegetarian and non-vegetarian players of different level of participation on the variable autonomy insignificant differences was found in vegetarian and non-vegetarian hockey and football female players.

Security Insecurity

- It was concluded that after doing analysis of variance among hockey and football vegetarian and non-vegetarian players of different level of participation on the variable security insecurity insignificant differences was found in vegetarian and non-vegetarian hockey and football female players.

Self -Concept

- It was concluded that after doing analysis of variance among hockey vegetarian and non-vegetarian players of different level of participation on the variable self-concept insignificant differences was found in vegetarian hockey female players.
- It was concluded that after doing analysis of variance among football vegetarian and non-vegetarian players of different level of participation on the variable self-concept insignificant differences was found in vegetarian and non-vegetarian hockey female players.

Intelligence

- It was concluded that after doing analysis of variance among hockey and football vegetarian and non-vegetarian players of different level of participation on the variable intelligence insignificant differences was found in vegetarian and non-vegetarian hockey and football female players.

Comparison of physical characteristics among state level, inter university level and national level vegetarian and non-vegetarian female sports person of endurance sports, i.e. hockey and football.

Flexibility

- It was concluded that after doing analysis of variance among hockey vegetarian and non-vegetarian players of different level of participation on the variable flexibility significant differences was found in vegetarian and non-vegetarian hockey female players.
- It was concluded that after doing analysis of variance among football vegetarian and non-vegetarian players of different level of participation on the variable flexibility insignificant differences was found in vegetarian and non-vegetarian football female players.

Muscular Endurance

- It was concluded that after doing analysis of variance among hockey vegetarian and non-vegetarian players of different level of participation on the variable muscular endurance insignificant differences was found in vegetarian and non-vegetarian hockey female players.
- It was concluded that after doing analysis of variance among football vegetarian and non-vegetarian players of different level of participation on the variable muscular endurance significant differences was found in vegetarian and non-vegetarian football female players.

Right-Hand Grip Strength

- It was concluded that after doing analysis of variance among hockey vegetarian and non-vegetarian players of different level of participation on the variable right-hand grip strength insignificant differences was found in vegetarian and non-vegetarian hockey female players.
- It was concluded that after doing analysis of variance among football vegetarian and non-vegetarian players of different level of participation on the variable right-hand grip strength significant differences was found in vegetarian and insignificant difference was found in non-vegetarian football female players.

Left-hand Grip Strength

- It was concluded that after doing analysis of variance among hockey and football vegetarian and non-vegetarian players of different level of participation on the variable left-hand grip strength insignificant differences was found in vegetarian and non-vegetarian hockey and football female players.

Back Strength

- It was concluded that after doing analysis of variance among hockey and football vegetarian and non-vegetarian players of different level of participation on the variable back strength insignificant differences was found in vegetarian and non-vegetarian hockey and football female players.

Leg strength

- It was concluded that after doing analysis of variance among hockey and football vegetarian and non-vegetarian players of different level of participation on the variable leg strength significant differences was found in vegetarian and non-vegetarian hockey and football female players.

Cardiovascular Endurance

- It was concluded that after doing analysis of variance among hockey vegetarian and non-vegetarian players of different level of participation on the variable cardiovascular endurance significant differences was found in vegetarian and insignificant difference was found in non-vegetarian hockey female players.
- It was concluded that after doing analysis of variance among football vegetarian and non-vegetarian players of different level of participation on the variable cardiovascular endurance insignificant differences was found in vegetarian and non-vegetarian female players.

Comparison of psychological characteristics between vegetarian and non-vegetarian female sports person of Strength sports (i.e. boxing and football) at different level of performance

- It was concluded that significant difference was found on all the psychological variables among vegetarian and non- vegetarian boxing female players of state level except emotional stability and significant difference was found on all the psychological variables of intervarsity level except autonomy and security and insecurity and on national level significant difference was found on all psychological variables.
- It was concluded that significant difference was found on all the psychological variables among vegetarian and non- vegetarian wrestling female players of state and national level and significant difference was found on all the psychological variables of intervarsity level except emotional stability.

Comparison of Physical Characteristics Between Vegetarian And Non-vegetarian female Sports Person of Strength Sports (I.E. Boxing And Wrestling) At Different Level of Performance

- It was concluded that significant difference was found on all the physical variables among vegetarian and non- vegetarian boxing female players of state except cardiovascular endurance and significant difference was found on all the physical variables among vegetarian and non- vegetarian boxing female players of intervarsity level except leg strength and on national level except flexibility.
- It was concluded that significant difference was found on all the physical variables among vegetarian and non- vegetarian wrestling female players of state level and significant difference was found on all the physical variables among vegetarian and non- vegetarian wrestling female players of intervarsity level except cardiovascular endurance and on national level insignificant difference was found on flexibility.

Comparison of psychological characteristics among state level, inter university level and national level vegetarian and non-vegetarian female sports person of strength sports (i.e. boxing and wrestling).

Aggression

- It was concluded that after doing analysis of variance among boxing vegetarian and non-vegetarian players of different level of participation on the variable aggression insignificant differences were found in both vegetarian boxing female players.
- It was concluded that after doing analysis of variance among wrestling vegetarian and non-vegetarian players of different level of participation on the variable aggression insignificant differences was found in vegetarian players and non-vegetarian wrestling female players.

Emotional Stability

- It was concluded that after doing analysis of variance among boxing and wrestling vegetarian and non-vegetarian players of different level of participation on the variable emotional stability insignificant differences was

found in both vegetarian and non-vegetarian boxing and wrestling female players.

Over all adjustment

- It was concluded that after doing analysis of variance among boxing and wrestling vegetarian and non-vegetarian players of different level of participation on the variable overall adjustment insignificant differences was found in vegetarian and non-vegetarian hockey and football female players.

Autonomy

- It was concluded that after doing analysis of variance among boxing and wrestling vegetarian and non-vegetarian players of different level of participation on the variable autonomy insignificant differences was found in vegetarian and non-vegetarian hockey and football female players.

Security Insecurity

- It was concluded that after doing analysis of variance among boxing vegetarian and non-vegetarian players of different level of participation on the variable security insecurity significant differences was found in vegetarian and insignificant difference was found in non-vegetarian boxing female players.
- It was concluded that after doing analysis of variance among wrestling vegetarian and non-vegetarian players of different level of participation on the variable security insecurity insignificant differences was found in vegetarian and non-vegetarian wrestling female players.

Self -Concept

- It was concluded that after doing analysis of variance among boxing vegetarian and non-vegetarian players of different level of participation on the variable self-concept insignificant differences was found in vegetarian boxing female players.
- It was concluded that after doing analysis of variance among wrestling vegetarian and non-vegetarian players of different level of participation on the variable self-concept significant differences was found in vegetarian and insignificant difference was found in non-vegetarian wrestling female players.

Intelligence

- It was concluded that after doing analysis of variance among boxing vegetarian and non-vegetarian players of different level of participation on the variable intelligence insignificant differences was found in vegetarian and non-vegetarian boxing female players.
- It was concluded that after doing analysis of variance among wrestling vegetarian and non-vegetarian players of different level of participation on the variable self-concept significant differences was found in vegetarian and insignificant difference was found in non-vegetarian wrestling female players.

Comparison of physical characteristics among state level, inter university level and national level vegetarian and non-vegetarian female sports person of strength sports (i.e. boxing and wrestling).

Flexibility

- It was concluded that after doing analysis of variance among boxing vegetarian and non-vegetarian players of different level of participation on the variable flexibility insignificant differences was found in vegetarian and significant difference was found in non-vegetarian boxing female players.
- It was concluded that after doing analysis of variance among wrestling vegetarian and non-vegetarian players of different level of participation on the variable flexibility significant differences was found in vegetarian and insignificant difference was found in non-vegetarian wrestling female players.

Muscular Endurance

- It was concluded that after doing analysis of variance among boxing and wrestling vegetarian and non-vegetarian players of different level of participation on the variable muscular endurance insignificant differences was found in vegetarian boxing and wrestling female players.

Right-hand grip strength

- It was concluded that after doing analysis of variance among boxing vegetarian and non-vegetarian players of different level of participation on the variable right-hand grip strength insignificant differences was found in non-vegetarian boxing female players.

- It was concluded that after doing analysis of variance among wrestling vegetarian and non-vegetarian players of different level of participation on the variable right-hand grip strength insignificant differences was found in vegetarian and non-vegetarian wrestling female players.

Left-hand grip strength

- It was concluded that after doing analysis of variance among boxing and wrestling vegetarian and non-vegetarian players of different level of participation on the variable left-hand grip strength insignificant differences was found in vegetarian boxing and wrestling female players.

Back Strength

- It was concluded that after doing analysis of variance among boxing and wreslting vegetarian and non-vegetarian players of different level of participation on the variable back strength insignificant differences was found in vegetarian and non-vegetarian hockey and football female players.

Leg strength

- It was concluded that after doing analysis of variance among boxing vegetarian and non-vegetarian players of different level of participation on the variable leg strength significant differences was found in vegetarian and insignificant difference was found in non-vegetarian boxing female players.
- It was concluded that after doing analysis of variance among wrestling vegetarian and non-vegetarian players of different level of participation on the variable leg strength significant differences was found in vegetarian and non-vegetarian wrestling female players.

Cardiovascular Endurance

- It was concluded that after doing analysis of variance among boxing vegetarian and non-vegetarian players of different level of participation on the variable cardiovascular endurance significant differences was found in vegetarian and insignificant difference was found in non-vegetarian boxing female players.
- It was concluded that after doing analysis of variance among wrestling vegetarian and non-vegetarian players of different level of participation on the variable cardiovascular endurance insignificant differences was found in

vegetarian and significant difference was found in non-vegetarian wrestling female players.

- It was concluded from the study that a vegetarian diet which is well planned and well-designed can fulfil the needs of the athletes satisfactorily so there is no need to switch your favourite diet just to do well in the sports.

SUGGESTION AND RECOMMENDATION FOR FURTHER RESEARCH

The present study was undertaken on Hockey, Football, Boxing and Wrestling state, intervarsity and national level players on their selected psychological and physical characteristics. The finding to this study would help us for the future researcher in the area of psychological research as related to performance in game and sports. In the light of the outcomes of the present work the investigator have to put forward the following suggestions to be following by future researcher.

1. The same study can be conducted as a longitudinal research.
2. The same study can be conducted in experiment way.
3. The study can be done on male players of different age groups and different level of performance.
4. This study can be taken out on other psychological variable then aggression and mental health.
5. The same study can be expanded by choosing more physiological variables
6. The same study can be taken out on hematological variables.

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