EAST WEST UNIVERSITY

A SURVEY ON THE FITNESS STATUS AMONG THE UNIVERSITY STUDENTS OF DHAKA

A thesis report submitted to the Department of Pharmacy, East West University, Bangladesh, in partial fulfillment of the requirements for the Degree of Bachelor of Pharmacy.

Submitted By:

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July 2017

Declaration by the Research Candidate

I, **Nahida Akter**, hereby declare that the dissertation entitled **"A Survey on the Fitness Status Among the University Students of Dhaka"** is submitted by me to the Department of Pharmacy, East West University, in the partial fulfillment for the award of the degree of Bachelor of Pharmacy, is a record of original research work conducted by me under the supervision of **Mr. Md. Anisur Rahman**, Assistant Professor, Department of Pharmacy, East West University and it has not formed on the basis for the award of any other Degree/Diploma/fellowship or other similar title to any candidate to any University.

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Certification by the Supervisor

This is to certify that the dissertation entitled **"A Survey on the Fitness Status Among the University Students of Dhaka"** is a research work done by **Nahida Akter (ID: 2013-3-70-054)**, in partial fulfillment of the requirement for the degree of Bachelor of Pharmacy under my supervision.

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This is to certify that the thesis entitled **"A Survey on the Fitness Status Among the University Students of Dhaka"** submitted to the Department of Pharmacy, East West University for the partial fulfillment of the requirement for the award of the degree Bachelor of Pharmacy, is a original record and genuine research work carried out by **Nahida Akter, ID: 2013-3-70-054** in July 2017.

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Dr. Shamsun Nahar Khan
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Dedication

This research paper is dedicated to my beloved parents, honorable faculties and loving friends.

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Abstract

OBJECTIVE: The research was carried out to find out status of fitness among students. METHOD: the study included finding out information regarding their knowledge about fitness, their effort to stay fit etc. and to find out the reason for not being fit to solve them. DESIGN: A standardized questionnaire introduced to student to collect their response. SETTING: East West University, Dhaka. SUBJECTS: 500 students of the university among them 287 were male and 213 were female. INTERVENTIONS: A Survey, questionnaire composed of eating habit related questions, physical activity related questions, other behavioral factor related questions, health related questions etc. RESULTS: 57% male and 43% female respondents, 46% belong to age range 20-22, 42% within the range 23-25, BMI, 69% of the population had healthy weight, 19% had smoking habit, 14% had alcohol consumption habit, sleep duration, 44% actively participated in sports. Male respondents showed greater percentage in alcohol consumption and smoking habit, participation in sports etc. female respondents showed greater percentage in doing meditation and yoga, not doing exercise, physical inactivity and less participation in sports. Some behaviors for example smoking, active participation in games, taking outside food, regular exercise differs greatly with age. Some behavioral pattern differ greatly in male and female for example alcohol consumption, physical activity, maintaining diet, eating habit, participation in sports etc. CONCLUSION: Majority of the students had healthy weight. So it can be said that overall fitness status is satisfactory among university students.

CHAPTER 1

INTRODUCTION

University students in most of the cases follow sedentary lifestyle willingly or unconsciously. It is observed that most of the students spend their time in sleeping, socializing, chatting etc. even the y are not that much aware about their eating habit. They are not aware about maintaining diet. They are not in many case they are not concerned about their health. The study has been carried out to evaluate the fitness related consciousness and physical activity among university students.

1.1 Physical fitness:

It is an indicator that shows whether you have the ability to perform and enjoy day-to-day physical activities with ease. Physical fitness is defined as the state of general well being, physically sound and healthy, along with mental stability. (health-galaxy.com, 2016)

Previously fitness was commonly defined as the capacity of the person to meet the physical demands of daily life and carry out the day's activities without undue fatigue. (Study.com, 2017)

Physical fitness is not only being able to perform several feats that expresses ones strength but also it is the condition of our body as a whole the physiological, mental and biochemical state and health. Physically fit ones can efficiently work, play, resist or can prevent chronic disease and meet constant demands. Everybody has a different level of complete fitness which if reached rewards one with healthy and more enjoyable life. (HEALTH COMMUNITY KEY, 2016)

However, because of increased leisure time, changes in lifestyles rendered this definition insufficient. These days, physical fitness is considered a measure of the body's ability to function efficiently and effectively in work and leisure activities, to be healthy, to resist hypo-kinetic diseases, and to meet emergency situations. (Study.com, 2017)

1.1.1 Hypokinetic: pertaining to diminished power of movement or motor function, this may or may not be accompanied by a mild form of paralysis.

1.1.2 Fitness components:

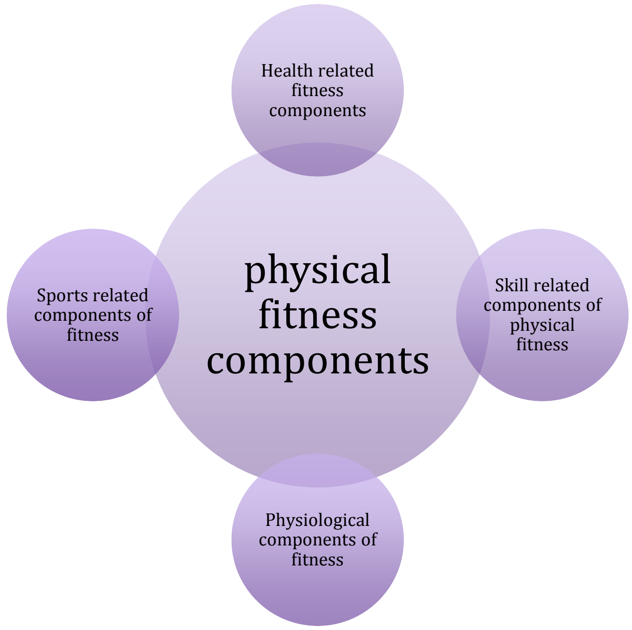


Fig 1.1: Fitness components (health-galaxy.com, 2016)

1.2 Health related fitness components:

Fig 1.2: Health related fitness components (health-galaxy.com, 2016)

1.3 Health Related Physical Fitness:

It is best defined as activity aimed to improve your health. The goal of health related fitness is prevention of or rehabilitation from disease as well as the development of a high level of functional capacity for daily tasks. Health related physical fitness is further divided into 5 parts i.e. components of health related physical fitness are

1.3.1 Balanced body composition:

It expresses the ratio of fat to muscle. Minimum of fat and maximum of lean mass is a sign of a healthy and fit body. For example, a 100-pound person with a 25% body fat composition will have a lean body mass of 75 pound. (Topend sport, 2010)

Fig 1.3.1: Using a skinfold caliper is a good, inexpensive, and fairly accurate way to measure one's body composition (RIH, 2017)

1.3.2 Cardiovascular fitness or endurance:

Cardiovascular endurance can be defined as the component that helps to determine if the heart and lungs are working in coordination. It shows the ability of the body to deliver oxygen and nutrients to tissues and to remove wastes. (Study.com, 2017)

Cardiovascular exercises are known as aerobic exercise that is continued for a long period of time. (Armayor, 2015)

Fig 1.3.2: Running a marathon is a great example of cardiovascular endurance. (RIH, 2017)

Cardiovascular exercises or aerobics -walking, running, biking, rowing, treadmills (RIH, 2017)

1.3.3 Flexibility:

Flexibility can be defined as the component that checks the ability of the joints in the body to move to their full range of motion. (Health Status, 2017)

Fig 1.3.3: The most common test for flexibility is the Sit and Reach Test (RIH, 2017)

Flexibility exercises - stretching, yoga (RIH, 2017)

1.3.4 Muscular endurance:

Muscular endurance is defined as the ability of the body to perform repeated exercises without getting tired. If a person can perform more number of repetitions of a particular strength training exercise, then it can be said that he/she has good muscular endurance. (Health Status, 2017)

Fig 1.3.4: A long-distance cycling race is a good example of muscular endurance. (RIH, 2017)

Strength training exercises are running, jogging etc. (RIH, 2017)

1.3.5 Muscle strength:

Muscle strength can be defined as the ability of a muscle or group of muscles to exert force against resistance. Having greater muscle strength enhances physical fitness because it allows you to more easily perform tasks such as pushing, pulling and lifting. (Health Status, 2017)

Muscle endurance activities helps to maintain weight as this types of exercise burns calories and metabolic rate also increases. This types of exercise also gives more energy to function better, improves heart and lung functions results in increases oxygen capacity and decreased workload on heart. This type of exercise also improved mood and reduces stress levels. This type of activity increases muscle strength, decreases risk of serious health issues. (Andrews, 2015)

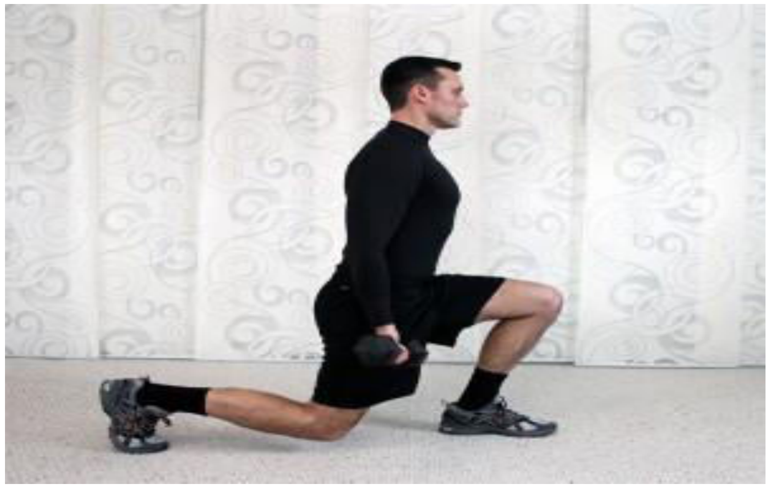


Fig 1.3.5: The walking lunge is a great way to improve muscular strength, balance, and coordination. (RIH, 2017)

Weight training exercises -push-ups, pull-ups, biceps curls, pectoral fly, leg extensions, back extension, etc. (Health Status, 2017)

1.4 Skill related components:

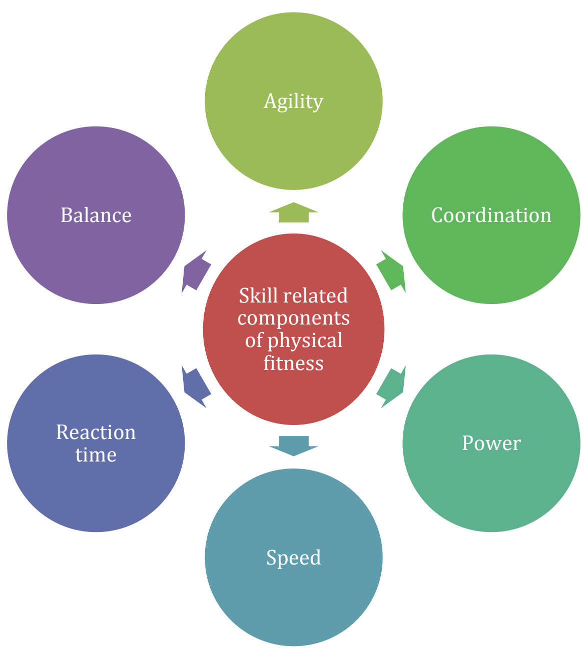


Fig 1.4: Skill related fitness component (Quizlet, 2017)

Examples:

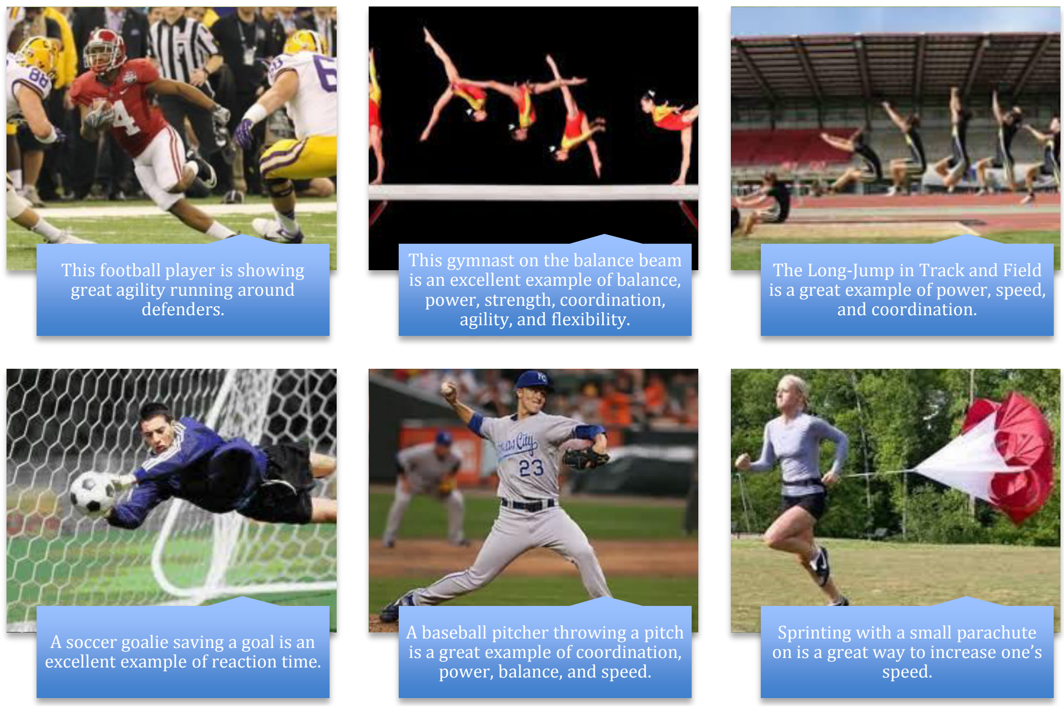


Fig 1.4.1: Examples of skill related fitness components (Angel, 2017)

1.5 Physiological components:

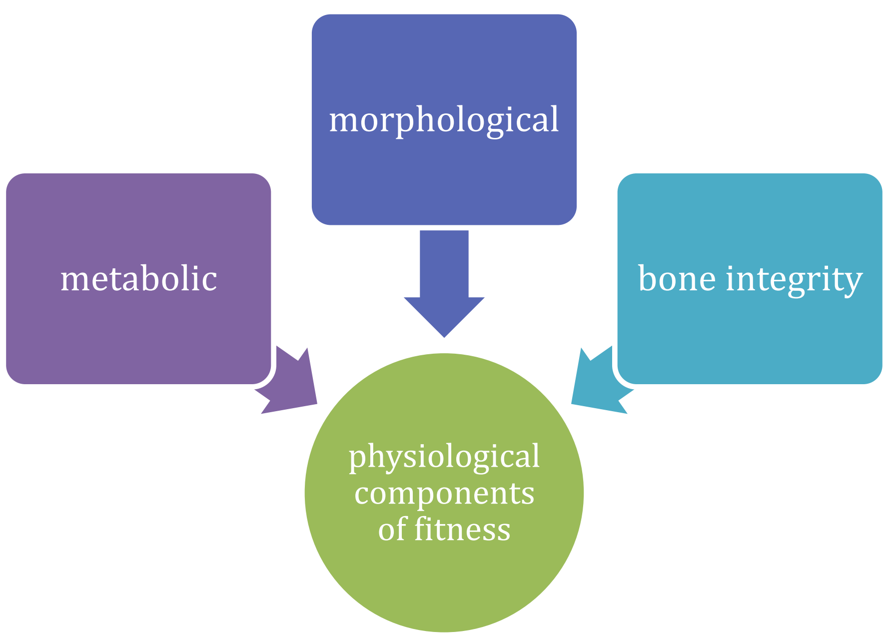


Fig 1.5: Physiological fitness components (health-galaxy.com, 2016)

1.6 Factors affecting fitness:

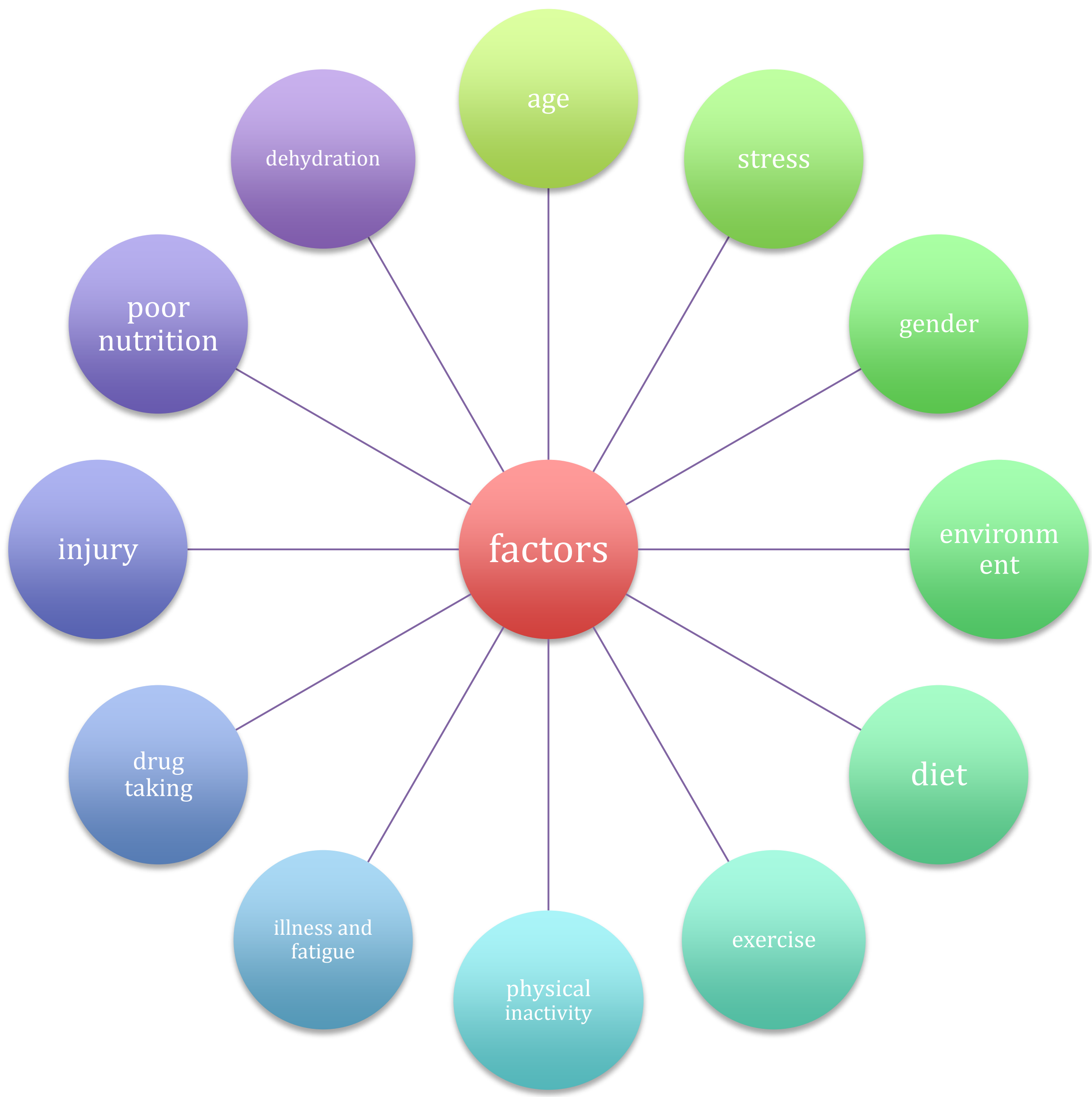
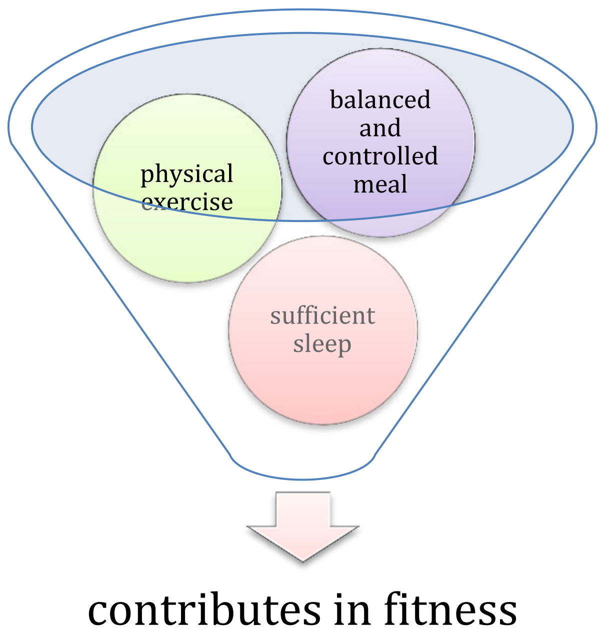


Fig 1.6: Factors affecting fitness (Study.com, 2017)

1.7 Benefits of physical fitness:

Fig 1.7: Benefits of physical fitness (MAYO CLINIC, 2017)

1.8 Some important measures to stay fit:



1.8.1 Balanced diet:

Generally, a healthy diet consists of healthy vegetables, fresh fruits, low or non-fat dairy products and whole grains. You must also include protein from meat, fish, eggs, poultry and nuts and limit your consumption of sugar, salt and fat.

A balanced diet id fuel for human body and it also boost the immunity. (Jeneffer, 2014)

Fig 1.8.1: Balanced diet composition (Jeneffer, 2014)

1.8.2 Physical exercise:

Regular physical activity is one that can help to

- Control your weight
- Lower your risk of heart disease
- Lower your risk for type 2 diabetes and metabolic syndrome
- Lower your risk of some cancers
- Strengthen your bones and muscles
- Improve your mental health and mood (Medicine Plus, 2015)

Several exercises are-

Fig 1.8.2: physical exercise that boosts fitness level (Medicine Plus, 2015)

1.8.3 Proper sleep and health:

Sleep plays a vital role in good health and well being throughout your life. Getting enough quality sleep at the right times can help protect your mental health, physical health, quality of life, and safety. (NIH, 2017)

Important health benefits of sleep are

- Improved memory
- Affects quality of life
- Curb inflammation
- Sharpen attention
- Help to manage healthy weight
- Lowers stress (Sparacino, 2017)

Most adults need 7 to 8 hours of good quality sleep on regular schedule each night. Getting enough sleep isn't only about total hours of sleep. It is also important to get good quality sleep on a regular schedule so that one feel rested when he/she wakes up.

1.9 Sedentary life style:

It is a type of life style with no or irregular physical activity. A person living a sedentary lifestyle is often sitting or lying, while reading, socializing, watching television, playing video games, or using a mobile phone or computer for much of the day. A sedentary lifestyle can contribute to many preventable causes contributes to death. (Lakka, 2003)

It is important to avoid sedentary lifestyle because:

One study showed a 40% decrease in cancer mortality in persons who were physically active compared to those who were inactive. Physical activity helps prevent insulin resistance. A recent study reported that for every 2 hours that a person watched TV, the risk of type 2 diabetes increased 14%. One study reported that there was a 50% reduction in the risk of dementia in older persons who maintained regular bouts of physical activity. Data from the Aerobics Research Center in Dallas, Texas, found that physically active men lowered their risk of stroke by two-thirds. And in the Nurses' Health Study, physically active women decreased their risk of stroke by 50%. One study showed that an hour of walking daily cut the risk of obesity by 24%. (NCHPAD, 2017)

1.9.1: Effect of sedentary lifestyle:

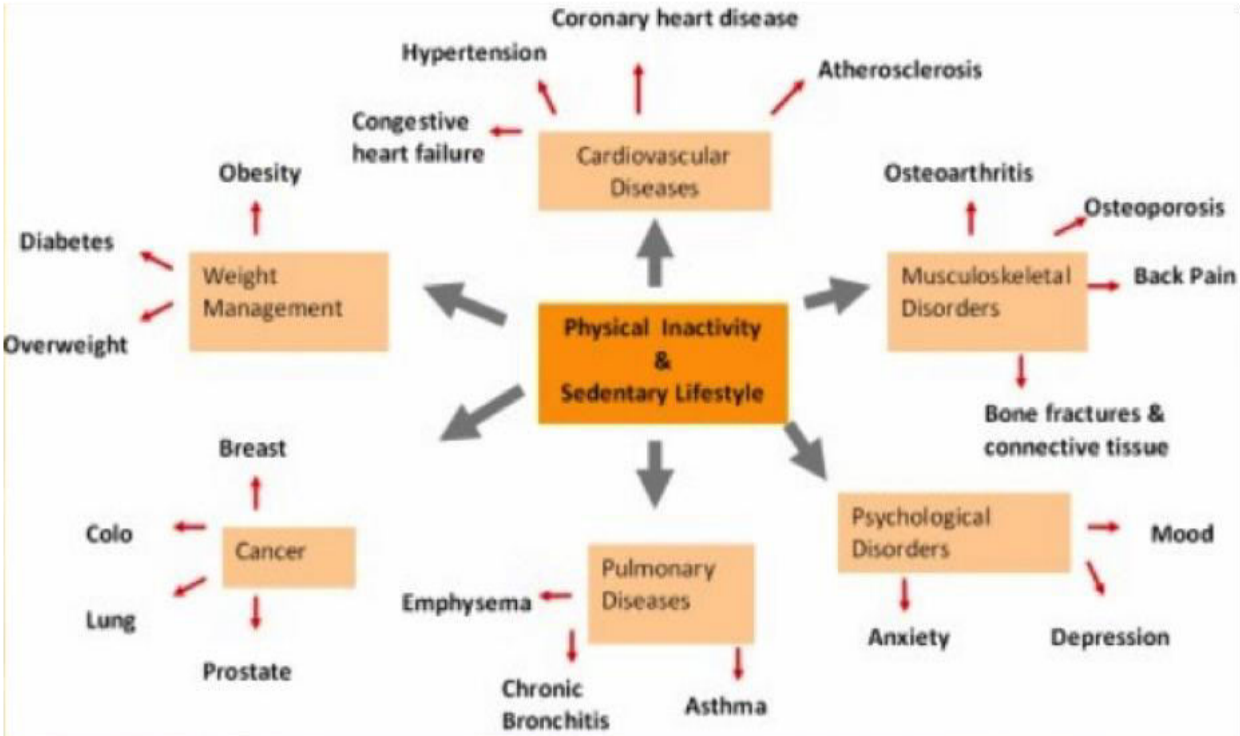


Fig 1.9: Effect of sedentary lifestyle on overall health (NCHPAD, 2017)

1.10 Athletic food supplements:

- Creatine:

Creatine is a chemical that is normally found in the body, mostly in muscles but also in the brain. It is commonly found in the diet in red meat and seafood. Creatine can also be made in the laboratory.

Creatine is most commonly used for improving exercise performance and increasing muscle mass in athletes and older adults. There is some science supporting the use of creatine in improving the athletic performance of young, healthy people during brief high-intensity activity such as sprinting. Because of this, creatine is often used as a dietary supplement to improve muscle strength and athletic performance. (Medicine Plus (2016)

- Ergogenic acid
- Caffeine

Stimulates the central nervous system, which can make feel more awake and give a boost of energy. (Medicine Plus, 2017)

- Anabolic steroids

Anabolic steroids are synthetic variations of the male sex hormone testosterone. The proper term for these compounds is anabolic-androgenic steroids. "Anabolic" refers to muscle building, and "androgenic" refers to increased male sex characteristics. (Drug Facts, 2016)

- Ephedra and Ephedrine alkaloids

Ephedrine and its related alkaloids are used to enhance athletic performance. Products containing ephedra alone or combined with vitamins, minerals, or other botanicals are marketed to increase energy and enhance athletic performance. (NIH, 2004)

1.11 Dietary supplements:

Popular supplements include vitamins D and E; minerals like calcium and iron and specialty products like glucosamine, probiotics, and fish oils. Scientific evidence shows that some dietary supplements are beneficial for overall health and for managing some health conditions. For example, calcium and vitamin D are important for keeping bones strong and reducing bone loss; folic acid decreases the risk of certain birth defects; and omega-3 fatty acids from fish oils might help some people with heart disease. (NIH, 2011)

1.12 Physical conditions which limits exercise:

Several physical conditions for example fever, cold, flu (flu with fever), asthma flare-ups, concussion (traumatic brain injury), injury, back pain, sore muscle etc. (WebMD, 2010) may limit the exercising capability in a greater extent.

CHAPTER 2

LITERATURE REVIEW

Research was endeavored to find a relationship of fitness training and improvement of physiological variables among standard and selected clinical populations. Theoretical suppositions in this area are reviewed and research designs are as either estimate as either trial or quasi-experimental and consequently interpretable or pre-interpretable and largely un-interpretable. The research recommends that substantial training lead to improvement of mood and work behavior. This suggestion is less clear about its effect on cognitive functioning although it seems to strengthen cerebral performance during and afterwards physical stress. Mentally underdeveloped children exhibit psychological enhancement following physical fitness training, however no conclusion can be extended regarding the consequences of physical fitness training alongside other clinical patterns. (Carlyle, 1981)

Experimental support has shown an optimistic relationship among physical training and designed mental health variables. In nonclinical findings most substantial consequences of physical training found on self-concept and body appearance. Two effective variables depression plus anxiety moreover appear to be manipulated by physical activity but to a minor amount in this population than among experimental population. Certain clinical populations seem to benefit cognitively and collectively from workout even though the endeavor may not be aerobically demanding. Ideas that attempt to justify the relationship concerning fitness and mental health are observed. (Glen, 1984)

The resolution of this evaluation is to provide the reader with an existing “state of the art” in this evaluation of typical physical activity in individual subjects. An argument of the conventional measurement of physical activity incorporates the use of reflections, diaries, implements and questionnaires. Most researchers of habitual physical activity in subjects were usually concerned in energy disbursement; hence the effectiveness of honest measurements of energy disbursement is designated and the probabilities and boundaries of assessments of energy disbursement based on functional explanations are reviewed. (Henry, 1984)

Mental disorders are significant in public health. Researchers have claimed that dynamic physical activity has effectiveness on mental health in both clinical and nonclinical subjects. This paper analyses the conformations for future findings. The clearest indication suggests that physical activity and workout possibly lessen some indications associated with mild to modest depression. The idea also suggests that physical endeavor and workout might provide a advantageous adjunct for alcoholism and substance misuse programs; recover self-image, societal skills, and mental functioning; lessen the symptoms of nervousness; and modify characteristics of coronary-prone (Category A) behavior and functional response to stressors. The consequences of physical activity and implementation on mental syndromes, such as schizophrenia, and additional aspects of mental fitness are not known. Undesirable psychological effects from training have also been stated. Suggestions for further examination on the consequences of physical activity and training on mental strength are prepared. (Taylor, 1985)

Physical activity, physical exercise and physical fitness these terms describe different theories but they are often confused with one another and sometimes used interchangeably. This paper proposes the distinguishable definitions of them. Physical activity can be defined as any physical movement produced by skeletal muscle those consequences in energy disbursement (can be measured in kilocalories). Physical activity in day-to-day life can be categorized in several types such as occupational, athletics, conditioning, domestic and other behaviors. Exercise is a subcategory of physical activity that is scheduled, organized, and repetitive and has as a concluding or an intermediate objective the development or continuation of physical fitness. Physical fitness is a standard or set of features that are either fitness- or skill-related. The level to which people have these features can be restrained with particular tests. These descriptions are presented as an interpretational context for comparing findings that narrate physical activity, exercise, and furthermore physical fitness to health. (Cespersen, 1985)

Physical activity may ultimately influence health behaviors for example overeating, smoking, substance misuse, stress managing, risk taking, and others. Considerable evidence reveals that physical activity is clearly associated with weight control and caloric consumption. This data blandly support the theory that physical activity and smoking are adversely associated. Insufficient data are available to assess the relationship between activity and alcohol intake, alcoholism, substance misuse, stress managing, defensive health behaviors, and risk-taking behavior. (Blair, 1985)

To assess physical activity more than 30 diverse methods have been used. The methods are grouped in seven major categories such as calorimetry, job category, survey processes, physiological indications, behavioral remark, mechanical and electronic monitors, and nutritional measures. Any single instrument can't fulfill the criteria of being valid, consistent, and practical while not influencing the behaviors. . The implements that are very detailed tend to be unrealizable on a population basis. Surveys are the most useful approach in large-scale findings, while little is known about their trustworthiness and validity. Studies utilizing objective supervising through heart rate, movement feelers, and doubly marked water procedures appear favorable, but are still experimental and expensive. Despite the inconvenience of measurement, fairly strong association has been discovered between physical activity and health, advising that, with improvements in evaluation techniques, even stronger relations should be understood. (Montoye, 1985)

This paper questions about the relationship among various features of health habits and health behaviors. Health habits, some of which relate to measure risk factors for some significant chronic syndrome, sometimes seem to be highly related to each other. So peoples can be classified who live healthy and unhealthy life styles. This paper inspects the interrelationship with several health habits observing personal health habits and excluding aspects related to the use of health care assistances for prevention. A dataset from Liberty Life Corporation headquarters employees is used to analysis the factors to analyze the issues. This paper resolves that the six health behaviors of alcohol use, smoking, supervision of stress, diet, preservation of proper weight and relaxation time exercise do not form one feature of health-related performance. Three distinct factors have been identified for men and women though the habit categories differ by sex, strength of the distinct level relationships as specified by correlational investigation. (Jennie, 1988)

Behaviors for protecting health are getting increasing attention for sustaining health and preventing disease. Several researches have assessed specific health behaviors separately, with relatively few studies of the connections between many health protective behaviors. This analysis examined how these protective behaviors were linked with each other using records from the American Family Report, a study of a national model of 1,247 adults in U.S. families. Eighteen healthiness protective behaviors were not all reliably interrelated with one another, with just 39% of the correlations noteworthy at $p<.001$. Aspect analysis using indirect rotation revealed six essential magnitudes of health protective activities: not smoking, deliberate exercise, routine exercise, enough drinking, absence of narcotic use, and overall health behaviors. These magnitudes were associated with socio-demographic variables, predominantly beside higher education being associated with improved behavior. The multidimensional nature of health protective conducts needs to be measured in programs for boosting prevention and health advancement. (John, 1990)

An inverted relationship between health and serum lipids in this collection of young subjects was reported in a paper. The newer study considers whether a better fitness level was connected with a more wise diet and whether this subsidized to the observed association between health and serum lipids. 70women and 49 men were considered as the study sample within the age range 23-27 years. Aerobic capability was measured candidly as maximal oxygen uptake (ml O_2 min^{-1} kg^{-1}) and nutritional intake as 7-day food reports. The maximum fitness tertile had a consumption of dietary fiber greater than that of the bottom tertile and a minor intake of sucrose, while total fat consumption and the ratio among polyunsaturated and saturated fatty acids remained similar. No alterations were observed in ingestion of alcohol, protein, and entire carbohydrate. Multiple regression analyses disclosed no impact of alimentary variables upon the connection between serum lipids and health. Better fitness was connected with a better dietary composition regarding dietary fiber and sucrose, excluding fat. The detected inverse relationship between health and serum lipids was not connected to diet. (Anderson, 1994)

To boost increased involvement in physical activity among Americans of each ages by issuing a public health proposal on the types and quantities of physical activity needed for health advancement and disease prevention several workshops were carried out. A planning committee of five experts was established then the committee designated 15 other workshop discussants in matters related to the health associations of physical activity. Major concerns related to physical activity and fitness was outlined, and selected associates of the expert panel enlisted sections of the paper from this summary. A draft manuscript was organized by the planning committee and distributed to the full team in advance of the 2-day workshop. During the workshop, the expert panel reviewed each section of the manuscript. Crucial attention was given to realizing group consensus concerning the suggested types and amounts of physical activity. A brief public health message was developed to precise the recommendations of the panel. Throughout the ensuing months, the agreement statement was further reviewed and modified and was formally approved US adult must accrue 30 minutes or further for moderate-intensity physical activity on utmost preferably all days of the week. (Russell, 1995)

Association of data between free time physical activity and former health behaviors are contradictory. Multivariate stepwise logistic regression analysis depleting data from 9054 respondents aged 20 to 69 years presented that participation in free time physical activity, even when it was not robust, was dimly associated with not smoking, following a special nourishment and moderate intake of alcohol; it was inversely related with obesity. These weak relations could influence health exercises at a population level if, as has been assumed, the adoption of leisure activity supports the adoption of other good health exercises. Confirmation of earlier discoveries of cross-sectional relations between activity and other optimistic health practices justifies upcoming prospective or experimental analysis to determine the behavioral reaction to adoption of free time physical activity. (Natalie, 1995)

Behavioral Risk Factor Observation System was used to evaluate self-reported health behaviors of buyers of finfish and raw shellfish in 1992. We assumed that consumers of finfish, foods contemplated to be healthy, were more expected than non-consumers of finfish to contribute in health-promoting behaviors. Likewise, we postulated that users of raw molluscan shellfish, foods related to an elevated risk of developing various illnesses, were more expected than non-consumers of raw-shellfish to consume in risk-taking behaviors. Finfish eaters were suggestively more likely than avoiders to report recent exercise, determinations to lose weight, periodic supervising of serum cholesterol, and not presently being smokers. Raw shellfish consumers were significantly more likely than avoiders to report recent severe and chronic alcohol consumption. The results propose that inquiry into dietary outlines may be an avenue for discovering other health behaviors. (Sean, 1995)

Rising free time physical exercise is a major objective of public health programs throughout the industrialized world, but few international assessments of exercise habits among individuals from varied cultures have been published. The objectives of this analysis were to assess the frequency of exercise among young adults from 21 European countries, to examine associations with health principles and risk mindfulness, and to investigate relations among exercise, other health-related activities, and mental health. A questionnaire survey of 7,302 male and 9,181 female academia students within age range from 18–30 years of 21 countries, was investigated. Awareness of the inspiration of exercise on heart disorder averaged 52% including men and 54% between women, but was not strongly connected with engagement in training. Physical exercise levels are highly flexible across samples of fairly privileged young Europeans from different nations. Relations with other health activities and with mental health suggest that steady physical exercise is reliable with a healthy life. Relations with health beliefs are stable despite of sociocultural differences, but incomplete knowledge of the health affairs of a sedentary lifestyle remains a reason for concern. (Andrew, 1997)

The relationships between health behaviors are not well assumed. The present analysis examines health behaviors besides their relations to numerous types of physical activity between university seniors. The study sample contains 576 men and women within the age range of 22-26.5 years. 19 health behavior matters were factor analyzed, accommodating 5 factors: tobacco use, alcohol consumption and driving, insecure sex, eating fatty foods, and consumption of healthy foods. Physical activity measures comprised leisure-time moderate and dynamic activities, flexibility, and strengthening activities. Physical activity was discovered to have modest relations with eating habits but not among other health-related behaviors. (Johnson, 1998)

The study examined the links between leisure-time workout and a range of health behaviors besides reports of illness and injury in a model of community employed adults. The study population comprised 4907 women and 4136 men who fulfilled surveys in 24 worksites in the Minneapolis–St. Paul cosmopolitan zone. Participants in the analysis were ranked by sex according to their workout score and assembled into quartiles. Women and men in the maximum activity quartiles were younger and highly educated. High-activity males were more likely to be single. Higher points of leisure-time exercise were confidently associated with seat belt practice and inversely related to smoking, nutritional fat intake, reported anxiety, and obesity. These findings suggest that relations between leisure-time exercises besides health behaviors occur at the advanced levels of exercise and interventions may need to endorse this higher level of leisure-time workout to impact entire public health. (Kerry, 1999)

The purpose of the study was to inspect associations between unhealthy behaviors between the Finnish adult populations. Data from chains of cross-sectional health performance surveys from the years 1991–1998 were assembled. Relations between smoking, alcohol intake, lack of steady physical activity and unhealthy nutritional intake were examined among 22,745 subjects. The relations were first reviewed in terms of accumulation: the incidence of each combination of unhealthful behaviors was compared to their probable appearance, assuming that the activities were independent from on another. Nevertheless, the occurrence of four unhealthy activities was about three times further common than expected under the hypothesis of independence of the behaviors. Similarly, most of the 3 behavior combinations showed accumulation. Smoking had the greatest and most consistent relations with other unhealthy behaviors. Differences between socio-demographic groups were minor and the forms of unhealthy behavior were strangely similar among males and females. (Mikko, 2001)

The connotation between physical activities besides diet has been studied, but data on the connotation between cardiorespiratory fitness (CRF) that is an objective measure of usual physical activity and diet are absent in adults. This report observes nutrient intakes of males and females across little, modest, and great fitness categories and associates the intakes to national dietary suggestions. It is the 1st step in inspecting the relationship among diet, CRF, and disease and mortality endpoints. In 1987-1995, 7959 males and 2453 females participated specified diet records and completed a preventive medical check. CRF was measured by a maximal exercise trial and other clinical variables were assessed following a standardized procedure, and lifestyle elements were assessed with a medical record questionnaire. The percentage of males and females meeting national dietary references was higher at greater CRF levels. (Brodney, 2001)

One recent study assessed the relationship among smoking and exercise within cognitive-behavioral moderators shown to be important in expecting readiness to change. In this study, we pursue to replicate the study in a low-income model; the majority of who are females, with at least one enduring illness who are attending initial care clinics. 270 adult outpatients data were obtained. Smoking and exercise period of change were not linked. Significant associations existed among the cognitive variables of smoking and exercise. No noteworthy differences endured within exercise stage of variation on the cerebral variables of smoking, and vice versa, no noteworthy differences were noticed within smoking period of change on the cerebral variables of exercise. Smoking and exercise seem to be specific health activities that are independent hypotheses in this particular sample. Still, caution should be taken when understanding the findings since 75% of the subjects had at least one chronic illness. (Edwin, 2003)

The major purpose of this narrative evaluation was to evaluate the existing literature and to specify further insight into the physical inactivity plays role in the improvement of chronic disease and impulsive death. We approve that there is certain evidence of the effectiveness of consistent physical activity in the initial and ancillary prevention of several chronic diseases (e.g., diabetes, cardiovascular disease, hypertension, cancer, depression, obesity, and osteoporosis) and early death. We also disclose that the present Health Canada physical activity guidelines are satisfactory to elicit health benefits, particularly in previously sedentary people. There seems to be a linear relation among physical activity and health significance, such that an additional proliferation in physical activity and fitness will bring about additional improvements in health status. (Warburton, 2006)

Cross-sectional research specifies physical inactivity and insignificant diet tend to co-occur; there are inadequate longitudinal data on how interventions targeting one conduct affect other conducts. The current investigation observed cross-sectional and longitudinal relations between health behaviors within the framework of a physical activity (PA) intervention. Sedentary women were registered in a randomized controlled PA trial associating the effects of print-based, individually personalized and sex-targeted PA interventions to a wellness/control form. Women completed standard, month 3, and month 12 evaluations that included measures of PA and nutritional behaviors. Although fat intake reduced in the context of this PA involvement, fruit/vegetable intake persisted unchanged. Also, PA did not aid as a gateway behavior for nutritional improvements. In fact, progresses in activity were associated with increases instead of decreases in fat intake. (Dutton, 2008)

Focusing multiple health behaviors is vital in preventing disease and mortality. The current study investigated the assembling of health behaviors, cerebral determinants and stages of variation in 2827 adults for the lifestyle elements of physical activity, fruit, vegetable and fat intake and smoking. The consequences showed that only 3% of the total population encountered recommended standards for all of the 5 behaviors. Behaviors discovered to be weakly connected. Behavior-specific perceptions and stages of variation for the behaviors assembled more strongly. With respect to nutrition and physical activity, respondents in the training stage for one behavior were expected also to be planning to change another behavior. Probable mechanisms for the obvious general willingness to change manifold behaviors are discussed, in addition to potential implications for health advancement practice. (Stef, 2008)

In health promotion and health training, health conscious eating habit and nutritional control become more and more important. Youth's dietary behaviors raise a number of difficulties all over the world since as a result of the effects of globalization; the trends are less and less satisfactory. Additionally, during adolescence, health behavior deviations are observed to an unfavorable trend. Researches have discovered that contrary to other health behaviors (such as smoking or alcohol intake), their peers less manipulates eating behavior, while the influence of parents still remains robust. The current study was going on between high school students in Szeged (age range within 15-20 years). Self-administered questionnaire was developed as a method of data collection that contained items on eating habit in the sample besides its social influences. Based on the statistics, we may conclude that the influence of parents is still strong on teenagers' eating habit, whereas the function of peers is rather indirect, principally through a relation to body appearance and body weight affairs. While variables associated to body image influence schoolgirls, social variables influence schoolboys. Girls are in a more profitable situation in a number of means; they are more neutral in their food choice, and they are less reliant on parents and the family. Moreover, the presence of weighty in the family tends to inspire adolescent girls to a healthier eating in a preventative way. Detecting adolescents' eating behavior may help make additional health conscious decisions in the arena of nutrition. (Bettina, 2008)

To investigate the connection between alcohol intake and physical activity there are common elements of health behaviors that are critical in designing plans to change risky behaviors. It is a Cross-sectional analysis. A sample of adults of U.S. population was selected to collect the data. Several measures of consumption of alcohol and exercise were studied. Specifications included abundant health performance, socioeconomic, and demographic regulator variables. Light, modest, and heavy drinking is attendant with 9.0%, 14.3%, and 13.7% point increases in the possibility of exercising actively. The estimation outcomes for males are similar to those for females. Our outcomes strongly suggest that alcohol intake and physical activity are positively correlated. The association continues at heavy drinking levels. (Michael, 2009)

The authors explored the correlation between self-reported forceful exercise frequency and alcohol intake, tobacco, and other drug (ATOD) use behaviors among 1st year college students who were identified as alcohol user. The authors employed 391 college students to participate in an alcohol misuse anticipation study. The authors lead a multivariate analysis of discrepancy to assess the connotation between vigorous exercise regularity and 6 events of ATOD use at baseline. Everyday exercisers drank considerably more often and a considerably greater quantity than did occasional exercisers. However, regular exercisers smoked cigarettes considerably less often than did infrequent exercisers. These findings suggest that dynamic exercise frequency is differentially related with alcohol and cigarette consumption between college students. Researchers should further study the reasons for these variances. (Moore, 2010)

This study examined the relations between physical activity and other health performances in a representative sample of US youths. 11631 high school students delivered information on physical endeavor, diet, substance usage, and other negative fitness behaviors. Logistic regression analyses observed associations between physical activity and other fitness behaviors in a subset of 2652 highly active and 1641 lower active students. Low activity was connected with cigarette smoking, marijuana abuse, lower fruit and vegetable intake, more television watching, failure to attire a seat belt, and low sensitivity of academic performance. For intake of fruit, television seeing, and alcohol intake, significant connections were found with race or sex, suggesting that sociocultural aspects may affect the relations between physical activities plus some health behaviors. Little physical activity was related with several additional negative health behaviors in youths. Future revisions should examine whether involvements for increasing physical activity in adolescence can be effective in decreasing negative health behaviors. (Pate, 2011)

Relationships between leisure-time physical activity and nutritional fat were observed in a population-based possibility sample of 29,672 adults in the 1990. Intake of 13 high-fat foodstuffs and involvement in physical activities were deliberate, and fat and activity scores were analyzed. Nutritional fat and physical activity remained strongly and negatively associated. This connection was independent of 9 other demographic and developmental risk factors. Etiologic researchers should reflect that nutrition and physical activity can hypothetically confound each other, and designers of public health messages that focus one behavior should cogitate including the other. (Simoes, 2011)

For understanding representatives of the relationship among physical activity (PA) and alcohol consumption is important for illuminating the mechanisms underlying these comportments besides informing health promotion interferences. This study examined age and sex as two candidate mediators of the PA-alcohol use connection. Cross-sectional population-based studies on 34,653 US adults, participants were directed surveys assessing demographics, alcohol intake, moderate and vigorous PA, and further characteristics. Multifactorial indices of the frequency and amount of alcohol intake and PA were utilized in studies. Among the American adults, age appears modest the connection between vigorous PA and alcohol intake, whereas sex appears to moderate the correlation between moderate PA and alcohol intake. These discoveries shed light on the underlying contrivances that may account for boosted alcohol use in exercisers and may have clinical effects for alcohol screening and involvements in adults who lead dynamic lifestyles. (Nadra, 2011)

The health awareness of 237 primarily Mexican American adolescents was evaluated using the HKI-Alpha. The mean trial score was 47.1 out of 110. Consequences revealed that a great percentage of students identified weight loss recommendations and the analytical test for breast cancer. Conversely, a great percentage of the students didn’t have any idea about myocardial infarction is a heart attack, fatal deformity can be caused by maternal German measles, or alcohol with barbiturates are considered lethal. Over 50% did not recognize a positive HIV test intended a person would get AIDS. Fewer than 50% of the questions for 10 of the 11 were responded correctly. Nutrition subscale results were slightly better; 60% of the responses were correct. Significant sex differences were discovered on two of the trials' subscales. Test outcomes suggest that better health training for Mexican American students is needed. (Smith, 2013)

Few studies have inspected the association between complete diet and cardiorespiratory fitness (CRF). Grains (refined and whole), treated meats, and drinks (coffee, beer, wine, meal-replacement drinks) were completely linked with the treadmill duration. Whole fruit (not juices), organ essences, cooked meats and fish, and nondairy products were adversely associated. The a priori diet-feature score was completely associated with the time overall and in all race-sex subcategories except black males. The meat outline was negatively related with the duration in white males and white females only. The fruit-vegetable outline was positively related with duration in white females only. Generally, the a priori diet-quality grade was positively related with CRF in this group of black and white adults, while the meat dietary outline was negatively correlated only in whites. (James, 2013)

CHAPTER 3

MATERIALS AND METHODS

3.1 Type of the Study

It was a survey-based study.

3.2 Materials

- Survey questionnaire
- Response from the respondents
- BMI Calculator

3.3 Study Area

The survey was conducted on students of different departments of East West University.

3.4.1 Inclusion Criteria

- Both males and females
- Anyone who was student of East west University

3.4.2 Exclusion Criteria

- Person unwilling to do the study
- Anyone who was not student

3.5 Study Population

In this study, both male and female were the study population. This inquiry was carried out on 500 students of East West University

3.6 Development of the Questionnaire

Following the STEPS guideline the questionnaire was developed. Also from the observation of different behavior of students.

3.7 Sampling Technique

In this study random sampling technique was followed.

3.8 Data Collection Method

The data was collected through questionnaire that is formed in English language. It is a questionnaire consists of multiple choice type questions. The data was collected by both face-to-face interview and by questionnaire supply.

3.9 Data Analysis

After collecting, all the data were checked and analyzed with the help of Microsoft Excel 2010.

3.10 BMI Parameter

BMI CLASSIFICATION

Very Severely Underweight	< 16
Severely Underweight	16 – 17
Underweight	17 – 18.5
Normal	**18.5 – 25**
Overweight	25 – 30
Obese Class I	30 – 35
Obese Class II	35 – 40
Obese Class III	> 40

Fig 3.1: BMI Classification

3.11 Procedure

The study was performed through 3 stages of the procedure. In the beginning literature review was done from 31 online literature regarding fitness and health. The aim of literature review was to observe affects of several behavioral factors (e.g. eating habit, alcohol taking habit, smoking habit, physical activity) on health status. Followed by the literature review data collection step was executed by collecting data with the help of a survey questionnaire. In the final stage data analysis was made with the help of Microsoft Excel 2010.

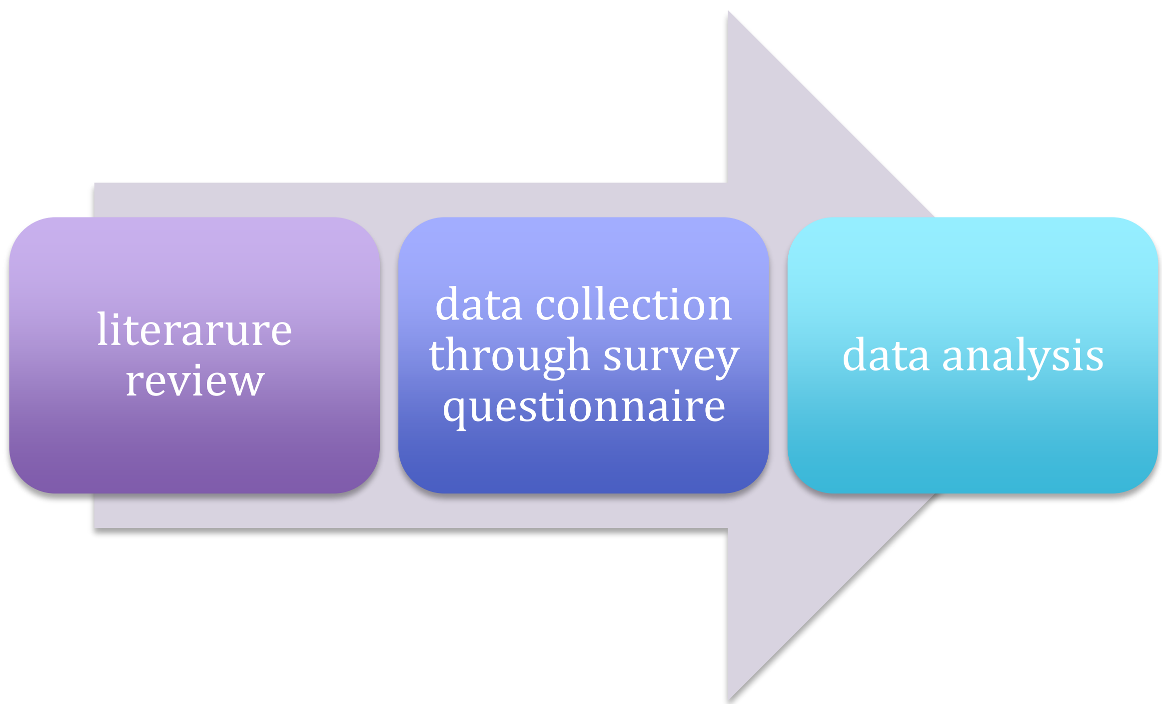


Fig 3.2: procedure

CHAPTER 4

RESULT ANALYSIS

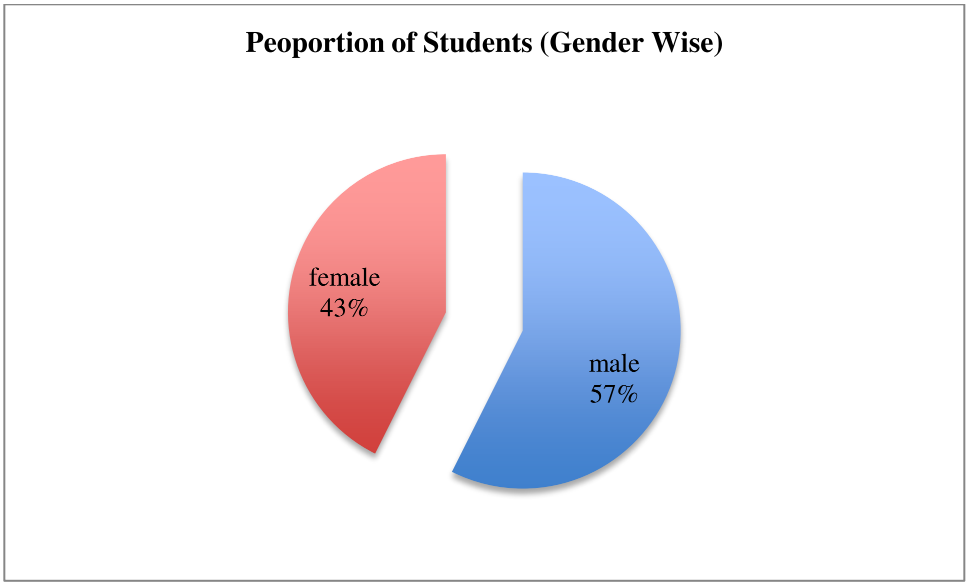


Fig 4.1: Proportion of students (gender wise)

The survey has been conducted on 500 students among them 43% of the population were female and 57% of the population were male.

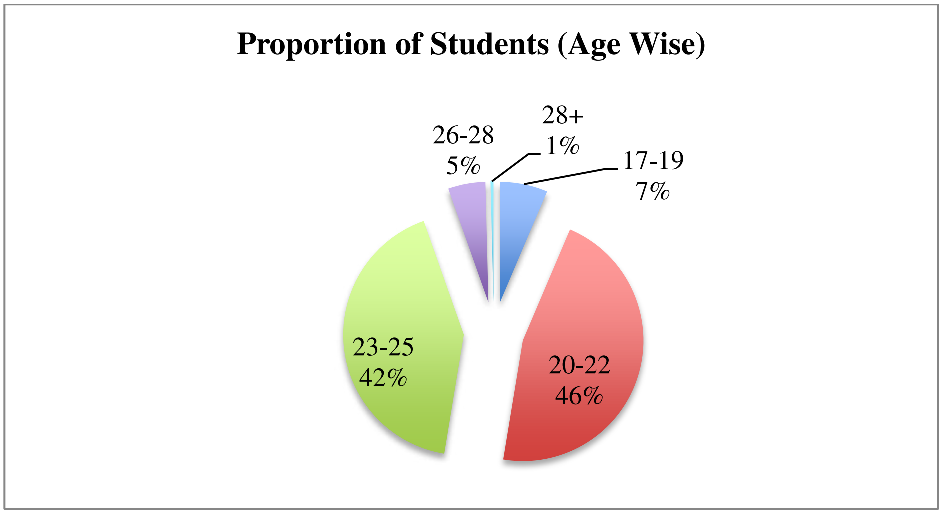


Fig 4.2.1: Age status of the students

Among 500 students 7% were in the range 17-19, 46% were in the range 20-22, 42% were in the range 23-25, 5% were in the range 26-28, 1% was in the range 28+.

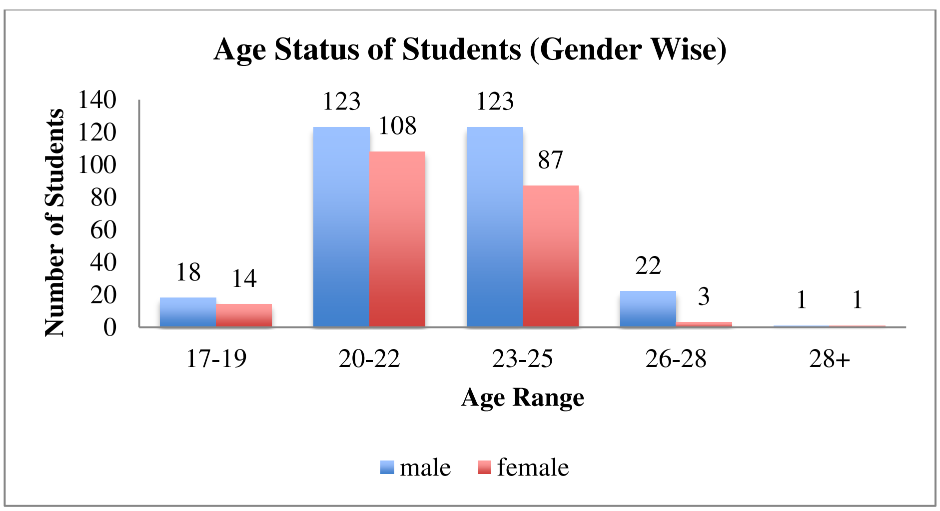


Fig4.2.2: Age status of students (gender wise)

Among 287 male students 6% were in the range 17-19, 43% were in the range 20-22, 43% were in the range 23-25, 8% were in the range 26-28, 1% was in the range 28+. Among 213 female students 7% were in the range 17-19, 50% were in the range 20-22, 40% were in the range 23-25, 2% were in the range 26-28, 1% was in the range 28+.

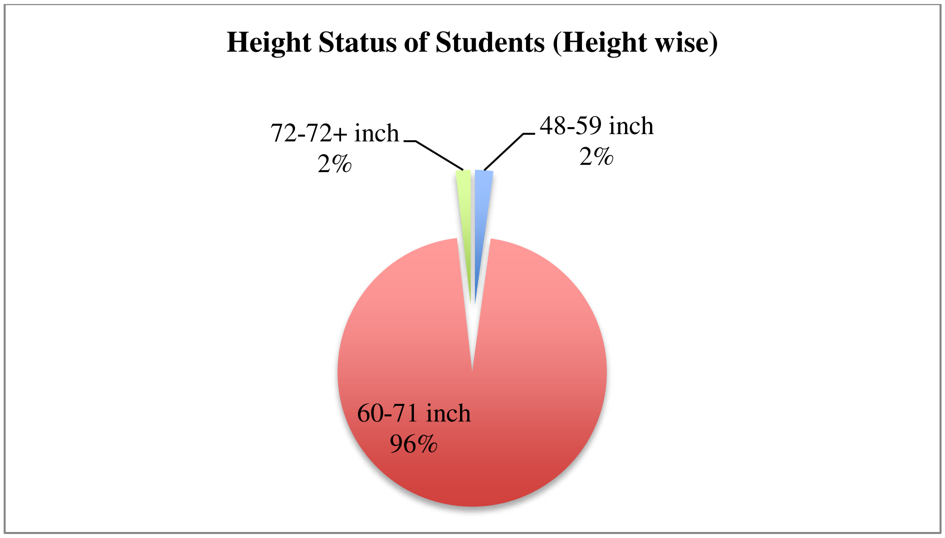


Fig 4.3.1: Height status of students (height wise)

Among the students 2% had height within 48-59 inch, 96% had height within 60-71 inch and 2% had height within 72-72+ inch.

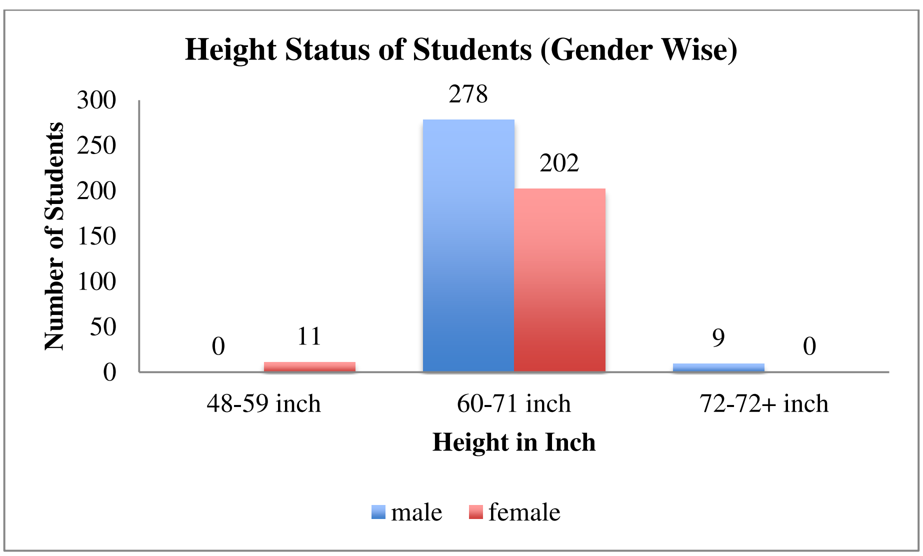


Fig 4.3.2: Height Status of Students (gender wise)

During this analysis it was found that among 287 male students 97% had height within 60-71 inch and 3% had height within 72-72+ inch. Among 213 female students 5% had height within 48-59 inch and rest 95% had height within 60-71 inches.

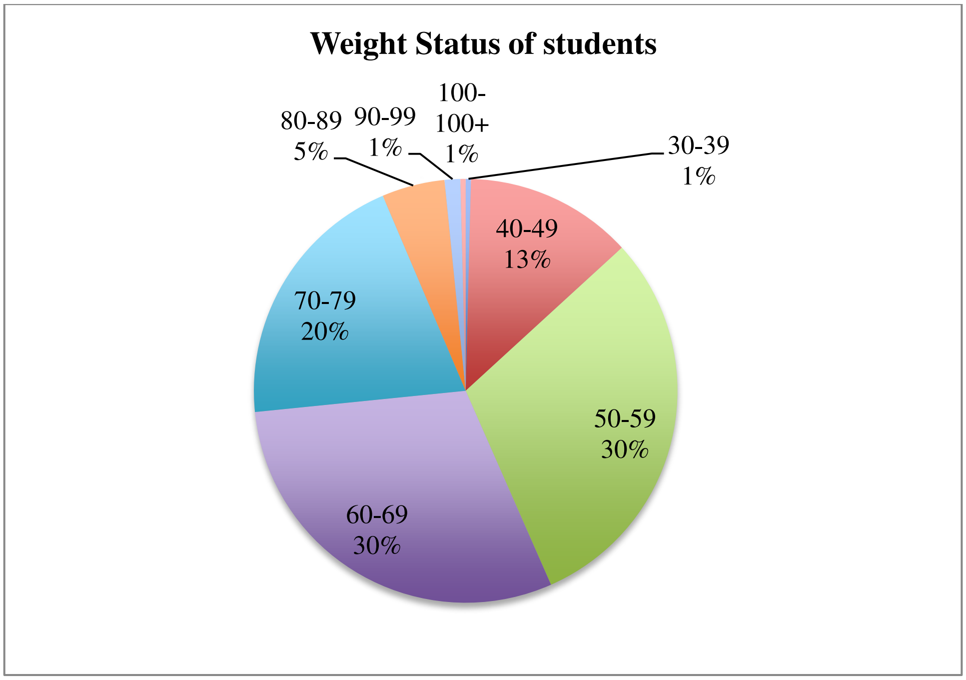


Fig 4.4: Weight status of students

Among 500 students 1% had weight within 30-39 kg, 13% had weight within 40-49 kg, 30% had weight within 50-59 kg, 30% had weight within 60-69 kg, 20% had weight within 70-79 kg, 5% had weight within 80-89 kg, 1% had weight within 90-99 kg and rest 1% had weight within 100-100+ kg.

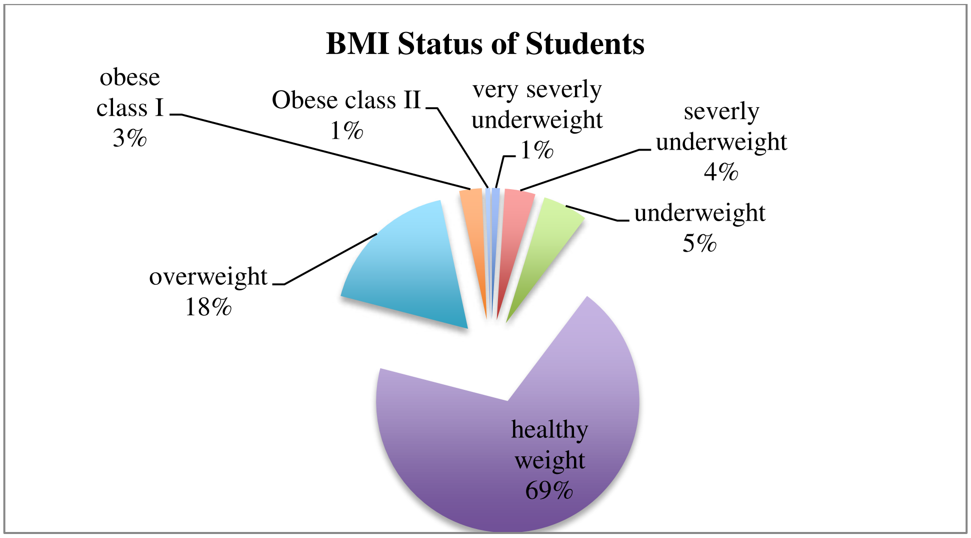


Fig 4.5: BMI status of students

Among 500 students 1% had very severely underweight, 4% had severely underweight, 5% had underweight, 69% had healthy weight, 18% overweight, 3% were obese (class I) and 12% were obese (class II).

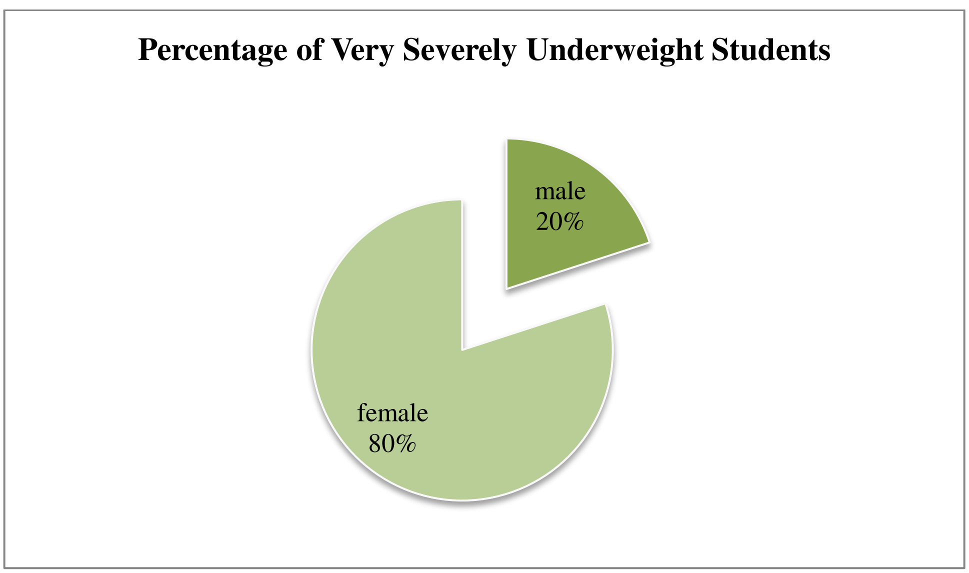


Fig 4.5.1: Percentage of very severely underweight students

In this study 5 students were found who had very severely underweight. Among them 80% were female and 20% were male.

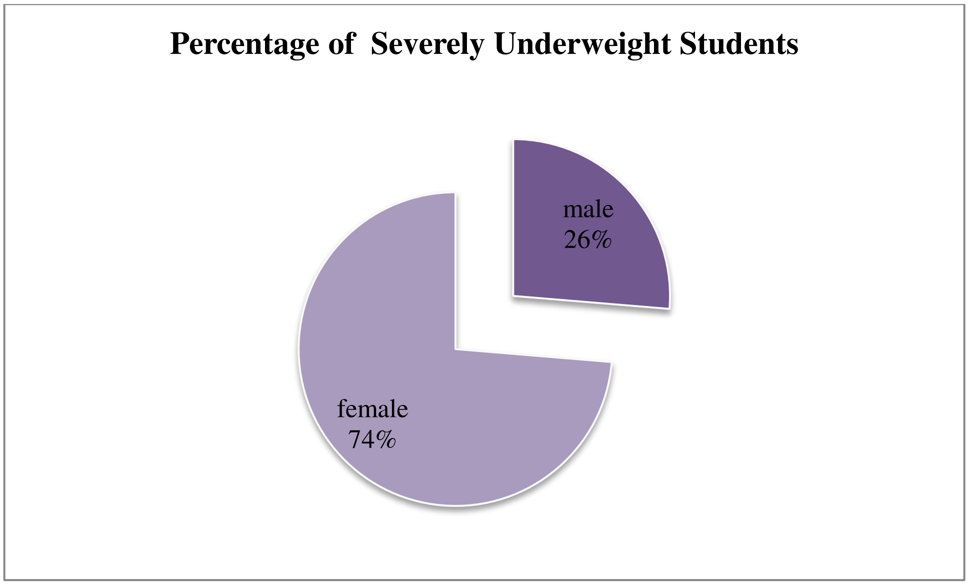


Fig 4.5.2: Percentage of severely underweight students

In this study 19 students were found who had severely underweight. Among them 74% were female and 26% were male.

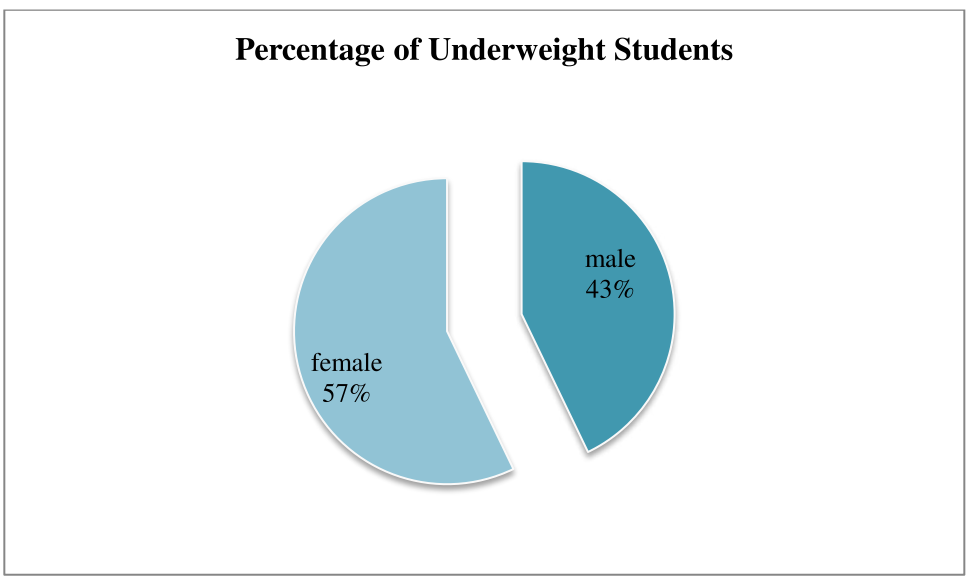


Fig 4.5.3: Percentage of underweight students

In this study 28 students were found who had underweight. Among them 57% were female and 43% were male.

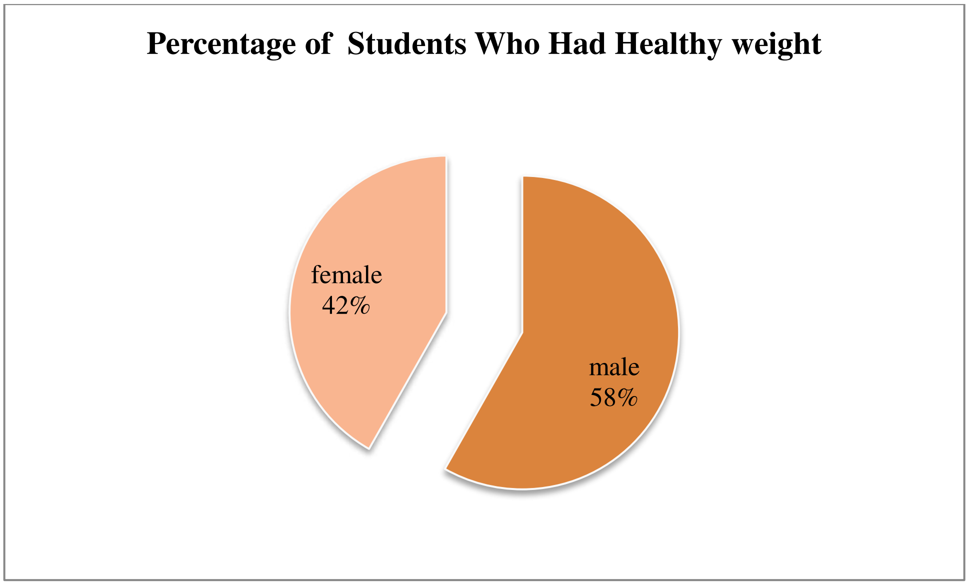


Fig 4.5.4: Percentage of students who had healthy weight

In this study 347 students were found who had very severely underweight. Among them 42% were female and 58% were male.

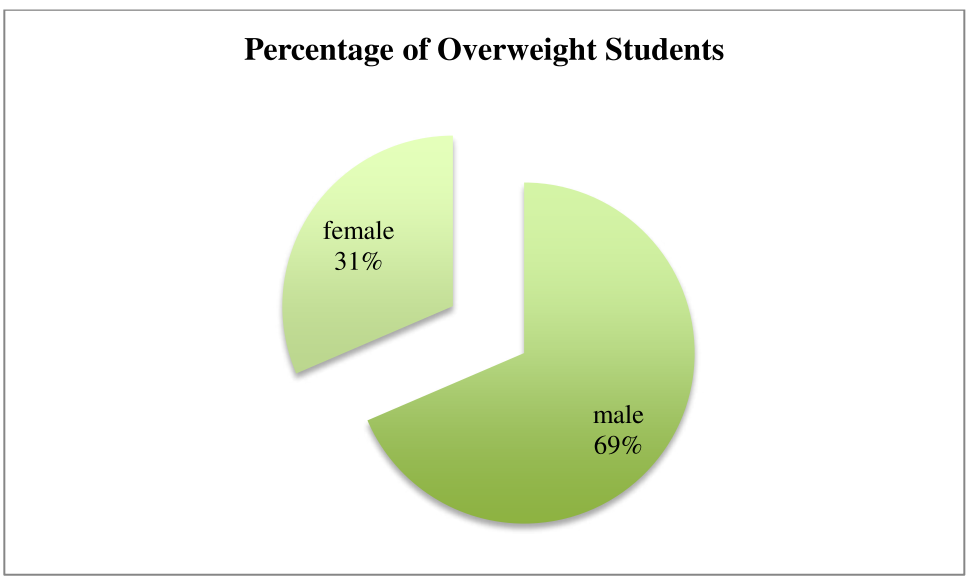


Fig 4.5.5: Percentage of overweight students

In this study 89 students were found who had overweight. Among them 31% were female and 69% were male.

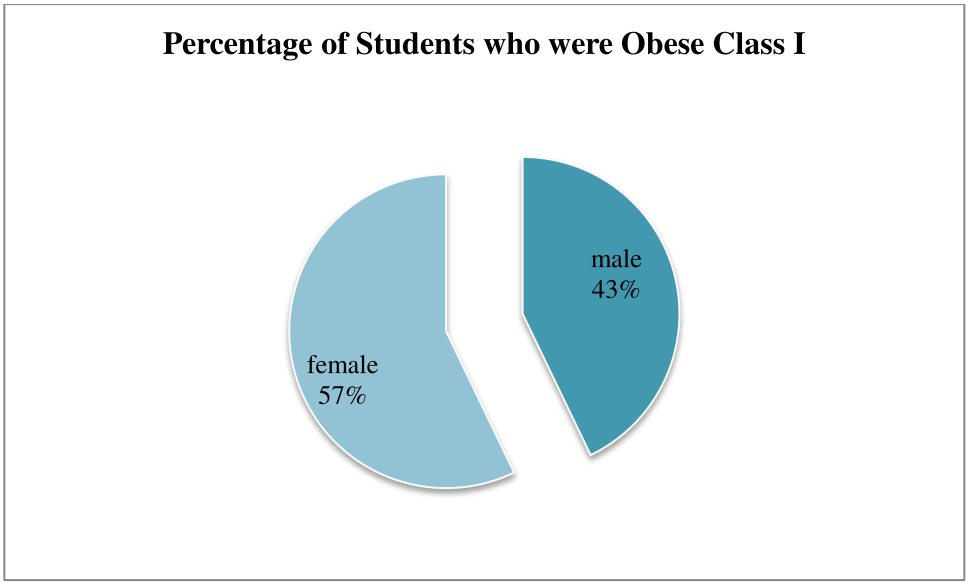


Fig 4.5.6: Percentage of students who were obese (class I)

In this study 14 students were found who were obese (class I). Among them 57% were female and 43% were male.

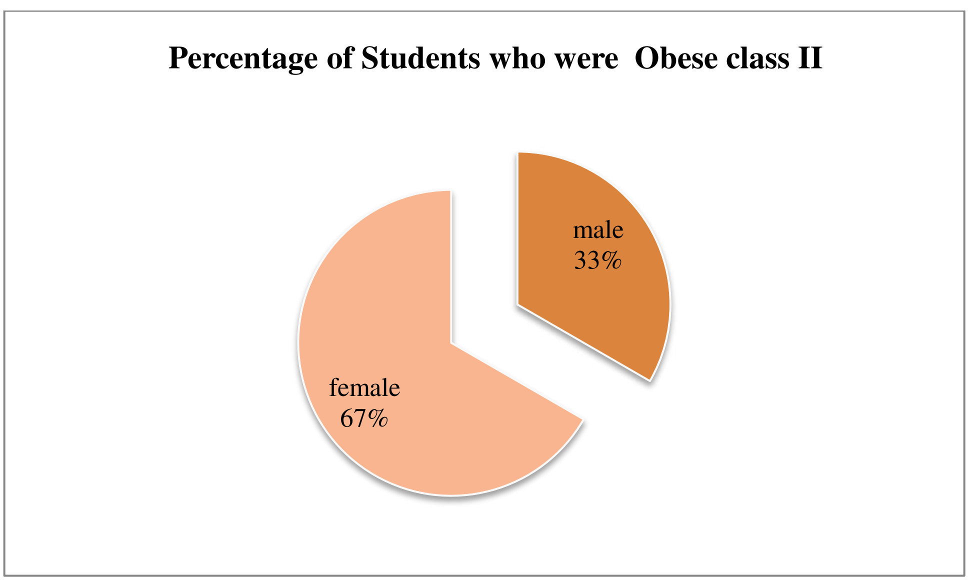


Fig 4.5.7: Percentage of students who were obese (class II)

In this study 3 students were found who were obese (class II). Among them 67% were female and 33% were male.

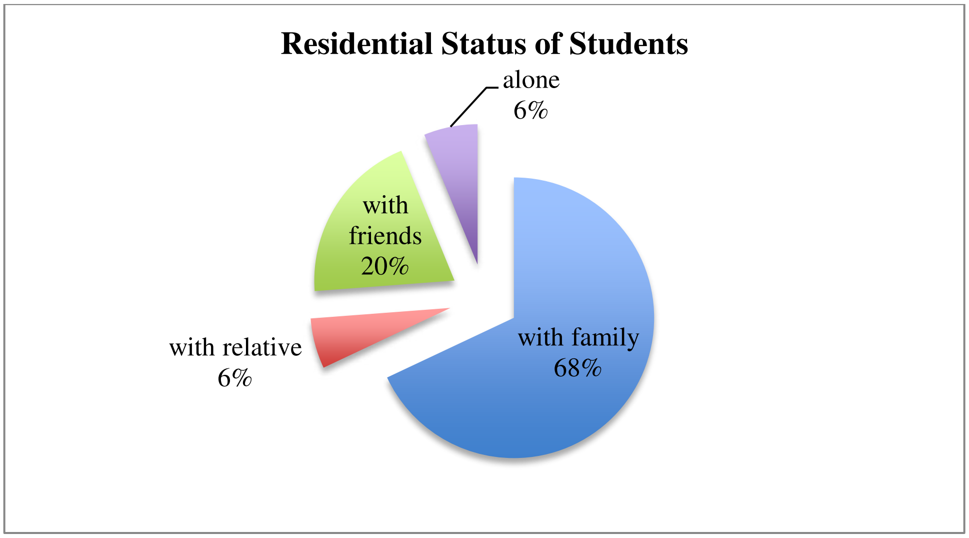


Fig 4.6.1: Residential Status of Students

Among 500 students 68% lived with family, 6% lived with relative, 20% lived with friends and 6% lived alone.

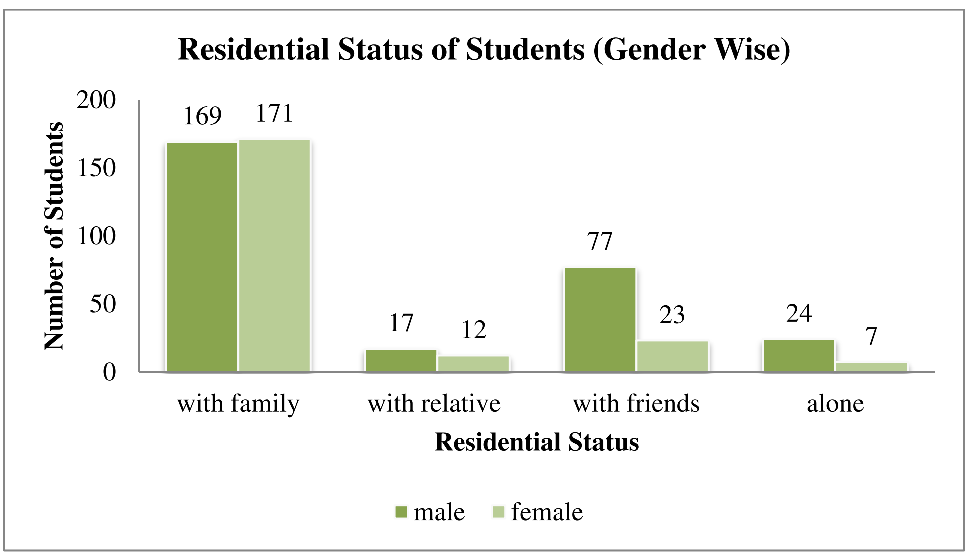


Fig 4.6.2: Residential Status of Students (gender wise)

Among 287 male students 59% lived with family, 6% lived with relative, 27% lived with friends and 8% lived alone. Among 213 female students 80% lived with family, 6% lived with relative, 11% lived with friends and 3% lived alone.

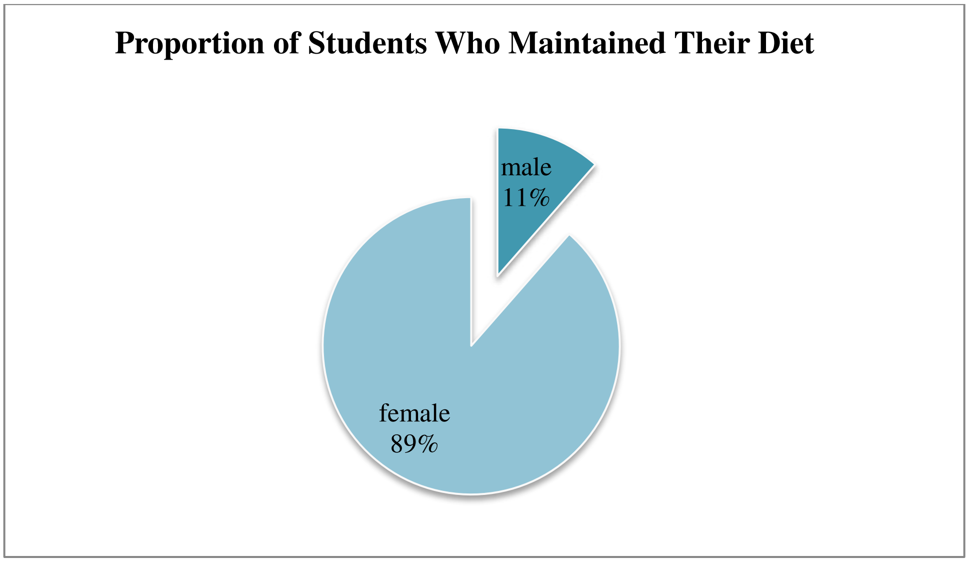


Fig 4.7.1: Proportion of students who maintained proper diet

In this study 195 students were found who maintained proper or healthy diet. Among them 89% were female and 11% were male.

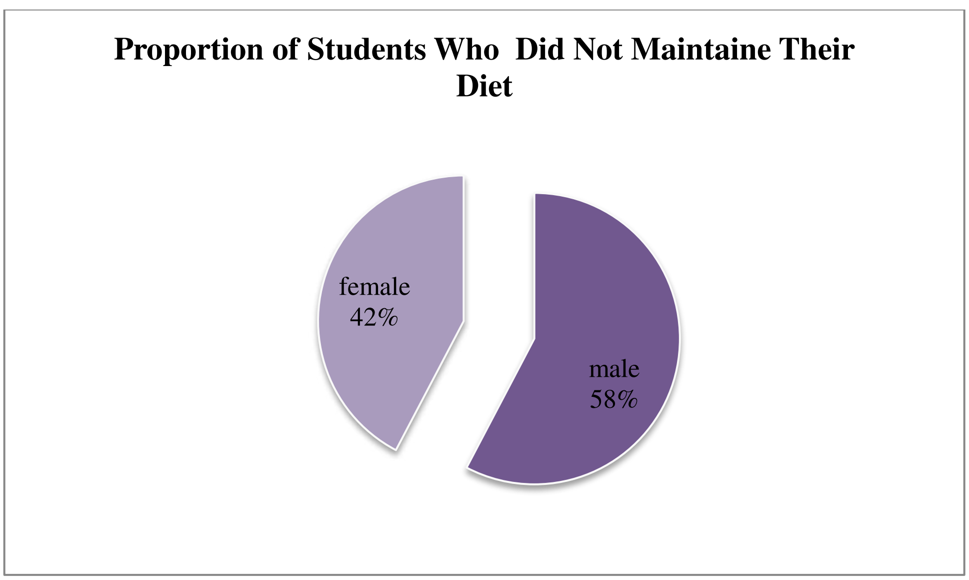


Fig 4.7.2: Proportion of students who did not maintain proper diet

In this study 305 students were found who did not maintain proper or healthy diet. Among them 42% were female and 58% were male.

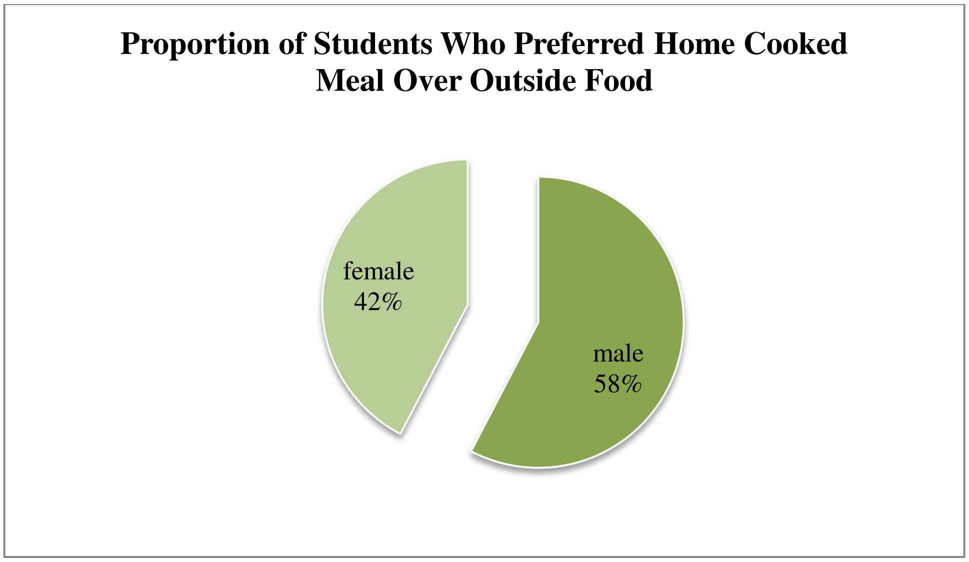


Fig 4.8.1: Proportion of students who preferred home cooked meal over outside food

Among 500 students 392 students preferred home cooked meal over outside food. Among them 42% were female and 58% were male.

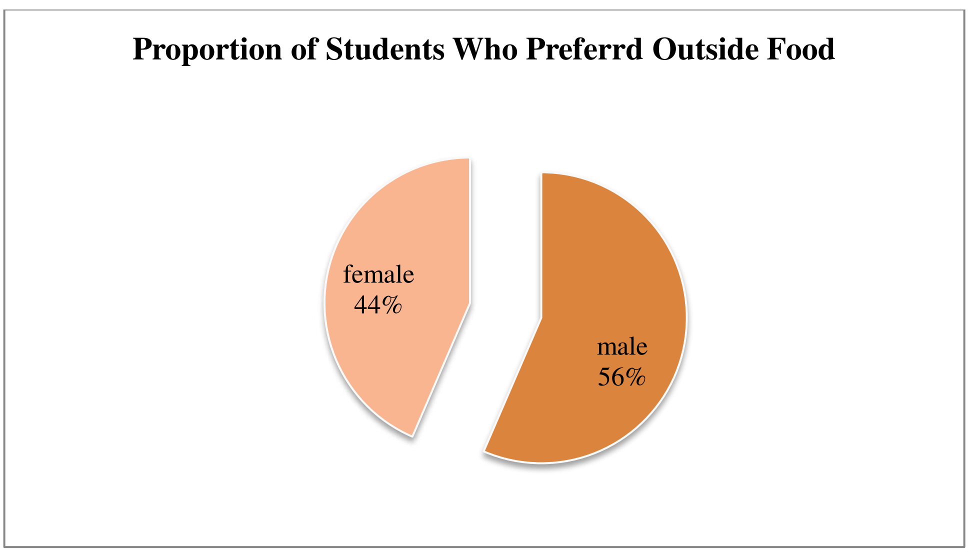


Fig 4.8.2: Proportion of students who preferred over outside food

Among 500 students 108 students preferred outside food. Among them 44% were female and 56% were male.

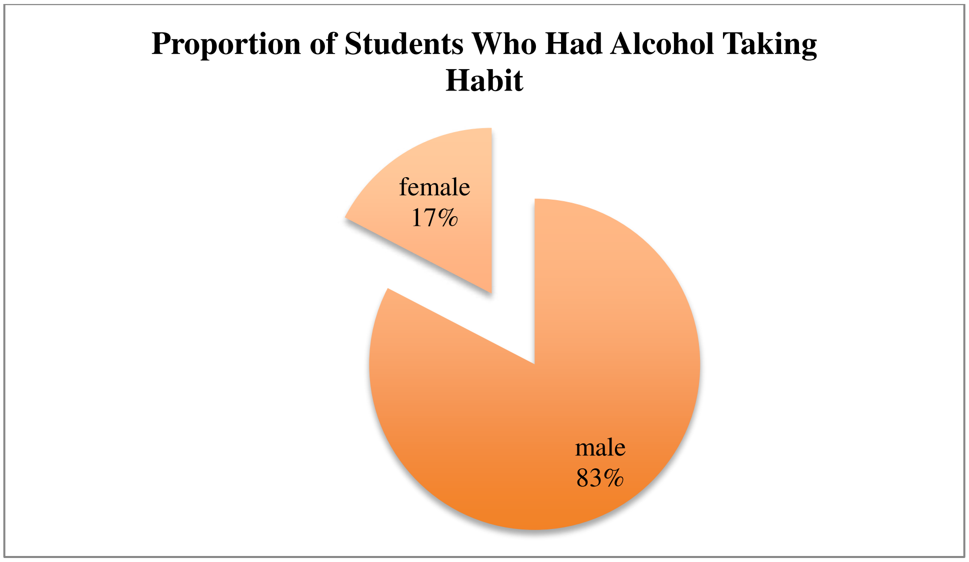


Fig 4.9.1: Proportion of students who had alcohol taking habit

It was observed that 69 students had alcohol taking habit. Among them 17% were female and 83% were male.

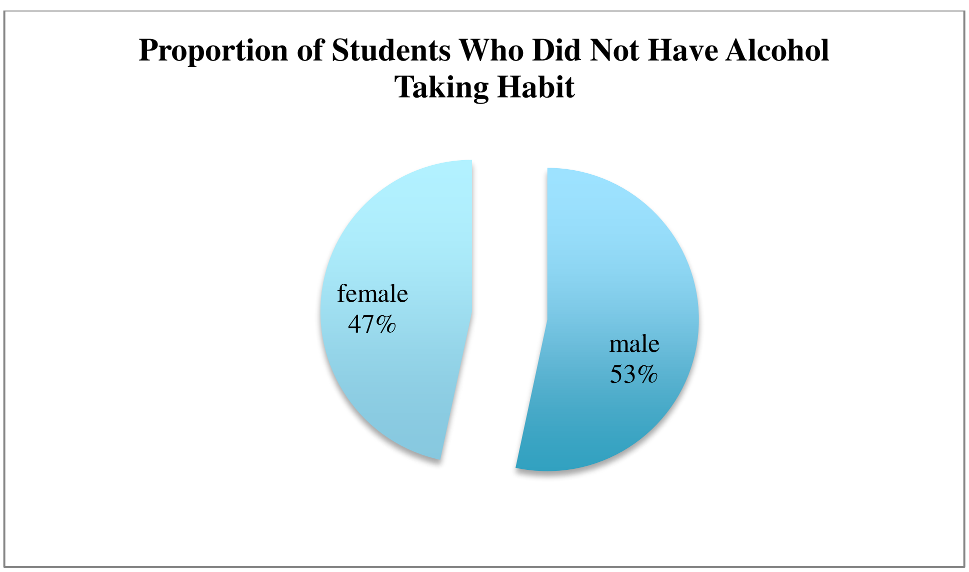


Fig 4.9.2: Proportion of students who did not have alcohol taking habit

It was observed that 431 students did not have alcohol taking habit. Among them 47% were female and 53% were male.

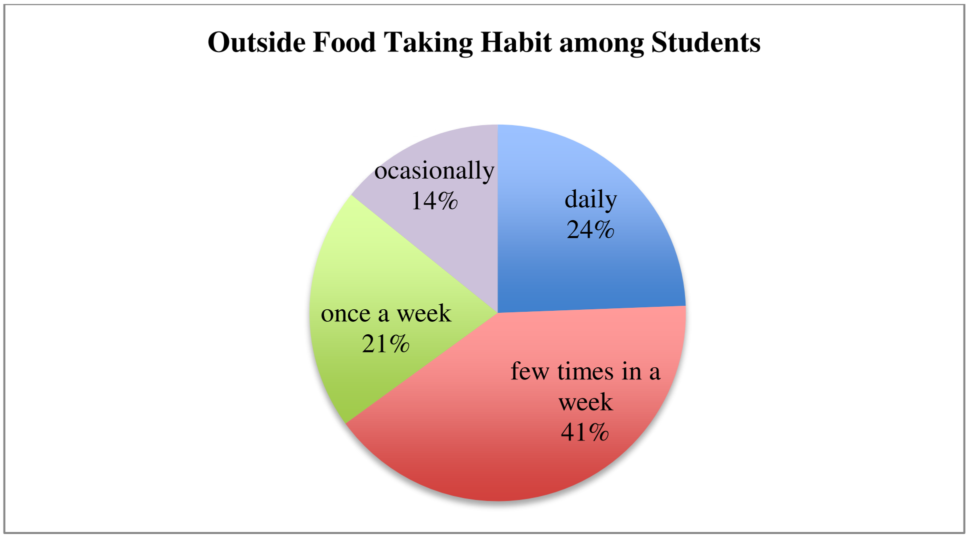


Fig 4.10.1: Outside food taking frequency among students

Among the students 28% take junk food daily, 41% take few times a week, 21% take once a week, 14% take occasinally.

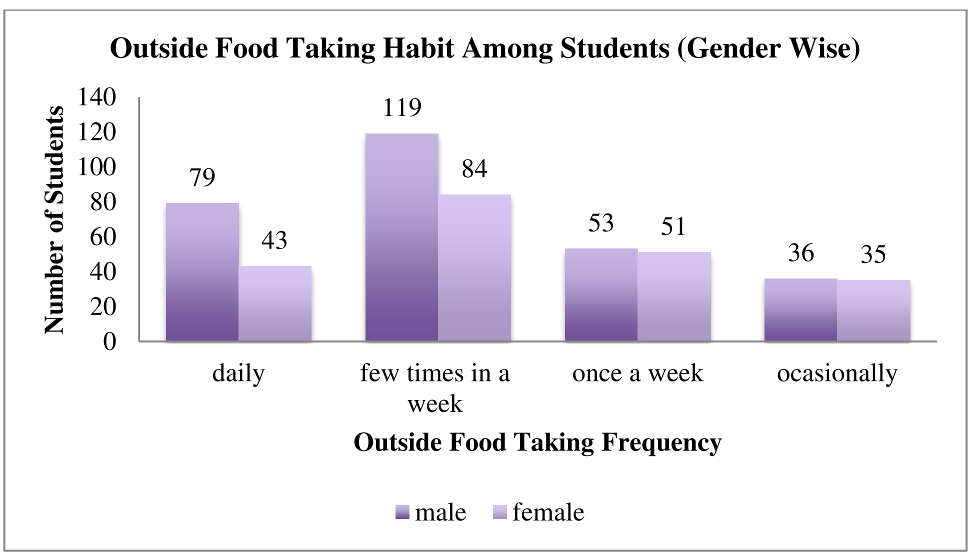


Fig 4.10.2: Outside food taking frequency among students (gender wise)

Among 287 male students 28% take outside food daily, 41% take few times a week, 18% take once a week, 13% take occasinally. Among 213 female students 20% take outside food daily, 40% take few times a week, 24% take once a week, 16% take occasinally.

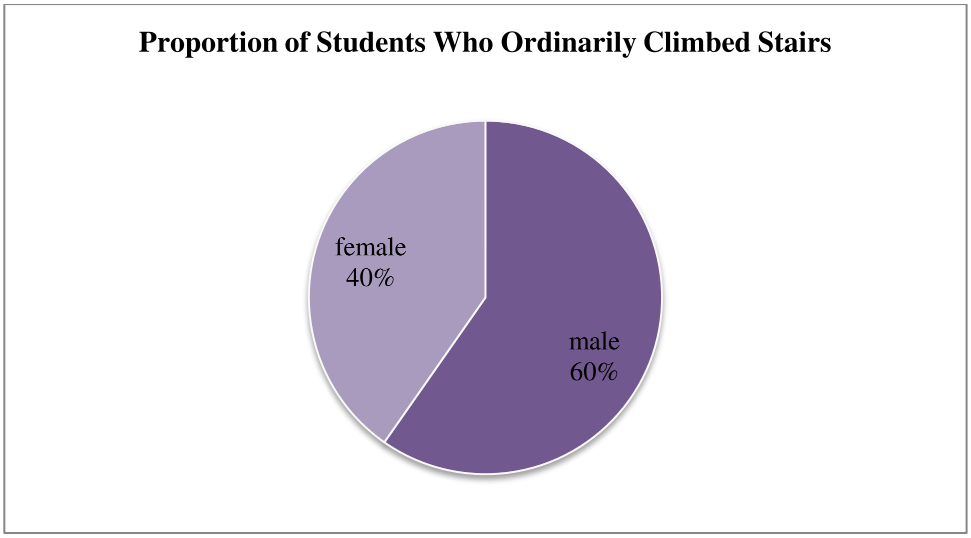


Fig 4.11.1: Proportion of students who usually climbed stairs instead of using elevators or escalators when going up for 1 or 2 floors

Among 340 students who climbed stairs 40% were female and 60% were male.

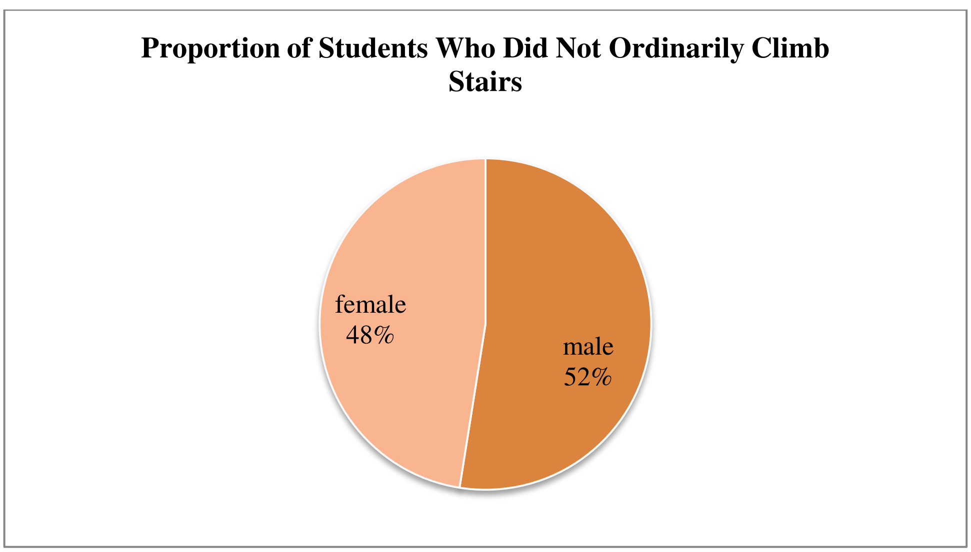


Fig 4.11.2: Proportion of students who usually used elevators or escalators when going up for 1 or 2 floors

Among 160 students who usually did not climbed stairs 48% were female and 52% were male.

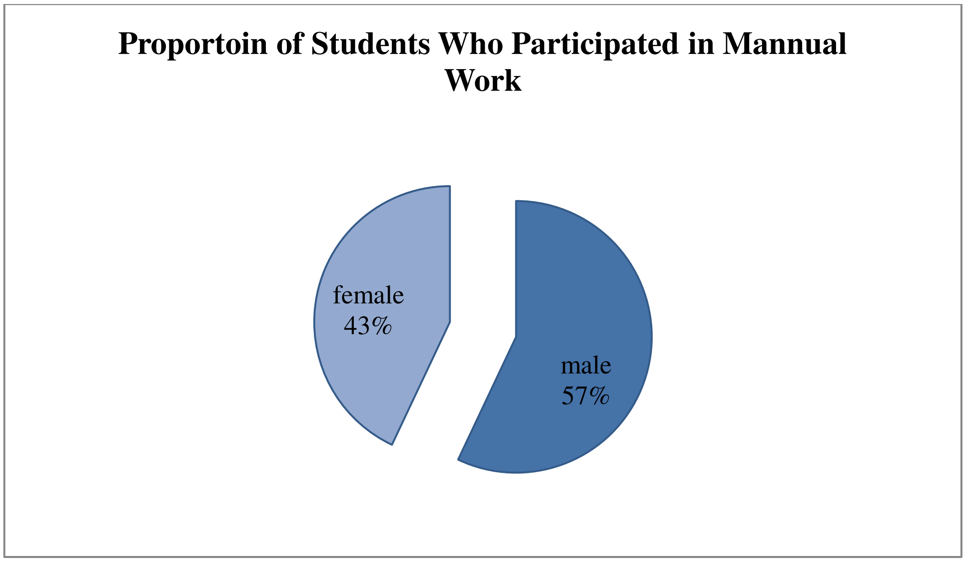


Fig 4.12.1: Proportion of students who engaged them in manual work

Among 249 students who took part in manual work in house 43% were female and 57% were male.

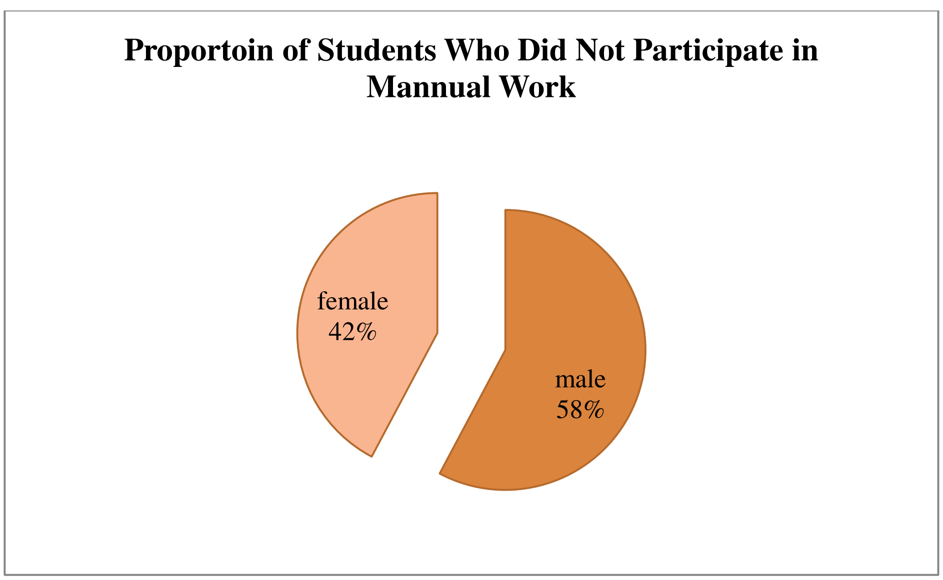


Fig 4.12.2: Proportion of students who did not engage them in manual work

Among 251 students who did not take part in manual work in house 42% were female and 58% were male.

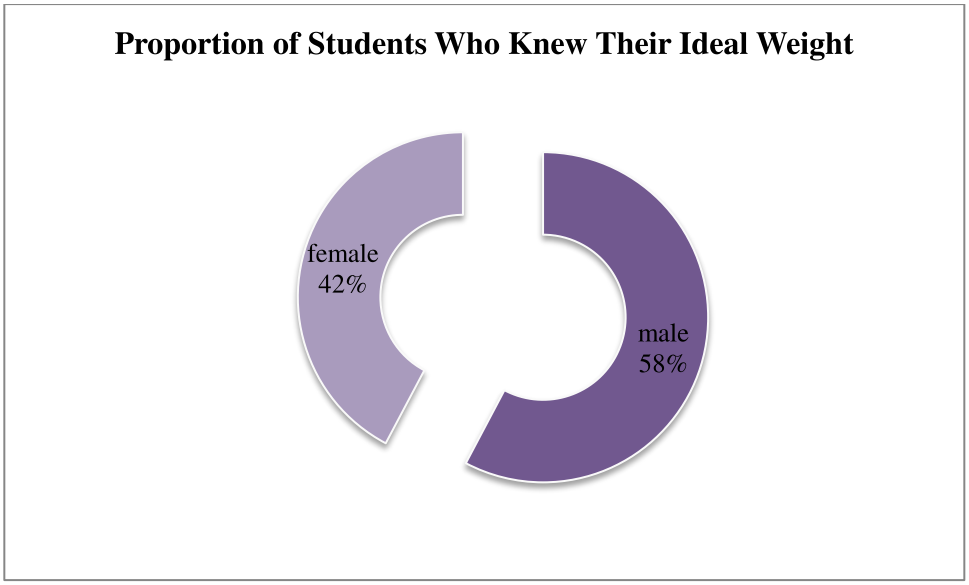


Fig 4.13.1.1: Proportion of students who knew their ideal weight

Among 355 students who knew their ideal weight 42% were female and 58% were male.

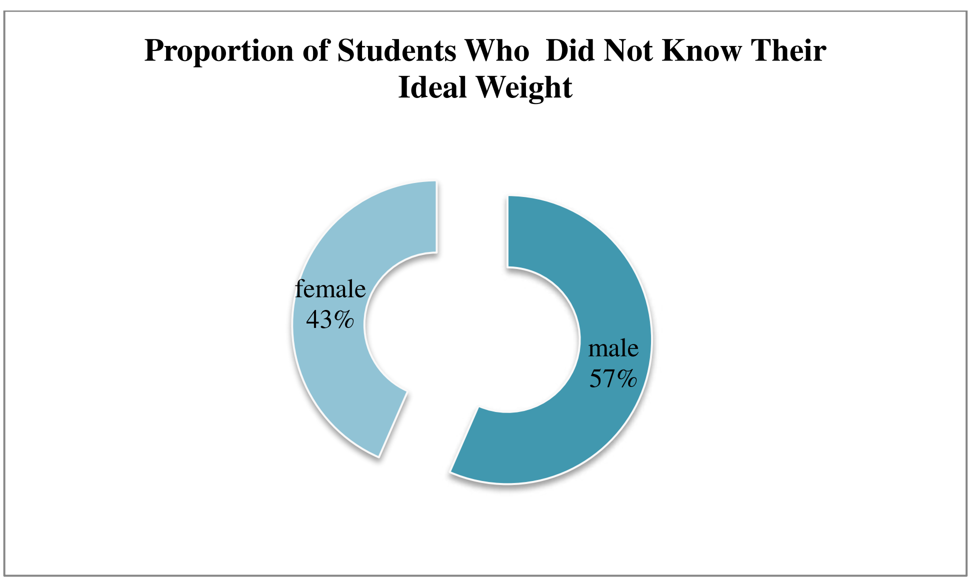


Fig 4.13.1.2: Proportion of students who did not know their ideal weight

Among 145 students who did not know their ideal weight 43% were female and 57% were male.

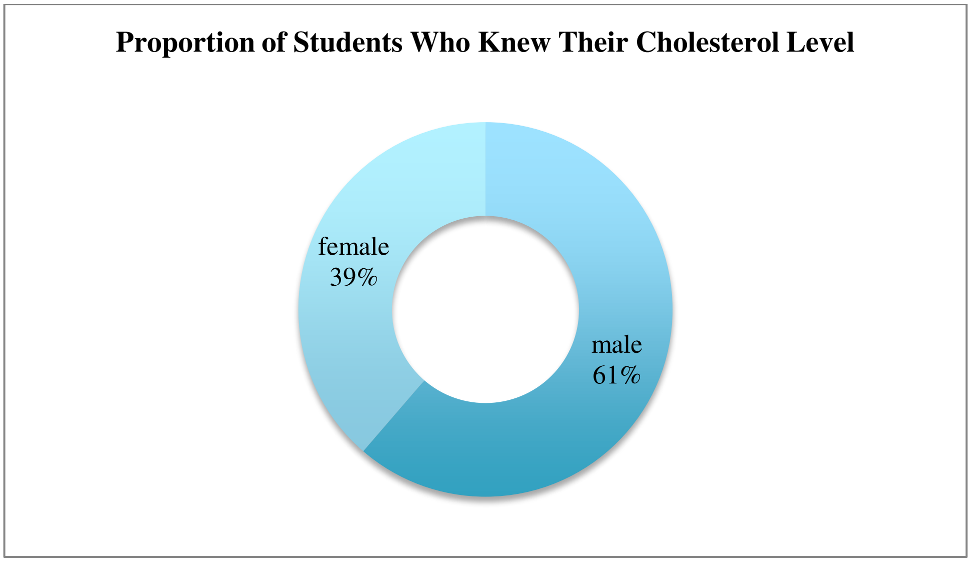


Fig 4.13.2.1: Proportion of students who knew their cholesterol level

Among 75 students who knew their cholesterol level 39% were female and 61% were male.

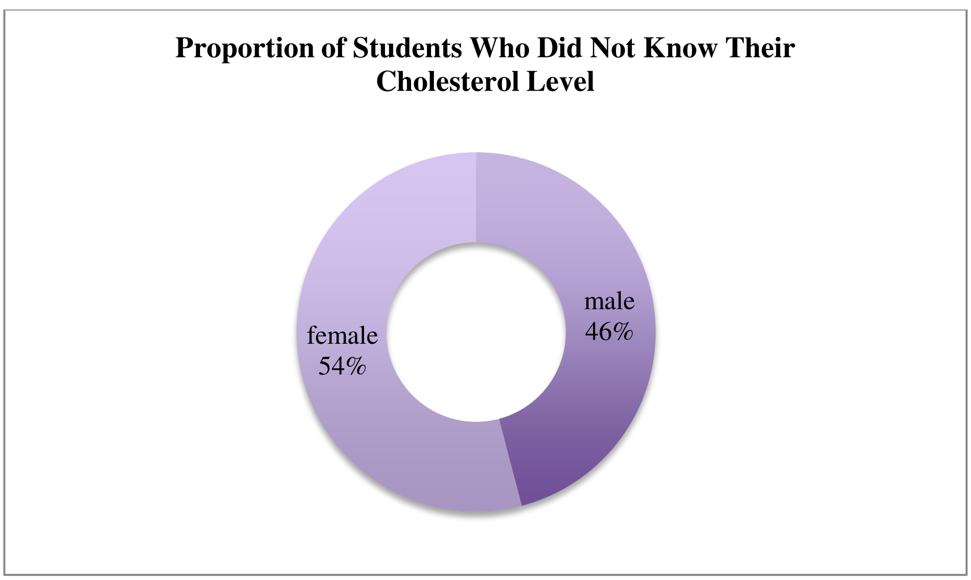


Fig 4.13.2.2: Proportion of students who did not know their cholesterol level

Among 425 students who did not know their cholesterol level 54% were female and 46% were male.

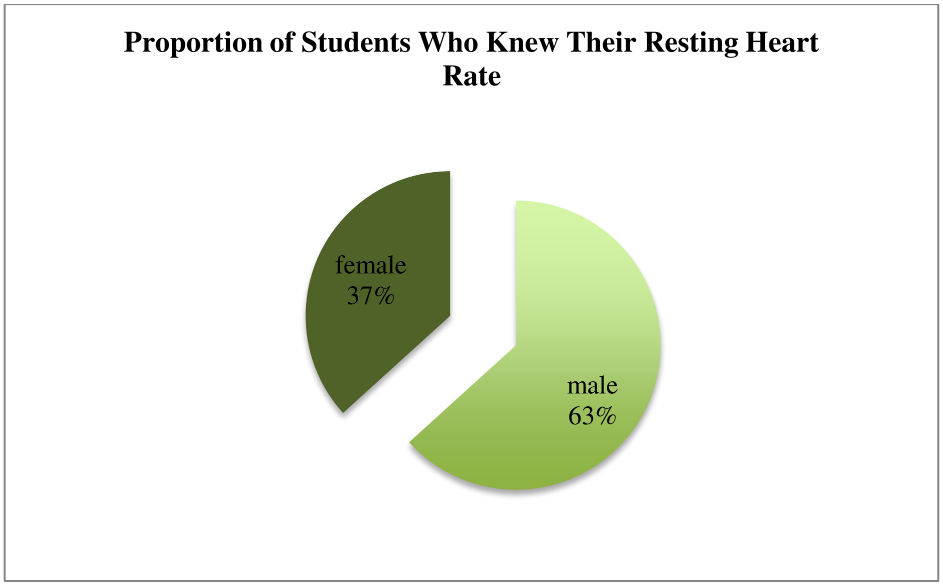


Fig 4.13.3.1: Proportion of students who knew their resting heart rate

Among 128 students who knew their resting heart rate 37% were female and 63% were male.

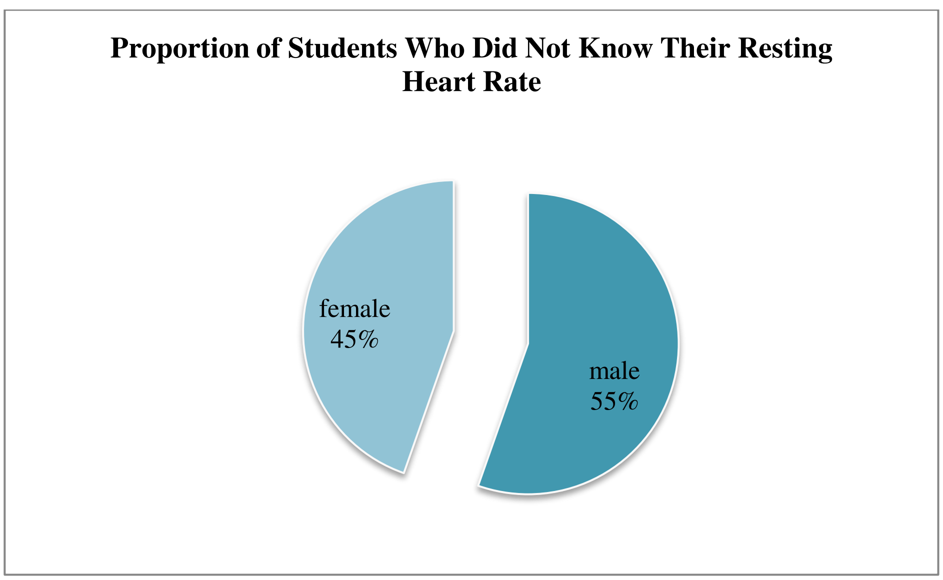


Fig 4.13.3.2: Proportion of students who did not know their resting heart rate

Among 372 students who did not know their resting heart rate 45% were female and 55% were male.

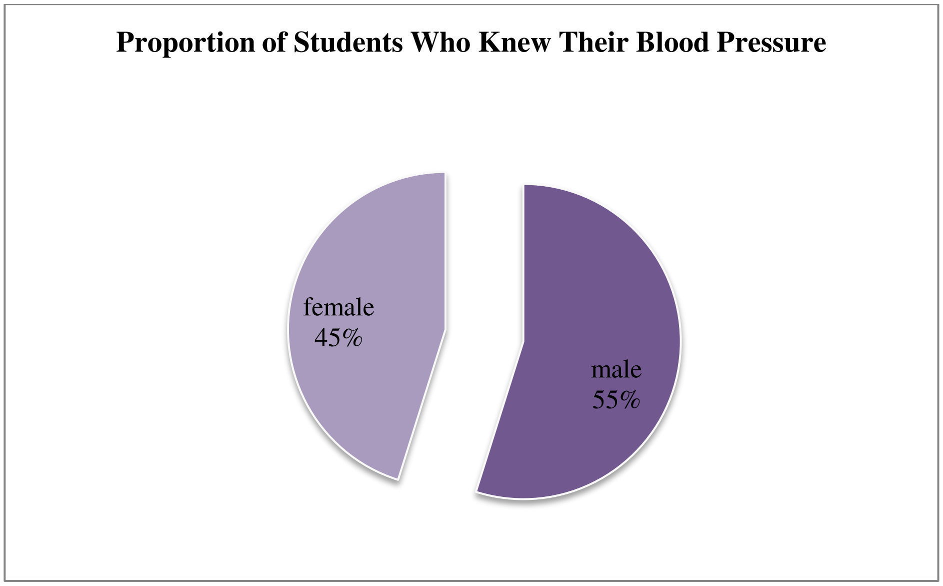


Fig 4.13.4.1: Proportion of students who knew their blood pressure

Among 308 students who knew their blood pressure 45% were female and 55% were male.

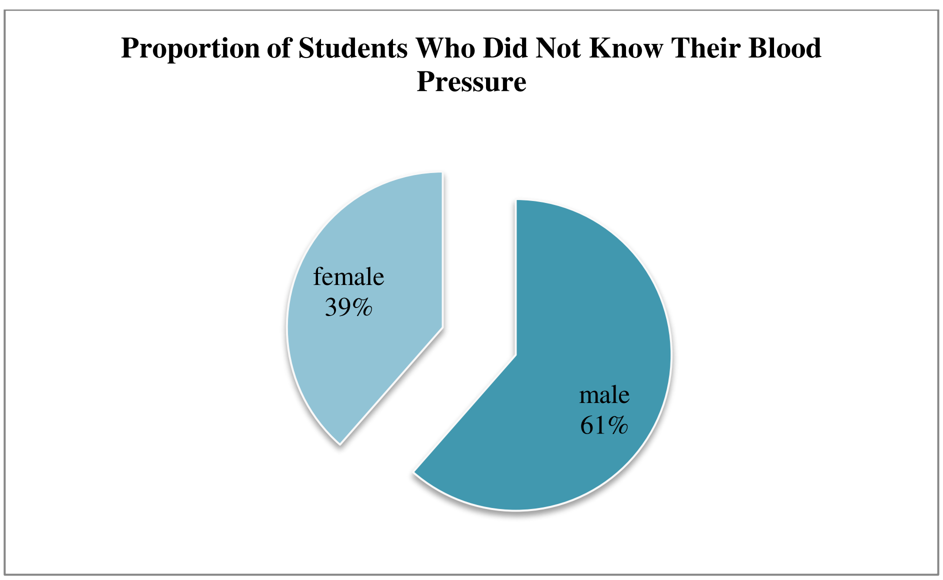


Fig 4.13.4.2: Proportion of students who did not know their blood pressure

Among 192 students who did not know their blood pressure 39% were female and 61% were male.

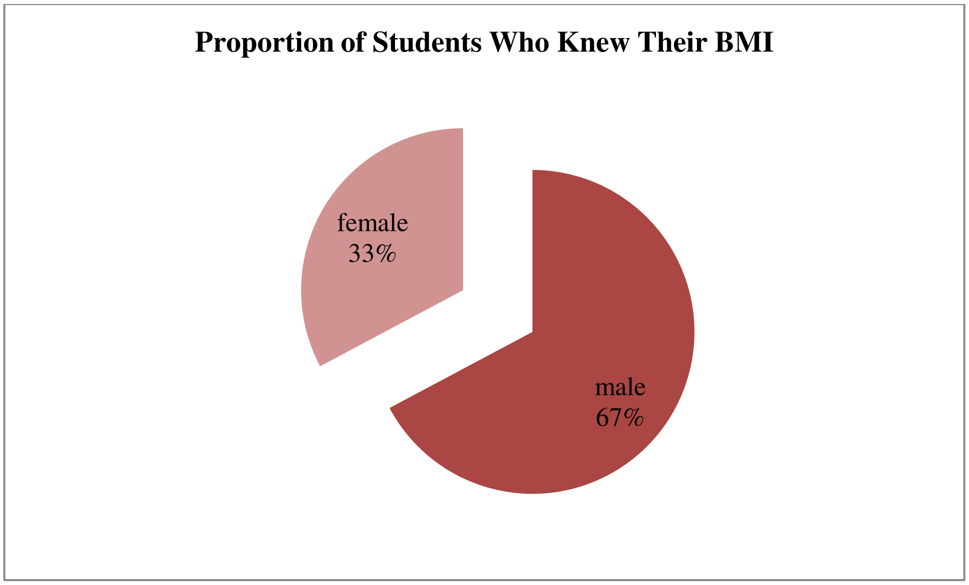


Fig 4.14.1: Proportion of students who knew their BMI (Body Mass Index)

Among 122 students who knew their BMI 33% were female and 67% were male.

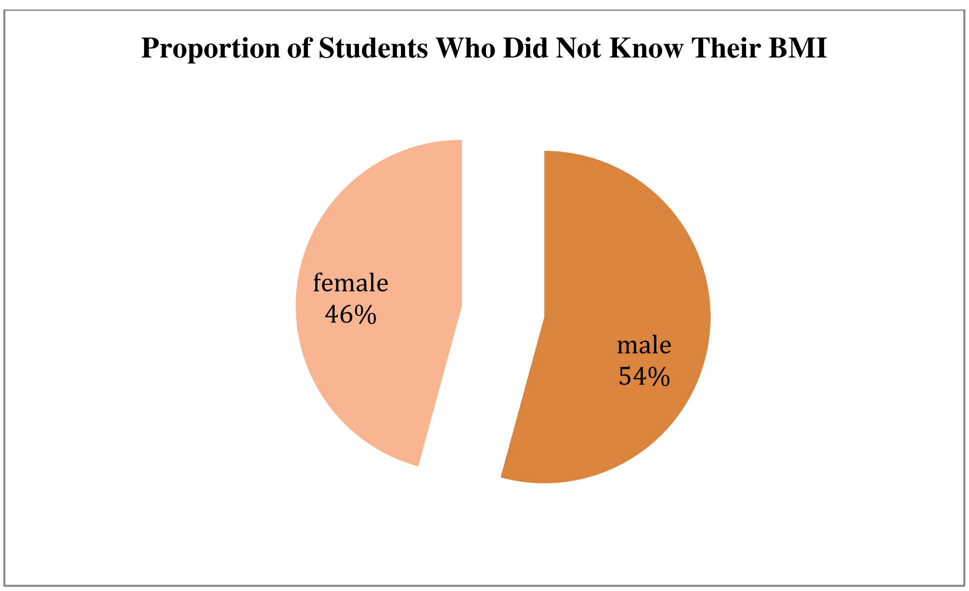


Fig 4.14.2: Proportion of students who did not know their BMI (Body Mass Index)

Among 378 students who knew their BMI 46% were female and 54% were male.

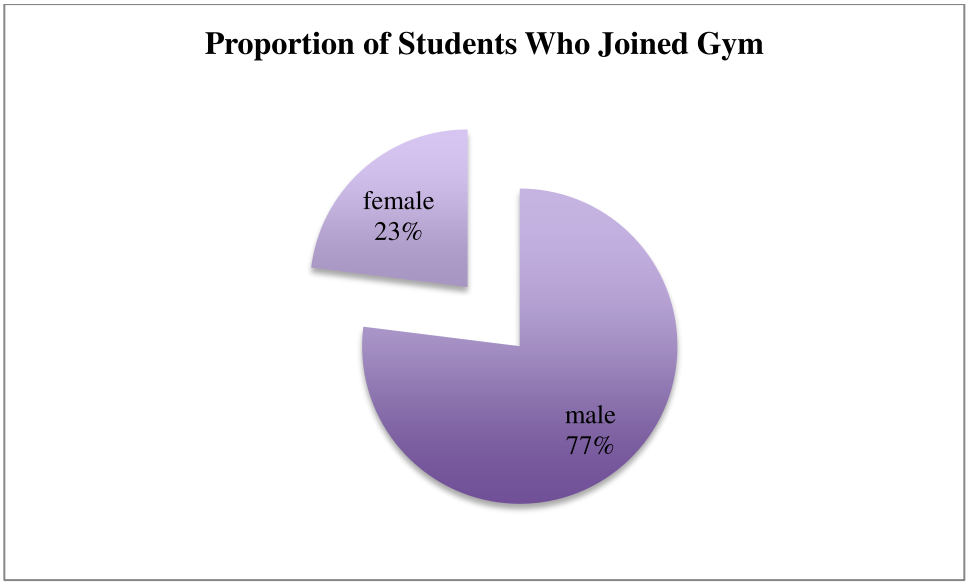


Fig 4.15.1: Proportion of students who ever joined gym

Among 152 students who joined gym 23% were female and 77% were male.

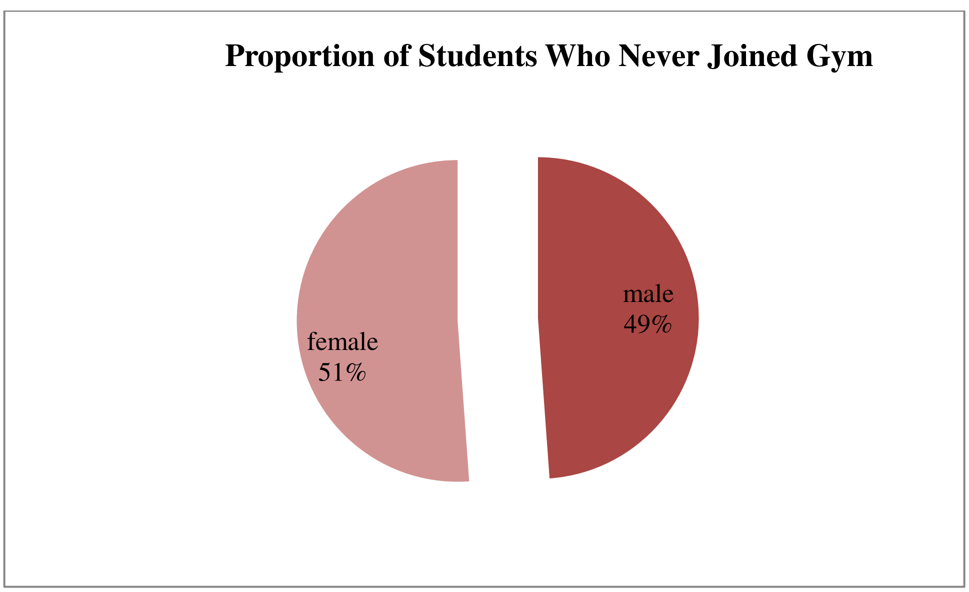


Fig 4.15.2: Proportion of students who never joined gym

Among 152 students who never joined gym 51% were female and 49% were male.

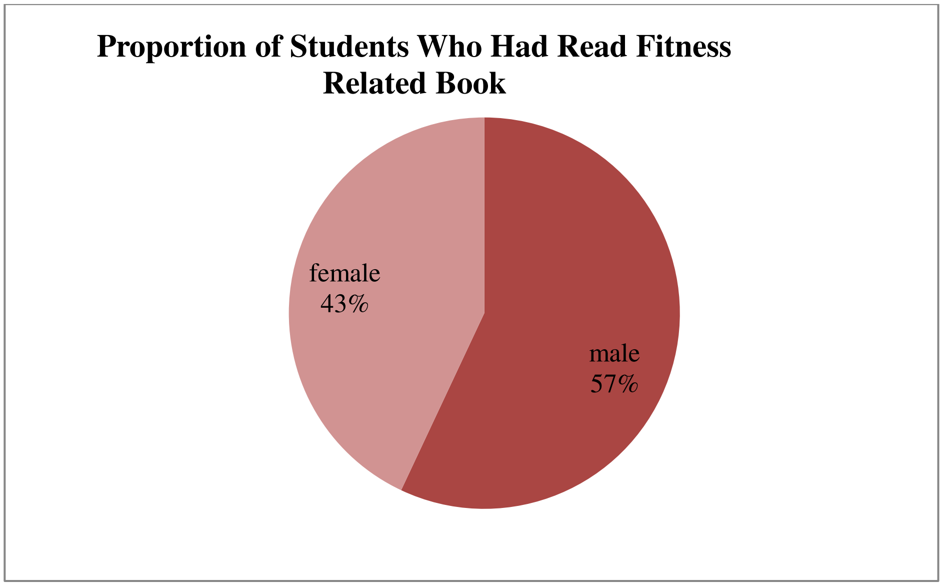


Fig 4.16.1: Proportion of students who ever read any fitness related book

Among 193 students who read any fitness related book 43% were female and 57% were male.

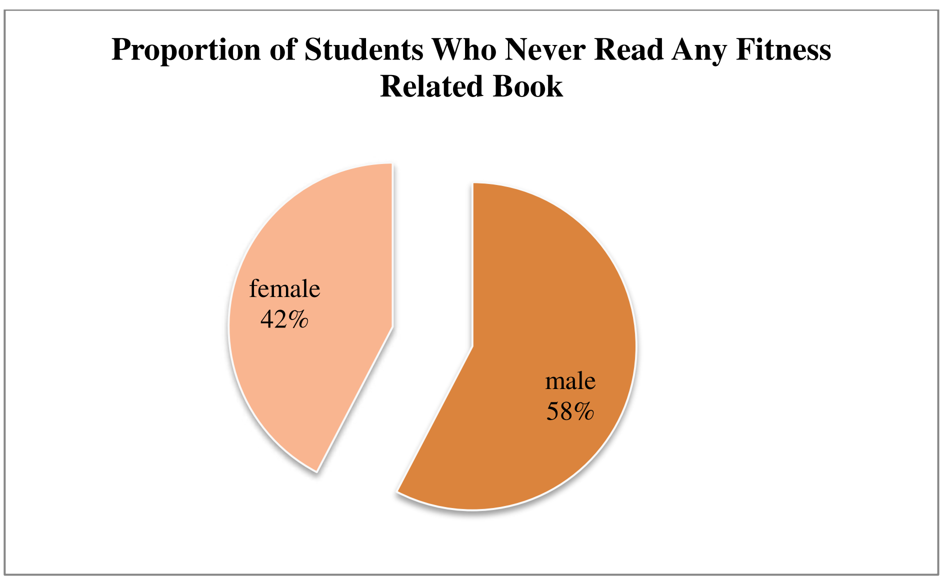


Fig 4.16.2: Proportion of students who never read any fitness related book

Among 307 students who never read any fitness related book 42% were female and 58% were male.

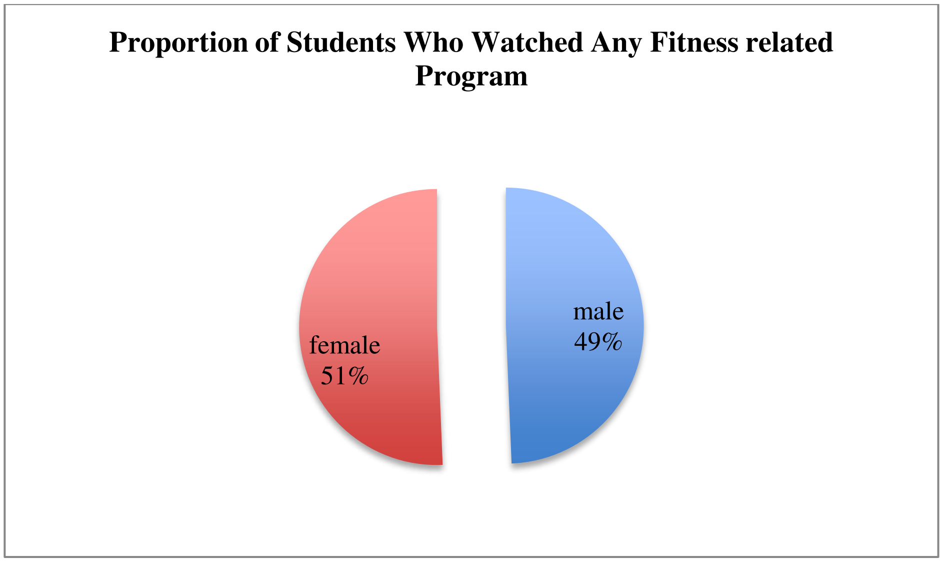


Fig 4.17.1: Proportion of students who watched any fitness related program

Among 249 students who watched any fitness related program 51% were female and 49% were male.

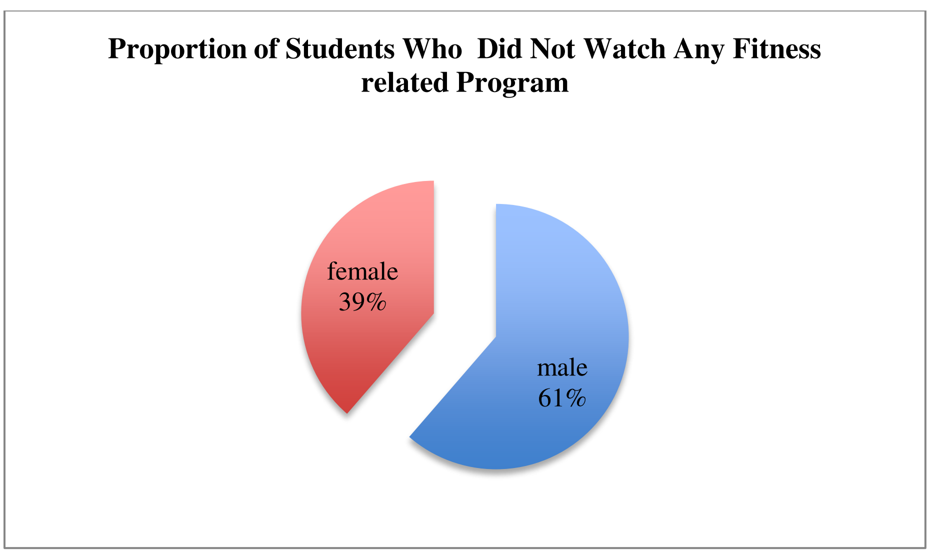


Fig 4.17.2: Proportion of students who did not watch any fitness related program

Among 249 students who did not watch any fitness related program 51% were female and 49% were male.

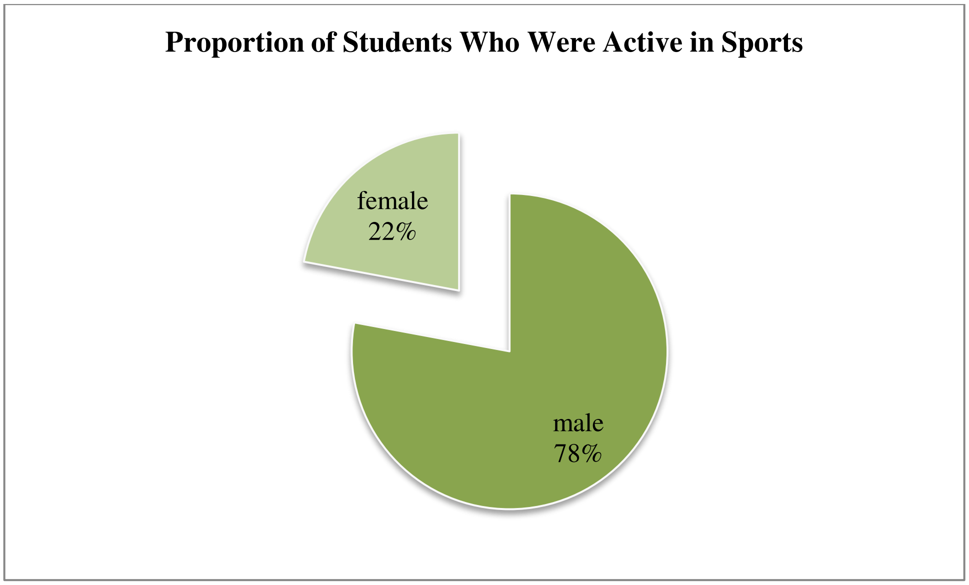


Fig 4.18.1: Proportion of students who were active in sports

Among 222 students who were active in sports 22% were female and 78% were male.

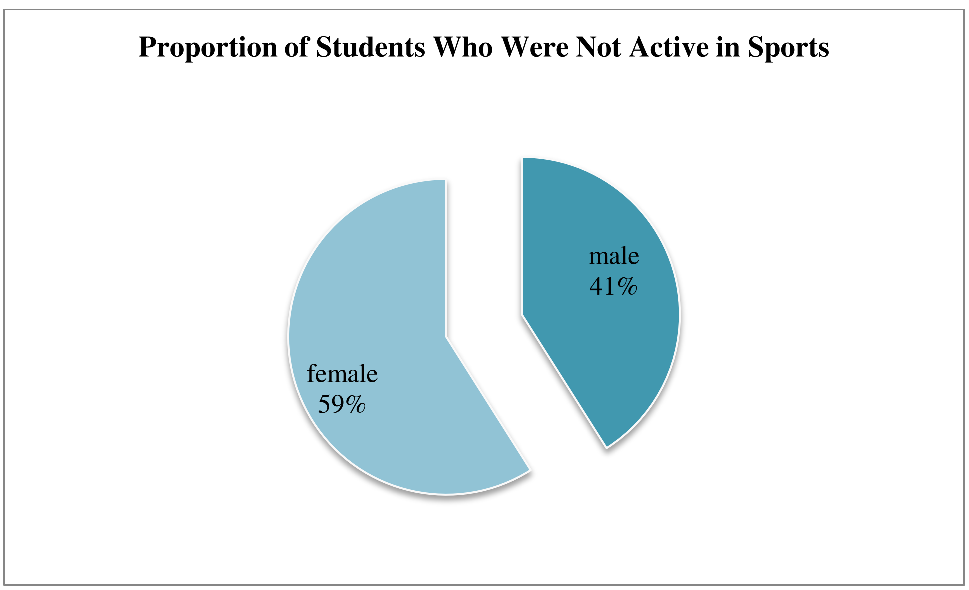


Fig 4.18.2: Proportion of students who were not active in sports

Among 278 students who were not active in sports 59% were female and 41% were male.

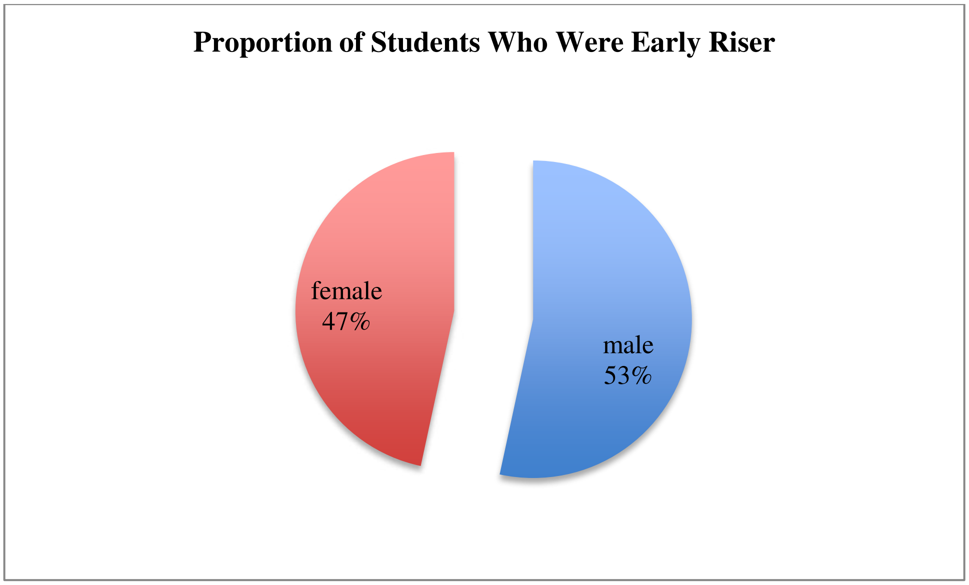


Fig 4.19.1: Proportion of students who were early riser

Among 281 students who were early riser 47% were female and 53% were male.

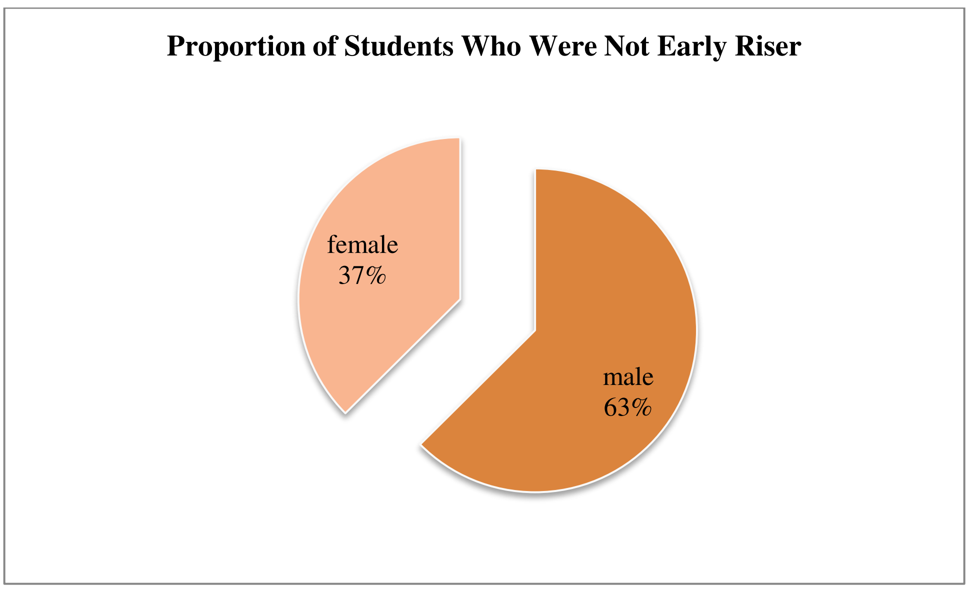


Fig 4.19.2: Proportion of students who were not early riser

Among 219 students who were not early riser 37% were female and 63% were male.

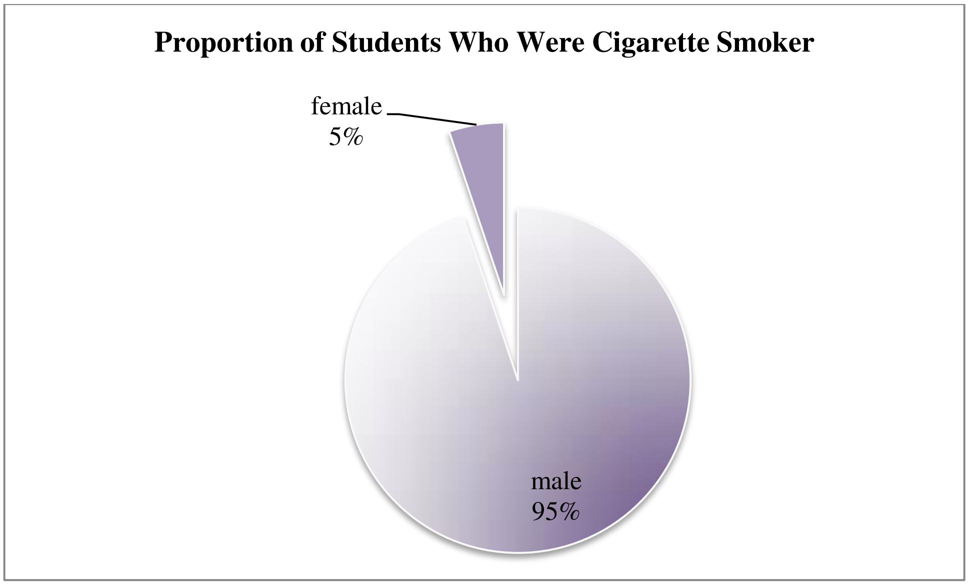


Fig 4.20.1: Proportion of students who were cigarette smoker

Among 53 students who were cigarette smoker 5% were female and 95% were male.

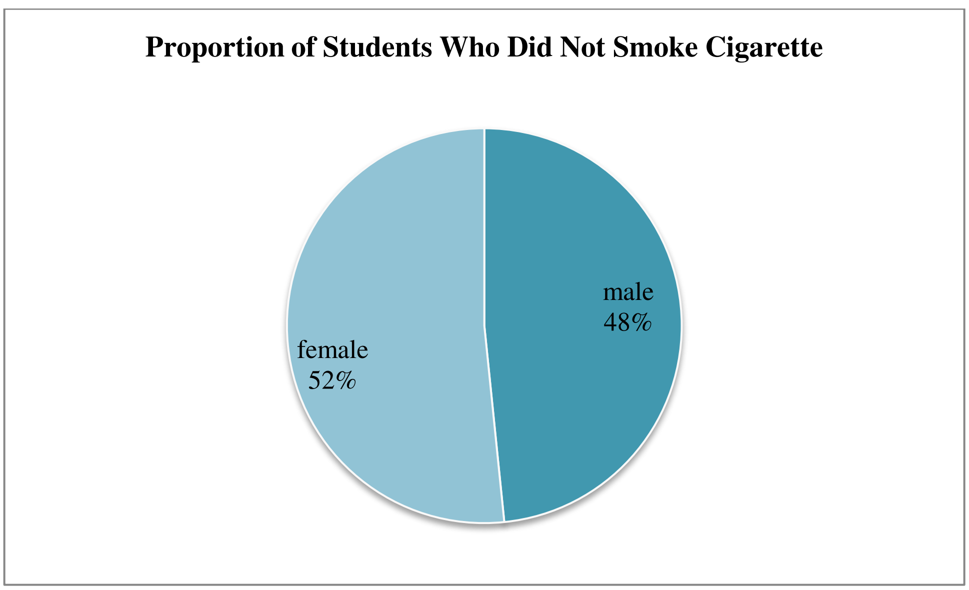


Fig 4.20.2: Proportion of students who did not smoke cigarette

Among 53 students who did not smoke cigarette 52% were female and 48% were male.

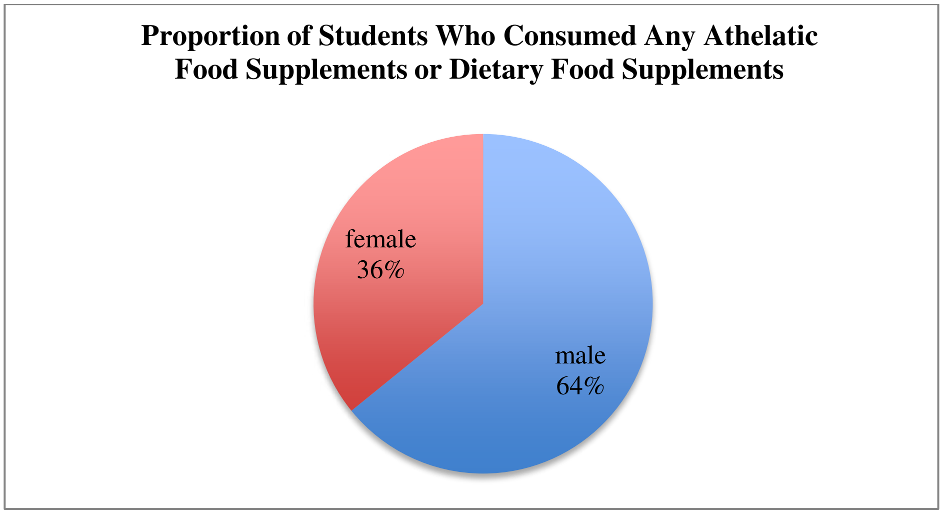


Fig 4.21.1: Proportion of students who consumed any athletic food supplements or dietary food supplements

Among 53 students who consumed any athletic food supplements or dietary supplements 36% were female and 64% were male.

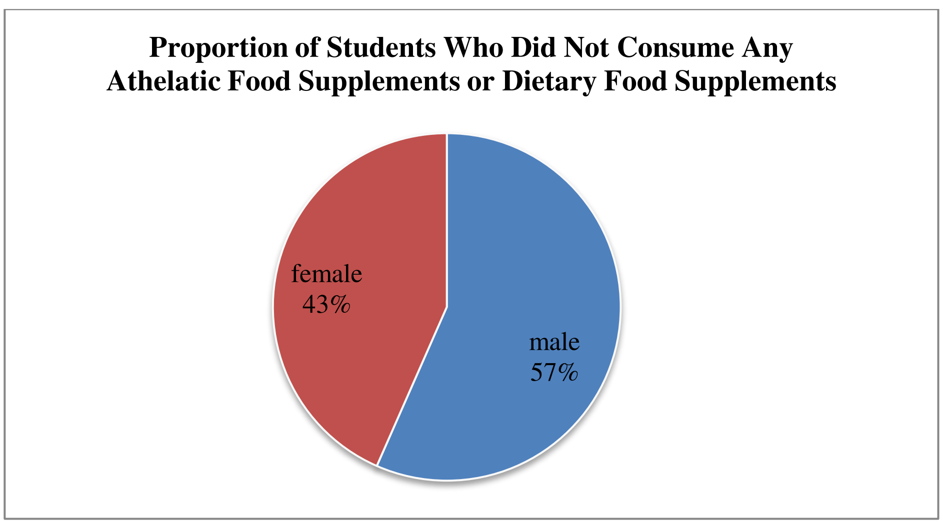


Fig 4.21.2: Proportion of students who did not consume any athletic food supplements or dietary food supplements

Among 53 students who did not consume any athletic food supplements or dietary supplements 43% were female and 57% were male.

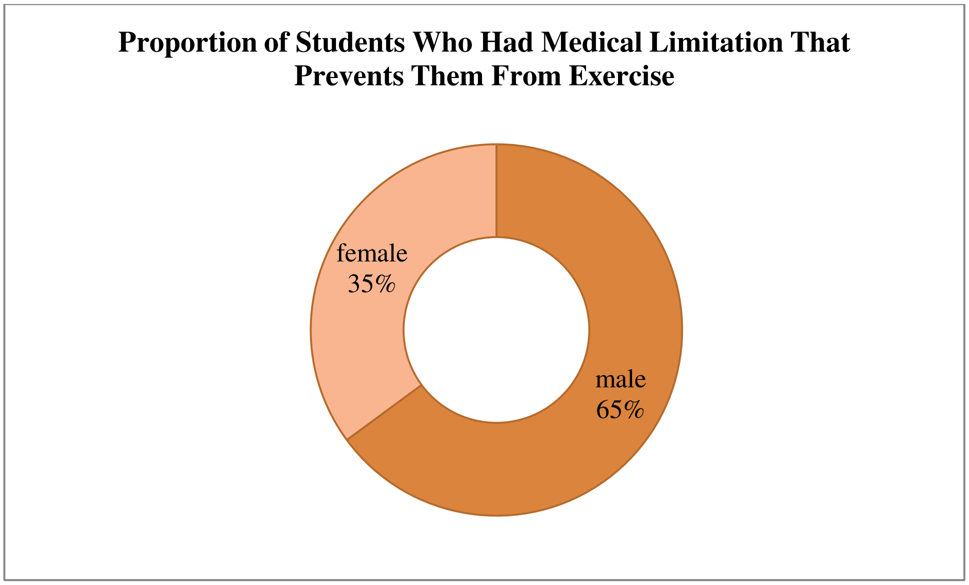


Fig 4.22.1: Proportion of students who had medical limitation that prevented them from exercising

Among 57 students who had medical limitation 35% were female and 65% were male.

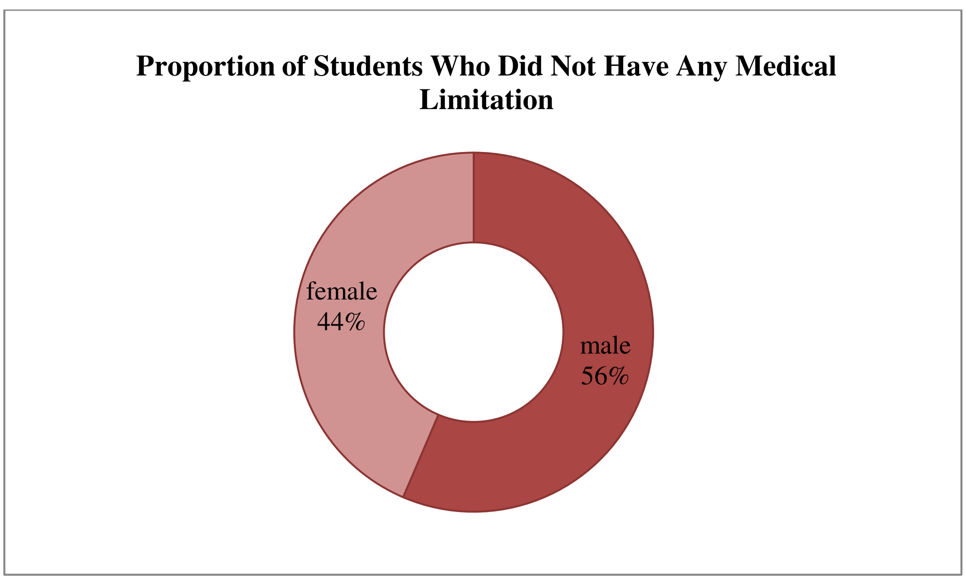


Fig 4.22.2: Proportion of students who did not have medical limitation

Among 443 students who did not have medical limitation 44% were female and 56% were male.

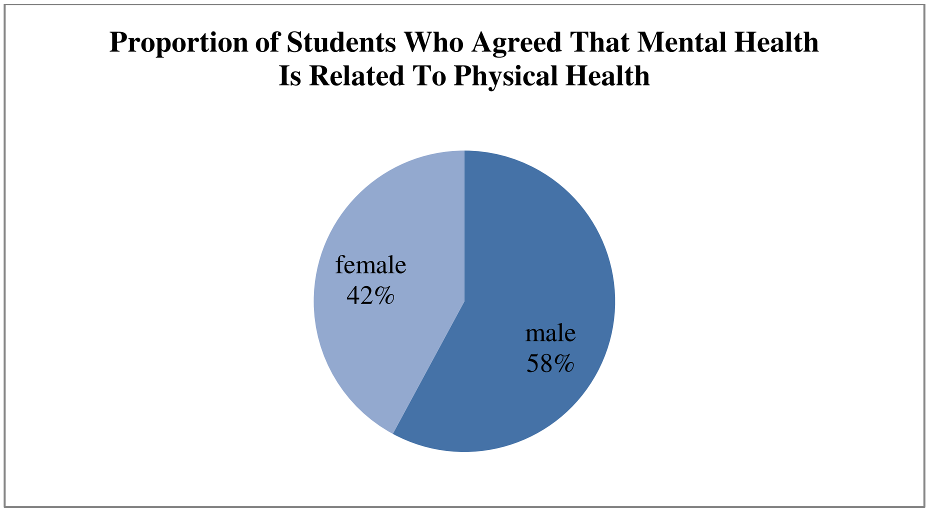


Fig 4.23.1: Proportion of students who agreed that mental health is related to physical health.

Among 463 students who agreed that mental health is related to physical health 42% were female and 58% were male.

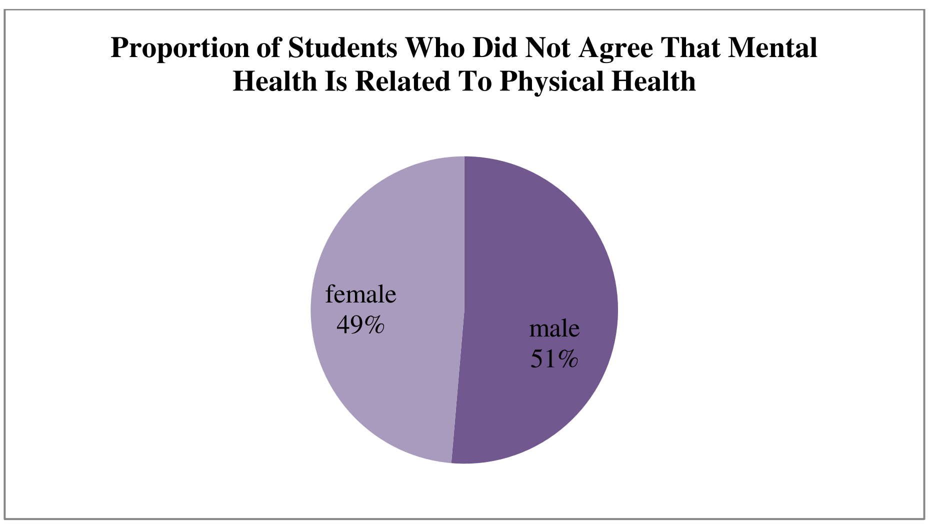


Fig 4.23.2: Proportion of students who did not agree that mental health is related to physical health.

Among 37 students who did not agree that mental health is related to physical health 49% were female and 51% were male.

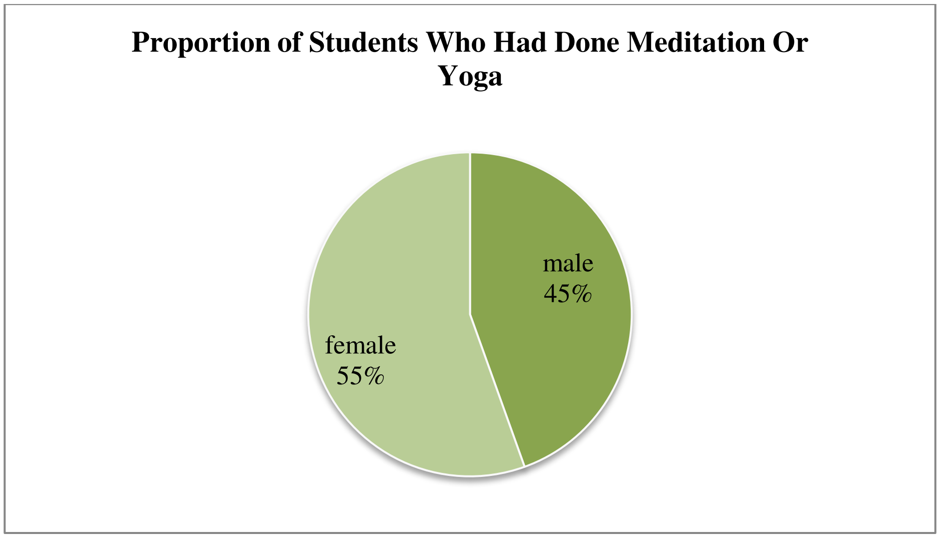


Fig 4.24.1: Proportion of students who had done meditation or yoga

Among 146 students who had done meditation or yoga 55% were female and 45% were male.

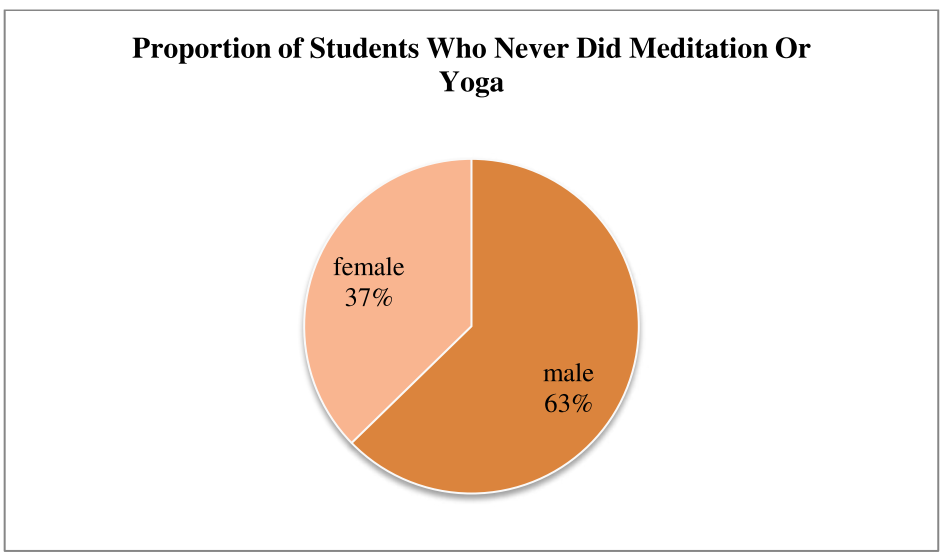


Fig 4.24.2: Proportion of students who had never done meditation or yoga

Among 354 students who had never done meditation or yoga 37% were female and 63% were male.

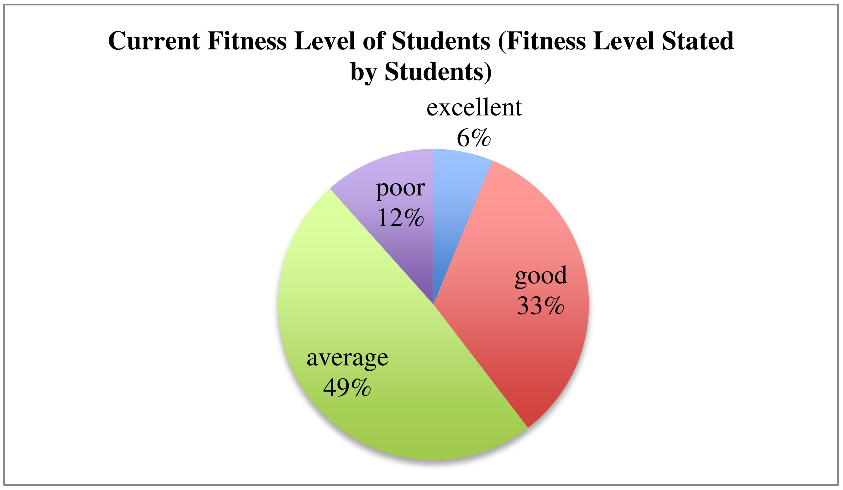


Fig 4.25.1: Current fitness level of students

Among 500 students 6% were excellent, 33% good, 49% average and 12% poor.

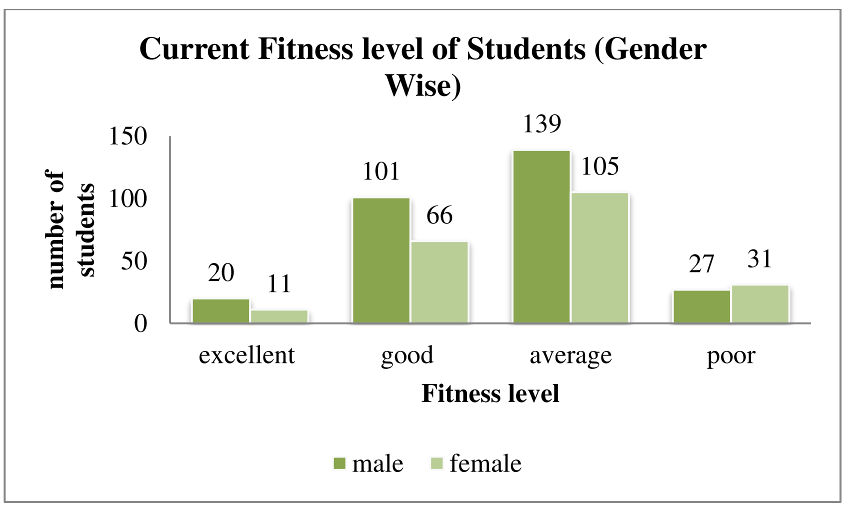


Fig 4.25.2: Current fitness level among students (gender wise)

Among 287 male students 7% of the students stated their fitness status excellent, 35% of the students stated their fitness status good, 49% of the students stated their fitness status average, 9% of the students stated their fitness status poor. Among 213 female students 5% of the students stated their fitness status excellent, 31% of the students stated their fitness status good, 49% of the students stated their fitness status average, 15% of the students stated their fitness status poor.

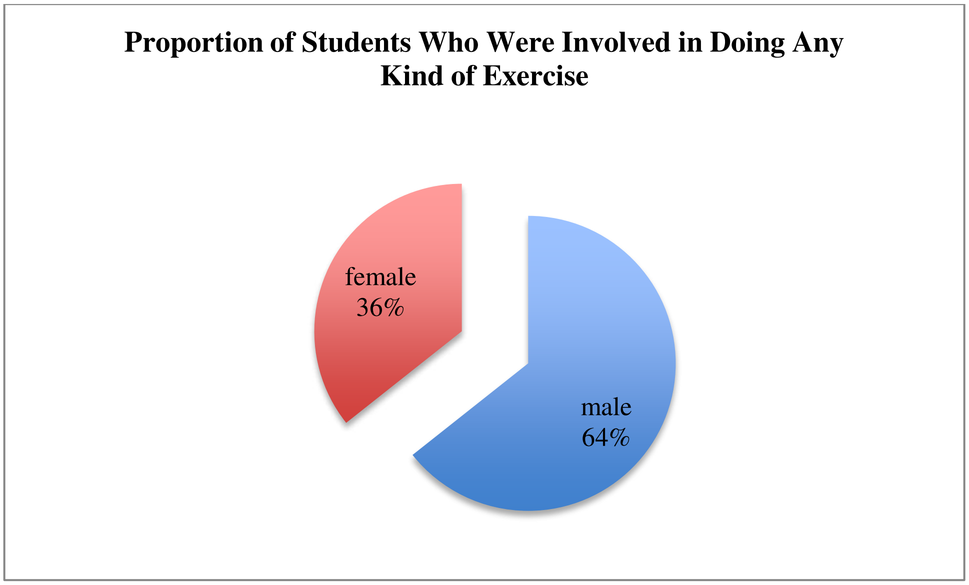


Fig 4.26.1: Proportion of students who did any kind of exercise.

Among 272 students who did any exercise 36% were female and 64% were male.

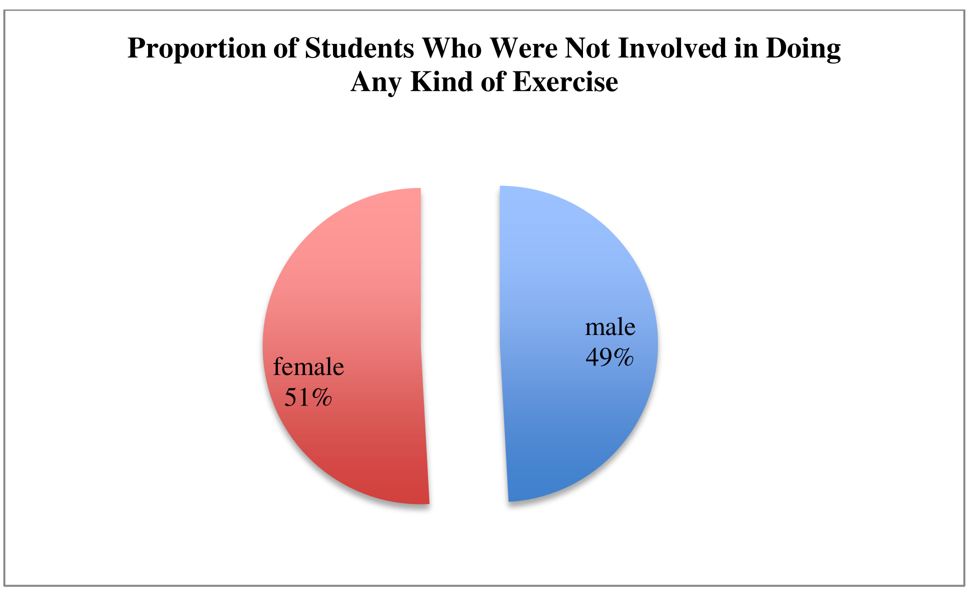


Fig 4.26.2: Proportion of students who did not do any kind of exercise.

Among 228 students who did not do any exercise 51% were female and 49% were male.

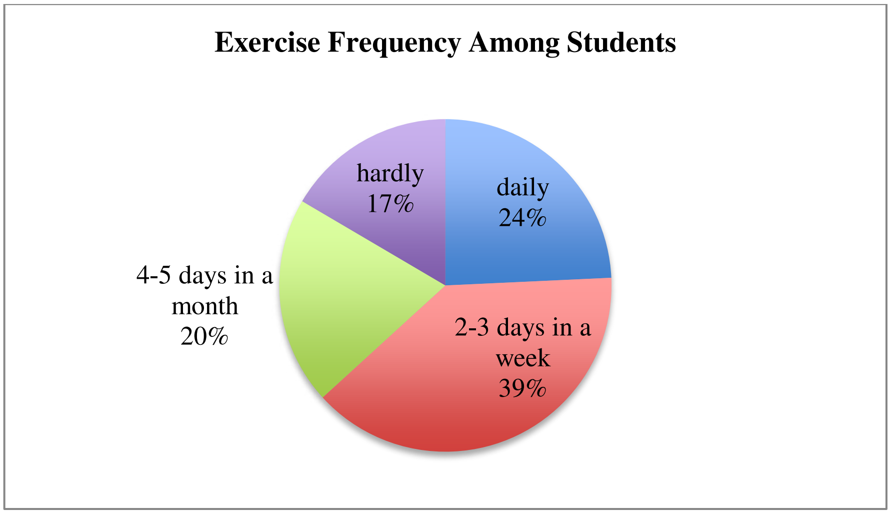


Fig 4.27.1: Exercise frequency among students

It has been observed that only 272 students were involved in doing exercise among them 24% exercised daily, 39% exercised 2-3 days in a week, 20% exercised 4-5 days in a month and 17% exercised hardly.

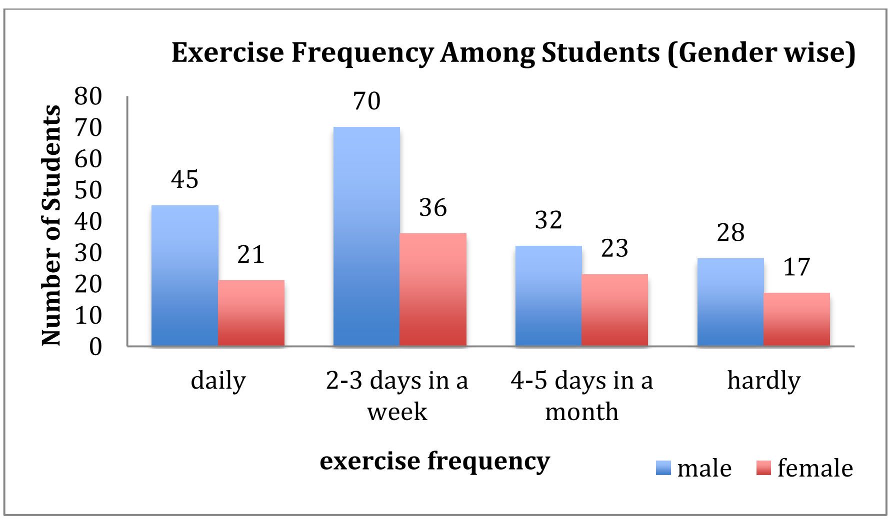


Fig 4.27.2: Frequency of exercise among students (gender wise)

Among 175 male students 26% exercised daily, 40% exercised 2-3 days in a week, 18% exercised 4-5 days in a month and 16% exercised hardly. Among 97 female students 22% exercised daily, 37% exercised 2-3 days in a week, 24% exercised 4-5 days in a month and 17% exercised hardly.

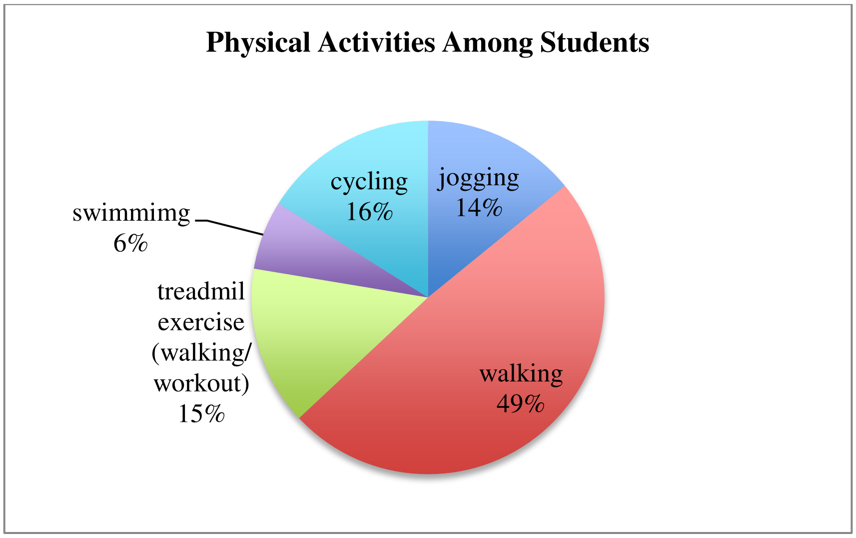


Fig 4.28.1: Physical Activity Among Students

Among the total students 14% do jogging, 49% do walking, 15% do treadmill exercise (running/ workout), 6% do swimming and 16% do cycling.

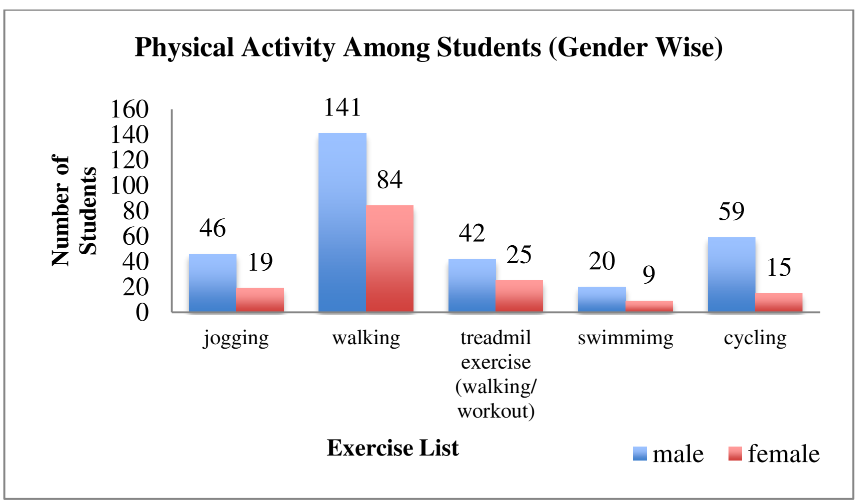


Fig 4.28.2: Physical activity among students (gender wise)

Among 306 responses from 175 male students 15% did jogging, 46% did walking, 14% did treadmill exercise (walking/ workout), 6% did swimming and 19% did cycling. Among 152 responses from 97 female students 13% did jogging, 55% did walking, 16% did treadmill exercise (walking/ workout), 6% did swimming and 10% did cycling.

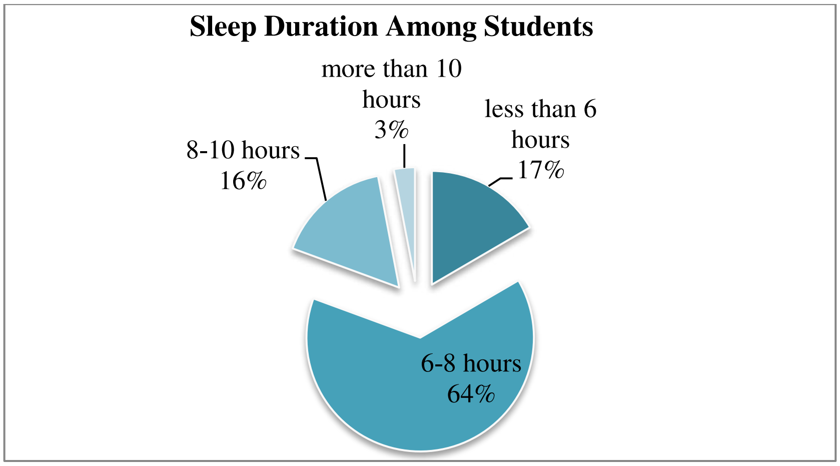


Fig 4.29.1: Sleep Duration Among Students

It has been observed that 17% had sleep duration is less than 6 hours, 64% had sleep duration 6-8 hours, 15% had sleep duration 8-10 hours, 3% had sleep duration more than 10 hours.

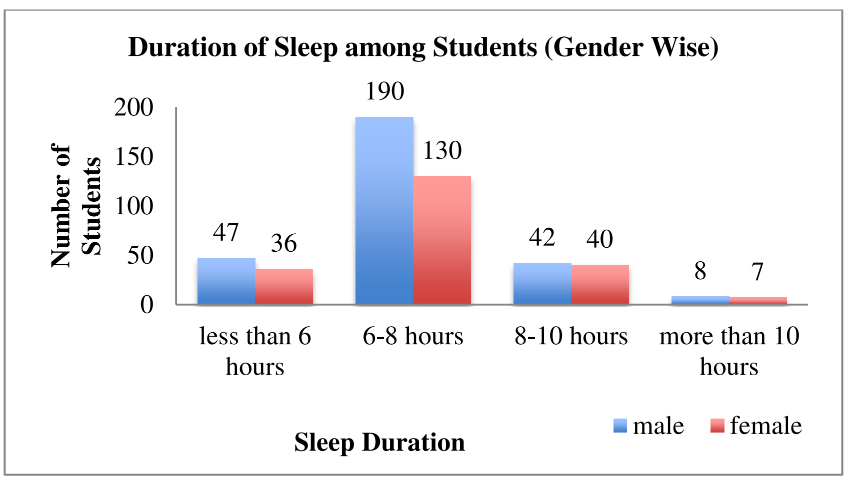


Fig 4.29.2: Sleep Duration Among Students (gender wise)

Among 287 male students 16% had sleep duration of less than 6 hours, 66% had sleep duration of 6-8 hours, 15% had sleep duration of 8-10 hours, 3% had sleep duration of more than 10 hours. Among 213 female students 17% had sleep duration of less than 6 hours, 61% had sleep duration of 6-8 hours, 19% had sleep duration of 8-10 hours, 3% had sleep duration of more than 10 hours.

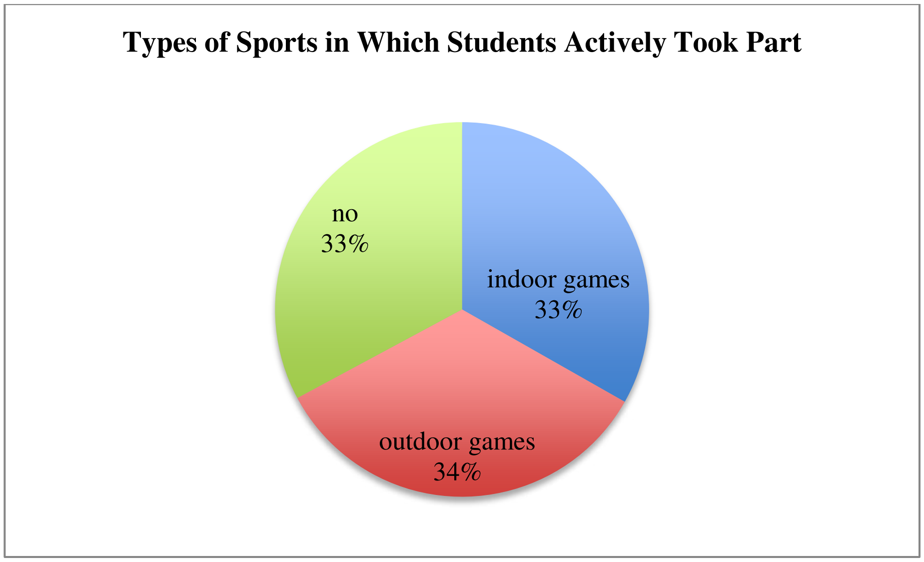


Fig 4.30.1: Types of sports in which students actively took part

In this study it was observed that among the students 33% took Part in indoor games, 34% in outdoor games and 33% did not take part in any games.

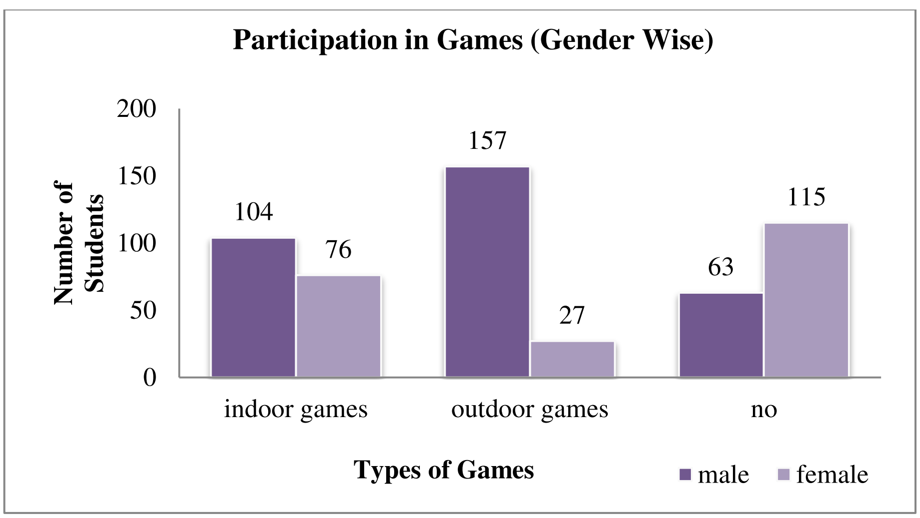


Fig 4.30.2: Active participation in games (gender wise)

Among 324 responses from male students 32% is indoor games, 49% outdoor games, 19% no games. Among 218 responses from female 35% is indoor games, 12% is outdoor games and 53% no games.

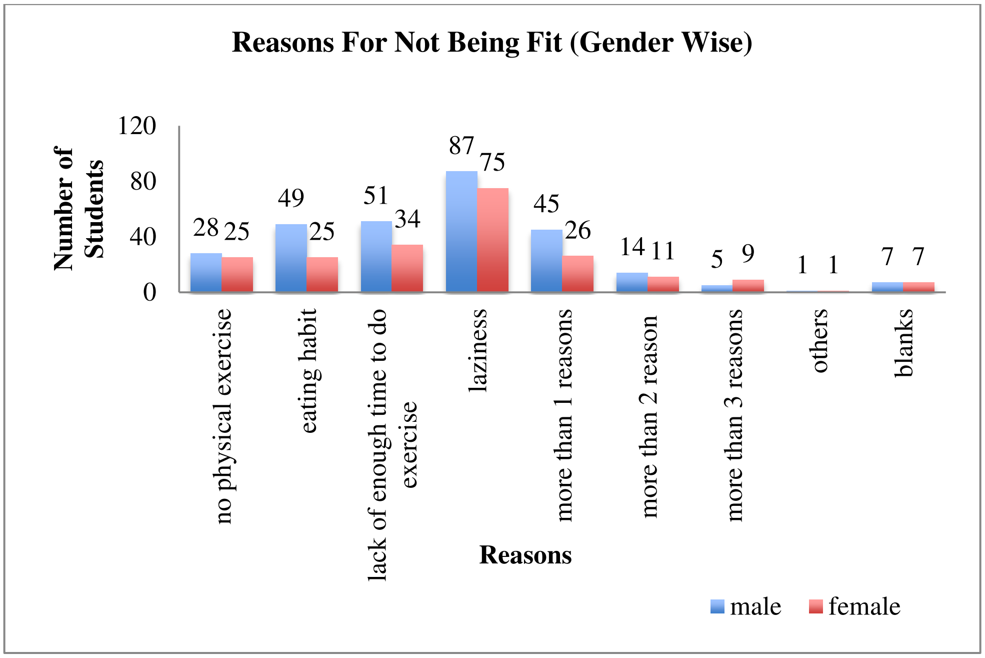


Fig 4.31: Reasons for not being fit (gender wise)

Among 287 male students 10% identified no physical exercise as a reason, 17% identified no eating habit as a reason, 18% identified lack of enough time to do exercise as a reason, 30% identified laziness as a reason, 16% identified more than one reason for not being fit, 5% identified more than two reason for not being fit, 2% identified more than three reason for not being fit, 1% stated other reason for not being fit and 2% didn’t give any answer. Among 213 female students 12% identified no physical exercise as a reason, 12% identified no eating habit as a reason, 16% identified lack of enough time to do exercise as a reason, 35% identified laziness as a reason, 12% identified more than one reason for not being fit, 5% identified more than two reason for not being fit, 4% identified more than three reason for not being fit, 1% stated other reason for not being fit and 3% didn’t give any answer.

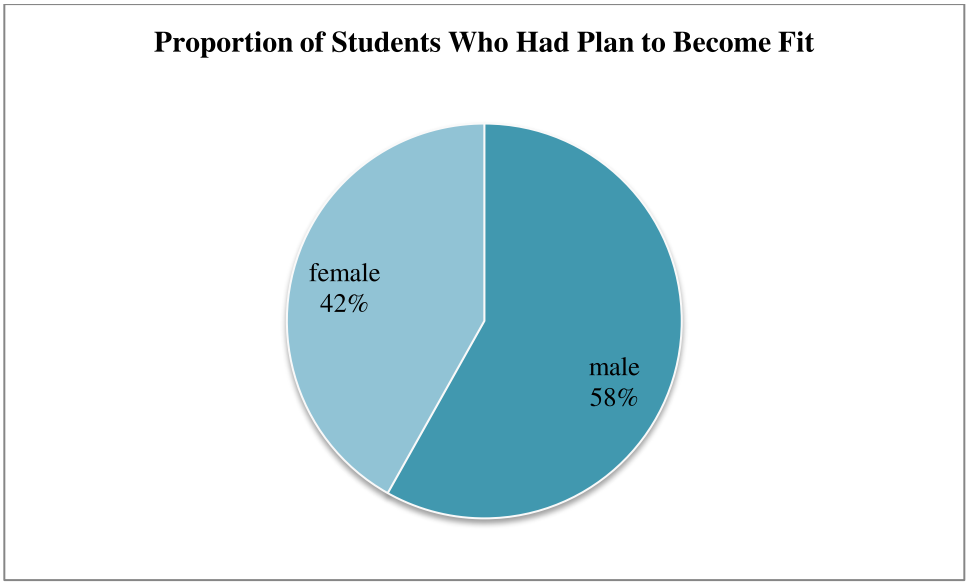


Fig 4.32.1: Proportion of Students who had plans to become fit

Among 387 students who had plans to become fit 42% were female and 58% were male.

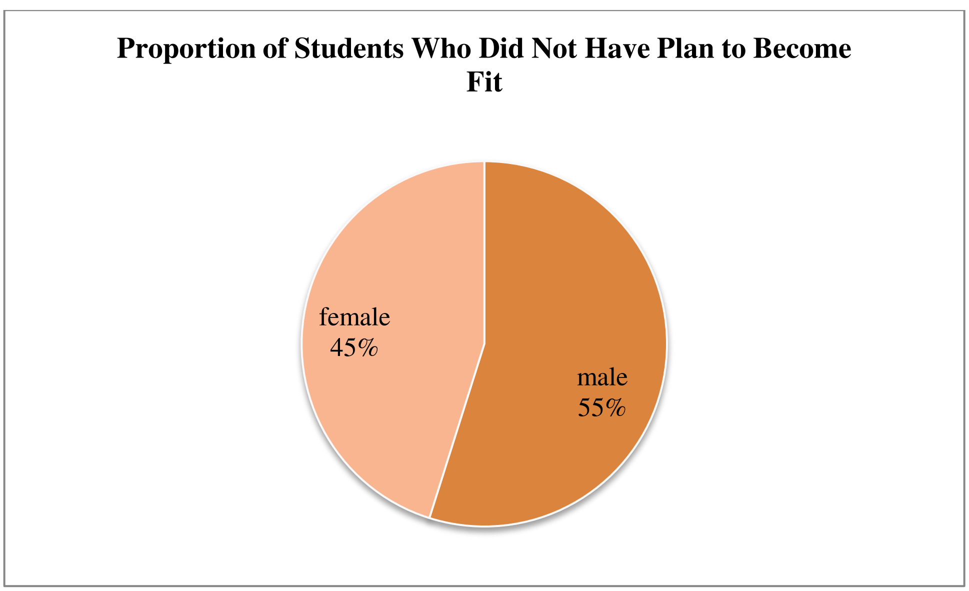


Fig 4.32.2: Proportion of Students who did not have plans to become fit

Among 113 students who did not have plans to become fit 45% were female and 55% were male.

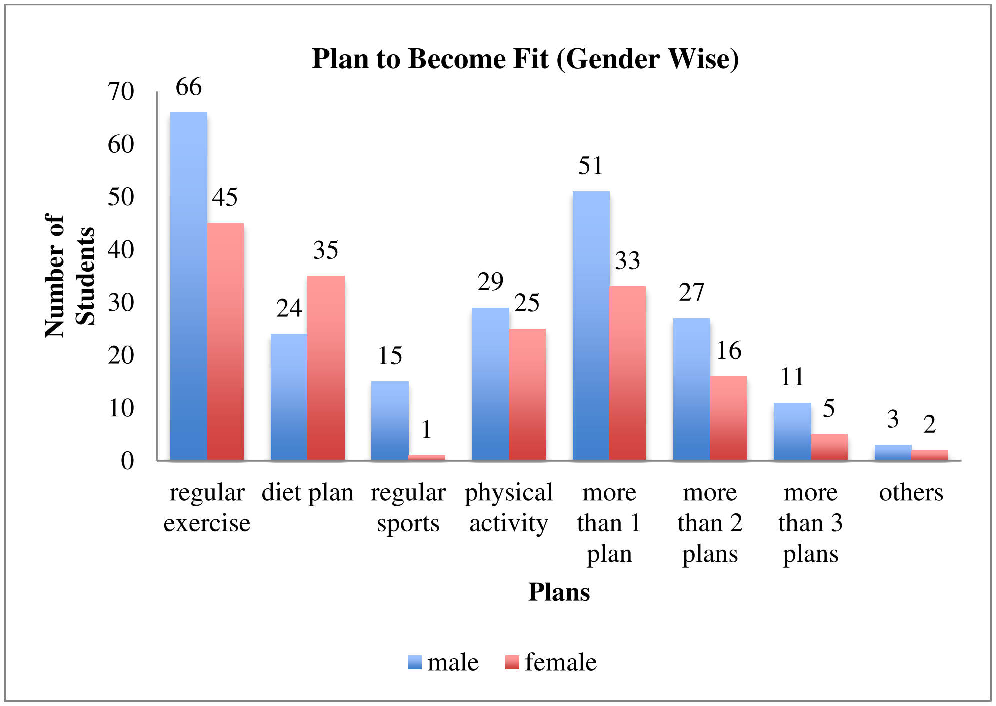


Fig 4.33: Plans among students to become fit (gender wise)

Among 287 male students 29% stated regular exercise as a plan, 11% stated diet plan as a plan, 7% stated regular sports as a plan, 13% stated physical activity as a plan, 22% stated more than one plan for being fit, 12% stated more than two plan for being fit, 5% stated more than three plan for being fit, 1% stated other plan for being fit. Among 213 female students 28% stated regular exercise as a plan, 22% stated diet plan as a plan, 1% stated regular sports as a plan, 15% stated physical activity as a plan, 20% stated more than one plan for being fit, 10% stated more than two plan for being fit, 3% stated more than three plan for being fit, 1% stated other plan for being fit.

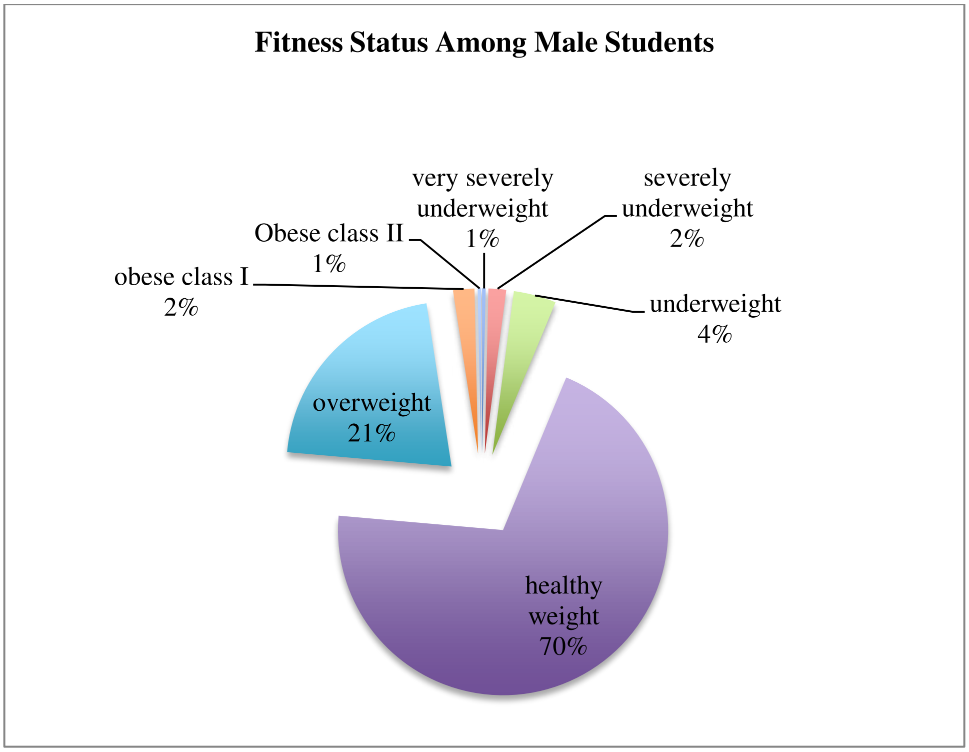


Fig 4.34.1: Fitness status among male students

It was found that among 287 male students 1% had very severely underweight, 2% had severely underweight, 4% had underweight, 70% had healthy weight, 21% overweight, 2% were obese (class I) and 1% were obese (class II).

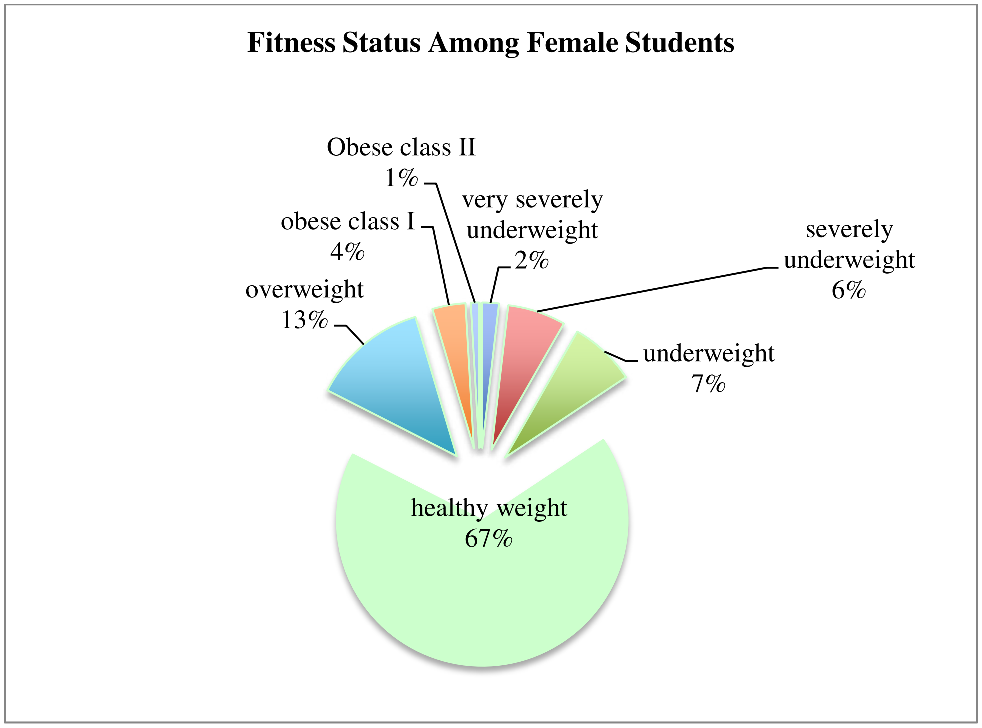


Fig 4.34.2: Fitness status among female students

It was found that among 213 female students 2% had very severely underweight, 6% had severely underweight, 7% had underweight, 67% had healthy weight, 13% overweight, 4% were obese (class I) and 1% were obese (class II).

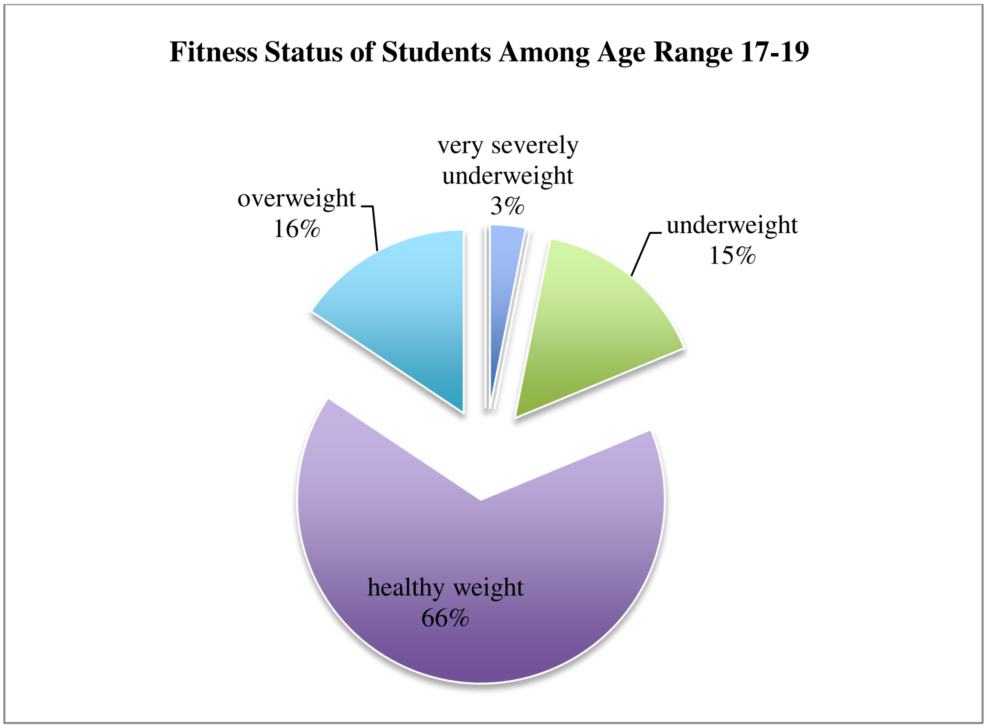


Fig 4.35.1: BMI based fitness status of students among age range 17-19

For this analysis age range is 17-19. During this analysis it has been found that among 32 students 5 students were overweight (1 male, 4 female), 21 students were fit (8 female, 13 male), 5 students were underweight (4 female, 1 male) and 1 respondent is very severely underweight (1 female).

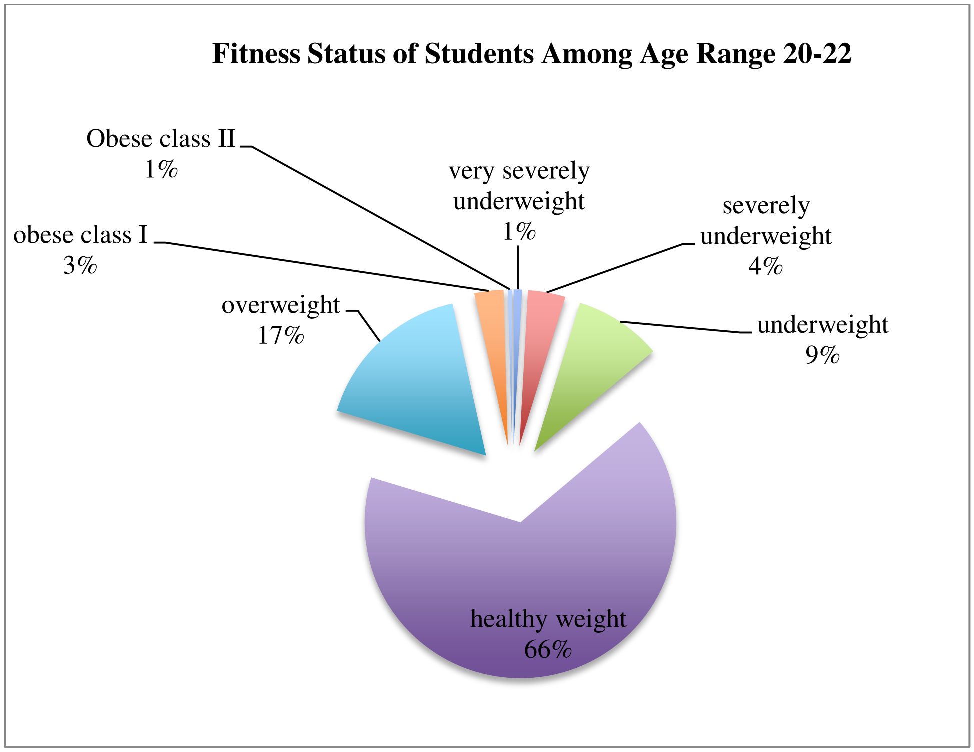


Fig 4.35.2: BMI based fitness status of students among age range 20-22

For this analysis age range is 20-22. During this analysis it has been found that among 231 students 1 respondent (1 male) were obese (class II), 7 students (3 male, 4 female) were obese (class I), 39 students (24 male, 15 female) were overweight, 152 students (84 male, 68 female) were fit, 21 students (10 male, 11 female) were underweight, 9 students were very severely underweight (1 male, 8 female) and 2 students (2 female) were very severely underweight.

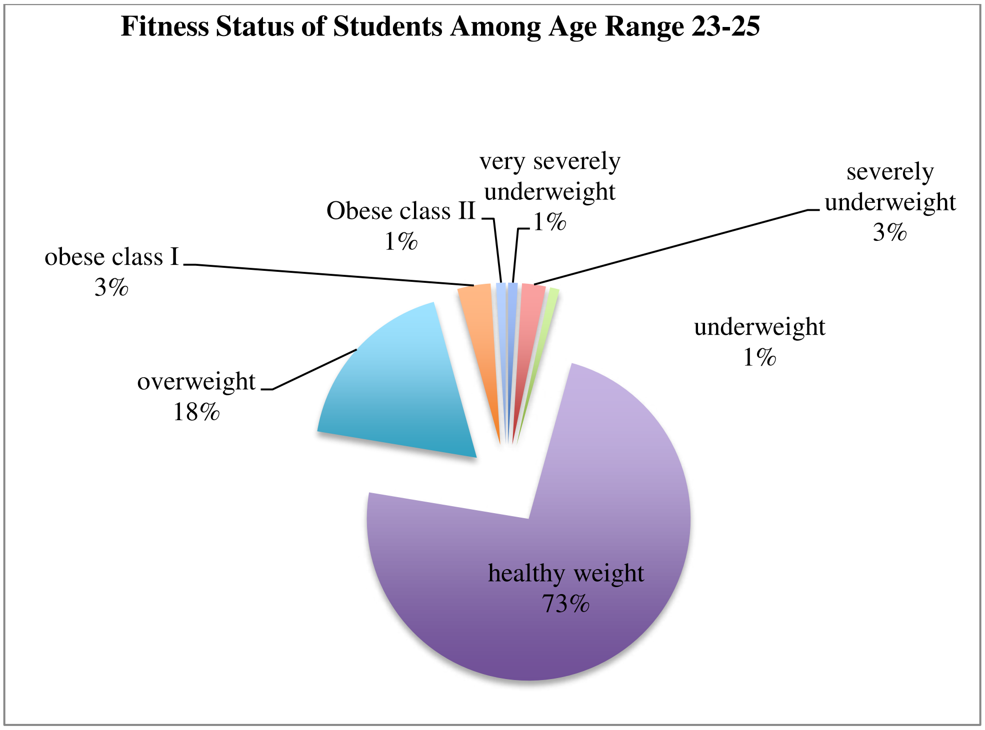


Fig 4.35.3: BMI based fitness status of students among age range 23-25

For this analysis age range is 23-25. During this analysis it has been found that among 210 students 2 students (2 female) is obese (class II), 7 students (3 male, 4 female) were obese (class I), 38 students (27 male, 11 female) were overweight, 154 students (88 male, 66 female) were fit, 2 students (1 male, 1 female) were underweight, 5 students were very severely underweight (3 male, 2 female) and 2 students (1male, 1 female) were very severely underweight.

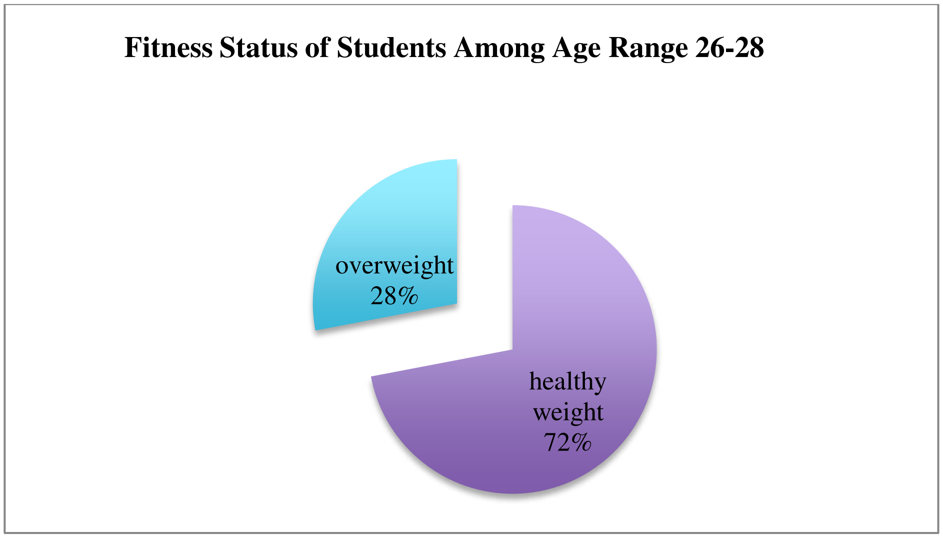


Fig 4.35.4: BMI based fitness status of students among age range 26-28

For this analysis age range is 26-28. During this analysis it has been found that among 25 students 7 students (6 male, 1 female) were overweight, 18 students (16 male, 2 female) were fit.

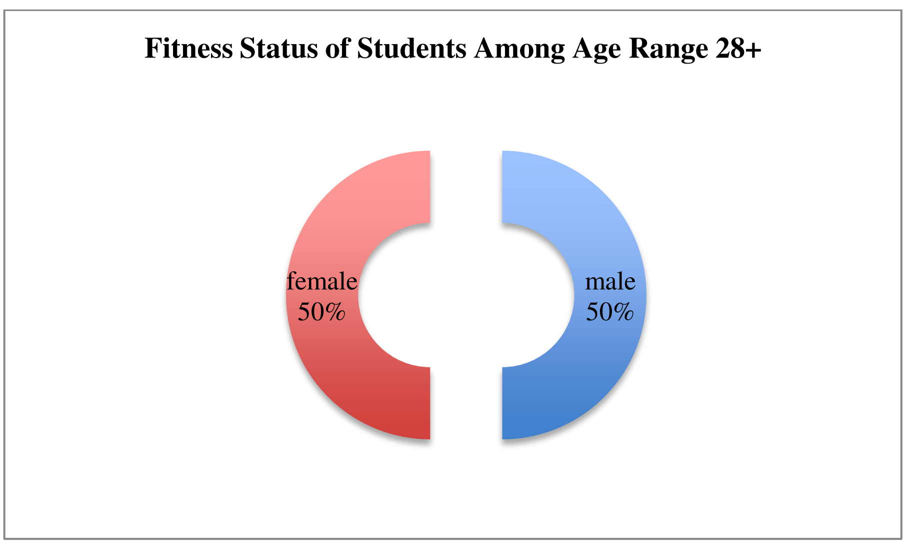


Fig 4.35.5: BMI based fitness status of students among age range 28+

Here age range is 28+. Above 28 years here is only 2 students. Among them both were fit (1 male, 1 female).

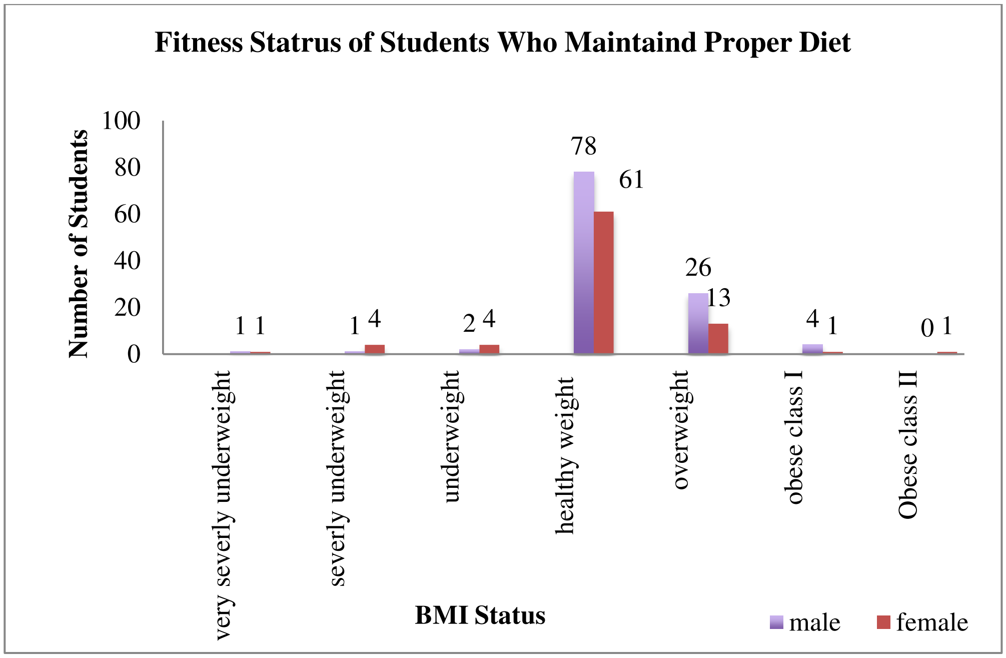


Fig 4.36.1: BMI based fitness status of students who maintained proper diet (gender wise)

Among 111 male students who maintained proper diet 1% very severely underweight, 2% underweight, 70% had healthy weight, 23% overweight and 4% obese (class I). Among 84 female students 1% very severely underweight, 4% severely underweight, 5% underweight, 73% had healthy weight, 15% overweight, 1% obese (class I) and 1% obese (class II).

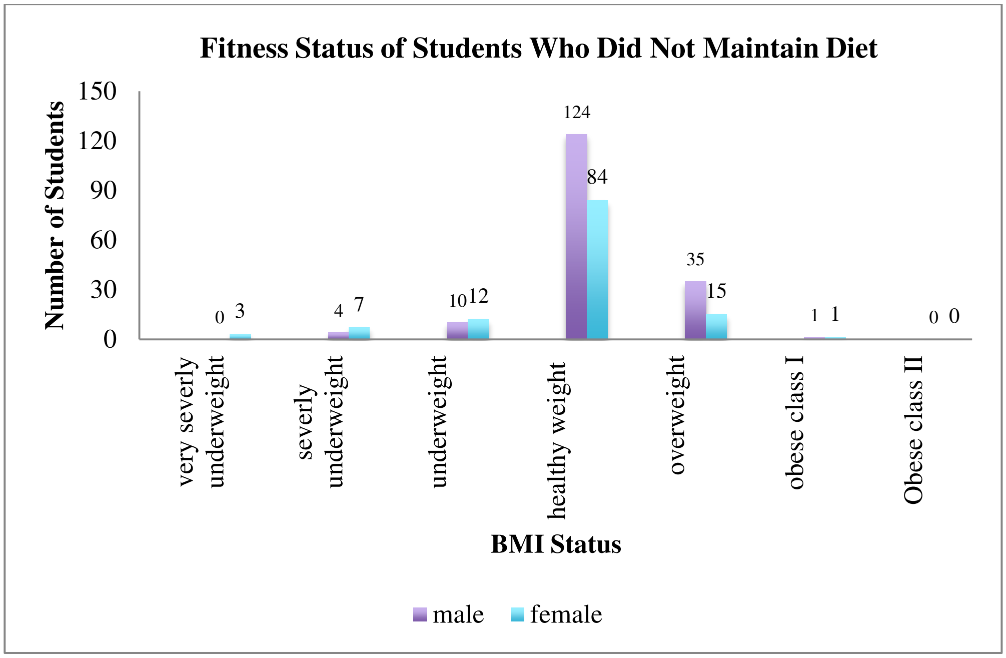


Fig 4.36.2: BMI based fitness status of students who did not maintain proper diet (gender wise)

Among 174 male students who did not maintain their diet 2% very severely underweight, 6% underweight, 70% had healthy weight, 20% overweight, 1% obese (class I) and 1% obese (class II). Among 129 female students 2% very severely underweight, 6% severely underweight, 9% underweight, 65% had healthy weight, 12% overweight, 5% obese (class I) and 1% obese (class II).

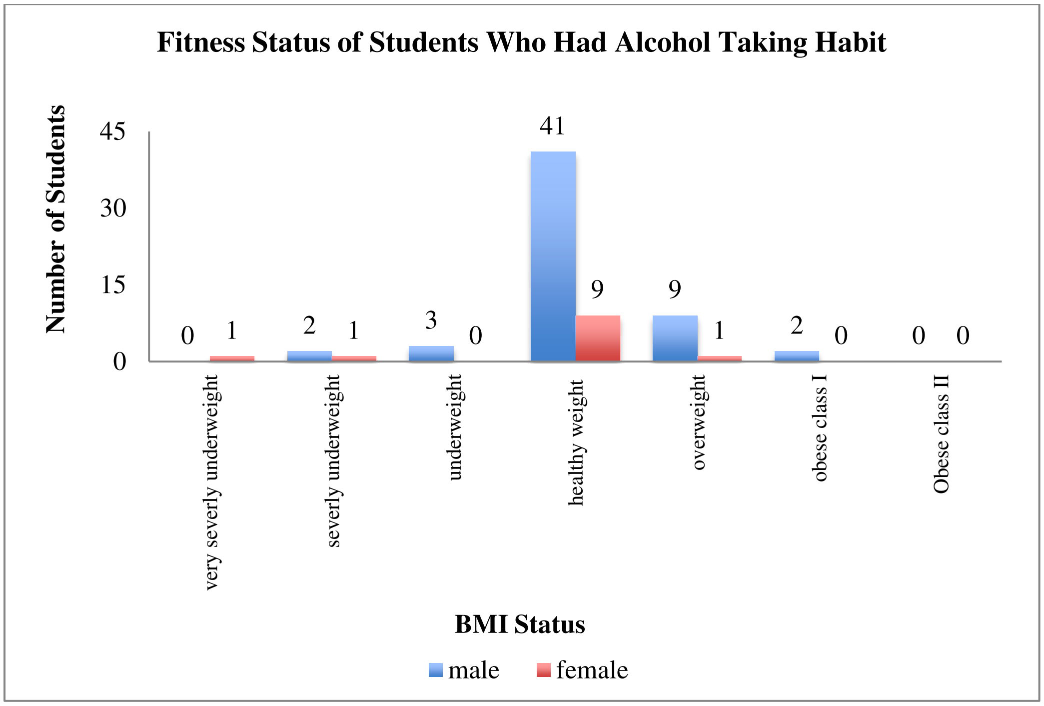


Fig 4.37.1: BMI based fitness status of students who had alcohol taking habit (gender wise)

Among 57 male students 3% had severely underweight, 5% had underweight, 72% had healthy weight, 16% overweight and 4% obese (class I). Among 12 female students 9% had very severely underweight, 8% had severely underweight, 75% had healthy weight and 8% had overweight.

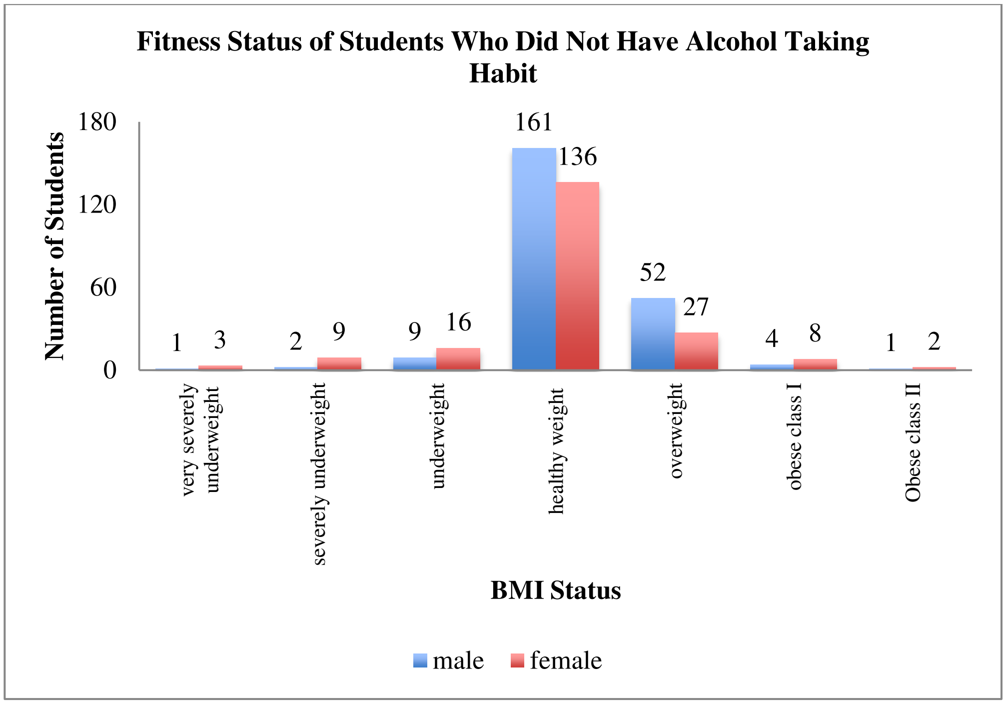


Fig 4.37.2: BMI based fitness status of students who did not have alcohol taking habit (gender wise)

Among 230 male students 1% had very severely underweight, 1% had severely underweight, 3% had underweight, 70% had healthy weight, 22% overweight, 2% obese (class I) and 1% obese (class II). Among 201 female students 2% had very severely underweight, 4% had severely underweight, 8% had underweight, 68% had healthy weight, 13% had overweight, 4% obese (class I) and 1% obese (class II).

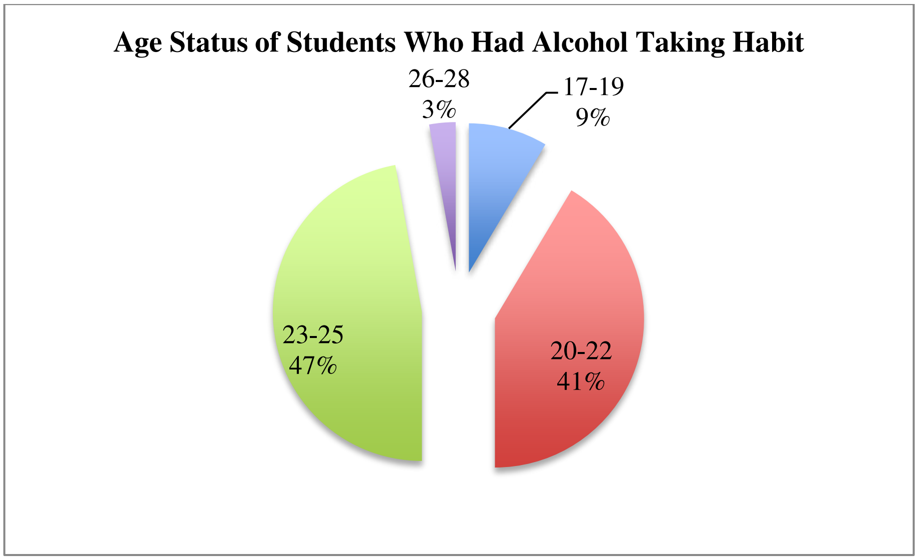


Fig 4.38.1: Age status of students who had alcohol taking habit

Among 69 students who had alcohol taking habit 9% were in the range 17-19, 41% were in the range 20-22, 47% were in the range 23-25 and 3% were in the range 26-28.

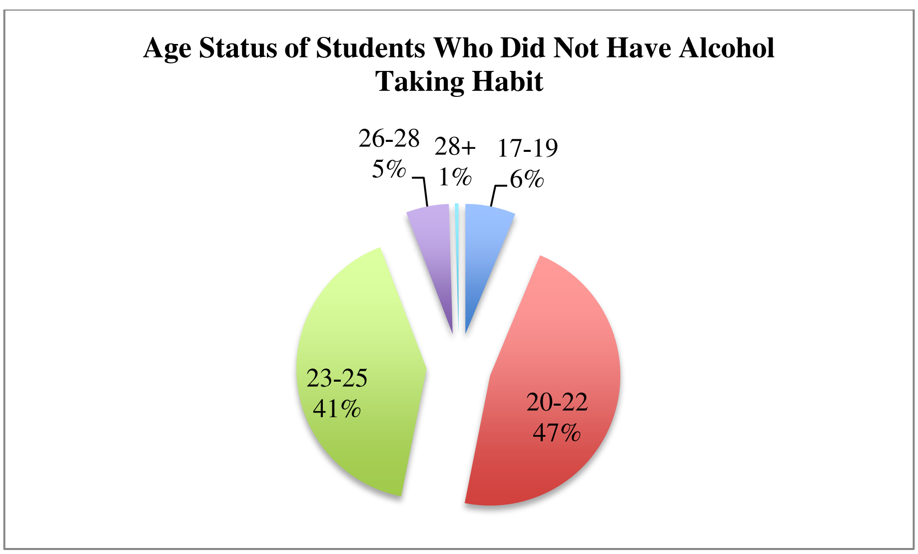


Fig 4.38.2: Age status of students who did not have alcohol taking habit

Among 431 students 6% were in the range 17-19, 47% were in the range 20-22, 41% were in the range 23-25, 5% were in the range 26-28, 1% was in the range 28+.

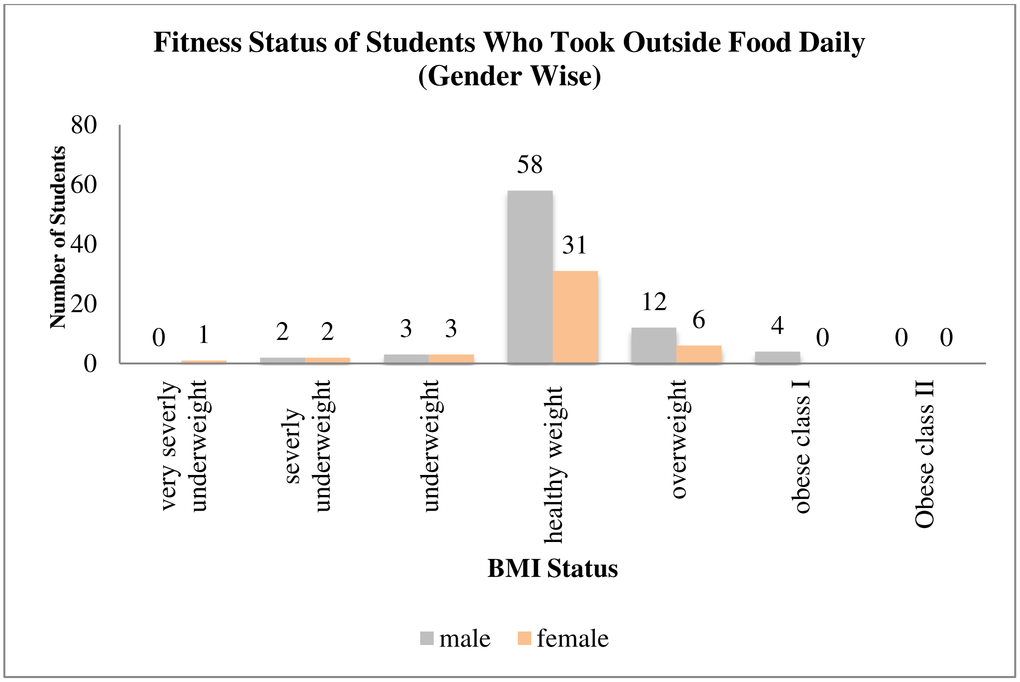


Fig 4.39.1: BMI based fitness status of students who took outside food daily (gender wise)

Among 79 male students 3% had severely underweight, 4% had underweight, 73% had healthy weight, 15% had overweight and 5% were obese (class I). Among 43 female students 2% had very severely underweight, 5% had severely underweight, 7% had underweight, 72% had healthy weight and 14% had overweight.

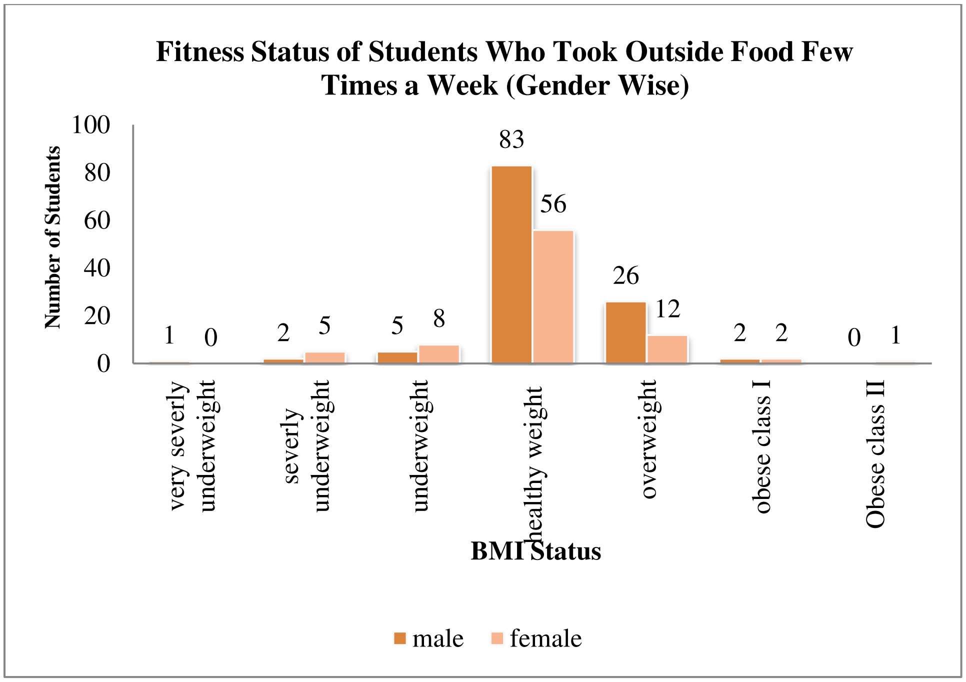


Fig 4.39.2: BMI based fitness status of students who took outside food few times a week (gender wise)

Among 119 male students 1% had very severely underweight, 1% had severely underweight, 4% had underweight, 70% had healthy weight, 22% overweight and 2% obese (class I). Among 84 female students 6% had severely underweight, 10% had underweight, 67% had healthy weight, 14% had overweight, 2% were obese (class I) and 1% was obese (class II).

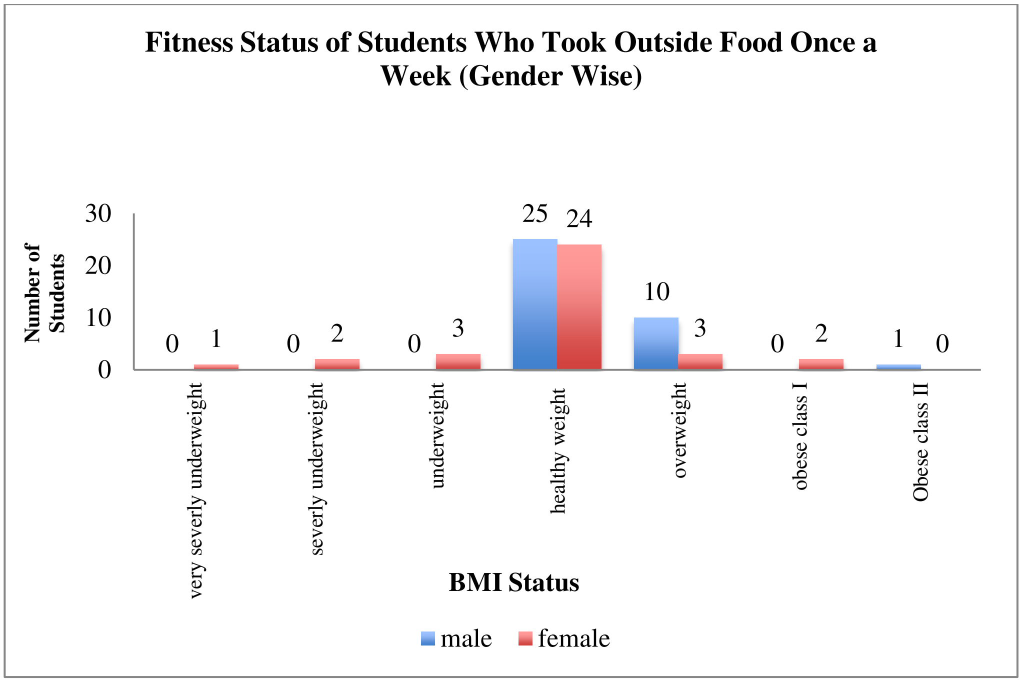


Fig 4.39.3: BMI based fitness status of students who took outside food once a week (gender wise)

Among 36 male students 69% had healthy weight, 28% overweight and 3% obese (class II). Among 35 female students 3% had very severely underweight, 6% had severely underweight, 8% had underweight, 68% had healthy weight, 9% had overweight and 6% obese (class I).

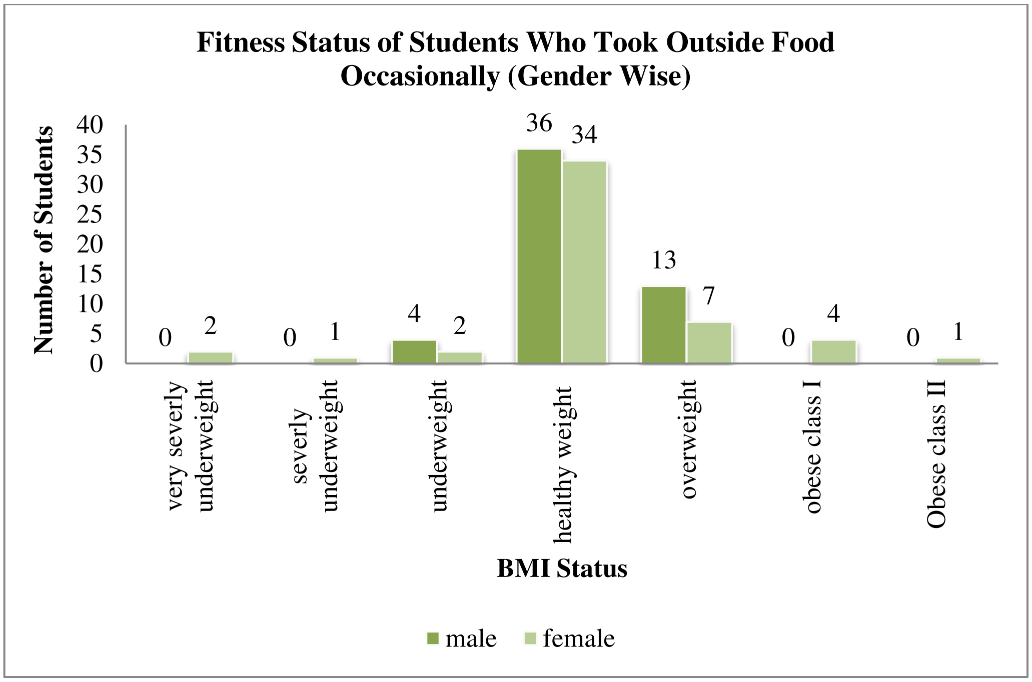


Fig 4.39.4: BMI based fitness status of students who took outside food occasionally (gender wise)

Among 53 male students 8% had underweight, 68% had healthy weight and 24% overweight. Among 51 female students 4% had very severely underweight, 2% had severely underweight, 4% had underweight, 66% had healthy weight, 14% had overweight, 8% obese (class I) and 2% obese (class II).

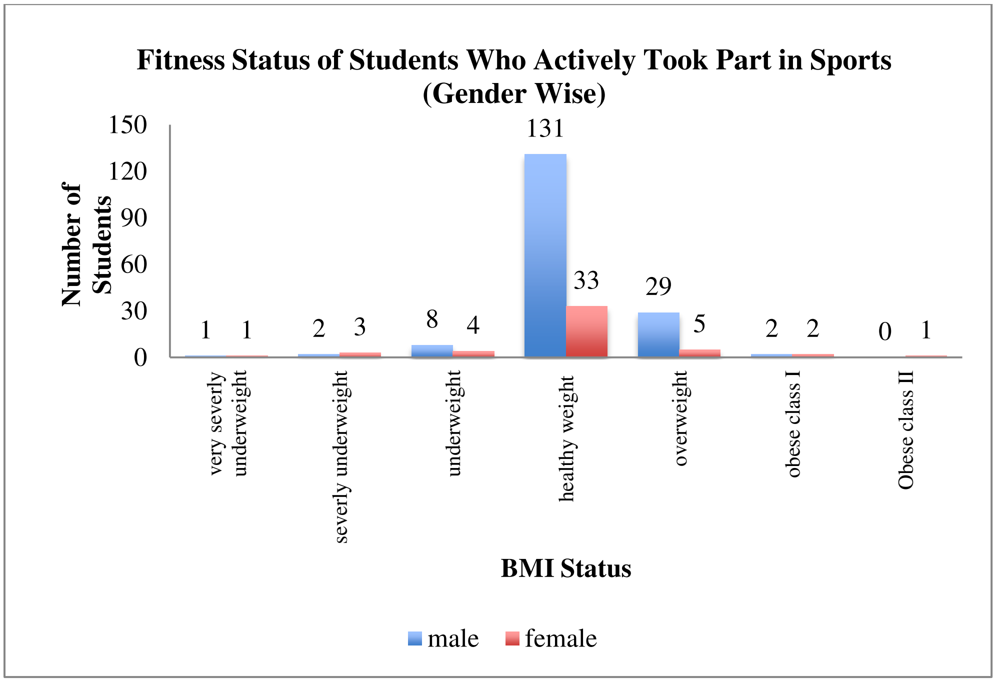


Fig 4.40.1: BMI based fitness status of students who were active in sports (gender wise)

Among 173 male students 1% had very severely underweight, 1% had severely underweight, 5% had underweight, 76% had healthy weight, 17% overweight and 1% obese (class I). Among 49 female students 2% had very severely underweight, 6% had severely underweight, 8% had underweight, 68% had healthy weight, 10% had overweight, 4% obese (class I) and 2% obese (class II).

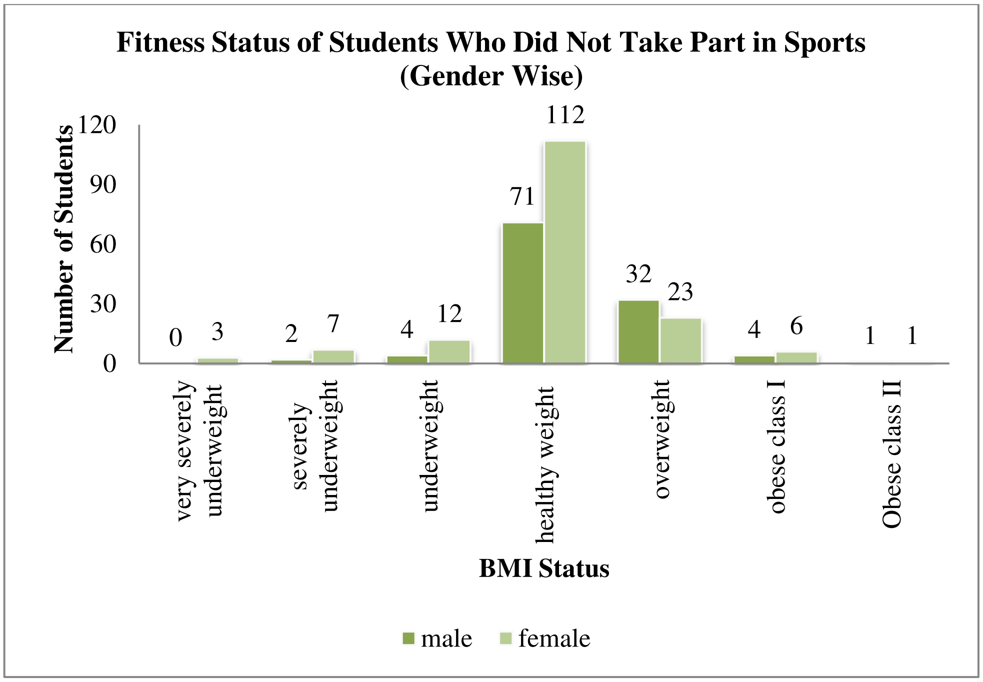


Fig 4.40.2: BMI based fitness status of students who were not active in sports (gender wise)

Among 114 male students 2% had severely underweight, 3% had underweight, 62% had healthy weight, 28% overweight, 4% obese (class I) and 1% obese (class II). Among 164 female students 2% had very severely underweight, 4% had severely underweight, 7% had underweight, 68% had healthy weight, 14% had overweight, 4% obese (class I) and 1% obese (class II).

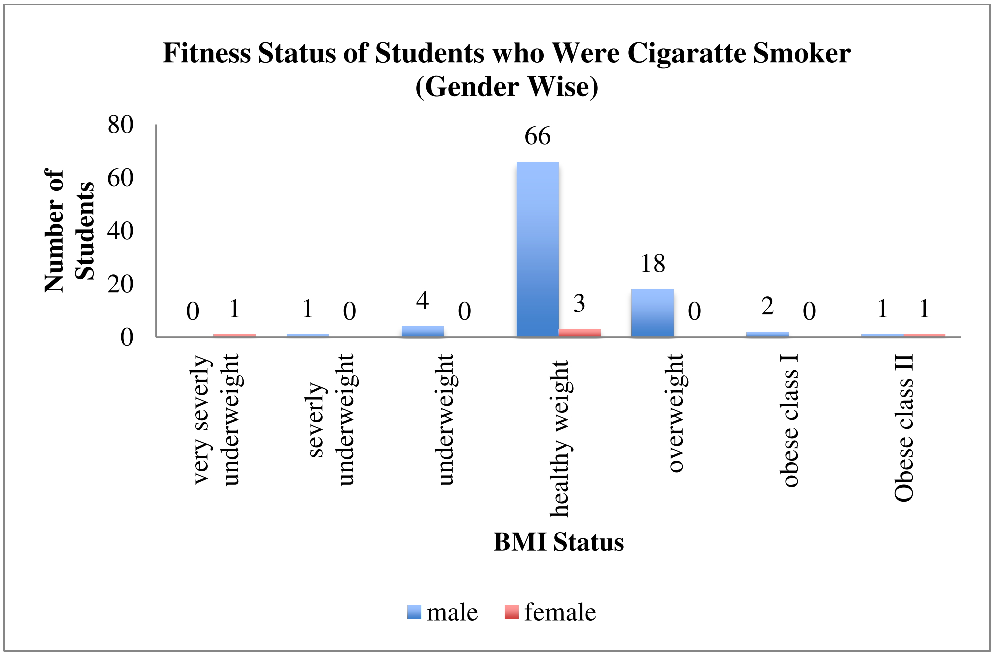


Fig 4.41.1: BMI based Fitness status among students who were cigarette smoker (gender wise)

Among 92 male students 1% had severely underweight, 4% had underweight, 72% had healthy weight, 20% overweight, 2% obese (class I) and 1% obese (class II). Among 5 female students 20% had very severely underweight, 60% had healthy weight and 20% obese (class II).

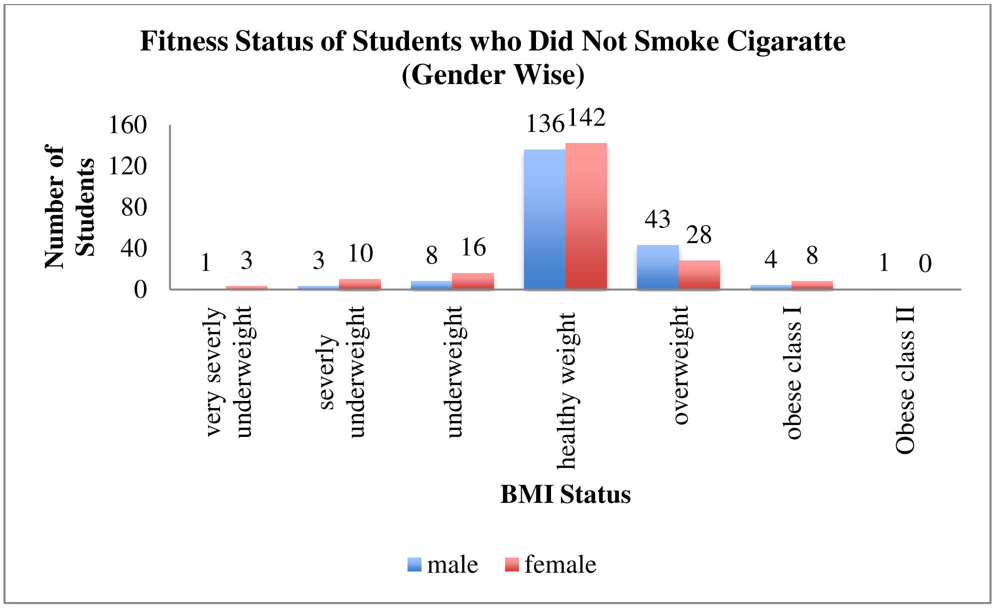


Fig 4.41.2: Fitness status of students who did not smoke cigarette (gender wise)

Among 195 male students 1% had very severely underweight, 2% had severely underweight, 4% had underweight, 69% had healthy weight, 22% overweight, 2% obese (class I) and 1% obese (class II). Among 208 female students 1% had very severely underweight, 5% had severely underweight, 8% had underweight, 69% had healthy weight, 13% had overweight, 4% obese (class I) and 1% obese (class II).

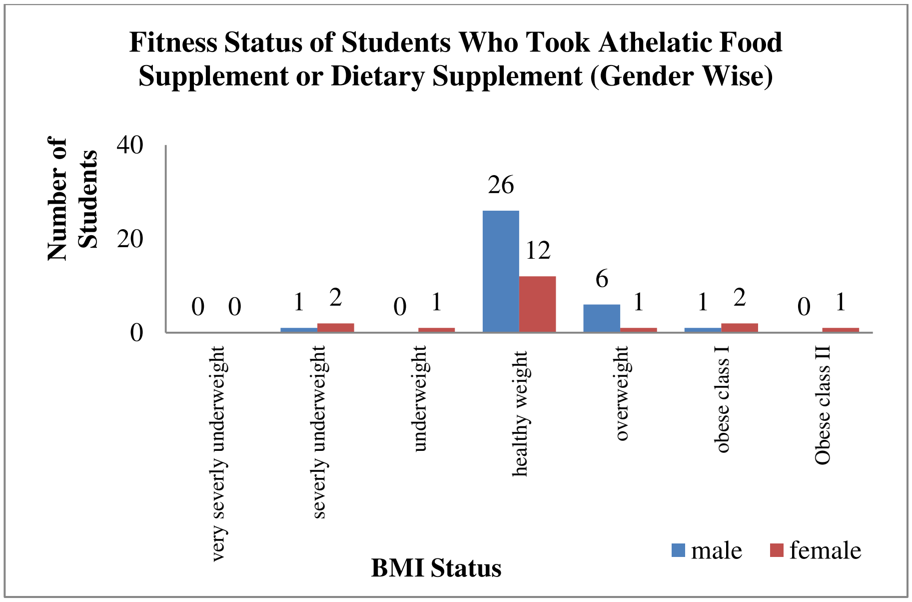


Fig 4.42.1: BMI based fitness status of the students who took athletic food supplements or dietary food supplements (gender wise)

Among 34 male students 3% had severely underweight, 76% had healthy weight, 18% overweight and 3% obese (class I). Among 19 female students 11% had severely underweight, 5% had underweight, 63% had healthy weight, 5% had overweight, 11% were obese (class I) and 5% were obese (class II).

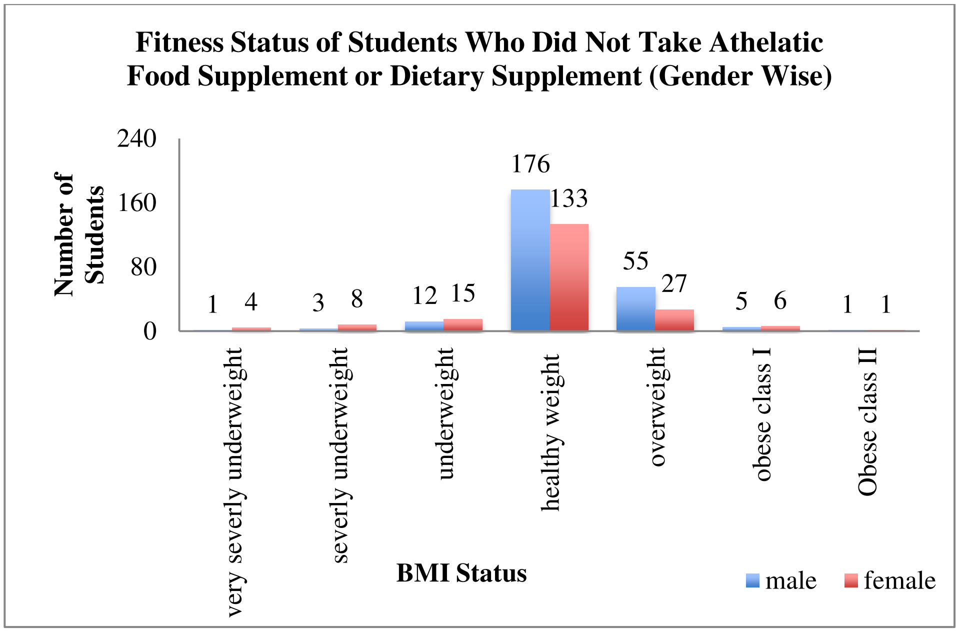


Fig 4.42.2: BMI based fitness status of the students who didn't take athletic food supplements or dietary food supplements (gender wise)

Among 253 male students 1% had very severely underweight, 1% had severely underweight, 5% had underweight, 70% had healthy weight, 22% overweight, 2% were obese (class I) and 1% was obese (class II). Among 193 female students 2% had very severely underweight, 4% had severely underweight, 8% had underweight, 69% had healthy weight, 14% had overweight, 3% were obese (class I) and 1% was obese (class II).

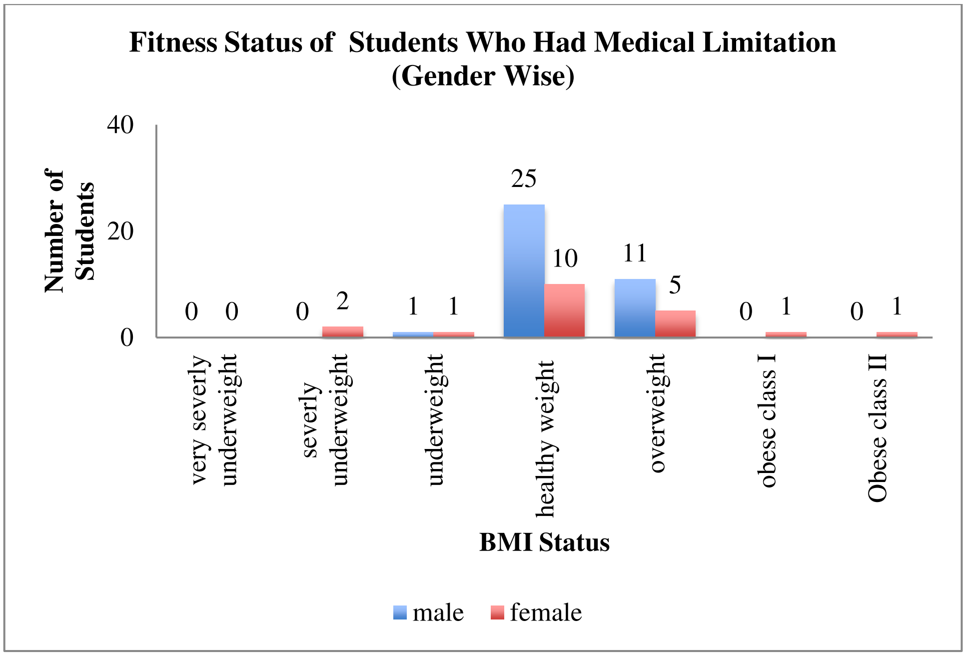


Fig 4.43.1: BMI based fitness status of the students who had medical limitation that prevent them from exercise (gender wise)

Among 237 male students 3% had underweight, 67% had healthy weight and 30% overweight. Among 20 female students 10% had severely underweight, 5% had underweight, 50% had healthy weight, 25% had overweight, 5% were obese (class I) and 5% were obese (class II).

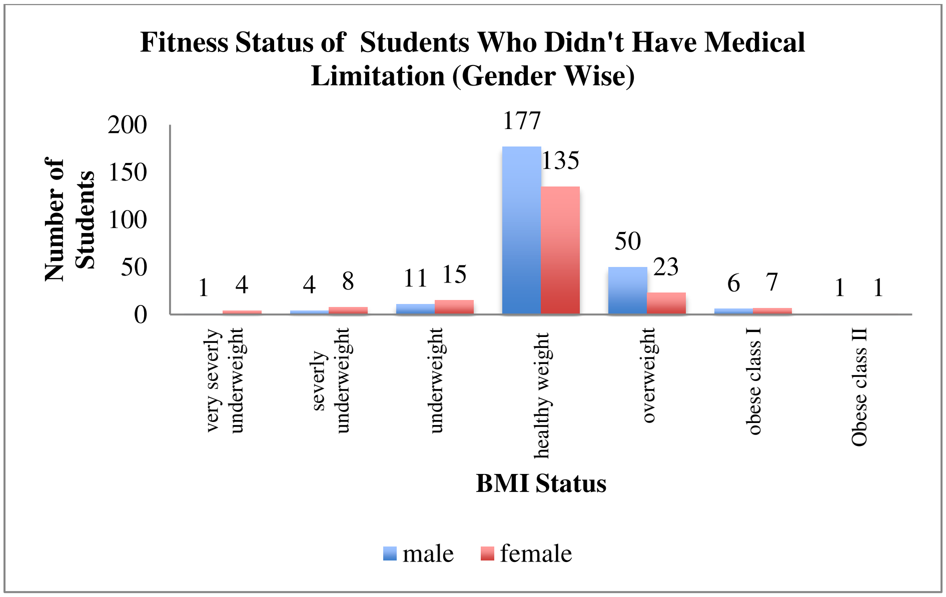


Fig 4.43.2: BMI based fitness status of the students who didn't have medical limitation (gender wise)

Among 250 male students 1% had very severely underweight, 2% had severely underweight, 5% had underweight, 71% had healthy weight, 20% overweight, 2% obese (class I) and 1% obese (class II). Among 193 female students 2% had very severely underweight, 4% had severely underweight, 8% had underweight, 70% had healthy weight, 12% had overweight, 4% were obese (class I) and 1% were obese (class II).

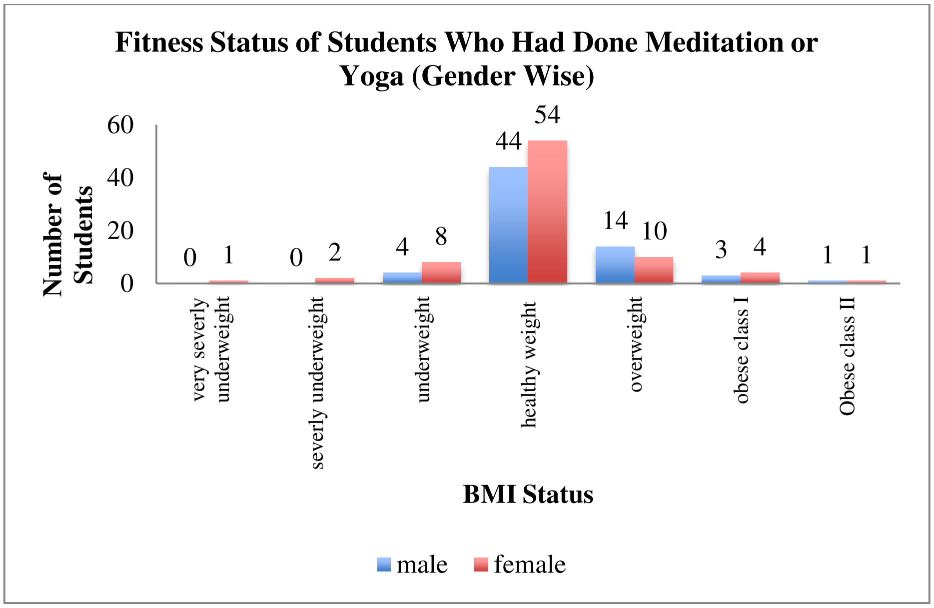


Fig 4.44.1: BMI based fitness status of the students who had done meditation and yoga (gender wise)

Among 65 male students 6% had underweight, 67% had healthy weight, 21% overweight, 5% obese (class I) and 1% obese (class II). Among 81 female students 1% had very severely underweight, 2% had severely underweight, 10% had underweight, 68% had healthy weight, 13% had overweight, 5% obese (class I) and 1% obese (class II).

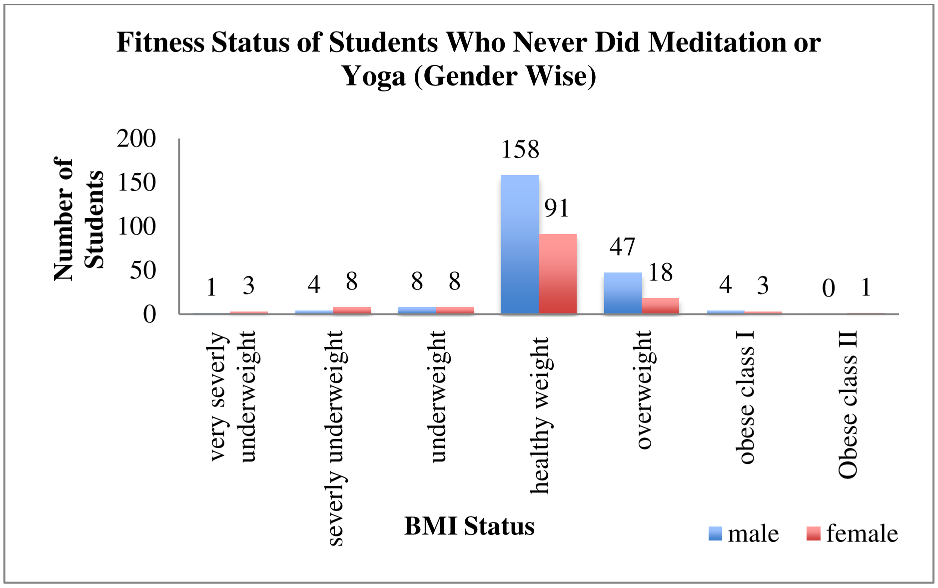


Fig 4.44.2: BMI based fitness status of the students who had never done meditation and yoga (gender wise)

Among 222 male students 1% had very severely underweight, 1% had severely underweight, 3% had underweight, 70% had healthy weight, 22% overweight, 2% obese (class I) and 1% obese (class II). Among 132 female students 2% had very severely underweight, 6% had severely underweight, 6% had underweight, 69% had healthy weight, 14% had overweight, 2% obese (class I) and 1% obese (class II).

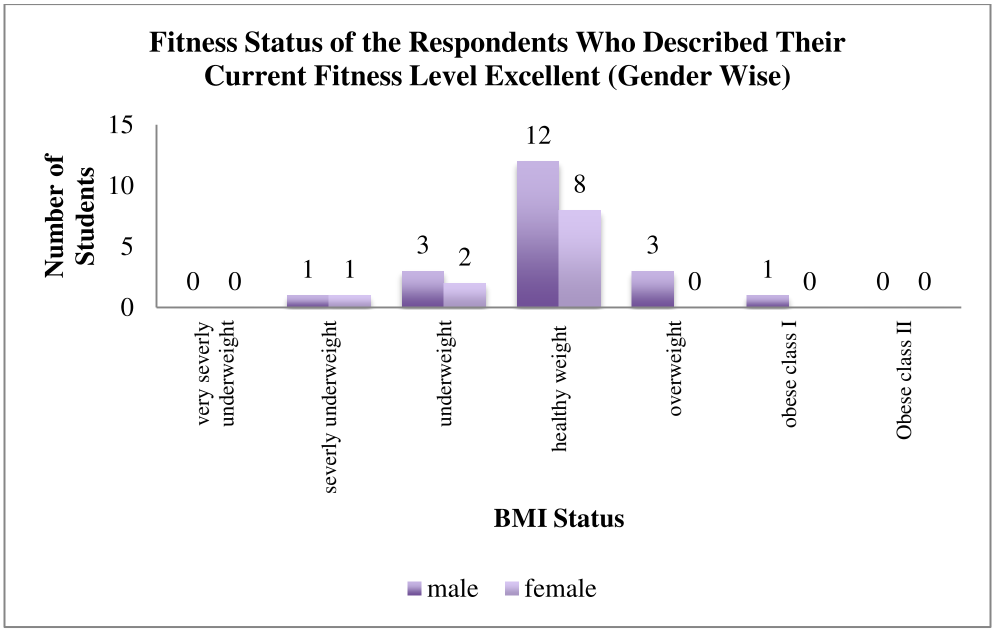


Fig 4.45.1: BMI based fitness status of the students who described their current fitness level excellent (gender wise)

In this study 31 students stated their fitness level excellent. Among 20 male students 5% had severely underweight, 15% had underweight, 60% had healthy weight, 15% overweight and 5% obese (class I). Among 11 female students 9% had severely underweight, 18% had underweight and 73% had healthy weight.

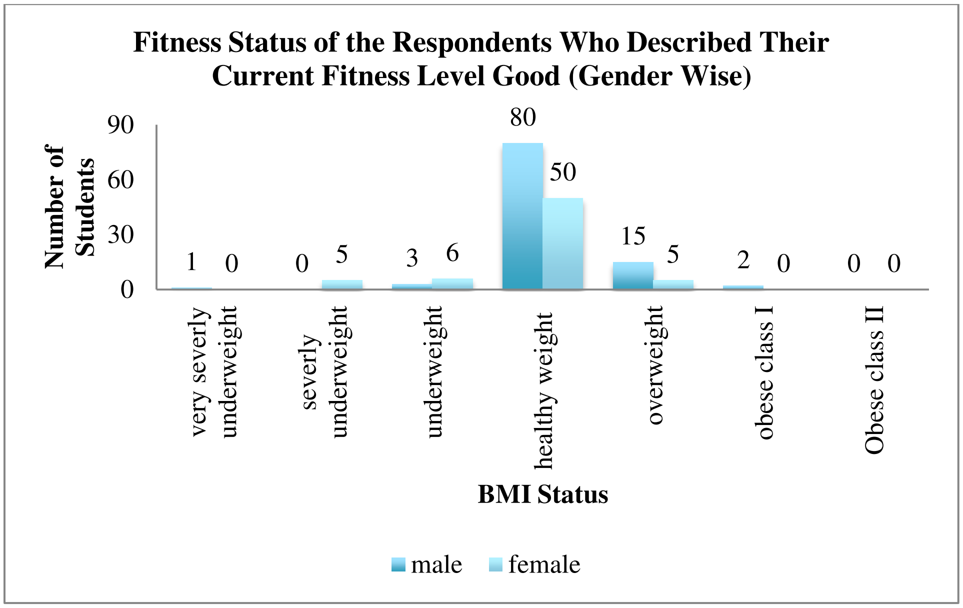


Fig 4.45.2: BMI based fitness status of the students who described their current fitness level good (gender wise)

In this study 167 students stated their fitness level good. Among 101 male students 1% had very severely underweight, 3% had underweight, 79% had healthy weight, 15% overweight and 2% obese (class I). Among 66 female 7% had severely underweight, 9% had underweight, 76% had healthy weight and 8% had overweight.

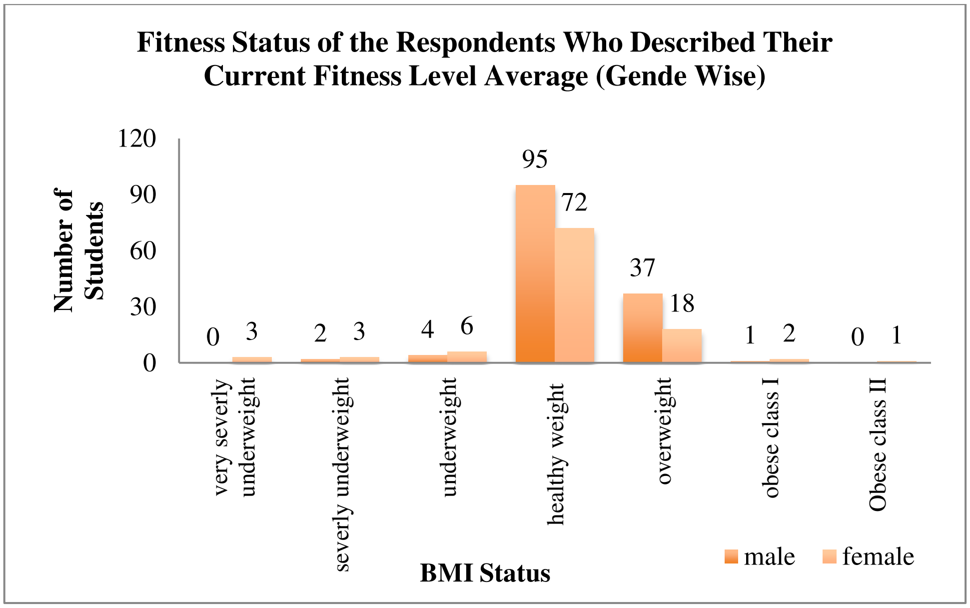


Fig 4.45.3: BMI based fitness status of the students who described their current fitness level average (gender wise)

In this study 244 students stated their fitness level good. Among 139 male students 1% had severely underweight, 3% had underweight, 68% had healthy weight, 27% overweight and 1% obese (class I). Among 105 female students 3% had very severely underweight, 3% had severely underweight, 6% had underweight, 68% had healthy weight, 17% had overweight, 2% obese (class I) and 1% obese (class II).

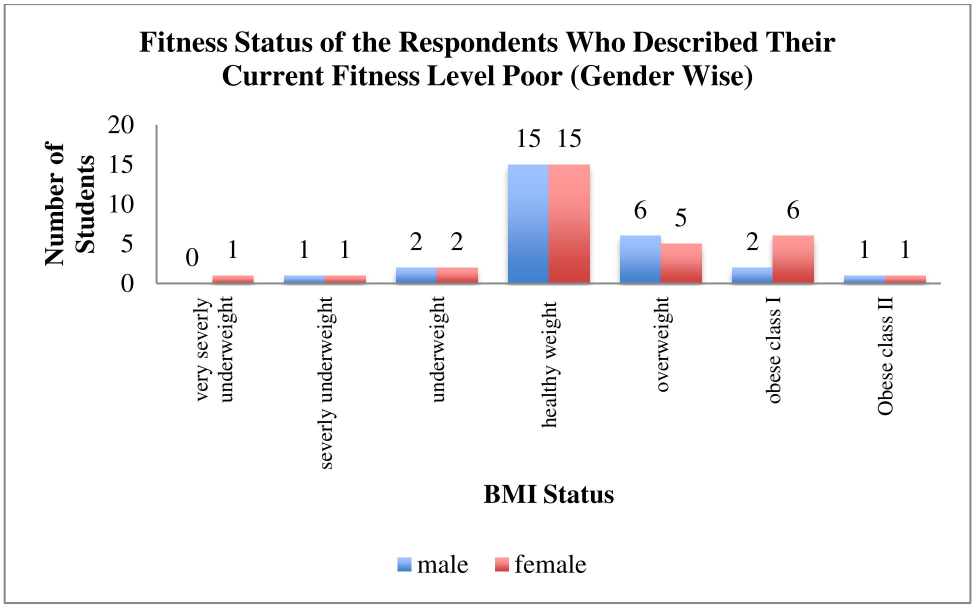


Fig 4.45.4: BMI based fitness status of the students who described their current fitness level poor (gender wise)

In this study 58 students stated their fitness level poor. Among 27 male students 4% had severely underweight, 7% had underweight, 56% had healthy weight, 22% overweight, 7% obese (class I) and 4% obese (class II). Among 31 female students 3% had very severely underweight, 3% had severely underweight, 7% had underweight, 49% had healthy weight, 16% had overweight, 19% obese (class I) and 3% obese (class II).

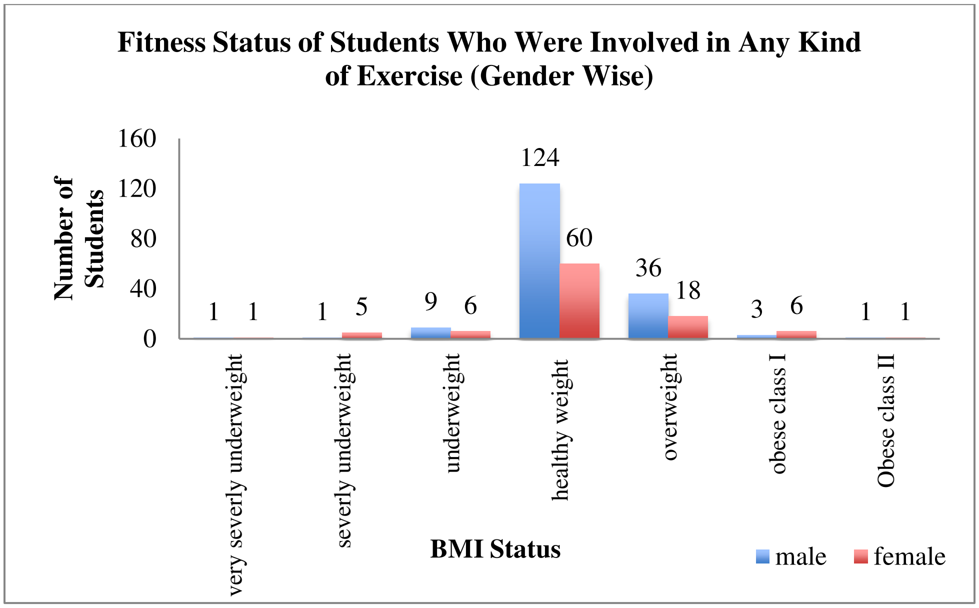


Fig 4.46.1: BMI based fitness status of the students who were involved in doing any kind of exercise (gender wise)

Among 175 male students 1% had very severely underweight, 1% had severely underweight, 5% had underweight, 71% had healthy weight, 21% overweight, 2% obese (class I) and 1% obese (class II). Among 97 female students 1% had very severely underweight, 5% had severely underweight, 6% had underweight, 62% had healthy weight, 19% had overweight, 6% obese (class I) and 1% obese (class II).

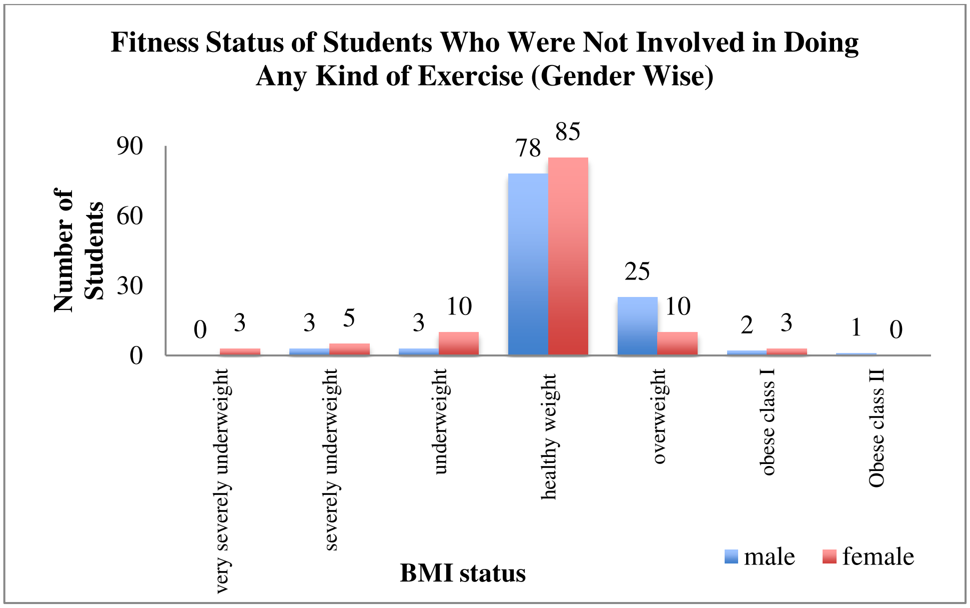


Fig 4.46.2: BMI based fitness status of the students who were not involved in doing any kind of exercise (gender wise)

Among 112 male students 3% had severely underweight, 3% had underweight, 69% had healthy weight, 22% overweight, 2% obese (class I) and 1% obese (class II). Among 116 female students 2% had very severely underweight, 4% had severely underweight, 9% had underweight, 73% had healthy weight, 9% had overweight and 1% obese (class I).

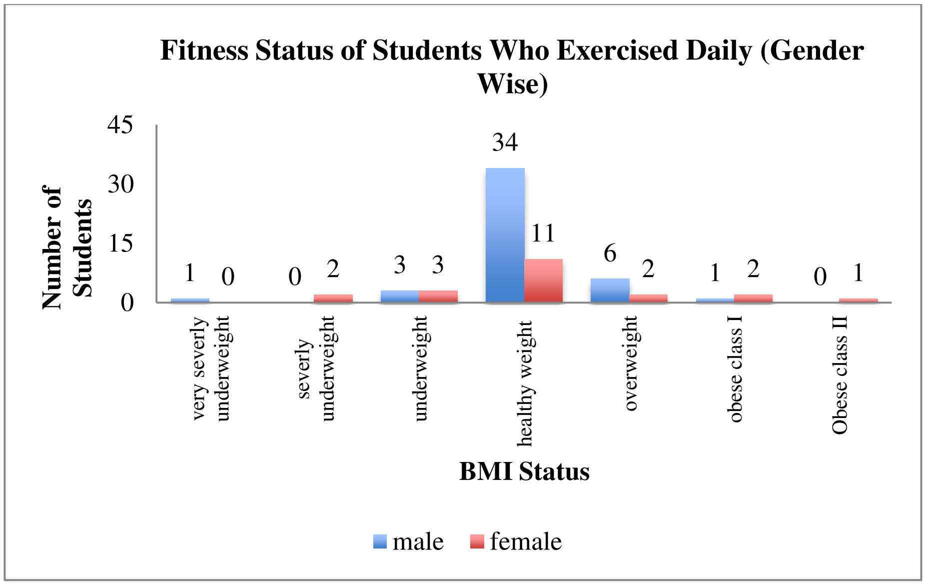


Fig 4.47.1: BMI based fitness status of the students who exercised daily (gender wise)

It has been found that 66 students exercise daily. Among 45 male students 2% had very severely underweight, 7% had underweight, 76% had healthy weight, 13% overweight and 2% obese (class I). Among 21 female students 9% had severely underweight, 14% had underweight, 52% had healthy weight, 10% had overweight, 10% were obese (class I) and 5% were obese (class II).

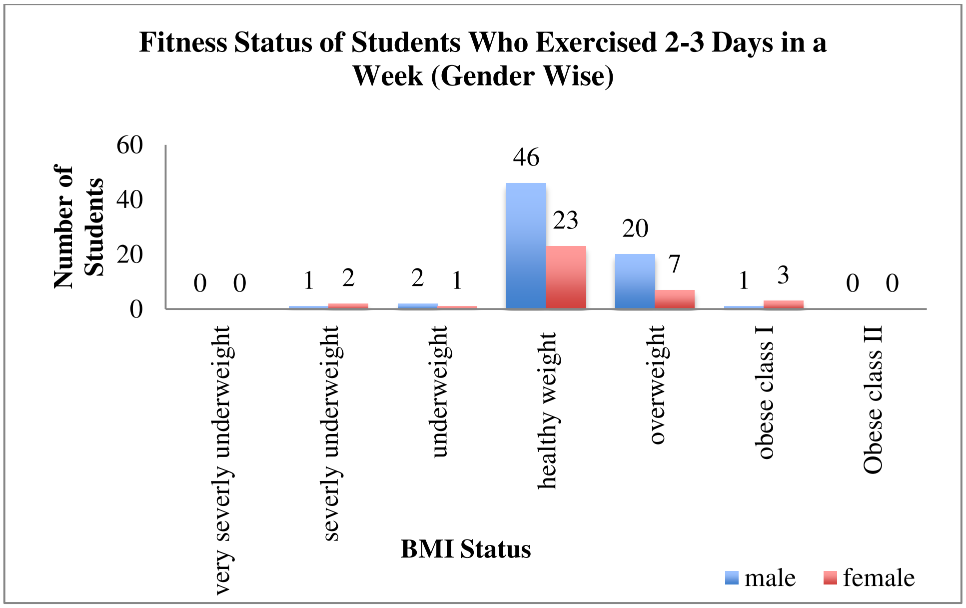


Fig 4.47.2: BMI based fitness status of the students who exercised 2-3 days a week (gender wise)

It has been found that 106 students exercise 2-3 days in a week. Among 70 male students 1% had severely underweight, 3% had underweight, 66% had healthy weight, 29% overweight and 1% obese (class I). Among 36 female students 6% had severely underweight, 3% had underweight, 64% had healthy weight, 19% had overweight and 8% were obese (class I).

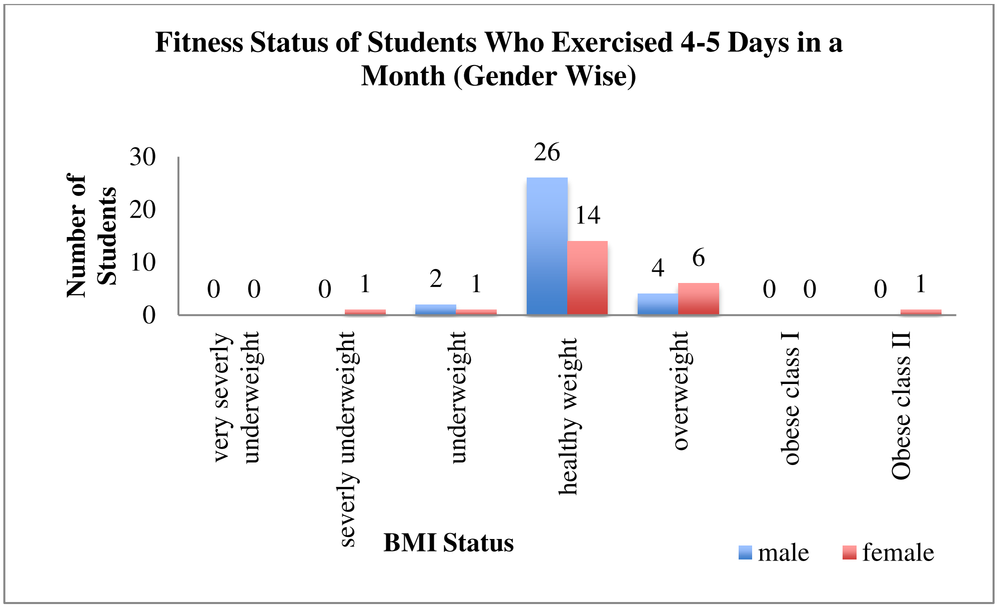


Fig 4.47.3: BMI based fitness status of the students who exercised 4-5 days a month (gender wise)

It has been found that 55 students exercise 4-5 days in a month. Among 32 male students 6% had underweight, 81% had healthy weight and 13% overweight. Among 23 female students 5% had severely underweight, 4% had underweight, 61% had healthy weight, 26% had overweight and 4% were obese (class II).

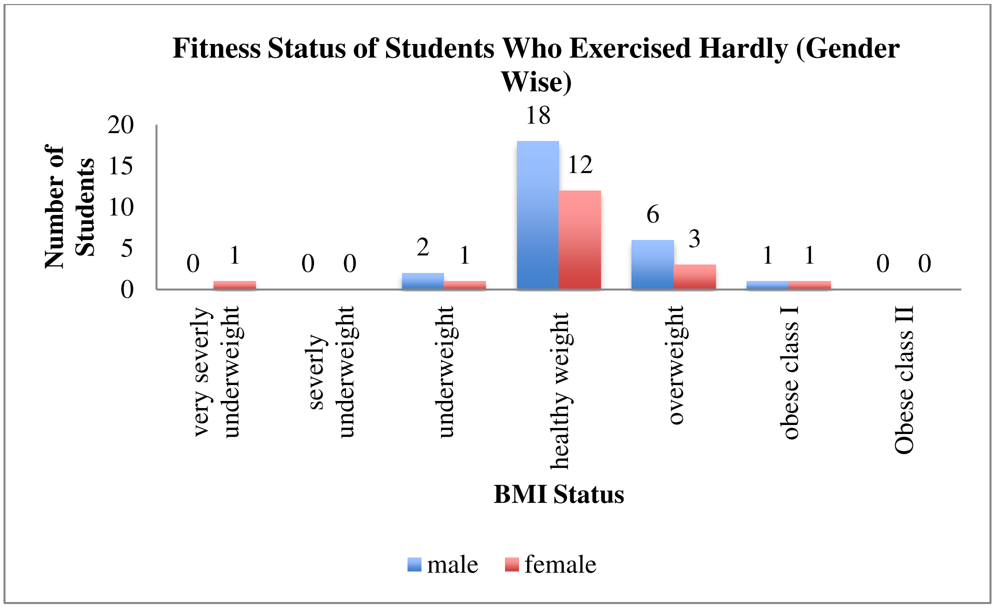


Fig 4.47.4: BMI based fitness status of the students who exercised hardly (gender wise)

It has been found that 45 students exercise hardly. Among 28 male students 7% had underweight, 67% had healthy weight, 22% overweight and 4% obese (class I). Among 17 female students 5% had very severely underweight, 5% had underweight, 67% had healthy weight, 17% had overweight and 6% were obese (class I).

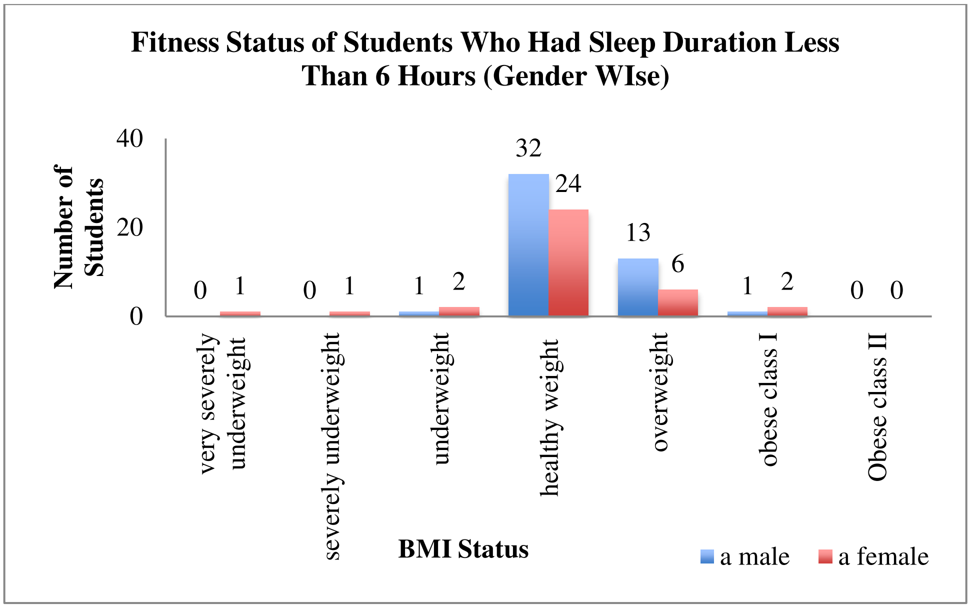


Fig 4.48.1: BMI based fitness status of the students who had sleep duration less than 6 hours (gender wise)

Among 47 male students 2% had underweight, 68% had healthy weight, 28% overweight and 2% obese (class I). Among 36 female students 3% had very severely underweight, 3% had severely underweight, 5% had underweight, 67% had healthy weight, 17% had overweight and 5% obese (class I).

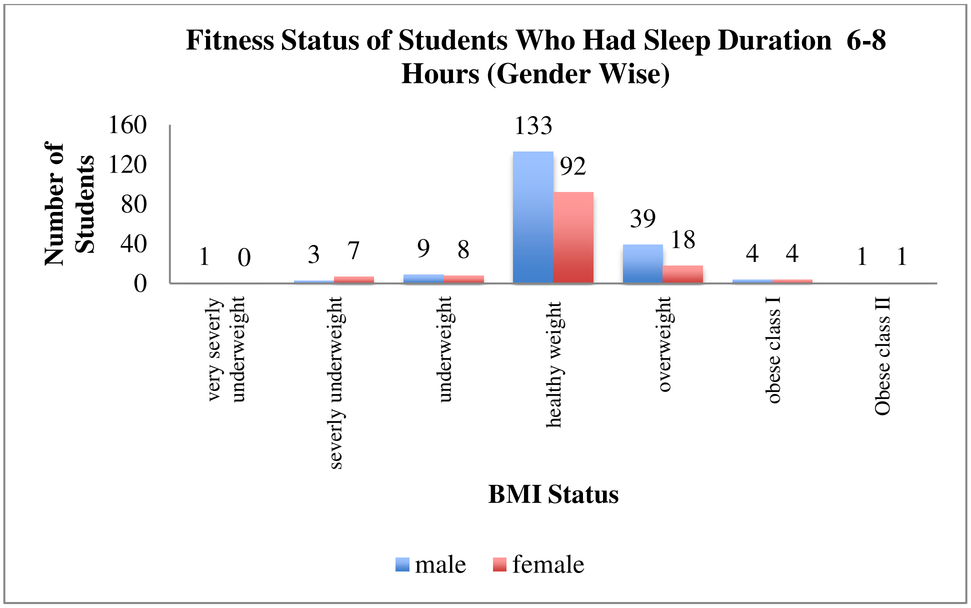


Fig 4.48.2: BMI based fitness status of the students who had sleep duration 6-8 hours (gender wise)

Among 190 male students 1% had very severely underweight, 2% had severely underweight, 5% had underweight, 70% had healthy weight, 21% overweight, 2% were obese (class I) and 1% was obese (class II). Among 130 female students 5% had severely underweight, 6% had underweight, 71% had healthy weight, 14% had overweight, 3% were obese (class I) and 1% was obese (class II).

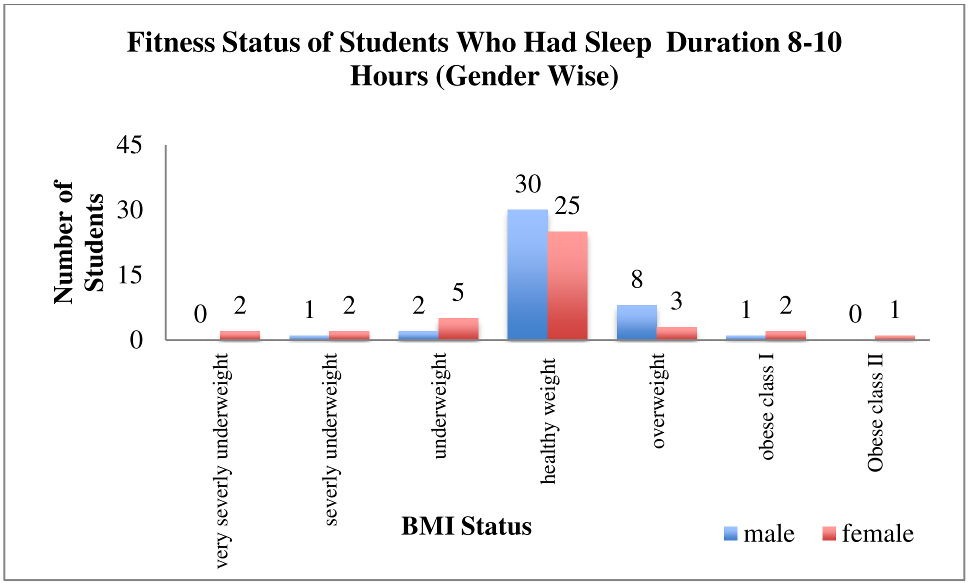


Fig 4.48.3: BMI based fitness status of the students who had sleep duration 8-10 hours (gender wise)

Among 42 male students 2% had severely underweight, 5% had underweight, 72% had healthy weight, 19% overweight and 2% obese (class I). Among 40 female students 5% had very severely underweight, 5% had severely underweight, 12% had underweight, 62% had healthy weight, 8% had overweight, 5% obese (class I) and 3% obese (class II).

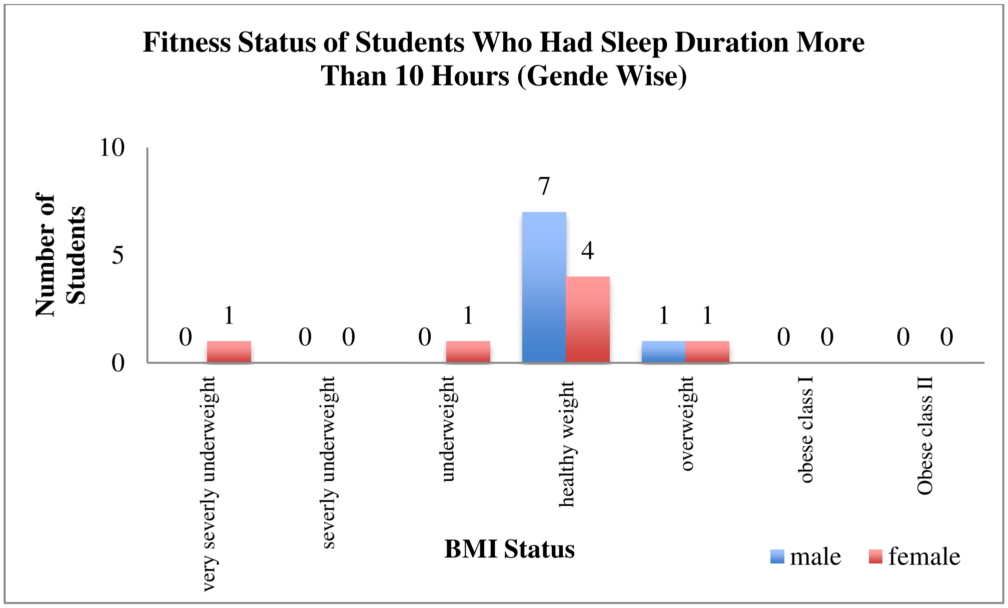


Fig 4.48.4: BMI based fitness status of the students who had sleep duration than 10 hours (gender wise)

Among 8 male respondent 87% had healthy weight and 13% overweight. Among 7 female students 15% had very severely underweight, 14% had underweight, 57% had healthy weight and 14% had overweight.

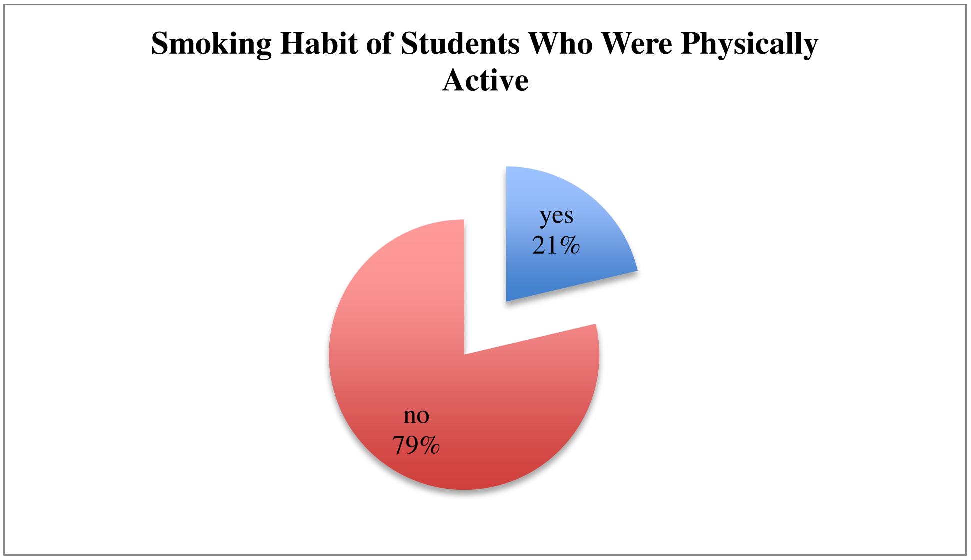


Fig 4.49.1: Smoking habit of students who were physically active

Among 272 students were physically active among them 21% had smoking habit rest 79% didn't have this habit.

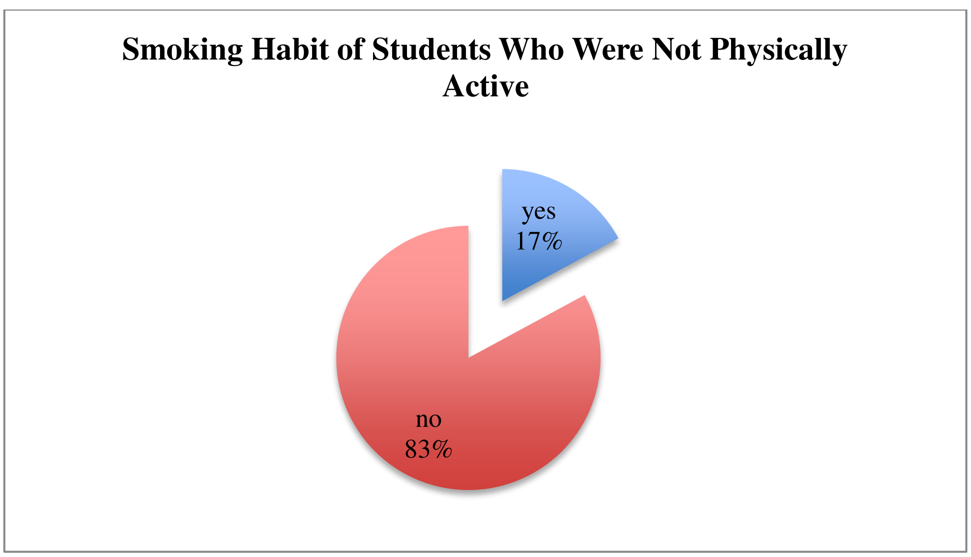


Fig 4.49.2: Smoking habit of students who were not physically active

Among 228 students were not physically active among them 17% had smoking habit rest 83% didn't have this habit.

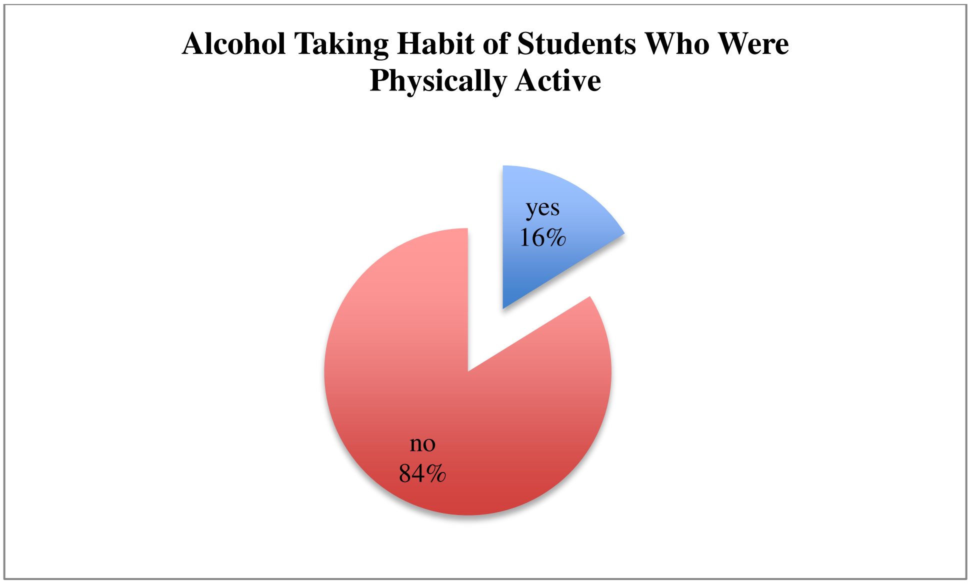


Fig 4.50.1: Alcohol-taking habit of students who were physically active

Among 272 students were physically active among them 16% had alcohol taking habit rest 84% didn't have this habit.

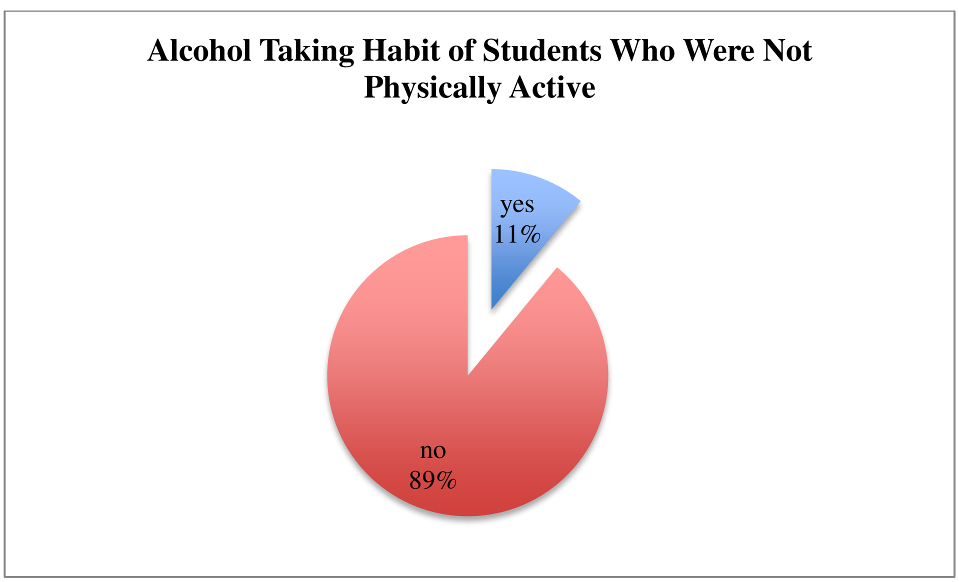


Fig 4.50.2: Alcohol taking habit of students who were not physically active

Among 228 students were not physically active among them 11% had alcohol taking habit rest 89% didn't have this habit.

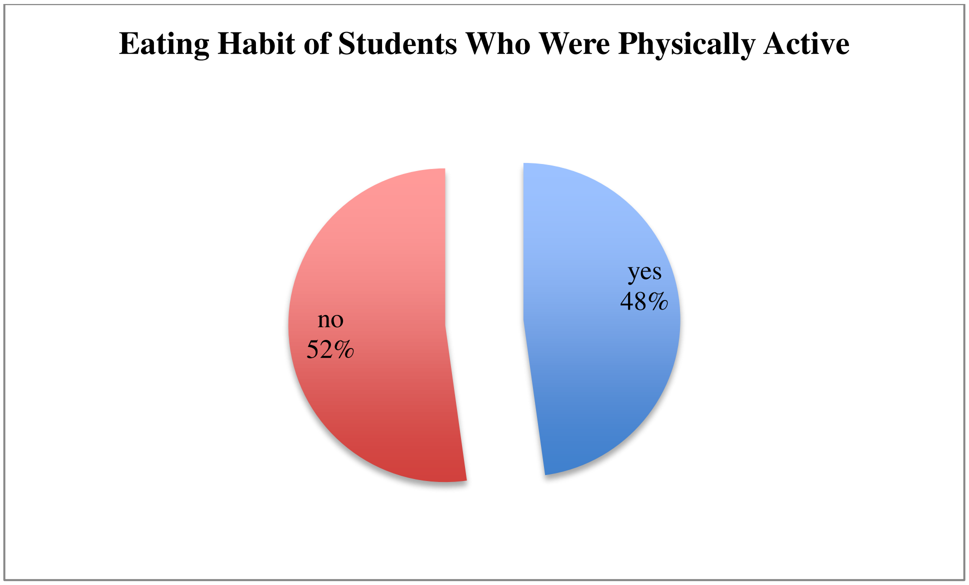


Fig 4.51.1: Eating habit of students who were physically active

Among 272 students were physically active among them 48% maintained their diet rest 52% didn't maintain their diet.

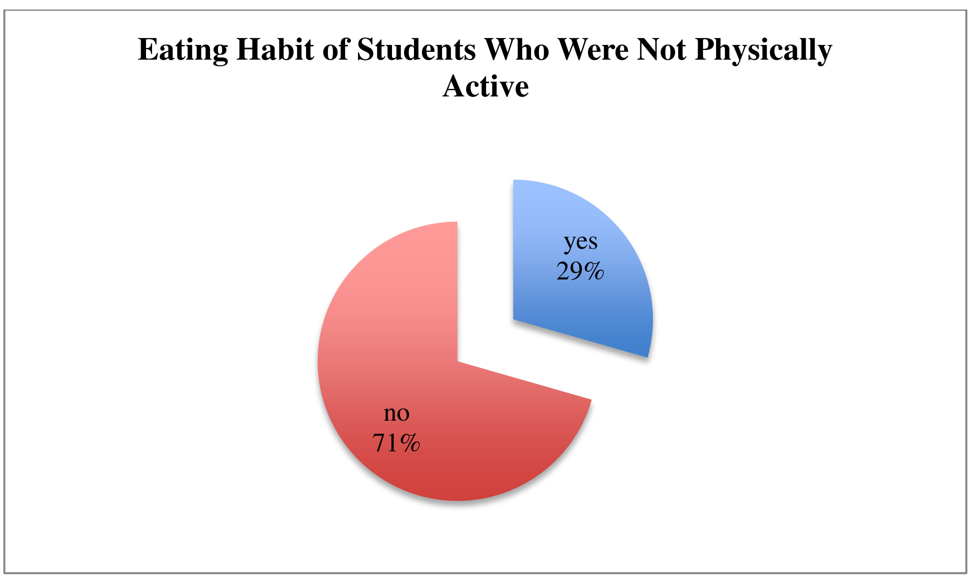


Fig 4.51.2: Eating habit of students who were not physically active

Among 228 students were not physically active among them 29% maintained their diet rest 71% didn't maintain their diet.

CHAPTER 5

DISCUSSION

Physical fitness is becoming an issue now a days among students. A survey was conducted to find relationship between physical activity exercise and sedentary behaviors among college students. They investigated sedentary activities and indicators of involvement in exercise and physical activity by demographic variables. It was found that male students had greater participation in physical activity and exercise than female students and they also spend more time watching television and using computer. (Buckworth, 2010) This study was done to find out the underlying causes to stay fit, to get a idea about fitness concept and fitness awareness among students and what are the steps they were taking to become fit.

The study has been carried out on 500 students (57% male and 43% female) of several departments of East West University.

This study included 7% of the students within age range of 17-19, 46% within the range 20-22, 42% within the range 23-25, 5% within the range 26-28 and 1% within the range 28+.

People in this age range of 23-25 showed greater response in maintain diet where people of age range 20-22 showed negative response in maintaining diet.

In a study analyzing 19 behavioral factor 5 factors were identified among them one is eating healthy food. For men significant relation was found between physical activity and eating healthy food. For women dynamic physical activity was related to eating healthy food. (Johnson, 1998) In our finding it has been noticed that students who were physically active among them 48% maintains their diet and rest 52% didn't. The students who were not physically active among them 29% maintain their diet and rest 71% didn't. Proper diet and physical activity seemed to have positive relationship.

A cross sectional research indicated that poor diet trend can affect health behaviors. Sedentary women were enrolled in a randomized control physical activity trial. Participants in more advanced physical activity change reported significantly greater fruit and vegetable consumption. (Dutton, 2008) In this study it has been observed that only 39% of the students maintained proper diet. Among 111 male students 78 had healthy weight and among 84 female students 61 had healthy weight. Maintaining proper diet had found to have positive effect on the health status of the students.

Alcohol taking habit was noticeable in male students and those who lived with their family and belongs to the age range 23-25. In female students who lived with their family and belong to the age range of 20-22 had been found to consume more alcohol than other groups.

Research suggested that physical activity or exercise could contribute to a beneficial effect against alcoholism. (Taylor, 1985) Few data were available for evaluating relation between physical activity and alcohol consumption. It has been stated that physical activity is may be inversely related to alcohol consumption. (Blair, 1985) Another study was conducted on U.S. adults to find the relation between alcohol consumption and physical activity. This result strongly suggests that alcohol consumption and physical activity are positively correlated and the association persists at heavy drinking level. (Michael, 2009) In another study conducted on freshman it was noticed that frequent exercisers drank significantly more often and a significantly greater quantity than did infrequent exercisers. (Moore, 2010) It has been observed that among 272 students who are physically active 16% of them consume alcohol and among 228 students who were not physically active 11% of them consume alcohol. Alcohol taking habit was not influenced by physical activity instead alcohol taking habit was more prominent in the students who are physically active rather than those who are not physically active. Among 230 male students who didn’t take alcohol 161 had healthy weight and among 201 female students 136 had healthy weight.

According to a study conducted on 270 adult outpatient attending 4 primary care clinics in Louisiana by King et al. (1996) the relationship between smoking and exercise on cognitive behavioral mediators was examined. In this study smoking and exercise stage of change were not related. Smoking and exercise appeared to be independent and specific health behaviors in particular sample. (Edwin, 2003) According to another study it has been stated that physical activity may indirectly influence health behaviors such as smoking. (Blair, 1985) Another study was conducted on 391 freshman college students in Northeast Florida. In this study it has been observed that frequent exerciser smoked cigarette less often than the infrequent exerciser. (Moore, 2010) In our findings smoking and exercise has been considered to be crucial factor on health status. Among 272 students who are physically active 21% smokes cigarette and among 228 students 17% smokes cigarette. Smoking tendency was greater in physically active students. The students who smokes cigarette among them 71% had healthy weight and among the students who didn't smoke cigarette 69% had healthy weight. Smoking and exercise can be considered as individual and independent factors on health as smoking didn't had any noticeable effect on health status or fitness status.

Experimental evidence has shown a positive relationship between physical training and some mental health variables**.** Some people appeared to benefit cognitively and socially from exercise. (Glen, 1984) According to our study it has been found that among the students who are physically active among them 38% do meditation or yoga and among the students who didn't do exercise regularly 19% of the students do meditation. The relation between physical activity and mental health activity variables seems not to be satisfactorily connected.

Physical activity and health behaviors relationship has found contradictory. (Natalie, 1995) Among 175 male students who do exercise 71% had healthy weight and among 97 female students who do exercise 62% had healthy weight. Among 112 male students who do exercise 69% had healthy weight and among 97 female students who do exercise 73%

had healthy weight. The association between health status and physical exercise seems to be positively associated.

CHAPTER 6

CONCLUSION

Physical fitness has become an alarming problem because several diseases, e.g. Type 2 Diabetes, osteoarthritis, high blood pressure, stroke etc. are connected with physical inactivity and overweight (NIH, 2015). So it is necessary to stay fit and stay active for the prevention of many diseases. During this study it has been observed that majority of the university students of East West University, Dhaka are conscious about their health. They sometimes found it difficult to manage time for their exercise but they tried to maintain their diet, engaged in manual work, actively participated in sports. All these activities were beneficial to stay fit and active. Some people were found that they thought that they are fit but actually that was not true. After analyzing their fitness status it was found that most of them did not have healthy weight, which was a fitness parameter in our study. Some students were found to have smoking habit, some had a unhealthy sleeping pattern, some were inactive in sports and manual work but most of the students were found to have healthy weight, maintained their diet, active in sports. The overall situation or the status of fitness among students was satisfactory. If rest of the students becomes aware and active then the situation could improve. This study was done only on the students of East West University so it only represents the fitness status of this university student. The data would be effective if more data were collected from different university students. Doing survey on different students on different part of Bangladesh can expand the study. The expanded study will represent the fitness status among students of whole Bangladesh.

CHAPTER 7

REFERENCES

Altekruse, S.F., Timbo, B.B., Headrick, M.L. and Klontz, K.C. (1995) Associations between diet and health behavior: results from the 1992 Rhode Island Behavioral Risk Factor Survey. *Journal of Behavioral Medicine*, *18*(3), pp.225-232.

Alyssa Sparacino (2017) 11 *Surprising Health Benefits of Sleep* Available at: http://www.health.com/health/gallery/0,,20459221,00.html [Accessed: 18 June, 2017]

BIH (2017) *Components of Physical Fitness* Available at: http://www.bringithomepersonaltraining.com/components-of-physical-fitness/ [Accessed: 18th June, 2017]

Blair, S.N., Jacobs Jr, D.R. and Powell, K.E. (1985) Relationships between exercise or physical activity and other health behaviors. *Public health reports*, *100*(2), p.172.

Boudreaux, E.D., Francis, J.L., Taylor, C.L.C., Scarinci, I.C. and Brantley, P.J. (2003) Changing multiple health behaviors: smoking and exercise☆. *Preventive medicine*, *36*(4), pp.471-478.

Boutelle, K.N., Murray, D.M., Jeffery, R.W., Hennrikus, D.J. and Lando, H.A., 2000. Associations between exercise and health behaviors in a community sample of working adults. *Preventive Medicine*, *30*(3), pp.217-224.

Brodney, S., Mcpherson, R.S., Carpenter, R.S., Welten, D. and Blair, S.N. (2001) Nutrient intake of physically fit and unfit men and women. *Medicine and science in sports and exercise*, *33*(3), pp.459-467.

Buckworth, J. and Nigg, C. (2004) Physical activity, exercise, and sedentary behavior in college students. *Journal of American College Health*, *53*(1), pp.28-34.

Caspersen, C.J., Powell, K.E. and Christenson, G.M. (1985) Physical activity, exercise, and physical fitness: definitions and distinctions for health-related research. *Public health reports*, *100*(2), pp.126.

Committee on Sports Medicine and Fitness and Committee on School Health, 2000.Physical fitness and activity in schools. *Pediatrics*, *105*(5), pp.1156-1157.

Drug Facts (2016) *What are anabolic steroids?* Available at: https://www.drugabuse.gov/publications/drugfacts/anabolic-steroids [Accessed: 22 June, 2017]

Dutton, G.R., Napolitano, M.A., Whiteley, J.A. and Marcus, B.H. (2008) Is physical activity a gateway behavior for diet? Findings from a physical activity trial. *Preventive medicine*, *46*(3), pp.216-221.

Folkins, Carlyle H.; Sime, Wesley E. (1981) Physical fitness training and mental health. *American Psychologist*, Vol 36(4), pp,373-389.

French, M.T., Popovici, I. and Maclean, J.C. (2009) Do alcohol consumers exercise more? Findings from a national survey. *American Journal of Health Promotion*, *24*(1), pp.2-10.

Haraldsdottir, J. and Andersen, L.B. (1994) Dietary factors related to fitness in young men and women. *Preventive medicine*, *23*(4), pp.490-497.

Harvard Health Publication (2017) *Exercise and Fitness* Available at: http://www.health.harvard.edu/topics/exercise-and-fitness [Accessed: 18 June, 2017]

HEALTH COMMUNITY KEY (2016) *The Importance of physical fitness* Available at: http://healthcommkey.org/importance-physical-fitness/ [Accessed: 22 June, 2017]

Health-galaxy.com (2016) *WHAT IS PHYSICAL FITNESS?* Available at: http://www.health-galaxy.com/What-Is-Physical-Fitness.html [Accessed: 22 June, 2017]

Jeff Angel (2017) *11 Components of Physical Fitness in Action* Available at: http://www.bringithomepersonaltraining.com/11-components-of-physical-fitness-in-action/ [Accessed: 22 June, 2017]

Jennefer Ramsey (2014) *Why A Balanced Diet Is Important For Physical Fitness?* Available at: http://bodyapplicatorwraps.com/balanced-diet-important-physical-fitness/ [Accessed: 18 June, 2017]

Jennifer Andrews (2015) *Five Benefits of Muscle Endurance & Exercise* Available at: http://www.livestrong.com/article/513988-five-benefits-of-muscle-endurance-activity-exercise/ [Accessed: 18 June, 2017]

Jim Sloan (2013) *Exercises to Improve Cardiovascular Endurance* Available at: http://www.livestrong.com/article/105668-exercises-improve-cardiovascular-endurance/ [Accessed: 18 June, 2017]

Johnson, M.F., Nichols, J.F., Sallis, J.F., Calfas, K.J. and Hovell, M.F. (1998) Interrelationships between physical activity and other health behaviors among university women and men. *Preventive medicine*, *27*(4), pp.536-544.

Johnson, N.A., Boyle, C.A. and Heller, R.F., (1995) Leisure- time physical activity and other health behaviours: are they related?. *Australian and New Zealand Journal of Public Health*, *19*(1), pp.69-75.

Krick, J.P. and Sobal, J., (1990) Relationships between health protective behaviors. *Journal of Community Health*, *15*(1), pp.19-34.

Kronenfeld, J.J., Goodyear, N., Pate, R., Blair, A., Howe, H., Parker, G. and Blair, S.N., 1988. The interrelationship among preventive health habits. *Health Education Research*, *3*(3), pp.317-323.

Laaksonen, M., PRÁTTALÄ, R. and Karisto, A. (2001) Patterns of unhealthy behaviour in Finland. *The European Journal of Public Health*, *11*(3), pp.294-300.

Lakka, T.A., Laaksonen, D.E., Lakka, H.M., Männikkö, N.I.K.O., Niskanen, L.K., Rauramaa, R.A.I.N.E.R. and Salonen, J.T. (2003) Sedentary lifestyle, poor cardiorespiratory fitness, and the metabolic syndrome. *Medicine and science in sports and exercise*, *35*(8), pp.1279-1286.

Laporte, R.E., Montoye, H.J. and Caspersen, C.J. (1985 Assessment of physical activity in epidemiologic research: problems and prospects. *Public health reports*, *100*(2), pp.131.

Lisha, N.E., Martens, M. and Leventhal, A.M. (2011) Age and gender as moderators of the relationship between physical activity and alcohol use. *Addictive behaviors*, *36*(9), pp.933-936.

MAYO CLINIC (2017) *Exercise: 7 benefits of regular physical activity* Available at: http://www.mayoclinic.org/healthy-lifestyle/fitness/in-depth/exercise/art-20048389/ [Accessed: 18 June, 2017]

Medicine Plus (2016) *Creatine* Available at: https://medlineplus.gov/druginfo/natural/873.html [Accessed: 22 June, 2017]

Medicine Plus (2017) *Caffeine* Available at: https://medlineplus.gov/caffeine.html [Accessed: 18 June, 2017]

Medicine Plus (2015) *Exercise and Physical Fitness* Available at: https://medlineplus.gov/exerciseandphysicalfitness.html [Accessed: 22 June, 2017]

Medicine Plus (2017) *Exercise and Physical Fitness* available at: https://medlineplus.gov/exerciseandphysicalfitness.html [Accessed: 18 June, 2017]

Michele Silence (2006)*Why Smoking & Exercise Don't Mix*available at: http://www.thedietchannel.com/Why-Smoking-And-Exercise-Dont-Mix.htm [Accessed: 18 June, 2017]

Montoye, H.J. and Taylor, H.L. (1984) Measurement of physical activity in population studies: a review. *Human Biology*, pp.195-216.

Moore, M.J. and Werch, C. (2008) Relationship between vigorous exercise frequency and substance use among first-year drinking college students. *Journal of American college health*, *56*(6), pp.686-690.

NCHPAD (2017) *Sedentary Lifestyle is Dangerous to Your Health* Available at: http://www.nchpad.org/403/2216/Sedentary~Lifestyle~is~Dangerous~to~Your~Health [Accessed: 18 June, 2017]

National Institute of Health (2011) *DIETARY SUPPLEMENTS: WHAT YOU NEED TO KNOW* Available at: https://ods.od.nih.gov/HealthInformation/DS_WhatYouNeedToKnow.aspx [Accessed: 22 June, 2017]

NIH (2004) *Ephedra and Ephedrine Alkaloids for Weight Loss and Athletic Performance* Available at**:** https://ods.od.nih.gov/factsheets/EphedraandEphedrine-HealthProfessional/[Accessed: 22 June, 2017]

Nutrition.gov (2017) *Dietary Supplements for Athletes* Available at: https://www.nutrition.gov/dietary-supplements/dietary-supplements-athletes [Accessed: 18th June, 2017]

Pate, R.R., Heath, G.W., Dowda, M. and Trost, S.G. (1996) Associations between physical activity and other health behaviors in a representative sample of US adolescents. *American journal of public health*, *86*(11), pp.1577-1581.

Pate, R.R., Pratt, M., Blair, S.N., Haskell, W.L., Macera, C.A., Bouchard, C., Buchner, D., Ettinger, W., Heath, G.W., King, A.C. and Kriska, A., (1995) Physical activity and public health: a recommendation from the Centers for Disease Control and Prevention and the American College of Sports Medicine. *Jama*, *273*(5), pp.402-407.

Pikó, B. and Keresztes, N. (2008) Nutritional control among high school students.Social influences of eating behavior and characteristics of their gender differences. *MentalhigieneesPszichoszomatika*, *9*(2), pp.149-164.

Shikany, J.M., Jacobs, D.R., Lewis, C.E., Steffen, L.M., Sternfeld, B., Carnethon, M.R. and Richman, J.S. (2013) Associations between food groups, dietary patterns, and cardiorespiratory fitness in the Coronary Artery Risk Development in Young Adults study. *The American journal of clinical nutrition*, *98*(6), pp.1402-1409.

Quizlet (2017) *6 skill related components of physical fitness* Available at: https://quizlet.com/19542654/6-skill-related-components-of-physical-fitness-flash-cards/ [Accessed: 22 June, 2017]

Simoes, E.J., Byers, T., Coates, R.J., Serdula, M.K., Mokdad, A.H. and Heath, G.W., (1995) The association between leisure-time physical activity and dietary fat in American adults. *American Journal of Public Health*, *85*(2), pp.240-244.

Smith, B.A., Price, J.O., Nicholson, T. and Higgins, C.W. (1998) Health knowledge of predominantly Mexican American high school students. *Journal of health education*, *29*(1), pp.21-25.

Steptoe, A., Wardle, J., Fuller, R., Holte, A., Justo, J., Sanderman, R. and Wichstrøm, L. (1997) Leisure-time physical exercise: prevalence, attitudinal correlates, and behavioral correlates among young Europeans from 21 countries. *Preventive medicine*, *26*(6), pp.845-854.

Study.com (2017) *Factors Affecting Physical Fitness & performance* Available at: http://study.com/academy/lesson/factors-affecting-physical-fitness-performance.html [Accessed: 22 June, 2017]

Study.com (2017) *What is Physical Fitness? – Definition &Importance* Available at: http://study.com/academy/lesson/what-is-physical-fitness-definition-importance.html [Accessed: 22 June, 2017]

Taylor, C.B., Sallis, J.F. and Needle, R. (1985) The relation of physical activity and exercise to mental health. *Public health reports*, *100*(2), p.195.

Topend sports (2010) *Components of Fitness* Available at: http://www.topendsports.com/fitness/components.htm [Accessed: 18 June, 2017]

Van Andel, G.E. and Austin, D.R. (1984) Physical fitness and mental health: a review of the literature. *Adapted Physical Activity Quarterly*, *1*(3), pp.207-220.

Vries, H.D., Kremers, S., Smeets, T. and Reubsaet, A. (2008) Clustering of diet, physical activity and smoking and a general willingness to change. *Psychology and Health*, *23*(3), pp.265-278.

Warburton, D.E., Nicol, C.W. and Bredin, S.S. (2006) Health benefits of physical activity: the evidence. *Canadian medical association journal*, *174*(6), pp.801-809.

Washburn, R.A. and Montoye, H.J. (1986) The assessment of physical activity by questionnaire. *American Journal of Epidemiology*, *123*(4), pp.563-576

WebMD (2010) *When Not to Exercise* Available at: http://www.webmd.com/fitness-exercise/features/when-not-to-exercise#1 [Accessed: 22 June, 2017]