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Research Article

**KNOWLEDGE ABOUT PHYSICAL FITNESS AMONG  
MEDICAL STUDENTS OF MOHTARMA BENAZIR BHUTTO  
SHAHEED MEDICAL COLLEGE MIRPUR AJ&K(PAKISTAN)**<sup>1</sup>Dr. Hasnat Shabbir, <sup>2</sup>Dr. Nimra Allaudin, <sup>3</sup>Dr Kamran Sajjad Hashmi<sup>1</sup>Divisional, Headquarters Teaching Hospital Mirpur, AJ&K (Pakistan)<sup>2</sup>House Officer, Benazir Bhutto Hospital, Rawalpindi.<sup>3</sup>Medical Officer DHQ Hospital Sheikhpura**ABSTRACT:**

**INTRODUCTION:** The world is facing an epidemic of non-communicable diseases (NCDs) and lack of exercise is one of the major risk factor for these diseases. At least 60% of the world's population fails to complete the recommended amount of physical activity required to induce health benefits.

**METHODOLOGY:** Study design: Cross sectional study

**Setting:** The study was undertaken amongst all the undergraduate students Mohtarma Benazir Bhutto Shaheed Medical College of 1<sup>st</sup> to 4<sup>th</sup> year who were willing to participate.

**Duration:** Total duration of this study is 6 months (April - September 2015).

**RESULT:** The study subjects 95% consider exercise is important for a medical student. Whoever 59.5% don't take part in sport activity while 40.5% do take part in sports. Although only 30% know about WHO recommendation regarding physical activity most of them 40% are physical active. 64% of students were active participants of sports in previous institute; however it is pleasant to know that 84.3% feel the need for regular physical activity.

**CONCLUSION:** It is evident from the survey that near half of the students (40.5%) are although inactive but still maximum of them (84.3%) do want to take part in sports activities. Most of the students have normal BMI ( 62 %) . Overall Girls have more BMI than boys.

**KEY WORDS:** BMI, sports activity, balance diet.

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**INTRODUCTION:**

The world is facing an epidemic of non-communicable diseases (NCDs) and lack of exercise is one of the major risk factor for these diseases. Physical inactivity has been identified as one of the leading preventable causes of death [1] and inverse linear relationship exists between volume of physical activity, behavior, and mortality. [2] Overall, it is estimated that lack of physical activity causes 1.9 million deaths globally. [3]

Physical activity is defined as any bodily movement produced by skeletal muscle that requires energy expenditure whereas physical exercise is a subset of the physical activity behavior that involves purposive and repetitive movements with aim of improving cardio-respiratory or muscular fitness. Exercise is carried out in a more structured manner, often performed at a greater intensity. [3] Centers for Disease Control (CDC) recommends at least 30 min of moderate intensity physical activity for at least 5 days per week for adults (i.e., 150 min of moderate intensity physical activity per week). [4]

At least 60% of the world's population fails to complete the recommended amount of physical activity required to induce health benefits. [5]. Due to lack of physical activity obesity is one of the leading risk factors known to be capable of causing devastating effects on various body systems contributing to 15% of the world's obese population [6]. Obesity occurring in adolescence can continue into adult life with consequences such as type 2 diabetes mellitus, hypertension, dyslipidemia, metabolic syndrome, polycystic ovarian disease, and coronary artery disease [6]. Almost 62% of the obese live in developing countries. [7]. Such effects contribute significantly to the poor health of nations and places a significant economic burden on countries [8,9].

Healthy active living benefits both individuals and society in many ways, for example, by increasing productivity, improving morale, decreasing absenteeism, and reducing health-care costs. Other benefits include improved psychological well-being, physical capacity; self-esteem and the ability to cope with stress.[9] Although behaviors of students are considered a temporary part of college life, however, unhealthy habits picked up at this level generally persist in adult life. University and college arenas, therefore, represent an important opportunity for health and nutritional education. College life is also a period during which individuals are for the most part exposed to stress and lack of time, posing a barrier to

adoption of healthy practices.[10] Physical activity among adolescents is consistently related to higher levels of self-esteem and self-concept and lower levels of anxiety and stress.[11]

Amongst this college population, it is assumed that the medical students have a greater knowledge about healthy lifestyle and dietary habits when compared to other students. One of the most important factors for predicting the physical condition of medical students is their own attitudes toward health promotion, illness prevention, and exercise.[11] However, there is no evidence to indicate that this knowledge translates into practice in terms of maintaining good health. Healthy habits among medical students are even more important as they are future physicians and the students who personally ignore adopting healthy lifestyle are more likely to fail to establish health promotion opportunities for their patients. Also, medical students have been shown to exhibit early risk factors for chronic diseases.[12] With this background in mind, the current study was designed to assess the attitude and practices of medical students regarding physical activity and to determine the motivating and hindering factors for the practice of physical activity.

**LITERATURE REVIEW:**

Non communicable diseases (NCD) will account for 73% of deaths and 60% of the global disease burden by 2020. Physical activity plays a major role in the prevention of these non-communicable diseases. The stress involved in meeting responsibilities of becoming a physician may adversely affect the exercise habits of students. So, the current study aimed to study the practice of physical activity among undergraduate medical students.

Physical inactivity has an adverse impact on health of all individuals including college students[13,14]. Lifestyle behaviors play an important role in healthy living. Poor mental wellbeing is often expressed as low self-esteem, depressed mood, lack of self-confidence, insomnia, and social isolation. According to the WHO, the second most frequent cause of disability by 2020 will be mental illness, specifically depression [13]. Insomnia is highly prevalent among college students, leading to stress, depression and reduced academic performance. Sleep deprivation and psychological stress are more frequently observed in medical students in various countries. Moreover, physical activity was shown to be negatively correlated with insomnia. The Insomnia Severity Index (ISI) is a valid and reliable tool for measuring insomnia [14,15]. Depression and

depressive disorders are considered public health burdens, with 10–15% of youths experiencing a mood disturbance at any one time. In adults, the risk of depression can be reduced by increasing physical activity [16]. The type, intensity and frequency of physical activity for effective stress control remains unclear. Leisure time physical activity leads to good mental health in women, with physical activity having beneficial effects on brain structure and function. Students involved in physical activity develop greater self-esteem, increased attention and better classroom behavior [17]. Much work is required to determine the correlation between physical activity and mental health. Medical professionals play an important role in the management of obesity. However, being a part of the same society these lifestyle diseases can afflict them too. Students in medical professional courses should develop healthy habits both dietary and physical as these will not only influence their own health and fitness but will also influence their counseling to patients under their care when they become physicians in due course of time [18]. These students lead a stressful lifestyle and may have unhealthy habits of diet and physical exercise which predispose them to being overweight and obese. A public problem of obesity thus extends itself to the smaller subset of health professionals in the society.

Earlier work elsewhere has shown that physical activity in students is mainly driven by the desire to lose weight [19]. Additionally, physical activity levels in medical students can continue to be part of their daily routine and can enhance their ability to prescribe and support physical activity in patients that they see in practice later [20]. Addressing the issues faced by future medical professionals should possibly improve their confidence in the interventions that they may be required to prescribe in the future.

There are no studies related to future medical professionals that have been published from Pakistan. We sought to address this gap in knowledge by designing a short duration educational intervention study to observe the effectiveness of small group sessions on change in the dietary and physical activity of a small group of undergraduate students in Mohtarma Benazir Bhutto Shaheed Medical College AJK.

## **METHODOLOGY:**

### **Objective :**

To determine knowledge about physical fitness among medical students.

## **Material and Methods :**

### **Setting :**

This study was conducted by the MBBS students of Mohtarma Benazir Bhutto shaheed Medical College under supervision of Community Department.

### **Duration of study:**

Total duration of this study was 6 months (april-september,2014)

### **Study Area and Study Population:**

It was an institution based observational study conducted amongst undergraduate medical students of Mohtarma Benazir Bhutto Shaheed Medical College in Mirpur AJK .Every year 100 students are admitted to medical college. The entire course of MBBS is divided into 5 years. The study was undertaken amongst all the undergraduate students from 1<sup>st</sup> year to 4<sup>th</sup> year who were willing to participate and all those were excluded who refused to participate or who could not be during study period due to absence from college.

### **Sample size:**

The study sample included total 260 from 1<sup>st</sup> to 4<sup>th</sup> year.

### **Sampling technique :**

This was a cross sectional study conducted in Mohtarma Benazir Bhutto Shaheed Medical College.The target population consist of MBBS students from 1<sup>st</sup> to 4<sup>th</sup> year.A total of 260 students were selected for this survey.From each class students were selected by using simple random sampling design.All the selected from the each class were briefed about the study and consent for inclusion in the study was taken.A pre tested semi structured questionnaire was used to collect data. Questionnaire were administered to the students at the lecture hall after the class and were collected after 15 minutes. In addition to demographic details height and weight were also included in the questionnaire. Body mass index (BMI ) was calculated the formula is weight in kilogram/ height in meter square.

### **Inclusion criteria:**

MBBS students

Every one present was included

### **Exclusion criteria :**

Non medical students.

Those absent or not willing to fill the Performa were excluded.

### **Data Analysis :**

Data from the questionnaires was entered and analyzed using Statistical Package for Social Sciences(SPSS V.20).

**RESULTS:**

Of the 260 study subjects who returned the completed Performa, proportion of female (n= 158 ,60.7%) was higher than male (n=102,39%).

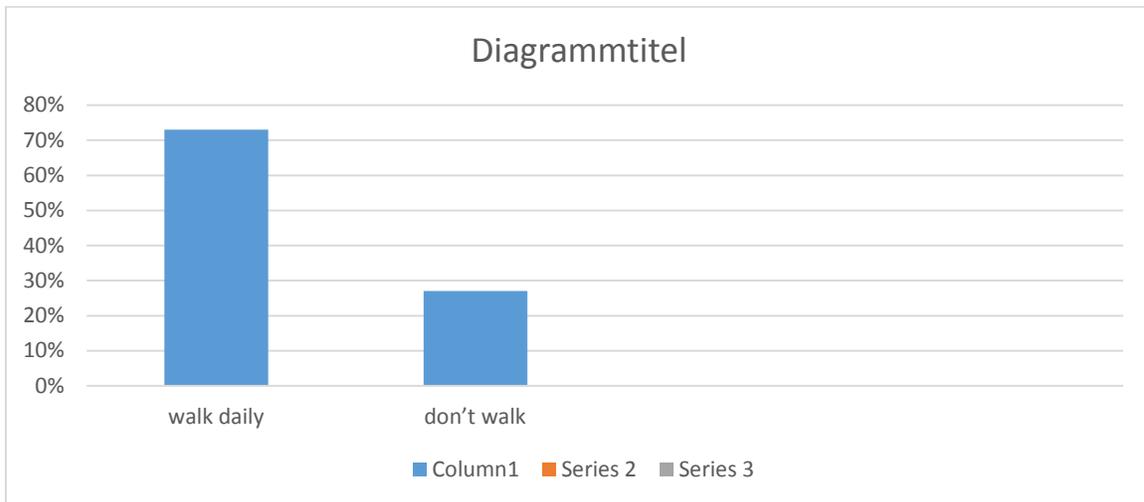
	frequency	percent
Male	102	39
Female	158	60.7
	260	100

1. On being asked about physical fitness 105 said that they are active in their routine work.

	frequency	percent
Active students	105	40
Not active	155	50
total	260	100

2. 162 (62.3%)students said that they feel the need of regular physical activity.

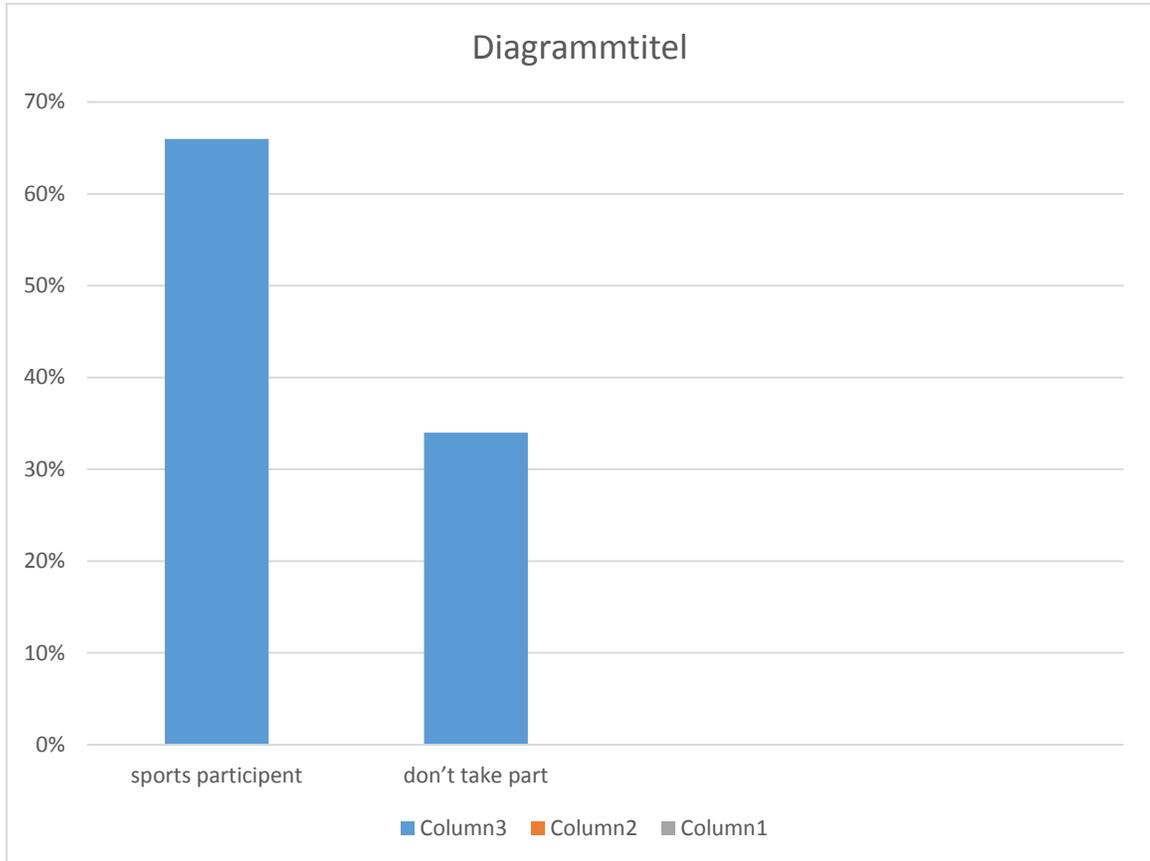
3. 190 (73%) don't walk after takig daily.



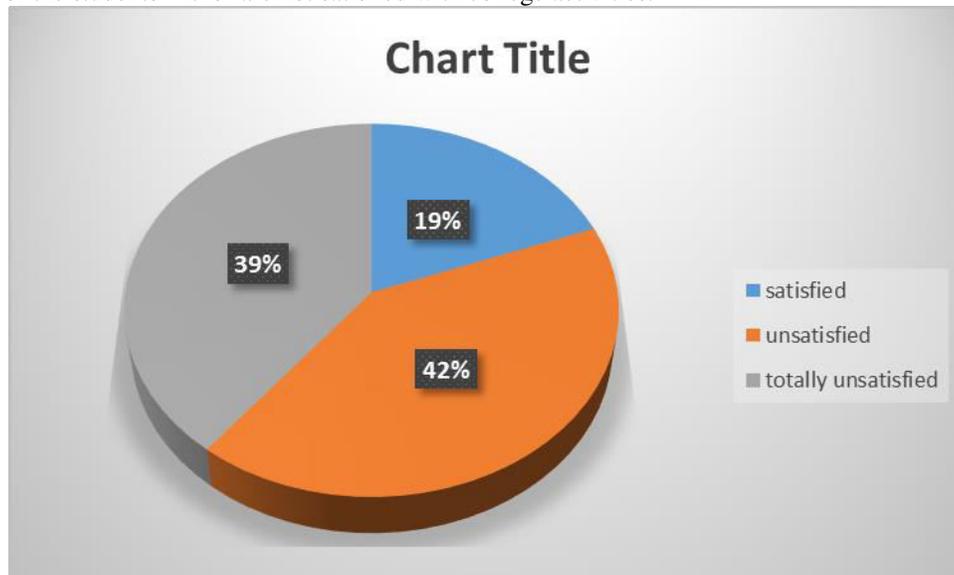
4. Meanwhile 230 (88%) said that regular medical checkup is necessary for a medical student.

	frequency	Percent
Regular medical checkup	230	88
Don't necessary	30	12
	260	100

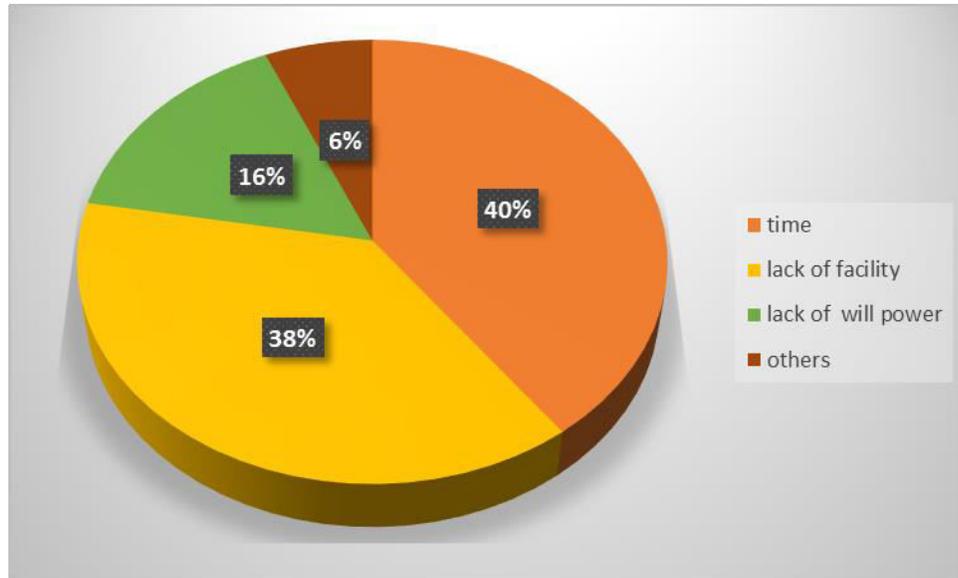
5. A large number of student 173 (66%) don't take part in sports activity.



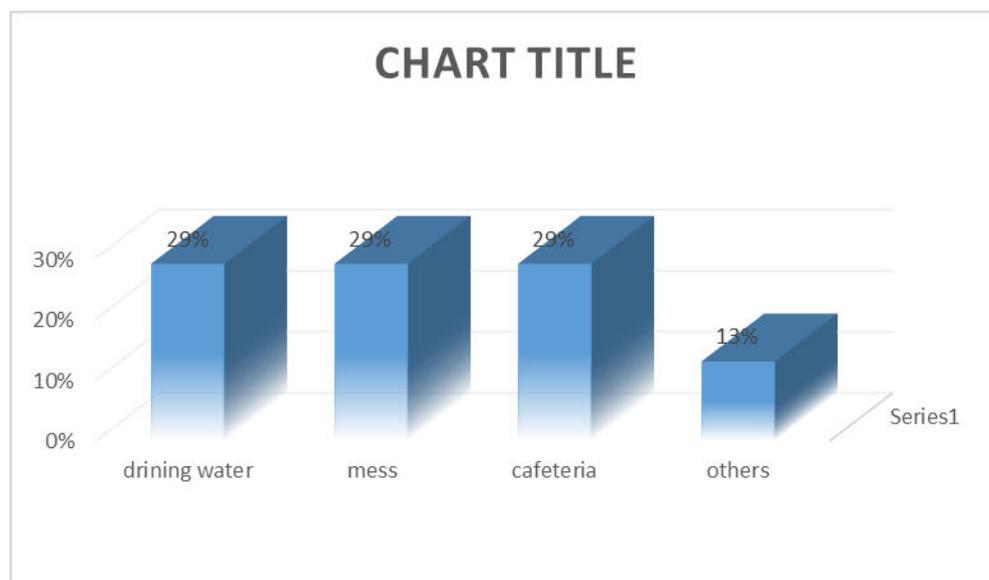
6. Maximum of the students 41.1% are not satisfied with college activities.



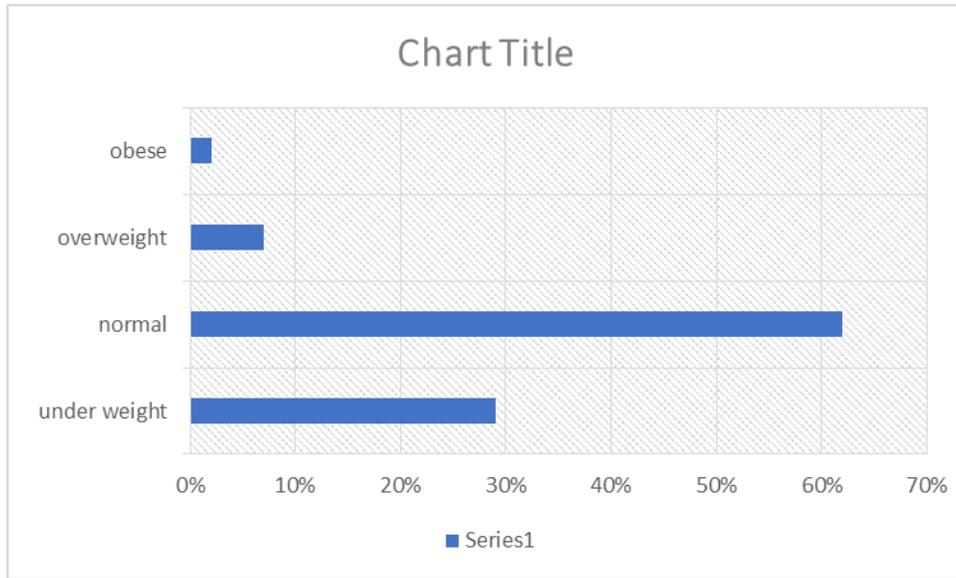
7. On being asked to report the barriers to adaptation of healthy life style, lack of time was reported as major barrier by the majority of students (43%).



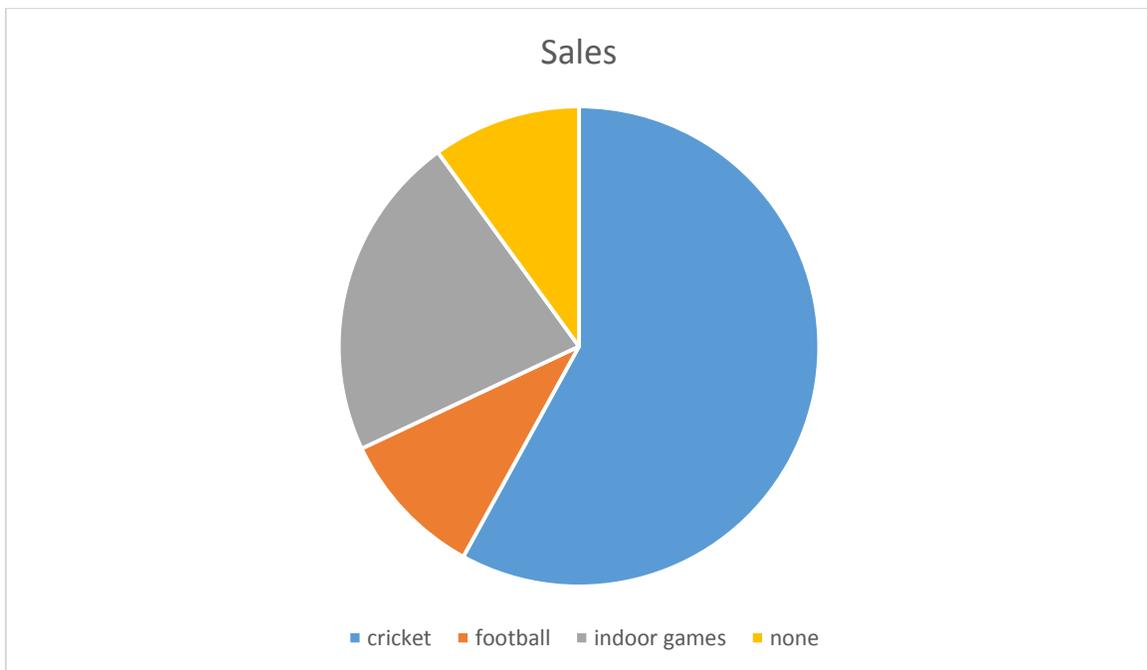
8. Students suggestions regarding change in their diet.



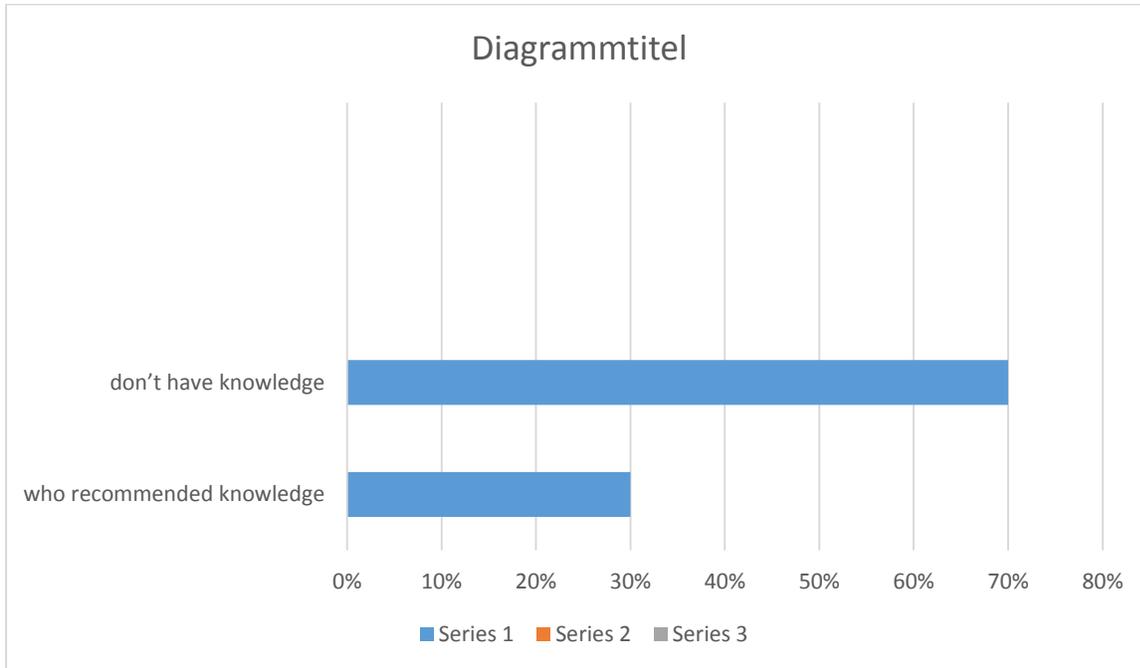
9. Regarding BMI most of the students have normal BMI( 62 % ).Girls have more BMI than boys.



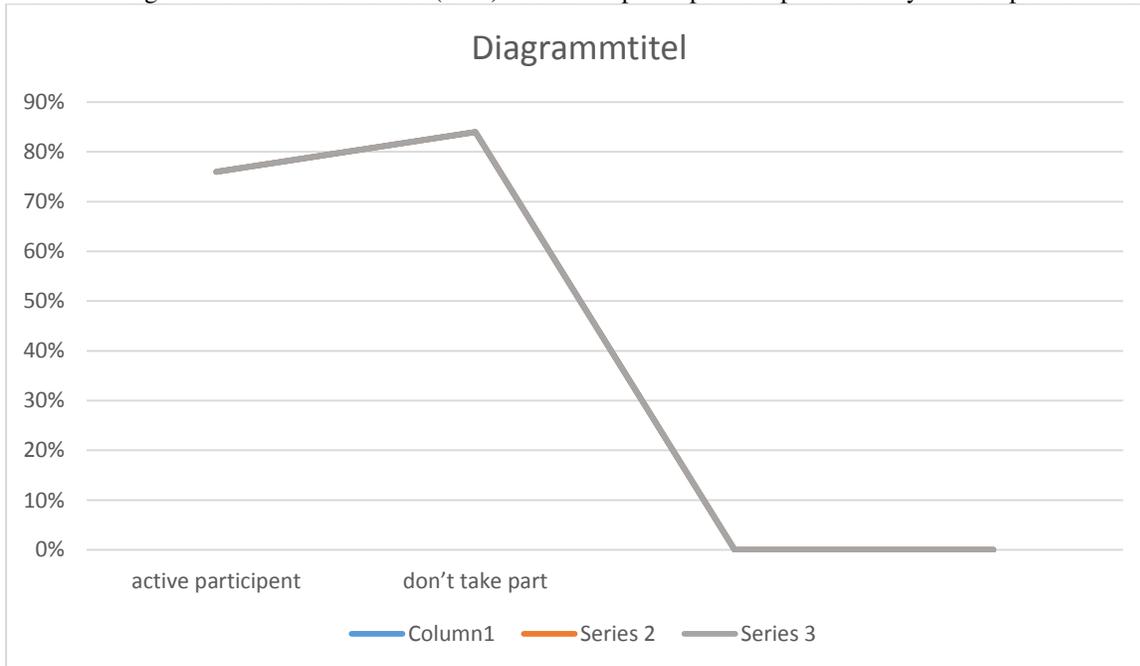
10. Maximum 152 (58%) said that among sports cricket is their best choice as compared to football (22%).



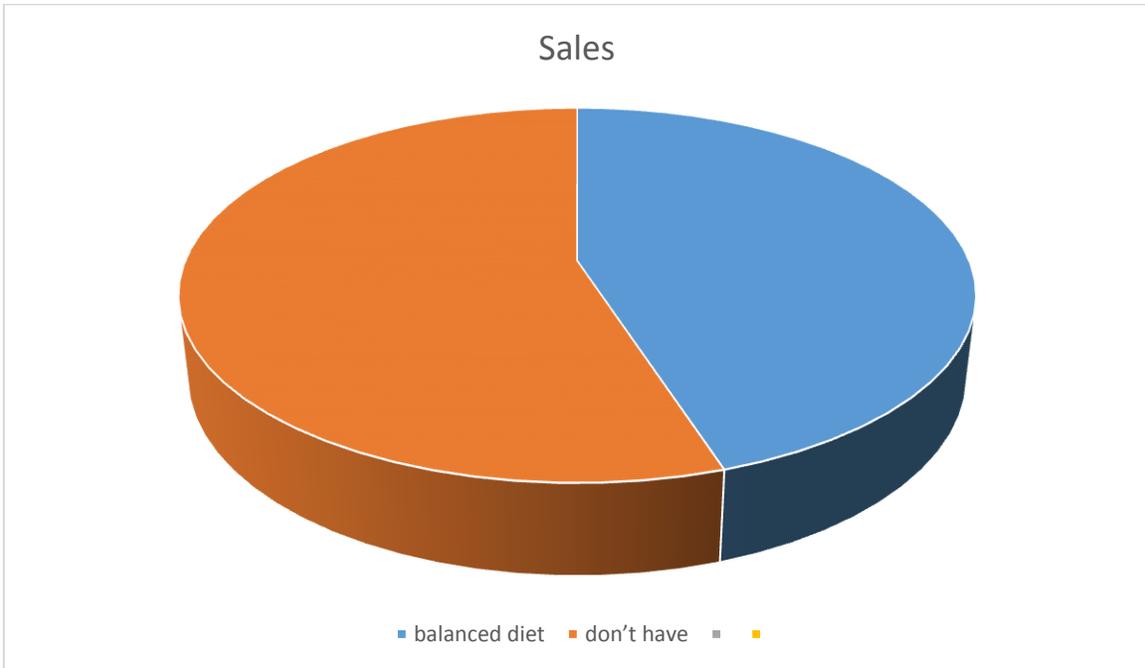
11. Query regarding knowledge about WHO recommendation about physical activity reveal that only 80 (30%) students don't have knowledge about it.



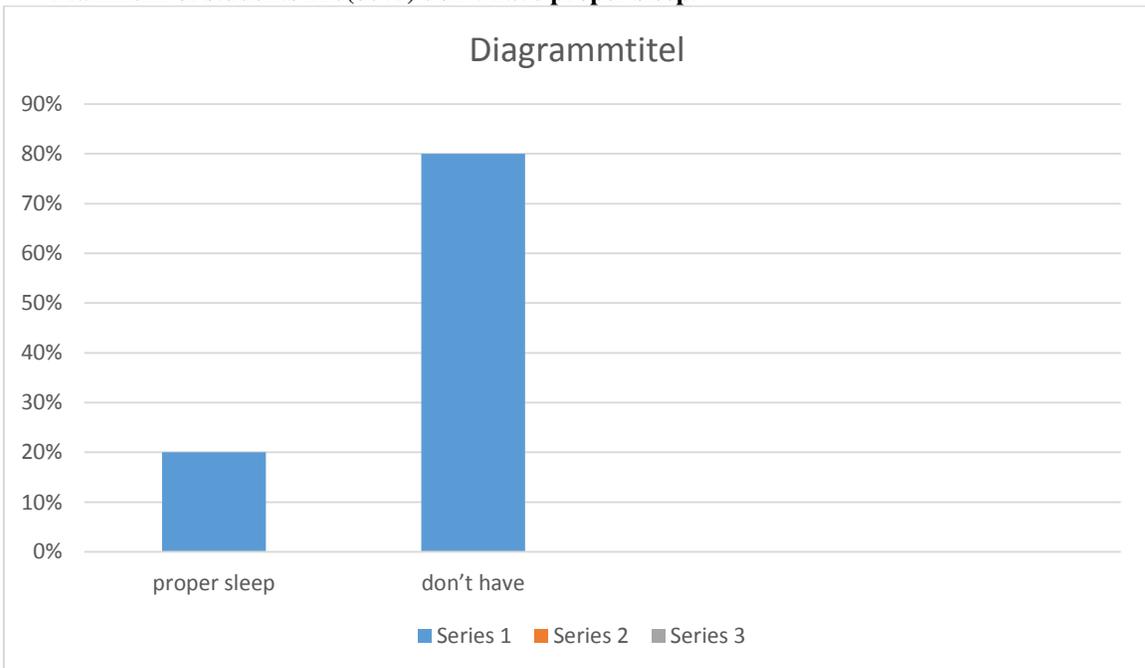
12. Large number of students 168 (64%) are active participant of sports activity in their previous institutes.



13. 145 (55%) students said that they don't have balanced diet.



**14. Maximum of students 210(80%) don't have proper sleep.**



**DISCUSSION:**

In most parts of the world, non-communicable diseases have become a major epidemic. This is due, in part, to a rapid change in lifestyles leading to reduced physical activity, changing diets, and increased tobacco use. This trend is present in all societies, rich and poor, developed and developing.[21]

Physical inactivity is the fourth leading risk factor for global mortality. Increasing levels of physical inactivity are seen worldwide, in high-income countries as well as in low- and middle-income countries. Urban and environmental policies can have huge potential to increase the physical activity levels in the population.[22] It is well known that the practice of physical exercise can have important benefits in terms of preventive and therapeutic effects on health. A number of studies conducted to evaluate the physical activity, diet, and fitness status of university students have revealed that the physical condition and nutritional habits of students is very much associated with their own attitudes toward health promotion and illness prevention.[23] Positive attitudes in these regards are vital for our future health professionals.

A positive finding revealed by our study was that nearly 62% of the medical students had a normal BMI. Similar results have been reported from Thailand,[24] while in Columbia, 80% of the students had normal BMI.[32] But students with BMI $\geq$ 25 kg/m<sup>2</sup> constituted 24% in our sample, similar to Columbian students (22%)<sup>5</sup> and a study from Maharashtra (20%)<sup>10</sup> as against a lower proportion (16%) in Thailand .[25]

Lack of time and laziness or lack of motivation was reported by over 50% of the students to be the most important hindering factors for practice of regular physical activity which were also identified by other studies.[24] Reasons for exercising quoted by students in the present study were to improve fitness, promote and maintain health, and as a measure to control weight were all found to be identical to the suggestions given to promote physical activity among Egyptian and Saudi medical students as reported by El-Gilany *et al*.[26]

To conclude, a longitudinal study to follow-up student behavior throughout their academic life and across different strata of students and across various disciplines will add value and weightage to the factors promoting the practice of physical activity among students.

**LIMITATIONS:**

Refusal to apply to the Performa especially to give measurements regarding BMI was the major limitation we face in conducting this study. . As the study was carried out in a college setting, the findings are limited college students and the results cannot be generalized to other settings.

**RECOMENDATIONS:**

There is a need to encourage physical activity in medical schools and also to emphasize the importance of inculcating physical activity in the lifestyle of medical students, so that as physicians of tomorrow, they are able to advice their patients regarding healthy lifestyle practices. The major hindering factor for the students was lack of facility so facilities should be provided on emergency basis and students should also be encouraged to take part in healthy activities.

**CONCLUSION:**

It is evident from the survey that near half of the students (40.5%) are although inactive but still maximum of them (84.3%) do want to take part in sports activities. Most of the students have normal BMI ( 62 %) . Overall Girls have more BMI than boys.

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