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A CRITICAL EVALUATION OF HEALTH AUTHORITIES AND COMMUNITY TO SHARE THE RESPONSIBILITY FOR IMPROVEMENT OF HEALTH STATUS OF THE NATION

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Abstract:
Introduction: *Balanced nutritional intake is essential for human development and healthy life, thus it should be practiced with every meal. Meal contents and dietary habits play important roles in nutritional intake. College students are considered an important segment of the population and are a group inclined to develop poor eating habits. Inadequate intake of nutrients would have a direct effect on both health and performance.*
Objectives: *To suggest and recommend health authorities and community to share the responsibility for improvement of health status of the nation.*
Materials and methods: *A descriptive cross sectional study was done. Closed ended questionnaire was used as data collection tool after getting consent from the participants & Administration. Data was collected by team members & will be analyzed & compiled through SPSS software version 22. 100% confidentiality & privacy will be maintained.*
Results: *Results were analyzed through SPSS software version 22.*
Conclusion: *After the completion of research the results will be analyzed & a conclusion was drawn.*
Key Words *Nutritional assessment - medical students– Food intake – Energy.*

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INTRODUCTION:

Study conducted by WHO provides an important basis for action. It synthesizes available evidence for action and aims to facilitate the development and implementation of national action plans to improve diets and increase physical activities, with specific reference to healthy weight.(WHO Global Strategy on Diet , Physical activity and Health 2010). A research was conducted to examine the long-term relationship between changes in water and beverage intake and weight change. It was carried out on 3 cohorts of 50 013 women aged 40–64 years, 52 987 women aged 27–44 years and 21 988 men aged 40–64 years without obesity and chronic diseases at baseline. They assessed the association of weight change within each 4-year interval, with changes in beverage intakes and other lifestyle behaviors during the same period. They found out that replacement of 1 serving per day of SSBs(Sugar sweetened beverages) by 1 cup per day of water was associated with 0.49 kg (95% CI: 0.32–0.65) less weight gain over each 4-year period, and the replacement estimate of fruit juices by water was 0.35 kg (95% CI: 0.23–0.46). Substitution of SSBs or fruit juices by other beverages (coffee, tea, diet beverages, low-fat and whole milk) were all significantly and inversely associated with weight gain and concluded that increasing water intake in place of SSBs or fruit juices is associated with lower long-term weight gain.(A Pan, V S Malik, T Hao, W C Willett, D Mozaffarian and F B Hu, 2011)

The evidence on population intervention to address weight gain and overweight and obesity in adults has been the subject of number of recent reviews (The report published by the Heart Foundation of Australia 2013). Nutritional Status is used for the purpose to estimate functional status, diet intake and body composition compared to normal populations. Body composition reflects calorie and protein needs. Nutritional status predicts hospital morbidity, mortality, length of stay, cost. Baseline body composition and biochemical markers determine if nutrition support is effective. Nutritional status has been traditionally defined by body composition,plasma-protein concentrations, immune competence, and multivariate analysis.2,3(2. Blackburn GL, Bistrian BR 1977)3. (Detsky AS, Baker JP, Mendelson RA, 1984)

The National Health and Nutrition Examination Survey (NHANES) is a survey research program conducted by the National Center for Health Statistics (NCHS) to assess the health and nutritional status of adults and children in the United States, and to track changes over time. The survey combines interviews and physical examinations. The NHANES interview includes demographic, socioeconomic, dietary, and health-related questions. The examination component consists of medical, dental, and physiological measurements, as well as laboratory tests administered by medical personnel. (Ozonoff, David (2014). The evaluation of the nutritional status is a broad topic, and to be of clinical importance the ideal method should be able to predict whether the individual would have increased morbidity and mortality in the absence of nutritional support. In short, can it predict the occurrence of nutrition-associated complications and thus predict outcome? Unfortunately, disease and nutrition interact so that disease in turn may cause secondary malnutrition or malnutrition may adversely influence the underlying disease. Thus, patient outcomes are multifactorial, and attempting to formulate the influence of malnutrition on outcome based on single parameters or simple models fails to consider the many interacting factors. This complexity has been recognized in the recent recommendations by the American Dietetic Association. 1 (American Dietetic Association.1994)

Recently published literature demonstrates SGA as a valid tool for the nutritional diagnosis of hospitalized clinical and surgical patients, and point to a potential superiority of nutritional screening methods in the early detection of malnutrition.(A systematic review of the literature ZOlS). Data from around the world show that the causes underlying most nutrition problems have not changed very much over the past 50 years. Poverty, ignorance and disease, coupled with inadequate food supplies, unhealthy environments, social stress and discrimination, still persist unchanged as a web of interacting factors which combine to create conditions in which malnutrition flourishes. However, what does change greatly is the approach to tackling malnutrition. Each decade or so witnesses a new dominant framework, paradigm, panacea or quick fix claimed to be capable of reducing the malnutrition problem greatly before ten years have passed. (TNS Hartini _ 2004).

Nutritional requirements change as a person gets older, because the elderly use a lot of medication their absorption, excretion and utilization of nutrients can be affected. Growing children have different nutritional needs to that of adults. For example, a growing infant requires a higher intake of essential fatty acids than that of an adult. In the same way there are different nutrition requirements for young and old there are also very different requirements between the sexes. For example, a woman's breastfeeding has different nutritional requirement to that of one who is not. Nutritional requirement vary depending on whether someone is healthy or ill. As diseases are unique so are the nutritional requirements needed whilst that person is ill. The same applies to

psychological and emotional stress. When people are affected by stress their appetite is affected, this results in less intake of food which in turn results in less nutrients being absorbed. (Stewart Hare C.H.Ed Dip NutTh 2010).

Nutritional requirements and uses are different in different occupation and physical activities. This is because when we do more work than our body requires more energy to keep our bodies still in healthy condition. Workers like coal miners, steel workers, forestry workers, army recruits, builders, laborers and athletics need more food that more nutrients such as carbohydrates, protein and fats. These classes of food important to give energy that required to sustain the function of the body such as physical work maintenance. respiration and circulation. Energy comes from the food eaten and released in the body to yield the chemical energy needed to sustain metabolism, nerve transmissions and circulation. ln addition. occupations are classified according to how active they are workers. Sedentary work like office workers, clerical tasks, pilots, lawyer and teachers need less of energy requirement and different types of nutrition they need to take. This is because their job does not require a lot of energy to do work. It is important that meals for very active jobs to provide sufficient energy, and it is advisable to supply about one third of third of the energy in the form of fat as carbohydrates food tend to be bulky and would therefore be difficult to digest while working actively. Extra water and sodium chloride should be taken if work is carried out in a hot atmosphere. (Stewart Hare 2007),

METHOD OF STUDY:

RESULTS:

It states that
- 68% students belong to 17-20 years age group.
- 32% students belong to 21-25 years age group.

Descriptive Cross Sectional in Avicenna medical college Lahore.
Study population Medical students
Three months Completion time. Medical students of Avicenna Medical College Lahore will be included. All males & females are included. Only those students giving informed consent are included. Other medical students else than those of ACMC are excluded. Students not giving consent are not included. Students ill due to any disease are not included in this research. Consent will be obtained for interview from administration & participants. After consent the confidentiality and secrecy of research will be maintained during & after research. The information about the names addresses etc. will not be disclosed to anyone and will not be used for unethical purpose.

Sample size: Sample size will be estimated using WHO software S size & by using formula of estimating a population +proportion with specified relative precision. At confidence level of 95% with anticipated population proportion of 70% & relative precision of 10%,the minimum sample size will be taken as 100 will be collected by research conducting members.

The data will be compiled and analyzed through SPSS software version 22 & appropriate statistical techniques. Data will be presented by means of tables, charts & diagrams. A semi structured questionnaire (pre-designed close ended with few open-ended questionnaires) will be used to collect information from patients

Table 1:

Gender Percentage of the population				
Respondents sex				
Valid	Frequency	Percent	Valid Percent	Cumulative Percent
	Male	20%	40.0	100.0
	Female	30%	60.0	100.0
	Total	50%	100.0	

Result:
It states that:-
- 60% students were female.
- 40% students were male.

Table 2:

Awareness among medical students regarding nutritional status	
Valid	**Awareness of Nutritional status**

	Frequency	percent	Valid percent	Cumulative percent
Yes	38	76.0%	76	76
No	12	24.0%	24	100
Total	50	100.0%	100	

Result:
It states that:-
- 76% students were aware of their nutritional status.
- 24% students were not aware of their nutritional status.

Table 3:

| Prevalence of underweight, overweight & obesity among medical sudents				
	Underweight	Overweight	obese	Normal(within limit)
Males	8%	10%	2%	20%
Females	10%	14%	8%	28%
Total	18%	24%	10%	48%

Results
It states that:-
- 8% males & 10% females are underweight.
- 10% males & 14% females are overweight.
- 2% males & 8% females are obese.
- 20% males & 28% females are normal weight

Figure 1:
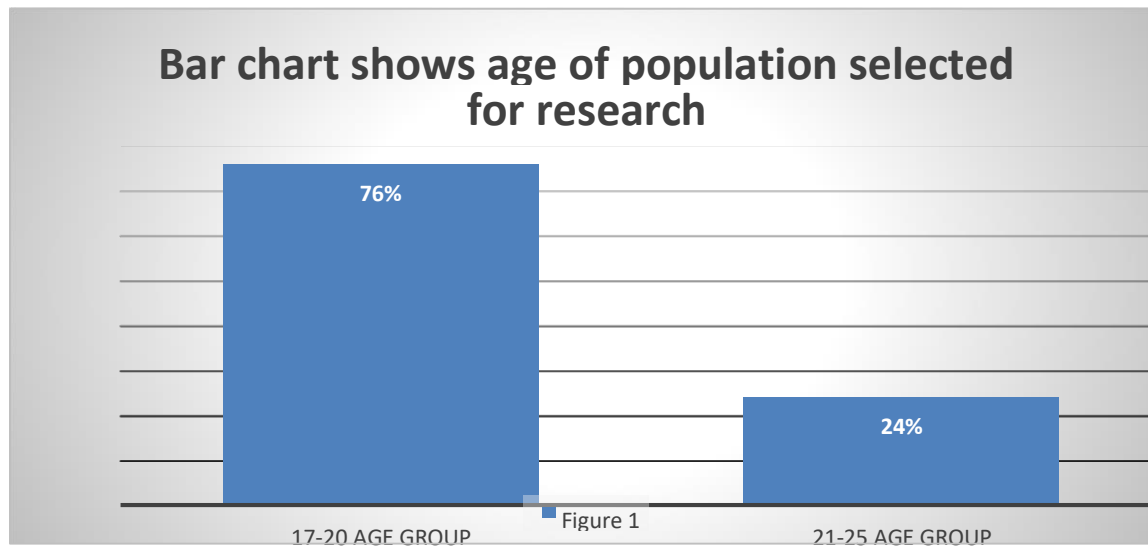
Results:
It states that
- 68% students belong to 17-20 years age group.
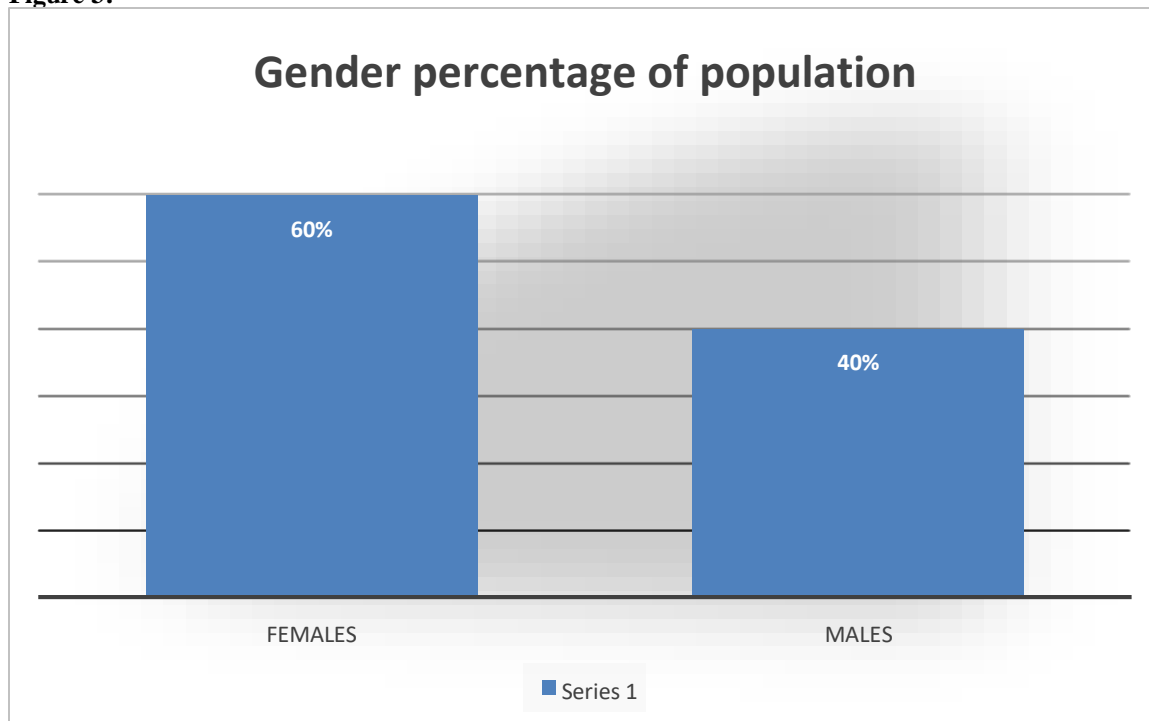- 32% students belong to 21-25 years age group.

Figure 2:
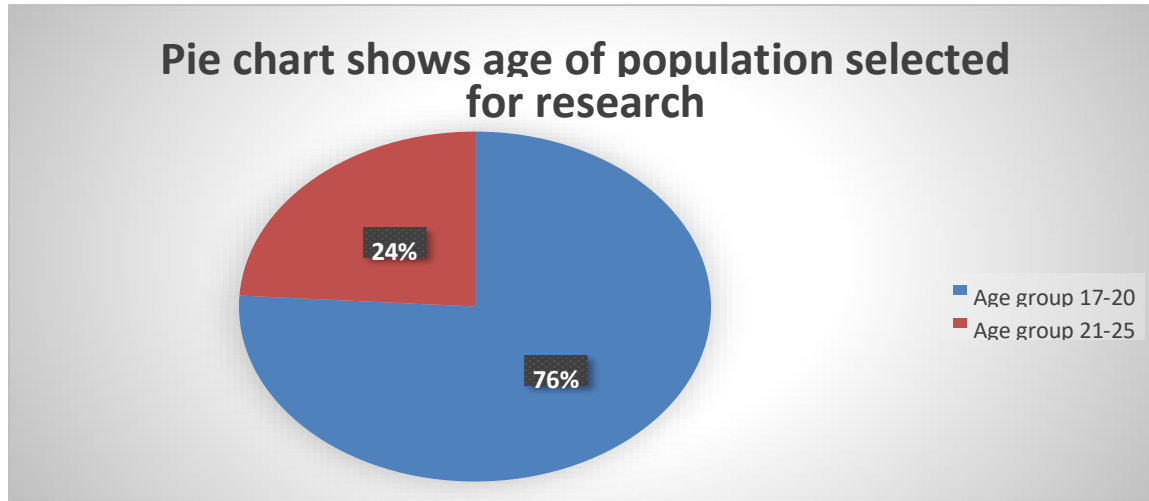
Pie chart shows age of population selected for research

24%

76%

- Age group 17-20
- Age group 21-25

Results:
It states that
- 68% students belong to 17-20 years age group.
- 32% students belong to 21-25 years age group.

Figure 3:

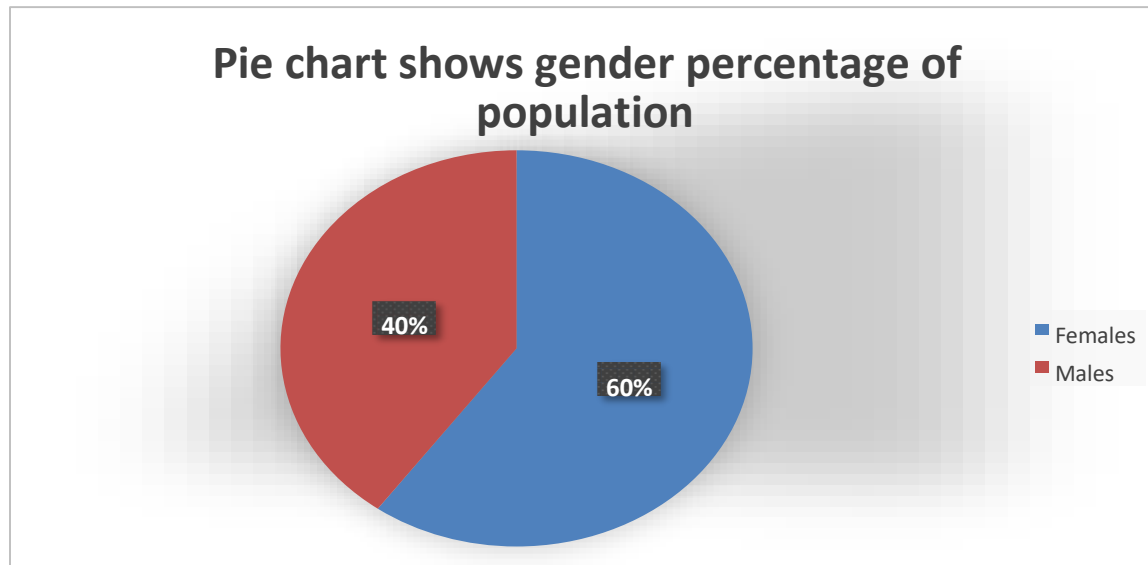**Gender percentage of population**

60%

40%

FEMALES   MALES

- Series 1

Result:
It states that:-
- 60% students were female. □   40% students were male.

Figure 4:

Pie chart shows gender percentage of population

40%

60%

■ Females
■ Males

Result:
It states that:-
- 60% students were female.
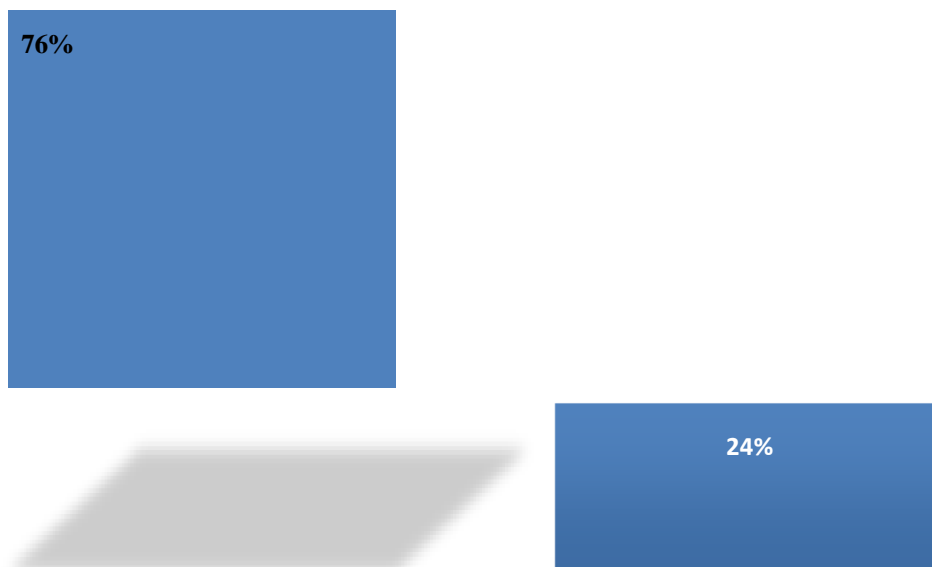- 40% students were male

Figure 5:

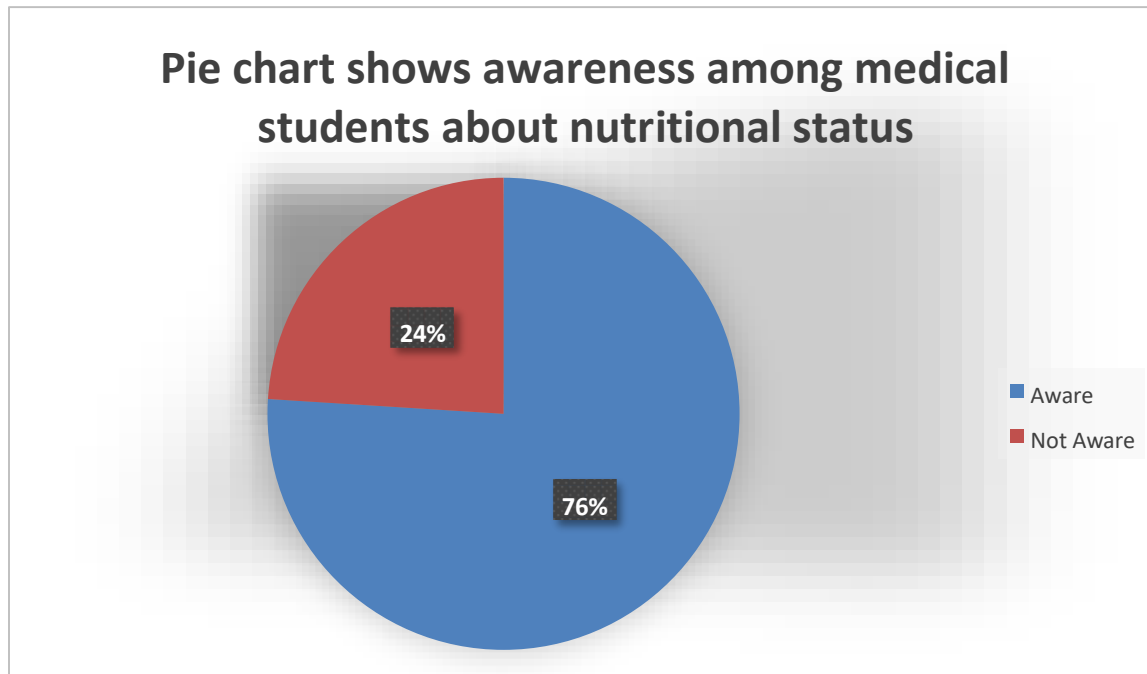Bar chart shows Awareness among medical students
■ Series 1
Aware   Not Aware

76%

24%

Result:
It states that:-
- 76% students were aware of their nutritional status.
- 24% students were not aware of their nutritional status.

Figure 6:

Pie chart shows awareness among medical students about nutritional status
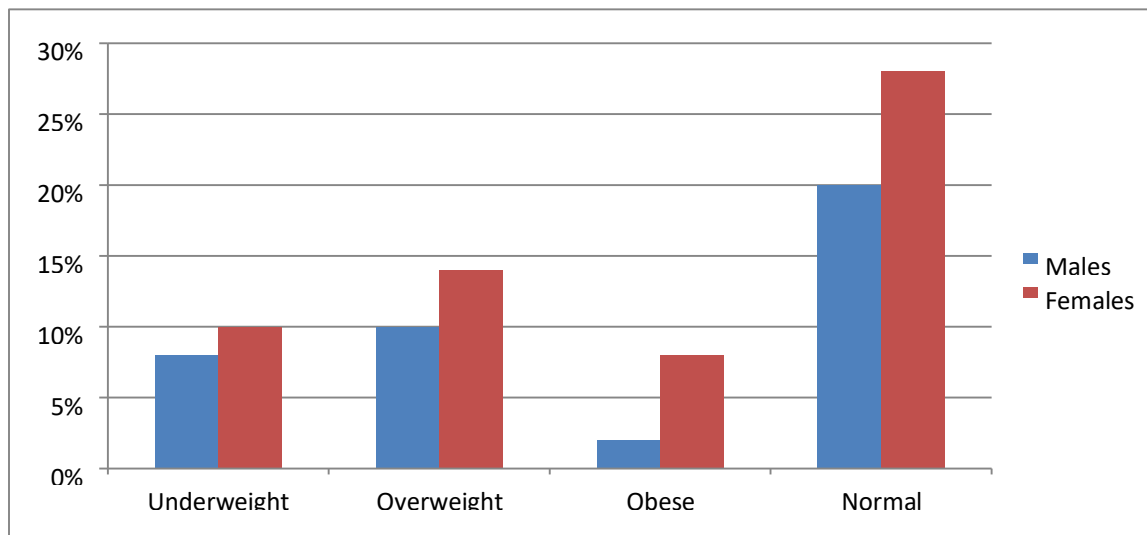

Result:

It states that:-

- 76% students were aware of their nutritional status.
- 24% students were not aware of their nutritional status.

Figure 7:

Bar chart shows Prevalence of under weight,over weight & obesity among medical students.
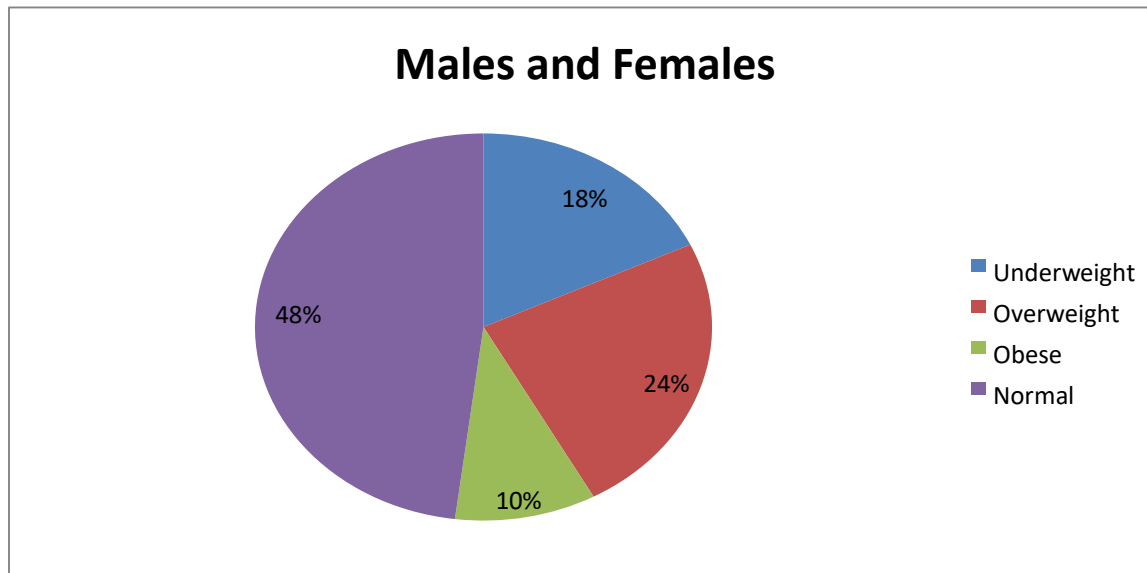

Results

It states that:-

- 8% males & 10% females are underweight.
- 10% males & 14% females are overweight.
- 2% males & 8% females are obese.
- 20% males & 28% females are normal weight.

Figure 8:

 Pie chart shows Prevalence of under weight,over weight & obesity among medical students.

Males and Females

Results :
It states that:-

- 8% males & 10% females are underweight.
- 10% males & 14% females are overweight. ☐ 2% males & 8% females are obese.
- 20% males & 28% females are normal weight

DISCUSSION:

Based on the result of the study, 76% students are aware and 24% are unaware of their nutritional status. Result of the study showed that majority of student agreed on the importance of nutrition in the health. Other believes that although it is very important but due to some reasons, the importance has been ignored.

The prevalence of underweight is higher than the obese. The study shows the percentage of underweight is 18% and obese is 10%.The percentage of overweight is 24% and the percentage of those students having normal value is 48%.10% female students are underweight. This is higher than the males as 8% of males are underweight. This is may be due to the reason that males prefer to have larger body size but female students idealize smaller body size.

Low body weight is unhealthy because it is not only can increase the risk of clinical conditions such as anemia and low body mass and also can increase the risk of eating disorder such as anorexia and bulimia.

Student living away from home had developed bad eating habits compared to students living with family. The low energy intake of subjects in the study could also be due to the habit of skipping breakfast as been investigated in present study. The percentage of

student who skipped breakfast is high among those who are living in hostel. Study shows that the leading cause for skipping breakfast was lack of time. Apart from that, it is also observed that the lack of appetite, dislike to eat early in the morning and over sleeping are the reasons for skipping breakfast.

The intake of fruits and vegetables among the students had decrease since beginning of college. The average consumption of fruit and vegetables was several times a week (1-4times). The availability of fast food restaurant can be the reason of prevalence of fast food intake more than 3 occasions per week.

Unfortunately, we do not have accurate data about familial history of obesity and if the students live alone or with the family; therefore, we can't produce a complex analysis of overweight and obesity etiology using the current data.

In this study, more than half of respondents had meals regularly at least three times per day. Regular breakfast consumption among medical students is important for sufficient energy intake to overcome fatigue due to busy (daily) learning schedule. In this study, less than half of respondents had breakfast daily.

The frequent consumption of snacks and light meals is a recognizable aspect of teenage food behavior. Surprisingly, our study found that only few number of

the students had snack at least three times per week. Our study also found that 48.5% of respondents consumed fruits at least three times per week.

It was reported that low intake of fruits and vegetables is associated with several chronic diseases at adulthood. Our study disclosed that majority of medical students were aware of this health risk. Attending a university or college can be a stressful experience for many students, so the behavioral consequences of stress may affect eating habits.

From our study it is found that female students eat vegetables more frequently than men. On the other hand male students likes chicken more than vegetables.

Faulty nutrition exacerbate a wide spectrum of disease condition diminishing the quality of life, personal productivity and longevity .Student may face difficulty in regulating eating behavior since it is the transition of when they are staying away from family homes.

CONCLUSION:

In this study, the prevalence of underweight is higher than obese. Majority of students in this study were deficient in their energy intake. The student were also lacking in other nutrients. Students tend to skip their breakfast intake and their fruit and vegetable consumption was also low. Many students usually consume fat food several times in week. Educational campaign regarding healthier food choices, lifestyle and weight management could make a positive impact on health of student. The nutrition interventions should focus on increasing personal valuation of health and education. Future research would be benefit if the study is design for longitudinal studies which would provide more information. It is also needs to including identifying the magnitude of potential nutritional risks associated with skipping main meal intake especially in large sample size. A food checking authority or supervisor should be appointed by the hostel administration to check the quality of food.

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