ORIGINAL ARTICLE

Prevalence of Health Hazards Related to Obesity among Business Community of Sukkur City

ASHFAQ HUSSAIN SHAH[1], ABDUL SATTAR MEMON[2], AIJAZ HUSSAIN MEMON[3,] *TEHMINA ANJUM BASHIR*[4]

ABSTRACT

Aim: To evaluate the health hazards in the business community of Sukkur city
Methods: This study was conducted in eight markets of Sukkur City from May 2008 to October 2008. It was designed to determine association between obesity and different diseases among the business community of Sukkur. 174 male subjects from eight different markets were evaluated for Body mass index and knowledge regarding comorbidities of obesity.
Results: Seven (2%) cases were >109 Kg which is highest weight and 25 (14.4%) were between 44 to 56 kg which was lowest weight. There are 8 (4.6%) subjects BMI between 15.4-18.4 which is underweight, 71 (40.8%) between 18.5-24.9 BMI are normal weight, 64 (36.8%) between 25 to 29.9 BMI are overweight and 8 (3.51%) between 30-40 BMI which are obese. Only 1.7%of obese people knew about their diabetes status and only 5.8% knew about their hypertension status.
Conclusion: Around one third of population in Sukkur city was recorded with obesity and has minimal knowledge regarding its comorbidities which is a cause of concern.
Keywords: Prevalence, Obesity, Body mass index, Comorbidities

INTRODUCTION

Obesity is known as a condition when an individual has accumulated excessive body fat which may have a negative effect on health. These individuals not only differ in the amount of abnormal fat which they store but also in the regional distribution in the body[1].

Developing world is recorded with an elevated rate to the global estimation of obesity affecting all segments of population i.e. male, females and newborn[2].

Developing countries are significantly more prone to obesity related complications as compare to the developed countries and it became the leading cause of disability and mortality in various developing regions[2].

According to WHO estimates, worldwide at least 400 million adult population is suffering with obesity while urban populations was recorded with higher rate of obesity[3]. Overweight population was recorded as 1.1 billion out of which 320 million people is obese. The International Obesity Task Force (IOTF) recorded that more than 1.6 billion population is exposed to weight-related health issues, taking into account various Asian regions having a body mass index of ≥23.

Annually, >2.5 million deaths are recorded due to increased BMI, this figure may be doubled in coming Decade[4]. World Health Organization estimated more than 2.3 billion adults with overweight globally by 2015 and out of these cases more than 700 million are obese[3].

Among various communities and races of the world the variation in rate of obesity may be because of heredity, sex, age, eating patterns, diet, behaviour/life style. Chinese population is recorded with minimal rate of obesity i.e. 3.8% while 6.7% in Singapore. Maximum rate of obesity was recorded in Micronesian Island of Nauru by calculating 93% in females and 85% in males[5].

Business community is recorded with morbidly obese (BMI >40), these are filed as 45% more claims, medical cost is also significantly higher than recorded in non-obese workers. Merely overweight BMI population filed 9% claims, medical cost etc as compare to non-obese workers[6].

SUBJECTS AND METHODS

This observational, cross-sectional, population based study was carried out at Sukkur city over a period of six months from May 2008 to October 2008. This study comprised 174 male subjects belonging to eight different markets. Males above 15 years of age and belonging to business community were included. Females and those obese persons who refused to participate in the study were excluded. Body mass index, height and weight of each subject were measured.

RESULTS

[1,2]Assistant Professor & [3]Associate Professor of Community Medicine, Ghulam Muhammad Mahar Medical College Sukkur,
[4]Dept of Community Medicine, Institute of Public Health Lahore
Correspondence to Dr. Ashfaq Hussain Shah Email: dr.ashfaqshah@yahoo.com

The age of subjects included in this study ranged from 16-75 with mean age of 35 years. According to body mass index, 8(4.6%) cases were 15.4-18.4 (underweight), 71 (40.8%) cases were 18.5-34.9 (normal weight), 64(36.8%) cases were 25-29.9 (overweight) and 31(17.8%) were 30-40+ (obese). Only 3(1.7%) subjects mentioned diabetes rest of the subjects did not know about their diabetes status. Nine (5.2%) subjects had hypertension less than 10 years and 1 subject (0.6%) had hypertension for more than 11 years. Majority of the subjects had education more than matric 135 (77.5%) [Table 1].

Table 1: Descriptive statistics of the subjects

Variable	n	%age
Age (years)		
16 – 40	111	
41- 80	73	
Body mass index		
15.4-18.4	8	4.6
18.5-24.9	71	40.8
25 - 29.9	64	36.8
30 – 40+	31	17.8
Diabetes		
Did not know	171	98.3
0-10 years	3	1.7
Hypertension		
Did not know	164	94.3
0-10 years	9	5.2
11-20 years	1	0.6
Education		
Illiterate	4	2.3
Primary	5	2.9
Matric	30	17.2
Above Matric	135	77.6

DISCUSSION

Obesity is a potential health issue to be addressed on priority. It results from various causes and contributing factors, including individual factors like genetics and behaviour. Behaviours include physical activity, inactivity, dietary patterns, medication use, and other exposures. Foot, education and skills, promotion and food marketing are contributed as some other factors of obesity. Følling et al[7] has done a study of adults in patients at Norwegian Hospital found over weight and obesity common a total of 45.1% were either overweight or obese. Those aged 40-49 years 33% with a BMI >30 kg/m^2 had been documented a clinical diagnosis of obesity. The results of the present study showed that prevalence of health hazards related to obesity among business community of Sukkur city shows 35% cases were between 16-27 years age which is young and reproductive age group of life, which shows that earning and family financial support is gaining more importance.2.3% cases were between 64-75 years age, which is old age group, even they were involved in process of earning which reflects overall poverty status.13.22% cases were obese class I, 3.51% cases were obese class II and 1.15% cases were obese class III. Weight 2.0% cases was 109kg and above, which is highest weight reflecting sitting all the day round on shop and no habit of walking or exercise. 14.4% cases were between 44 to 56 kg, which is lowest weight. These persons were mostly daily wagers, earning meagre amount and taking insufficient diet. 49.4% cases were of height ranging from 1.66-1.74 meters. Minimum cases i.e., 1.7% were 1.84+meters. Obesity is more prone in females as compared to male subjects. It could be related to the impact of cultural factors. Indeed female obesity is seen as a sign of weight and beauty in the African cultural context. Similarly, the influence of behavioural and psychosocial factors has been demonstrated to explain the importance of obesity in women[8]. It has also been reported in the literature that the prevalence of obesity and overweight increase with age[9,10].

Prevalence of obesity was higher in urban than rural areas, there is tendency to have a diet rich in fat and low in fruits and vegetables. A survey conducted in 2007 in urban Benin reported a prevalence of 18%[11].

In Africa, elevation in urbanization and production pattern is general, while particular in Benin, it evolves a western model. The possible reason is unbalanced meals, stress and lifestyle, reduced physical activity and higher motorized transport[12,13]. High blood pressure is higher in obese individuals as compared to non-obese and it also leads to increase in the cardiovascular risk.

In our study, mean diastolic blood pressure was calculated as 77.59mmHg. 81.77mmHg, 85.82mmHg for normal, overweight and obese. Whereas mean systolic blood pressure was recorded as 126.85mmHg, 132.17mmHg, 137.60mmHg, respectively ($p<0.001$).

In the present study, health hazards related to obesity among business community of Sukkur city. Majority of persons i.e., 94.3% cases did not know about their hypertension status. Only small number 5.2% cases knew the hypertension status within last 10 years, 0.6% cases knew hypertension status between 11-20 years. 98.3% cases did not know about their diabetic status. This reflects lack of health education and motivation about healthy behaviours by concerned personnel only small number that is i.e. 1.7% cases knew the diabetic status within last 10 years. Majority of subjects, 98.9% cases did not fell chest pain luckily .This shows good cardiovascular functional status in spite of low exercise habits. Only

small number of business worker i.e. 1.1% felt chest pain within last 10 years.

Wahab et al[14] stated that among apparently healthy adult Nigerians showing the prevalence of overweight (BMI>25kg/m^2 to be 53.3%) with a stationary higher prevalence among females compared to males (62% vs. 41.9%).For obesity the overall prevalence was 21% with a female ratio of approximately 1:3.

The aetiology of obesity is complex one with multiple causation. So more studies should be conducted in business community and in the general population so as to establish guideline on nutrition and weight status. In this connection, health education is highly recommended for such people. This may be in form of public lectures about maintaining healthy lifestyle and distribution of brochures among educated business class will be much helpful.

CONCLUSION

In nutshell it can be concluded that that obesity is a major public health problem that requires concerted interventions to be prevented and controlled. Mostly the business personnel were overweight or at upper limit of normal weight, about 55% and majority of them were unaware of its comorbidities which is alarming to society. There is much work to be done to significantly improve health and the associated healthcare costs.

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