FREQUENCY OF OVERWEIGHT & OBESITY AMONG NURSES AT DHQ HOSPITAL CHINIOT

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ABSTRACT

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Background: There is a high rate of obesity and overweight among healthcare department in Pakistan. Due to lack of information and knowledge about the prevalence of overweight and obesity available in Pakistan it is difficult to compare figures about it. **Objective:** To find the frequency overweight and obesity's among nurses **Study Design:** Cross sectional study. **Setting:** DHQ Hospital Chiniot. Period: Aug 2017 to Dec 2017. **Material and Method:** This research was quantitative & cross sectional; a self-administered questionnaire was used to collect the data and SPSS 21.0 was used to analyze the data. The sample size was 50 nurses at DHQ Hospital Chiniot. **Results:** This study found a considerably high prevalence of overweight and obesity amongst nurses working in District Head Quarter Hospital, Chiniot. The prevalence of overweight and obesity were 64.0% (N=32) and 16.0% (N=8) respectively, with a mean BMI of 28.43 kg/m^2. Thus the predominant pattern of malnutrition in nurses in this study was found to be one of overweight and obesity. The overweight and obesity prevalence found in this study was higher than that of the general Pakistani adult population but similar to that of the economically active Pakistani population. **Conclusion:** There was higher level of overweight and obesity found among nurses.

Keywords: Overweight and Obesity, Prevalence

INTRODUCTION

Prevalence of overweight and obesity is increasing worldwide.[1] About 2/3 of adult population of United States is overweight and obese and US is at top of the list of all countries (BMI ≥ 25) (Ogden *et al.,* 2015). There were 60% of Australian adults were overweight and obese (Cameron *et al.,* 2003). Likewise, there were 60% Canadian adults were overweight and obese, while 26.3% children have age between 2-17 years in Canada were overweight.[2] Correspondingly, there were 10-27% males and 10-38% females reported to overweight and obese in European countries (Lien *et al.,* 2010).

Obesity was a problem for developed countries previously, but now there is up rise of overweight and obesity in developing countries. There is increase of overweight and obesity in China as well which is found 27.3%.[3] Likewise, prevalence of overweight and obesity is also found high percentage which is 26.3%.[4]

At present, Pakistan is experiencing an initial obesity epidemic. The burden of obesity in adults and children has increased with key risk factors containing harmful diet, unhealthy lifestyle an inactiveness of physical activities. The instant precautionary and controller measures required to control the condition may contain a physical activity environment and a healthy diet, cognitive monitoring and childhood obesity testing to the method to preventive precautions while as adolescent girls and children at high risk.[5]

Previous research has shown that rates and correlations may differ between health workers and the overall population.[6] It has been perceived that arterial blood pressure inclines to rise with body weight and age, and that excessive weight

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loss rates increase with increasing levels of education. There is an increasing proportion of overweight and obesity in the sector of health. There is association of marital status and women with overweight and obesity.[6]

There is significance contribution of occupational factors and inactive physical activity with obesity between healthcare workers. There should be programmed activities between healthcare workers to promote physical activities to avoid overweight and obesity between them.[7] Number of influencing factors in health care workers, especially night shifters, may increase the risk of developing metabolic syndrome like overweight and obesity.[8]

Prevention of overweight and obesity and consequences of it are affected by workplace and health professionals critically. Health care workers can become role models for their patients to control their overweight and obesity by controlling their diet and increasing their physical activity which could prevent them from overweight and obesity.[9]

Poor diet, sedentary lifestyle, improved socio-economic status and poor diet are major contributing factors in the rise of overweight and obesity.[10] Marital status, stress, alcohol intake, parity and increasing age are also the other major contributing factors to overweight and obesity.[11]

At present, healthcare sector of Pakistan is suffering from the prevalence of overweight and obesity. Due to lack of information and knowledge about the prevalence of overweight and obesity available in Pakistan it is difficult to compare figures about it. This research study has highlighted the statistical information about the prevalence of overweight and obesity in nurses at DHQ Hospital Faisalabad. There is also identification of contributing factors of overweight and obesity amongst the healthcare workers in this research work.

MATERIAL AND METHOD

This research was quantitative in nature and for the purpose of data collection a self-constructed questionnaire was used. The samples size of this study was 140 nurses at FIC, Faisalabad. The data was statistically analyzed by using SPSS 21.0.

RESULTS

Table 1 shows that majority of the nurses were overweight with the percentage of 64% (N=32), 20.0% of the nurses were normal weight and 16.0% were obese.

Table 4 shows the association between demographic factors and prevalence of obesity/overweight in nurses. It shows that married women were majority having prevalence of overweight/obesity as compare to single

Table 1. Demographic Characteristics of the Nurses			
Gender	**Frequency**	**Total**	**Percentage (%)**
Female	50	50	100.0%
Designation	**Frequency**	**Total**	**Percentage (%)**
Nurses	50	50	100.0
Marital Status	**Frequency**		**Percentage**
Single	16		32.0
Married	34		68.0
Total	50		100.0%
Age	**Frequency**		**Percentage**
18-24 years	3		6.0
25-29 years	16		32.0
30-34 years	12		24.0
35-39 years	8		16.0
40-44 years	2		4.0
45-49 years	5		10.0
50-54 years	4		8.0
Total	50		100.0%
Education	**Frequency**		**Percentage**
Diploma	22		44.0
Graduate	12		24.0
Post-graduate	16		32.0
Total	50		100.0
Experience	**Frequency**		**Percentage**
Less than 5 years	19		38.0
5-10 years	18		36.0
More than 10 yeas	13		26.0
Total	50		100.0
Working Shift	**Frequency**		**Percentage**
Morning	22		44.0

Evening	14	28.0
Night	8	16.0
Rotation	6	12.0
Total	50	100.0

Table 2. Distribution of the nurses regarding their body physique

Body Physique	Frequency	Percentage
Normal weight (BMI:18.5-24.9kg/m2)	10	20.0%
Over weight (BMI:25-29.9kg/m2)	32	64.0%
Obese (BMI:>30kg/m2)	8	16.0%
Total	50	100.0

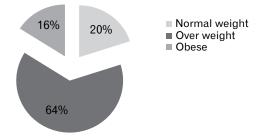**Figure 1. Percentage of Nurses regarding their body physique**

Table 3. Summary Table

Prevalence of Overweight and Obesity			
Body Physique	Normal Weight	Overweight	Obese
	10 (20.0%)	32 (64.0%)	8 (16.0%)
Cause of Obesity	Too much food	Too little exercise	Medicines
	2 (4.0%)	43 (86.0%)	5 (10.0%)
Obesity in Family		Yes	No
		11 (22.0%)	39 (78.0%)
Obesity disturbs		41 (82.0%)	9 (18.0%)
Obesity is a risk factor of Heart Disease		50 (100.0%)	0
Obesity is a risk factor of Diabetes		50 (100.0%)	0
Obesity is a problem for nurses		49 (98.0%)	1 (2.0%)
Nurses take care to prevent obesity		13 (26.0%)	37 (74.0%)
Exercise prevent/reduce obesity		42 (84.0%)	8 (16.05)
Culture values have an impact on obesity		2 (4.0%)	48 (96.0%)
Being obese is a sign of healthy living		2 (4.0%)	48 (96.0%)
Take snacks/beverages in between meal		28 (56.0%)	22 (44.0%)
Contributing Factors in Overweight/Obesity			
Meals taken in a day	2 times	3 times	4 times	More than 4 times
	27 (54.0%)	19 (38.0%)	4 (8.0%)	0 (0%)
Common constituents in meals	Rice	Pulse	Meat	Milk & Products
	18 (36.0%)	10 (20.0%)	8 (16.0%)	14 (28.0%)
	Yes		No	
Take Exercise	20 (40.0%)		30 (60.06)	

women. The table also shows that the nurses who have the 5-10 years' experience were having more prevalence of overweight as compare to the other nurses.

Table 5 shows highly significance relationship between marital status and prevalence of obesity/overweight among nurses. The mean value was found to be 1.68, standard deviation .471, standard error .067, t value was 25.210 and degree of freedom.

Table 4. Association of demographic factors with prevalence of obesity/overweight

Marital Status	Normal Weight	Overweight	Obese	Total
Single	5 (10%)	9 (18%)	2 (4%)	16 (32%)
Married	5 (10%)	23 (46%)	6 (12%)	34 (68%)
Experience	Normal Weight	Overweight	Obese	Total
Less than 5 years	7 (14%)	11 (22%)	1 (2%)	19 (38%)
5-10 years	2 (4)	14 (28%)	2 (4%)	18 (36%)
More than 5 years	1 (2%)	7 (14%)	5 (10%)	13 (26%)

Table 5. Marital Status as a factor of obesity/overweight in nurses

Variable	Mean	SD	SE	t	df	Sig.
Marital Status	1.68	.471	.067	25.210	49	.000**

DISCUSSION

High prevalence of overweight and obesity in DHQ Hospital Chiniot, was found in this study. Overweight percentage was 64.0% and percentage of obesity was 8.0% found in healthcare workers. There was mean BMI 23.9kg/m2 reported in Turkey among healthcare workers by Oguz et al., (2008).

There is increased prevalence of overweight and obesity in the age group between 25-29 years. This finding is in consonance with earlier studies made that obesity growths with age. These figures are particularly annoying that with increase in weight the death rate also increased by 1-2% for every 0.5kg weight in the age group of 30-62 years. Findings from previous studies showed that increase in age also increases the risk of increase in obesity and this factor also should be in consideration of policy makers who make intervention programs to prevent prevalence overweight and obesity.

This is a fact that overweight and obesity prevalence is increasing globally not only developed countries but in developing countries also and the major contributing factors associated with this are also the similar in

developed and developing countries. Higher level of education increases the risk of obesity than lower education especially in females.

It is also found that in a previous study that a married woman who is having a caring husband and wealth and happiness is overweight and obese. There is found correlation in this study between eating pattern and obesity, healthcare workers who take snacks or beverages between meals were having high risk factor of overweight and obesity. Other major worried results indicated that majority of healthcare workers (49.3%) do not exercise at all and 26.7% of the respondents do not exercise regularly and despite those findings the majority of the healthcare workers (96%) believe in exercise to reduce the risks of overweight and obesity. It was significantly found that healthcare workers who do not bother to take exercise were higher risk to become overweight and obese. This was in accordance with previous study of (Senekal et al., 2003).

Obesity is a complex condition with having influences environmentally, culturally, socially, behaviorally, genetically and biologically. There could be contribution to excessive caloric intake and inadequately amounts of physical activities of individual behaviors. There is attribution of current high prevalence of obesity with eating habits, limited opportunities of physical activity (Duffey & Popkin, 2011; Piernas & Popkin, 2011; Powell et al., 2011; Sallis & Glanz, 2009).

Another reason of gaining weight is use of certain medical conditions and taking medicines like steroids and anti-depression medicines. Inadequacy in sleep, post-natal and prenatal effects is also suggested evidently. (Gore et al., 2015; Gundersen et al., 2011; Knutson, 2012; Shliskyet al., 2012; Weng et al., 2012). Numerous contributing factors from these affect almost every person once in life to some extent, but those people who have limited resources of physical activity and unhealthy eating habits face more risks and challenges.

CONCLUSION

Onyebukwa[12] found an overweight and obesity rate of 29.7% and 41.0% correspondingly in one study. He found that risk factors like eating between meals, inactivity in exercise, high level of education were associated with obesity rates. There was found more prevalence of overweight/obesity in participants than general population in South Africa.

Ondicho et al.,[9] conducted a cross-sectional research to evaluate the prevalence of overweight and obesity between healthcare workers in Kenya and also evaluated the risk factors associated with obesity. There was 58.8% overweight and obesity found in their research. There was determined that a major risk factor associated with overweight and obesity was increased age and marital status, sex and physically inactivity were also major factors associated with overweight and obesity. It was found that prevalence of overweight and obesity amongst healthcare workers was more than other population of country.

Kyle et al.,[13] compared the obesity rates amongst non-healthcare workers and healthcare workers in United Kingdom. High prevalence of overweight and obesity was found in unregistered healthcare workers and nurses. They found the mental health and osteoporosis' increased risk were the reasons of overweight and obesity. Recommendations for further research to help to preserve healthy weight were made.

Phetla & Skaal[14] pointed out that misclassification of body weight of healthcare workers is a major risk factor associated with obesity. They demonstrated that this group's health should be given importance and focus whose health South African people depend on and who will be the driver of healthy life for all. They stressed that accurately classifying the body weight of a health worker would encourage people to act in an effort to combat their own obesity and that of others. Humphreys (2007) identified that rate of injuries

increased in nurses and patients due to overweight and obesity in America.

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