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RESEARCH ARTICLE

OBESITY AMONG FEMALE STUDENTS OF HIGHER EDUCATION IN SAUDI ARABIA: A STUDY IN ALKHARJ GOVERNORATE.

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Abstract

Obesity has been one of the growing concerns among the population in Kingdom of Saudi Arabia. Saudi Arabia has been ranked 29th on a 2007 list of the fattest countries with 68.3% (BMI more than 25kg/m²). According to Lancet survey, in 2016, has placed Kingdom of Saudi Arabia as the 3rd most obese nation in the world after Malta and Swaziland. It further stated that 70% of Saudi Arabian population is overweight. According to health officials, obesity has been one of the leading causes of preventable deaths in Kingdom of Saudi Arabia. Obesity is associated with many diseases like hypertension, high triglycerides, diabetes, osteoarthritis, cardio vascular diseases, malignancy etc. With strong macro-economic variables of Saudi Arabia, the Kingdom has witnessed significant changes in quality of life and life style. Changes in dietary intake along with physical inactivity and complexities of life, the risk of obesity has increased exponentially, many of the cases remain untreated. This may be due to lack of awareness of obesity and associated health risks. This trend is more so evident among students category. Not many of the studies related to obesity among students particularly female students in higher education has been conducted in the Kingdom.

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Introduction:-

Obesity has been a major physiological problem faced majorly in developed and developing economies. The menace is growing and thereby the health and medical problems thereto. The reasons behind this growing phenomenon and effective physiotherapeutic interventions could help control obesity. Extend of Obesity is a function of Body weight and height and measured in terms of Body Mass Index BMI]. BMI is person's weight in kilograms divided by square of height in meters. According to World Health Organization if a person's BMI is <18.5 kg/m², he is under weight, 18.5–24.9 kg/m², he is normal weight, 25–29.9 kg/m², he is overweight and if more than 30 kg/m², he is obese. Obesity can lead to life threatening conditions like type 2 diabetes, stroke, cancers and coronary heart disease. It can also cause psychological problems like depression and low self-esteem. Researches have suggested the growing menace of obesity more in women as compared to men. Obese women are highly prone to some of women centric diseases like postmenopausal breast cancer and endometrial cancer. Diabetic women are highly susceptible to coronary diseases as compared to men. Saudi Arabia is in a transformational and transitional phase both economically and socially also faces the problem of high obesity. The sooner one reduces this problem; the better it is for the country. Today's youth are tomorrow's future and healthy youth means a healthy future. Towards making

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a healthy future of the country, the contribution of particularly the female students in higher education is of utmost importance. This research is an attempt to study the co relationship between demographics and obesity.

Objectives of the Study:-

1. To find out the awareness level about obesity among female students of higher education.
2. To find out the obesity level among female students of higher education.
3. To find out the relationship between obesity and demographic variables.
4. To find out the reason of obesity among the students.
5. Recommend remedial measures to reduce obesity.

Topic

Obesity among Female Students of Higher Education in Saudi Arabia: A Study in AlKharj Governorate

Research Methodology:-

1. This study is based on primary data. The data would be collected through administering questionnaires. The universe for the study is the female students of higher education.
2. Sample size taken for the study is 58.
3. Random disproportionate stratified sampling technique is used for the study. Appropriate statistical tools have been used for analysis.

Limitations Of Study

1. Limited research experience of the researchers with reference to the Kingdom.
2. Sample size
3. Study is limited to female students in higher education of Al-Kharj.

Literature Review

Over weight and obesity are contentions which are becoming increasing threat to public health worldwide which in turn is leading to many other non-communicable diseases. In its race towards progress, Kingdom of Saudi Arabia in the last few decades has witnessed radical impact of developed economies on its culture and traditions in terms of food habits, sedentary lifestyle etc. Its seen in Saudi Arabia that the problem of overweight and obesity is more prevent among Saudi women as compared to Saudi men (Erica, Omar, Aburizaiza, Azhar, Haider & David, 2015). In one of the studies it was found that approx. 75 % of adults and approx. 40% of children in Arab region are either overweight or obese (Abdul Rahim et al, 2014). Also among the Arab nations kingdom of Saudi Arabia had one of the highest overweight and obesity prevalence rate approx. 80 % (Al Haqwi et al, 2015). Within Saudi Arabia the southern region witnessed one among the lowest overweight and obesity prevalence rates possibly because of higher physical activity in terms of agriculture and fishing being major occupation (Al Othaimen et al, 2007).

It is also predicted that as per the future trends that obesity among women in Saudi Arabia may increase to 78% by 2022 (Al Quwaidhi et al, 2014). It is noticed that the physical activity in Saudi women is much less as compared to Saudi men (Adul, Sibai, Khader, Hwalla, Fadhill, et al, 2014]. Women in Saudi Arabia have to constrain themselves from involving in sports activities or physical activities mainly because of social conservatism which restricts them the access to such facilities (Ng SW, Zaghloul, Ali, Harrison, Popkin, 2011). Also Saudi women lack physical activities and exercises due to lack of awareness, time and laziness (Rasheed, 1999).

This problem of obesity is alarmingly increasing just not in developed economies but also in developing economies. This overweight and obesity problems may lead to many diseases and also have a negative impact on the economy of the country (Memish, Baheraonic, tuffaha, Robinson, Daoud et al 2014). Insufficient secretion of insulin can disturb metabolism of fats, carbohydrates and proteins leading to chronic hyperglycemia that is diabetes mellitus (Baghli, Ghamdi, Turki, Elq, Zubaier et al, 2010). One of the researches finds significant relationship between obesity and sleep disturbances apart from fast food consumption, physical activity etc. (Shehri et al, 2013).

The causes of obesity is just not restricted to lifestyles, physical inactivity etc but genetic factors also influence obesity (Horaib, Khasan, Mishriky, Selim, Nowaieser, et al 2013).

Discussion and Findings:-

After the collection of primary data accumulated through administering questionnaires to various female students of higher education in Al Kharj region of Saudi Arabia, the same was classified and edited for it to be analyzed. The number of sample for the study was 75. Random disproportionate sampling technique was used for the purpose. The following are the major findings:

Table No 1:-

Sr. no	Demographic – Age range	Indicator	No of participants
1	16-20	1	39
2	21-25	2	36

The above table shows that the respondent's age groups were in the age group from 16-25 year, out which 39 were between 16-20 years and 36 were 21-25 years.

Table No 2:-

Sr. no	Demographic – Family Income	Indicator	No of participants
1	0 - 10000	1	6
2	10001 - 20000	2	20
3	20001 – 30000	3	20
4	Above 30000	4	29

The above table shows the respondent's monthly family income in Saudi riyals. 6 students were in the range of 0-10000, 20 students were in the range of 10001-20000, 20 students were in the range of 20001-30000 and 29 students were more than 30000.

Table No 3:-

Sr. no	Body mass index		Indicator	No of participants
1	Less than 18.5	underweight	1	5
2	18.5–24.9	Normal weight	2	41
3	25.0–29.9	Over weight	3	23
4	More than30	obesity	4	6

The above table shows the respondent's body mass index. 5 respondents were found to be underweight, 41 respondents were of normal weight, 23 were overweight and 6 were obese.

Out of total of 75 respondents, 29 were found to be overweight and obese in Body Mass Index range above 24.9 kg/m² which constituted 38.66 % of the total respondents, 41 respondents were of normal weight in the BMI range of 18.5–24.9 kg/m² which constituted 54.66, 5 respondents were found to be underweight in the BMI range of <18.5 kg/m² which constituted 6.66 % of the total respondents. It is thus seen from above finding that the female students who are overweight and obese is much less than the national overweight percentage of 70% in Saudi Arabia. This is inductive of the fact that females in the age group from 16-25 years of age are more conscious of their weight and health in general.

Table No 4:-

Sr. no	Character	Yes - 1	No - 2
1	Less than 4 hours	9	-
2	4 – 6 hrs	24	-
3	6 – 8 hrs	26	-
4	More than 8 hrs	16	-

The above table shows the respondent's sleeping character. 9 students sleeps less than 4 hours, 24 students sleeps 4-6 hours, 26 students sleeps 6-8 hours and 16 students sleeps more than 8 hours. It is found that there is a correlation between sleep and obesity. Among the 29 overweight and obese female students 35.7 % of respondents had erratic sleep pattern that means they had less than 6 hours of average sleep per day. This is indicative that overweight/obesity can lead to sleep disorders.

The study also tried to find out the family background of the respondents in terms their parents suffering from overweight. It is found that among the total of 29 obese and overweight female students, 20 respondent's father were overweight or obese which means 69% of obese and overweight female student's parents were overweight or obese. For the rest of the underweight and normal weight female students only 6 female students' parents were overweight/obese that means 13% female students' parents were overweight/obese. This is indicative that the probability of the child being overweight/obese in their adulthood may depend on their parents' being obese/overweight.

The study also found that out of the 29 obese/overweight female students, 15 student's parent suffered from diabetic that means 52 % of obese/overweight female students' parents suffered from diabetes. For the rest of the underweight and normal weight female students only 12 female students' parents were diabetes that means 26% female students' parents were diabetes. This is also indicative that the diabetic condition in parents may also lead to the child being overweight/obese in their adulthood.

Conclusion:-

The above study focuses on the status of over weightiness and obesity among female students of higher education. The results in its entirety do give a light to different obesity levels among different demographic segments in Saudi Arabian society. The total population which is overweight in Saudi is said to be 70% but among the young educated females it is much less at 38.66%. Causes of over weightiness and obesity among female students in higher education also points to their parents being overweight and diabetic, at the same time the parents of normal and underweight were also underweight or normal leading to the conclusion that apart from other factors there may be genetic causes of overweight and obesity. This study has not gone in deep to find out the outcomes of overweightness and obesity but has found that it may lead to sleep disorder. One of the problems of overweightness and obesity is found to be sleep disorder. Exact conclusions from the demographic variable of income is difficult to draw but seems that higher income group are more vulnerable to overweight and obesity.

The above conclusions are subject to various limitations particularly due to limited scope and sample size hence needs a wider scope and bigger sample size to generalize the findings about overweight and obesity status of female students of higher education in the Kingdom of Saudi Arabia.

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