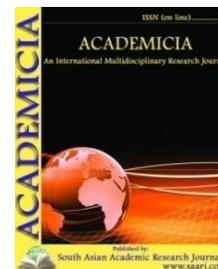


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DAILY EATING FREQUENCY OF OBESE SUDANESE WOMEN AGED 40-50 YEARS A CASE STUDY WED MEDANI AREA

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ABSTRACT

A total of 200 apparently healthy adult Sudanese females aged 40-50 years were invited to participate in this study. Participants were classified into two groups, non-obese, and obese (BMI-C: < 25 and >30kg/m²) based on WHO,1997. Most of the study participants either refused to record their food intake due to their believes .Or they were unable to estimate it .So food calorie content was excluded from this research. 48% of Non-obese women had two main meals per day, 52% had three main meals. Meanwhile, 92% of non-obese women had one light meal and 8% had two light meals per day. While, 35% of obese women had two main meals per day, 65% had three main meals. Mean while 91%had one light meal and 9% had two light meals per day. At (P<0.05) obese women had higher number of main meals per day compared to non-obese women. There was no significance difference in number of light meals taken by subjects participated in this study. Chi test values were (0.00, 4.50) respectively. The predominant potent factor of weight gain is the amount of food eaten by study participants. So a new eating behavior should be introduced .Eating in separate plate make individuals more aware about the amount of food they consume during having a meal. Reducing working hours or traditional food supplementation should be provided to employees.

INTRODUCTION

Observational studies of the diet and weight change are complicated by possibility that, persons who consider themselves to be overweight may alter their diets to reduce weight (Stellman,1986). Self-perceived overweight varied by sex, race/ethnicity, and socioeconomic status.(Paeratakul , et al.,2002). Indigenous Peoples globally are part of the nutrition transition.

They may be among the most extreme for the extent of dietary change experienced in the last few decades only 10-36% of energy was derived from Traditional food.(Kuhnlein, 2004).

Eating patterns, which describe eating frequency, the temporal distribution of eating events across the day, breakfast skipping, and the frequency of eating meals away from home, may be related to obesity.(Ma, et al.,2003). Different dietary patterns are associated with differing risks of chronic disease. Yet independent relationships between diet and demographic variables, such as age, sex, and education, are poorly described.(Fraser, et al., 2000). Frequency of eating also changes the metabolism of glucose and the concentration of cholesterol when normal volunteers eat several small meals per day they have lower concentration of cholesterol than when the same total intake is eaten in a few large meals.(Young, 1972 & Jenkins, 1989).Irregular meal frequency leads to a lower post prandial energy expenditure compared with the regular meal frequency, while the mean energy intake is not significantly different between the two.(Farshchi, 2004).. There are no significant differences in body weight and 3-day mean energy intake between the regular and irregular meal pattern.(Farshchi, 2004).The period with one large meal is associate more rapid formation of fat as measured by incorporation of carbon from glucose into fatty acid in adipose tissue(Bray, 1972).

This study designed to estimate the daily eating pattern of obese Sudanese women aged 40-50 years

MATERIAL AND METHODS

STUDY AREA

This study was conducted in Wad Medani town capital of Gezira state. It is located about two hundred kilometers Southern Khartoum on the Blue Nile river west bank.

It is situated in the middle of the agricultural districts and represents the agricultural capital of Sudan.

SAMPLING:

Cluster sampling technique-probability from local inhabitants was invited to participate in this study. A total of 200 apparently healthy adult female aged 40-50 years were the subject of this study. All participants were absence of medical illness as sub stained by medical history and physical examination. None had weight fluctuation more than 2kg during the last six months prior to testing and lived most of their lives in Sudan .The participants were classified into two groups, normal body weight and obese as indicated by body mass index categories (BMI-C:< 25 and >30kg/m²).Respectively based on (WHO,1997).

Data collection for this study was conducted during Oct-Dec 2011.For statistic analysis subjects with BMI< 25 defined as control and those BMI>30 were defined as case .

METHODOLOGY

Two hundred women aged 40-50 years were invited to participate in this study. They were described as follows hundred non- obese women (control) and hundred obese women (case).

TOOL

The study procedure consisted of collecting data by way of interview questionnaire.

DATA ANALYSIS

The data was analyzed by using Statistical Package for Social Sciences (SPSS), Windows version 8x, 1997 SPSS, Inc, Chicago, IL, and USA.

Percentage was calculated and Chi test was also used

RESULTS

Most of the study participants either refused to record their food intake due to their believes .Or they were unable to estimate it .So food calorie content was excluded from this research. Non-obese women mentioned that: 48% of them had two main meals per day, 52% had three main meals. Meanwhile, 92% of non-obese women had one light meal and 8% had two light meals per day. While, obese women recorded that: 35% of them had two main meals per day, 65% had three main meals. Mean while 91% had one light meal and 9% had two light meals per day. Table (1).

Statistic analysis of this study exhibited that at ($P < 0.05$). Obese women had higher number of main meals per day compared to non-obese women. There was no significance difference in number of light meals taken by subjects participated in this study. Chi test values were (0.00, 4.50) respectively. Table (2, 3).

TABLE (1) PREVALENCE OF NUMBER OF MEALS PER DAY TAKEN BY PARTICIPANTS

participants	Main meals		Light meals	
	2 meals/day	3mals/day	1meals/day	2meals/day
Non- obese women	48	52	92	8
Obese women	35	65	91	9

TABLE (2) CHI TEST OF DAILY FREQUENCY OF MAIN MEALS TAKEN BY STUDY PARTICIPANTS

participants	Chi test	significance
Non-obese- Obese	0.00	*

KEY

P <0.5

*: Significant

TABLE (3) CHI TEST FOR DAILY FREQUENCY OF LIGHT MEALS TAKEN BY STUDY PARTICIPANTS

Participants	Chi test	Significance
Non- obese-obese	4.50	Not significant

Key

P <. 05

DISCUSSION

When study participants have their meals at home, they sit around a tray, sharing the same plates, making conversations in addition to presence of huge quantity of carbohydrates. Having a meal at office snacks and fast food may be the only available choice. On the other hand long working hours force individuals to have light meals or sometimes another main meal. All these factors make study participants unable to estimate their food intake or estimate calories consumption in their meals. Another thing is role of vision in food intake. This result was similar to that obtained by Guthrie, et al.,(2002) & Barkeling, et al.,(2003)& Romieu, et al.,(1998) who cited meals and snacks based on food prepared away from home contained more calories per eating occasion, and "away" food was higher in total fat and saturated fat on a per-calorie basis than at-home food. "Away" food contained less dietary fiber, calcium, and iron on a per-calorie basis. Among adults but not children, food prepared away from home was more sodium and cholesterol dense. The saturated -fatty acid composition of the diet was positively associated with relative weight. Vision is one of a number of factors influencing the amount of food consumed during a meal. The obese subjects eat 24% less food when blindfolded. Being obese might be due to dietary calories content and unbalanced diet in addition to participant's custom of having a meal, rather than the eating pattern. This result disagreed with that obtained by Ma, et al.,(2003) & Murphy, et al., 1(996)& Fomon, et al.,(1969) & Fabry, et al.,(1964) who reported greater number of eating episodes each day is associate with a lower risk of obesity .In contrast, skipping breakfast is associate with increased prevalence of obesity, as is greater frequency of

eating breakfast or dinner away from home. Nibbling is beneficial in reducing the concentrations of lipid and hormones. It has been observed clinically that obese individual frequently eat fewer meals than normal weight people. The men who eat two meals per day are heavier, has thicker skin fold as compared to men who eat three or more per day.

Total amount of food consumed, specifically from snacks, is positively associates with overweight status.(Nicklas, et al.,2003). Light meals were not significant between study participants and did not play potential role in gaining weight. As it including drinking of black tea, coffee and juice which contains low calories (regarding to local preparations methods calories content comes from added sugar only). This result agreed with that mentioned by Lako, and Nguyen, (2001) who reported the food frequency study reveals bread and sugar are consumed daily as the main carbohydrate foods and main beverage is sweet tea.

CONCLUSION AND RECOMMENDATION

The predominant potent factor of weight gain is the amount of food eaten by study participants. So a new eating behavior should be introduced .Eating in separate plate make individuals more aware about the amount of food they consume during having a meal. Reducing working hours or traditional food supplementation should be provided to employees.

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