A study of affect regulation in obesity in egypt

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Abstract

obesity is a pandemic associated with increased mortality and a lot of morbidities. Although humans have an impressive capacity for self-regulation, failures are common and people lose control of their behavior in a wide variety of circumstances. Such failures are an important cause of several contemporary societal problems like obesity. The aim of this work is to find out the role of affect regulation in cases of adults with obesity.This study included thirty study group with obesity and 30 control group. This study was designed to evaluate the cases with obesity, who were diagnosed by using the Body Mass Index (BMI) scale. All the cases and controls completed the Trans Meta Mood Scale (TMMS) and the General Health Questionaire-28 (GHQ-28).

Keywords: Obesity, Affect regulation, Emotion.

1. Introduction

Obesity is defined by WHO as abnormal or excessive fat accumulation that may impair health, which can be measured by body mass index (BMI)which is a simple index of weight-for-height that is commonly used to classify overweight and obesity in adults. It is defined as a person's weight divided by the square of his height in meters (Kg/m2) [1].

The maintenance of physical and mental health is determined in part by an individual's self-regulatory ability. Affect regulation, or the ability to modify valence states to achieve optimal well-being, is closely linked with an individual's capacity to selectively engage in behavior congruent with long term goals while simultaneously avoiding behavior that is solely focused on temporarily improving affect [2].

Although the modern world holds many temptations; every day, people need to resist fattening foods, avoid browsing the internet when they should be working, keep from snapping at annoying coworkers and curb bad habits, such as smoking or eating too much. Psychologists have made considerable progress in identifying the individual and situational factors that encourage or impair self-control. The most common circumstances under which self-regulation fails are when people are in bad moods when minor indulgences snowball into full-blown binges when people are overwhelmed by immediate temptations or impulses, and when control itself is impaired [3].

In order to define emotion dysregulation, it is first helpful to define emotion regulation. Although researchers do not agree upon a single definition of this construct, two common points are worth noting. One key element is that emotion regulation is not one function, but more likely involves a set of processes or systems (e.g., attention, cognitive, behavioral, social, and biological). Second, these processes act to modulate, manage, or organize emotions to help

individuals meet the demands of their environment. Emotions may be positive (e.g., happy, proud) or negative (e.g., sad, anxious) in valence. Emotions also vary in intensity, with the same stimulus evoking different responses in individuals [4].

Despite the importance of affective processes in eating behavior, it remains difficult to predict how emotions affect eating. Emphasizing individual differences, previous research did not pay full attention to the twofold variability of emotion-induced changes of eating (variability across both individuals and emotions). There are five classes of emotion-induced changes of eating: [1] emotional control of food choice, [2] emotional suppression of food intake, [3]impairment of cognitive eating controls, [4] eating to regulate emotions, and [5] emotion-congruent modulation of eating. These classes are distinguished by antecedent conditions, eating responses and mediating mechanisms. They point to basic functional principles underlying the relations between emotions and biologically based motives: interference, concomitance and regulation. Thus, emotion-induced changes of eating can be a result of interference of eating by emotions, a by-product of emotions, and a consequence of regulatory processes (i.e., emotions may regulate eating, and eating may regulate emotions [5].

2. Subjects and methods

This study included thirty cases with obesity and thirty controls. The study was assessed and approved by the institutional ethics committee. The procedure was explained to the subjects and informed consent was obtained. All Cases and Control groups were subjected to the following: Full clinical psychiatric evaluation in the form of a semi-structured interview, Body Mass Index (BMI): calculated by (Weight,Kg\Height,m2), Psychometric studies in form of Trait Meta Mood Scales and General Health Questionnaire-28.

Exclusion criteria were age less than 18 years or more than 55 years, presence of endocrinal or genetic disease as a cause of obesity and those who refused to be included or to give a formal consent.

3. Statistical analysis

The clinical data were recorded on a report form. These data were tabulated and analyzed using the computer program SPSS (Statistical package for social science) version 20 to obtain: Descriptive statistics were calculated for the data in the form of Mean and standard deviation for descriptive data and frequency and distribution for qualitative data. In the statistical comparison between the different groups, the significance of difference was tested using one of the following tests: Student's t-test:- Used to compare mean of two groups of quantitative data and Inter-group comparison of categorical data was performed by using chi square test (X2-value) and fisher exact test (FET). A P value <0.05 was considered statistically significant (*) while >0.05 statistically insignificant P value <0.01 was considered highly significant (**) in all analyses.

4. Results

The study enrolled 24 men and 36 women with a mean age of 28.6±7.58 years (range 18–54 years). All cases were educated with different levels. The majority 75% were either in universities or already graduated. 25% finished or were still in high school. In our study 43.3% of cases were single and 3.3% were divorced and 53.3% were married. 50 % of cases were semiskilled, and 26.7 % were skilled, another 23.3 % of cases were unemployed. 60% of cases have family history of obesity and 26.7% of cases have attempted to lose weight Table (1), Fig (1).

5. Discussion

In a trial to find out the relation between affect and its regulation as well as dysregulation and its impact on obesity, this study was designed to investigate cases of obesity, during their follow-up visits in out-patient clinics.

Therefore, the aim of the current work was to study the negative affect regulation present with obesity, to investigate the effect of obesity on affect regulation.

In our sample, mean age of cases was 28, the range of age was 18:54

As our inclusion criteria considered only the adult patients between 18 and 55 years, to give the chance of having patients with adequate duration of illness, that give enough time and so more possibility of attempts to lose weight and other co-morbidities.

These finding came in accordance with that of Wrzosek et al., (2018) who found that patients

with early onset of obesity had a higher total body fat mass, and higher body fat percentage, and a 1.84 times higher risk of BMI above 40 kg/m2 than patients with adult-onset of obesity ($\geq$ 20 years) [6].

All cases were educated with different levels. The majority 75% were either in universities or already graduated. 25% finished or were still in high school which could be attributed that educated individuals will seek obesity treatment more than uneducated individuals .

Cohen et al. (2013) found that there was an inverse association between educational attainment and obesity [7].

In our study 43.3% of cases were single and 3.3% were divorced and 53.3% were married and there was a statistically significant difference compared to the control group .

An expected finding that came in accordance with that of Averett et al., (2008) who found that married individuals are more likely to have a confidant with whom to eat and may, therefore, eat more regularly, leading to weight gain.

Shafer et al., (2010) described the attractiveness model which links bodyweight to differences in emphasis people place on their physical attractiveness. Married men and women are less likely to be conscious of or concerned about their body weight because they are not actively seeking a mate [8]. [9].

While 50 % of cases were semiskilled, and 26.7 % were skilled, another 23.3 % of cases were unemployed which could be explained by the idea that skilled workers may pay more attention to their diet and follow healthier eating behaviors and lifestyle in general.

An expected finding that came in accordance with that of Gu et al., (2014) that workers in health care support, protective service, and transportation and material moving have high prevalence of obesity. This finding is also consistent with a previous study.10 Workers in architecture and engineering, health care practitioners and technicians, and arts/design/entertainment/sports/media had relatively low prevalence of obesity compared with other workers regardless of gender and race/ethnicity [10].

In our study 63.3% of cases were females which could be explained that females have higher incidence of obesity more than males and Seek treatment for obesity more than males .

Pinto et al., (2018) found that the length of the working week influences factors underlying weight gain, possibly issues linked to behavior and/or stress mechanisms. It appears difficult for women not to become involved in domestic duties and, when such demands are combined with long working hours, the likelihood of gaining weight appears to be greater. The fact that this association was restricted to women

suggests that the present findings are derived from gender inequalities involving relationships between time and health. [11].

In our study, 60% of cases have family history of obesity. In addition, there is a highly significant statistical difference between cases and control groups.

An expected finding that came in accordance with that of Thaker et al., (2017) who found that genetic factors and the environmental factors that influence the expression of these genes play a large role in the development of obesity in children, adolescents and young adults. Thoughtful consideration of genetic causes and an understanding of the growing evidence of the epigenetic changes that influence the burgeoning epidemic of obesity [12].

In our study, 26.7% of cases have attempted to lose weight. In addition, there is a significant statistical difference between cases and control groups.

An expected finding that came in accordance with that of Machado et al., (2012) who found that approximately 42.0% of individuals with obesity in Brazil also exerted efforts to lose weight over the last 12 months prior to the study.

Lemon et al., (2009) found that females with overweight or obesity are more likely to attempt weight loss than their male counterparts.

Shatia et al., (2017) found A highly significant difference among obese females and non-obese were detected with 42% obese females had followed specific regimen and had operations to decrease weight [13,14 and 15].

Table (1)

	Obese group (30)	Control group (30)	Statistical test (X^2)	P value
Age **Mean ±SD**	28.6±7.58	25.07±4.93	St t= 2.14	0.037*
Sex				
Male	11(36.7)	13(43.3)	0.28	0.60
Female	19(63.3)	17(56.7)		
Education level				
High school	10(33.3)	5(16.7)	2.22	0.14
University	20(66.7)	25(83.3)		
Marital status				
Single	13(43.3)	24(80.0)	FET= 8.69	0.007**
Married	16(53.3)	6(20.0)		
Divorced	1(3.3)	0(0.0)		
Occupation				
Unemployed	7(23.3)	1(3.3)	FET= 5.8	0.054
Semiskilled	15(50.0)	22(73.3)		
Skilled	8(26.7)	7(23.3)		
Smoking			0.0	
Yes	5(16.7)	5(16.7)		1.0
No	25(83.3)	25(83.3)		
Ht **Mean ±SD**	172.23±10.38	172.53±8.23	St t=0.12	0.90
Wt **Mean ±SD**	99.37±14.5	70.12±10.15	St t=9.05	<0.001**
BMI **Mean ±SD**	33.37±2.78	23.42±2.32	St t= 15.03	<0.001**

This table shows that there was a significant statistical difference between obese and control groups regarding age as more obesity in older age groups.

Also, this table shows that there was highly significant statistical difference between obese and control groups regarding marriage, weight and Body Mass Index (BMI) as obesity was significantly much more prevailing among married group than among other groups and obese group had higher weights and BMI than control group.
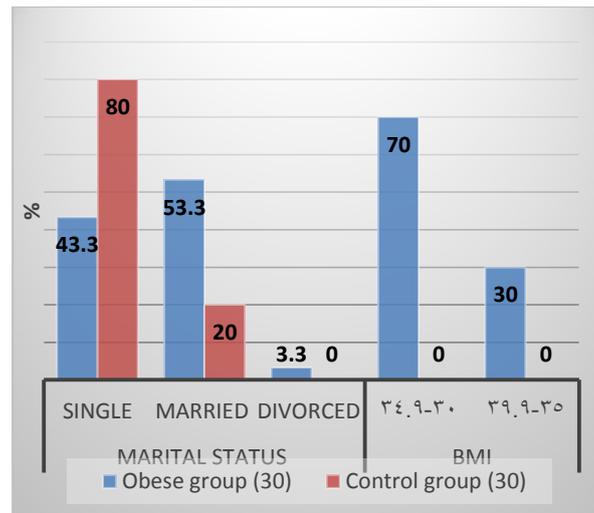
Fig (1)

6. Conclusion

Although humans have an impressive capacity for self- regulation, failures are common and people lose control of their behavior in a wide variety of circumstances. Such failures are an important cause of several contemporary problems like obesity.

Negative emotional states are related to obesity, and negative affect regulation might be playing a role in obesity.

Training to control this negative affect might help in obesity prevention and better outcome in cases of obesity..

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