



International Journal of Allied Medical Sciences and Clinical Research (IJAMSCR)

ISSN:2347-6567

IJAMSCR |Volume 6 | Issue 2 | Apr - Jun - 2018
www.ijamscr.com

Research article

Medical research

Anxiety and depression levels in obese college going students

*Sai P.Dhamangaonkar¹, Dr. Sneha Ghuman (PT)², Dr. Varoon Jaiswal (PT)³ and Dr. Snehal Ghodey (PT)⁴

¹BPTH Intern, MAEERS'S Physiotherapy College, Talegaon Dabhade, Maharashtra, India

²Assistant Professor, MAEER'S Physiotherapy College, Talegaon Dabhade, Maharashtra, India

³Associate Professor, MAEER'S Physiotherapy College, Talegaon Dabhade, Maharashtra, India

⁴Principal, MAEER'S Physiotherapy College, Talegaon Dabhade, Maharashtra, India

Corresponding Author: Sai P.Dhamangaonkar

Email: saidhamangaonkar@gmail.com

ABSTRACT

This study was carried out to find out anxiety and depression level in obese college going students. This study was conducted on 70 subjects .The DASS Questionnaire was given to all the subjects. This questionnaire contains 42 symptoms divided into depression scale, anxiety scale and stress scale .Subjects were asked to rate their symptoms according to 4 point severity scale provided in the DASS Questionnaire. The patients were classified according to DASS questionnaire scoring. Data analysis suggested, there is significant variations seen in anxiety and depression level than stress level in obese students.

Keywords: Obesity, Anxiety, DASS Questionnaire, Body image

INTRODUCTION

Obesity is defined as an excess accumulation of body fat. Obesity often begins in childhood and in such cases, the chances for adult obesity are three times greater than for children having a normal amount of body fat. [1].

Because of poor dietary and exercise habits and genetic reason, obesity is very common. One of the causes of obesity is also imbalance between calories consumed and calories expended, sedentary lifestyle. Excessive fatness develops slowly during adulthood, middle aged men and women invariably weigh more than college aged counterparts of the same stature.

The most commonly used measure for obesity is the Body Mass Index (BMI). It is defined as the

weight in kilograms divided by the square of the height in meters (kg/m²).

The ranges for Asian Indian population are [4] –

Normal BMI: 18.0-22.9 kg/m²,

Overweight: 23.0-24.9 kg/ m²,

Obesity: >25 kg/m²

Obesity comes with many health risks such as [1]:

1. Impaired cardiac function as a result of increased mechanical work and autonomic and left ventricular dysfunction
2. Hypertension and stroke
3. Adult onset diabetes
4. Pulmonary disease and impaired function resulting from added effort needed to move the chest wall

5. Osteoarthritis, degenerative joint disease, and gout
6. Several types of cancer
7. Abnormal plasma lipid and lipoprotein levels
8. Menstrual irregularities

9. Enormous psychological burden

Obesity is often related with shame about their bodies leading to negative thoughts about body image which is reinforced by view of others [5]. This in turn might lead to hiding their social or physical appearance, binge eating, anorexia nervosa

It might be possible that depression and anxiety can cause obesity because of dysregulated stress systems or through unhealthy lifestyles [6]. It is also possible that, obesity through its negative effects on self-image and its consequences, results in the development of depression over time.

Generally, thinness is considered as beauty standards because of social acceptance and sociocultural factors [6] and because of this obesity might cause less satisfaction towards their bodies, negative body image and low self-esteem.

DASS is a set of 3 self-report scales designed to measure negative emotional states of depression, anxiety and stress [10]. Each of the three DASS scales contains 14 items, divided into subscales of 2-5 items with similar content. Scores for Depression, Anxiety and Stress are calculated by

summing the scores for the relevant items. Since Anxiety & depression are often correlated with obesity because of the body image factor, this study was conducted.

METHODOLOGY

The study conducted was cross sectional study with purposive sampling. The study was carried on 70 subjects. Students in Age group of 18-25 years, both males and females having BMI higher than 25 kg/m² were included in the study. Students with severe clinical or psychiatric morbidity or students who were not willing to participate were excluded from the study.

PROCEDURE

Students under inclusion criteria were selected. Detailed explanation of the study procedure was given to the subjects in language they understood and written consent was obtained from each of them. Height and weight of all the subjects was measured. Body Mass Index (BMI) formula was used to assess obesity & waist hip ratio was measured.

DASS questionnaire was self-administered by the participants. They were classified according to DASS questionnaire scoring.

STATISTICAL ANALYSIS AND GRAPH

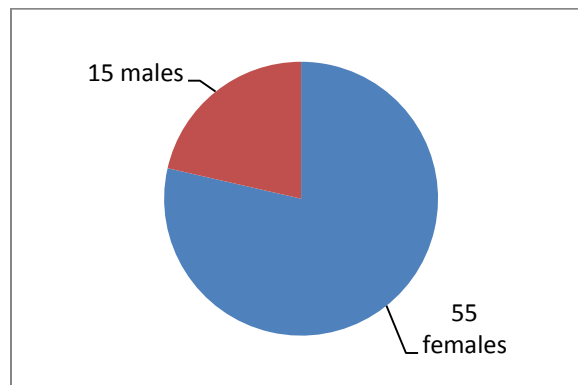


Fig.1 Demographic Data

Total 55 females and 15 males were included in this study.

Interpretation

These graphs represent the percentage score of anxiety, depression and stress scores in obese college going students

Depression score

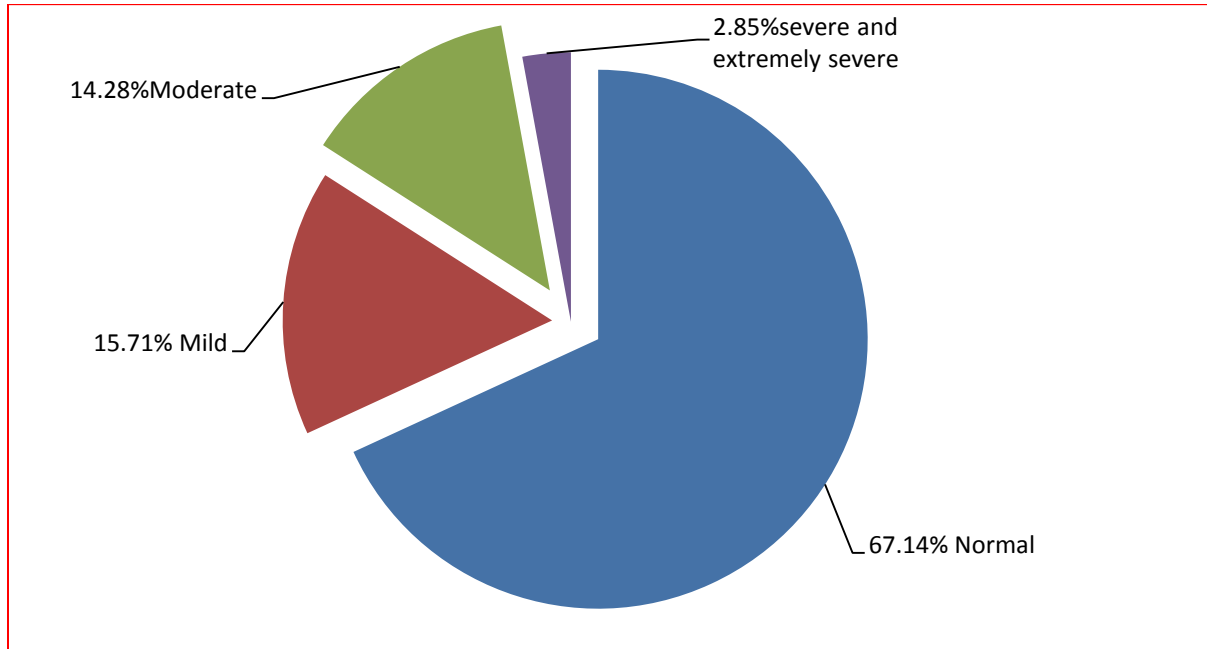


FIG NO.1

Anxiety score

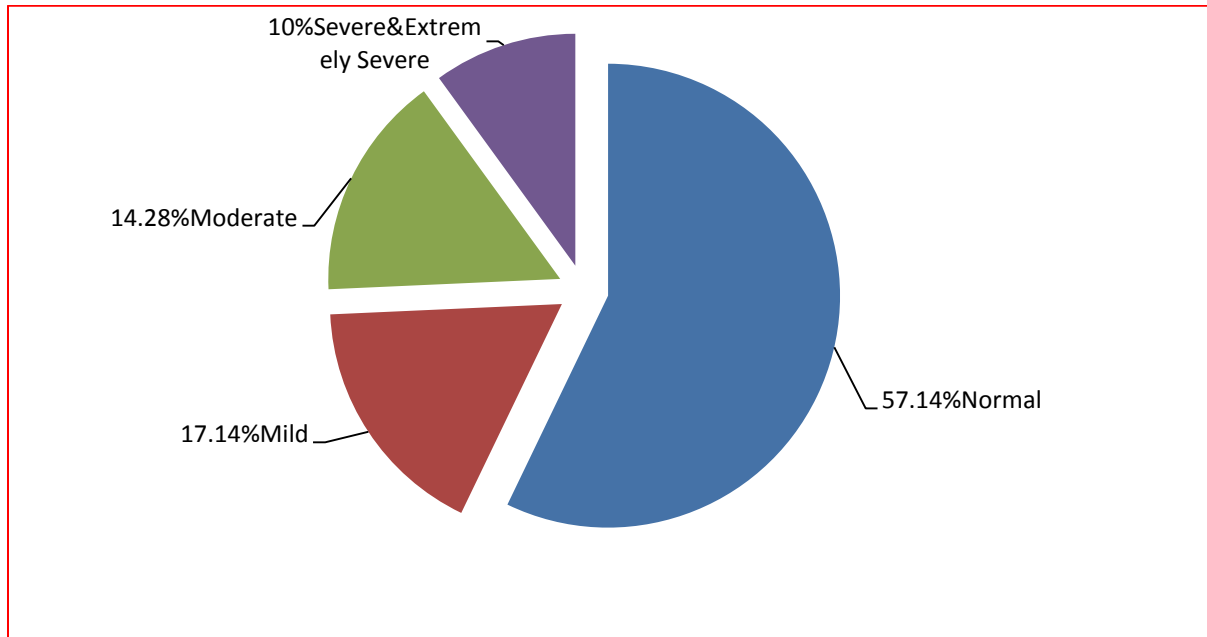


FIG NO.2

Stress score

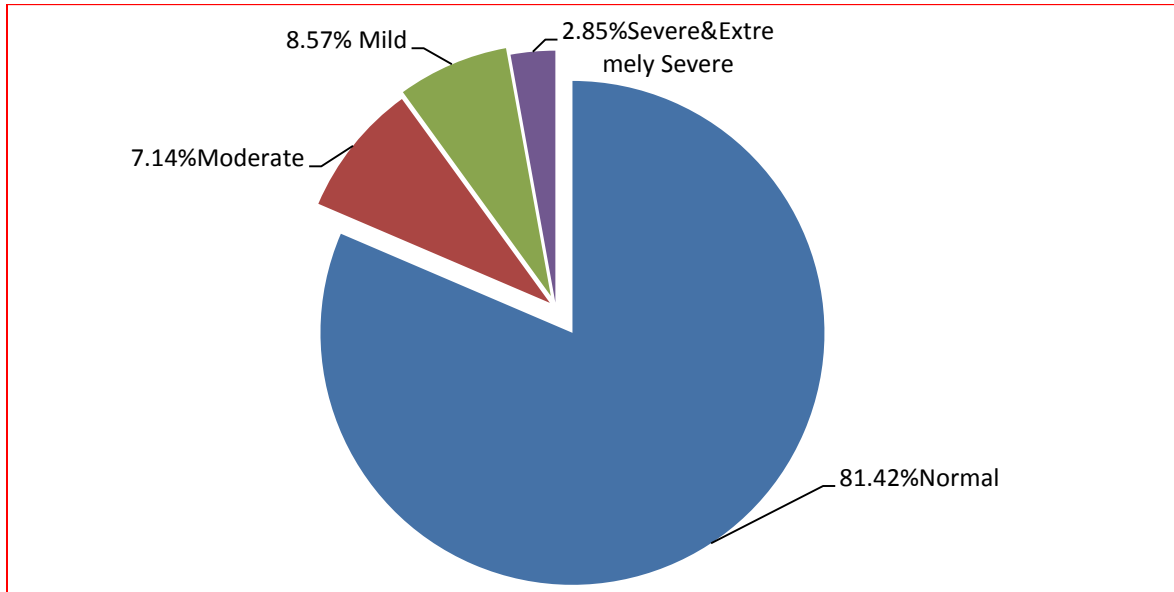


FIG NO.3

DISCUSSION

This study was carried out to find out anxiety and depression level in obese college going students. The survey showed following results: 15.71% mild depression, 14.28% moderate depression and 2.85% severe or

Extremely severe depression; 17.14% mild anxiety, 15.71% moderate anxiety and 10% severe or extremely severe anxiety; 8.57% mild stress, 7.14% moderate stress and 2.85% severe or very severe stress.

Obese individuals due to less satisfaction towards their body image often subjected to low self-esteem. So in order to fit in society they often do many attempts towards dieting, gym and/or take medications to lose weight. Failed attempts of dieting or gym might lead obese subjects to develop depression and/or anxiety.

According to study done by L. Lykouras, J. Michopoulos, Obesity may be associated with anxiety disorders by many ways. Social discrimination, Low Self-esteem which might lead obese people to anxiety. They try hard to loose weight, which is usually done without planning and might lead to failure. Thus eating and weight control leads to excessive worry and anxiety.

Diabetes and hypertension through their direct effect or through related complications can cause psychological distress. Another possible way of

explaining Anxiety and/or depression in obese individuals is hypothalamic-pituitary-adrenal (HPA) axis dysregulation, which might affect energy balance (energy intake exceeding energy expenditure). When this leads to increased appetite, people under psychological stress like anxiety or depression can easily gain weight by storage of the excessive energy as fat [11].

In order to prevent or manage this depression and anxiety associated with obesity one should include regular physical exercise in their lives. Exercise improves mood or anxiety related symptoms by HPA axis regulation and also it improves ones sense of well-being and self-esteem [12].

Physical activity reduces the risk of depression/anxiety by increasing the levels of endorphins, improved regulation of nor epinephrine, and improved fitness.

Hence obese individuals should be motivated to do more regular exercise in order to maintain their physical as well as mental health.

CONCLUSION

According to data analysis, there are significant variations seen in anxiety and depression level in obese students. While there are less variation seen in stress levels.

REFERENCES

- [1]. William D.Mcardle, Frank I.Katch, Victor I.Katch -Exercise Physiology (Energy, Nutrition & Human Performance) , 4(29), .603, 606-609
- [2]. Niraj Ahuja -A Short Textbook Of Psychiatry, Neurotic,Stress-Related and Somatoform Disorders 6(8)
- [3]. Depression and its signs and symptoms
<https://www.nimh.nih.gov/health/topics/depression/index.shtml>
- [4]. Misra, A., Chowbey, P., Makkar, B.M., Vikram, N.K., Wasir, J.S., Chadha, D., Joshi, S.R., Sadikot, S., Gupta, R., Gulati, S. and Munjal, Y.P., 2009. Consensus statement for diagnosis of obesity, abdominal obesity and the metabolic syndrome for Asian Indians and recommendations for physical activity, medical and surgical management.
- [5]. Thomas, Samantha, et al "'Just bloody fat!': A qualitative study of body image, self-esteem and coping in obese adults. .. " International Journal of Mental Health Promotion 12(1), 2010, 39-49.
- [6]. Luppino, Floriana S., et al "Overweight, obesity, and depression: a systematic review and meta-analysis of longitudinal studies. "Archives of general psychiatry 67(3), 2010, 220-229
- [7]. Lykouras, L. and Michopoulos, J., Anxiety disorders and obesity. *Psychiatriki*, 22(4), 2011, 307-313.
- [8]. Askari, J., Hassanbeigi, A., Khosravi, H.M., Malek, M., Hassanbeigi, D., Pourmovahed, Z. and Alagheband, M.. The relationship between obesity and depression. *Procedia-Social and Behavioral Sciences*, 84, 2013, 796-800.
- [9]. G Garipey, D Nitka and N Schmitz, The association between obesity and anxiety disorders in the population: a systematic review and meta-analysis - International Journal of Obesity 34, 2010, 407–41910.
- [10]. DASS Questionnaire <http://www2.psy.unsw.edu.au/dass>
- [11]. Nieuwenhuizen, A.G. and Rutters, F., The hypothalamic-pituitary-adrenal-axis in the regulation of energy balance. *Physiology & behavior*, 94(2), 2008, 169-177.
- [12]. Anderson, Elizabeth, and Geetha Shivakumar. "Effects of Exercise and Physical Activity on Anxiety." *Frontiers in Psychiatry* 4(27), 2013, 2018.
- [13]. G Z hao, ES Ford ,S Dhingra, C Li ,TW Strine and AH Mokdad, Depression and anxiety among US adults: associations with body mass Index International Journal of Obesity 33, 2009, 257–266
- [14]. Sabeti, F. and Gorjian, Z., 2013. The relationship between the satisfaction of body image and self-esteem among obese adolescents in Abadan, Iran. *Iranian Journal of Diabetes and Obesity*, 5(3), 126-131.
- [15]. Zhao, G., Ford, E.S., Li, C., Tsai, J., Dhingra, S. and Balluz, L.S., Waist circumference, abdominal obesity, and depression among overweight and obese US adults: National Health and Nutrition Examination Survey 2005-2006. *BMC psychiatry*, 11(1), 2011, 130.
- [16]. Brown, T.A., Chorpita, B.F., Korotitsch, W. and Barlow, D.H., Psychometric properties of the Depression Anxiety Stress Scales (DASS) in clinical samples. *Behaviour research and therapy*, 35(1), 1997, 79-89.
- [17]. Hatata, H., Body image dissatisfaction and its relationships with psychiatric symptomatology, eating beliefs and self esteem in Egyptian female adolescents. *Current Psychiatry [Egypt]*, 16(1), 2009.
- [18]. Taylor, C.B., Sallis, J.F. and Needle, R., The relation of physical activity and exercise to mental health. *Public health reports*, 100(2), 1985, 195.
- [19]. Arterburn, David, et al "Relationship between obesity, depression, and disability in middle-aged women.". *Obesity research & clinical practice* 6(3), 2012, e197-e206.
- [20]. Faubel, M., Body image and depression in women with early and late onset obesity. *The Journal of psychology*, 123(4), 1989, 385-395.

How to cite this article: Sai P.Dhamangaonkar, Dr. Sneha Ghuman (PT), Dr. Varoon Jaiswal (PT) and Dr. Snehal Ghodey (PT). Anxiety and depression levels in obese college going students. Int J of Allied Med Sci and Clin Res 2018; 6(2): 364-368.

Source of Support: Nil. **Conflict of Interest:** None declared.