



**RELATIONSHIP BETWEEN EATING DISORDER AND BODY MASS INDEX  
IN PHYSIOTHERAPY STUDENTS**

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**ARTICLE INFO**

**Article History:**

Received 18<sup>th</sup> August, 2017

Received in revised form 10<sup>th</sup>

September, 2017

Accepted 06<sup>th</sup> October, 2017

Published online 28<sup>th</sup> November, 2017

**Key words:**

BMI, EAT 26, Physiotherapy

**ABSTRACT**

**Introduction:** The World Health Organization in the 1987, declared Eating Disorders as one of priority issues of the world's population. There is a commonly held view that Eating Disorders are a lifestyle choice. Eating disorders actually serious often fatal illness that causes severe disturbances to a person's eating behaviors. The prevalence of overweight and obesity has increased rapidly over the past decades throughout the world. This has raised serious public health concerns because of the association between overweight and obesity and increased risk of wide range of chronic disease.

**Methodology:** 300 students from the Faculty of Physiotherapy, Dr. MGR Educational and Research Institute university participated in this observational study. They were selected on the basis of Inclusion Criteria both sex, 18-25 years physiotherapy students, willing to participate, BMI-Under Weight (less than 18.5), Normal Weight (18.5-25.5), Over Weight (25.5-30.5), Obese (above 30.0) and Exclusion Criteria Students under the age of 17 and above 25, Non-willing students, students in medications. All the students were given an informed consent form and requested to sign. The aim, purpose and procedure of the study was explained to them in detail and all their doubts were cleared by the researcher. After obtaining the consent form and detailed explanation about the study, an assessment form with detailed demographic details was collected. The students were grouped into under weight, Normal weight, Obese and Overweight according to their BMI. The EAT questionnaire was given to them and the collected data was statistically analysed.

**Result:** This study showed that the eating habits of the Under weight and Normal weight people is similar and the eating habits of Over weight and Obese people is similar

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**INTRODUCTION**

The World Health Organization in the 1987, declared eating disorders as one of priority issues of the world's population. There is a commonly held view that eating disorders are a lifestyle choice. Eating disorders actually serious often fatal illness that causes severe disturbances to a person's eating behaviors. Obsessions with food, body weight and shape may also signal an eating disorder. Common eating disorders include anorexia nervosa, bulimia nervosa, and binge eating disorder. Anxiety disorders, depression, substance abuse are common among people with eating disorder<sup>(1)</sup>.

People with anorexia nervosa may see themselves overweight even they are dangerously underweight. Anorexia nervosa has the highest mortality rate of any mental disorder while many young women and men with this disorder die from complications, other die of suicide. Cause of this eating disorders is not clear<sup>(2)</sup>.

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The prevalence of overweight and obesity has increased rapidly over the past decades throughout the world. This has raised serious public health concerns because of the association between overweight and obesity and increased risk of wide range of chronic disease, including cardiovascular disease<sup>(3)</sup>, type-2 diabetes<sup>(4)</sup>, several types of cancer<sup>(5,6,7)</sup>. Gall bladder disease, Gout, osteoarthritis and several other conditions as well as all cause of mortality. Though many studies shown an increased risk of all cause mortality with greater adiposity as measured by Body Mass Index (BMI). Researchers through their studies had found a strong coexistence between various factors like biological, psychological and social.

Brain imaging studies are also proving a better understanding of eating disorders. Researchers have found differences in patterns of brain activity in people with eating disorders in comparison with healthy people.

**Back Ground of the Study**

The most important biological factor in eating disorder is gender. Girls and women are more affected than boys and men. Apart from gender, age also plays a major role in eating

disorder, teens and early 20s are the victims. Studies have proved that Genes also increases the possibility of eating disorder. According to NICE (2004) 70% of eating disorders are triggered by life event or issue. In this case, lack of support after stressful event is seen as most problematic and therefore triggering eating disorders (Pike *et al.*, 2006). It is mainly the low self-esteem that contributes to the development of eating disorders. But there is number of other psychological factors or personality traits that may be present in eating disorders, e.g. perfectionism, obsessive-compulsiveness, neuroticism, low self-control, or some emotional disorders (Krch, 2005).

The aim of this research article is to bring out a clear picture of the relationship between the Eating Attitude and the Body Mass Index. Researches of this study would like to clear the misconception that BMI and eating disorder are directly proportional to each other.

**METHODOLOGY**

300 students from the Faculty of Physiotherapy, Dr. MGR Educational and Research Institute university participated in this observational study. They were selected on the basis of inclusion criteria both sex, 18-25 years physiotherapy students, willing to participate, BMI-Under Weight(less than 18.5), Normal Weight (18.5-25.5), Over Weight (25.5-30.5), Obese (above 30.0) and exclusion criteria Students under the age of 17 and above 25, Non-willing students, students in medications. All the students were given an informed consent form and requested to sign. The aim, purpose and procedure of the study was explained to them in detail and all their doubts were cleared by the researcher. After obtaining the consent form and detailed explanation about the study, an assessment form with detailed demographic details was collected. The students were grouped into under weight, normal weight, obese and overweight according to their BMI. The EAT questionnaire was given to them and the collected data was statistically analysed.

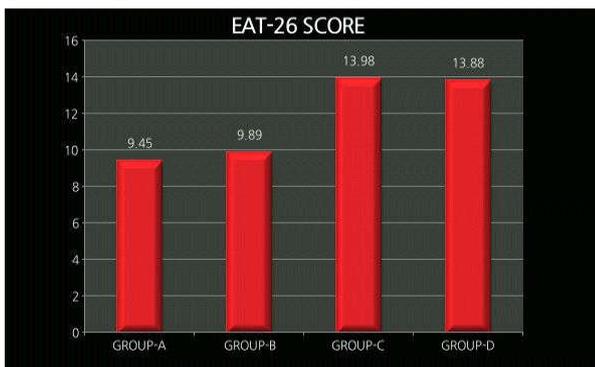
**Data Analysis**

The collected data's were tabulated and analyzed using both descriptive and inferential statistics. All the parameters were assessed using Statistical Package for Social Science (SPSS) version 16.

**Comparison of Eat Between Group - A, B, C and D**

GROUPS	MEAN	S.D	t-VALUE	SIG***
GROUP-A	9.45	6.05	0.078	.304
GROUP-B	9.89	7.45	0.804	.938
GROUP-C	13.98	6.05	1.036	.448
GROUP-D	13.88	11.17	1.056	.348

**Graphical Representation of Group's A, B, C, and D**



**RESULT**

The results revealed that subjects of Group-A and Group-B have similar Eating Attitude Test score were the subjects of Group-A were in Under weight category and the subjects of Group-B were Normal weighted. Likewise the difference between the subjects of Group-C and Group-D was similar to one another were the subjects of Group-C were under the Over weight category and subjects of Group-D were Obese.

This study showed that the eating habits of the Under weight and Normal weight people is similar and the eating habits of Over weight and Obese people is similar.

**DISCUSSION**

The purpose of the study was to determine whether the eating attitude and body mass index (BMI) are proportional to each other in physiotherapy students. The results were concluded by using the scores of Eating Attitude Test (EAT-26) questionnaire. Thus result of the study helped us to correlate that the eating attitude test questionnaire score was similar in Group A (Under weight) and Group B (normal weight) students, and in Group C (over weight) and Group D (obese) students and the data analysis using SPSS version 16 showed mean of 9.48 in Group A, 9.89 in Group B, 13.98 in Group C, 13.88 in Group D. The main finding of the study was that the physiotherapy students belonging to over weight and obese category that is., students of Group C and Group D were more likely to binge eat and they were also more prone to have eating disorder than the normal and the under weight category students that is., students of Group A and Group B. If we compare the gender difference, boys had higher BMI and girls scored higher on binge and emotional eating. These results are consistent with findings of research on the relationship between body satisfaction and self-esteem (Mirza, 2005).

It is widely believed that men are less likely to develop eating disorders in particular due to the fact that in their efforts to regulate their body weight they are not on so many diets as women and this current study also indicated so. As for the eating disorders, boys suffer more from bigorexia than from anorexia nervosa or bulimia nervosa. Differences between men and women can be also found on important developmental and physical variables as well as associated psychological features (Barry *et al.*, 2002).

Gender differences is not discussed much in this study but correlated the BMI to the Eating Disorder and concluded the result which showed differences among the various groups. Thus this study was helpful in correcting the misconception that BMI and Eating Disorder were proportional to each other according to the results of this study that had been observed and concluded using the EAT-26 scores of different groups correlating with their BMI's.

**CONCLUSION**

The EAT of the Under weight and Normal weight subjects was similar and the EAT of Over weight and Obese subjects was similar. EAT was very helpful in determining the Eating Disorders of various BMI groups. Thus, this study concluded that the Subjects of Group-C and Group-D are very prone to eating disorder than the subjects of Group-A and Group-B.

Ethical Consideration: This study was conducted after obtaining the approval from the Institutional Review Board of faculty of Physiotherapy.

Conflict of Interest: None  
Fund: Self funded project

Acknowledgement: I would like to thank the management of Dr.MGR Educational and Research Institute University and Faculty of Physiotherapy for providing the necessary infrastructure to complete this study.

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### How to cite this article:

Yuvarani.G *et al* (2017) 'Relationship Between Eating Disorder And Body Mass Index In Physiotherapy Students', *International Journal of Current Advanced Research*, 06(11), pp. 7436-7438.  
DOI: <http://dx.doi.org/10.24327/ijcar.2017.7438.1149>

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