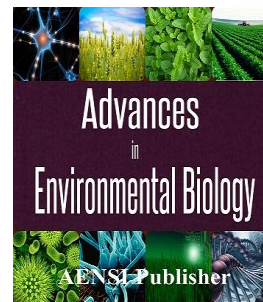




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Correlation between Depression and Body Image with Eating Disorder and Body Mass Index (BMI), Amongst Female Students at the Azad Islamic University of Chaloos

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ABSTRACT

The present research was carried out with the object of considering the correlation between depression and body mass index with eating disorders among female students at the Azad Islamic University of Chaloos that its method of descriptive research is of correlation type. statistical universe of the present research includes all of the students at The Azad Islamic University of Chaloos at two levels of BA(Bachelor of Arts)and MA(Master of Arts)levels studying in the academic year of 1392-1393 Of Persian calendar in the first semester and among them 200 students were chosen through random sampling. For data collection, Beck Depression Inventory and Beck self-concept questionnaire and eating disorders questionnaire were used. The results of the research showed that in focal correlation,appearance evaluation (0/94),the Body Areas Satisfaction(0/81),subjective weight(0/8),appearance orientation(0/78),and fitness orientation(0/77)show the most percentage of predictions and the maximum influence of these variables on the criterion variables, eating disorder(0/79) and waist line(0/64),are predicted respectively. At the center of psycho-somatic dissatisfaction variable fitness evaluation variables are(%88), the body areas satisfaction scale or BASS (66%),subjective weight(64%),appearance orientation(61%)and fitness orientation are(59%) that are capable of predicting the variable of psycho somatic dissatisfaction relevant to eating(criterion variable).In general, it can be said that the predictive power of the variable psychosomatic dissatisfaction is 43%.

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INTRODUCTION

Limitation of physical exercise which is one of the achievements of the machine life in recent age causes gaining weight that by itself sets the ground for lots of chronic diseases as hypertension, type2diabetes, strokes,heart attacks, cancers, etc. These diseases appropriate the maximum amount of mortality rate [7]. Overweight even influences the mental health. On the other hand, by an increase in the attention paid to the beauty and the general appearance based on age and sex, weight control is considered as a social issue and individuals not only for the sake of a well-proportioned physique, but due to paying attention to the health condition pay a specific attention to this issue [9].

In recent years, prevalence of anorexia nervosa and overweight in teenagers has increased significantly and overweight and obesity are globally pandemic. For instance, anorexia nervosa appears in 0.5% to1% of teenage girls and its prevalence in girls is 10 to 20 times more than boys and is followed by a great deal of mortality rate [10]. According to Bruch (1962; quoted by Ghofranipour1385) the main problem of anorexia nervosa is not to slim but the psychosomatic disorder is relevant to it. He also puts his idea this way that without a right and correct change in psychosomatic perception, any improvement of health condition in the patient that manifests itself through overweight is just a temporary improvement. In a research carried out by Dishman et.al [1], it appeared that there is a strong and positive relationship between body image in a general sense and self-esteem and also there is a moderate reverse relation between self-esteem and depression symptoms. In some of growing

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individuals' dissatisfaction with the body leads to negative attitudes about eating and obesophobia and problems related to eating habits [2]. Ghofranipour *et al* [4] showed that there is a meaningful relationship between body mass index (BMI) and dissatisfaction with psychosomatic image in a way that by an increase in the amount of body mass index, satisfaction with body image decreases. In today's society there is a great deal of cultural-social emphasis on attractiveness and physical fitness. Social pressures about slimness and thinness and widespread views about physical structure causes a prevalent dissatisfaction with the body image and a negative body image in the society and specifically among women in a way that depression and behavioral disorders can be seen more than ever among different individuals. Living environment may not have the potentiality to meet and sustain people's requirements in human societies and this story can itself act as an obstacle to the growth of self-reliance and finally leads to helplessness and depression and appearance of stress-inducing factors in individuals. Pasha, Naderi and Akbari [8] showed in a research that among applicants for cosmetic surgery, ones who undergo cosmetic surgery and usual people in terms of body image, BMI (body mass index), general health and self-thought there is a meaningful difference. Researches of Jennifer [6] and Vonder [12] showed that the distorted body image can influence the psycho-somatic health of an individual and continuous dissatisfaction with our own body image can lead to depression, anxiety and social phobia, sleeping disorder and psychosis, disorder in eating or nutritional patterns and other disorders. University students are considered as a large stratum of society and it's natural that physical and mental health is a determining factor in their educational development as well. So, evaluation of the amount of depression in university students is one of the subjects being studied by researchers. A finding of the researchers shows that university students during their educational year are exposed to lots of pressures that these factors can influence their mental health. While studying, mental pressures such as depression influence the educational performance of the students. Depression and other mental pressures causes absence, aggression, unrealistic demands on oneself, motivational problems and weakening of social relations among university students. The nature moves on and changes continuously and human as a part of this nature should match themselves with this movement and change and keep his body and soul active as well; that this activeness and liveliness is the secret of his health. In today's society, there is a great deal of cultural-social emphasis on attractiveness and physical fitness (Zarshenas, 1390). Parallel with this subject, the researcher poses this question that whether there is any relationship between depression and body image with eating disorder and body mass index (BMI) among university students.

MATERIALS AND METHODS

This research is of the kind of correlation research. This method looks for considering the amount of changes in a factor or in several factors among one factor or several other factors. The statistical universe of the present research includes all of the students at the Azad Islamic University of Chaloos at the BA (Bachelor of Arts) and MA (Master of Arts) level that are studying in the academic year of (1392-1393) of Persian calendar in the first semester. The number of distributed questionnaires among female university students who inhabited in the dormitories of the Azad Islamic university of Chaloos was 200 that by means of random sampling method was chosen. Among these ones, 160 persons filled the information form and took part in measurements.

Research Tools:

1-Beck Depression Inventory:

Beck depression inventory is a kind of self-assessment test and can be filled between 5 to 10 minutes. Testees should answer each item based on a likert scale of 4, from 0 to 3. the minimum mark in this test is zero and the maximum mark is 63. By adding up the marks in each item, the individual's mark will be achieved directly. Beck and associates in the year 1996 achieved the coefficient of validity of re-examination of the exam in a week-long period by 0.93. From among these researches we can refer to the research carried by Tashakori and Mehriar (1374) that its reliability coefficient in Iran equals 0.78. In other researches such as Partovi (1354), Vahabzadeh (1352), and Chegini (1381) the validity of the above mentioned Beck questionnaire is reported which is valid from 0.70 to 0.90 (Khoosh, 1387).

2-Multi-Dimensional Body Self Relation Questionnaire (MBSRQ):

Multi-dimensional body self relation questionnaire is a scale of self-assessment with 46 items that is provided by Cash and his associates in 1986 and 1987 to evaluate the provided body image (Thomson, 1990). In this research the final form of the questionnaire presented by Cash in 1997 is used. This scale in the first form contains six subscales as follows: 1-appearance evaluation. 2- appearance orientation. 3-fitness evaluation. 4-fitness orientation. 5-mental or subjective weight. 6-body areas satisfaction. Each of these items are scored from 1 to 5 based on likert scale from (strongly disagree-disagree-undecided-agree-strongly agree) and the score of each person is earned from the sum of scale scores.

3-Questionnaire for eating disorders:

This questionnaire includes 26 questions about eating or nutritional behaviors which the answers to the questions 1 to 26 is loaded from 1 to 3. According to this, in questions 1 to 25 the items "always, almost always and often" have the scores of 3, 2, 1 respectively and the next items have a score that equals zero. The items sometimes, seldom and never in question number 26 have the scores of 1, 2, 3 respectively and the rest of items have a value of zero. If the sum of an individual's score equals 20 or more than that, s/he is considered to be exposed to the eating disorder (Poorghasemi et al. 2009); its validity and reliability in the research of Shokri (1390) and Manai (1389) is (0.78) and (0.67) respectively. In this research the parametric statistical tests of canonical correlation coefficient is used. Meanwhile, all of the statistical operations are analyzed by means of SPSS software (18th version).

Results:

In this section, findings of the research are presented on a deductive level to respond the submitted research question that have been analyzed by means of canonical correlation tests.

Table 1: Correlation matrix between predictive and criterion variable.

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	Variables
-0.05	-0.2*	-0.11	-0.003	0.01	0.05	-0.18	0.15	-0.09	-0.06	0.14	-0.16*	-0.14	0.14	-	General appearance evaluation
0.47**	0.002	0.06	0.21**	0.04	-0.02	0.06	-0.04	0.19**	0.51**	0.54**	0.62**	0.6**	-	-	Appearance orientation
0.43**	-0.13	0.002	0.41**	0.13	0.02	0.09	-0.11	0.17*	0.61**	0.62**	0.64**	-	-	-	Fitness evaluation
0.43**	-0.13	0.05	0.37**	-0.09	-0.14	0.06	-0.06	0.32**	0.57**	0.56**	-	-	-	-	Fitness orientation
0.29**	-0.008	0.03	0.41**	0.08	-0.06	0.06	-0.11	0.12	0.5*	-	-	-	-	-	Subjective weight
0.31**	-0.07	0.05	0.45**	0.13	-0.09	0.13	-0.02	0.14	-	-	-	-	-	-	Body areas satisfaction scale
0.27**	0.02	0.03	0.09	0.07	0.07	-0.05	-0.05	-	-	-	-	-	-	-	Depression
0.006	0.61**	0.03	-0.07	0.03	0.03	0.77**	-	-	-	-	-	-	-	-	Body fat percentage
-0.04	-0.62	0.40	0.03	0.09	0.03	-	-	-	-	-	-	-	-	-	Skeletal muscle percentage
0.11	0.03	0.04	0.01	-	-	-	-	-	-	-	-	-	-	-	Weight
0.01	0.05	0.18*	-	-	-	-	-	-	-	-	-	-	-	-	Waist size
0.01	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	Visceral fat
-0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Body mass index
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Eating disorder

**p<0.01 *p<0.05

The results obtained from table 1 shows that there is a positive correlation between appearance orientation and fitness evaluation, fitness orientation, subjective weight, body areas satisfaction, depression, waist size and eating disorder ($P < 0.01$), between fitness evaluation and fitness orientation, subjective weight, the body areas satisfaction, depression, waist size and eating disorder there is a meaningful positive correlation ($P < 0.01$). Between general appearance evaluation and fitness orientation, percentage of skeletal muscle and BMI there is a meaningful negative correlation ($P < 0.05$). Between fitness orientation and subjective weight, body areas satisfaction, waist size and eating disorder there is a meaningful positive correlation ($P < 0.01$). Between mental weight and waist size, body areas satisfaction and eating disorder there is a meaningful positive correlation ($P < 0.01$). Between body areas satisfaction and waist size and eating disorder there is a positive correlation ($P < 0.01$). Between depression and eating disorder there is a meaningful positive correlation ($P < 0.01$).

Table 2: variance analysis summary for some variables-consideration of criterion variables series.

Sig	F	dF2	dF1	Statistical value	Multi-variable test
0.004	1.62	574	56	0.953	Peeli effect
0.002	1.73	414	56	0.323	Lambda Wilk's
0.000	1.82	520	56	1.37	Hetling effect

The results from table 2 shows that the amount of statistical value of Lambda Wilk's equals (0.3230) that this statistical value at the level of ($\alpha = 0.01$) is meaningful and it can be said that between psycho-somatic dissatisfaction factors (predictive variables) and psycho-somatic problems relevant to eating (criterion variables) by a probability rate of 99%, there is a meaningful relation. $F(56.414) = 1.73; P < 0.01; \text{Lambda Wilk's} = 0.323$

Table 3: Summary of canonical correlation dimensions:

sig	dF2	dF1	F	Lambda Wilk's	Common variance	Correlation amount	size
0.002	414.58	56	1.73	0.32	0.43	0.65	1
0.287	364.61	42	1.12	0.57	0.23	0.48	2
0.73	3.4	30	0.83	0.74	0.1	0.32	3

0.721	262.96	20	0.79	0.82	0.09	0.3	4
0.759	211.95	12	0.69	0.9	0.08	0.28	5
0.946	162	6	0.28	0.98	0.02	0.14	6
0.967	82	2	0.03	0.1	0.0008	0.03	7

Table 3 results shows that from among canonical bases, only one canonical base is statistically meaningful. The amount of canonical correlation of the first base is (0.65), the percentage common variance between the two compound series of predictive variables and criterion variables is (43%) as well. So, by considering a probability level of (0.99), it can be said that (0.43%) of psycho-somatic problems relevant to eating is predictable based on compound variables of psycho-somatic dissatisfaction.

Discussion:

This research is carried out with the aim of considering the relationship between depression and body image with eating disorders and body mass index (MBI) in female students at The Azad Islamic University of Chaloos that we are going to it for analyzing and expressing the obtained results out of it as follows:

The obtained findings of the recent research shows that in focal correlation, general appearance evaluation (0.94), satisfaction with body areas(0.81),mental weight(0.8),appearance tendency(0.78), and fitness tendency equals(0.77) that show the maximum amount of predictive value and the maximum amount of these variables' influence on criterion variables which are eating disorder(0.790) and waist line(0.64)respectively. Among psycho-somatic dissatisfaction factors, the variables of fitness evaluation (%88), satisfaction with body areas(%66),mental weight(%64),appearance tendency(%61),and fitness tendency(%59) are capable of predicting the variable of psycho-somatic dissatisfaction relevant to eating (criterion variable). In general it can be said that the predictive power of the variable of psycho-somatic dissatisfaction is (%43).the obtained results are compatible with the findings of Naderi and Akbari [8], Ghofranipour *et al.* [4], Vonder [12], Jennifer [6], Dishman *et al.* [1].

The obtained results of the research by Frederick *et al.* [3] shows that the distorted body images can influence the psycho-somatic health of an individual and continuous dissatisfaction with one's own body image can lead to depression, anxiety and social phobia, sleeping disorder and psychosis, disorder in eating patterns and other disorders. Van [12], in their research carried out for considering the psychological problems and satisfaction with the body image in individuals interested in cosmetic surgeries showed that the distorted body image can influence the psycho-somatic health of an individual and continuous dissatisfaction with the body image itself can lead to depression, anxiety and social phobia, sleeping disorder and psychosis, disorder in eating or nutritional patterns and other disorders. To explain and clarify the obtained results it should be said that the body weight is an important characteristic relevant to the health that has a complicated relationship with the marital status. As we know, marital status is the variable relevant to catching a disease and mortality. As it was put in the epidemiological arguments, the married individuals are healthier and are less exposed to the risk of death than single individuals. It seems that participation in physical exercises end in an increase in the amount of physical capabilities and physical preparation of an individual that this subject in its turn causes a change in the kind of evaluation and estimation of an individual of their capabilities. This relationship enjoys a positive aspect that finally leads to an increase in self-esteem and a positive view of the body. Also, this issue leads to an increase in self-acceptance or self-worth and self-characteristics aside from realized levels of merit.

In general it can be said that getting to physical exercise besides physical and physiological effects has psychological effects such as an increase in self-esteem and self-thought of individuals towards themselves and this issue can be effective in their attitude towards the quality of life. On the other hand, the results showed that the body image of individuals towards their ego is under the influence of their body dimensions and thus enjoying physical fitness has a key role in shaping and protecting a proper and positive physical self-thought and achieving self-esteem in the arena of social and personal events. From among other tendencies of girls towards catchexia or excessive thinness in the society we can refer to obesophobia that besides warning and teaching to prevent overweight, the relevant problems and harms out of catchexia or excessive thinness and the probability of the appearance of nutritional disorders should be mentioned.

REFERENCES

- [1] Dishman, J.L., A.L. Kossert, 2006. Self-Esteem Threat Combined With Exposure To Thin Media Images Leads To Body Image Compensatory Self-Enhancement. *Body Image*, 4: 39–50.
- [2] Fairburn, CG., 2009. Risk Factors For Binge Eating Disorder: A Community Based Case-Control Study. *Arch Gen Psychiatr*, 55: 425-32.
- [3] Ferdric , U., N.L. Etcoff, S. Wilhelm, 2007. Facial Attractiveness Ratings And Perfectionism In Body Dysmorphic Disorder And Obsessive-Compulsive Disorder. *Journal Of Anxiety Disorders*, 22: 540–547

- [4] Ghofranipour, F., M. Amidi, and R. Hosseini, 1385. The relationship between dissatisfaction with mental image and body mass index(BMI)in teen girls,two quarterly periodicals of Researches in behavioral sciences,4th series, (1-2): 65-95.
- [5] Golparvar, M., M. Kamkar and B. Rismanchian, 1386. The relationship between overweight and self-reliance, depression, Lifestyle, and physical self-thought among self-introduced women in the institutes of weight loss, *Science and Research in Psychology Magazine*, 32: 121-144.
- [6] Jennifer, K., 2006. What Characterizes Early Adolescents With A Positive Body Image? A Qualitative Investigation Of Swedish Girls And Boys. *Body Image*, 7: 205–212.
- [7] Lopes, PC., SR. Prado, P. Colombo, 2010. Risk factors associated with obesity and overweight in school children. *Rev Bras Enferm. Jan-Feb.*, 63(1): 73-8.
- [8] Naderi, F., Sh. Akbari and Pasha, Ghayn, 1389. Comparison of body image, Body mass index, General health and self-thought among individuals undergone a cosmetic surgery and applicants of cosmetic surgery, *Quarterly of Science and Research in Psychology*, 12th year, (3): 23-36
- [9] Perman, JA., TL. Young, E. Stines, J. Hamon, LM. Turner, MG. Rowe, 2008. A community-driven obesity prevention and intervention in an elementary school. *J Ky Med Assoc. Mar*, 106(3): 104-8
- [10] Sohrabi, F., H. Khanipour and N. Mohammadpour nikbin, 1390. The relationship between self-concept and methods of facing the amount of mental health among women dissatisfied with their weight in Rasht, *social-psychological studies of women magazine*, ninth year, (1): 99-100.
- [11] Vander, R.T., 2000. Clothing Behavior, Body Cathexis, And Appearance Management Of Women Enrolled In A Commercial Weight Loss Program. Partial Fulfillment Of The Requirements For The Degree Of Doctor Of Philosophy In Clothing And Textiles, Blacksburg, Virginia Rudd, N.A.
- [12] Von, E.M., 2009. Academic Self-Concept And Self-Efficacy: How Different Are They Really? *Educational Psychology Review*, 15(1):1-40. 8(1): 160–70.
- [13] Zarshenas, S., 1390. The influence of aerobic exercise on women's attitude toward body image, *Rehabilitation Magazine*,11th series,No.2.

