IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Factor Analytical Study Of Eating Attitudes Among Adolescent Females

DR. PREETI GULATI

ASSISTANT PROFESSOR

DEPARTMENT OF PSYCHOLOGY, S.R. Government College for Women, AMRITSAR

ABSTRACT

Health related problems such as eating disorders, obesity is found to be related with eating attitudes. In the present study, a non clinical sample of (75 adolescent females) 16 to 18 years of age were incorporated. All the participants were tested on Eating Attitude Test, Multi Dimensional Perfectionism Scale, Barrat's Impulsivity Scale, Locus of Control, Body Esteem Scale, Body Shape Questionnaire and along with these their BMI was calculated. For the purpose Kelly's (1935) method of principal axis was used for factorization of the correlation matrix to partial out to some extent the influence of the extraneous factors. The 21 variables were inter-correlated by means of product moment correlations. The 21 x 21 matrices of inter correlations obtained were subjected to factor analysis. Eight factors were found to account for the bulk 71.29% of variance in females. Factors extracted for female adolescents were perfectionism, sexual attractiveness, body satisfaction, motor, individual control, bulimia, attention and perseverance.

Keywords: EATING ATTITUDES; FACTOR ANALYSIS; BODY SATISFACTION; BULIMIA.

1. Introduction

The most common explanation in the scholarly literature for the appearance of changing eating attitudes, patterns and behaviors is a result of the "Westernization" or "Modernization" of the society in question. The basic proposition here is that as societies become more western or more modern, the specific attitudes and behaviors associated with eating (i.e. more focus on the self-starvation, bingeing and purging, body image disturbances, intense fear of gaining weight, body esteem or other disordered eating habits as overeating, focus on more of fatty foods, and overall unhealthy eating attitudes and behavior patterns) become meaningful expression of particular cultural features: heightened consumerism, media exposure and saturation, an idealization of self-discipline, an ethos of independence, coupled with the constant seduction to "super size" everything, from fries to televisions. Eating attitudes, described as one's thought, idea, belief and a feeling one holds or a personal preference of a particular person towards several foods or variety of foods. These patterns may give rise to other health related problems like eating disorders and obesity. Eating disorders, namely anorexia nervosa and bulimia nervosa, are characterized by clinical disturbances in body image and eating behaviors. The eating disorders not otherwise specified category reflects many cases of eating disorders that can be quite severe but do not meet the diagnostic criteria for anorexia nervosa and bulimia nervosa.

The prevalence of eating disorders has increased dramatically over the past three decades (Fisher et al., 1995; Krieipe and Birndorf, 2000). In fact, it is the third most common, chronic illness in female adolescents. However, many who display "disordered eating" symptoms do not meet the current DSM-IV-TR (Diagnostic and Statistical manual of mental disorders) criteria for either Anorexia Nervosa or Bulimia Nervosa and may be classified as EDNOS (Eating Disorder not otherwise specified). In fact EDNOS accounts for about 50% of the population of eating disorders (American Psychiatric Association, 2000). Another major and most prevalent health problem related to unhealthy eating attitudes is obesity which is commonly defined as 20% exceed in the desirable weight. Moreover, Obesity appears to be a problem that persists over time and some cases result from metabolic or hormonal disorders, most obese person simply take more calories than they burn. So, it is estimated that 85% of these disorders had their onset during the adolescent period (Journal of American Dietetic Association, 2001). Nowadays, most of the adolescents are consuming foods full of calories but are not involved in physical activities. So they are not able to burn their calories. So the adolescents are always at the greater risk for developing eating disorders.

Wang (2006) investigated the reputation based peer status and weight related behaviors and cognitions for both adolescent boys and girls. The findings revealed weight-related cognitions for girls (concerning obesity) and boys (concerning musculature fitness). Peer-Perceived popularity, but not likeability, was significantly associated with both boys' and girls' body size and dieting. Lower levels of popularity were associated with heavier body shapes for girls and with both thin and heavier body shapes for boys. Eating Attitudes is related to various biological, psychological and sociological factors or variables. (Garner et al., 1982) The biological variables studied in relation are height, weight, age and body mass index (BMI) which is described as the individual's body weight divided by the square of their height. The psychological variables studied in relation to eating attitudes are perfectionism, impulsivity, locus of control, body esteem and body satisfaction. Perfectionism as described by Frost et al,(1990) is conceptualized as having excessively high standards accompanied by critically stringent self evaluation in the form of doubting one's actions and being overly concerned with making mistakes. Perfectionists are unduly sensitive to parental criticism and expectations and tend to be preoccupied with an inflated need for order and organization. Impulsiveness may be described as a factor which constitutes the measure of impatience and impulsivity which accounts for greater procrastination and reduced self-control (Barratt, 1995). Locus of control as described by Levenson & Miller (1976) is a continuum and people can be ordered along that continuum. For the sake of convenience, we will refer people as internals or externals. Body esteem constitutes that how a specified person feels about the particular part or function of his/her own body and this describes the self-evaluation which the person makes regarding his own physical features or body (Franzoi & Shields, 1984). The body satisfaction or body image disturbance is a core diagnostic feature of anorexia and bulimia nervosa. These individuals are excessively concerned with body weight and shape and their self –evaluation is unduly influenced by body weight and shape (Evans & Dolan, 1993).

A longitudinal study conducted by Archibald et al., (2002) revealed a direct effect of unhealthy eating on parent-adolescent relationship. For example, Gross et al., (2000) conducted a study examining the perception of parental messages regarding eating and weight and their impact on disordered eating. The results showed that there is a perception by young women with elevated eating disturbance and are concerned with weight and body shape and greater dissatisfaction with current weight that their mothers communicated negative verbal messages about eating and weight. Empirical studies often indicate that impulsivity is correlated with the eating disorders, particularly when there is binge eating behavior (Vitousek & Manke, 1994; Wonderlich & Mitchell, 1997). Furthermore, it has been suggested that body dissatisfaction may be a mediator of the relationship between dietary restraint and the development of eating disorders (Ricciardell et al., 1997).The results of a study revealed that BMI and gender had significant main effects on Eating behaviors and attitudes(Heaven et. al., 2001). Latzer et al, (2001) conducted a study in an attempt to determine the scope of the problem among 38 adolescent girls (aged between 2-17 years) and their significant others, found that 85% of adolescent girls were dissatisfied with their figure, 63% were considering a diet, and 60% were afraid of losing control over their weight. 55% of significant others did not think that EDs were more prevalent in families with fallacious attitudes about physical build and eating and 50% thought that pubescent girls should be encouraged to diet. Extensive studies have been conducted to explore the issue of body image in females (e.g. Silverstein, Perdue, Peterson, & Kelly, 1986; Stice, Spangler & Agras, 2001; Yamamiya, Cash, Melnyk, 2005).

The study by Shisslak et al., (2006) examined the links among body mass index (BMI), weight control practices, binge eating and disordered eating among middle school girls. The results showed that both the prevalence and frequency of weight control behaviors increased as BMI increases, but binge eating was reported approximately equally by girls across the BMI spectrum. Several studies have shown high prevalence of overweight and obesity in adolescents girls (Musaiger *et al.*, 2016) which coupled with rapid socio-cultural changes puts them at risk for developing various eating disorders such as Anorexia nervosa, Bulimia nervosa, frequent dieting, binge eating and partial syndromes (Latzer, Azaiza, & Tzischinsky, 2014; Mousa, Al-Domi, Mashal, & Jibril, 2010).

2. Methods

In the present study, a non-clinical sample of 75 adolescents females were incorporated. The purpose of the study was to obtain first hand information about how they think, act or view their day to day eating patterns or attitudes and only the generalized findings would be reported to educators and researchers concerned with the provision of optimal environmental conditions that induced those eating patterns or attitudes. The age of the sample ranged between 16 to 18 years with the mean and standard deviation of 16.33 and 1.30 respectively. The age range of the sample is given in table no.1.

Table no. 1

Age range of the Subjects (F=75)

Age (in years)	Female
17-18	2
16-17	21
15-16	52
N	75
Mean	16.33
S.D	1.30

2.1 Measures

All the participants completed a set of six questionnaires such as:-

a) Eating Attitude Test – EAT -26 (Garner et al, 1982).
b) Multi Dimensional Perfectionism Scale (Frost, 1990).
c) Barratt's Impulsivity Scale (Patton et al., 1995).
c) Locus of Control (Levenson and Miller, 1976).
d) Body Esteem Scale (Franzoi & Shields, 1984).
e) Body Shape Questionnaire (BS 16-A Evans and Dolan, 1995).
(g) Body Mass Index (BMI).

2.3. RESULTS AND DISCUSSIONS

Factor Analysis:

As the main purpose of the present study was to know the eating attitudes of adolescent Girls in relation to perfectionism, impulsivity, locus of control, body shape and body esteem. Though the inter correlations suggested most of these correlates, yet they do not provide a very clear cut information. As the correlations are influenced by a large number of uncontrolled factors, so factor analysis was applied as it can partial out at least to some extent, the influence of these extraneous factors.

The 21 variables were inter-correlated by means of product moment correlations. The 21 x 21 matrices of inter correlations so obtained of 75 subjects were subjected to factor analysis. Choosing a talent root 1.00 as the cut off point for the number of factors to be extracted (KAISER, 1973). Eight factors were found to account for the bulk 71.29% of variance in common for females.

The Eight factors for females corresponding to the extent roots were rotated using the varimak rotation procedure (Kaiser, 1958). Structure obtained by rotating the axis until each row of the factor matrix has one zero and each column of the factor matrix has zeroes, where the p is the number of factors. For each pair of factors, there are several variables for which the loadings on one is virtually zero and the loadings on the other is substantial, and if there are many factors, then for each pair of factors, there are many variables for which both loadings are zero (Thrustone 1947). A factor loading of 0.40 or above is considered to be significant. The rotation was done with the hope that the new factors would be less difficult to interpret. The rotated factor matrices seem to satisfy reasonably well the criterion of simple structure. The commonality h^2 gives the proportion of the variance for each of the original variables presented in the last column of the tables 3 and 4. The values of h^2 for each variable on the un-rotated and rotated factors matrices for 75 subjects are practically the same. Minor discrepancies were due to the rounding of the values.

Table – 2: EIGEN VALUE FOR THE PRINCIPAL COMPONENT ANALYSIS

Factors	Eigen Value	% Contribution	Cumulative %
F	F	F	F
I	3.70	17.62	17.62
II	2.83	13.46	31.08
III	2.17	10.32	41.40
IV	1.66	7.92	49.32
V	1.38	6.55	55.87
VI	1.19	5.66	61.53
VII	1.04	4.96	66.49
VIII	1.00	4.8	71.29

TABLE – 3: UNROTATED FACTOR MATRIX (FEMALE)

S. No	VARIABLES	I	II	III	IV	V	VI	VII	VIII	h^2
1.	Parental Expectation Control (PEC)	0.45	0.49	-0.18	4.10	0.25	0.22	0.14	0.13	0.63
2.	Organization (O)	0.25	0.70	0.20	0.28	0.13	0.26	0.13	0.00	0.78
3.	Personal Standards (PS)	0.48	0.30	-0.01	0.23	-0.01	0.00	0.23	0.00	0.44
4.	Concern Over Mistakes (CM)	0.69	0.30	-0.27	-0.21	0.24	0.00	-0.01	0.01	0.75
5.	Attention (A)	-0.16	0.33	0.18	0.01	-0.62	0.00	-0.01	0.51	0.82
6.	Motor(M)	0.31	-0.10	0.00	-0.50	0.31	-0.15	0.15	0.36	0.63
7.	Self Control (SC)	0.00	0.40	0.11	0.61	-0.21	0.00	0.30	-0.14	0.70
8.	Cognitive Complexity (CC)	-0.24	0.38	0.15	0.2	-0.16	0.50	-0.28	0.40	0.78
9.	Perseverance (P1)	-0.01	0.19	0.00	0.11	0.22	-0.74	0.14	-0.34	0.78
10.	Cognitive Instability (CI)	0.00	-0.47	0.18	-0.32	-0.39	0.17	0.39	0.00	0.69
11.	Body Satisfaction (Total 1)	0.40	-0.45	0.50	0.18	0.01	0.01	0.30	0.11	0.76
12.	Powerful Others (P2)	-0.67	-0.23	0.00	0.27	0.11	0.35	-0.13	-0.13	0.74
13.	Chance Control (C)	-0.15	-0.31	-0.21	0.51	0.26	0.01	-0.19	0.18	0.56
14.	Individual Control (I)	-0.01	-0.23	-0.55	0.23	0.33	0.01	0.00	0.38	0.68
15.	Bulimia (B)	0.56	0.00	0.33	-0.13	-0.01	0.12	-0.57	-0.18	0.82
16.	Dieting Subscale (DS)	0.41	0.14	0.75	0.14	0.22	0.00	-0.21	0.00	0.85
17.	Oral Control (OC)	0.65	0.26	0.13	-0.11	0.00	0.12	-0.01	0.00	0.54

18.	Sexual Attractiveness (SA)	-0.52	0.29	0.44	-0.26	0.30	0.01	0.23	0.01	0.77
19.	Weight Concern(WC)	-0.58	0.60	0.14	-0.24	0.17	0.2	-0.01	0.00	0.84
20.	Physical Condition (PC)	-0.62	0.28	0.40	-0.15	0.25	0.00	0.00	0.01	0.72
21.	Body Mass Index (Total 2)	0.12	-0.48	0.52	0.31	0.24	0.00	0.00	0.21	0.71
	% Contribution	17.62	13.4	10.3	7.92	6.55	5.66	4.96	4.8	71.2

TABLE – 4: ROTATED FACTOR MATRIX (FEMALE)

S. No	VARIABLES	I	II	III	IV	V	VI	VII	VIII	h^2
1.	Parental Expectation Control (PEC)	0.76	0.00	-0.10	0.16	0.11	0.04	-0.06	-0.04	0.63
2.	Organization (O)	0.79	0.27	0.00	-0.23	-0.07	0.13	0.06	0.02	0.78
3.	Personal Standards (PS)	0.59	-0.28	0.04	-0.03	-0.09	-0.06	0.04	0.04	0.44
4.	Concern Over Mistakes (CM)	0.57	-0.26	-0.16	0.50	0.00	0.25	-0.12	0.08	0.75
5.	Attention (A)	0.06	0.06	-0.07	-0.13	-0.20	-0.09	0.80	-0.31	0.82
6.	Motor(M)	0.06	0.02	0.13	0.77	-0.04	-0.06	-0.06	-0.01	0.63
7.	Self Control (SC)	0.48	-0.02	0.10	-0.60	-0.07	-0.21	0.18	0.17	0.70
8.	Cognitive Complexity (CC)	-0.03	0.17	-0.05	-0.03	0.12	0.08	0.78	0.34	0.78
9.	Perseverance (P1)	-0.01	0.04	0.00	-0.02	-0.10	-0.11	0.00	0.87	0.78
10.	Cognitive Instability (CI)	-0.32	-0.16	0.25	0.08	-0.45	-0.32	-0.12	-0.41	0.69
11.	Body Satisfaction (Total 1)	0.02	-0.21	0.83	0.08	-0.13	-0.06	-0.08	0.00	0.76
12.	Powerful Others (P2)	-0.40	0.35	-0.04	-0.49	0.37	-0.09	-0.17	-0.21	0.74
13.	Chance Control (C)	-0.12	-0.12	0.15	-0.18	0.69	-0.05	-0.02	0.00	0.56
14.	Individual Control (I)	0.01	-0.15	-0.10	0.20	0.71	-0.30	-0.07	-0.16	0.68
15.	Bulimia (B)	0.10	-0.21	0.13	0.06	-0.21	0.83	-0.02	-0.10	0.82
16.	Dieting Subscale (DS)	0.13	0.09	0.73	0.00	-0.09	0.54	-0.01	0.02	0.85
17.	Oral Control (OC)	0.51	-0.21	0.09	0.21	-0.24	0.34	0.02	-0.10	0.54
18.	Sexual Attractiveness (SA)	-0.05	0.84	0.09	0.06	-0.14	-0.17	0.03	0.03	0.77
19.	Weight Concern(WC)	0.07	0.81	-0.40	-0.09	-0.06	0.02	0.11	-0.03	0.84
20.	Physical Condition (PC)	-0.17	0.81	0.00	-0.07	-0.03	-0.03	0.12	0.08	0.72
21.	Body Mass Index (Total 2)	-0.12	0.02	0.81	-0.01	0.20	0.06	-0.02	-0.05	0.71
	% Contribution	17.6	13.4	10.3	7.92	6.55	5.66	4.96	4.8	71.2

Interpretation of Factors:

Factor I (Perfectionism)

VARIABLE	LOADINGS
Organization	0.79
Parental Expectation for Control	0.76
Personal / Standards	0.59
Concern over mistakes	0.57
Oral Control	0.51
Self Control	0.48
Powerful others	0.40

This factor has significant loadings on all the four subscales of perfectionism, so the factor has been named accordingly. The individuals who believe in perfectionism have oral control, self control and they are not controlled by powerful others. The similar findings have been reported by (Archibald et. al, 2002) that how parent-adolescent relationship effect the eating behaviour of young adolescents. Even (**Woodside et. al., 2002**) reported similar findings.

Factor II (Sexual Attractiveness)

VARIABLE	**LOADINGS**
Sexual Attractiveness	0.84
Weight Concern	0.81
Physical Condition	0.81

The secondary factor has highest loading on sexual attractiveness so it is named accordingly. It means that females who are concerned regarding sexual attractiveness are also concerned with their weight and physical condition.

Factor III (Body Satisfaction)

VARIABLE	**LOADINGS**
Body Satisfaction	0.83
Body Mass Index	0.81
Dieting Subscale	0.73
Weight concern	-0.40

The third factor has high loading on body satisfaction; therefore it has been named as body image or body satisfaction. This shows that the females who are overly concerned with their body shape have major concerns for body mass and diets they take. The lesser weight gave more body satisfaction. The same results have been reported by (Cash & Pruzinsky, 1990; Stice, 2001; Jones, 2001; Holder et al., 2006)

Factor IV (Motor)

VARIABLE	**LOADINGS**
Motor	0.77
Self Control	-0.60
Concern over mistakes	0.50
Powerful others	-0.49

The fourth factor is named as motor as it constituents high loadings. This indicates that females usually act on a impulse and have lower self control. Though they show compulsiveness in work and habits but are not controlled or moulded by powerful others.

Factor V (Individual Control):

VARIABLE	**LOADINGS**
Individual Control	0.71
Chance Control	0.69
Cognitive Instability	-0.45

The high loading on this factor names this factor as individual control. This states that females believe that they have a better control on themselves and whatever they acquire or gain is the direct result of their actions. They have external locus of control and more stability in thoughts and they never astray task in hand.

Factor VI (Bulimia):

VARIABLE	LOADINGS
Bulimia	0.83
Dieting Subscale	0.54

As there is significant loading on this factor therefore it is named as bulimia. This means that the females who show more of bulimic activities are more addressed with dieting and tend to avoid high caloric food and even are terrified about being overweight.
The corresponding studies by (Patton, 1999, Whitaker, 1999 and Neumark et al. 1998) stated that bulimia leads to the development other risky behaviours especially in young adolescent girls or females.

Factor VII (Attention)

VARIABLE	LOADINGS
Attention	0.80
Cognitive Complexity	0.78

The factor has been named as attention because of significant factor loadings. This indicates that females pay more attention or concentrate more on to particular activity or a task which is related to cognitive complexity and which grabs more of attention.
Factor VIII (Perseverance)

VARIABLE	LOADINGS
Perseverance	0.87
Cognitive Instability	-0.41

As the factor constituents high loading therefore it is named as perseverance. This reveals that females who are impulsive, they don't stick to a particular job but they show cognitive stability.

CONCLUSION

After conducting factor analysis of female sample, the data has generated eight factors namely perfectionism, sexual attractiveness, body satisfaction, motor, individual control, bulimia, attention and perseverance. The individuals who believe in perfectionism have oral control, self control and they are not controlled by powerful others. It means that females who are concerned regarding sexual attractiveness are also concerned with their weight and physical condition. Females who are overly concerned with their body shape have major concerns for body mass and diets they take. Females usually act on an impulse and have lower self control. Though they show compulsiveness in work and habits but are not controlled or molded by powerful others. Females show more of bulimic activities are more addressed with dieting and tend to avoid high caloric food and even are terrified about being overweight. They pay more attention or concentrate more on to particular activity or a task which is related to cognitive complexity and which grabs more of attention.

Future Directions

1. Provision of early screening of the eating disorder in adolescents is highly needed for particular treatment procedures.
2. Future research is needed to develop intervention programs to control eating disorders among adolescents.
3. Awareness regarding appropriate nutrition in relation to body weight is needed among female students.

REFERENCES

Archibald, Andrea Bastiani; Linner, Miriam R.; Graber, Jneia A. & Brooks-Gunn, Jeame (2002). Parent-adolescent relationship and girls unhealthy eating: Testing reciprocal effects. *Journal of Research on Adolescence*, Vol 12(4), 451-461.

Cash, T.F., Pruzinsky, T. (Eds.), 1990 *Body Images: Development, Deviance, and Change*, Guilford, New York.

Evans, C., & Dolan, B. (1993). Body Shape Questionnaire: derivation of shortened "alternate forms". International Journal of Eating Disorders, 13, 315-321.

Fisher, M., Golden, N.H., Datzman, K.D., Dreipe, R.E. and Schebendach, J.(1995): Eating Disorders in adolescents a background paper. *J. Add. Health Care*, 16: 420-437 (1995)

Franzoi, S.L., & Sheilds, S. A. (1984). The Body-Esteem scale: Multidimensional structure and sex differences in college population. Journal of personality assessment, 48, 173-178.

Frost, R.O., Marten, P.A., Lahart, C., & Rosenolate, R. (1990). The dimensions of perfectionisms. *Cognitive therapy and Research*, 14, 449-468.

Garner DM, Garfinkel PE(1979). The Eating Attitude Test: an Index of the Symptomes of anorexia Nernosa. *Psychol Med*; 9: 273-9.

Garner DM, Olmsted MP, Bohr Y, Garfinkel PE (1982). The Eating Attitudes Test : Psychometric features and clinical correalttes. *Psychol. Med*; 12: 871-8.

Gross, Romayne M. & Nelson, Eileen S.(2000). Perception of Parental message regarding eating and weight and their impact on disordered eating. *Journal of college student psychotherapy*, 2000, Vol. 15(2), 57-78.

Holder, Mark D & Keates, Jeany (2006). Size of drawings influences body size. Estimates by momen with and without eating concerns. *Body image*, (Mar), Vol. 3(1), 77-86.

Kreipe RE, Golden NH, Katzman DK, et al.(1999). Eating Disorders in adolescents. A position paper of the society for adolescent Medicine. *J Adolese Health*, 1995; 16:476-9

Latzer, yael & Shatz, Sarit.(2001). Disturbed attitudes to weight control in female Kibbutz adolescents: A preliminary study with a view to prevention. Eating Disorders: *The Journal of treatment & Prevention*, 2001 (Fal), Vol 9(3), 225-237.

Latzer Y., Azaiza F., Tzischinsky O. (2014). Not just a western girls' problem: eating attitudes among Israeli-Arab adolescent boys and girls. *International Journal of Adolescence and Youth,* 19(3), 382-394. doi:10.1080/02673843.2012.747973

Levenson, H & Miller, J (1976). Multidimensional Locus of Control in sociopolitical activists of conservative and liberal ideologies. Journal of Personality and Social Psychology, 33, 198-202.

Mousa T. Y., Al-Domi H. A., Mashal R. H., Jibril M. A. (2010). Eating disturbances among adolescent schoolgirls in Jordan. *Appetite,* 54(1), 196-201. doi:10.1016/j.appet.2009.10.008

Musaiger A. O., Al-Kandari F. I., Al-Mannai M., Al-Faraj A. M., Bouriki F. A., Shehab F. S., Al-Qalaf W. B. (2016). Disordered Eating Attitudes Among University Students in Kuwait: The Role of Gender and Obesity. *International Journal of Preventive Medicine,* 7, 67 doi:10.4103/2008-7802.180413

Neumarker KJ, Bettle N, Bettle O, Dndeck U, Neumarker U.(1998). The Eating attitudes test: Comparative analysis of female and male students at the public Ballet school of Berlin. *Eur child Adolese Psychiatry*. 7: 19-23.

Patton GC, Selzer R. Coffet C, Carlin JB, molfe R.(1999). Onset of adolescent eating disorders: population based cohort study ones 3 years. *Br. Med*; 318: 765-768.

Patton, J. H., Stanford, M. S., & Barratt, E. S. (1995). Factor structure of the Barratt Impulsiveness Scale. *Journal of Clinical Psychology*, 51(6), 768-774

Ricciardelli, L.A., Tate; D.; Williams, R.J., 1997. Body dissatisfaction as a mediator of relationship between dietary restraint and bulimic eating patterns. *Appetite*, 29, 43-54.

Shisslak, Catherine M. Mayz Z.; Crago, Marjoric; Jirsak, Jan K. et al.(2006). Eating and weight control behaviors among middle school girls in relationship to body weight and ethnicity. *Journal of adolescent health*, 2006 (May), Vol. 38 (5), 631-633.

Silverstein, B., Perdue, L., Peterson,l B., Kelly, E. (1986), The role of the mass media in promoting a thin standard of bodily attractiveness for women. *Sex Roles*, 14, 519-532.

Stice, E., Spangler, D., & Agras, W. S. (2001) Exposure to media-portrayed thin-ideal images adversely affects vulnerable girls: A longitudinal experiment, *Journal of social and clinical psychology*, 20, 270-288.

Vitousek, K. & Manke F. (1994). Personality Variables and disorders in anorexia nervosa and bulimia nervosa. *Journal of Abnormal Psychiatry*, 103, 137-147.

Wang, Shirlley S., Houshyar, Shadi & Prinstin, Mitchell J.(2006). Adolescent Girls and boys weight – Related health Behaviors and Cognitions: Associations with Reputation – and Cognitions : Associations with Reputation and Preference-Based Peer status. *Health Psychology*, Vol. 25 (5), 658-663

Whitaker A.H.(1999). An epidemiological study of anorectic and bulimic symptoms in adolescents girls: implications for pediatricians pediatr. *Ann*; 21: 752-9

Yamamiya, Y., C ash, T.F., Mehnyk. S.E., Posavac. H.D., & Posovac, S.S. (2005) Women's exposure to thin-and-beautiful media images: body image effects of media-ideal internalization and impact-reduction interventions. *Body Image*, 2(1), 74-80.