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Original Article

Investigating the role of early maladaptive schemas in Body image disturbance

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ABSTRACT

The present study aimed to investigate the role of early maladaptive schemas (EMS) in body image disturbance. This research is a descriptive-correlational study. The sample consisted of 334 students (159 boys and 175 girls) selected through a cluster sampling method among students attending universities in Arak. EMSs and body image disturbance were measured by the "Young Early Maladaptive Schemes Questionnaire" and "Body Image Concerns Inventory", respectively. The data were analyzed using Pearson correlation coefficient and multivariate regression analysis. The results showed that there is a significant positive correlation between EMSs (other than the "Emotional Deprivation", "Abandonment/Instability", "Social Alienation/Rejection", and "Self-Sacrifice"), as well as all five basic schema domains, and body image disturbance. Regression analysis also showed that combining the two schemes of "Insufficient Self-Control/Self-Discipline" and "Vulnerability", 21%, and the schema domains of "Impaired Autonomy & Performance" and "Impaired Limits", 17% of variance of body image disturbance Explain and predict.

Keywords: Early maladaptive schemas, body image, disturbance

Introduction

In recent decades, body image dissatisfaction and disturbance have become so commonplace [1-6], which have been referred to as "normal dissatisfaction" [6]. This dissatisfaction that may focus on one or more aspects of the body, including stretching, height, weight, or parts of the appearance, such as nose, jaw and teeth, species, or overall physical appearance, is a serious causative agent Some of the clinical disorders including eating disorders [7, 8], body dysmorphic disorder [9], and so on. In the non-clinical population, this attention, dissatisfaction and dissatisfaction affect the well-being and psychological functions of individuals including interpersonal relationships and self-esteem [10, 11], and disorders such as depression [7, 12, 13], anxiety, panic Social [11]. On the other hand, body image disturbance, on many occasions, have led to the intense tendency of individuals to change and improve their appearance, using a variety of unhealthy and high-risk methods, including the massive use of drugs (nauseous, stomach and depression drugs, Steroids, anti-pregnancy …), hard physical activity, intense limited diets, abortion, maternal delivery, and all kinds of cosmetic and plastic surgery [14-16]. The interpretation of the "cosmetic surgery bomb" as a function of the wide prevalence of interest in plastic surgeries, which is itself subject to attention to body and BID, is a rather exaggerated reflection of this fact [16].

Cache [17], as one of the researchers in the field of body image, emphasizes, one of the future directions in the field of body image research, study Risk factors of body image: **"**Factors that influence positive and negative body image development across the life span (i.e., risk factors and protective factors)". Accordingly, a wide range of factors related to body image and body image disturbances have been studied. Many of these factors have been studied in the form of predisposing factors or risk factors, including demographic factors such as age, gender, education (parent and parent education), occupation (parental occupation), population (city and village) , Socioeconomic status; factors such as body mass index, weight, height, abdominal fat, as well as lifestyle factors such as exercise activities, watching TV, nutrition program (healthy and non-alcoholic), consumption Tobacco and alcohol, as well as social factors such as culture, family, group of friends and peers, mass media, or psychological factors such as personality, self-esteem, aesthetic factors, health status [18-27]. However, despite the fact that the

Access this article online	
Website: www.japer.in	**E-ISSN:** 2249-3379

How to cite this article: Ali Abedi, Mohammad Ali Sepahvandi*, Fazlolah Mirderikvand. Investigating the role of early maladaptive schemas in Body image disturbance. J Adv Pharm Edu Res 2018;8(S2):51-57.
Source of Support: Nil, Conflict of Interest: None declared.

body image is a multifaceted structure includes cognitive, emotional and perceptual dimensions [28], less research is concerned with the role of cognitions or fundamental cognitive components, including early maladaptive schemas, as a risk factor in formation and disturbance of the body image.

Schemas are fundamental structures that, like a lens, affect people's perceptions of the world, themselves and others. In other words, schemas form the way of interpretation, selection and evaluation of individuals, in their experiences [29]. By filtering the experiments, schemas provide them with an interpretation consistent with their structure and lead to choices that are consistent with them. Of course, schemas are not necessarily adaptive and do not have normal function [30]: early maladaptive schemas are the core of many personality disorders, behavioral and cognitive problems, and other disorders. In other words, early maladaptive schemas are a factor of vulnerability to disturbances and psychological and personality disorders [29]. Young [30] lists eighteen maladaptive schemas in five basic schema domains that are maladaptive, including: First domain(Disconnection & Rejection) including Abandonment/ Instability, Mistrust/Abuse, Emotional Deprivation, Defectiveness/Shame, Social Alienation/Rejection; second domain(Impaired Autonomy & Performance) including Dependence/Incompetence, Vulnerability to Harm/Illness, Enmeshment/Undeveloped Self, Failure; The third domain (Impaired Limits) including Entitlement/Grandiosity, Insufficient Self-Control/Self-Discipline; the fourth domain (Other-Directedness) includes schemas Subjugation, Self-Sacrifice, Approval-Seeking/Recognition-Seeking; the fifth domain (Overvigilance & Inhibition)including Negativity/Pessimism, Emotional Inhibition, Unrelenting Standards/Hypercriticalness, Punitiveness. These maladaptive schemas result from the non-satisfaction of the basic emotional needs of childhood and have emotional and cognitive self-harm patterns [30]. According to Young [30], early maladaptive schemas are the core of many personality disorders, behavioral and cognitive problems, and other disorders. In other words, early maladaptive schemas are a special vulnerability factor to disturbances and psychological and personality disorders [29], such as body image disturbances and disorders.

Regarding the relationship between schemas and disorders associated with body image (eating disorders, physical deformity, social appearance anxiety, etc.), some studies have been carried out and the role of cognitive foundations and schemas has been emphasized. For example, some research studies the role of maladaptive schemas in body image disorders, including searching and performing cosmetic surgery [31], obesity [32], body mass index [33], eating disorder [34, 35], Disagreements about body weight [36], etc., but less exploration has directly investigated the role of maladaptive schemas in the body image and disorder in which the core and morbid forms of all these disorders are shaped. In some studies, [35, 37, 38], although directly related to the relationship of schemas with maladaptive body image, these studies have, in general, analyzed the variables of schemas and their relation to the distorted body image. Evaluated, for example, in a study [37], early maladaptive schemas are reflected only in the form of a single score and a single scale (rather than each single schema as a subscale), and its relationship with the disrupted body image is measured. Or, in other study [35], maladaptive schemas have been evaluated only in the form of five domains in relation to the distorted physical image. In the study of the magnificent and others [38], firstly, the criterion variable is merely a physical image, while the variables of schemas, such as the study of Bone and others [35], have been studied and analyzed in the form of five domains. Therefore, the present study investigates the role of primary maladaptive schemas in the form of single schemas and schema domains in body image disturbances.

Material and Methods

The present study is a descriptive-correlational study examining the relationship of maladaptive schemas and body image disturbance. The study sample consisted of 334 students (159 boys and 175 girls) who were selected by cluster sampling method among students attending universities in Arak. The variables (early maladaptive schemas and body image disturbance) were measured using the Young Early Maladaptive Schemes Questionnaire (Short Form) and Body Image Concerns Inventory respectively. Descriptive statistics (mean, standard deviation), Pearson correlation coefficient and multiple regression analysis were used to analyze the research data.

Materials

Body Image Concerns Inventory(BICI): BICI was developed and validated by Littleton et al. [39] to assess body image dissatisfaction and appearance concern. The BICI is a 19-item self-report measure. For each item, individuals indicated how often they have the described feeling or perform the described behavior on a 5-point Likert scale bounded by 1 (*never*) to 5 (*always*). BICI, basically measures one's body image dissatisfaction in disorders such as body dismorphic, eating disorders and similar semiotics at clinical and non-clinical levels. In the study of Liteleton et al. [39], Cronbach's alpha in the college sample was obtained .93 and the correlation of the material with the total between .32 to .73. In the same study, the correlation of this questionnaire with the Self-Reporting Questionnaire for Body dismorphic Disorder (BDD-SR) .83 was obtained.

BICI was verified in Iran by Besak Nejad and Ghaffari [40] and validated on the collage student population. According to them (the same source), Cronbach's alpha was obtained .95 (female .93, male .95). Also, in their review, the validity of this questionnaire was correlated with the fear of negative evaluation of physical appearance and fear of negative evaluation, respectively, .55 and .43 respectively. In the study of Besak Nejad, Mehrabizadeh Honarmand, Hassani and Nargesi [41], the Cronbach's alpha for female and male students, was .84, .84 and 85 respectively. The study of Pasha, Naderi and Akbari

[42] has also confirmed the optimal psychometric properties of this questionnaire.

Young's Early maladaptive schemas (short form): This questionnaire consists of 75 items that were developed by Young [43] to evaluate 15 maladaptive schemas. These schemas are distributed in five basic domains including: First domain (Disconnection & Rejection), Abandonment/ Instability, Mistrust/Abuse, Emotional Deprivation, Defectiveness/Shame, Social Alienation/Rejection; second domain(Impaired Autonomy & Performance) including Dependence/Incompetence, Vulnerability to Harm/Illness, Enmeshment/Undeveloped Self, Failure; The third domain (Impaired Limits) including Entitlement/Grandiosity, Insufficient Self-Control/Self-Discipline; the fourth domain (Other-Directedness) includes schemas Subjugation, Self-Sacrifice; the fifth domain (Overvigilance & Inhibition)including, Emotional Inhibition, Unrelenting Standards/Hypercriticalness. Each question is scored on a 6-point scale (1 (absolutely false) to 6 (perfectly correct)). In this questionnaire, each schema is measured by five questions. Reliability and validity of this tool have been proved in several studies. For example, in the study of Waller, Meyer and Hennings [44], Cronbach's alpha for the whole test was 0/96 and for all sub-scales was above 80. The implementation and standardization of this questionnaire in the Iranian population [45-47], in general, confirms its validity and reliability.

Results

In order to investigate the relationship between early maladaptive schemas and also five basic schema domains and body image disturbance, the Pearson correlation coefficient was used (Tables 1 and 2). the mean and standard deviation of the variables are also presented in the end rows of tables:

Table 1: Descriptive statistics and Correlational Matrix for five schema domains and BID

Variables(schema domains & BID)	1	2	3	4	5	6
Domain 1(Disconnection & Rejection)	1					
Domain 2(Impaired Autonomy & Performance)	0.64	1				
Domain 3(Impaired Limits)	0.52	0.47	1			
Domain 4(Other-Directedness)	0.48	0.58	0.33	1		
Domain 5(Overvigilance & Inhibition)	0.60	0.64	0.44	0.57	1	
Body image disturbance(BID)	**0.26	** 0.38	**0.34	** 0.25	**0.28	1
Mean	16.20	10.82	11.02	11.45	12.12	36.4
SD	8.69	8.95	4.66	4.20	5.11	9.39

Note. (*) denotes p < .05, (**) denotes p < .01

The data in Table 1 show, all of the five schema domains ("Disconnection & Rejection", "Impaired Autonomy & Performance", "Impaired Limits", "Other-Directedness", "Overvigilance & Inhibition") are positively correlated with body image disturbance. According to data, domains 2 and 3("Impaired Autonomy & Performance", "Impaired Limits") show the highest relationship with body image disturbance, respectively.

Table 2: Descriptive statistics and Correlational Matrix for EMSs and BID

variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ED	1															
AI	0.11	1														
MA	0.20	0.31	1													
SI	0.32	0.17	0.49	1												
DS	0.27	0.28	0.52	0.67	1											
Fa	0.16	0.29	0.39	0.59	0.67	1										
DI	0.10	0.40	0.50	0.38	0.54	0.62	1									
VH	0.02	0.45	0.40	0.24	0.35	0.43	0.57	1								
EM	0.03	0.24	0.59	0.43	0.49	0.52	0.62	0.47	1							
Sb	0.22	0.38	0.52	0.46	0.52	0.51	0.65	0.51	0.55	1						
SS	0.17	0.18	0.12	0.09	0.01	0.09	0.25	0.23	0.27	0.34	1					
EI	0.15	0.17	0.42	0.58	0.59	0.54	0.47	0.43	0.57	0.46	0.16	1				
US	0.22	0.25	0.40	0.24	0.27	0.20	0.38	0.32	0.36	0.43	0.45	0.25	1			
ET	0.30	0.08	0.37	0.24	0.30	0.21	0.21	0.20	0.37	0.21	0.12	0.25	0.30	1		
IS	0.16	0.13	0.50	0.45	0.47	0.52	0.39	0.27	0.38	0.44	0.12	0.46	0.14	0.36	1	
BID	0.07	0.16	0.29**	0.15	0.20*	0.30**	0.33**	0.36**	0.23*	0.26*	0.14	0.25*	0.20*	0.20*	0.36**	1
Mean	4.38	7.63	5.66	4.28	2.33	3.33	4.17	4.54	4.18	5.01	12.16	6.01	12.17	9.47	7.07	36.4
SD	4.07	4.52	3.88	3.91	2.87	3.87	4.16	4.72	3.8	3.74	3.95	4.98	4.68	4.32	4.14	9.39

Note. (*) denotes p < .05, (**) denotes p < .01. ED=Emotional Deprivation, AI = Abandonment/ Instability, MA=Mistrust/Abuse, SI=Social Isolation/Alienation, DS=Defectiveness/Shame, FA=Failure, DI=Dependence/Incompetence, VH=Vulnerability to Harm/Illness, EM= Enmeshment /Undeveloped Self, SB=Subjugation, SS=Self-Sacrifice, EI=Emotional Inhibition, US=Unrelenting Standards/Hypercriticalness, ET=Entitlement/Grandiosity, IS=Insufficient Self-Control/Self-Discipline, BID=body image disturbance.

As Table 2 shows, early maladaptive schemas such as "Mistrust/Abuse", "Failure", "Dependence/Incompetence", "Vulnerability to Harm/Illness" (at the level of p<0.01) and "Defectiveness/Shame", "Enmeshment/Undeveloped Self", "Subjugation", "Emotional Inhibition", "Unrelenting Standards/Hypercriticalness", "Entitlement/Grandiosity defect" (at the level of p<0.05%), are positively correlated with body image disturbance. There was not *a* significant relationship between "Emotional deprivation", "Abandonment/Instability", "social isolation/alienation", and

"self-sacrifice" with the body image concern. The three schemas "Insufficient Self-Control/Self-Discipline", "Vulnerability to Harm/Illness" and "dependency/incompetence" show the highest relationship with body image disturbance, respectively.

The multiple regression analysis was used to determine the role of early maladaptive schemas in body image concern and disturbance. Tables 3 and 4 show the results of this analysis:

Table 3: Hierarchica regression analyses summaries for schema domains predicting body image disturbance

Steps	Criterion	Predictor variables	r	R2	F	Sig.	B	β	T	Sig.
1	BID	Domain2 (autonomous and impaired performance)	.0 384	.0 148	.22 89	.0 000	.0 403	.0 384	.4 87	.0 000
2	BID	Domain2 (autonomous and impaired performance)	.0 426	.0 169	.14 50	.0 000	.0 300	.0 285	.3 19	.0 002
		Domain 3 (impaired limits)					.0 418	.0 208	.2 31	.0 022

According to table 3, schema domains 2 and 3 ("autonomous and impaired performance" and "impaired limits"), significantly predicted, almost 17% of the variance of body image disturbance. The rest of the schema domains are eliminated from the model due to the weak relationship with the criterion variable.

Table 4: Hierarchical regression analyses summaries for EMSs predicting body image disturbance

Steps	criterion	Predictors	R	R2	F	Sig.	B	β	T	Sig.
1	BID	IS	.0 367	.0 134	.20 50	.0 000	.1 24	.0 367	.4 52	.0 000
2	BID	IS	.0 458	.0 210	.17 42	.0 000	.0 980	.0 288	.3 57	.0 000
		VH					.0 853	.0 286	.3 54	.0 001

Note. BID=body image disturbance, IS=Insufficient Self-Control/Self-Discipline, VH=Vulnerability to Harm/Illness

According to Table 4, among the fifteen schemas, the combination of two incompatible schemas "Insufficient Self-Control/Self-Discipline", and "Vulnerability to Harm/Illness" in general, predicts 21% of variance of body image disturbances. The rest of the schemas are eliminated from the model due to the weak relationship with the criterion variable.

Discussion

The present study was carried out to investigate the relation between EMSs and BID. Based on the findings (Tables 1 and 2), all of the five schema domains and also all of the EMSs (with the exception of "emotional deprivation", "Abandonment/Instability", "social isolation/alienation" and "self-sacrifice") are positively correlated with BID. On the other hand, the regression analysis data confirms the role of the schemas in BID; two schema domains of "autonomy and impaired performance" and "impaired limits", in total, predicted %17 of the variance of the BID (Table 3). Also, combination of two schemas of "self-control/inadequate self-control" and "vulnerability Vulnerability to Harm/Illness", predicted 21% of the variance of BID (Table 4).

These results indicate that the maladaptive schemas, leads to increasing in distortion and dissatisfaction with the body image. These findings are consistent with other research investigating the relationship maladaptive schemas and body image disturbance [35, 37, 38]. On the other hand, given that the body image and its disturbance is important aspect of disorders such as body dysmorphic disorder and eating disorders(maybe even *their core* feature), the findings are indirectly consistent with Pauwels [34], cullum [48], Sapmazs Yurtsever and Sütcü [36], Unoka, Tölgyes and Czobor [33], Abbasi, Aghighi, Porzoor and Dehghan [49], Nilforooshan, Shamohammadi and Navidian [31]. Of course, this consistency is merely general; all of the above studies indicate that there is a relationship between the schema system and the body image and its disturbance, but there are differences in the details of this relationship. For example, in the study of Khosheghbal et al. [37], which has measured the relationship between BID and maladaptive schemas in nose surgery volunteers, EMSs (which are only integrated into a solidarity analysis based on a general YSQ score), Shows a very high correlation with BID (r =0.83). Meanwhile, in the regression analysis report, schemes of "Mistrust/Abuse", "Entitlement/Grandiosity" and "approval-seeking/recognition-seeking", has been reported as predictors of BID [37]. However, in the present study, firstly, the highest correlation coefficient was 0.37, and on the other hand, schemas of "Insufficient Self-Control/Self-Discipline" and "Vulnerability to Harm/Illness", are the best predictors of BID. According to Mojallal, et al. [38], who have compared the schema domains and body image of aesthetic surgery applicants with normal group, the results showed that the relationship between the schema domains and body image is negative, but this relationship has only been achieved in two schema domains of "Disconnection & Rejection" and "Impaired Autonomy & Performance", while in the present study, the results show a significant relationship between all schema domains with the BID. Bone et al. [35] also, who have investigated the schemas system of eating disorder population solely on the basis of five schema domains, reported Significance positive relationship between all schema domains and BID (between 0.23 and 0.48). These differences at this level may result from differences in the research groups (clinical and non-clinical groups) as well as measuring instruments. But, in any case, the total survey confirms the existence of a close relationship between early maladaptive schemas and the body image disturbance.

There are several possible explanations for this result. First, perceptual-attitude foundation and, consequently, the cognitive-emotional elements of the body image that have been emphasized in the cognitive approaches to the body image [17, 50, 51]. Based on the cognitive-behavioral approach [17], the body image consists of

multiple components, including perceptual, evaluation, cognitive, emotional and behavioral components; the cognitive component refers to "How do you think about your body?" Including beliefs and thoughts related to the physical characteristics, shape and size of the body and appearance and also their important, or beliefs associated with the ideals appearance. Accordingly, the disturbance of the body image, resulting from cognitive biases in the self-assessment and estimation of the body [51], or more precisely, is derived from the biases and thoughts associated with the body and the ideals related with the body, therefore this disturbance basically can be have a Cognitive-emotional nature. This means that cognitions and cognitive biases are an integral part of body image and its disturbances [15, 51]. On the other hand, according to Cache [17], the body image or appearance schemas are formed as a result of historical factors, including interpersonal experiences, events (teasing) and physical features and characteristics; such a process is the basis of how people think, feel and act in relation to their bodies. Accordingly, in general, the body image and its disturbance is an emotional-cognitive structure and a part of self-concept that genesis in the developmental context of the individual and in relation to themselves and others. Meanwhile, cognitive schemas, including early maladaptive schemas, also have the same nature and foundation: schemas have an emotional-cognitive structure and form in the relational context of individual with themselves and others in childhood and adolescence. These schemas act as a filter in the process of attention, processing, and action, and are the main and undisputed interpreter and decision-maker of the mental structure [30]. Therefore, both the body image and the schemas system, form in the developmental context and social relationships of individuals, and each of them has a cognitive-emotional identity. On this basis, it can be said that the role (predictor) of early maladaptive schemas in body image disturbance and the relationship between them can be in the first step due to such common foundation and the more fundamental of the schemas in the formation of all psychological structures, including the body image in the next step.

References

1. Brito MJAD, Nahas FX, Cordás TA, Gama MG, Sucupira ER, Ramos TD, Felix GDAA, Ferreira LM. Prevalence of Body Dysmorphic Disorder Symptoms and Body Weight Concerns in Patients Seeking Abdominoplasty. Aesthetic Surgery Journal. 2016; 36(3): 324–33.
2. As-Sa'edi E, Sheerah S, Al-Ayoubi R, Al-Jehani A, Tajaddin W, Habeeb H. Body image dissatisfaction: Prevalence and relation to body mass index among female medical students in Taibah University, 2011. Journal of Taibah University Medical Sciences. 2013; 8(2): 126-133.
3. Fiske L, Fallon EA, Blissmer B, Redding CA. Prevalence of body dissatisfaction among United States adults: Review and recommendations for future research. Eating Behaviors. 2014; 15, 357–365.
4. Runfola CD, Holle AV, Trace SE, Brownley KA, Hofmeier, SM, Gagne, DA, Bulik CM. Body Dissatisfaction in Women Across the Lifespan: Results of the UNC-SELF and Gender and Body Image (GABI) Studies.Eur Eat Disord Rev. 2013; 21(1): 52–59.
5. Jafari-Adli S, Jouyandeh z, Qorbani M, Soroush A, Larijani B, Hasani-Ranjbar S. Prevalence of obesity and overweight in adults and children in Iran; a systematic review. Journal of Diabetes & Metabolic Disorders.2014; 3:121. https://doi.org/10.1186/s40200-014-0121-2
6. Ferrari EP, Petroski EL, Silva DAS. Prevalence of body image dissatisfaction and associated factors among physical education students. Trends Psychiatry Psychother. 2013;35(2):119-127.
7. Ferreiro F, Seoane G, Senra C. A prospective study of risk factors for the development of depression and disordered eating in adolescents. J Clin Child Adolesc Psychol. 2011; 40(3):500-5.
8. Vander Wal JS. Eating and body image concerns among average-weight and obese African American and Hispanic girls, Eating Behaviors. 2044; 5:181-187.
9. Rosen JC, Ramirez E. A comparison of eating disorders and body dismorphic disorder on body image and psychological adjustment. Journal of Psychosomatic research. 1998; 44:441 – 449.
10. Paxton SJ, Neumark-Sztainer D, Hannan PJ, Eisenberg ME. Body dissatisfaction prospectively predicts depressive mood and low self-esteem in adolescent girls and boys. J Clin Child Adolesc Psychol. 2006; 35(4):539-49.
11. Mohammadi N, Sajadinejad MS. The Evaluation of psychometric properties of Body Image Concern Inventory and examination of a model about the relationship between body mass index, body image dissatisfaction and self-esteem in adolescent girls. Psychological Studies. Faculty of Education and Psychology Al-Zahra University. 2007; 3(1): 85 – 101.
12. Hamilton SR. A relationship between perceived body image and depression: How college women see themselves may affect depression. Student Journal of Psychological Science, 2008; 1(1): 13-20
13. Brausch AM, Gutierrez PM. The role of body image and disordered eating as risk factors for depression and suicidal ideation in adolescents. Suicide Life Threat Behav.2009; 39(1):58-71.
14. Sobanko JF, Taglienti AJ, Wilson AJ, Sarwer DB, Margolis DJ, Dai J, Percec I. Motivations for Seeking Minimally Invasive Cosmetic Procedures in an Academic Outpatient Setting. Aesthetic Surgery Journal. 2015; 35(8): 1014–1020.
15. Neagu A. Body image: A theoretical framework. Proc. Rom. Acad., Series B. 2015; 17(1):29–38.
16. Frederick DA, Lever J, Peplau LA. Interest in Cosmetic Surgery and Body Image: Views of Men and Women across the Lifespan. Plastic and Reconstructive Surgery. 2007; 120(5):1407-1415.

17. Cash TF. Body image: Past, present, and future (editorial). Body Image: An International Journal of Research. 2004; 1, 1–5. —Provides the editor's perspective on the feld for the journal's inaugural issue, which includes nine review articles on core topics about body image.
18. Momeni M, Ghorbani A, Hasandoost F. Predictors of Body image dissatisfaction among students of Qazvin University of Medical Sciences. Iranian Journal of Psychiatric Nursing (IJPN).2016; 4(13): http://research-repository.uwa.edu.au/en/persons/katerina-chinaloy-lima(749ac4bb-6a81-40da-bc24-8a6451c6f290)/publications.html
19. Araujo TSD, Filho VCB, Gubert FDA, Almeida PCD, Martins MC, Carvalho QGDS, Costa, ACPDJ, Vieira NFC. Factors Associated with Body Image Perception Among Brazilian Students from Low Human Development Index Areas.The Journal of School Nursing, 2017.
20. Grabe S, Ward LM, Hyde JS. The Role of the Media in Body Image Concerns Among Women: A Meta-Analysis of Experimental and Correlational Studies. Psychological Bulletin Copyright 2008 by the American Psychological Association. 2008; 134(3): 460–476.
21. Frederick SAL. The Connections between Body Image Disturbance and Self-Esteem in College Men and Women.2015. https://www.mckendree.edu/academics/scholars/issue23/shay-frederick.pdf
22. Alikasifoglu M, Ercan O, Erginoz E, AlbayearakKaymak D, Uysal O. Factors Associated with Dissatisfaction of Body Image among Turkish Adolescents. Journal of Adolescent Health. 2011; 48(2): http://doi.org/10.1016/j.jadohealth.2010.11.114
23. Gillen, MM. An Examination of Multiple Aspects of Body Image in Racially /Ethnically Diverse Emerging Adults. North American Journal of Psychology. 2013; 15(1): 71-88.
24. Pelegrini A, Coqueiro RDS, Beck CC, Ghedin KD, Lopes ADS, Petroski EL. Dissatisfaction with body image among adolescent students: association with socio-demographic factorsand nutritional status. Ciência & Saúde Coletiva, 2014; 19(4):1201-1208.
25. Vonderen, KEV, Kinnally W. Media Effects on Body Image: Examining Media Exposure in the Broader Context of Internal and Other Social Factors. American Communication Journal. 2012;14(2): 41-57.
26. MacNeill LP, Best LA, Davis LL. The role of personality in body image dissatisfaction and disordered eating: discrepancies between men and women. Journal of Eating Disorders.2017; 5:44
27. Petroski EL, Pelegrini A, Glaner MF. Reasons and prevalence of body image dissatisfaction in adolescents. Ciência & Saúde Coletiva. 2012; 17(4):1071-1077.
28. Chin-A-Loy Lima K. A biopsychosocial model of body image dissatisfaction in adolescent boys and girls: cross-sectional and longitudinal associations from a population study. 2017. http://repository.uwa.edu.au/files/14771905/THESIS_DOCTOR_OF_PHILOSOPHY_CHIN_A_LOY_LIMA_Katerina_Maria_2017.pdf
29. Valizadeh L. Investigating the Relationship between the Perceived Parenting Styles and Early Maladaptive Schemas with Loneliness. Journal of Administrative Management, Education and Training. 2016; 12(3): 347-356.
30. Young JE, Klosko JS, Weishaar M. Schema Therapy: A Practitioner's Guide. Guilford Publications: New York. 2003.
31. Nilforooshan P, Shamohammadi M, Navidian A. Early maladaptive schemas and psychological health among Womens seeking cosmetic surgery. Iranian Journal of Psychiatric Nursing (IJPN). 2015; 3(1): 12-23.
32. Doosalivand H, Tahmasbi N, Ghanbarijolfaei A, Ghahremani S, Pishgahroudsari M. A comparison of maladaptive early schemas and appearance schemas in obese and normal weight control subjects. 2015; 16 (3): 329 – 337.
33. Unoka Z, Tölgyes T, Czobor P. Early maladaptive schemas and body mass index in subgroups of eating disorders: a differential association. Compr Psychiatry. 2007; 48(2):199-204.
34. Pauwels E, Dierckx e, Schoevaerts K, Claes l. Early Maladaptive Schemas in Eating Disordered Patients with or Without Non-Suicidal Self-Injury. Eur Eat Disord Rev. 2016; 24(5):399-405.
35. Boone L, Braet C, Vandereycken W, Claes L. Are maladaptive schema domains and perfectionism related to body image concerns in eating disorder patients? Eur Eat Disord Rev. 2013;21(1):45-51.
36. Sapmaz Yurtsever S, Sütcü ST. Early Maladaptive Schemas Related to Body Weight and Gender International Society of Schema Therapy Conference 12-14 June 2014, İstanbul Turkey: https://www.researchgate.net/publication/298713517
37. Khosheghbal M, Eesazadeghan A, Mikaeli Manee F. Examination of the Relationship between Perfectionism and Body Image Dissatisfaction in Nose Beauty Surgery's Applicants: Role of Early Maladaptive Schemas. International Journal of Psychology and Behavioral Sciences. 2015; 5(3): 109-114.
38. Mojallal M, Khosrojavid M, Pakzad F, Ghanbari M. Early Maladaptive Schemas, Body Image, and Self-Esteem in Iranian Patients Undergone Cosmetic Surgery Compared with Normal Individuals. Journal of Practice in Clinical Psychology. 2014;2(3):201-209.
39. Littleton HL, Axsom DS, Pury CL. Development of the body image concern inventory, Behavior Research and Therapy. 2005; 43:229 -241.

40. Basak-Nejad S, Ghaffari M. The Relationship between Fear of Body Dysmorphia and Psychological Disorders of University Students. Journal of Behavioral Sciences,2007; 2: 179-187. In Persian.
41. Bassak Nejad S, Mehrabizadeh Honarmand M, Hasani M, Nargesi F. The Effect of Narrative Group Therapy on Body Dysmorphic Concern in Female University Students. Health Psychology.2012;1(2): 5-11. In Persian.
42. Pasha G, Naderi F, Akbari SH. Comparison of body image, body build index, general health and self concept between beauty surgery those who have done beauty surgery and ordinary people in Behbahan. Journal of social psychology (New findings in psychology), 2008;2(7): 61-80. In Persian.
43. Young JE. The Young Schema Questionnaire-Shortened Inventory. http://www.schematherapy.com. Copyright Jeffrey Young and Gary Brown. 1998.
44. Waller G, Meyer C, Hanian V. Psychometric properties of the long & short versions of the Young Schema Questionnative. Cognitive Therapy and Research. 2001;25: 137-147.
45. Ahi G, Mohamadifar M, Besharat MA. Relability and Validity of the early maladapting Schema scale (short form). Journal of Psychology and Education School of Tehran University. 2007; 37(3): 5-20. Persian.
46. Sadooghi Z, Aguilar-Vafaie ME, Rasoulzadeh-Tabatabaie K, Esfehanian N. Factor analysis of the young schema questionnaire- short form in a nonclinical Iranian sample. Iranian J Psychiatry Clin Psychol. 2008; 14: 214-219.
47. Yousefi N, Shirbagi N. Validating the Young Early Maladaptive Schema Questionnaire (YEMSQ) among Students. Iranian Journal of Psychiatry and Behavioral Sciences (IJPBS). 2010; 4(1): 38-46.
48. Cullum JL. Maladaptive Schemas as a Predictor of Residential Treatment Outcomes in Females with Eating Disorders. 2009; All Graduate Teses and Dissertations. 459. https://digitalcommons.usu.edu/etd/459
49. Abbasi M, Aghighi A, Porzoor P, Dehghan M. Comparison of early maladaptive schemas and psychological well-being in women undergoing cosmetic surgery and normal women. Journal of Research & Health Social Development & Health Promotion Research Center.2017; 7(3): 841 – 849.
50. Cash TF, Smolak L. Body Image: A Handbook of Science, Practice, and Prevention, Chapter 1, Understanding Body Images Historical and Contemporary Perspectives. Second Edition.2011.www.guilford.com/p/cash2
51. Waldman A, Loomes R, Mountford VA, Tchanturia K. Attitudinal and perceptual factors in body image distortion: an exploratory study in patients with anorexia nervosa Journal of Eating Disorders 2013; 1:17 http://www.jeatdisord.com/content/1/1/17.