

The Relationship between the Contact Styles and Self-Esteem of the People with Obesity

Gönül Özgür¹, Ayşe Büyükbayram^{2*} and Nesil Gören Atalay³

¹Division of Nursing, Department of Mental Health and Psychiatry Nursing, Bornova, İzmir, Turkey

²Division of Nursing, Department of Mental Health and Psychiatry Nursing, Izmir Katip Celebi University, Cigli, Izmir, Turkey

³Atatürk Training and Research Hospital, Izmir Katip Celebi University, Cigli, Izmır, Turkey

*Corresponding author: Ayşe Büyükbayram, Division of Nursing, Department of Mental Health and Psychiatry Nursing, Izmir Katip Celebi University, Cigli, Izmır, Turkey, Tel: +0905052204200; E-mail: abayram35@gmail.com

Received date: November 15, 2017; Accepted date: November 27, 2017; Published date: December 5, 2017

Copyright: © 2017 Özgür G, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

Abstract

Objective: This study aimed to examine the relationship between contact styles and self-esteem of people with obesity.

Methods: This relational and descriptive study was conducted in 2015 with 322 persons with obesity that were followed in endocrinology clinics of two hospitals at İzmir and agreed to participate. The Introductory Information Form, Rosenberg Self-Esteem Scale (RSES) and Revised Form of Gestalt Contact Styles Scale (GCSS-RF) were used.

Results: Mean age of the people with obesity was 46.18 ± 11.89 . 84.2% were female. Their mean RSES score was 1.48 ± 0.26 . Mean GCSS-RF sub-dimension scores were: confluence 2.63 ± 0.45 (min=1, max=3.92); deflection 3.13 ± 0.69 (min=1.38, max=4.69); contact 2.71 ± 0.60 (min=1, max=4.45); emotional desensitization 2.78 ± 0.62 (min=1, max=4.83); retroflection 2.96 ± 0.75 (min=1.22, max=6.67). An inverse relationship was found between the mean scores of retroflection (r=-0.52, p<0.01), contact (r=-0.12, p<0.01), deflection (r=-0.50, p<0.01), confluence (r=-0.21, p<0.01), and self-esteem. No relationship was found between these sub-dimensions and emotional desensitization (r=0.07, p>0.05).

Conclusion: Self-esteem of people with obesity is lower than the moderate level. Individuals use confluence, deflection, contact, emotional desensitization, and retroflection respectively. Participants who use these subdimensions, except for emotional desensitization, have negative self-esteem.

Keywords: Obesity; Self-esteem; Gestalt contact styles; Gestalt therapy; Nursing approach; Contact styles; Obese person

Introduction

The World Health Organization defines obesity as the increase in body fat to a level that negatively affects health [1,2]. The prevalence and cost of obesity as a health issue are increasing in all countries, particularly in the developed countries [1-3].

The majority of obesity-related health expenditure is directly related to physical and mental problems caused by obesity [2-6]. In addition to the physical problems such as cardiovascular disorders, type 2 diabetes, arthritis and cancer [5,7] and psychological problems such as anxiety disorder and depression [2,4,5,7-11], not finding marriage partners due to social bias and problems related to finding a job and education are frequent; these problems affect the duration and quality of life [2,4-8,11,12]. These problems also worsen the negative feelings of the people with obesity and decrease self-esteem [7-10,13-15].

Self-esteem is an individual's realistic perceptions and judgments such as self-love, self-respect and self-trust [16,17]. Individuals in this positive mood feel themselves precious and worth being appreciated and loved [4,10,12,14]. In many studies conducted with people with obesity, these people had a negative self-perception and lower selfesteem than those who do not suffer from obesity [4,7-10,12-14,18]. How people perceive themselves is important for their psychological well-being. This affects their contact style, reflects on their behaviors and attitudes, and shapes social interactions [19]. According to the Gestalt approach, contact is defined as individuals' interactions with themselves, others and physical and social environment. Any interaction-such as eating, running, feeling, screaming, laughing, attacking, hugging, fighting, and loving-that takes place between the individuals and their environment is at base a contact [19,20].

The Gestalt approach has a humanist perspective that enables individuals to grow while adopting to their environment without being judged, blamed, embarrassed, and fearing and worrying, and to live in a world the way they wish [19,20]. Therefore, this approach suggests that individuals should be considered together with their environment, and that nobody could ensure that their needs are met if they did not interact with their environment because they would not be able to maintain their lives. Common contact styles used in the Gestalt approach are deflection, confluence, inclusion, reflection, retroflection, desensitization and self-monitoring [19-21]. These contact styles are not personal characteristic: Individuals use them separately or employ a few of them together with their choices and contact styles in mind [19-21]. Particularly, using negative contact styles for too long may constitute a risk factor for psychological problems. Thus, contact styles are important for Gestalt therapy approach [20-23].

Regarding the Gestalt therapy approach, individuals gain sufficient energy for a change in their lives, live with the "now and here" principle and add values and meanings to their lives when they maintain a positive interaction with themselves and their environment [19-27]. However, individuals may not be able to meet their own needs and express themselves, thus they suffer from psychological problems because they cannot interact with anybody when their contact with themselves and their environment is interrupted. Gestalt therapy will help individuals understand how healthy interaction is interrupted, what can be fixed, and which path will be followed [20-23]. Moreover, studies suggest that psychological and social problems of people with obesity should also be supported by psychotherapeutic practices or group activities; this is significant [2,4,6,13-15,18]. It is suggested that the contact styles individuals frequently employ may be a significant risk factor for psychological problems they may face in the future, and a Gestalt approach may be effective in eliminating these problems.

In addition, studies indicating that people with obesity generally have low levels of self-esteem, face problems in their social relationships, have fewer social interactions compared to other people, and suffer from psychological problems [11-15,18]. However, no study examining the contact styles indicating individuals' interaction with themselves, others, and physical and social environment has been found.

Based on that unfulfilled need, this study aimed to examine the relationship between contact styles and the self-esteem of people with obesity. This study is expected to contribute to the limited number of obesity-related sources, to create awareness about how contact styles determine individuals' interaction with themselves and their environment, and to shed light on the studies for improving the Gestalt therapy approach for people with obesity. The following questions will be answered:

- What is the self-esteem level in the people with obesity?
- What are the contact styles used by the population with obesity?
- Is there a relationship between the contact styles and self-esteem of the people with obesity?

Materials and Methods

This is a descriptive and relational study with the purpose of examining the relationship between contact styles and self-esteem. After obtaining the necessary permissions, it was conducted in 2015 with the people who applied to the endocrinology polyclinic of University Hospital and Training and Research Hospital at İzmir, and were subsequently diagnosed with obesity. 339 of these persons with obesity agreed to participate in the study, but only 322 were included because 17 of them had insufficient research data. The data were collected conducting face-to-face interviews after the verbal consent of the people with obesity was obtained.

Data collection tools

Three forms were used to collect data:

Information form

This form, created by the researcher, contains closed-ended questions to determine the socio-demographic characteristics of patients.

Rosenberg self-esteem scale

This scale, developed by Rosenberg, was adapted to Turkish by Çuhadaroğlu [17]. This scale consists of ten items. Items 1, 2, 4, 6 and 7 question positive self-evaluation and are scored with points ranging between 3 and 0. Items 3, 5, 8, 9 and 10, on the other hand, question negative self-evaluation and are scored with points ranging between 0 and 3. The total score range is between 0 and 30. Scores between 15 and 25 indicate sufficient self-esteem, and scores lower than 15 suggest a low level of self-esteem. The reliability coefficient of the scale was 0.71 and its reliability coefficient was 0.75 [17]. Cronbach's alpha reliability coefficient was 0.79 for this study.

Revised form of gestalt contact styles scale (GCSS-RF)

This form, adapted to Turkish by Aktaş and Daş [19] assesses contact styles in the Gestalt approach that are important for diagnosing a person and identifying the best ways to conduct therapy and to follow its results. This Likert type scale consists of 61 items. It is scored with points ranging from 1 to 5 (completely suits, suits, no idea, does not suit, and does not suit at all). Items 2, 16, 20, 34, 36, 37 and 57 are reverse-scored. Separate scores are obtained for each dimension of the scale. High scores indicate that relevant contact styles are used more frequently. Cronbach's alpha reliability coefficient ranged between 0.53 and 0.84 [19]. Inclusion and reflection did not emerge as the same contact styles, although they were included in the original analysis as a result of the analyses [19]. Cronbach's alpha coefficient was 0.84 for this study.

GCSS-RF consists of five factors: retroflection, deflection, contact, confluence and emotional desensitization.

- Retroflection includes items related to inability to act, physical tension, negative self-perception, perceptions of social insufficiency, confusion and depressive symptoms.
- Deflection includes items related to difficulty in interacting, inability to concentrate, inability to recognize the feelings, and confusion.
- Contact includes items related to self-confidence in relationships, self-esteem, being social and dominant, and using social relationships to cope with the problems.
- Confluence includes items related to being meek and easy going, disliking differences, using indirect ways in communication, and showing no tolerance for tension.
- Emotional Desensitization includes items related to displaying rational reactions to the environment, defining oneself as a rational person and avoiding from displaying emotional reactions [19,20].

Ethical dimension of the research

Ethical approval was obtained from the Ethics Committee of Faculty of Nursing in University (IRB no. 2014-81) and written permission was received from the Secretary General of the Public Hospitals Association, in order to conduct this study. Participants were told that their details would be kept confidential and not be used for any purpose that is not related to the study, and their verbal and written consent was obtained. Citation: Özgür G, Büyükbayram A, Atalay NG (2017) The Relationship between the Contact Styles and Self-Esteem of the People with Obesity. J Nurs Care 6: 436. doi:10.4172/2167-1168.1000436

Page 3 of 6

Data analysis

Results

Descriptive findings, numbers, percentages, distributions and standard deviation were used to analyse the data. Because the study data did not show a normal distribution, Spearman's correlation analysis was used to examine the relationship between the variables. Cronbach's alpha values for the scales used in this study were examined.

84.3% of these individuals with obesity were female; ages of 41.9% of the cohort ranged between 45 and 54 years (mean age, 46.1 \pm 1.89). Also, 55% were married and 24.8% and 29.2% graduated from high school and university, respectively. 84.5% lived in the city, 78% had a nuclear family, 33.3% were retired and 37% were housewives. The income of 59.3% was equal to their expenditure (Table 1).

	n	%		n	%	
Gender	Residential Area					
Female	271	84.2	Village 7		2.2	
Male	51	15.8	Town 43		13.4	
Age	City	272	84.5			
34 years of age or under	52	16.1	Family Structure			
Age between 35-44 years	59	18.3	Nuclear	251	78	
Age between 45-54 years	135	41.9	Extended	54	16.8	
55 years of age or older	76	23.6	Lonely	17	5.3	
Marital status			Occupation			
Married	177	55	Housewife 119		37	
Single	145	45	Retired 107		33.2	
Educational status			Civil servant 27		8.4	
Elementary school	85	26.4	Other 69		21.4	
Moderate	32	9.9	Income level			
High school	80	24.8	Income lower than the expenditure 85		26.4	
Bachelor's degree	94	29.2	Income equal to the expenditure 191 59.3		59.3	
Master's degree	31	9.6	Income higher than the expenditure 46 14.3		14.3	
Total	322	100	Total	322	100	

Table 1: Socio-demographic characteristics of individuals.

Mean contact style scores of the individuals with obesity were as follows: confluence, 2.63 ± 0.45 (min=1, max=3.92); deflection, 3.13 ± 0.69 (min=1.38, max=4.69); contact 2.71 ± 0.60 (min=1, max=4.45);

emotional desensitization, 2.78 ± 0.62 (min=1, max=4.83); Retroflection, 2.96 ± 0.75 (min=1.22, max=6.67). Mean self-esteem score was found to 1.48 ± 0.26 (max: 3) (Table 2).

		м	SD	Min.	Max.
Self-esteem		1.48	0.26	0	3
Gestalt contact styles	Confluence	2.63	0.45	1	3.92
	Deflection	3.13	0.69	1.38	4.69
	Contact	2.71	0.6	1	4.45
	Emotional Desensitization	2.78	0.62	1	4.83
	Retroflection	2.96	0.75	1.22	6.67

Table 2: Mean scores of the individuals with obesity from self-esteem and contact styles (N: 322).

Citation: Özgür G, Büyükbayram A, Atalay NG (2017) The Relationship between the Contact Styles and Self-Esteem of the People with Obesity. J Nurs Care 6: 436. doi:10.4172/2167-1168.1000436

Page 4 of 6

A reverse and moderate relationship was found between the selfesteem levels of the people with obesity for retroflection (r=-0.52p<0.01) and reflection (r=-0.50 p<0.01). A reverse and poor relationship was found between the self-esteem levels for contact

(r=-0.10 p<0.05) and confluence (r=-0.21 p<0.01). However, no relationship was found between self-esteem and emotional desensitization (r=0.07 p>0.05) (Table 3).

	Gestalt contact styles					
		Retroflection	Deflection	Contact	Confluence	Emotional Desensitization
Self-esteem	r	-0.512	-0.503	-0.156	-0.216	0.074
	р	0	0	0.005	0	0.183

Table 3: The relationship between the contact styles and self-esteem of the people with obesity (N: 322).

Discussion

Most of the persons with obesity who visited the obesity polyclinic were females who were older than middle-aged, married, housewives, and retired, graduated from high school and university, lived in the urban area, had a nuclear family, and an income equal to their expenditures.

The self-esteem of the people with obesity was found to be below the moderate level (Table 2). In many studies that support the findings of this study, low-esteem levels of the people with obesity were low, and as these people gained weight, their self-esteem worsened [8-15,18].

Participants with obesity used confluence, deflection, contact, emotional desensitization, and retroflection, respectively. In addition, a reverse relationship was found between retroflection, deflection, confluence, and contact, and self-esteem levels.

Among the contact styles, people with obesity use confluence the most. Individuals who use this contact style are meek, easy going and obedient, dislike differences, use indirect ways to the communicate, and show no tolerance for tension [19,20]. Because those who use this style could not recognize where the borders lie around them and their environment starts and ends, they frequently use the word "we", have difficulty in saying "no", need people who will motivate and approve them, and prioritize the needs of other people [19-27]. Therefore, it has been suggested that these people have difficulties in getting satisfied, experience disappointments and go into depression [19,20,23-27]. Studies report that individuals with obesity and low self-esteem may avoid from expressing themselves [11-15]. And suffer from psychological problems such as anxiety disorder and depression [2,4,6,13,15] because they frequently need approval, feel worried that their ideas will be not accepted and they will be rejected, and they are sensitive to criticism. In the study conducted by Değirmenci [4], people with obesity who do not know their borders, need the approval of others and cannot say no have lower self-esteem. In other words, individuals who use confluence contact style have low level of selfesteem, which is an expected result. Thus, it is important to provide psychosocial support to the individuals with obesity who use that contact style.

Research findings indicate that people with obesity use deflection as the second most frequent contact style. People who use this contact style use methods such as changing the topic, equivocating, intellectualizing, and joking to avoid situations and relationships that will evoke intense and disturbing emotions [19-27]. In addition, these individuals display attitudes such as having difficulties in making contact, inability to concentrate and recognize emotions, and being confused. Therefore, it is suggested that people neglect their emotions to avoid clashing with themselves and their environment, are not open for feedback, and complain about the disappointments they constantly face [19-27]. In addition, study participants who used deflection had lower self-esteem. Because participants with a low level of self-esteem are unable to interact, have difficulties in expressing themselves and avoid from getting into tough situations [2,4,6,15], it is expected that individuals with obesity who have a low level of self-esteem will use this contact style to avoid emotional tensions; it is important to provide psychosocial support to these individuals. In addition, qualitative studies should be conducted to determine the methods (changing the topic, equivocating, etc.) these individuals use in relation to this contact style.

Participants used the "contact" contact style as the third (slightly lower than the moderate level) most frequent style in the scale evaluation. People who use this contact style have positive characteristics such as self-confidence, assertiveness and expressing themselves, and they use social relationships to cope with their problems [19-27]. However, individuals who use this contact style less have psychological problems for different reasons, such as difficulties in expressing themselves and an inability to interact [24,25,27]. Thus, it is suggested that these participants constituted a significant risk group in terms of psychological problems, and it is important to evaluate the individuals with obesity for their psychological problems in further. In addition, a high level of self-esteem for those who use the contact style, and satisfaction from social relationships are determinant factors [19-27], but a weak reverse relationship was found between the contact style and self-esteem, which was not expected. In other words, selfesteem of those who use the contact style is low. This unexpected outcome is presumed to arise from the efforts of the participants with low self-esteem to show themselves as more positive or participants' innate characteristics.

This study showed that emotional desensitization is below the average values in scale evaluation, and individuals with obesity use this style as the fourth most frequent contact style. Individual's avoidance from possible threats and close relationships when they realize certain speculation, and superficial relationships with others stay at the core of the emotional sensitization style [19-27]. Studies report that individuals, who use emotional desensitization as their contact style neglect body pain or stimulants in their environment, avoid displaying emotional responses to situations, tend to disregard their own health and ignore the threats around them, and spend a significant part of their lives isolating themselves from internal and external stimulants. Thus, their spontaneity decreases, and they become unfamiliar with their physical characteristics and environment [19-27]. Although people with obesity use this contact style less frequently, using this

contact style for too long is an important risk factor for physical and psychological health. Thus, it is important to provide psychosocial support to people with obesity that uses emotional desensitization. In addition, the fact that no relationship exists between self-esteem and emotional desensitization may be related to the difficulties participants have in recognizing their own emotions and expressing themselves.

Individuals with obesity use retroflection as the least frequent contact style. When individuals using this contact style communicated with another person, they had emotional (e.g. blaming themselves when they get angry], behavioural (e.g. biting the lips, bending the fingers or committing suicide), and cognitive difficulties (e.g. internal observation, resisting self-awareness, and establishing a dialog within themselves or with other people quite often in their minds) [19-27]. In addition, these people may be unable to move, and they may have physical tension, negative self-perception, feelings of social insufficiency, and depressive symptoms [23-27]. The present study found that people who used this contact style had negative selfperception, i.e., low self-esteem. Other studies suggest that people with obesity and low esteem have problems meeting their social needs and establishing communication, and they are introverted, blame themselves, and have somatic complaints [4,7,13-15,28]. The finding that people who suffer from obesity and use retroflection have low selfesteem is an expected result.

Regarding the people with obesity, a relationship is present between the contact styles and low self-esteem. Certain studies suggest that negative self-perception is related to perspective, i.e., stigmatization; [2,4,7,8,13,18,28-30] these people are sensitive to criticism; they cannot express themselves in society and isolate themselves; and they suffer from certain problems such as anxiety disorder and depression [2,4,7,13,28-30]. Thus, people who have low self-esteem suffer from obesity and use contact styles such as retroflection, deflection, contact and confluence may be sensitive to stigmatization. For that reason, it is important to provide psychosocial support to individuals with obesity, negative self-perception and contact styles by conducting personal and group therapy [2,4,6,13-15,18].

Conclusion

Research indicates that people with obesity have low self-esteem. Obese individuals use confluence, deflection, contact, emotional desensitization, and retroflection contact styles. A reverse and significant relationship was found between self-esteem and retroflection, deflection, contact and confluence; however, no relation was found between self-esteem and emotional desensitization.

Consequently, for preventive mental health, it is important to ensure that people with obesity have positive self-esteem and establish positive interpersonal and social relationships in terms of contact styles. Therefore, psychosocial support should be provided to people with obesity for developing positive self-esteem, gaining awareness about contact styles and developing healthy contact styles. Particularly, Gestalt therapy will help understand how healthy interaction is interrupted, what can be fixed, and which path should be followed. No study was found that examines the effectiveness of Gestalt therapy in the problems that people with obesity have. Therefore, it is expected that outcomes of the present study will contribute to the literature and shed light on the studies to be conducted later.

However, all health staff should cooperate to prevent stigmatization and psychological problems that people with obesity may suffer. It is important to ensure that psychiatry consultation liaison nurses should observe and support the people with obesity that apply to the polyclinic and are hospitalized in the polyclinic, and those who have problems in their social lives should be observed and supported by the community mental health nurses. Thus, psychological problems of the individuals with obesity will be prevented, and these people will have higher motivation to lose weight.

In addition, the failure to examine the psychological problems of the people with obesity and their stigmatization-related perception is among the limitations of study. Similar studies towards the contact styles in the people with obesity should examine the psychological problems and stigmatization issue. Qualitative studies in this topic are considered valuable.

References

- 1. Turkey healthy Nutrition and Moving Life Program (2013-2017) TC Ministry of Health Turkish Public Health Authority, Ankara.
- 2. Eren İ, Erdi O (2003) The frequency of psychiatric disorders in obese patients. J Clin Psychiatry 6: 152-157.
- 3. Obesity and overweight fact sheet. World Heatlh Organization, 2014.
- 4. Degirmenci T (2006) Self-esteem, quality of life, eating attitude, depression and anxiety among obese adults. (Dissertation) Department of Psychiatry, Pamukkale University School of Medicine, Denizli, Turkey
- Doll HA, Petersen SE, Stewart-Brown SL (2000) Obesity and physical and emotional well-being: associations between body mass index, chronic illness and the physical and mental components of the SF-36 questionnaire. Obes Res 8: 160-170.
- Onen Sertoz O, Elbi Mete H (2005) Efficacy of cognitive behavioral group therapy on weight loss, quality of life and psychopathology in the treatment of obesity: Eight week follow-up study. Bull Psychopharmacol 15: 119-26.
- 7. Muennig P (2008) The body politic: The relationship between stigma and obesity-associated disease. BMC Public Health 8: 128.
- 8. Armagan A (2013) Examination of the constitutive variables in the effect of respect of the self on body image in women with obesity. Okan University, İstanbul.
- Mond J, Van den Berg P, Boutelle K, Hannan P, Neumark-Sztainer D (2011) Obesity, body dissatisfaction and emotional well-being in early and late adolescence: Findings from the project EAT study. J Adolesc Health 48: 373-378.
- 10. Pinar R (2002) Depression, self-esteem and body image in the people with obesity: A comparative study. Cumhuriyet Nurs J 6: 12.
- 11. Friedman KE, Reichmann SK, Costanzo PR, Musante GJ (2002) Body image partially mediates the relationship between obesity and psychological distress. Obes Res 10: 33-41.
- 12. Yucel N (2008) Assessment of the Relationship between obesity and selfesteem in women with overweight and obese. Marmara University, İstanbul.
- Deveci A, Demet MM, Özmen B, Özmen E, Hekimsoy Z (2005) Psychopathology, alexithymia and respect for self in patients with obese. Anatolian Journal of Psychiatry 6: 84-91.
- 14. Tezcan B (2009) Self-esteem, body image and traumatic past experiences among obese individuals. (Dissertation) Prof. Dr. Mazhar Osman Training and Research Hospital, İstanbul.
- 15. Lo Coco G, Gullo S, Scrima F, Bruno V (2012) Obesity and interpersonal problems: An analysis with the interpersonal circumplex. Clin Psychol Psychother 190: 390-398.
- 16. Nursing terminology dictionary (2015) Turkish Language Institute Publications, Ankara.
- 17. Cuhadaroğlu F (1986) The self-esteem in adolescents. Unpublished expertise thesis, Hacettepe University, Ankara.

Page 6 of 6

- Hamurcu P (2014) Evaluation of self-esteem and body image of obese persons. (Unpublished master's thesis) Health Sciences Institute/İstanbul Bilim University, İstanbul.
- Aktas CG, Das C (2002) Factor structure, validity and reliability of gestalt contact styles questionnaire revised on Turkish population. Journal of Gestalt Therapy 1: 28.
- Das C (2015) Integrating and growing. Gestalt therapy approach. Psychology and psychiatry Series 14, 6th edition. HYB Publication, Ankara.
- 21. Voltan Acar N (2015) How much did I know? Gestalt therapy. Nobel Academic Publications, Review 6th Edition, İstanbul.
- 22. Kuyumcu B (2011) Investigate the relationship between gestalt contact styles and attachment styles in married people. Mehmet Akif Ersoy University Journal of Social Science Institute 3: 57-70.
- 23. Roubal J (2007) Depression A gestalt theoretical perspective. British Gestalt J 16: 35-43.
- 24. Kudiaki C (2013) Comparison of migraine, tension type and nonheadache groups on contact styles, anxiety and anger levels (Doctoral Thesis). Institute of Social Sciences, Ankara University, Ankara.

- 25. Balkaya F (2006) The relationship between contact styles and anger and anxiety among university students. (Doctoral thesis) Institute of Social Sciences, Ankara University, Ankara.
- 26. Gurdil G (2009) The evaluation of relations among Gestalt contact styles, attachment styles and life satisfaction.
- 27. Akca F, Sahin G, Vazgeçer B (2011) An investigation of the relationships among self-perceptions, gestalt contact styles and anxiety levels of the university students. Mersin University Journal of the Faculty of Education 7: 18-28.
- Crerand CE, Wadden TA, Foster GD, Sarwer DB, Paster LM, et al. (2007) Changes in obesity-related attitudes in women seeking weight reduction. Obesity (Silver Spring) 15: 740-747.
- Papadopoulos S, Brennan L (2015) Correlates of weight stigma in adults with overweight and obesity: A systematic literature review. Obesity (Silver Spring) 23: 1743-1760.
- Sikorski C, Luppa M, Luck T, Riedel-Heller SG (2015) Weight stigma "gets under the skin"-evidence for an adapted psychological mediation framework: A systematic review. Obesity (Silver Spring) 23: 266-276.