

T.C.
YEDİTEPE UNIVERSITY
HEALTH SCIENCES INSTITUTE
DEPARTMENT OF NUTRITION AND DIETETICS

**EXAMINATION OF THE RELATIONSHIP
BETWEEN BODY MASS INDEX AND BODY
IMAGE PERCEPTION IN WOMEN ADVISORS
WHO APPLY TO A PRIVATE HEALTH CENTER
IN ISTANBUL**

MASTER THESIS

İLKEM ŞENOL BİLGİN

Istanbul, 2020

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SUPERVISOR

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Istanbul, 2020

APPROVAL

Kurum : Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü

Program : Beslenme ve Diyetetik

Tez Başlığı : İstanbul’da Bulunan Özel Bir Sağlık Merkezine Başvuran Kadın

Danışanlarda Beden Kitle İndeksi ve Beden İmaj Algısı arasındaki İlişkinin İncelenmesi

Tez Sahibi : İlkem ŞENOL

Sınav Tarihi : 30.06.2020

Bu çalışma jürimiz tarafından kapsam ve kalite yönünden Yüksek Lisans Tezi olarak kabul edilmiştir.

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ONAY

Bu tez Yeditepe Üniversitesi Lisansüstü Eğitim-Öğretim ve Sınav Yönetmeliğinin ilgili maddeleri uyarınca yukarıdaki jüri tarafından uygun görülmüş ve Enstitü Yönetim Kurulu’nun 29/07/2020 tarih ve 2020/07-15 sayılı kararı ile onaylanmıştır.

Prof. Dr. Bayram YILMAZ
Sağlık Bilimleri Enstitüsü Müdürü

DECLARATION

I hereby declare that this thesis is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which has been accepted for the award of any other degree except where due acknowledgment has been made in the text.

Tarih

İmza

Diyetisyen İlkem ŞENOL BİLGİN



ACKNOWLEDGEMENTS

Tez dönemim boyunca desteğini ve bilgi birikimini benden esirgemeyen Sayın Assist. Prof. Dr. Hülya DEMİR’e

Her koşulda yanımda olan, yapamayacağıma inandığım zaman bile bana benden çok güvenen, her türlü sevgisini ve desteğini hissettiğim sevgili ailem; annem Mahmure ŞENOL, babam İbrahim Ethem ŞENOL ve kardeşim Hüseyin Mert ŞENOL’a

Her zaman elimi tutan ve bana cesaret veren sevgili eşim, Mert BİLGİN’e gönülden teşekkür ederim...

Diyetisyen
İlkem ŞENOL BİLGİN

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LIST OF SYMBOLS AND ABBREVIATIONS

AV	Average
BIA	Bioelectrical Impedance Analysis
BIS	Body Image Score
BMI	Body Mass Index
CM	Centimeter
KG	Kilogram
M	Man
M ²	Square meters
Min-Max	Minimum-Maximum
N	Number of Individuals Participating in the Study
NCSS	Number Cruncher Statistical System
PA	Physical Activity
SADHS	South Africa Demographic and Health Survey
SD	Standard Deviation
TBSA	Turkey Nutrition and Health Survey
TEKHARF	Health Disease and Risk Factors in Turkish Adults
TOHTA	Turkey Obesity and Hypertension Screening
TÜİK	Turkish Statistical Institute
TURDEP-I	Turkey Diabetes, Hypertension, Obesity and Endocrinology Diseases Prevalence Study -I
TURDEP-II	Turkey Diabetes, Hypertension, Obesity and Endocrinology Diseases Prevalence Study -II
USA	United States of America
W	Woman
WHR	Waist Hip Ratio
WHO	World Health Organization

ABSTRACT

Şenol Bilgin İ. (2020). Examination Of The Relationship Between body Mass Index And Body Image Perception In Women Advisors Who Apply To A Private Health Center In Istanbul. Yeditepe University Institute of Health Sciences, Department of Nutrition and Dietetics, Master Thesis, Istanbul.

Objective: This study was planned and implemented in order to examine the relationship between body mass index and body image of female clients with a body mass index between 18.5 and 35.0.

Materials and Methods: This descriptive and cross-sectional study was conducted with the participation of 272 female clients, aged between 18-65, who applied to a private health center on the European side of Istanbul between 30.01.20-30.04.20 who met the inclusion criteria.

The study started with the ethics committee approval of a private foundation hospital in Istanbul.

The data includes personal information consisting of 17 questions (age, marital status, educational status, illness, etc.) and 14 questions of nutritional habits (number of meals, salt consumption, daily fluid consumption, etc.) and a total of 31 questions. It was obtained from the summation form and body image scale consisting of 40 questions.

The data of the study were evaluated using the NCSS (Number Cruncher Statistical System) 2007 (Kaysville, Utah, USA) program, descriptive statistical analyzes (mean, standard deviation, median, frequency, ratio, minimum, maximum) and hypothesis tests.

Results: The average age of the women participating in the study is 39.68 ± 12.96 . According to BMI classification, 49.6% of women are normal weight, 28.7% are light weight, 21.7% are obese. Body Image Scale mean score is 131.74 ± 24.45 . The mean BMI was found to be 25.42 ± 4.72 and the average Body image score as 131.74 ± 24.45 .

Conclusion and Suggestions: A statistically significant difference was found between body image score according to BMI level. According to BMI classification, body image scores of women with normal weight (143.12 ± 24.27) are higher than overweight (122.55 ± 17.73) and obese (117.86 ± 20.10) women. At the same time, body image and marital status, educational status, socio-economic status, chronic illness, age, waist-hip ratio, body weight status perceived by themselves, satisfaction with current weights, wanting to lose weight, physical activity level, appetite, chewing - A statistically significant difference was found with swallowing difficulty and adequate-balanced nutrition.

Especially in women with low body perception, behavioral treatment should be applied with a holistic approach, and she emphasizes that the perception of the "ideal body" created on the female body in the society should be reduced globally and environmentally.

Keywords: Obesity, Body Image, Body Perception, Body Mass Index



ÖZET

Şenol Bilgin İ. (2020). İstanbul’da Bulunan Özel Bir Sağlık Merkezine Başvuran Kadın Danışanlarda Beden Kitle İndeksi Ve Beden İmaj Algısı Arasındaki İlişkinin İncelenmesi. Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü, Beslenme ve Diyetetik Bölümü, Yüksek Lisans Tezi, İstanbul.

Amaç: Bu çalışma, beden kitle indeksi 18,5-35.0 arasında olan kadın danışanların beden kitle indeksi ile beden imajlarını ile ilişkisini incelemek amacıyla planlanarak, uygulanmıştır.

Gereç ve Yöntem: Tanımlayıcı tipte ve kesitsel desendeki bu araştırma İstanbul Avrupa yakasında bulunan özel bir sağlık merkezine 30.01.20-30.04.20 tarihleri arasında başvuran, yaşları 18-65 yaş arasında olan ve çalışmaya dahil edilme kriterlerine uyan kadın danışanlardan 272 kişinin katılımı ile uygulanmıştır.

Çalışmaya İstanbul’da bulunan özel bir vakıf hastanesinin etik kurul onayı alınarak başlanmıştır.

Veriler, 17 sorudan oluşan kişisel bilgiler (yaş, medeni durum, eğitim durumu, hastalık durumu vb.) ve 14 sorudan oluşan beslenme alışkanlıklarını (öğün sayısı, tuz tüketimi, günlük sıvı tüketimi vb.) içeren ve toplamda 31 sorudan oluşan bilgi edinme ve veri toplama formundan ve 40 sorudan oluşan beden imaj ölçeğinden elde edilmiştir.

Araştırmanın verileri NCSS (Number Cruncher Statistical System) 2007 (Kaysville, Utah, USA) programı kullanılarak, tanımlayıcı istatistiksel analizler (ortalama, standart sapma, medyan, frekans, oran, minimum, maksimum) ve hipotez testleri ile değerlendirilmiştir.

Bulgular: Çalışmaya katılan kadınların yaş ortalaması $39,68 \pm 12,96$ ’dır. Kadınlar, BKİ sınıflandırmasına göre %49,6’sı normal kilolu, %28,7’si hafif kilolu %21,7’si obezdir. Beden İmajı Ölçeği puan ortalaması $131,74 \pm 24,45$ ’tir. Ortalama BKİ $25,42 \pm 4,72$ ve ortalama Beden imaj puanı ise $131,74 \pm 24,45$ olarak bulunmuştur.

Sonuç ve Öneriler: BKİ düzeyine göre beden imaj puanı arasında istatistiksel olarak anlamlı bir fark bulunmuştur. BKİ sınıflandırmasına göre normal kilolu olan kadınların beden imaj puanları ($143,12 \pm 24,27$), fazla kilolu ($122,55 \pm 17,73$) ve obez ($117,86 \pm 20,10$) kadınlardan daha yüksektir. Aynı zamanda beden imajı ve medeni durum, eğitim durumu, sosyo-ekonomik durum, kronik hastalık, yaş, bel-kalça oranı, kendi algıladıkları vücut ağırlığı durumu, mevcut ağırlıklarından memnun olma durumu, zayıflamak isteme durumu, fiziksel aktivite düzeyi, iştah durumu, çiğneme-yutma güçlüğü, yeterli-dengeli beslenme ile istatistiksel olarak anlamlı bir farklılık saptanmıştır. Özellikle beden algısı düşük kadınlarda bütüncül yaklaşım ile davranışsal tedavi uygulanmalı, toplumda kadın bedeni üzerinde

oluřturulan “ideal beden” algısının küresel ve çevresel olarak azaltılması gerektiğini vurgulamaktadır.

Anahtar kelimeler: Obezite, Beden İmajı, Beden Algısı, Beden Kitle İndeksi



1. INTRODUCTION AND PURPOSE

Obesity, which is increasing in frequency all over the world; It is an important public health problem that reaches life-threatening levels in developed and developing countries in our age. Obesity by the World Health Organization (WHO); It is generally defined as abnormal or excessive fat accumulation in adipose tissue, which is harmful to health, and it is evaluated by Body Mass Index (BMI) and various anthropometric methods (1, 2). It is also affected by many biological, psycho-social, socio-economic and environmental factors. As the number of obese and overweight people increases in societies, public health, physical and mental problems and negative results in the economy are seen. This situation negatively affects the body image of the people (1).

Body image perception includes how the individual perceives, imagines and feels his / her own body other than the current situation; It is a structure that includes a very large part from true / positive body perception to false / negative body perception. In its simplest sense, body perception is how our own body, which we shape in our minds, looks to us (3). The correct perception of body weight is the consistency between the perceived and measured body weight of the person. Inaccurate perception of body weight is the inconsistency between the person's actual weight status and his perception; This situation is frequently encountered in overweight and obese people (4). At the same time, women are more concerned with having slim body images and dieting than men (5). It is seen that comparing oneself with the ideal body patterns (such as the physical characteristics of mannequins), which we encounter a lot in the visual and print media today, creates discontent. Associating the concept of weakness with "beauty"; On the other hand, it has been reported that obesity in individuals is associated with negative features such as "ugliness" (6).

1.1. Purpose of the Research

The aim of this study is; It was planned to examine the relationship between body mass index and body image of female clients aged 18-65 and whose body mass index was between 18.5-35.0, who were admitted to a private health center in Levent, Beşiktaş District, Istanbul. For this purpose, general characteristics and characteristics of nutritional habits were compared with the body image scale average score of the individuals.

It is a study that will determine the effects of today's imposition of beauty, environmental factors and diseases on people. Actually, being thin is not nice; It is a thesis that aims to raise awareness in order to emphasize that each individual should be in the body composition in which he / she is healthy in his / her own body.

1.2. Research Hypotheses

H1. Women who are considered obese according to body mass index classification have lower self-perception than non-obese women.

H2. Body image scale average score is different according to some descriptive characteristics of women (age, waist-hip ratio, chronic disease status, etc.).

H3. According to some opinions of women about body weight (body weight assessment, being satisfied with current weight, wanting to lose weight, wanting to gain weight, physical activity level, etc.), body image scale average score is different.

H4. According to some of the nutritional characteristics of women (number of meals per day, skipping meals, general appetite, difficulty in chewing and swallowing, adequate and balanced nutrition status, etc.), body image scale average score is different.

2. LITERATURE REVIEW

2.1. Definition of Obesity

Obesity is a multifactorial situation that can risk a person's life as a result of excessive fat accumulation in the body (7). The word “obesity” is derived from the word “obesus” in Latin and also, it is expressed as the condition that the energy taken is more than the energy spent (8, 9).

While obesity was an indicator of power, prosperity, and health in ancient times, it is defined as one of the biggest public health problems among both developed and developing countries in modern age (10, 11). Due to the increasing urbanization, socioeconomic transformation, easier access to food, and increased jobs requiring less physical workload via westernization, overweight or obesity depending on a positive energy balance can be observed in most people (12). Despite the current evidence suggests that obesity is more prevalent in developed countries, the prevalence of obesity also appears to be concerning in these countries when compared to the low and middle-income countries (13, 14, 15).

In several reports, it has been stated that it is a risk factor via the increase in the prevalence of overweight and obesity for various diseases such as hypertension, stroke, diabetes, osteoarthritis, metabolic syndrome, dyslipidemia, obstructive sleep apnea, and some cancer types (8, 16, 17). It also causes loss in productivity, psycho-social problems, and high healthcare costs (11).

2.1.1. Prevalence of Obesity in the World

According to WHO, it is specified that estimated 650 million adults with the age of 18 and over in the world are obese and the prevalence of obesity has reached epidemic proportions (13). In case the prevalence of obesity cannot be controlled, it is expected to have more than one billion adults worldwide be obese till 2030 (18). The underlying reasons of obesity vary by region, country, and society, and the prevalence is higher among women (19).

In recent years, it is reported that the ratios of overweight and obesity have increased in most of the countries in Europe. Most of 50% of the adults in 46 countries

making up 87% of the European region are overweight or obese. It is estimated that there are 320,000 men and women deaths every year due to overweight and obesity (20). In the European Union (EU) member states, as the mean percentage of obesity in adults was 11% in 2000, this rate increased to 16% in 2014. In this 14-year period, it was seen that it increased milder in other countries such as Belgium, Hungary, Italy, and Slovakia (21).

Table 2.1. shows the prevalence of obesity among the adults in European countries from 1995 to 2016. According to the table, an increasing trend is detected in all the countries, and it is observed that the prevalence of obesity is higher when compared to the previous years. Prevalence has increased especially in the countries where obesity gave a warning in advance as a social issue (Malta, Turkey, and the Czech Republic). In the countries with low-medium prevalence (for example, Italy, Norway, France), it has shown a significant increase. Table 2.1. shows that there is a rising pandemic in 2016 in the countries where obesity is higher in women (20).

Table 2.1. 1995-2016 obesity distribution percentage for the group of 18 and +

	1995			2005			2016			Percentage increase between 1995 and 2016		
	Man	Woman	Total	Man	Woman	Total	Man	Woman	Total	Man	Woman	Total
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Turkey	11.9	26.2	19.4	17.1	32.2	25.1	24.4	39.2	32.1	105.0	49.6	65.5
Malta	18.9	23.5	21.3	23.7	26.2	25	29.2	28.5	28.9	54.5	21.3	35.7
United Kingdom	14.5	17.7	16.2	19.9	22.7	21.4	26.9	28.6	27.8	85.5	61.6	71.6
Hungary	17.1	19.1	18.2	21.5	21	21.3	28.2	24.6	26.4	64.9	28.8	45.1
Lithuania	15.4	24.4	20.5	19.2	25.8	22.9	24.2	27.8	26.3	57.1	13.9	28.3
Israel	16.8	21.9	19.5	21	24.2	22.7	25.9	26.2	26.1	54.2	19.6	33.8
Czech Republic	17.6	21.7	19.8	21.4	23.1	22.3	26.4	25.4	26	50.0	17.1	31.3
Andorra	18.8	23	21	22.3	24.4	23.4	25.9	25.3	25.6	37.8	10.0	21.9
Ireland	12.9	14	13.5	18.2	19.2	18.7	25.1	25.5	25.3	94.6	82.1	87.4
Bulgaria	15	18.7	17	19.5	21	20.4	25.5	24.3	25	70.0	29.9	47.1
Greece	13.9	19.3	16.7	18.4	22.3	20.4	24.2	25.4	24.9	74.1	31.6	49.1
Belarus	12.2	21.2	17.2	16.6	23.6	20.5	22.1	26.3	24.5	81.1	24.1	42.4
Croatia	13.6	17.7	15.9	18	20.5	19.4	24.1	24.5	24.4	77.2	38.4	53.5
Ukraine	13	21.8	17.9	16.8	23.4	20.5	22	25.7	24.1	69.2	17.9	34.6
Spain	15.2	17.8	16.6	19.5	20.3	20	24.6	22.8	23.8	61.8	28.1	43.4
Latvia	13.4	22.1	18.3	16.9	23.3	20.5	21.6	25.1	23.6	61.2	13.6	29.0
Montenegro	11.7	15.5	13.7	17.4	19.6	18.6	23.3	23.1	23.3	99.1	49.0	70.1
Russian Federation	10.5	24.1	18.1	13.7	25.2	19	18.1	26.9	23.1	72.4	11.6	27.6
Norway	12.6	14.9	13.8	17.6	18.6	18.2	23.6	22.5	23.1	87.3	51.0	67.4
Poland	14.1	17.8	16.2	18.2	19.6	19.1	23.7	22.2	23.1	68.1	24.7	42.6
Luxembourg	13.6	14.1	13.9	18.5	17.3	17.9	24.5	20.7	22.6	80.1	46.8	62.6
Romania	13	16.2	14.7	17.2	18.3	17.8	23.4	21.6	22.5	80.0	33.3	53.1
Macedonia	13.8	17.3	15.6	17.6	19.3	18.5	22.6	22.1	22.4	63.8	27.7	43.6
Germany	14.4	14.4	14.5	18.7	17.2	18	24.2	20.4	22.3	68.1	41.7	53.8
Finland	14.1	14.5	14.4	18.6	17.6	18.2	23.7	20.6	22.2	68.1	42.1	54.2
Belgium	14.4	16.4	15.5	18.3	18.7	18.5	23.1	21	22.1	60.4	28.0	42.6
Iceland	14.1	14.4	14.3	18.7	16.9	17.8	24.2	19.4	21.9	71.6	34.7	53.1
Cyprus	12.9	16.2	14.6	17.2	19.1	18.2	21.9	21.6	21.8	69.8	33.3	49.3
Georgia	9.6	14.3	12.2	13	17.8	15.7	19.2	23.8	21.7	100.0	66.4	77.9
Albania	9.6	13.1	11.3	14.3	16.6	15.4	21.6	21.8	21.7	125.0	66.4	92.0
France	12.8	15.3	14.1	16.9	18.1	17.6	22	21.1	21.6	71.9	37.9	53.2
Serbia	11.7	15.8	13.9	15.9	18.5	17.3	21.1	21.8	21.5	80.3	38.0	54.7
Estonia	12.8	19.3	16.5	16	20.2	18.4	20.3	21.8	21.2	58.6	13.0	28.5
Kazakhstan	10	14.1	12.3	13.6	17.6	15.9	18.9	22.7	21	89.0	61.0	70.7
Portugal	9.7	13.1	11.6	14.4	17.1	15.9	20.3	21.2	20.8	109.3	61.8	79.3
Sweden	13	12.6	12.9	17.5	15.1	16.3	23.1	18.1	20.6	77.7	43.7	59.7
Slovakia	12.6	15.5	14.2	16.3	17.3	16.9	21	19.9	20.5	66.7	28.4	44.4
Netherlands	9.7	12	10.9	14.6	16	15.4	20.8	20	20.4	114.4	66.7	87.2
Armenia	9.5	15.4	12.8	12.5	18.4	15.7	17.1	23	20.2	80.0	49.4	57.8
Slovenia	11.3	15.9	13.7	14.8	18.1	16.5	19.4	21	20.2	71.7	32.1	47.4
Austria	12.3	12.1	12.3	16.5	15	15.8	21.9	18.3	20.1	78.0	51.2	63.4
Azerbaijan	7.7	14	11.1	10.6	17.6	14.3	15.8	23.6	19.9	105.2	68.6	79.3
Italy	12.2	14.6	13.5	15.9	17.1	16.5	20.1	19.5	19.9	64.8	33.6	47.4
Denmark	12.8	12.1	12.5	16.9	14.3	15.7	22.3	17	19.7	74.2	40.5	57.6
Switzerland	12.7	11.5	12.2	16.9	14.1	15.5	22.2	16.9	19.5	74.8	47.0	59.8
Republic of Moldova	8.9	16.6	13.2	11.9	18.4	15.5	16.2	21.1	18.9	82.0	27.1	43.2
Turkmenistan	7.2	11.2	9.4	10.5	15.1	12.9	15.9	20.9	18.6	120.8	86.6	97.9
Bosnia-Herzegovina	9.2	13	11.3	12.6	15.2	14	17.1	18.4	17.9	85.9	41.5	58.4
Uzbekistan	6.5	10.2	8.5	9.1	13.5	11.4	13.8	19	16.6	112.3	86.3	95.3
Kyrgyzstan	6.4	9.9	8.3	9.2	13.1	11.3	14	18.6	16.6	118.8	87.9	100.0
Tajikistan	5.3	8.6	7	7.4	11.4	9.4	11.6	16.7	14.2	118.9	94.2	102.9

In the history, the problem of obesity is generally a problem of the developed countries, however in recent years, it has become an increasing epidemic in middle-income countries such as South Africa. Of the adult population in middle-income

countries, 30% is overweight or obese (22). South African Population and Health Survey (SADHS) conducted in 2002 have reported that 29% of men and 56% of women are overweight or obese (23). In Morocco, located in the northwestern region of the African continent, the prevalence of overweight and obesity, especially among women in urban areas, is high and it constitutes 42% of women in urban areas and 29% of women in rural areas (24). In another study conducted in Africa in 2014, it was found that the rate of incidence of obesity prevalence in women was much higher than in men (25).

Obesity is an important reason for morbidity and mortality in United States of America (USA). Every year, approximately 300.000 US citizens die due to the reasons related to obesity (26). In the studies conducted, it is observed that the rates in USA are increasing in the fastest way among highly trained people (27). In a study conducted in various countries between 2000 and 2016, it was observed that the highest prevalence of obesity in adults was in America (28). Total obesity prevalence in adults in America between 2017 and 2018 was 42.4%. The prevalence was 40% in the young adults between the 20 and 39 years old, 44.8% in middle-aged people between 40 and 59 years old, and 42.8% in the elderly population over 60 years old. From 1999-2000 to 2017-2018, the prevalence of obesity adjusted according to age increased from 30.5% to 42.4% (29). In general, direct costs of obesity and physical inactivity (sedentary life) constitute approximately 9.4% of the national healthcare expenses in the USA (26).

2.1.2. Prevalence of Obesity in Turkey

As in the whole world, overweight and obesity is a major public health problem among adults in Turkey and the prevalence of obesity is increasing gradually (10,30). The nutritional status in Turkey varies significantly according to the regions, seasons, socio-economic status, and residential districts (31).

In TURDEP-1 study, that was conducted nationally as 24,788 people screened in 1999, it was detected that the prevalence of obesity was 23.8% in the urban area and 19.6% in the rural area (32). According to TURDEP-2 study conducted in 2010, the prevalence of obesity is 27.3% in men over 20 years old, while it is 44.2% in women (33). It is observed that the prevalence of obesity of the adults in Turkey has increased from 22.3%, as in TURDEP-1 conducted in 1998, to 31.2%, as in TURDEP-2 conducted in 2010 (34). In Turkish Nutrition and Health Research (TNHR) that is a sample study

conducted in 2010 throughout Turkey, results similar with TURDEP-II were obtained (35). In the study, despite the total prevalence of obesity in adults was 30.3%, the distribution was found to be as 41% in women and 20.5% in men (36).

Tablo 2.2. Adults Study of Obesity in Turkey

Research/Writer	Place / Year	The number of participants/ Age group	Obesity Prevalence (%)
Turkey Obesity and Hypertension Diabetes Epidemiology Study -I (TURDEP-I) / Satman and arc.	15 provinces, 540 centers / 1997-1998	24788 (W: 13708, M: 11080) / ≥ 20 age	Total: 22,3 (W: 29,9/M:12,9)
Turkey Adult Cardiac Health and Hypertension Research and Risk Factors (TOHTA) / Yumuk and arc.	Turkey / 1999-2000	23888 (W: 6969, M: 169191) / ≥ 20 age	Total: 19,4 (W: 24,3/M:14,4)
Turkey Adult Cardiac Health and Hypertension Research and Risk Factors (TEKHARF) / Onat and arc.	6 provinces / 2000 6 provinces / 2003	3681 / ≥ 30 age 2269 / ≥ 30 age	(W: 43,0 / M: 21,1) (W: 44,2 / M: 25,2)
Balçova Cardiovascular Hospital Study / Ünal and arc.	Balçova / 2007	16080 (W: 10528, M: 5552) / ≥ 30 age	Total: 39,1 (W: 44,2/M:29,4)
Turkey Health Research / TÜİK	Türkiye / 2008 Türkiye / 2010 Türkiye / 2012	≥ 15 age	Total: 15,2 (W: 18,5/M:12,3) Total: 16,9 (W: 21,0/ M: 13,2) Total: 17,2 (W: 20,9/ M: 13,7)
Turkey Nutrition and Health Research (TBSA)	81 provinces, 600 centers / 2010	4853 (W: 3038, M: 1815) / ≥ 19	Total: 30,3 (W: 41,0/ M: 20,5)
TURDEP-II / Satman and arc.	15 provinces, 540 centers / 2010	26499 (W:16696, M: 9327) / ≥ 20 age	Total: 31,2 (W: 44,0/ M: 27,0)
Doğan and arc.	Afyonkarahisar / 2010	1947 / ≥ 18 age	Total: 31,7 (W: 39,8/ M: 20,7)
Kutlutürk and arc.	Tokat / 2011	1095 (W: 554, M: 541) / ≥ 18 age	Total: 23,4 (W: 33,6/ M:12,9)
Aydın and arc.	Melen / 2012	2222 (W: 1418, M: 804) / Ort. 50 age	Total: 43,3 (W: 53,1/ M: 26,9)
Ustu and arc.	Tokat / 2012	5162 (W: 1885, M: 3277) / ≥ 18 age	Total: 29,5 (W: 22,3/ M: 33,6)

The obesity studies performed to adults in Turkey as specified in Diagnosis and Treatment Guide for Obesity, that is published in 2018 by the Society of Endocrinology and Metabolism are summarized in Table 2.2 (35).

In the survey conducted by TSI in 2016 on the individuals over 15 years old, the prevalence of obesity in the general population is found as 19.6% in the population, 15.2% in men, and 23.9% in women. According to the same study, the rate of overweight individuals over 15 years old was found as 34.3% (30.1% women, 38.6% men) (37).

2.2. Determination of Obesity

Obesity is assessed by anthropometric measurements and/or indexes. Most frequently used indexes are Body Mass Index (BMI) and Waist-Hip Ratio (38).

2.2.1. Body Mass Index

Body mass index (BMI) is a standard measurement of overweight and obesity in adults (11). It is a measurable, easy to use, and an inexpensive method for observing weight changes (39). It classifies underweight, overweight, and obesity in adults. BMI is obtained by dividing the body weight of the individual (kilogram) to the square of his/her height (in meters) ($BMI = \text{kg}/\text{m}^2$). International obesity classification prepared by WHO is given in Table 2.3 (1).

Table 2.3. Classification according to the Body Mass Index in Adults

Classification	BMI	Comorbidity Risk
Under weight	<18.50	Low (other increasing clinical problems)
Normal	18.50-24.99	Average
Over weight:	≥ 25.00	
Obese	≥ 30.00	Increased
Class I obese	30.00-34.99	Moderate
Class II obese	35.00-39.99	Severe
Class III obese	≥ 40.00	Very severe

High BMI is related to the risk of higher blood pressure and hypertension, total cholesterol, LDL-cholesterol and triglyceride levels, and lower HDL-cholesterol levels (40). It is used both as a risk factor for the development or prevalence of various health problems and in the determination of public health policies (41).

2.2.2. Waist-Hip Ratio

Waist-hip ratio is used in the calculation of the distribution of the fatty tissues in abdominal body type. Abdominal obesity is correlated with increasing risk of morbidity and mortality (43). Waist circumference greater than 102 cm in men and 88 cm in women

increases the risk of obesity-related comorbidity (44). According to WHO, attention should be paid to have the waist-hip ratio under 0.90 in men and under 0.85 in women (45). As abdominal obesity is more related to metabolic complications, waist-hip ratio is used in addition to the BMI value (10).

2.3. Treatment of Obesity

In various countries around the world, most of the population is overweight or obese (40). This situation, the treatment of people suffering from non-contagious diseases, imposes a burden on the health systems. In low- and middle-income countries, the economic burden of non-contagious diseases is higher as their population grows and their food systems change (46). Thus, the efforts to reduce the prevalence of obesity should focus not only on preventing obesity (primary prevention) in those who are not obese yet, but also on preventing to gain more weight and promoting weight loss (secondary prevention) in those who are obese (40).

General purposes in the treatment of obesity are to prevent weight gain in individuals, to reduce the body weight and to provide weight control in long term and also to reduce other risk factors related to weight that may arise (47). Multidisciplinary and combined treatment approach is adapted in the treatment of obesity (48).

Lifestyle interventions such as medical nutrition (diet), exercise (physical activity), and behavioral therapy, in other words behavioral weight control, are the essential treatment methods to be applied in obesity (49, 50). In case no results are obtained from the first treatment line, pharmacological treatment (medication), surgical treatment, and therapeutic treatment options should be conducted (49).

In the panels supported by both WHO and the specialists at National Health Institutes, it is recommended to have overweight and obese adults lose 10% of their initial weight (50). As the first step, it is required to reduce the caloric intake. In overweight and obese people, the number of calories taken should be reduced by 500 to 1000 calories per day. However, the calorie of the diet should not be too low (less than 800 calories per day) (51).

During the diet training in the treatment of obesity, below mentioned matters should be considered:

- Energy value of the food,
- Food composition-carbohydrates (including diet fiber), fat and protein contents,
- To read the food labels to determine the calorie content and food composition when choosing foods,
- To develop new purchasing habits – preferring low-calorie food,
- Food preparation - avoiding adding high-calorie ingredients (such as fats) during cooking
- To avoid excessive consumption of high-calorie foods,
- To provide sufficient water consumption,
- Portion control,
- To limit alcohol consumption (52).

Physical activity is important in weight gain and obesity as much as energy intake, and it is possible to have many interactions between both sides of the equation in terms of etiology and prevention (40). Energy expenditure is a key determinant in energy balance and weight control. It reduces the risk of cardiovascular diseases, diabetes, metabolic syndrome, and some of the cancer types besides obesity. It is recommended to have the individuals be at a sufficient physical activity level throughout their life. Different types and amounts of physical activity are required for different health problems (53). In the treatment of obesity, starting with mild exercises for the individuals having a sedentary lifestyle, the intensity of the exercises should be increased according to the adaptation of the individual (47).

Behavioral, in other words lifestyle interventions, are accepted as the cornerstone of the treatment of obesity. With this treatment method, it is aimed to provide weight loss for a long term together with the changes in diet and physical activity. Behavioral approaches constitute a basis for the prevention and treatment of obesity both in children and in adults. Changing behavior plays a critical role in terms of the success of weight. Lifestyle interventions helping to change the eating habits and physical activity behaviors of obese individuals provide weight loss of 5-10% of body weight and positive improvements in terms of clinical health. Such behavioral interventions are important as

an essential component of pharmacological therapy or surgical treatments oriented to weight control besides weight loss (54).

2.4. Obesity and Self-Conception, Self-Respect

2.4.1. Self-Conception

Self-conception means how someone thinks about themselves, how they evaluate, or perceive themselves. Historically, the definitions of self-conception are explained as:

- “The attitude of a person towards self” according to Lowe in 1961,
- “Organized configuration of perceptions, beliefs, feelings, attitudes, and values that are seen as a part of the characteristics of the individual” according to Paderson in 1965,
- “Self-conception is a complicated concept and the compromised and sophisticated side of the personality” according to Rosenberg in 1985,
- “Cognitive structures that can include self-conceptions, content, attitudes, or evaluative judgments and that are used to explain the meaning of the world, focus on the aims of the individual, and maintain the basic values of the individual” according to Oyserman and Markus in 1998,
- And finally, self-conception is defined as “the beliefs about the individual, including who and what the individual is” according to Baumeister in 1999.

Self-conception is a subjective experience. Subjectivity means that the self-conception may differ from the real appearance of the individual. Self-conception is not a constant status; it develops and changes in time. It includes the self-knowledge, self-expectations, and self-evaluation of the individual. Self-conception affects our actions, motivations, expectations, and goals for the future (55). Also, when it comes to self-conception, it should be understood that it is related to the perception of how the individual sees himself/herself in physical, social, and spiritual areas (56).

Self-respect is developed by the appreciation and acceptance of the self-conception by the individual. Self-conception and self-respect are the variables related to specific characteristics of the personality or self of the individual (57).

2.4.2. Self-Respect

Self-respect is defined as the value that individuals bind themselves as a result of their lifestyle perceptions and experiences (58). Self-respect is developed by the appreciation or inappreciation of self-conception (59). While the self-conception constitutes the cognitive part of the self, self-respect describes the emotional side (57). It defines all the beliefs and behaviors constituting the individual by making him/her aware of his/her personal strengths and weaknesses. Literature reviews specify that the individual perceives his/her own value via his/her family, school, cultural structure, gender, socialization, personal experiences, and activities (60).

High self-respect means that the difference between the ideal self-imagination that the individual wants to achieve and the true self is small and coherent and low self-respect develops when the difference between the said ideal self-imagination and the true self is large (57). As the positive self-respect of the individual is directly expressed by a better mental health, negative self-respect is correlated with various diseases (such as psychiatric disorders, depression, obesity, and eating disorders) (60). The correlation between self-conception and how the individual is actually perceived by others can trigger the behaviors ranging from loneliness to disappointment (56).

In overweight and obese adults, misperception of the body weight, in other words, inconsistency between actual weight and the weight status, is frequently seen (4). While the concept of underweight gets credit, especially in western societies, obese individuals are excluded and they are also exposed to various negative labels. When it is considered that self-respect is affected by interpersonal relationships and the meaning given by the individual for such relationships, negative feedback from the environment may cause a decrease in self-respect in the individual. Exposure to criticism and social exclusion due to overweight will negatively affect the school or work life, social relations, and attitudes of the individual against physical activities (61).

As a result of most of the studies, it is found that body dissatisfaction is higher in the obese groups (59). Stigmatization of the weight status in obese adults and experience of such stigmatization is associated with lower self-respect, more psychological distress, and body dissatisfaction, increasing eating habits, and weight anxiety. In general, it is seen that women internalize weight discrimination and weight stigmatization more than

men (62). Obese women have a negative physical self-conception and attitudes towards self-respect (63). Also, the relationship between being having lower self-respect and showing depressive symptoms in case of being obese is greater in women than men (62).

Studies conducted in the world state that the individuals applying for the treatment of obesity need psychosocial support. A sophisticated approach including psychological support should be applied in the treatment of obesity. Development and improvement of self-respect take place in the basis of this psychological support (59).

2.4.3. Body Image (Perception)

The concept of “body image” was first defined by the German author, Schilder, as an important and holistic psychological phenomenon in the monograph of the Image and Appearance of Human Body (64). In general, the definition of body perception is how our body, that we shaped in our minds, looks like by us (59). It reveals as a result of the subjective evaluation of the individual regarding his/her own appearance (65). Also, it is the picture of the body of the individual and all the sensations of the body that are created in the mind (66). Body perception constitutes the idea of “me” and has an essential role in shaping the ego. Self-respect and body perception are similar concepts and they are affected by each other as a result of cause-effect relationship (61). Positive body image is related to high self-respect; thus, negative body image is associated with low self-respect. On the other hand, the concept of body image affects the self-respect, eating attitudes, social anxiety levels, sexual activities, social relationships, and emotional states of the individual (67).

In modern Western society, the concept of weakness is defined as the center of beauty (68). As the social pressure increase for reaching an “ideal” physique both in men and women, the incoherence between this ideal physique and the body of the individual also increases (69). A great number of young girls and women undergo a constraint to reach a slender ideal as they cannot obtain the standard that causes body dissatisfaction (70). During adolescence, girls have more concerns about their weight, body shape, and ego image than boys. Most of the people are dissatisfied with their body size and weight, because underweight is seen as the desired standard and beauty model, especially for young women. Even in adulthood, the perception of being underweight is more frequently seen in women than in men (71).

The weight stigmatization seen in the population is partially related to the negative body image. Obese and overweight individuals (especially women) are subject to discrimination and stigmatization due to their weights in the living spaces and in their experiences (68). Thus, many obese women have a potential fear for their negative outlook assessment and not complying with the norms of underweight beauty and they are dissatisfied with their current weight and struggle with their weight. As a step in this direction, Choate (2005) specified the potential protective factors that were identified in the literature and that could prevent young adult women from developing a negative body image.

The protective factors for a negative body image in women are as follows:

- (a) family support,
- (b) reduction of sociocultural pressures on beauty and being underweight,
- (c) rejection of the ideal of being a super woman,
- (d) positive physical self-conception,
- (e) efficient coping
- (f) strategies contributing to a sense of holistic health and balance.

Choate (2005) model assumes that positive body image may be related to family support and beauty and ideal thinness and reduction of pressures, rejection of an ideal superwoman, positive physical self-conception, and effective coping strategies. These factors are associated with health and a positive body image (70).

Focusing on a healthy lifestyle instead of weight in overweight and obese individuals can help to reduce weight discrimination against individuals, promote their health, and relieve the psychosocial, health, and economic burdens faced by such individuals (62).

3. MATERIALS AND METHODS

3.1.The Type and Pattern of the Research

This study was planned in a descriptive and cross-sectional design in order to examine the relationship between body mass index and body image of female clients with a body mass index between 18.5 and 35.0.

3.2.Place and Time of the Research

This study was conducted with 272 women (N = 272), female clients aged between 18-65, who applied to a private health center in Levent, Beşiktaş District, Istanbul between 30.01.20-30.04.20. The study was examined by the Ethics Committee of a private foundation hospital on the Anatolian side, and the decision was made that there was no ethical and scientific harm, and it was carried out with the Ethics Committee Approval (Annex-1) dated 16.01.2019, number 37068608-6100-15-1810.

3.3.The Universe and Sample of the Research

The universe of the research; She applied to a private health center in Istanbul between 30.01.20-30.04.20 and formed female individuals between the ages of 18-65, who do not have any psychological health problems and who meet the inclusion criteria.

3.4.Inclusion Criteria of the Research

- Be woman
- Being in the age range of 18-65
- Body Mass Index (BMI) value in the range of 18.5 to 35
- Being a consultant at the health center where the study was conducted
- Agree to respond to the questionnaire and be included in the study

3.5.Not Inclusion Criteria of the Research

- Being a Man
- Being Out Of The Specified Age Range (18-65 Years)
- Body Mass Index (BMI) Value Not in the Desired Range (18.5-35)

- Pregnants, Breastfeeding Mothers, Puerperant, Children
- In Intensive Care and Unconscious Persons
- Not being a Consultant at the Health Center where the Study was conducted
- Not Accepting To Answer The Questionnaire And Include In The Study

The scope and objectives of the study were explained in detail to the individuals who accepted to participate in the study voluntarily and who met the inclusion criteria, and a voluntary consent form was filled in (Annex-2). General information about the research was given in the form, and it was clearly stated that the identity information was not used and that it could be withdrawn from the study if desired. Individuals who did not meet the inclusion criteria, who applied before or after the specified dates, who were diagnosed with any psychological health problem before or during the study were not included in the study.

3.1. Data Collection Tools

Research, T.C. It was initiated by the Yeditepe University Clinical Research Ethics Committee with the Ethics Committee Approval (Annex-1) dated 16.01.2019, dated 37068608-6100-15-1810.

The information and data collection form (Annex-3) was applied to the clients who filled out the voluntary consent form. Afterwards, body image scale (Appendix-4) was applied. The entire process took an average of 15-20 minutes, except for anthropometric measurements, the clients answered the information themselves.

Anthropometric measurements were taken by the dietician, paying attention to all issues. Height, weight, waist-hip ratio were recorded using standard methods.

Among the anthropometric measurements, height was measured with a tape measure and body weight was measured with Tanita BC 418, then body mass index (BMI) and waist-hip ratio were calculated.

3.6.1. Body Weight and Height Measurements

While measuring the body weight and height of the clients, care was taken to ensure that they were wearing thin clothes and without shoes. The weight of the participants in the study was measured using Tanita BC 418 model scale, which can perform segmental fat analysis with 100 grams sensitive bioelectrical impedance (BIA). Lengths were measured with a tape measure against the wall, feet adjacent, and the head is on the Frankfurt plane.

3.6.2. Body Mass Index (BMI)

After taking accurate height-weight measurements of the people participating in the study, their BMI values were calculated. With the standard BMI equation, the desired value was obtained by dividing the body weight by the square meter of the height [BMI = body weight (kg) / height (m²)]. Body mass index, Table 2.3. It has been evaluated in accordance with the World Health Organization (WHO) classification (1).

3.6.3. Waist-Hip Ratio (WH)

Waist and hip measurements were taken. First, waist circumference was taken standing, and the lateral iliac protrusions were measured with the help of a tape that does not stretch from the midpoint of the lowest rib. While in the same position, the hip circumference was measured with a tape that does not stretch from the widest point of the hip. The desired value, waist / hip ratio [waist-hip ratio = waist (cm) / hip (cm)] was calculated. According to WHO, waist / hip ratio should be below 0.90 in men and 0.85 in women (45).

3.6.4. Information and Data Collection Form

Information acquisition and data collection form consisting of 17 questions (age, marital status, educational status, illness, etc.) and 14 questions about eating habits (number of meals, salt consumption, daily fluid consumption, etc.) and 31 questions in total (Appendix-3) has been applied.

3.6.5. Body Image Scale (BIS)

The Body Image Scale (BIS) used in the study was developed by Secord and Jourand in 1953 and contains 40 items. Each substance is related to an organ or part of the body (arm, leg, etc.) or a function (such as the level of sexual activity). The total score of the scale, which has scores from 1 to 5 for each item and has the option to answer "I don't like at all", "I don't like very much", "I am indecisive", "I quite like it" and "I like it very much", varies between 40 and 200. The scale cut-off score is 135, and those with a score below 135 are defined as low body perception. In our country, the validity and reliability of the scale was performed by Hovardaoğlu in 1989 (72).

3.7. Evaluation of Data

NCSS (Number Cruncher Statistical System) 2007 (Kaysville, Utah, USA) program was used for statistical analysis. Descriptive statistical methods (mean, standard deviation, median, frequency, ratio, minimum, maximum) were used while evaluating the study data. The suitability of the quantitative data to normal distribution was tested by Shapiro-Wilk test and graphical evaluations. Student's t-test was used for two-group comparisons of quantitative variables with normal distribution, and Mann-Whitney U test was used for two-group comparisons of variables that did not show normal distribution. One-way ANOVA test was used for comparisons of three and more normally distributed groups, and Bonferroni test was used for paired comparisons. The Kruskal Wallis test was used for comparisons of three or more groups that did not show normal distribution, and the Bonferroni-Dunn test for pairwise comparisons. Pearson Correlation Analysis was also used to evaluate the relationships between variables ($P < 0.05$).

3.8. Limitations of the Study

- Since the entire universe cannot be reached in the research, the research is limited to the sample.
- The research is limited to the Private Hay Health Center.
- Data collection tools to be used in the research are limited to the information acquisition and data collection form and body image test.

- The research is planned to be completed between 30.01.20-30.04.20. Research is limited to these periods.

3.9. Ethical Dimension of the Research

The data, sources and findings used in the study are shared completely. Results, methods, procedures are reported accurately. At the same time, it does not contain anything that may mislead our colleagues and the public. The research was conducted in accordance with scientific ethics. In our research, attention was paid to the privacy of individuals. Personal information (name, age, etc.) of the clients participating in the study was not used.



4. RESULTS

In this section, the main findings of the research are summarized.

Table 4.1. Distribution of Descriptive Characteristics of Women (n = 272)

		Min-Max (Median)	Av±Sp
Age (year)		18-65 (40)	39,68±12,96
Height (cm)		150-190 (165)	164,81±6,37
Weight (kg)		48-104 (67)	68,92±12,74
BMI (kg/m²)		18,5-34,9 (25)	25,42±4,72
Waist-hip ratio		0,6-1,1 (0,9)	0,85±0,10
		n	%
BMI level	Normal	135	49,6
	Overweight	78	28,7
	Obese	59	21,7
Marital status	Married	148	54,4
	Single	103	37,9
	Widow	5	1,8
	Divorced	16	5,9
Education status	Secondary	17	6,2
	High school	57	21,0
	University	148	54,4
	Graduate	50	18,4
Income status	Less than income	41	15,1
	Income equals expenses	166	61,0
	More than income	65	23,9
Chronic illness condition	No	160	58,8
	Yes	112	41,2
▪ Chronic illness (n=112)	Obesity	20	17,9
	Insulin resistance	27	24,1
	Cardiovascular disease	10	8,9
	Hypertension	25	22,3
	Diabetes	10	8,9
	Thyroid	37	33,0
	Other diseases	39	34,8
Smoking status	Yes	89	32,7
	No	183	67,3

▪ *There are cases with multiple chronic diseases.*

Table 4.1 contains the distribution of descriptive characteristics of women.

The age range is between 18 and 65.

Height measurements are between 150 and 190 cm.

Body weight is minimum 48 kg and a maximum of 104 kg, ranging from 48 to 104.

BMI measurements are between 18.5 and 34.9 kg / m², according to BMI measurements, 49.6% (n = 135) of the cases were normal weight, 28.7% (n = 78) were overweight and 21.7% (n = 59) is obese.

Waist-hip ratios vary between 0.6 and 1.1.

54.4% (n = 148) of the cases were married, 37.9% (n = 103) were single, 1.8% (n = 5) were widowed and 5.9% (n = 16) is divorced.

When the educational situation is examined; It was observed that 6.2% (n = 17) were secondary education graduates, 21.0% (n = 57) high school graduates, 54.4% (n = 148) university graduates, and 18.4% (n = 50) graduates.

Looking at the income status, it is less than the expense in 15.1% (n = 41) of the cases, equal to the expense in 61.0% (n = 166) and more than the expense in 23.9% (n = 65).

41.2% (n = 112) of the cases have a chronic disease that requires medication. When chronic disease types are examined; 17.9% (n = 20) obesity, 24.1% (n = 27) insulin resistance, 8.9% (n = 10) cardiovascular disease, 22.3% (n = 25) hypertension, 8%, There were 9 (n = 10) diabetes, 33.0% (n = 37) thyroid and 34.8% (n = 39) other diseases.

While the rate of smoking cases is 32.7% (n = 89), 67.3% (n = 183) do not smoke.

Table 4.2. Distribution of Opinions of Women on Body Weight (n = 272)

Specifications		n	%
Body weight assessment	Underweight	20	7,4
	Normal	104	38,2
	Slightly overweight	109	40,1
	Overweight	29	10,6
	Obese	10	3,7
Satisfaction with current weight	I am satisfied	68	25,0
	I am undecided	39	14,3
	I am not satisfied	165	60,7
Want to lose weight	Yes	210	77,2
	No	62	22,8
Reason for wanting to lose weight (n = 210)	Health	109	51,9
	Appearance	79	37,6
	Family pressure	5	2,4
	Social pressure	8	3,8
	Other	9	4,3
Want to gain weight	Yes	10	3,7
	No	262	96,3
Reason for wanting to gain weight (n = 10)	Health	4	40,0
	Appearance	6	60,0
Finding sufficient daily physical activity	Not enough	150	55,1
	May be enough	84	30,9
	Enough	29	10,7
	Quite enough	9	3,3

Table 4.2 contains the distribution of the opinions of women on body weight.

When the subjects were asked about their body weight evaluations; 7.4% (n = 20) underweight, 38.2% (n = 104) normal, 40.1% (n = 109) slightly overweight, 10.6% (n = 29) overweight and 3.7% (n = 10) responded obese.

While 25.0% (n = 68) of the cases were satisfied with their current weight; 14.3% (n = 39) of them stated that they were indecisive and 60.7% (n = 165) of them stated that they were not satisfied.

There are 77.2% (n = 210) of the patients who want to lose weight. As the reason for wanting to lose weight; 51.9% (n = 109) had health, 37.6% (n = 79) external appearance, 2.4% (n = 5) family pressure, 3.8% (n = 8) social pressure and 4.3% (n = 9) stated other reasons.

There are 3.7% (n = 10) cases who want to gain weight. As the reason for wanting to gain weight; 40.0% (n = 4) expressed health and 60.0% (n = 6) expressed external appearance.

When the situation of finding adequate daily physical activity is examined; 55.1% (n = 150) were not enough, 30.9% (n = 84) were may be enough, 10.7% (n = 29) were enough, and 3.3% (n = 9) were quite enough.

Table 4.3. Distribution of Nutritional Habits of Women (n = 272)

Specifications		n	%
Number of meals per day	1 meal	2	0,7
	2 meals	56	20,6
	3 meals	104	38,2
	4-6 meals	104	38,2
	> 6 meals	6	2,3
Skip meals status	Yes	95	34,9
	Sometimes	124	45,6
	No	53	19,5
Meal skipped (n = 219)	Breakfast	64	29,2
	Lunch	88	40,2
	Dinner	23	10,5
	Snacks	44	20,1
Reason for skipping meals (n = 219)	To lose weight	21	9,6
	Don't forget / can't find the opportunity	109	49,8
	Don't need a meal	69	31,5
	Other reasons	20	9,1
Regular meal times	Yes	135	49,6
	No	137	50,4
General appetite	Under	18	6,6
	Normal	179	65,8
	Much	75	27,6
Chewing-Swallowing difficulties	Yes	17	6,3
	No	255	93,7
Adequate and balanced diet	Yes	161	59,2
	No	111	40,8
Adding salt to the food on the table	Yes	104	38,2
	No	168	61,8

Table 4.3. The distribution of the eating habits of women is shown.

0.7% of the subjects (n = 2) 1 meal a day, 20.6% (n = 56) 2 meals, 38.2% (n = 104) 3 meals, 38.2% (n = 104) 4 -6 meals and 2.3% (n = 6) ate more than 6 meals.

When the status of skipping meals of the cases is examined; 34.9% (n = 95) stated that they skipped meals, 45.6% (n = 124) sometimes skipped meals, and 19.5% (n = 53) did not skip meals. Of the missed meals, 29.2% (n = 64) were breakfast, 40.2% (n = 88) lunch, 10.5% (n = 23) dinner and 20.1% (n = 44) snacks. As the reason for skipping meals; 9.6% (n = 21) weight loss, 49.8% (n = 109) forgetting / not having an opportunity, 31.5% (n = 69) not needing and 9.1% (n = 20) other reasons are shown.

While 49.6% (n = 135) of the cases stated that meal times were regular, 50.4% (n = 137) stated otherwise.

When the general appetite of the cases is questioned; 6.6% (n = 18) gave the answer under, 65.8% (n = 179) normal, 27.6% (n = 75) much.

6.3% (n = 17) of the cases had difficulty in chewing and swallowing. The rate of the cases who stated that they had adequate and balanced nutrition was 59.2% (n = 161).

38.2% of the subjects (n = 104) add salt to the foods at the table.

Table 4.4. Distribution of Liquid and Food Consumption Characteristics of Women (n = 272)

Specifications		n	%
Daily liquid consumption	1-4 cups	36	13,2
	4-8 cups	87	32,0
	8-10 cups	88	32,4
	>10 cups	61	22,4
Frequency of consuming dairy products	1-2 times a week	33	12,1
	3-4 times a week	69	25,4
	5-6 times a week	35	12,9
	Everyday	135	49,6
Frequency of consuming meat products	1-2 times a week	51	18,8
	3-4 times a week	104	38,2
	5-6 times a week	53	19,5
	Everyday	64	23,5
Frequency of fruit consumption	1-2 times a week	81	29,8
	3-4 times a week	64	23,5
	5-6 times a week	38	14,0
	Everyday	89	32,7
Frequency of consuming the cereal group	1-2 times a week	70	25,7
	3-4 times a week	93	34,2
	5-6 times a week	34	12,5
	Everyday	75	27,6

Table 4.4. Distribution of liquid and food consumption characteristics of women (n = 272) are shown.

13.2% (n = 36) of the cases 1-4 cups per day, 32.0% (n = 87) 4-8 cups, 32.4% (n = 88) 8-10 cups and 22.4% (n = 61) consume 10 + cups.

When the consumption frequency of milk and dairy products is examined; 12.1% (n = 33) 1-2 times a week, 25.4% (n = 69) 3-4 times a week, 12.9% (n = 35) 5-6 times a week and 49.6% (n = 135) was observed to be consumed every day.

When the consumption frequency of meat and meat products is examined; 18.8% (n = 51) 1-2 times a week, 38.2% (n = 104) 3-4 times a week, 19.5% (n = 53) 5-6 times a week and 23.5% (n = 64) was observed to be consumed every day.

When the frequency of fruit consumption is examined; 29.8% (n = 81) 1-2 times a week, 23.5% (n = 64) 3-4 times a week, 14.0% (n = 38) 5-6 times a week and 32.7% (n = 89) was observed to be consumed every day.

When the consumption frequency of the cereal group is examined; 25.7% (n = 70) 1-2 times a week, 34.2% (n = 93) 3-4 times a week, 12.5% (n = 34) 5-6 times a week and 27.6% (n = 75) was observed to be consumed every day.

Table 4.5. Distribution of Body Image Scale Scores

Body image score	
Min-Max	49-193
Median	133
Av±Sp	131,74±24,45
Number of Items	40

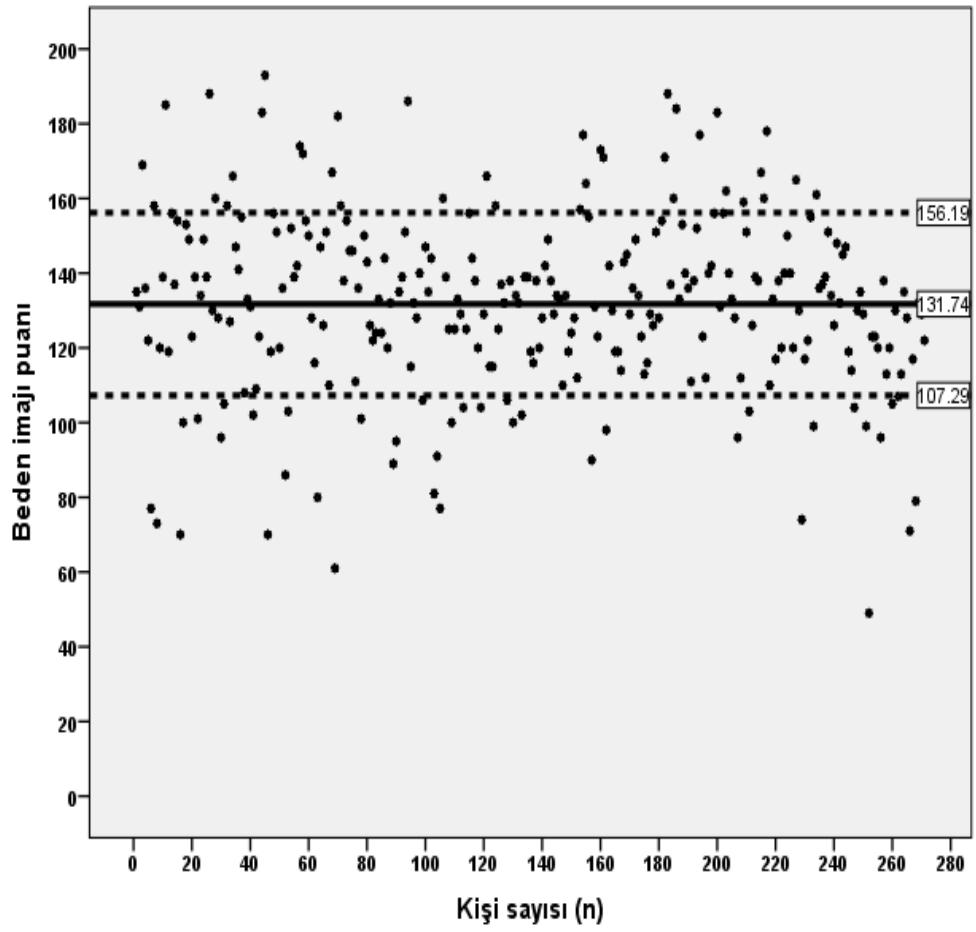


Figure 4.1. Distribution of Body Image Scores

Body Image Scale scores range from 49 to 193, with an average of 131.74 ± 24.45 .

Table 4.6. Comparison of Women's Body Image Score Averages According to Descriptive Features

		Body image score			p
		n	Min-Max (Median)	Av±Sp	
BMI level	Normal	135	61-193 (144)	143,12±24,27	^a 0,001**
	Overweight	78	49-153 (123,5)	122,55±17,73	
	Obese	59	70-151 (126)	117,86±20,10	
Marital status	Married	148	49-193 (132)	130,30±24,24	^b 0,288
	Single	134	70-188 (135)	133,47±24,68	
Education status	Secondary	17	49-188 (128)	122,29±36,78	^a 0,340
	High school	57	70-186 (131)	128,16±26,05	
	University	148	61-193 (133)	133,09±21,59	
	Graduate	50	71-185 (136)	135,06±25,04	
Income status	Less than income	41	49-188 (119)	119,07±29,78	^a 0,001**
	Income equals expenses	166	61-188 (133)	132,25±22,12	
	More than income	65	89-193 (138)	138,43±23,80	
Chronic illness condition	No	160	73-193 (137)	137,84±22,21	^b 0,001**
	Yes	112	49-183 (128)	123,03±24,94	
Smoking status	Yes	89	61-193 (132)	131,52±26,44	^b 0,916
	No	183	49-188 (133)	131,85±23,49	
^a Oneway ANOVA Test		^b Student t Test		^{**} p<0,01	

In Table 4.6, the comparison of the mean BIS scores according to the descriptive characteristics of women is given.

It was found that as BMI of women increased, the mean BIS pounds decreased and body image perception was high (> 135) in women with normal weight, while body image perception was low (<135) in overweight and obese women.

A statistically significant difference was found between body image scores according to BMI level (p = 0.001; p <0.01). As a result of paired comparisons made in

order to determine which group caused the significant difference; The scores of the cases with normal weight were higher than the overweight ($p = 0.001$) and obese ($p = 0.001$) cases ($p < 0.01$). No statistically significant difference was found between the scores of overweight and obese cases ($p > 0.05$).

Body image score does not show a statistically significant difference according to marital status and educational status ($p > 0.05$).

A statistically significant difference was found between body image scores according to income level ($p = 0.001$; $p < 0.01$). As a result of paired comparisons made in order to determine which group caused the significant difference; The scores of the cases whose income is less than their expenses were found to be lower than those whose income is equivalent to their expenses ($p = 0.005$) and whose income is more than their expenses ($p = 0.001$) ($p < 0.01$). No statistically significant difference was found between the scores of the cases whose income was equal to or higher than their expenses ($p > 0.05$).

A statistically significant difference was found between body image scores according to chronic disease status ($p = 0.001$; $p < 0.01$); The scores of the patients with disease were lower than those without the disease.

No statistically significant difference was found between body image scores according to smoking status ($p > 0.05$).

Table 4.6.1. The Relationship Between Descriptive Traits and Body Image Scores

		Body image score
Age (year)	r	-0,153
	p	0,012*
BMI (kg/m²)	r	-0,455
	p	0,001**
Waist-hip ratio	r	-0,370
	p	0,001**
<i>r: Pearson Correlation Coefficient</i>		<i>*p<0,05 **p<0,01</i>

In Table 4.6.1., The relationship between some descriptive characteristics of women and their mean BIS scores is given.

A statistically significant negative correlation (score decreases with increasing age) was found between age and body image mean score ($r: -0.153$; $p = 0.012$; $p < 0.05$).

A statistically significant negative correlation (score decreases with increasing BMI) was also found between BMI measurements and body image mean score ($r: -0.455$; $p = 0.001$; $p < 0.01$).

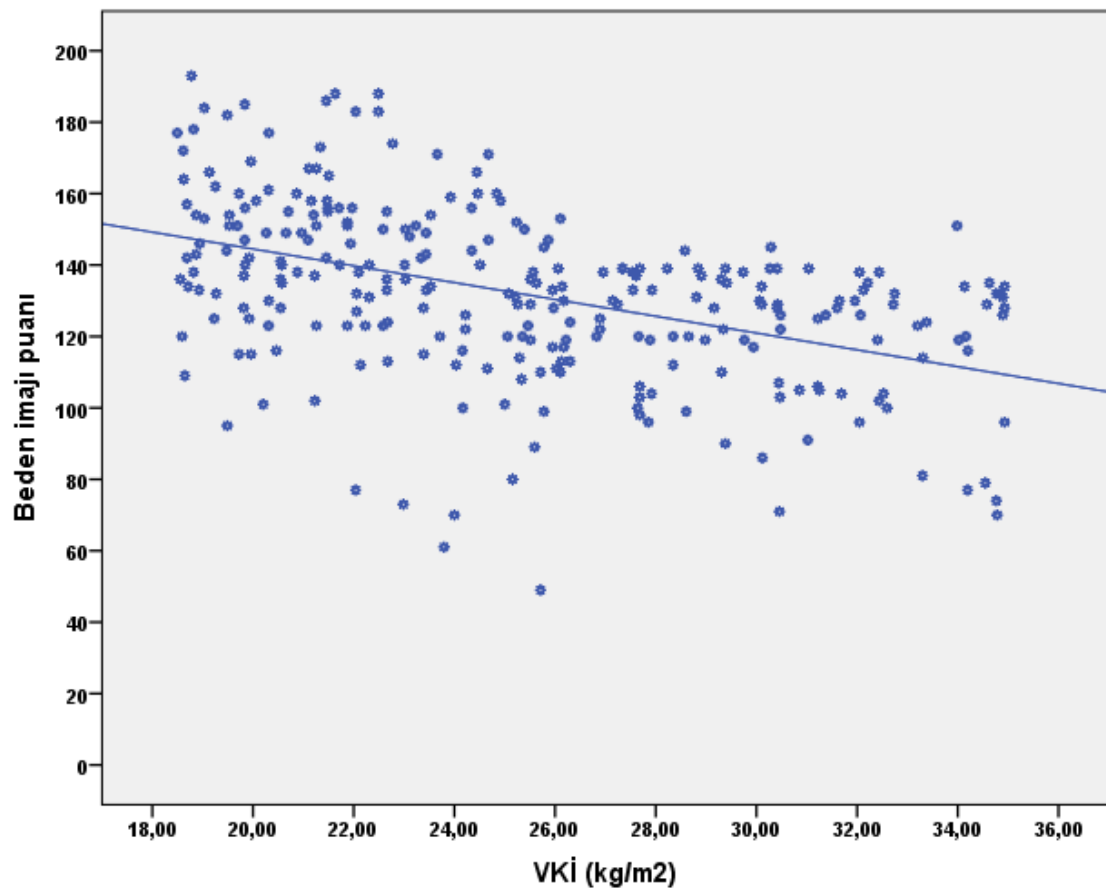


Figure 4.2. Relationship Between BMI and Body Image Score

A statistically significant negative correlation (score decreases with increasing waist-hip ratio) at the level of 0.370 was found between waist-hip ratio and body image mean score ($r: -0.370$; $p = 0.001$; $p < 0.01$).

Table 4.7. Comparison of Body Image Score Averages According to the Views of Women on Body Weight

		Body image score			
		n	Min-Max (Median)	Av±Sd	p
Body weight assessment	Under weight	20	109-193 (149,5)	150,35±20,70	^a 0,001**
	Normal	104	49-188 (144)	141,39±25,14	
	Slightly overweight	109	61-183 (126)	123,94±20,23	
	Overweight	29	91-151 (126)	123,10±15,03	
	Obese	10	70-139 (110,5)	104,30±24,16	
Satisfaction with current weight	Satisfied	68	80-193 (154)	151,54±23,38	^a 0,001**
	undecided	39	73-167 (133)	131,26±18,58	
	don't satisfied	165	49-183 (128)	123,70±21,37	
Want to lose weight	Yes	210	49-183 (129)	126,20±22,28	^b 0,001**
	No	62	95-193 (151)	150,53±22,13	
Want to gain weight	Yes	10	120-193 (145)	148,40±24,70	^c 0,048*
	No	262	49-188 (132)	131,11±24,26	
Finding sufficient daily physical activity	Not enough	150	49-193 (130)	127,93±24,54	^d 0,001**
	May be enough	84	70-188 (133)	132,89±23,22	
	Enough	29	73-183 (140)	141,83±21,69	
	Quite enough	9	112-188 (160)	152,11±25,85	

^aOneway ANOVA Test

^bStudent t Test

^cMann Whitney U Test

^dKruskal Wallis Test

*p<0,05

**p<0,01

Table 4.7. A comparison of the mean body image scores of women according to their views on body weight was shown.

A statistically significant difference was found between body image scores according to the body weight evaluation (p = 0.001; p <0.01). As a result of paired comparisons made in order to determine which group caused the significant difference; The scores of the patients who evaluated themselves as underweight were found to be higher than those who evaluated themselves as slightly overweight (p = 0.001), overweight (p = 0.001) and obese (p = 0.001) (p <0.01). The scores of the patients who

evaluated themselves as normal weight were found to be higher than those who evaluated themselves as slightly overweight ($p = 0.001$), overweight ($p = 0.001$) and obese ($p = 0.001$) ($p < 0.01$). No statistically significant difference was found in other paired comparisons ($p > 0.05$).

A statistically significant difference was found between body image scores according to satisfaction with the current weight ($p = 0.001$; $p < 0.01$). As a result of paired comparisons made in order to determine which group caused the significant difference; The scores of the cases satisfied with their weight were higher than the undecided ($p = 0.001$), and don't satisfied ($p = 0.001$) cases ($p < 0.01$). No statistically significant difference was found between the scores of the undecided and don't satisfied cases ($p > 0.05$).

A statistically significant difference was found between body image scores according to the condition of wanting to lose weight ($p = 0.001$; $p < 0.01$); The scores of the subjects who wanted to lose weight were found to be lower than those who did not want to lose weight.

A statistically significant difference was found between body image scores according to the status of wanting to gain weight ($p = 0.048$; $p < 0.05$); The scores of the subjects who wanted to gain weight were higher than those who did not want to gain weight.

A statistically significant difference was found between body image scores according to the condition of finding adequate daily physical activity ($p = 0.001$; $p < 0.01$). As a result of paired comparisons made in order to determine which group caused the significant difference; The scores of the patients who did not find physical activity not enough ($p = 0.006$) those who found enough ($p = 0.042$) and quite enough were found to be lower ($p < 0.05$). No statistically significant difference was found in other paired comparisons ($p > 0.05$).

Table 4.8. Comparison of Body Image Scores of Women According to Their Nutrition Habits

Habits		n	Body image score		p
			Min-Max (Median)	Av±Sd	
Number of meals per day	≤2 meals	58	77-188 (132,5)	132,79±26,25	^a 0,182
	3 meals	104	49-186 (135,5)	134,57±25,94	
	≥4 meals	110	61-193 (130)	128,52±21,70	
Skip meals status	Yes	95	49-178 (130)	127,80±24,45	^a 0,138
	Sometimes	124	61-193 (134)	133,38±24,48	
	No	53	79-186 (133)	134,98±23,89	
General appetite	Under	18	99-172 (133,5)	136,06±21,77	^a 0,013*
	Normal	179	49-188 (135)	134,26±24,63	
	Much	75	74-193 (126)	124,71±23,47	
Chewing-Swallowing difficulties	Yes	17	77-160 (116)	115,53±21,79	^b 0,005**
	No	255	49-193 (133)	132,82±24,27	
Adequate and balanced diet	Yes	161	49-188 (136)	136,22±24,29	^b 0,001**
	No	111	70-193 (128)	125,24±23,29	
^a Oneway ANOVA Test		^b Student t Test		*p<0,05	**p<0,01

Table 4.8. A comparison of the average body image scores of women according to their eating habits has been shown.

Body image score does not show a statistically significant difference according to the number of daily meals and the status of skipping meals ($p > 0.05$).

A statistically significant difference was found between body image scores according to the general appetite status ($p = 0.013$; $p < 0.05$). As a result of paired comparisons made in order to determine which group caused the significant difference; The scores of the cases with excessive appetite were found to be lower than the cases with normal appetite ($p = 0.013$; $p < 0.05$). No statistically significant difference was found in other paired comparisons ($p > 0.05$).

There was a statistically significant difference between the body image scores according to chewing and swallowing difficulties ($p = 0.005$; $p < 0.01$); The scores of the patients with difficulty were found to be lower than the ones without difficulty.

A statistically significant difference was found between body image scores according to adequate and balanced nutrition status ($p = 0.001$; $p < 0.01$); The scores of the subjects who had a sufficient and balanced diet were higher than those who did not have a balanced and adequate diet.

Table 4.9. Comparison of Body Image Scores of Women According to Liquid and Food Consumption Characteristics

Habits		n	Body image score		p
			Min-Max (Median)	Av±Sd	
Daily liquid consumption	1-4 cups	36	71-188 (130,5)	129,17±25,59	^a 0,855
	4-8 cups	87	70-188 (132)	131,67±25,11	
	8-10 cups	88	70-193 (134)	133,05±24,06	
	>10 cups	61	49-183 (134)	131,49±23,83	
Frequency of consuming dairy products	1-2 times a week	33	96-185 (128)	131,48±24,02	^a 0,367
	3-4 times a week	69	61-188 (130)	127,88±26,97	
	5-6 times a week	35	49-172 (134)	130,26±25,06	
	Everyday	135	70-193 (134)	134,16±22,99	
Frequency of consuming meat products	1-2 times a week	51	49-188 (132)	131,82±27,79	^a 0,116
	3-4 times a week	104	61-188 (129,5)	128,36±24,95	
	5-6 times a week	53	73-186 (134)	131,06±21,86	
	Everyday	64	71-193 (136)	137,75±22,14	
Frequency of fruit consumption	1-2 times a week	81	70-193 (128)	127,30±24,80	^a 0,082
	3-4 times a week	64	49-188 (133,5)	132,28±24,05	
	5-6 times a week	38	73-186 (140,5)	139,63±26,55	
	Everyday	89	61-188 (134)	132,03±22,93	
Frequency of consuming the cereal group	1-2 times a week	70	61-188 (130,5)	132,36±28,07	^a 0,124
	3-4 times a week	93	71-193 (135)	135,97±21,61	
	5-6 times a week	34	49-184 (127,5)	127,38±25,96	
	Everyday	75	74-185 (130)	127,91±22,94	

^aOneway ANOVA Test

Table 4.9 shows the comparison of body image score averages of women according to fluid and food consumption characteristics.

No statistically significant difference was found between body image scores according to daily fluid consumption ($p > 0.05$).

There was no statistically significant difference between body image scores according to the consumption frequency of milk and dairy products ($p > 0.05$).

No statistically significant difference was found between body image scores according to the consumption frequency of meat and meat products ($p > 0.05$).

While no statistically significant difference was found between body image scores according to the frequency of fruit consumption ($p = 0.082$; $p > 0.05$); It is noteworthy that the scores of those who consume sparse fruit are low.

No statistically significant difference was found between body image scores according to the consumption frequency of the cereal group ($p > 0.05$).

5. DISCUSSION AND CONCLUSION

5.1. Discussion

This study was designed to examine and evaluate the relationship between body image perceptions of women with different body mass indexes. The hypothesis that women who are considered obese according to body mass index classification have lower self-image perception compared to non-obese women was investigated.

H1. Women who are considered obese according to body mass index classification have lower self-perception than non-obese women.

H2. Body image scale average score is different according to some descriptive characteristics of women (age, waist-hip ratio, chronic disease status, etc.).

H3. According to some opinions of women about body weight (body weight assessment, being satisfied with current weight, wanting to lose weight, wanting to gain weight, physical activity level, etc.), body image scale average score is different.

H4. According to some of the nutritional characteristics of women (number of meals per day, skipping meals, general appetite, difficulty in chewing and swallowing, adequate and balanced nutrition status, etc.), body image scale average score is different.

In the study, 272 people were included and 49.6% (n=135) of the cases were classified as normal, 28.7% (n=78) as overweight and 21.7% (n=59) as obese according to the BMI measurements. In the study, it was found that overweight and obese women have lower body image scores and negative body image when compared to women with normal weight. A correlation was found between the body mass index, waist-hip ratio, age, income-expense status, chronic diseases, physical activity level, adequate and balanced nutrition, and the perception of body image.

One of the main reasons for the study to be conducted only among women is that the concept of "ideal body" is generally done on the female body. Nowadays, associating the concept of "ideal body" with "weakness" or "thinness" in many areas creates a psychological pressure especially on obese women. All women, mostly obese women, are generally more exposed to judgment, criticism and social pressure with their external

appearance compared to men (71). In a meta-analysis study, women's exposure to body dissatisfaction, internalization of the subtle ideal and eating behaviors were tested. Findings support the idea that exposure to media images and pressure depicting the slim ideal body may be due to body image impairment in women (73). According to the World Health Organization (WHO), women constitute approximately 60% of the estimated overweight (1.9 billion) and obese individuals (600 million) worldwide (74). In general, the reason why women gain more weight than men in the world can be explained by factors related to gender inequality (75). In another study, it was stated that women consistently display a more negative body image and have a weaker body image than men (76). In widely published literature, body weight perception points to gender differences related to weight dissatisfaction (77).

Women between 18 and 65 years old were included in the study, and the mean age of the women was found to be 39.68 ± 12.96 (Table 4.1.). A significant negative correlation was found between the age and the body image score (as the age increases, the score decreases) (Table 4.6.1.). Decrease in the body image as the age increases can be associated with weight gain and increased BMI due to the slowing metabolism. At the same time, women may have the idea that they get away from the concepts of “ideal body” and “beauty” with age and due to this perception, it is possible to have body dissatisfaction increase with increasing age. When the literature studies are considered, a random sample (n=1081) of young (between 18 and 35 years old) and middle-aged adults (between 36 and 55 years old) was encountered in a cross-sectional study conducted in the Balearic Islands of Spain in 2009-2010. As a result of the study, it was found that middle-aged participants were less satisfied with their body shape when compared to young people (78). In a study conducted with 7677 people both in Scotland and the Netherlands (79) and in another study including 1114 people between 18 and 63 years old in Sri Lanka, it was found that the BMI value increased together with the increasing age (80). In numerous studies conducted, it was reported that high BMI value was also associated with low body image (3, 11, 59).

In the present study, a statistically significant difference was found between the body image scores according to the body mass index classification ($p=0.001$; $p<0.01$), and a negative correlation was found between the BMI measurements and the body image score (as the BMI increases, the score decreases) (Table 6). It is seen that obese women

have more negative body images when compared to women with normal weight. In order to give an example from a literature review supporting this situation, in a study including 76 obese women and 43 non-obese women, the majority of obese women had dissatisfaction with their body images related to their obesity status and reported more body image dissatisfaction in average than the non-obese control group. This situation explains that the BMI value has a significant effect on body dissatisfaction and body image (3). In another descriptive and cross-sectional study, 816 people were included and 86.3% of them were women. According to their BMI values, they were classified as normal weight, overweight, obese, and morbid obese. When normal individuals were taken as reference according to their BMI values, it was reported that the rate of low self-respect was 1.49 times higher in obese and 3.31 times higher in morbid obese patients (59).

Waist-hip ratio (WHR) is associated with the risk of morbidity and mortality (43), and care should be shown to the waist-hip ratio to be lower than 0.90 cm in men and 0.85 cm in women according to WHO (45). In the current study, waist-hip ratio was between 0.6 and 1.1 and the average was found to be 0.85 ± 0.10 (Table 2.1.). A statistically significant relationship at a rate of 0.370 was found between waist-hip ratio and body image score in a negative direction (as the waist-hip ratio increases, score decreases). As the reason for this relationship, it can be suggested that abdominal (central) obesity (42), indicating high fat tissue and distribution in the body, is higher than the fat ratio according to the concept of “ideal body”, and it negatively affects the body image in women. In Turkish Nutrition and Health Research conducted in Turkey in 2010, it was stated that while the ratio of women having a waist circumference less than 80 cm in 19-30 years old age group was 60.5%, it was 22.2% in the 31-50 years old age group. The waist circumference of a very low percentage of people aged between 51 and 64 years old (6.7%), 65 years old and over (8.0%) is within normal limits. It was seen that the rate of the individuals having a waist circumference of more than 88 cm were 82.7% in the 51-64 years old age group and 79.2% in the 65 years old and above age group. These values highlight the importance of abdominal obesity in women (36). In a study conducted on 3,617 women over the age of 19, who participated in the Seventh Korea National Health and Nutrition Examination Survey in 2016, it was seen that the perception of their own bodies of the women with abdominal obesity as obese was 3.07 times more than women without abdominal obesity. At the same time, women with abdominal obesity were found

to have higher self-perception of their body images according to the waist-hip ratio and BMI values (81). In another study conducted with 79 obese and 43 non-obese women, they specified that most of the obese women were not satisfied with their body images. More than half of the women, who reported body image dissatisfaction, stated that the most disliked parts of their bodies were the waist and abdomen (3).

When the educational status of the women participating in the study was examined, it was determined that the highest rate was 54.4% with the university graduates (Table 1). In the study, no statistically significant relationship between the body image score and marital status and educational status was found. The reason for the absence of a relationship with body image may be that the people in the secondary education category constitute 6.2% of the total cases and people with a high level of education are proportionally higher in the study, thus, they are not distributed homogeneously. When the literature is reviewed, in a study presented at the 8th National Public Health Congress, it was reported that being married and non-employment are the risk factors for obesity (82).

When the educational status was examined, 54.4% postgraduates and 18.4% postgraduates were present in the study (Table 1). The high level of education of the women in our study may be the reason for the not finding a meaningful difference between the body image and the educational status (Table 4.6.). When the studies regarding educational status and body image in the literature were reviewed, a correlation was found between low education level and the body image. In a study consisting of 4 racial/ethnic groups that included more than 1,700 overweight and obese women aged 40 and over, it was found that body satisfaction was related with lower body mass index (BMI), greater age, lower education level, and better self-assessment health (83). In another study conducted with a population-based sample oriented to women between 40 and 65 years old, a significant correlation was found between obesity and depression related to the body image dissatisfaction among women, who received education for less than 16 years (84).

The income-expense level was evaluated by taking the statements of the women participating in the study as a basis. Of the people, 61% had equal income-expenditure status, 15.1% had less, and 23.9% had more (Table 2.1.). In the study, a relationship of having lower body images ($p < 0.01$) was found in the patients whose income is less than

their expenses, whose income is equivalent to their expenses ($p=0.005$), and whose income is more than their expenses ($p=0.001$). It can be considered that the reason for this may be that it could be more difficult for people with low income to reach the right food. People with lower income may prefer more easily accessible carbohydrates such as white bread and white flour. Nutrition with simple carbohydrates may trigger to gain weight. Body dissatisfaction can be seen together with increasing BMI and increasing waist circumference. A review of the literature reveals that there is a strong inverse relationship between women and socioeconomic status in developed societies as a result of the review of 144 studies published regarding the relationship between socioeconomic status and obesity. In developing populations, there is a strong direct relationship between men, women and children about the socioeconomic status and obesity. It is contemplated that various variables affecting the attitudes towards obesity and being underweight among women in developed populations, resulting in an inverse relationship between socioeconomic status and obesity, may intervene (85).

Of women participating in the study, 41.2% had a chronic disease that requires medication. When the types of chronic diseases were examined, other diseases took place with 34.8%, thyroid diseases with 33.0%, insulin resistance with 24.1%, hypertension with 22.3%, and obesity with 17.9% in the first 5 ranking (Table 2.1.). The body image score of women with a chronic disease (123.03 ± 24.94) was found to be lower than those without the disease (137.84 ± 22.21) (Table 4.6.). Obesity causes a significant increase in morbidity and mortality besides low body image. The prevalence of obesity increases with a body mass index of 25 and above and concomitantly, the risk of obesity-related hypertension, Type 2 Diabetes, and cardiovascular disease shows an increase (10). Diseases caused by obesity include metabolic syndrome, hyperinsulinemia, sleep apnea, digestive system diseases, polycystic ovary syndrome, some cancer types, low self-respect, and psycho-social complications such as negative body image (1, 8, 10, 16, 17, 40). In a meta-analysis conducted in China that proves this situation, it was seen that chronic diseases such as hypertension, cardiovascular diseases, and type 2 diabetes, that are related to obesity, have increased in the last decade with the increase of overweight and obesity (86).

The smoking status of the women participating in the study was asked and 67.3% of the cases stated that they did not smoke (Table 2.1.). In the study, no significant result

related to smoking and body image was found (Table 4.6.). When the literature was reviewed, 141 smoking women participating in 12-week randomized smoking cessation trial were prospectively examined. Regression analyses have shown that smoking cessation treatment may positively affect the body image. The results support that smoking cessation may prevent negative body image. In addition, weight gain during smoking cessation can negatively affect the body image and may pose an increased risk for relapse (87).

In the study, people were asked how they perceive their own body weights and the highest answer was defined as “overweight” with a ratio of 40.1% (Table 4.2). However, cases, whose BMI values were calculated with their actual weights and heights, were classified as “normal weight” according to the obesity classification with an average of 25.42 kg/m² (Table 2.1.). A statistically significant difference was found between the body image scores according to body weight evaluation ($p=0,001$; $p<0,01$). As a result of paired comparisons conducted to determine which group caused the significant difference, the scores of the cases, who evaluated themselves as underweight, were found to be higher than those, who evaluated themselves as overweight ($p=0.001$), overweight ($p=0.001$), and obese ($p=0.001$) ($p<0,01$). This indicates that most of the women participating in the study misperceived their own body weights. Similar situation was seen in another study in the literature. In a study conducted with 161 students as 60.9% men and 39.1% women, most of the participants were classified as normal (55.9%) according to their BMI values. The ratios of real obese, overweight, and underweight students were reported as 4.4%, 30.4%, and 9.3%, respectively. However, the ratio of the students perceiving themselves as obese or overweight was only 37.3%. The fact that the value of women (57.2%) was significantly higher than that of men (20.4%) and this caused them to perceive themselves as overweight ($p<0.001$). The relationship between actual BMI and perceived weight was found to be weak. Both the current study and the study in the literature show that health promoting interventions helping to create healthy body habit perceptions, need to be developed.

In our study, in addition to overweight and obese individuals, women with normal weight having a BMI value between 18.5 and 24.9 were found to feel overweight or overweight and dissatisfied with their current weight in their own body weight assessments. Statistically, the reasons for desiring to lose weight in the participants were

mostly due to health (51.9%), and then external appearance with 37.6% (Table 2). This situation may be related to the concept of ideal body in the Western societies that are internalized by most women. Observation of such concern and anxiety situations about the external appearance of normal and healthy women may cause eating disorders, psychological problems, and negative body image in the future. As an example for this situation, when the literature is reviewed, the effect of the threat caused by the the perceived body image and the perception of thin-ideal images including perceived/objective, ideal/objective and desired/objective self-perception categories, was examined in a study conducted with 82 women. Results showed that, regardless of the body mass index, when women are encountered with threatening dimensions of thin ideal perception, there are more differences between their own bodies and their perceived body images (89).

A statistically significant difference was found between the body image scores according to the status of desiring to gain weight ($p = 0.048$; $p < 0.05$), the scores of the patients desiring to gain weight were higher than those who did not desire (Table 4.7.). Since the cases desiring to gain weight were 10 people, further studies were needed for the relationship regarding body image.

The answers given by women participating in the study to the daily physical activity levels showed that more than half of the total answers were not doing sufficient physical activity (Figure 5). In Table 4.7., the body images of those, who do not have sufficient physical activity were found to be lower than other cases. It can be considered that people may affect their body perceptions positively due to the possibility of feeling themselves happier, vigorous, and healthy via physical activity. The low physical activity level in the present study can be correlated with the sedentary lifestyle observed in most of the individuals today. Sedentary life is a risk factor for obesity and diabetes (90). According to the data of Turkish Nutrition and Health Survey in 2010, while % 41.6 of men in Turkey have active or moderate activity level, it was determined that most of the women have a sedentary life or mild activity level and active or moderately active lifestyle (36). Physical activity (PA) is a key determinant in energy expenditure, energy balance, and weight control (53). It is as important as energy intake in the formation of obesity (40). In a 36-month study including 221 overweight/obese women, who participated in a behavioral weight-control intervention, besides the physiological effects

of exercise and physical activity, it was shown that psychological mechanisms related to the body image and mental state explained the role of physical activity as a “gateway behavior” for better nutritional regulation in overweight women. Such effects may help to understand the key role of exercise in long-term weight management (91). Studies show that physical activity and exercise have a protective effect on the body image and general physical self-conception when used to improve health and well-being (70).

Appetite status of the participants were asked and as seen in Table 4.3., 27.6% of the cases defined their appetite status as “high”. When the relationship between appetite and body image was questioned, it was seen that women with higher appetite status have lower scores than other women (Table 4.8). The change in the appetite status may be caused by emotional eating, which can be highly observed, especially in women. It can be considered that especially obese individuals may be affected more by emotional eating attacks. When the literature is reviewed, it was found that internalization of weight stigmatization in women is strongly related to the cognitive and attitudinal aspects of the eating disorders when compared to men. Women appear to be at more risk of being affected by emotional eating. Such type of increased eating disorder in women may reflect the gender differences in terms of body image problems and depression (62). It can be suggested that 18 people, who answered the appetite status as “low”, may be elderly, excluding special conditions (diseases, surgery etc.) (Table 4.3.). When the literature is reviewed, it is stated that despite the prevalence of overweight is high in the elderly, decrease in food intake and loss of eating motivation can be observed. Insufficient and poor nutritional status play a role in the development and progression of chronic diseases affecting elderly. Depression, that is generally associated with the break from or deterioration of social life, is a common psychological problem in the elderly and it is an important reason for loss of appetite. The reduction in food intake may be related to eating less (hunger) from a lower need status or related to faster acting and stronger inhibitory (satiety) signals (92). In this case, loss of appetite can be seen.

When women participating in the study asked whether they had chewing and swallowing difficulties, it was observed that 17 of the cases answered as “yes”. When this situation was associated with the body image, it was concluded that the scores of the cases having difficulty were lower than those who did not. However, it is not possible to make various remarks as chewing-swallowing difficulties may have many factors. When the

literature is reviewed, in a study conducted about chewing and swallowing, 160 people, matched gender and age, were classified as obese, overweight, normal, and underweight according to body mass index, and there were 40 people in each subject group. As a result of the study, despite the individuals in the obese group tended to swallow larger particles, no significant differences were observed in chewing performance and swallowing reflex between the four groups (93). Further studies are required to develop a relationship between chewing and swallowing difficulties and the body image.

In the current study, women were asked whether they were keeping a sufficient and balanced diet, and the results were found to be close to each other. Women, who answered as “yes” by thinking that they had a sufficient and balanced diet, were found to be 59.2%, and those, who answered as “no” because they did not think that they did not have a sufficient and balanced diet, were found to be 40.8% (Table 3). Body image scores of women considering to have a adequate and balanced diet were also higher (Table 4.8.). However, since the statements of the individuals are taken as a basis and they do not have any professional nutritional knowledge, they may keep an irregular, uniform, or wrong diet under the name of “sufficient and balanced nutrition”, and in such a case, the answer they gave may vary depending on whether the person has received a nutrition training by a specialist or not, and the person has correct information. At the same time, distribution of the food consumption is given in Table 4.4 by taking the statements of women participating in the study as a basis. The cases were asked about their daily liquid consumption, the frequency of consuming dairy products, the frequency of consuming meat products, the frequency of consuming fruit, and the frequency of consuming cereals, and when compared to the body image, the significant correlation was only found to be low in those who rarely consumed fruits (Table 4.9). By considering this result, it can be specified that people rarely consuming fruits cannot reach the daily portion of fruits and vegetables that should be taken in a healthy diet and it is possible to have the body image of the individuals eating unhealthy foods lower than others. Turkish Nutrition and Health Survey conducted in 2010 indicates the frequency of consuming fruits in Turkey. The rate of the individuals consuming fresh fruits every day is increased to 51.5%. It is determined that the rate of those living in urban areas and consuming fresh fruits every day (53.5%) is higher than the rate of those living in rural areas (45.5%) (36).

5.2. Conclusion

This study was carried out to determine the relationship between women's body mass indexes and body image perceptions. The results of the study are summarized below.

1. Women aged 18-65 participated in the study and the average age of individuals were 39.02 ± 12.08 years.
2. The height of women participating in the study were between 150 and 190 cm and the average is 164.81 ± 6.37 .
3. The weight of the women participating in the study were between 48 and 104 kg and an average of 68.92 ± 12.74 kilograms.
4. The body mass index of the women participating in the study were between 18.5 and 34.9 kg / m² and an average of 25.42 ± 4.72 .
5. The waist-hip ratio of the women participating in the study were between 0.6 and 1.1, with an average of 0.85 ± 0.10 .
6. Women participating in the study were 49.6% normal, 28.7% overweight and 21.7% obese, according to their body mass index level.
7. The marital status of the women participating in the study were 54.4% married, 37.9% single, 1.8% widowed and 5.9% divorced.
8. The education level of women participating in the study were 6.2% secondary education, 21.0% high school, 54.4% university and 18.4% post-graduate.
9. The income status of women participating in the study were 15.1% less than income, 61.0% is equivalent to income and 23.9% is more than income.
10. Women who participated in the study had chronic disease status, 58.8% did not have any chronic disease, 41.2% had chronic disease.
11. Of 112 people with chronic diseases; 17.9% obesity, 24.1% insulin resistance, 8.9% cardiovascular disease, 22.3% hypertension, 8.9% diabetes, 33.0% are thyroid and 34.8% are other diseases.
12. 32.7% of women participating in the study smoked, 67.3% did not smoke.
13. When the women participating in the study evaluated their body weight; It responded to 7.4% underweight, 38.2% normal, 40.1% slightly overweight, 10.6% overweight and 3.7% obese.

14. When asked women participating in the study whether they are satisfied with their current weight, 25% say I'm satisfied, 14.3% are indecisive and 60.7% say I'm not satisfied.
15. When asked the women participating in the study about their willingness to lose weight, 77.2% said yes and 22.8% said no.
16. When asked about the reasons for wanting to lose weight in 210 people who said yes, 51.9% answered health, 37.6% appearance, 2.4% family pressure, 3.8% social pressure and 4.3% other.
17. When the women participating in the study were asked about their willingness to gain weight, 3.7% answered yes and 96.3% answered no.
18. When asked about the reasons for wanting to gain weight, among 10 people who said yes, 40% answered health and 60% said appearance.
19. When asked about the physical activity levels of the women participating in the study, 55.1% found it insufficient, 30.9% was considered sufficient, 10.7% found it sufficient and 3.3% found it quite sufficient.
20. When we ask the women participating in the study about the number of meals per day, 0.7% of them are 1 meal, 20.6% 2 meals, 38.2% 3 meals, 38.2% 4-6 meals and 2.3% >6 meals.
21. When we asked the women participating in the study about their daily skipping meals, 34.9% answered yes, 45.6% sometimes, and 19.5% no.
22. When we asked 219 women who stated that they skipped meals, 29.2% answered breakfast, 0.2% lunch, 10.5% dinner and 20.1% snack.
23. When asked 219 women who skipped meals for the reasons for skipping meals, 9.6% answered weight loss, 49.8% said forgetting or not having the opportunity, 31.5% not needing and 9.1% the other answer.
24. When asked about regular meal times among the women participating in the study, 49.6% answered yes and 50.4% answered no.
25. When asked about the general appetite of the women participating in the study, 6.6% answered low, 65.8% normal, 27.6% more.
26. When the women participating in the study were asked about their chewing and swallowing difficulties, 6.3% answered yes and 93.7% answered no.
27. When asked about adequate and balanced nutrition, 59.2% answered yes and 40.8% answered no.

28. When asked if the women participating in the study are adding salt to their meals at the table, 38.2% answered yes and 61.8% answered no.
29. When the women participating in the study were asked about their daily fluid consumption, 13.2% were answered 1-4 glasses, 32.0% 4-8 glasses, 32.4% 8-10 glasses and 22.4% > 10 glasses of water.
30. When the women participating in the study were asked about the frequency of consuming dairy products, were answered 12.1% 1-2 times a week, 25.4% 3-4 times a week, 12.9% 5-6 times a week and 49.6% every day.
31. When asked about the frequency of consuming meat products among the women participating in the study, 18.8% 1-2 times a week, 38.2% 3-4 times a week, 19.5% 5-6 times a week and 23.5% every day.
32. When asked about the frequency of consuming the cereal group, 25.7% 1-2 times a week, 34.2% 3-4 times a week, 12.5% 5-6 times a week and 27.6% every day.
33. Body image scale scores of the women participating in the study ranged from 49 to 193.
34. Body image scale mean score of the women participating in the study is 131.74 ± 24.45 .
35. A statistical difference was found between body image scores according to body mass index in women participating in the study ($p = 0.001$; $p < 0.01$), scores of women with normal body mass index were overweight ($p = 0.001$) and obese ($p = 0.001$). higher than the cases ($p < 0.01$).
36. There was no significant difference between marital status and body image among the women participating in the study ($p > 0.05$).
37. There was no significant difference between the educational status and body image among the women participating in the study ($p > 0.05$).
38. A statistically significant difference was found between the body image scores of the women participating in the study according to their income levels ($p = 0.001$; $p < 0.01$). Body image scores of women with low income (119.07 ± 29.78) were found to be lower than body perception scores of women whose income is equal to their expenses (132.25 ± 22.12) and whose income is more than their expenses (138.43 ± 23.80).
39. A difference was found between the chronic illness and body image scores of the women participating in the study ($p = 0.001$; $p < 0.01$). Body image scores of women

with chronic disease (123.03 ± 24.94) were found to be lower than those without chronic disease (137.84 ± 22.21).

40. No significant difference was found between smoking and body image scores among women who participated in the study ($p > 0,05$).
41. Looking at the relationship between age and body image score in the women participating in the study, a relationship between age and body image score decreased as age increased ($r: -0,153$; $p = 0,012$; $p < 0,05$).
42. Looking at the relationship between BMI and body image score in the women participating in the study, it is seen that the body image score decreases as BMI increases ($r: -0,455$; $p = 0,001$; $p < 0,01$).
43. Looking at the relationship between waist-hip ratio and body image score in women participating in the study, it is seen that the body image score decreases as the waist-hip ratio increases ($r: -0,370$; $p = 0,001$; $p < 0,01$).
44. A difference was found between self-perceived body weight and body image scores of the women participating in the study ($p = 0,001$; $p < 0,01$). The scores of women perceiving themselves as underweight (150.35 ± 20.70); higher than those who perceived themselves as slightly overweight (123.94 ± 20.23), overweight (123.10 ± 15.03) and obese (104.30 ± 24.16). The scores of women who evaluated themselves as normal weight ($141,39 \pm 25,14$) were higher than those who evaluated themselves as slightly overweight ($123,94 \pm 20,23$), overweight ($123,10 \pm 15,03$) and obese ($104,30 \pm 24,16$).
45. A relationship was found between body image scores according to current weight satisfaction in women participating in the study. The scores of women who were satisfied with their weight (151.54 ± 23.38) were higher than the undecided (131.26 ± 18.58) and don't satisfied (123.70 ± 21.37) women. No difference was found between the scores of the undecided and don't satisfied cases.
46. A relationship was found between wanting to lose weight and body image score of women participating in the study. Body image scores of women who want to lose weight ($126,20 \pm 22,28$) were found to be lower than body image scores of women who do not want to lose weight ($150,53 \pm 22,13$).
47. A relationship was found between wanting to gain weight and body image scores in women who participated in the study. Body image scores of women who wanted to gain weight ($148,40 \pm 24,70$) were higher than body image scores of women who did not want to gain weight ($131,11 \pm 24,26$).

48. A relationship was found between physical activity levels and body image scores of the women participating in the study. The scores of the women participating in the study who did not find physical activity not enough ($127,93 \pm 24,54$) those who found enough ($141,83 \pm 21,69$) and quite enough ($152,11 \pm 25,85$) were found to be lower. No significant difference was found in other paired comparisons.
49. No correlation was found with the body image score, the number of daily meals and skipping meals of the women participating in the study.
50. A relationship was found between the general appetite and body image scores of the women participating in the study. The scores of women with much appetite ($124,71 \pm 23,47$) were found to be lower than women with normal appetite ($134,26 \pm 24,63$).
51. A relationship was found between chewing and swallowing difficulties and body image scores of the women participating in the study. Body image scores of women with chewing and swallowing difficulties ($115,53 \pm 21,79$) were found to be lower than women who did not have chewing and swallowing ($132,82 \pm 24,27$) difficulties.
52. A relationship was found between the adequate and balanced nutritional status of the women participating in the study and their body image scores. Body image scores of women who have adequate and balanced nutrition ($136,22 \pm 24,29$) are higher than the body image scores of women who do not have adequate and balanced nutrition ($125,24 \pm 23,29$).
53. There was no relationship between daily fluid consumption and body image scores of the women participating in the study.
54. There was no relationship between the consumption frequency of milk and dairy products and body image scores of the women participating in the study.
55. There was no relationship between the consumption frequency of meat and meat products and body image scores of the women participating in the study.
56. No relationship was found between the frequency of fruit consumption and body image scores in the women participating in the study; However, it is striking that the scores of those who consume sparse fruit are low.
57. There was no relationship between the consumption frequency of the cereal group and body image scores of the women participating in the study.

5.2.1. Recommendations

This study was conducted to determine the relationship between body mass indexes and body image perceptions of women. As a result of the study, it was observed that overweight or obese women with high body mass index had lower and negative body perception than those with normal weight. It was also observed that body image may be affected by weight-related or other independent factors (such as age, waist-hip ratio, chronic disease, socioeconomic status, physical activity level).

Another striking point in the study is that it was reported that women with normal weight were also not satisfied with their current weight despite their ideal weight, and most of them wanted to lose weight. The result of this study shows us that today obese women can negatively affect their body image as a result of such social, psychological and environmental pressures as well as the negative body image of normal weight women; weight control, ideal body, the idea that being thinner is more beautiful is generally worrisome for all women.

In order to prevent such situations, the correct body perception should be created in people by considering obese women. Since the concepts of body perception and self-esteem generally occur during adolescence, nutritional education should start from childhood and adolescence. The important thing is that physical and mental health should be in good health as a whole, not that the weak is beautiful, but to instill a positive body perception in one's own healthy body composition both socially and personally.

Especially, obese women should be taught the state of being healthy with a holistic treatment and multidisciplinary team work such as dietician, doctor, psychologist, sports coach. At the social level, children and students should be educated about body perception and healthy nutrition, and awareness should be created in media that can affect people's body perception such as big brands, television programs, advertisements, social media.

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7. APPENDIXS

APPENDIX.1 Ethics Committee Permission for Thesis Study



Sayı : 37068608-6100-15- 1810
Konu: Klinik Araştırmalar
Etik kurul Başvurusu hk.

16/01/2020

İlgili Makama (İlkem Şenol)

Yeditepe Üniversitesi Sağlık Bilimleri Fakültesi Beslenme ve Diyetetik Bölümü Dr. Öğr. Üyesi Hülya Demir'in sorumlu araştırmacı olduğu **"İstanbul'da Bulunan Özel Bir Sağlık Merkezine Başvuran Kadın Danışanlarda Beden Kitle İndeksi ve Beden İmaj Algısı Arasındaki İlişkinin İncelenmesi"** isimli araştırma projesine ait Klinik Araştırmalar Etik Kurulu (KA EK) Başvuru Dosyası (1792) kayıt Numaralı KA EK Başvuru Dosyası, Yeditepe Üniversitesi Klinik Araştırmalar Etik Kurulu tarafından **16.01.2020** tarihli toplantıda incelenmiştir.

Kurul tarafından yapılan inceleme sonucu, yukarıdaki isimi belirtilen çalışmanın yapılmasının etik ve bilimsel açıdan uygun olduğuna karar verilmiştir (**KA EK Karar No: 1151**).

Prof. Dr. Turgay ÇELİK
Yeditepe Üniversitesi
Klinik Araştırmalar Etik Kurulu Başkanı

APPENDIX.2 Informed Consent Form for Research Purposes

Değerli katılımcı,

Yeditepe Üniversitesi, Sağlık Bilimleri Enstitüsü, Beslenme ve Diyetetik Bölümü yüksek lisans tez çalışmamın anket bölümüne katılmak üzere davet edilmiş bulunmaktasınız. Bu çalışmada yer almayı kabul etmeden önce, çalışmanın ne amaçla yapılmak istendiğini anlamanız ve kararınızı bu bilgilendirme çerçevesinde vermeniz gerekmektedir.

Aşağıdaki bilgileri lütfen dikkatlice okuyunuz. Herhangi bir sorunuz olduğunda belirtiniz ve açık yanıtlar isteyiniz.

Bu çalışma gözlemsel bir araştırma olup, kadınların Beden Kitle İndeksinin Beden İmaj algısı arasındaki ilişkinin incelenmesi için yapılmaktadır. Çalışma, 18-65 yaş arasındaki Beden Kitle İndeksi 18,5-35 arasında olan kadın bireylerin kilo durumlarını etkileyen faktörleri, bedenlerinden hoşnut olup olmamalarının sebeplerini, günlük besin alımlarını ve diyet kalitelerini nelerin etkilediğini açıkça gösterecektir. Aynı zamanda bu araştırma, kişilerin kendi bedenini nasıl algıladığını, bedeni imgesi ile bedenin gerçek durumu arasında tutarlılık olup olmamasını tanımlamak için yapılmaktadır.

Çalışmaya katılması beklenen tahmini gönüllü sayısı 200 olup, gönüllünün araştırmaya devam etmesi için öngörülen süre ise 3 aydır. Gönüllü olan kişilere herhangi bir bir tedavi uygulanmayacaktır; ilk olarak 17 soruluk genel bilgiler ve beslenme alışkanlıkları bilgilerini içeren 14 soruluk bir anket formu doldurulacaktır. Sonrasında ülkemizdeki vatandaşlara göre uyarlanan Beden İmaj Ölçeği doldurulmak üzere verilecektir. Araştırma sadece anket ve beden imaj ölçeği kullanılarak yapılacağı için deneysel bir kısım içermemekte olup gönüllülerin maruz kalabileceği herhangi bir risk veya rahatsızlık bulunmamaktadır. Gönüllülere anket ve beden imaj ölçeği dışında uygulanabilecek herhangi bir alternatif yöntem yoktur. Çalışmada advers olay beklenmemektedir.

Gönüllülerin tüm soruları eksiksiz ve hatasız yanıtlaması gerekmektedir. Gönüllünün araştırmaya katılımı isteğe bağlıdır ve gönüllü istediği zaman, herhangi bir cezaya veya yaptırıma maruz kalmaksızın, hiçbir hakkını kaybetmeksizin araştırmaya

katılmayı reddedebilir veya araştırmadan çekilebilir. Her türlü bilgi ve kayıtların araştırma sonuçları yayımlanması halinde dahi gönüllülerin kimlik bilgileri gizli kalacaktır.

Gönüllüler, yazılı bilgilendirilmiş gönüllü olur formunun imzalanmasıyla yalnızca gönüllü veya kanuni temsilcisinin söz konusu erişime izin vermiş olacaktır. Sağlık otoriteleri(yoklama yapan kişiler, etik kurul, kurum vb.) gönüllünün orijinal kayıtlara doğrudan erişimde bulunabilecektir, ancak bu bilgiler gizli tutulacaktır. Araştırma konusu ile ilgili veya gönüllünün araştırmaya katılmaya devam etme isteğini etkileyebilecek yeni bilgiler elde edildiğinde gönüllü zamanında bilgilendirilecektir, çalışma sonrası araştırma ürünlerine erişim kısıtlı olacaktır. Araştırmada makul ölçüde beklenen yararlarla ilgili olarak gönüllü durum hakkında bilgilendirilecektir.

Gönüllünün anket sorularına eksik, yanlış veya birden fazla yanıt verilmemesi gereken bölümlere birden fazla yanıt vermesi ile istatistiksel olarak yanlış bilgiler elde edileceği ve araştırma sonucunu yanlış yönde etkileyebileceği için bu gibi durumlarda katılımın sona erdirilmesi gerekecektir.

Lütfen aşağıda yazılmış olan cümleleri eksiksiz bir şekilde kendi el yazınız ile yazın.

“Bilgilendirilmiş Gönüllü Olur Formundaki tüm açıklamaları okudum. Bana, konusu ve amacı belirtilen araştırma ile ilgili yazılı ve sözlü açıklama, aşağıda adı belirtilen kişi tarafından yapıldı. Araştırmaya hiçbir baskı ve zorlama olmaksızın gönüllü olarak katıldığımı, istediğim zaman gerekçeli veya gerekçesiz olarak araştırmadan ayrılabileceğimi ve kendi isteğime bakılmaksızın araştırmacı tarafından araştırma dışı bırakılabileceğimi biliyorum”.

“Söz konusu araştırmaya, hiçbir baskı ve zorlama olmaksızın, kendi rızamla katılmayı kabul ediyorum”.

.....
.....
.....

GÖNÜLLÜNÜN	SORUMLU ARAŞTIRMACININ	YARDIMCI ARAŞTIRMACININ
Adı:-soyadı:	Dr. Öğr. Üyesi Hülya Demir	Dyt. İlkem ŞENOL BİLGİN
Tarih:		
İmzası:		



APPENDIX.3 Information and Data Collection Form

YEDİTEPE ÜNİVERSİTESİ
SAĞLIK BİLİMLERİ FAKÜLTESİ
BESLENME VE DİYETETİK BÖLÜMÜ

İstanbul’da Bulunan Özel Bir Sağlık Başvuran Kadın Danışanlarda
Beden Kitle İndeksi Ve Beden İmaj Algısı Arasındaki İlişkinin
İncelenmesi

ANKET NO :

TARİH :

GENEL BİLGİLER

1. Yaş :
2. Boy :
3. Kilo :
4. Medeni durum: a) Evli b) Bekar c) Dul d) Boşanmış
5. Eğitim durumu: a) Orta öğrenim b) Lise c) Üniversite d) Yüksek Lisans+
6. Beden Kitle İndeksi:
7. Bel/Kalça oranı:
8. İlaç kullanmanızı gerektirecek tanısı konulmuş bir kronik hastalığınız var mı?
a) Yok b) Var (Birden fazla seçeneği işaretleyebilirsiniz)
 - Obezite ()
 - İnsülin direnci ()
 - Kalp-damar hastalıkları ()

- Hipertansiyon ()
- Diyabet ()
- Tiroid hastalıkları ()
- Diğer ()

9. Sigara kullanıyor musunuz?

- a) Evet b) Hayır

10. Vücut ağırlığınızı nasıl değerlendiriyorsunuz?

- a) Aşırı Zayıf b) Zayıf c) Normal d) Kilolu e) Aşırı kilolu f) Obez

11. Mevcut ağırlığınızdan memnun musunuz?

- a) Memnunum b) Kararsızım c) Memnun değilim

12. Zayıflamak istiyor musunuz?

- a) Evet b) Hayır

13. Zayıflamak istiyorsanız neden?

- a) Sağlık b) Dış görünüm c) Aile baskısı d) Sosyal baskı e) Diğer

14. Kilo almak istiyor musunuz?

- a) Evet b) Hayır

15. Kilo almak istiyorsanız neden?

- a) Sağlık b) Dış görünüm c) Aile baskısı d) Sosyal baskı e) Diğer

16. Günlük fiziksel aktivitenizi yeterli buluyor musunuz?

- a) Yeterli değil b) Yeterli sayılır c) Yeterli d) Oldukça yeterli

17. Gelir-gider durumunuz nedir?

- a) Gelirim giderimin altında b) Gelir-giderim eşit c) Gelirim fazlasıyla yeterli

BESLENME ALIŞKANLIKLARI

1. Günde toplamda (atıştırma ve içecekler dahil) kaç öğün yaparsınız?

- a) 1 öğün b) 2 öğün c) 3 öğün d) 4-6 öğün e) 6 öğünden fazla

2. Gün içerisinde öğün atlıyor musunuz?

- a) Evet b) Hayır c) Bazen

3. Cevabınız evet ise hangi öğünü atlıyorsunuz?

- a) Kahvaltı b) Öğle Yemeği c) Akşam Yemeği d) Ara Öğünler

4. Neden öğün atlarsınız?

- a) Zayıflamak için
b) Unuttuğum/fırsat bulamadığım için
c) Gerek duymadığım için
d) Diğer

5. Yemeklerinizin saatleri düzenli midir?

- a) Evet b) Hayır

6. Genel olarak iştah durumunuz nasıldır, iştah değişikliğinizi belirtiniz?

- a) Az b) Normal c) Fazla

7. Çiğneme-yutma güçlüğü yaşıyor musunuz?

- a) Evet b) Hayır

APPENDIX.4 Body Image Scale (BIS)

Arka sayfada bulunan sorularda bir vücut özelliğiniz hakkındaki duygularınızı en iyi anlatan ifadenin altına (x) işareti koyunuz.

Sayfayı çevirin...

	Hiç Beğenmiyorum	Pek Beğenmiyorum	Kararsızım	Oldukça Beğeniyorum	Çok Beğeniyorum
Saçlarım					
Yüzümün rengi					
İştahım					
Ellerim					
Vücudumdaki kıl dağılımı					
Burnum					
Fiziksel gücüm					
İdrar – dışkı düzenim					
Kas kuvvetim					
Belim					
Enerji düzeyim					
Sırtım					
Kulaklarım					
Yaşım					
Çenem					
Vücut yapım					
Profilim					
Boyum					
Duyularımın keskinliği					
Ağrıya dayanıklılığım					
Omuzlarımın genişliği					
Kollarım					
Göğüslerim					
Gözlerimin şekli					
Sindirim sistemim					
Kalçalarım					
Bacaklarım					
Dışlerimin şekli					
Cinsel gücüm					
Ayaklarım					
Uyku düzenim					
Sesim					
Sağlığım					
Cinsel faaliyetlerim					
Dizlerim					
Vücudumun duruş şekli					
Yüzümün şekli					
Kilom					
Cinsel organlarım					
Hastalığa direncim					

APPENDIX 5. Curriculum Vitae

Personal Informations

Name	İL KEM	Surname	ŞENOL BİL GİN
Place of Birth	MERSİN	Date of Birth	10.11.1994
Nationality	T.C.	TR ID Number	36979497206
E-mail	Ilkem.senol@hotmail.com	Phone number	05343317672

Education

Degree	Department	The name of the Institution Graduated From	Graduation year
Doctorate			
Master			
University	Faculty of Nutrition and Dietetics	Bahçeşehir University	2017
High school	Science High School	Private Başkent Schools	2012

All the grades must be listed if there is more than one (KPDS, ÜDS, TOEFL; EELTS vs),

Languages	Grades (#)

Work Experience (Sort from present to past)

Position	Institute	Duration (Year - Year)
Dietician	Private Hay Health Center	2018 - ongoing
Dietician	Dietician Yekbu KÖSEOĞLU Nutrition and Diet Center	April 2018 - July 2018

Computer Skills

Program	Level
SPSS	Good
Microsoft Office Programs	Excellent

*Excellent , good, average or basic

Scientific works

The articles published in the journals indexed by SCI, SSCI, AHCI

Articles published in other journals

Proceedings presented in international scientific meetings and published in proceedings book.

Journals in the proceedings book of the refereed conference / symposium

Others (Projects / Certificates / Rewards)

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