REPUBLIC OF TURKEY

ISTANBUL AREL UNIVERSITY

INSTITUTE OF SOCIAL SCIENCES

The Department of Psychology

Clinical Psychology

THE PREDICTORS OF DISORDERED EATING ATTITUDES: A COMPARISON STUDY OF CLINICAL AND HEALTHY POPULATION

MASTER'S THESIS

Başak İNCE

155182124

Supervisor: Assoc. Prof. Dr. Hanife Özlem SERTEL-BERK

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T.C.
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Enstitümüz Klinik Psikoloji Yüksek Lisans programı öğrencilerinden ***155182124*** numaralı ***Başak İNCE*** *"İstanbul Arel Üniversitesi Lisansüstü Eğitim - Öğretim ve Sınav Yönetmeliği"*nin ilgili maddesine göre hazırlayarak, Enstitümüze teslim ettiği ***"THE PREDICTORS OF DISORDERED EATING ATTITUDES: A COMPARISON STUDY OF CLINICAL AND HEALTHY POPULATION "*** konulu tezini, Yönetim Kurulumuzun ***11.07.2016*** tarih ve ***2016/11*** sayılı toplantısında seçilen ve Sefaköy Yerleşkesinde toplanan biz jüri üyeleri huzurunda, ilgili yönetmeliğin 48. maddesi gereğince (55.) dakika süre ile aday tarafından savunulmuş ve sonuçta adayın tezi hakkında ~~***oybirliği/oybirliği***~~ ile ***Kabul/~~Red veya Düzeltme~~*** kararı verilmiştir.

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PLAGIARISM

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Başak İnce

ABSTRACT

THE PREDICTORS OF DISORDERED EATING ATTITUDES: A COMPARISON STUDY OF CLINICAL AND HEALTHY POPULATION

Başak İNCE

Master's Thesis, the Department of Clinical Psychology

Supervisor: Assoc. Prof. Dr. Hanife Özlem Sertel-Berk

July 2016, - 61 pages

Eating disorders (EDs) are characterized by insistent disturbance in eating behaviour and serious distress about weight and body shape. Since disordered eating attitudes (DEAs) are significantly associated with EDs, this study aimed to explore predictors of DEAs among clinical and healthy population in Turkey. Furthermore, this study investigated predictors of DEAs in females and males. Sample consisted of 63 patients (only 2 males) with EDs and 119 university students (64 females and 55 males). For testing the predictors of DEAs, Demographic Information Form, Eating Disorder Examination Questionnaire (EDEQ)**,** Eating Attitudes Test (EAT-40), Body Image Satisfaction Questionnaire (BISQ), Toronto Alexithymia Scale (TAS-20), and Beck Depression Inventory (BDI) were administered to the participants. Descriptive statistics analyses on EDEQ, EAT-40, BISQ, BDI and TAS-20 showed that scores of patients were higher compared to the students except the score of BISQ, and patients' body mass index (BMI) was lower. Moreover, a statistically significant difference between female and male students for BMI was found, but not for the scores of EAT-40, EDEQ, BISQ, BDI, and TAS-20. A further multiple regression analysis showed that BISQ, BMI, and TAS-20 explained significant variance of EDEQ and EAT-40. Different predictors of total and subscales of EDEQ and EAT-40 were found for each sample and gender. BDI only found to predict weight concern score in female university students. It is believed that current findings contributed to understanding of predictors of DEAs and EDs for both clinical and healthy population, and genders. A further contribution of the study was to improve knowledge of appearance of EDs in Turkish society. Within the context of relevant

literature, results, strengths, limitations and implications of the study were discussed. Moreover, suggestions for future research were provided.

Keywords: disordered eating attitudes, eating disorders, body dissatisfaction, depression, alexithymia, body mass index

ÖZET

BOZULMUŞ YEME TUTUMLARININ YORDAYICILARI: KLİNİK VE SAĞLIKLI POPÜLASYONUN KARŞILAŞTIRILMASI ARAŞTIRMASI

Başak İNCE

Yüksek Lisans Tezi, Klinik Psikoloji Anabilim Dalı

Danışman: Doç. Dr. Hanife Özlem Sertel-Berk

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Yeme bozuklukları (YB) yeme davranışında devamlı bozulma, kilo ve beden şekli hakkında ciddi stresle karakterize bir hastalıktır. Bozulmuş yeme tutumları (BYT) YB ile anlamlı bir ilişki içinde olduğundan, bu araştırmanın amacı Türkiye'de klinik ve sağlıklı popülasyonda BYT'nin yordayıcılarını belirlemektir. Bu çalışma ayrıca BYT'nin kadın ve erkeklerdeki yordayıcılarını araştırmıştır. Örneklem 63 hasta (ikisi erkek) ve 119 üniversite öğrencisinden (64 kadın, 55 erkek) oluşmaktadır. BYT'nın yordayıcılarının belirlenmesi için, katımcılar Demografik Bilgi Formu, Yeme Bozuklukları Değerlendirme Ölçeği(YDÖ), Yeme Tutum Testi(YTT-40), Beden Bölgelerinden Hoşnut Olma Ölçeği (BBHOÖ), Toronto Aleksitimi Skalası (TAS-20) ve Beck Depresyon Envanterini (BDE) doldurmuşladır. Betimleyici istatistik analizine göre hastaların YBDÖ, YTT-40, BBHOÖ, BDE ve TAS-20'den aldıkları skorlar BBHOÖ dışında tüm ölçeklerde üniversite öğrencilerine göre daha yüksektir. Buna ek olarak, hastaların beden kitle indeksleri (BKİ) öğrencilerden daha düşüktür. Kadın ve erkekler arasında sadece BKİ açısından istatistiksel olarak anlamı bir fark bulunmuştur. Çoklu regresyon analizine göre, YBDÖ ve YTT-40'taki varyans BBHOÖ, BKİ ve TAS-20 tarafından istatistiksel olarak anlamlı şekilde açıklanmaktadır. Ayrıca, her bir katılımcı popülasyonu için YBDÖ'nün alt ölçekleri ve YTT-40'ın farklı yordayıcıları olduğu bulunmuştur. BDE ise sadece kadın üniversite öğrencilerindeki kilo kaygısını yordamaktadır. Bu araştırmanın bulgularının, BYT'nın ve YB'nın yordayıcılarının klinik ve sağlıklı gruplarına ve her iki cinsiyete ilişkin varolan bilgiye katkıda bulunduğuna inanılmaktadır. Çalışma ayrıca YB'nın Türk toplumdaki görünürlüğüne ilişkin bilgi sunmaktadır. Varolan

literatür kapsamında; çalışmanın sonuçları, güçlü ve zayıf yönleri ile çıkarımları tartışılmıştır. Aynı zamanda, gelecek çalışmalar için önerilerde bulunulmuştur.

Anahtar sözcükler: Bozulmuş yeme tutumları, yeme bozuklukları, beden memnuniyetsizliği, depresyon, aleksitimi, beden kitle indeksi.

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LIST OF ABBREVIATIONS

EDs:	Eating Disorders
DSM-5:	Fifth Edition of the Diagnostic and Statistical Manual of Mental Disorders
AN:	Anorexia Nervosa
BMI:	Body Mass Index
NCS-R:	National Comorbidity Study Replication
BN:	Bulimia Nervosa
BED:	Binge Eating Disorder
NCS-R:	National Comorbidity Study Replication
EDNOS:	Eating Disorder not Otherwise Specified
OSFED:	Other Specified Feeding or Eating Disorder
TBWR:	Turkey Body Weight Research
DEAs:	Disordered Eating Attitudes
WHO:	World Health Organization
EDE-Q:	The Eating Disorder Examination Questionnaire
EDE:	Eating Disorder Examination
EAT-40:	The Eating Attitudes Test-40
BISQ:	Body Image Satisfaction Questionnaire
BDI:	Beck Depression Inventory
TAS-20:	Toronto Alexithymia Scale-20
DIF:	Difficulty in Identifying Feelings
DDF:	Difficulty in Describing Feelings
EOT:	Externally Oriented Thinking
EDP:	The Eating Disorders Program
EDEQ-DR:	Eating Disorders Examination Questionnaire Dietary Restrained Subscale
EDEQ-EC:	Eating Disorders Examination Questionnaire Eating Concern Subscale
EDEQ-SC:	Eating Disorders Examination Questionnaire Shape Concern Subscale
EDEQ-WC:	Eating Disorders Examination Questionnaire Weight Concern Subscale
VIF:	Variance Inflation Factor
SPSS:	Statistical Package for Social Sciences

LIST OF SYMBOLS

M : Mean

SD : Standard Deviation

SE: Standard Error

df : Degrees of freedom

N: Sample size

α: Alpha

p: Significance

t: T test

β : Beta

r^2: Coefficient of determination

R^2 : Multiple correlation coefficient

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1. CHAPTER

INTRODUCTION

Eating disorders (EDs) are life-threatening mental illnesses characterized by insistent disturbance in eating behaviour and serious distress related to weight and/or body shape which in turn lead to impaired physical and/or psychosocial functioning (APA, 2013; Juarascio et al., 2016). Most frequently seen attitudes and behaviours in eating disorders are inadequate or excessive food intake, obsessive thoughts about food and dieting, dissatisfaction with body shape, fear of gaining weight and extreme occupation with weight and body shape (Alpaslan, Soylu, Avcı, Coşkun, Kocak & Taş, 2015). According to cognitive-behavioural model of EDs, main factor in the development and maintenance of eating related pathology is the overvaluation of body and worry about weight and body shape (Fairburn, 2008).

ED symptoms and behaviours start developing during adolescence, and individuals with ages of 10-24 are indicated to be risk group for developing EDs (Alpaslan et al., 2015; Juarascio et al., 2016). Even though 12-month prevalence rate of EDs has been shown to change between 0.3 and 1.6% for adolescents, more than 20% of adolescents state that they engage some kind of disordered eating behaviours (Jacobson & Luik, 2014). Moreover, 12-month prevalence rate of EDs for adults has been indicated to be between 0.5 and 2.15 % (Jacobson & Luik, 2014). The existence of disordered eating attitudes and behaviours in early adolescence has shown to be an important predictor of symptoms of EDs in late adolescence as well as young adulthood (Juarascio et al., 2016). Therefore, it is believed that it is crucial to improve our understanding regarding to psychological factors that trigger disordered ED attitudes and behaviours among young people. In this way, it would be possible to develop prevention interventions.

EDs are known to cause decreased levels of functionality and high levels of comorbid psychiatric illnesses and distress. For instance, depression, anxiety disorders, obsessive-compulsive disorder, and addiction are commonly observed among patients with EDs (Vardar & Erzengin, 2011). Furthermore, eating related disturbances can lead to lower cognitive performances, higher level of class absenteeism, and interference in academic duties (Yanover & Thompson, 2008). These consequences of EDs lead to development of a chronic course as well as

decreased positive outcome among both the general and clinical population (Nagl et al., 2016). Existence of both of psychological and physical disturbances observed in EDs make them unique among other mental health illness (Wiseman, Sunday, Klapper, Harris, & Halmi, 2001).

1.1. The Aim of the Current Study

Eating disorders (EDs) have become world-wide health concern in both mental and physical levels. In this regard, conducting studies on aetiology and epidemiology of disordered eating attitudes have great importance in order to develop prevention and treatment interventions. Therefore, the aim of the current study is to investigate predictors of disordered eating attitudes among ED patients and female and male undergraduate university students. In this way, it would be possible to gain a better understanding regarding to development of disordered eating attitudes in both clinical and healthy population as well as in both genders. In the light of this knowledge, a further aim of the current study aims is to contribute to existing knowledge regarding to features and incidence of EDs in Turkey. It is believed that gathering information from Turkey is particularly important since Turkey is where Europe and Asia are connected both geographically and culturally.

1.2. Research Questions

For the purposes of the current study, the following research questions will be tested.

1. Do body dissatisfaction, body mass index, depression, alexithymia and gender predict disordered eating attitudes and eating disorders pathology?

2. Do predictors of disordered eating attitudes and eating disorders pathology show differences between patients with eating disorders and undergraduate university students?

3. Do predictors of disordered eating attitudes and eating disorders pathology show differences between females and males?

2. CHAPTER

LITERATURE REVIEW

2.1. Definition of Eating Disorders in DSM – 5

According to the Fifth Edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM – 5), pica, rumination disorder, avoidant/restrictive food intake disorder, anorexia nervosa, bulimia nervosa, and binge-eating disorder are classified under Feeding and Eating Disorders (APA, 2013). For the scope of the current study, only anorexia nervosa, bulimia nervosa, binge-eating disorder, and other specified feeding or eating disorder will be explained in details.

2.1.1. Anorexia Nervosa

As a very first diagnostic category of EDs, Anorexia nervosa (AN) has a chronic course which is likely to disable patients in psychological, physical and societal levels (Bühren et al., 2014). The perception of the body size or shape is significantly disturbed in AN. Being underweight is known to be the main clinical feature of individuals with AN. Even though individuals with AN are underweight, they are afraid of and show resistance to gaining weight (Ertekin & Yücel, 2013). These patients consider weight loss as a sign of success, discipline and self-control (Ortaçgil, 2009). Restriction of food intake, excessive exercise, misuse of laxatives, enamas and diuretics and self- induced vomiting are the methods that individuals with AN engage in order to control their weights. Due to malnutrition and starving the body, AN causes cognitive and physical damages in patients (Ertekin & Yücel, 2013). Table 1 represents DSM – 5 criteria for AN and subtypes of AN (APA, 2013; p.338-339).

Table 1

The Diagnostic Criteria for Anorexia Nervosa According to the DSM-5

A. Restriction of energy intake relative to requirements, leading to a significantly low body weight in the context of age, sex, developmental trajectory, and physical health. Significantly low weight is defined as a weight that is less than minimally normal or, for children and adolescents, less than that minimally expected.
B. Intense fear of gaining weight or of becoming fat or persistent behaviour that interferes with weight gain, even though at a significantly low weight.
C. Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or persistent lack of recognition of the seriousness of the current low body weight.
Restricting type: During the last 3 months, the individual has not engaged in recurrent episodes of binge eating or purging behaviour (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas). This subtype describes presentations in which weight loss is accomplished primarily through dieting, fasting, and/or excessive exercise.
Binge-eating/purging type: During the last 3 months, the individual has engaged in recurrent episodes of binge eating or purging behaviour (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas).

DSM – 5 has indicated the levels of disorder severity based on World Health Organization categories for adults (APA, 2013). According to individuals' body mass index (BMI), severity of disorder is considered to be:

Mild: BMI>17kg/m^2

Moderate: BM116-16.99 kg/m^2

Severe: BM115-15.99 kg/m^2

Extreme: BMI < 15 kg/m^2

The lifetime prevalence rate of AN has been indicated to be between 0.3 – 2.2 % (Jacobson & Luik, 2014; Keski-Rahkonen et al., 2007; Whitehouse et al., 1992). According to the finding of the National Comorbidity Study Replication (NCS-R), an adult study on 2980 people in the United States, lifetime prevalence of AN was 0.9 % in women and 0.3 % men (Hudson, Hiripi, Pope, & Kessler, 2007). Furthermore, the incidence of AN has been found to be 270 per 100.000 person-years in young women aged 15-19 (Keski-Rahkonen et al., 2007).

Research has shown that AN has the highest levels of morbidity and mortality rates compared to other psychiatric disorders (Bühren et al., 2014). In a meta-analysis study conducted by Arcelus and colleagues (2011), weighted annual

mortality rate was found to be 5 per 1000 person years for patients with AN. Similarly, another study on AN patients who were followed up for 13.4 years reported that standardized mortality ratio was 6.2 (Papadopoulos, Ekbom, Brandt, & Ekselius, 2009).

2.1.2. Bulimia Nervosa

Bulimia nervosa (BN) as another type of ED is characterized by uncontrolled and recurrent episodes of binge eating and purging as weight control methods such as excessive exercising, vomiting, dieting, fasting and misuse of laxatives and diuretics (Ertekin & Yücel, 2013; Ortaçgil, 2009). During the binge eating episodes, patients often consume big amounts of high caloric foods (e.g., cake, pizza, burger and chocolate) within a short period of time. DSM – 5 criteria for BN are presented in Table 2 (APA, 2013; p.345). Binge eating episodes are generally planned and occur secretly due to feeling ashamed about it. Even though patients describe relief in the beginning of these episodes, they start feeling regretful and guilty followed by harsh self-criticizing when the episode is over (Ertekin & Yücel, 2013). Whereas vomiting generally provoked by fingers in the first stages of BN, no such effort is needed during proceeded periods of the disorder. It is also important to mention here that it can take many years for parents to realize the problem since the binge eating and purging episodes generally occur hidden (Ertekin & Yücel, 2013).

Table 2

The Diagnostic Criteria for Bulimia Nervosa According to the DSM-5

A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:

1. Eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than what most individuals would eat in a similar period of time under similar circumstances.
2. A sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating).

B. Recurrent inappropriate compensatory behaviors in order to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, or other medications; fasting; or excessive exercise.

C. The binge eating and inappropriate compensatory behaviors both occur, on average, at least once a week for 3 months.

D. Self-evaluation is unduly influenced by body shape and weight.

E. The disturbance does not occur exclusively during episodes of anorexia nervosa.

The life time prevalence rate of BN has been reported to be changed between 0.5 – 3% (Jacobson & Luik, 2014; Keski-Rahkonen et al., 2009). With regard to gender, the lifetime prevalence of BN is between 1.5- 2 % for women and 0.5 % for men (Hay, Girosi, & Mond, 2015; Hudson, Hiripi, Pope, & Kessler, 2007). Moreover, the incidence rate of BN has been reported to be 300/100.000 person-years for ages of 16–20 years and 150/100.000 for ages of 10–24 years (Keski-Rahkonen et al., 2009). Based on findings of several studies, the mortality rate of BN changes between 0.5 – 3.9% (Ertekin & Yücel, 2013; Keski-Rahkonen et al., 2009). Although prognosis found to be more positive and mortality rate found to be lower in BN compared to AN, BN is still a significant health concern.

2.1.3. Binge Eating Disorder

Binge eating disorder (BED) is characterized by uncontrollable consumption of large amount of food within a very short period of time compared to a healthy person's food consumptions under the same conditions (Ortaçgil, 2009; Turan, Poyraz, & Özdemir, 2015). In the binge eating episodes, people consume food without feeling physical hunger until they feel uncomfortably full which in turn causes feelings of guilt, shame and depression (Ertekin & Yücel, 2013). Similarly to

BN, persistent and frequent overeating episodes along with loss of control feeling are observed among individuals with BED. However, in contrast to BN, these individuals do not engage compensatory behaviours (e.g., excessive exercise, use of laxatives and vomiting) in order to eliminate negative effects of binge eating episodes (Ortaçgil, 2009; Turan, Poyraz, & Özdemir, 2015). Table 3 indicates DSM – 5 criteria for BED (APA, 2013; p.350). It has been previously stated that in spite of the fact that body mass index of individuals with BED are assumed to be above normal range, they do not necessarily have diagnosis of obesity (Ortaçgil, 2009).

Table 3

The Diagnostic Criteria for Binge Eating Disorder According to the DSM-5

A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:

1. Eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than what most people would eat in a similar period of time under similar circumstances.
2. A sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating).

B. The binge-eating episodes are associated with three (or more) of the following:

1. Eating much more rapidly than normal.
2. Eating until feeling uncomfortably full.
3. Eating large amounts of food when not feeling physically hungry.
4. Eating alone because of feeling embarrassed by how much one is eating.
5. Feeling disgusted with oneself, depressed, or very guilty afterward.

C. Marked distress regarding binge eating is present.

D. The binge eating occurs, on average, at least once a week for 3 months.

E. The binge eating is not associated with the recurrent use of inappropriate compensatory behaviour as in bulimia nen/osa and does not occur exclusively during the course of bulimia nervosa or anorexia nervosa.

Evidence has shown that BED is more commonly diagnosed type of ED when compared to AN and BN with the lifetime prevalence rate ranged between 1.12% to %4.5 (Jacobson & Luik, 2014; Semiz, Kavakçı, Yağız, Yontar, & Kuğu, 2013). The National Comorbidity Study Replication (NCS-R) on 2980 United States citizen adults found that the lifetime prevalence of BED is 3.5 % in women whereas it is 2 % for men (Hudson et al., 2007).

BED has been introduced as a separate diagnostic criteria in DSM –5 in 2013, therefore our knowledge regarding to longitudinal course of the disorder is limited. According to result of a recent study, the standardized mortality ratio of BED is calculated to be 1.50 (Fichter & Quadflieg, 2016). Although it is lower than other EDs, it is considered to be a significant ratio for general population.

2.1.4. Other Specified Feeding or Eating Disorder

In DSM-IV, eating disorder not otherwise specified (EDNOS) was the residual category that had been used to describe individuals who did not meet the full criteria for a specific EDs but still exhibited EDs features. This category was renamed in DSM -5, and now it is called as other specified feeding or eating disorder (OSFED) (APA, 2013). DSM-5 criteria for OSFED are demonstrated in Table 4 (APA, 2013; p.354-354).

Since name of OFSED has been introduced in DSM-5, most of the previous EDs studies were conducted according to criteria of its former category EDNOS. Evidence has indicated that the number of EDNOS cases were higher in men compared to women (Raevuori, Anna Keski-Rahkonen, & Hoek, 2014). The proportion of patients with EDNOS have been demonstrated to be more in comparison to AN and BN. Earlier research reported that 40-60% of the patients were diagnosed with EDNOS among the EDs patients who seek treatment (Machado, Gonçalves, & Hoek, 2012). However, the proportion of cases with EDNOS found to drop from 73% to 51% following the application of DSM-5 criteria for OSFED to the same sample (Machado, Gonçalves, & Hoek, 2012). Similarly, one of the few studies conducted on OSFED as new diagnostic criteria in DSM-5 showed that patients with OSFED accounts for between 15-40% of DSM-5 EDs cases (Fairweather-Schmidt & Wade, 2014). Even though the proportion of these patients has decreased, the prevalence of OSFED is still high. For example, according to a community cohort study on 699 adolescent female twins, prevalence of OSFED was 5% (Hay, Girosi, & Mond, 2015). Given with the high prevalence of OSFED within the general population and EDs patients, it is believed to be worthwhile to improve our knowledge about its predictors and characteristics features.

Table 4

The Diagnostic Criteria for Other Specified Feeding or Eating Disorder According to the DSM-5

This category applies to presentations in which symptoms characteristic of a feeding and eating disorder that cause clinically significant distress or impairment in social, occupational, or other important areas of functioning predominate but do not meet the full criteria for any of the disorders in the feeding and eating disorders diagnostic class. The other specified feeding or eating disorder category is used in situations in which the clinician chooses to communicate the specific reason that the presentation does not meet the criteria for any specific feeding and eating disorder. This is done by recording "other specified feeding or eating disorder" followed by the specific reason (e.g., "bulimia nervosa of low frequency"). Examples of presentations that can be specified using the "other specified" designation include the following:

1. Atypical anorexia nervosa: All of the criteria for anorexia nervosa are met, except that despite significant weight loss, the individual's weight is within or above the normal range.

2. Bulimia nervosa (of low frequency and/or limited duration): All of the criteria for bulimia nervosa are met, except that the binge eating and inappropriate compensatorybehaviors occur, on average, less than once a week and/or for less than 3 months.

3. Binge-eating disorder (of low frequency and/or limited duration): All of the criteria for binge-eating disorder are met, except that the binge eating occurs, on average, less than once a week and/or for less than 3 months.

4. Purging disorder: Recurrent purging behaviour to influence weight or shape (e.g., self-induced vomiting: misuse of laxatives, diuretics, or other medications) in the absence of binge eating.

5. Night eating syndrome: Recurrent episodes of night eating, as manifested by eating after awakening from sleep or by excessive food consumption after the evening meal. There is awareness and recall of the eating. The night eating is not better explained by external influences such as changes in the individual's sleep-wake cycle or by local social norms. The night eating causes significant distress and/or impairment in functioning. The disordered pattern of eating is not better explained by binge-eating disorder or another mental disorder, including substance use, and is not attributable to another medical disorder or to an effect of medication.

2.2. Incidence and Prevalence of Eating Disorders in Turkey

Evidence has demonstrated that EDs are more common in Western countries and prevalence rates are increasing. Even though number of people who are suffering from EDs in Western societies is higher, studies have indicated that prevalence of EDs in Non-Western countries has shown to be on the rise (Hoek, 2006; Yücel et al., 2011). Industrialization, city life, media influence, increased interaction between cultures and changes in feeding behaviour can be considered as reasons of increased prevalence and awareness regarding to EDs among Non-Western countries (Semiz et al., 2013). However, compared to large number of studies conducted in Western societies, number of studies investigating epidemiology, aetiology, socio-demographic and clinical features of EDs outside of these societies appears to be limited (Hoek, 2006; Yücel et al., 2011).

Turkey is a unique country where influences of European, Mediterranean, Asian and Islamic values are observed (Yücel et al., 2011). Similarly to Western countries, disordered eating behaviours have started to take more attention with given negative psychological and physical consequences, and EDs have become a major public health issue in Turkey (Tozun, Unsal, Ayranci, & Arslan, 2010). However, there is lack of epidemiological studies in clinical population in Turkish population. Most of the studies have been conducted on normal population including high-school and university students. Hence, our knowledge about the clinical representation of EDs remains limited.

In 2006, a study conducted in Turkey in order to investigate the prevalence of EDs among university students where 951 students (459 males and 492 females) were participated. Findings of this study showed that only 2.2% of the students had EDs. Among those with EDs, 1.7% of them had BN while 0.31% of them had BED (Kugu, Akyuz, Dogan, Ersan, & Izgic, 2006). Another research investigated eating attitudes of female university students, and indicated that 12.4 % of the 258 students showed behaviours and attitudes related to EDs (Celikel et al., 2008). According to a more recent study, EDs were observed in 68 students (2.33 %) out of 2907 high school students. In terms of type of EDs, prevalence of BED (0.99%) was found to be higher than AN (0.03%) and BN (0.79%) (Vardar & Erzengin, 2011). Furthermore, Alpaslan and his colleagues (2015) recently conducted a study on high school students in order to examine the prevalence of disordered eating attitudes. Results of this study demonstrated that 13.6% of adolescents engage in problematic

eating behaviours and attitudes. As one of the few research on clinical population, Yücel and her colleagues (2011) investigated diagnostic and clinical characteristic of EDs patients in a university hospital in İstanbul, Turkey. They found that out of 110 patients (only 1 of them was male) with the mean age of 21.55, 57.66 % of patients met the DSM-IV criteria for AN, 34.23% of them BN and 8.11 % of them eating disorder not otherwise specified (EDNOS). Based on the existent literature, it is possible to conclude that EDs is a significant health concern.

In 2012, the Republic of Turkey Health Ministry also conducted a study in order to investigate severity of problems related to body mass index (BMI) scores. According to findings of Turkey Body Weight Research (TBWR) on 6082 Turkish citizens, 3.6 % of the participants were in underweight range, 39.7 % of them were in normal range, 33.3 % of them were overweight in range, and 23.4 % were considered to be obese.

According to Turkish Statistical Institute (2016), 16.4% of the Turkish population consists youths who are aged between 15 -24 years old. Compared to the most of the Western countries, the percentage of youths appears to be higher. Since EDs are mostly seen among adolescents and young adults, it would be particularly worthwhile to conduct studies among Turkish adolescents and young people for the determination of risk factors.

2.3. Disordered Eating Attitudes

Subclinical eating disorders are defined as the existence of some attitudes and behaviours related to EDs but not enough to meet full diagnostic criteria (Sanford-Martens, Davidson, Yakushko, Martens, & Hinton, 2005). Subclinical eating disorders and problems have been found to be the most importance predictors of EDs (Alpaslan et al., 2015). Previous literature has underlined that unhealthy eating attitudes, behaviour and habits are common among adolescents and young adults (Celikel et al., 2008). Dissatisfaction with body image, obsessive thoughts about food, weight and dieting, fear of fatness and preoccupation related to being overweight are defined as disordered eating attitudes (DEAs) (Costarelli, Demerzi, & Stamou 2009). Moreover, feeling angry in the case of hunger, use of food to deal with undesirable emotions, classifying food (dangerous or safe) and inadequate knowledge about nutrition are considered to be typical problematic eating attitudes (Alvarenga, Koritar, Pisciolaro, Mancini, Cordás, & Scagliusi, 2014). According to

research findings from several countries, it has been stated that the prevalence of DEAs changes between 5 to 30% in adolescents (Alpaslan et al., 2015). A study in a clinical population found that patients with AN and BN show more dysfunctional eating attitudes compared to patients with BED and obesity (Alvarenga et al., 2014).

Evidence has indicated that the presence of DEAs is a strong risk factor for the development of clinical EDs (Alpaslan et al., 2015). Since subclinical eating problems have been indicated as being one of the significant precursors of the development of EDs, improving our understanding regarding to disordered eating behaviour and attitudes has particular importance for developing prevention interventions and improving existing treatment strategies (Alpaslan et al., 2015).

2.4. Possible Predictors of Disordered Eating Attitudes

2.4.1. Body Dissatisfaction

As a discrepancy between real and ideal body figures, body dissatisfaction consists of negative evaluation of one's body, fear of weight and becoming fat and inappropriate use of body image as a way of self-evaluation (Brechan & Kvalem, 2015; Furnham, Badmin, & Sneade, 2002). Evidence has suggested that body dissatisfaction is the strongest factors that trigger development of pathological eating among girls as well as women (Furnham, Badmin, & Sneade, 2002; Lewis-Smith, Diedrichs, Rumsey, & Harcourt, 2016). A recent study investigated adolescents aged between 12 to 15 years old during a 4-years period, and showed that body dissatisfaction is likely to increase the chance of development of an eating disorder by 68% (Rohde, Stice, & Marti, 2015). Moreover, studies reported that there is a higher prevalence of EDs among people who are belong to groups where being thin is considered to be ideal body shape such as athletes and dancers (Furnham, Badmin, & Sneade, 2002). Besides of the research demonstrating the significant influence of body dissatisfaction, some studies state that body dissatisfaction indirectly affect EDs (Furnham, Badmin, & Sneade, 2002). Therefore, the impact of body dissatisfaction on disordered eating attitudes and behaviours remains unclear.

2.4.2. Body Mass Index (BMI)

An association between disordered eating attitudes and body mass index (BMI) has been previously suggested. Evidence has indicated that overweight and obese individuals are likely to exhibit weight and body shape concerns and related

dieting behaviours (Fan, Li, Liu, Hu, Ma, & Xu, 2010). Regarding to the relationship between BMI and ED types, in their study, Alvarenga and colleagues (2014) has found that "the BMI was lower for AN, intermediate for BN and higher (and similar) for BED and OBS patients" (p.101). Vogeltanz-Holm and her colleagues (2000) have shown that onset and chronicity of binge eating behaviours are predicted by BMI. Furthermore, BMI has been found to be significantly related to higher scores of dissatisfaction with body shape, drive for thinness and bulimia symptoms (Fan et al., 2010). Contradictorily, there are also some studies which did not identify statistically significant difference between individuals with DEAs and without DEAs regarding to BMI (Alpaslan et al., 2015; Kugu el al., 2006). However, it is possible to suggest that BMI might predict types of EDs to different extents since not all of DEAs are related to every type of ED. Thus, it is believed that testing the predicting role of BMI on DEAs would contribute to knowledge on aetiology of EDs.

2.4.3. Depression

Depression is an emotional state which is characterized by the feelings of sadness and hopelessness, the loss of pleasure and interest in daily activities, loss of sleep, appetite and sexual desire. The sense of guilt, worthlessness and emptiness, impaired cognitive abilities and somatic complains are also seen in individuals with depression (APA, 2013; Büyükgöze-Kavas, 2007). Evidence has demonstrated that there is a strong association between depression and EDs (Celikel et al., 2008; Hudson et al., 2007). Previous literature has been indicated that depression is the most common co-morbid psychological disorder among patients with ED (Semiz et al., 2012). A study conduct on 1,895 German children and adolescents aged between 11 to17 years showed that youngsters with disordered eating behaviours exhibited significantly higher levels of depressive symptoms compared to their healthy peers (Herpertz-Dahlmann et al., 2008). According to findings of several studies, 20% to 90% of individuals with EDs suffer from depressive disorders at least once during their lifetimes (Öztürk, 2012; Semiz et al., 2012). Evidence further suggested that depression and negative affect play a significant role on the development and maintenance of disordered eating (Celikel et al., 2008; Juarascio et al., 2016). For instance, it has been proposed that depression might trigger binge eating (Brechan & Kvalem, 2015). Moreover, Juarascio and her colleagues (2016) have suggested that depressive symptoms and negative affect can be risk factors for the onset and

maintenance of ED attitudes and behaviours. In this regard, it is believed that any research on if and what extent depressive symptoms predict disordered eating attitudes and behaviour would broaden our understanding regarding to aetiology of EDs.

2.4.4. Alexithymia

Alexithymia is defined as inability to identify and verbalize emotions, differentiate bodily sensations and emotions and describe emotions to others (Alpaslan et al., 2015; Zerach, 2014). Feelings of emptiness, limited imagination and high levels of negative feelings along with a lack of positive feelings are other characteristic features of alexithymia (Alpaslan et al., 2015). Individuals with alexithymia suffer from affective dysregulation and lack of awareness regarding to their feelings, thus they are not able to manage their feelings (Celikel et al., 2008).

Evidence has demonstrated that individuals with EDs and DEAs had higher levels of alexithymia compared to healthy subjects (Alpaslan et al., 2015; Öztürk, 2012; Zerach, 2014). Several studies have reported that prevalence of alexithymia changes between 23% to 77% for AN patients, 51% to 83% for BN patients and 24.1% to 62.5% for BED patients (Carano et al., 2006; Quinton & Wagner, 2005). However, it has been also mentioned that there are some studies that reported no relationship between alexithymia level and ED symptom severity (Celikel et al., 2008). Given contrary findings regarding to association between EDs and alexithymia, it is believed that a further investigation on this association would bring a more clear understanding. Previous literature has suggested that individuals with alexithymia may engage disordered eating behaviours such as bingeing or starving in order to handle with their uncontrollable feelings (Celikel et al., 2008). In this regard, it is possible to assume that alexithymia would predict disordered eating attitudes and behaviours.

2.4.5. Gender

Evidence has demonstrated that there is an approximately 10 times higher chance of developing EDs for women compared to men (APA, 2013; Goddard Carral-Fernández, Denneny, Campbell, & Treasure, 2014). Regarding to the type of EDs, unlike AN and BN, the ratio for prevalence of BED between females and males is more equal since BED is shown to be most commonly diagnosed ED among men

(Raevuori, Keski-Rahkonen, & Hoek, 2014). One of the reasons for this difference in lifetime prevalence of EDs has been suggested to be under detection of disordered eating attitudes among men (Raevuori, Keski-Rahkonen, & Hoek, 2014). There are relatively few studies on men regarding to the aetiology and epidemiology of EDs and DEAs. Thus, it is believed that any investigation on men would make an important contribution to the current knowledge.

Previous literature has indicated that there are both similarities and differences in the clinical features of EDs in females and males. For instance, it has been previously mentioned that women and men attribute different meanings to being underweight. While women consider being underweight as something good, men think it is bad (Furnham, Badmin, & Sneade, 2002). Moreover, while persistence and perfectionism are seen in both genders, men mostly focus on building muscle rather than becoming thinner (Goddard et al., 2014). Given with these differences among women and men, it is plausible to assume that different factors would predict eating attitudes in women and men. However, it is also important to mention here that gender can be a predictor of disordered eating attitudes (Büyükgöze-Kavas, 2007). In this regard, an investigation on gender as a predicting factor of DEAs as well as how different factors influence development of DEAs among both genders appears to be necessary for more clear understanding.

3. CHAPTER

METHOD

3.1. Participants

A total of 182 individuals (63 patients with ED and 119 undergraduate university students) participated in the current study.

63 patients with EDs who were referred to the Eating Disorders Program of the Psychiatry Department in İstanbul University Faculty of Medicine were participated in the study. Of those patients, 32 (50.8 %) had diagnosis of AN, 23 (36.5%) had diagnosis of BN, and 8 (12.7 %) had diagnosis of EDNOS. There was no patient who had diagnosis of BED. Only two of the patients were men. Mean age of the participants was 20.98 (SD = 5.06) where age range was between 14 to 30 years.

For the comparison of eating attitudes and its' predictors among healthy sample and patients with EDs, 119 undergraduate Psychology students from İstanbul Arel University were recruited. Of these undergraduate students, 64 (53.8 %) were female and 55 (46.3 %) were male. The age range of the undergraduate participants was between 18 to 28 years. These participants' mean age was 21.47 (SD= 2.13). There were no significant age differences between gender and both samples. Mean age of the female undergraduate students was 21.29 (SD = 2.13) while mean age of the male undergraduate students was 21.69 (SD = 2.13).

Ethical approval for the study was obtained from Faculty of Medicine at İstanbul University. A written informed consent was provided to all of the participants, and participation to the study was voluntary based (Appendix A).

3.2. Instruments

For the purpose of the current study, The Demographic Information Form (Appendix B) and Turkish versions of the Eating Disorder Examination Questionnaire (Appendix C), The Eating Attitudes Test-40 (Appendix D), Body Image Satisfaction Questionnaire (Appendix E), Toronto Alexithymia Scale (Appendix F), and Beck Depression Inventory (Appendix G) have been administered to the participants.

3.2.1. The Demographic Information Form

This form primarily was prepared in order to gather demographic information regarding to the participants (e.g., age, gender, current weight and height).

Body Mass Index (BMI) of the participants was calculated by dividing each individual's body weight by the square of her/his height (kg/m^2). Participants considered being in the underweight range (BMI < 18.5 kg/m^2), normal weight range (BMI < 24.9 kg/m^2) and overweight range (BMI > 25 kg/m^2) based on the World Health Organization's recommendations (WHO, 2000).

3.2.2. The Eating Disorder Examination Questionnaire (EDE-Q)

EDE-Q is a self-report questionnaire which was developed based on the Eating Disorder Examination interview (EDE) (Fairburn & Cooper, 1993; Fairburn & Beglin, 1994). The EDE-Q aims to investigate attitudes, behaviours and cognitions related to eating disorders symptoms over the past 28 days. This questionnaire consists of total of 28 items with the four subscales of weight concern, eating concern, shape concern and dietary restraint. In the EDE-Q, by thinking about their last 28 days, responders are expected to rate each item on a 7-point Likert scale (0: no days; 6: everyday) where higher scores indicating higher ED pathology. This questionnaire also measures the frequency of disordered eating behaviours. The EDE-Q has been shown to provide good validity with the Cronbach's $\alpha = 0.87$ (Harrison, Mountford, & Tchanturia, 2014).

Yucel and her colleagues (2011) have validated EDE-Q in Turkish and tested reliability in a sample of non-clinical adolescents. Test-retest reliability has been shown to be good for EDE-Q total score ($r = .91$). Furthermore, internal consistency of the EDE-Q was found to be high (Cronbach's $\alpha = 0.93$) for total scale. The questionnaire also provided good internal consistencies for all of subscales ranging from 0.63 to 0.86 (Yucel et al., 2011).

3.2.3. The Eating Attitudes Test-40 (EAT-40)

EAT-40 is a self-report instrument which was developed to assess behaviours and attitudes related to EDs, AN and BN symptoms in particular (Garner & Garfinkel, 1979). This instrument consists of 40 items, and each item is rated on a 6 - point Likert scale, from never to always. It is important to mention here that there is no fixed scoring for each item. According to statements, scoring of the items shows

changes. The sum of scores of each item provides total score and score of 30 and greater indicates greater disordered eating attitudes. The EAT-40 demonstrated good internal consistency with the Cronbach's α = 0.94 (Garner & Garfinkel, 1979). The study on reliability and validity of the Turkish version of the EAT-40 was conducted by Savasir and Erol (1989), and indicated to be a good instrument for investigating EDs in Turkish population.

3.2.4. Body Image Satisfaction Questionnaire (BISQ)

As a self report questionnaire, BISQ was developed in order to investigate satisfaction with body image (Berscheid, Walster, & Bohrnstedt, 1973). The BISQ has two forms for women (25 items) and men (26 items). The questionnaire consists of six subscales. The general appearance subscale assesses satisfaction with body position, body part ratio, body colour, sport ability, height, weight and muscle power. The face subscale investigates satisfaction with hair, ears, eyes, mouth, teeth, noose, chin, facial beauty and voice for both gender and amount of hair on the face only for men. The trunk subscale covers items related to satisfaction with hips, ankles, abdomen and legs. The extremities subscale assesses satisfaction with hands, arms, shoulders and feet. There are also two other subscales that investigates satisfaction with chest and upper torso and sexual organs (Canpolat, Orsel, Akdemir, & Ozbay, 2005).

In the BISQ, responders are asked to rate the degree of their satisfaction with above mentioned body parts on a 5- point Likert scale. The mean score of the BISQ is obtained by dividing total score to the number of items. Higher scores represent higher body satisfaction in the BISQ. The Turkish version of the BISQ which was adapted by Cok (1988, 1990) from the original questionnaire and tested validity and reliability of a sample of Turkish adolescents was administered in this study.

3.2.5. Beck Depression Inventory (BDI)

As a 21-item self-report instrument, BDI assesses depressive symptoms (e.g., loss of appetite and hopelessness) in the past 2 weeks (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). In the BDI, responders are asked to rate given statements regarding to their frequency or severity on a 4-point Likert scale (0: none of the time, 3: most or all of the time). A higher total score of BDI represents greater depression severity. Scores between 0-10 indicates the normal range, scores of 11-16 indicate

mild symptoms and scores of 17-20 borderline clinical depression, 21-40 indicates severe symptoms while 41 and above indicates extreme levels of depression. The BDI has provided high internal consistency for both psychiatric (Cronbach's α = 0.86) and non-clinical population (Cronbach's α = 0.81) (Beck et al., 1961). The BDI has been adapted to Turkish by Hisli (1988), and has been shown to be valid and reliable instrument for assessing depression in Turkish population (Cronbach's α = 0.74).

3.2.6. Toronto Alexithymia Scale (TAS-20)

TAS was developed as a self-report instrument in order to investigate alexithymia (Bagby, Parker, & Taylor, 1994). This 20-item questionnaire consists of three-factors. The first factor, Difficulty in Identifying Feelings (DIF) measures individuals' ability to describe their emotions and to differentiate the bodily sensations from emotions is assessed. Difficulty in Describing Feelings (DDF) is the second factor which measures difficulty in explaining emotions to others. Lastly, the third factor measures Externally Oriented Thinking (EOT). Score of 61 and above in TAS is an indicator of that individual is in the alexithymic range.

The TAS-20 has been found to provide good internal consistency (Cronbach's α = 0.81; Bagby, Parker, & Taylor, 1994). TAS -20 has been translated and validated to Turkish by Kose and his colleagues in 2005. In Turkish version of TAS-20, the Cronbach's α alpha for the total scale has been demonstrated to be 0.78 (Güleç et al., 2009). Furthermore, the three factors of the TAS-20 provided acceptable internal consistency (Cronbach's α = 0.80 for the DIF, Cronbach's α = 0.57 for the DDF and Cronbach's α = 0.63 for the EOT).

3.3. Procedure

Recruitment of the patients with ED to the current study was done from the The Eating Disorders Program (EDP) of the Psychiatry Department in İstanbul University Faculty of Medicine. As a part of routine care, each of the patients who were referred to EDP are asked to complete a package of questionnaires measuring eating disorders and most commonly diagnosed co-morbid mental illnesses. In this way, the data pool is created by the folders of ED patients who are referred to the EDP. However, not every patient completes all of the questionnaires in this package.

Thus, patients who filled out all of above mentioned questionnaires are included in the current study from the data pool of patients with EDs at EDP.

University students were recruited from Istanbul Arel University. Students in Psychology Department were informed about the current study and invited to take a part of this study. A package consists of Psychosocial-Demographical Information Form, EDE-Q, EAT-40, BISQ, TAS-20 and BDI were given to students who were willing to participate to the study. Students returned the package when they completed all of the questionnaires.

3.4. Statistical Analysis

Analyses of the data collected for the purpose of current study were performed using the Statistical Package for Social Sciences (SPSS), version 21. Before conducting main analyses, preliminary analyses were performed in order to explore the data. First of all, normality assumption was checked to see if data is normally distributed. Running descriptive statistics showed that data for each questionnaire and descriptive characteristics of the sample (e.g., age and gender) was found to be normally distributed based on skewness and kurtosis levels.

As a second step, the reliability analysis was conducted in order to investigate reliability of the EDEQ, the EAT-40, the BISQ and the TAS-20. Reliability analysis showed that these questionnaires provide good Cronbach's alpha levels ranged .81 to .92 for undergraduate students and good Cronbach's alpha levels ranged .80 to .91 for eating disorder patients. Therefore, it is concluded that running main analyses on these questionnaires is reliable for the current sample.

Descriptive statistics and frequency analyses were applied in order to describe demographic characteristics of the current sample (e.g., mean age and BMI and number of individuals with each EDs). Moreover, independent sample t-tests were conducted for testing if there is a difference between patients with EDs and undergraduate students on levels of disordered eating attitudes measured by EAT-40, eating disorder pathology measured by EDEQ, body satisfaction measured by BISQ, depression measured by BDI, TAS-20 measured by TAS-20 and BMI. Further independent sample t-tests were conducted to investigate if there is a difference between female and male students on levels of above mentioned measures.

For the main analysis, a multiple regression analysis was conducted in order to investigate whether depression, body satisfaction, alexithymia and BMI predicted

disordered eating attitudes and eating disorder pathology. Individual multiple regression analysis with the use of enter method was conducted for both comparison of eating disorders patients and university students and female and male university students. Collinearity Statistics further was conducted to test multicollinearity assumption. Results of tolerance and variance inflation factor (VIF) values showed that the current data did not suffer from multicollinearity.

4. CHAPTER

RESULTS

There were missing values in the collected data. Therefore, before conducting main analysis, missing value analysis and pattern analysis were conducted. According to results of missing value and pattern analyses, there was no variable with missing value more than 5% and these missing values were considered to be random. Therefore, missing values in each variable were replaced by using mean series. Then, analyses were conducted in the completed data.

4.1. Comparison of Eating Disorders Patients and Undergraduate University Students

4.1.1. Descriptive Features

Results of descriptive statistics analyses and independent sample t-tests indicated that there was no statistically age difference between ED patients and undergraduate students. A further analyses on total EDEQ, EAT-40, BISQ, BDI, TAS-20 and BMI showed that scores of patients with eating disorders were higher in all of the variables compared to university students except the score of BISQ. These differences between these groups were statistically significant regarding to the mean scores of above mentioned outcome variables. Table 5 represents mean scores, standard deviations and standard errors of ED patients and undergraduate students on these outcome measures.

Table 5

Scores of Patients with EDs and University Students on Outcome Measures

	Patients with EDs (N =63)			**University Students (N=119)**		
	M	SD	SE	M	SD	SE
EDEQ	3.37	1.44	0.18	1.34	1.29	0.12
EAT-40	40.14	11.23	1.42	16.38	7.35	0.67
BISQ	3.42	0.85	0.11	3.87	0.63	0.06
BDI	21.39	12.32	1.55	13.01	9.12	0.84
TAS-20	56.39	13.06	1.64	50.08	10.40	0.95
BMI	18.16	3.28	0.41	22.55	3.63	0.33

4.1.2. Predictors of Eating Disorders Examination Questionnaire (EDEQ)

Before presenting results, there is an important point that one needs to be cautious regarding to BISQ scores. BISQ measures body satisfaction in which higher scores are considered to be more satisfaction with the body and negative scores gathered in the analysis actually is an indicator of that body dissatisfaction predicts eating disorders pathology.

A multiple regression analysis was conducted in order to investigate whether depression, body dissatisfaction, alexithymia and BMI predicted eating disorder pathology measured by total EDEQ score. It was found that BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in eating disorders pathology (F (4, 114) = 20.21, $p < .001$, $R^2 = .42$, $R^2_{Adjusted} = .39$) in university students. The analysis indicated that BISQ ($\beta = -.33$, t (118) = -4.11, $p < .001$) and BMI ($\beta = .44$, t (195.96) = 5.99, $p < .001$) significantly predicted eating disorder pathology. However, no statistically significant predicting effects of BDI or TAS-20 were found.

Among patients with eating disorders, it was found that BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in eating disorders pathology (F (4, 58) = 9.10, $p < .001$, $R^2 = .39$, $R^2_{Adjusted} = .34$). The analysis demonstrated that BISQ ($\beta = -.26$, t (62) = -2.17, $p = .03$), BMI ($\beta = .26$, t (62) = 2.49, $p = .02$) and TAS-20 ($\beta = .37$, t (62) = 2.75, $p = .01$) significantly predicted eating disorder pathology. However, BDI did not significantly predict eating disorder psychopathology. Table 6 displays the unstandardized regression coefficients, the standardized regression coefficients, t-test and significance values found in the multiple regression analysis.

Table 6

Summary of Multiple Regression Analysis for Variables Predicting EDEQ in University Students and ED Patients

		B	***SE***	***β***	***t***	***p***
University Students	BISQ	-0.66	0.16	-0.33	-4.11	0.00
	BDI	0.02	0.01	0.14	1.65	0.10
	TAS-20	0.00	0.01	0.00	0.05	0.96
	BMI	0.16	0.03	0.44	5.99	0.00
ED Patients	BISQ	-0.44	0.20	-0.26	-2.17	0.03
	BDI	0.01	0.02	0.05	0.33	0.74
	TAS-20	0.04	0.01	0.37	2.75	0.01
	BMI	0.11	0.05	0.26	2.49	0.02

In addition to overall score of EDEQ, predictors of each subscale of EDEQ were also investigated for both patients with eating disorders and undergraduate university students.

4.1.2.1. Eating Disorders Examination Questionnaire Dietary Restrained Subscale (EDEQ-DR)

BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in the EDEQ-DR (F (4, 114) = 9.76, $p < .001$, $R^2 = .26$, $R^2_{Adjusted} = .23$) in university students. While BISQ and BMI significantly predicted EDEQ-DR, there was no statistically significant predicting effect of BDI or TAS-20.

BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in EDEQ-DR (F (4, 58) = 3.70, $p = .01$, $R^2 = .20$, $R^2_{Adjusted} = .15$) in patients with eating disorders. The analysis demonstrated that only TAS-20 significantly predicted EDEQ-DR.

4.1.2.2. Eating Disorders Examination Questionnaire Eating Concern Subscale (EDEQ-EC)

Among university students, BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in the EDEQ-EC (F (4, 114) =11.42, $p < .001$, $R^2 = .29$, $R^2_{Adjusted} = .26$). BISQ and BMI significantly predicted EDEQ-EC; however BDI or TAS-20 did not significantly predict EDEQ-EC.

BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in EDEQ-EC (F (4, 58) = 9.75, $p < .001$, $R^2 = .40$, $R^2_{Adjusted} = .36$). According to

analysis, BISQ and TAS-20 significantly predicted EDEQ-EC while BDI or BMI did not make a statistically significant effect.

4.1.2.3. Eating Disorders Examination Questionnaire Shape Concern Subscale (EDEQ-SC)

BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in the EDEQ-SC (F (4, 114) = 26.55, $p < .001$, $R^2 = .48$, $R^2_{Adjusted} = .46$) in university students. Analysis showed that BISQ and BMI significantly predicted EDEQ-SC, but BDI or TAS-20 did not significantly predicted EDEQ-SC.

BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in eating disorders pathology (F (4, 58) = 11.37, $p = .01$, $R^2 = .44$, $R^2_{Adjusted} = .40$) in patients with eating disorders. Except BDI, all of these variables significantly predicted EDEQ-SC.

4.1.2.4. Eating Disorders Examination Questionnaire Weight Concern Subscale (EDEQ-WC)

In university students, BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in the EDEQ-WC (F (4, 114) = 21.11, $p < .001$, $R^2 = .43$, $R^2_{Adjusted} = .41$). Analysis showed that all of the variables significantly predicted EDEQ-WC except TAS-20.

In patients with eating disorders, BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in EDEQ-WC (F (4, 58) = 5.45, $p = .01$, $R^2 = .27$, $R^2_{Adjusted} = .22$). The analysis demonstrated that only TAS-20 and BMI significantly predicted EDEQ-WC.

The unstandardized regression coefficients, the standardized regression coefficients, t-test and significance values found in the multiple regression analysis for each subscale and each sample are presented in Table 7.

Table 7

Summary of Multiple Regression Analysis for Variables Predicting Subscales of EDEQ in University Students and ED Patients

		Patients with EDs (N =63)					**Undergraduate Students (N=119)**				
		B	***SE***	***β***	***t***	***p***	***B***	***SE***	***β***	***t***	***p***
EDEQ-DR	BISQ	-0.41	0.27	-0.21	-1.6	-0.19	-0.78	0.23	-0.30	-0.34	0.001
	BDI	-0.02	0.02	-0.16	-0.96	0.34	0.10	0.02	0.05	0.56	0.60
	TAS-20	0.05	0.02	0.36	2.33	0.02	-0.01	0.02	-0.05	-0.55	0.60
	BMI	0.12	0.06	0.23	1.94	0.06	0.16	0.04	0.35	4.18	0.00
EDEQ-EC	BISQ	-0.43	0.21	-0.24	-2.04	0.04	-0.37	0.14	-0.23	-2.58	0.01
	BDI	0.02	0.02	0.15	0.15	0.31	0.02	0.01	0.18	1.92	0.06
	TAS-20	0.04	0.02	0.34	0.34	0.01	0.00	0.01	0.01	0.13	0.90
	BMI	0.09	0.05	0.20	0.20	0.05	0.11	0.02	0.37	4.49	0.00
EDEQ-SC	BISQ	-0.60	0.22	-0.31	-2.72	0.01	-0.86	0.17	-0.38	-5.03	0.00
	BDI	0.01	0.02	0.10	0.73	0.47	0.02	0.01	0.12	1.49	0.14
	TAS-20	0.04	0.02	0.34	2.60	0.01	0.01	0.01	0.04	0.45	0.65
	BMI	0.12	0.05	0.25	2.45	0.01	0.18	0.03	0.45	6.53	0.00
EDEQ-WC	BISQ	-0.31	0.25	-0.16	-1.25	0.21	-0.63	0.18	-0.28	-3.51	0.001
	BDI	0.01	0.02	0.09	0.57	0.57	0.03	0.01	0.19	2.22	0.03
	TAS-20	0.04	0.02	0.30	2.01	0.049	0.00	0.01	0.03	0.36	0.71
	BMI	0.12	0.06	0.25	2.21	0.03	0.18	0.03	0.46	6.26	0.00

4.1.3. Predictors of Eating Attitudes Test-40 (EAT-40)

A multiple regression analysis was conducted in order to investigate if depression, body satisfaction, TAS-20 and BMI predicted eating attitudes measured by EAT. BDI, BISQ, TAS-20 and BMI found to explain a significant amount of the variance in eating disorders pathology ($F(4, 114) = 3.81$, $p = .006$, $R^2 = .12$, $R^2_{Adjusted} = .09$) among undergraduate students. The analysis indicated that only BMI ($\beta = .26$, $t(118) = 2.77$, $p = .007$) significantly predicted disordered eating attitudes. However, BISQ, BDI and TAS-20 did not significantly predict disordered eating attitudes.

Among patients with eating disorders, results of the enter method indicated that BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in disordered eating attitudes ($F(4, 58) = 7.48$, $p < .001$, $R^2 = .34$, $R^2_{Adjusted} = .30$). The analysis showed that BISQ ($\beta = -.29$, $t(62) = -2.34$, $p = .02$) and TAS-20 ($\beta = .46$, $t(62) = 3.30$, $p = .02$) significantly predicted disordered eating attitudes. However, no predicting effect of BDI and BMI on disordered eating attitudes was found. The unstandardized regression coefficients, the standardized regression coefficients, t-test and significance values in the multiple regression analysis can be seen in Table 8.

Table 8

Summary of Multiple Regression Analysis for Variables Predicting EAT-40 in University Students and ED Patients

		B	***SE***	***β***	***t***	***p***
University Students	BISQ	0.23	1.13	0.02	0.21	0.84
	BDI	0.05	0.08	0.06	0.54	0.59
	TAS-20	0.13	0.07	0.18	1.76	0.08
	BMI	0.51	0.18	0.25	2.76	0.01
ED Patients	BISQ	-3.82	1.64	-0.29	-2.34	0.02
	BDI	-0.05	0.14	-0.05	-0.35	0.72
	TAS-20	0.40	0.12	0.46	3.30	0.002
	BMI	-0.12	0.37	-0.03	-0.32	0.75

4.2. Comparison of Female and Male Undergraduate University Students

Since there were only 2 men patients with eating disorders in the current sample, it was not possible to run a parametric analysis on predictors of eating disorder pathology and eating attitudes among women and men in EDs patient sample. Hence, how predictors of eating disorder pathology and disordered eating attitudes differ in genders was investigated only in the undergraduate university student sample.

4.2.1. Descriptive Features

Descriptive statistics analyses and independent sample t-tests were conducted for testing if there is a difference between female and male undergraduate students on the levels of disordered eating attitudes, eating disorder pathology, body satisfaction, depression, alexithymia and BMI. A statistically significant difference ($t(18) = -4.82$, $p < .001$) between female and male students on mean score of BMI was found. However, no significant difference was found on mean scores of EAT-40, EDEQ, BISQ, BDI and TAS-20. Mean scores, standard deviations and standard errors of female and male undergraduate students on outcome measurements are presented in Table 9.

Table 9

Scores of Female and Male University Students on Outcome Measures

	Female Students (N = 64)			**Male Students (N = 55)**		
	M	SD	SE	M	SD	SE
EDEQ	1.36	1.38	0.17	1.32	1.19	0.16
EAT-40	15.44	6.06	0.76	17.48	8.53	1.15
BISQ	3.82	0.64	0.08	3.92	0.63	0.09
BDI	12.29	7.31	0.91	13.84	10.87	1.47
TAS-20	49.26	10.65	1.33	51.03	10.12	1.36
BMI	21.18	3.35	0.42	24.14	3.32	0.45

4.2.2. Predictors of Eating Disorders Examination Questionnaire (EDEQ)

In female students, it was found that BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in eating disorders pathology ($F(4, 59) = 18.51$, $p < .001$, $R^2 = .56$, $R^2_{Adjusted} = .53$). The analysis further indicated that only BMI ($\beta =$

.49, $t(63) = 4.78$, $p < .001$) significantly predicted eating disorder pathology. Nevertheless, no statistically significant predicting effects of BISQ, BDI or TAS-20 were found on eating disorder pathology for women.

In male students, results of the enter method demonstrated that BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in eating disorders pathology ($F(4, 51) = 4.95$, $p = .002$, $R^2 = .28$, $R^2_{Adjusted} = .22$). The analysis showed that BISQ ($\beta = -.26$, $t(55) = -2.17$, $p = .02$) and BMI ($\beta = .40$, $t(55) = 3.10$, $p = .03$) significantly predicted eating disorder pathology. However, BDI and TAS-20 did not significantly predict eating disorder psychopathology among male students. Table 10 presents unstandardized regression coefficients, the standardized regression coefficients, t-test and significance values found in the multiple regression analysis.

Table 10

Summary of Multiple Regression Analysis for Variables Predicting EDEQ in Female and Male University Students

		B	***SE***	***β***	***t***	***p***
Females	BISQ	-0.32	0.25	-0.15	-1.32	0.19
	BDI	0.03	0.02	0.16	1.30	0.20
	TAS-20	0.02	0.02	0.12	1.04	0.30
	BMI	0.20	0.04	0.49	4.78	0.00
Males	BISQ	-0.65	0.22	-0.34	-2.94	0.005
	BDI	0.02	0.01	0.20	1.44	0.16
	TAS-20	-0.01	0.01	-0.11	-0.88	0.38
	BMI	0.17	0.04	0.48	3.86	0.00

Predictors of each subscale of EDEQ were further investigated for comparing female and male undergraduate university students.

4.2.2.1. Eating Disorders Examination Questionnaire Dietary Restrained Subscale (EDEQ-DR)

BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in the EDEQ-DR ($F(5, 59) = 6.57$, $p < .001$, $R^2 = .32$, $R^2_{Adjusted} = .27$) in female

students. Only BMI significantly predicted EDEQ-DR, there was no statistically significant predicting effect of other variables.

In male university students, BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in EDEQ-DR ($F(5, 49) = 6.48$, $p < .001$, $R^2 = .34$, $R^2_{Adjusted} = .29$). The analysis demonstrated EDEQ-DR significantly predicted by BISQ and BMI. However, BDI or TAS-20 did not predict EDEQ-DR.

4.2.2.2. Eating Disorders Examination Questionnaire Eating Concern Subscale (EDEQ-EC)

Among female university students, BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in the EDEQ-EC ($F (4, 59) =11.49$, $p < .001$, $R^2 = .43$, $R^2_{Adjusted} = .40$). Analysis showed that BMI was the only variable which significantly predicted EDEQ-EC.

BDI, BISQ, TAS-20 and BMI did not explain a significant amount of the variance in EDEQ-EC ($F (4, 50) = 2.43$ $p = 0.06$, $R^2 = .16$, $R^2_{Adjusted} = .09$) for male university students. However, analysis indicated that BISQ and BMI significantly predicted EDEQ-EC.

4.2.2.3. Eating Disorders Examination Questionnaire Shape Concern Subscale (EDEQ-SC)

BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in the EDEQ-SC ($F(4, 59) = 24.01$, $p < .001$, $R^2 = .62$, $R^2_{Adjusted} = .60$) in university students. Only BISQ and BMI found to significantly predicted EDEQ-SC.

For male university students, BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in eating disorders pathology ($F(4, 50) = 8.39$, $p < .001$, $R^2 = .40$, $R^2_{Adjusted} = .35$) in patients with eating disorders. As in females, BISQ and BMI significantly predicted EDEQ-SC.

4.2.2.4.Eating Disorders Examination Questionnaire Weight Concern Subscale (EDEQ-WC)

In female university students, BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in the EDEQ-WC ($F(4, 59) = 16.36$, $p < .001$, $R^2 = .59$, $R^2_{Adjusted} = .54$). Analysis showed that only BMI significantly predicted EDEQ-WC.

In male university students, BDI, BISQ, TAS-20 and BMI explain a significant amount of the variance in eating disorders pathology ($F(4, 50) = 5.32$, p

=.001, R^2 = .30, $R^2_{Adjusted}$ = .24). The analysis demonstrated that BISQ and BMI significantly predicted EDEQ-WC while other variables did not predict.

Table 11 shows the unstandardized regression coefficients, the standardized regression coefficients, t-test and significance values found in the multiple regression analysis for each subscale and both females and males.

Table 11

Summary of Multiple Regression Analysis for Variables Predicting Subscales of EDEQ in Female and Male University Students

		Female Students (N = 64)					**Male Students (N= 55)**				
		B	***SE***	***β***	***t***	***p***	***B***	***SE***	***β***	***t***	***p***
EDEQ-DR	BISQ	-.31	.38	-.12	-.81	.42	-.83	.29	-.38	-2.87	.006
	BDI	.01	.04	.04	.24	.82	.02	.02	.15	1.08	.28
	TAS-20	.03	.02	.18	1.21	.23	-.03	.02	-.25	-1.94	.06
	BMI	.19	.06	.37	2.89	.005	.21	.06	.44	3.51	.001
EDEQ-EC	BISQ	-.06	.22	-.04	-.27	.79	-.44	.21	-.28	-2.08	.04
	BDI	.03	.02	.21	1.57	.12	.02	.01	.17	1.13	.27
	TAS-20	.01	.01	.06	.48	.64	-.00	.01	-.04	-.28	.79
	BMI	.16	.04	.48	4.17	.000	.09	.04	.29	2.05	.045
EDEQ-SC	BISQ	-.58	.26	-.24	-2.24	.03	-.77	.23	-.37	-3.34	.002
	BDI	.04	.02	.17	1.52	.13	.02	.02	.17	1.29	.20
	TAS-20	.02	.02	.10	.93	.36	-.01	.02	-.04	-.30	.77
	BMI	.22	.05	.47	4.92	.00	.21	.05	.54	4.51	.00
EDEQ-WC	BISQ	-.34	.29	-.14	-1.21	.23	-.55	.24	-.28	-2.27	.03
	BDI	.04	.03	.19	1.59	.12	.03	.02	.24	1.75	.09
	TAS-20	.01	.02	.09	.78	.44	-.01	.02	-.05	-.36	.72
	BMI	.24	.05	.51	4.99	.00	.18	.04	.49	3.78	.00

4.2.3.Predictors of Eating Attitudes Test-40 (EAT-40)

Multiple regression analysis with the use of enter method showed that BDI, BISQ, TAS-20 and BMI did not explain a significant variance in disordered eating attitudes ($F(4, 51) = .15$, $p = .96$, $R^2 = .01$, $R^2_{Adjusted} = -.06$) among undergraduate male students. Unlike males, BDI, BISQ, TAS-20 and BMI found to explain a significant amount of the variance in disordered eating attitudes ($F(4, 59) = 5.75$, $p = .001$, $R^2 = .28$, $R^2_{Adjusted} = .23$) among undergraduate female students. The analysis showed that only TAS-20 ($\beta = .45$, $t(63) = 3.03$, $p = .02$) significantly predicted disordered eating attitudes in females. However, no predicting effect of BISQ, BMI or BDI was found. The unstandardized regression coefficients, the standardized regression coefficients, t-test and significance values in the multiple regression analysis are presented in Table 11.

Table 12

Summary of Multiple Regression Analysis for Variables Predicting EAT-40 in Female and Male University Students

		B	***SE***	***β***	***t***	***p***
Females	BISQ	0.56	1.38	0.06	0.40	0.69
	BDI	-0.02	0.13	-0.02	-0.15	0.88
	TAS-20	0.26	0.09	0.45	3.03	0.004
	BMI	0.43	0.24	0.23	1.80	0.08
Males	BISQ	0.20	1.93	0.01	0.10	0.92
	BDI	0.07	0.13	0.09	0.56	0.58
	TAS-20	0.01	0.13	0.01	0.08	0.93
	BMI	0.47	0.39	0.18	1.21	0.23

5. CHAPTER

DISCUSSION

The aim of the current study was to investigate the predictors of disordered eating attitudes and eating disorders. More specifically, this study examined whether depression, body mass index, body dissatisfaction and alexithymia predict disordered eating attitudes and eating disorder pathology. This study further investigated how predictors of disordered eating attitudes and eating disorder pathology show changes in the undergraduate university students and patients with eating disorders. Additionally, the possible predictors for female and male university students were explored. Overall, this study provided evidence for all of the above mentioned factors as to be predictors of disordered eating attitudes (DEAs) and eating disorders (EDs) except depression.

5.1. Comparison of Eating Disorders Patients and Undergraduate University Students

Findings of the current study revealed that patients with eating disorders presented significantly higher levels of eating pathology, problematic eating attitudes and behaviours, depression and alexithymia compared to the university students. Moreover, body mass index (BMI) of these patients was found to be significantly lower than these students. As expected, university students exhibited higher levels of body image satisfaction. Thus, it is possible to conclude that patients with EDs and university students demonstrated distinctive patterns.

The current study further demonstrated that DEAs were predicted by body dissatisfaction among patients with EDs. In other words, decrease in body satisfaction among ED patients resulted in increased DEAs. However, the situation appeared to be different in the undergraduate university students. Among those students, it was found that DEAs were predicted by body mass index (BMI). Thus, when BMI of these students rises, it is more likely that they would present more DEAs. Whereas BMI based on the actual weight and height, satisfaction with body image is significantly associated with the standards that one places on her/himself by being independent of the actual body size (Anton, Perri, & Riley, 2000). Thus, this discrepancy found in this study between students and patients pointed out the importance of self-evaluation for the development of disordered eating attitudes and

behaviours. It appears that although university students who could also be considered as a part of healthy population evaluate themselves in an objective manner, patients with EDs make more subjective evaluations. In this regard, it is plausible to assume that how an individual evaluates her/himself plays a significant role on the eating attitudes and behaviours. More specifically, the discrepancy between ideal self and real self might become to be a significant risk factor.

It has been previously indicated that body dissatisfaction and BMI play predictive role on increasing dieting behaviours and pathological eating behaviours (Fan et al., 2010; Paxton, Neumark-Sztainer, Hannan, & Eisenberg, 2006). As in line with the earlier literature, body image dissatisfaction and BMI played predictive roles in the undergraduate university students on the mean score of eating disorders instrument. Similar to the university students, increase in body image satisfaction and BMI predicted higher scores of eating disorders in patients with EDs. However, different than the situation in the university students, alexithymia was found to be another predictive factor in the development of eating disorders pathology among patients with EDs. Based on this finding; one can assume that alexithymia is a differential feature for having higher levels of eating disorder pathology which would lead to be diagnosed with an eating disorder.

When subscales of eating disorders instrument examined, BMI and alexithymia found to predict weight concerns in patients with EDs. Furthermore, eating concerns were predicted increased levels of alexithymia and body dissatisfaction. Shape concerns of these patients were shown to increase by body dissatisfaction, BMI and alexithymia. Alexithymia found to be a predictive factor for dietary restraint in patients with EDs in this study. Overall, these findings mainly emphasize the importance of alexithymia symptoms for the development of ED pathology.

Previous literature has suggested that improving capacity of identifying and expressing emotions would positively affect one's perception of body and symptoms of alexithymia (Carano et al., 2006). In this sense, integration of strategies to deal with alexithymia within the interventions for the patients with EDs is likely to increase treatment outcome. However, a caution is needed. Evidence has indicated that there might be different underlying mechanisms of alexithymia symptoms for ED patients who present restricted eating behaviours compared to ones who present binge eating and purging behaviours (Nowakowski, McFarlane & Cassin, 2013).

Therefore, determination of underlying mechanisms of alexithymia symptoms for the subtypes of EDs should be the first step before delivering any intervention.

Results of the current study showed that increase in BMI and body dissatisfaction among the university students found to predict higher levels of shape concerns, eating concerns and dietary restrained behaviours among the university students. Furthermore, weight concerns of the university students were predicted by higher levels of BMI, body dissatisfaction and depression.

Finding the predicting effect of depression only on weight concerns but not on any other variables related to DEAs or EDs is remarkable. In the current study, the mean score of the university students in the Beck Depression Inventory found to be in the mild symptoms range while the mean score of the patients with EDs found to be in the severe symptoms range. Even though university students and patients with EDs presented higher scores than the normal range, no predicting effect of depression was demonstrated on DEAs or ED pathology for either of these groups. This result is contradictory with the several studies (e.g., Juarascio et al., 2016) which demonstrated that depression significantly predicted increase in eating disorder pathology. The reasoning behind the present study's finding might be that there is only a relationship between depression and weight concern since depression has known to cause increased appetite for some individuals which resulted in weight gain. Previous research supports this idea with the scientific evidence on a positive association between weight concerns and depression in adolescents (Herpertz-Dahlmann et al., 2008). Likewise, another study has demonstrated that a significant amount of variance in weight concern is explained by depressive symptoms (Wilksch & Wade, 2004).

This present finding about depression rises a further question that whether depression is a consequence of EDs and DEAs rather than being a risk factor. For instance, a recent study conducted on adolescents has shown that depression may be considered to be both a cause and a consequence for obese individuals (Goldfield, Moore, Henderson, Buchholz, Obeid, &, Flament, 2010). Previous research has demonstrated that body dissatisfaction that often observed among patients with EDs is a strong predictor of depressive mood, thus it considered to be a risk factor (Paxton et al., 2006). Some individuals have a tendency to consider having ideal body weight under their personal controls. When achieving ideal body size becomes highly important, one is likely to evaluate him/herself negatively in the case of any failure

during this journey. Those with less satisfaction with their body can also define this failure as a personal inadequacy. As a consequence, these negative evaluations result in development of depressive symptoms (Paxton et al., 2006). However, a further evaluation on this issue is necessary in order to draw statistically supported conclusion.

5.2. Comparison of Female and Male Undergraduate University Students

Earlier research has demonstrated that gender plays a significant role on the development of unhealthy eating behaviours and attitudes (Ortaçgil, 2009). Even though the present study did not find statistically significant differences between females and males for the outcome measures, males exhibited higher mean scores on disordered eating attitudes, depression, alexithymia, body satisfaction and BMI compared to their female peers. However, as one can assume from the growing evidence on the field of ED research, females showed higher mean scores for eating disorder pathology.

When predictors of disordered eating attitudes and behaviours were examined in female and male university students, it was found that increases in alexithymia symptoms results in increased DEAs among females. Nevertheless, variables in the current study did not explain the significant variance in male's DEAs. There might be another factor which was not investigated within the scope of this study, but actually leads increases in DEAs among male university students. For instance, pressure of muscle building has been previously shown to have positive correlation between disordered eating attitudes and behaviours (Olivardia, Pope Jr, Borowiecki III & Cohane, 2004). The reasoning behind engaging in DEAs for men might be that they are particularly aiming for muscular body rather than being skinny or losing weight. Thus, it is crucial to further research to distinguish muscularity and weight concern in men when investigating the DEAs.

Findings of the current study revealed that BMI was the only predictor factor in female university students regarding to overall eating disorders pathology. Nevertheless, increases in body dissatisfaction and BMI were shown to predict increased eating disorders pathology in male university students. In the matter of the predictors of subscales of eating disorders instrument, higher levels of body dissatisfaction and BMI among male university students were found to result in increased dietary restrained, eating, shape and weight concerns. Similarly to their

peers, shape concerns of female university students were predicted by BMI and body dissatisfaction. However, only higher levels of BMI were found to cause dietary restrained, eating and weight concerns among these females.

5.3. Limitations

The current study has several limitations that must be acknowledged when interpreting the results. First, the small sample size of male patients with EDs was underpowered to detect meaningful differences between female and male patients. Therefore, it was not possible to run analysis to provide information about how predictors of disordered eating attitudes and eating disorders pathology show changes between genders in the clinical sample. Second, disordered eating attitudes, eating disorders pathology, body mass index, body satisfaction, depression, and alexithymia were measured by the application of self-report questionnaires. Even though all of the instruments used in this study are validated, reliable, and well-known, self-report questionnaires are associated with increased risk of social desirability bias (Brechan & Kvalem, 2015). Another limitation of the present study was that the predictors of EDs and DEAs did not investigated for the subgroups of EDs, namely AN, BN, BED, and OSFED. Since each of these subtypes of EDs have their own specific features, it is likely that different factors would influence these subtypes. For instance, it has been previously suggested that there might be a strong link between binge eating and mood changes, whereas bulimic behaviours and attitudes might be more strongly linked to cognitive processes (Berg, Frazier, & Sherr, 2009). Thus, investigation of unique diagnostic categories within eating disorders would enrich our understanding regarding to the specific risk factors of subtypes of EDs. It would be also beneficial to target different features when delivering interventions. Lastly, the demographic characteristics of the current sample did not included to the analysis. Therefore, it was not possible to draw a conclusion regarding to the effect of demographical variables such as place of residence and education.

5.4. Strengths

Despite the limitations, there are also several strengths of the current study. First of all, the research design of this study can be considered to be fairly powerful since a group of patients with EDs as well as university students were included. As

another methodological strength, attitudes and behaviours related to EDs were measured by the application of multiple instruments rather than relying on a single tool. Moreover, this study provided remarkable information regarding to the predictors of EDs in Turkish students and patients, and contributed to Turkish literature on EDs which is quite limited. In this way, it is believed that the knowledge about characteristics and appearance of EDs in a non-Western society was improved. Furthermore, the existing literature has criticised about the fact that most of the studies on EDs only focus on females in spite of growing evidence of EDs among males. Thereagainst to this limitation of existent literature, a relatively good number of male participants were included to this study.

5.5. Clinical Implications

The results of the current study provided considerable implications for public health and mental health services. First of all, to the present author's knowledge, this is the one of the few studies on EDs that investigated both clinical and healthy population, particularly in Turkey. Thus, it is believed that it would be possible to improve the existent interventions with the help of provided information about the characteristics of the Turkish EDs patients in the ways suggested by the current study. More specifically, this study demonstrated the importance of alexithymia for both prevention and treatment strategies for EDs. Furthermore, the findings have drawn attention to the fact that depression might be a consequence of EDs rather than being a precursor or a risk factor.

This study also believed to increase the awareness regarding to EDs among males. Growing number of males suffer from EDs and body dissatisfaction, and they started seeking cosmetic surgery and engaging excessive exercises. The increase in prevalence of EDs among males and increased number of people who needs care put more burden on the public health care services (Olivardia et al., 2004). By the means of present findings, it would be possible to develop interventions which are also tailored to meet the specific needs of males.

5.6. Future Directions

Based on the current findings and shortcomings of the existent literature in the EDs field, directions for the future studies are provided. It has been previously proposed that while binge eating and mood changes are related, bulimic behaviours

are linked to cognitive processes (Berg, Frazier, & Sherr, 2009). Thus, investigation of unique diagnostic categories within eating disorders would enrich our understanding regarding to specific risk factors of each subtype of EDs. Further research would also benefit from conducting any research on male patients with EDs. Our existent knowledge about the clinical representations of the ED patients is limited to females. Moreover, instruments for identification of DEAs and EDs were mainly developed and psychometrically tested on females which are likely to result in under recognition of ED symptoms among males (Raevuori, Keski-Rahkonen, & Hoek, 2014). Given with the lack of scientific evidence and reliable and validated instruments for testing EDs in males, practitioners may fail to recognise EDs in their male clients. In this regard, any research on the development of psychometrically tested instruments with the focus of features of male ED patients would contribute to both of the scientific field and clinical practice. Finally, it is believed that a further investigation of self-esteem which is close relationship with body satisfaction as a risk factor for development of EDs among both patients and healthy population would be beneficial (Olivardia et al., 2004).

5.7. Conclusion

In many respects, eating disorders are world-wide health concerns. The present study emphasized that EDs are not Western specific mental illness, but also a serious issues in non-Western societies such as Turkey. Thus, it is crucial to identify the risk factors and enhance efficacy of existent interventions targeting EDs. The findings of the current study facilitated a better understanding about the predictors of disordered eating attitudes and eating disorders pathology. More specifically, this study showed that higher levels of body dissatisfaction, BMI and alexithymia result in higher levels of disordered eating attitudes and eating disorders pathology. It is believed that it would be possible to develop and improve the prevention and treatment strategies for EDs by taking present findings account.

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APPENDICIES
(In Turkish)

APPENDIX A

Consent Form

GÖNÜLLÜ BİLGİLENDİRİLMİŞ ONAY FORMU

Bu araştırma İstanbul Arel Üniversitesi Psikoloji Bölümü öğretim elemanı Arş. Gör. Başak İnce tarafından, İstanbul Tıp Fakültesi Psikiyatri Anabilim Dalı Öğretim Üyesi
Prof. Dr. Başak Yücel ve İstanbul Üniversitesi Psikoloji Bölümü Öğretim Üyesi Doç. D. Hanife Özlem Sertel Berk danışmanlığında yüksek lisans tez çalışması olarak yürütülmektedir. Bu araştırmayla yeme tutumlarını etkileyen faktörlerin belirlenmesi amaçlanmaktadır. Elde edeceğimiz sonuçlarla, gelecekte, yeme bozukluklarının gelişmesinin engellenmede, hastaların yaşam kalitesini arttırmada ve daha etkin bakım önerilerinin geliştirilmesine katkıda bulunmayı hedefliyoruz.

Yaklaşık 25 dakika sürecek olan bu araştırma kapsamında sizden bazı anketler doldurmanızı bekliyoruz. Anketin sağlıklı sonuç verebilmesi için soruları mümkün olduğunca boş bırakmadan cevaplamanız çok önemlidir. Vermiş olduğunuz cevaplar tamamıyla gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Araştırma sonuçları bilimsel amaçlar dışında kullanılmayacaktır. Araştırmaya katılmayı kabul ederseniz, isminiz saklı tutulacak; etik kurullar ve resmi makamlar gerekirse size ait araştırmayla ilgili demografik bilgilere ulaşabilecek; araştırmada sizi ilgilendirebilecek bir bilgi söz konusu olduğunda, bu size bildirilecektir.

Bu araştırmaya katılım tamamen gönüllülük esasına dayalıdır. Anket, genel olarak kişisel rahatsızlık verecek soruları içermemesine rağmen, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz cevaplamayı yarıda bırakabilirsiniz. Çalışma hakkında daha fazla bilgi almak isterseniz 0850 850 27 35 – 1259 telefon numarasından ya da *basakince@arel.edu.tr* e-posta adreslerinden araştırmacılara ulaşabilirsiniz.

Yukarıda gönüllüye araştırmadan önce verilmesi gereken bilgileri içeren metni okudum. Konu hakkında bana yazılı ve sözlü açıklamalar yapıldı. Bu koşullarla söz konusu araştırmaya kendi rızamla hiçbir baskı ve zorlama olmaksızın katılmayı kabul ediyorum.

Gönüllünün adı, soyadı, imzası, adresi ve telefon numarası

18 yaşından küçük gönüllü katılımcılar için yasal velisinin adı, soyadı, imzası, adresi ve telefon numarası

Açıklamaları yapan araştırmacının adı, soyadı ve imzası

Arş. Gör. Başak İnce

GÖNÜLLÜ BİLGİLENDİRİLMİŞ ONAY FORMU – VELİ BİLGİLENDİRME FORMU (18 YAŞINDAN KÜÇÜK KATILIMCILAR İÇİN)

Bu araştırma İstanbul Arel Üniversitesi Psikoloji Bölümü öğretim elemanı Arş. Gör. Başak İnce tarafından, İstanbul Tıp Fakültesi Psikiyatri Anabilim Dalı Öğretim Üyesi Prof. Dr. Başak Yücel ve İstanbul Üniversitesi Psikoloji Bölümü Öğretim Üyesi Doç. D. Hanife Özlem Sertel Berk danışmanlığında yüksek lisans tez çalışması olarak yürütülmektedir. Bu araştırmayla yeme tutumlarını etkileyen faktörlerin belirlenmesi amaçlanmaktadır. Elde edeceğimiz sonuçlarla, gelecekte, yeme bozukluklarının gelişmesinin engellenmede, hastaların yaşam kalitesini arttırmada ve daha etkin bakım önerilerinin geliştirilmesine katkıda bulunmayı hedefliyoruz.

Yaklaşık 25 dakika sürecek olan bu araştırma kapsamında çocuğunuzdan bazı anketler doldurmasını bekliyoruz. Anketin sağlıklı sonuç verebilmesi için soruların mümkün olduğunca boş bırakmadan cevaplanması çok önemlidir. Çocuğunuzun vermiş olduğu cevaplar tamamıyla gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Araştırma sonuçları bilimsel amaçlar dışında kullanılmayacaktır. Çocuğunuzun araştırmaya katılmasını kabul ederseniz, sizin ve çocuğunuzun ismi saklı tutulacak; etik kurullar ve resmi makamlar gerekirse size ve çocuğunuza ait araştırmayla ilgili demografik bilgilere ulaşabilecek; araştırmada sizi ya da çocuğunuzu ilgilendirebilecek bir bilgi söz konusu olduğunda, bu size bildirilecektir.

Bu araştırmaya katılım tamamen gönüllülük esasına dayalıdır. Anket, genel olarak kişisel rahatsızlık verecek soruları içermemesine rağmen, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü çocuğunuz kendinisini rahatsız hissederse cevaplamayı yarıda bırakabilir. Çalışma hakkında daha fazla bilgi almak isterseniz 0850 850 27 35 – 1259 telefon numarasından ya da *basakince@arel.edu.tr* e-posta adreslerinden araştırmacılara ulaşabilirsiniz.

Yukarıda gönüllünün yasal velisine araştırmadan önce verilmesi gereken bilgileri içeren metni okudum. Konu hakkında bana yazılı ve sözlü açıklamalar yapıldı. Bu koşullarla söz konusu araştırmaya kendi rızamla hiçbir baskı ve zorlama olmaksızın çocuğumun katılmasını kabul ediyorum.

Gönüllü katılımcının yasal velisinin adı, soyadı, imzası, adresi ve telefon numarası

Açıklamaları yapan araştırmacının adı, soyadı ve imzası

Arş. Gör. Başak İnce

KATILIMCININ BEYANI

Arş. Gör. Başak İnce tarafından İstanbul Tıp Fakültesi Psikiyatri Anabilim Dalı ve İstanbul Arel Üniversitesi Psikoloji Bölümü'nde bir araştırma yapılacağı belirtilerek, bu çalışma ile ilgili yukarıdaki bilgiler bana aktarıldı. Bu bilgilerden sonra bu araştırmaya 'katılımcı' olarak davet edildim.

Eğer bu çalışmaya katılırsam, araştırmacı ile aramda kalması gereken bilgilerin gizliliğine bu çalışma sırasında büyük özen ve saygı ile yaklaşılacağına inanıyorum. Araştırma sonuçlarının eğitim ve bilimsel amaçlarla kullanımı sırasında kişisel bilgilerimin ihtimamla korunacağı konusunda bana yeterli güven verildi.

Çalışmanın yürütülmesi sırasında herhangi bir sebep göstermeden araştırmadan çekilebilirim. Bu araştırmada elde edilecek bilgilerin resmi kurumlar ve etik kurullar tarafından gerekirse incelenebileceği konusunda bilgilendirildim.

Bu çalışma için bana herhangi bir ücret ödenmeyeceği bilgisine de sahibim.

Araştırma sırasında sorun ile karşılaştığımda; mesai saatleri içinde 0850 850 27 35 – 1259 numaralı telefondan Arş. Gör. Başak İnce'yi veya 0212 4142000-31989 numaralı telefondan Prof. Dr. Başak Yücel'i arayabileceğimi biliyorum.

Bu çalışmaya katılmak zorunda değilim ve katılmayabilirim. Çalışmaya katılmam konusunda zorlayıcı bir davranışla karşılaşmış değilim. Eğer katılmayı reddedersem, bu durumun bana herhangi bir olumsuz yansıması olmayacaktır.

Bana yapılan tüm açıklamaları ayrıntılarıyla anlamış bulunmaktayım. Belli bir düşünme süresi sonunda bu çalışmaya 'katılımcı' olarak katılma kararını aldım. İmzalı bu form kağıdının bir kopyası bana verilecektir.

Katılımcı
Adı Soyadı:

Adres:

Tel:

İmza:

KATILIMCININ YASAL VELİSİNİN BEYANI (18 YAŞINDAN KÜÇÜK KATILIMCILAR İÇİN)

Arş. Gör. Başak İnce tarafından İstanbul Tıp Fakültesi Psikiyatri Anabilim Dalı ve İstanbul Arel Üniversitesi Psikoloji Bölümü'nde bir araştırma yapılacağı belirtilerek, bu çalışma ile ilgili yukarıdaki bilgiler bana ve velisi olduğum 18 yaşından küçük olan ..... (isim-soyisim) aktarıldı. Bu bilgilerden sonra, çocuğum bu araştırmaya 'katılımcı' olarak davet edildi.

Eğer çocuğum bu çalışmaya katılırsa, araştırmacı ile arasında kalması gereken bilgilerin gizliliğine bu çalışma sırasında büyük özen ve saygı ile yaklaşılacağına inanıyorum. Araştırma sonuçlarının eğitim ve bilimsel amaçlarla kullanımı sırasında çocuğumun kişisel bilgilerinin ihtimamla korunacağı konusunda bana yeterli güven verildi.

Çalışmanın yürütülmesi sırasında herhangi bir sebep göstermeden çocuğumu araştırmadan çekebilirim. Bu araştırmada elde edilecek bilgilerin resmi kurumlar ve etik kurullar tarafından gerekirse incelenebileceği konusunda bilgilendirildim.

Bu çalışma için bana ya da çocuğuma herhangi bir ücret ödenmeyeceği bilgisine de sahibim.

Araştırma sırasında ben ya da çocuğum bir sorun ile karşılaştığında; mesai saatleri içinde 0850 850 27 35 – 1259 numaralı telefondan Arş. Gör. Başak İnce'yi veya 0212 4142000-31989 numaralı telefondan Prof. Dr. Başak Yücel'i arayabileceğimi biliyorum.

Çocuğum bu çalışmaya katılmak zorunda değil ve katılmayabilir. Çocuğumun çalışmaya katılması konusunda zorlayıcı bir davranışla karşılaşmış değilim. Eğer çocuğumun katılmasını reddedersem, bu durumun bana ya da çocuğuma herhangi bir olumsuz yansıması olmayacaktır.

Bana yapılan tüm açıklamaları ayrıntılarıyla anlamış bulunmaktayım. Belli bir düşünme süresi sonunda, çocuğumun bu çalışmaya 'katılımcı' olarak katılmasına karar aldım. İmzalı bu form kağıdının bir kopyası bana verilecektir.

Katılımcının Velisinin
Adı Soyadı:

Adres:

Tel:

İmza:

APPENDIX B

The Psychosocial-Demographical Information Form

Demografik Form

1. Cinsiyet:
2. Doğum Tarihi:
3. Eğitim Durumu: a) Okuryazar değil b) İlköğretim c) Lise d)Üniversite e) Yüksek Lisans f)Doktora

4. Medeni Durum

a) Evli b) Bekar c) Birlikte yaşıyor

5. Maddi durum

a) Düşük b) Orta c) Üst - orta d) Yüksek e) Çok yüksek

6. Şu anda yaşadığı yer

a) Metropol b)Büyükşehir c) Küçükşehir d) Kasaba e) Köy

7. Yetiştiği yer

a) Metropol b)Büyükşehir c) Küçükşehir d) Kasaba e) Köy

8. Meslek:

9. Çalışma Durumu:

a) Çalışıyor: _____ (lütfen çalıştığınız işinizi yazınız) e

b) Çalışmıyor:

10. Çalışmıyor ise nedeni:

a) Hastalığa bağlı sebepler

b) Başka nedenlerle: _____(lütfen nedenini yazınız)

c) Öğrenci olduğu için

11. Şu anki kilo: Boy:

a) Şimdiye kadar en yüksek kilo:

b) Şimdiye kadar en düşük kilo:

12. Daha önce yeme problemleri ile ilişkili doktora başvuru var mı?

a) Yok b) Var; (Kaç defa): _____

13. Daha önce bir tedavi gördünüz mü?

a) Hayır b) Evet

14. Evet ise tedavi türü nedir?

a)Yatarak ise i) Psikiyatri ii) özel

b) Ayaktan ise i) devlet ii)özel

15. Psikiyatrik öz geçmiş (geçmişte psikiyatrik başka bir sorunu var mı?)

a) Yok b) Var; (Açıklayınız): _____

16. Psikiyatrik soy geçmiş (1. Derece akrabalarında psikiyatrik bir sorun var mı?)

a) Yok b) Var; (Açıklayınız): _____

APPENDIX C

The Eating Disorder Examination Questionnaire

YEME DEĞERLENDİRME ÖLÇEĞİ

YÖNERGE : Aşağıdaki sorular sadece son 4 hafta ile ilgilidir. Lütfen her soruyu dikkatlice okuyunuz ve tüm soruları yanıtlayınız. Teşekkürler.

1'den 12'ye kadar olan sorular : Lütfen sağdaki uygun olan sayıyı yuvarlak içine alınız . Soruların

	Son 28 günün kaçında...	**Hiçbirin-de**	**1 -5**	**6 -12**	**13 -15**	**16 -22**	**23 -27**	**Hergün**
1-	Kilonuzu ya da bedeninizin şeklini değiştirmek amacıyla yiyecek miktarınızı kasıtlı olarak sınırlandırmaya çalıştınız mı ? (*Başarılı olup olmadığınız önemli değildir.*)	0	1	2	3	4	5	6
2-	Bedeninizin şeklini ya da kilonuzu değiştirmek amacıyla uzun bir süre (*uyanık olduğunuz 8 saat boyunca ya da daha fazla bir süre için*) hiçbir şey yemediğiniz oldu mu ?	0	1	2	3	4	5	6
3-	Bedeninizin şeklini ya da kilonuzu değiştirmek amacıyla hoşlandığınız yiyecekleri beslenme düzeninizden çıkarmaya çalıştınız mı ? (*Başarılı olup olmadığınız önemli değildir.*)	0	1	2	3	4	5	6
4-	Bedeninizin şeklini ya da kilonuzu değiştirmek amacıyla yemenizle ilgili (örn.kalori sınırlandırması) belli kurallara uymaya çalıştınız mı ? (*Başarılı olup olmadığınız önemli değildir.*)	0	1	2	3	4	5	6
5-	Bedeninizin şeklini ya da kilonuzu etkilemek amacıyla boş bir mideye sahip olmak için belirgin bir arzu duydunuz mu ?	0	1	2	3	4	5	6
6-	Tamamen düz bir karına sahip olmak için belirgin bir arzu duydunuz mu ?	0	1	2	3	4	5	6
7-	Yiyecek, yemek yeme yada kalorilerle ilgili düşünmenin, ilgilendiğiniz konulara (örn. çalışma, bir konuşmayı takip etme yada okuma) yoğun-laşmanızı çok zorlaştırdığı oldu mu ?	0	1	2	3	4	5	6

	Son 28 günün kaçında...	Hiçbirin-de	1 -5 gün	6 -12 gün	13 -15 gün	16 -22 gün	23 -27 gün	Her gün
8-	Bedeninizin şekli ve kiloyla ilgili düşünmenin, ilgilendiğiniz konulara (örn. İşinize, bir konuşmayı takip etmenize ya da okumanıza) yoğunlaşmanızı çok zorlaştırdığı oldu mu ?	0	1	2	3	4	5	6
9-	Yemek yemeyle ilgili kontrolü kaybetmekten belirgin biçimde korktuğunuz oldu mu ?	0	1	2	3	4	5	6
10-	Kilo alabileceğinizden belirgin bir biçimde korktunuz mu?	0	1	2	3	4	5	6
11-	Kendinizi şişman hissettiniz mi?	0	1	2	3	4	5	6
12-	Kilo vermek için güçlü bir arzunuz oldu mu ?	0	1	2	3	4	5	6

13'ten 18'e kadar olan sorular : Lütfen sağdaki boşluğa uygun sayıyı yazınız. Soruların yalnızca son dört haftaya yönelik olduklarını (28 güne) hatırlayınız.

	Son dört hafta içinde (28 gün)...	
13-	Son 28 gün içinde, kaç kere, başka insanların alışılmadık miktarda fazla (şartlara göre) olarak tanımlayacakları biçimde yemek yediniz ?	.....
14-	Bu süre içinde kaç kere yemek yemenizle ilgili kontrolü kaybetme hissine kapıldınız (yediğiniz sırada) ?	.....
15-	Son 28 günün kaç **GÜNÜNDE** aşırı yemek yeme nöbetleri ortaya çıktı (örn. Alışılmadık miktarda fazla yemek yediğiniz ve o sırada kontrolü kaybettiğiniz duygusunu yaşadınız) ?	.....
16-	Son 28 gün içinde, bedeninizin şekli ya da kilonuzu kontrol amacıyla, kaç kere kendinizi kusturdunuz ?	.....
17-	Son 28 gün içinde, bedeninizin şekli ya da kilonuzu kontrol amacıyla, kaç kere müshil (bağırsak çalıştırıcı) kullandınız ?	.....
18-	Son 28 gün içinde, kilonuzu, bedeninizin şeklini ya da yağ miktarınızı kontrol etmek, kalorileri yakmak amacıyla, kaç kere "kendinizi kaybedercesine" ya da "saplantılı" biçimde egzersiz yaptınız ?	.....

19'dan 21'e kadar olan sorular : Lütfen uygun sayıyı yuvarlak içine alınız. Lütfen bu sorular için "tıkınırcasına yeme" teriminin, mevcut koşullarda başkalarına göre alışılmadık miktarda ve kontrolü kaybetme duygusuyla beraber fazla yemeyi ifade ettiğini göz önünde bulundurunuz.

	Son 28 günün kaçında...	Hiçbirinde	1-5 gün	6-12 gün	13-15 gün	16-22 gün	23-27 gün	Hergün
19-	Son 28 gün içinde, kaç kere gizlice (örn. Saklanarak) yemek yediniz ? (Tıkınırcasına yeme durumlarını saymayınız.)	0	1	2	3	4	5	6
20-	Yemek yediğiniz zaman bedeninizin şeklini ya da kilonuzu etkilediği için ne oranda kendinizi suçlu hissettiniz (hata yaptığınızı hissettiniz) ? (Tıkınırcasına yemek yeme durumlarını saymayınız.)	0	1	2	3	4	5	6
21-	Son 28 gün içinde, başkalarının sizi yemek yerken görmesiyle ilgili ne kadar endişelendiniz? (Tıkınırcasına yeme durumlarını saymayınız.)	0	1	2	3	4	5	6

22'den 28'e kadar olan sorular : Lütfen sağda uygun bulduğunuz sayıyı yuvarlak içine alınız. Soruların yalnızca son dört haftaya yönelik olduklarını (28 güne) hatırlayınız.

22-	Kilonuz, kişi olarak kendiniz hakkında düşüncenizi ve yargınızı etkiledi mi ?	0	1	2	3	4	5	6
23-	Bedeninizin şekli, kendiniz hakkındaki düşüncenizi (yargınızı) etkiledi mi?	0	1	2	3	4	5	6
24-	Önümüzdeki dört hafta boyunca, haftada 1 kez tartılmanız istense (ne daha sık ne daha seyrek), bu sizi ne kadar üzerdi ?	0	1	2	3	4	5	6
25-	Kilonuzdan ne derece memnun değilsiniz ?	0	1	2	3	4	5	6
26-	Bedeninizin şeklinden ne derece memnun değilsiniz ?	0	1	2	3	4	5	6
27-	Bedeninizi görmekten ne kadar rahatsız oluyorsunuz (örn. Aynada, mağazanın camında, soyunurken, banyo ya da duş yaparken) ?	0	1	2	3	4	5	6
28-	Başkalarının bedeninizin şeklini görmesinden ne derece rahatsız oluyorsunuz ? (örn. Soyunma odalarında, yüzerken ya da dar elbiseler giyerken)	0	1	2	3	4	5	6

Şu andaki kilonuz nedir ? (Lütfen en yakın tahmini yapınız) .....

Boyunuz ne kadar ? (Lütfen en yakın tahmini yapınız) .....

Kadınlara : Geçtiğimiz üç-dört aylık dönemde hiç aybaşı (regl) olmadığınız oldu mu ?.....
Aksama olduysa kaç tane ?.....
Buna bağlı olarak hap kullanıyor musunuz ?.....

APPENDIX D

The Eating Attitudes Test-40

Bu anket sizin yeme alışkanlıklarınızla ilgilidir. Lütfen ,her bir soruyu dikkatlice okuyunuz ve size uygun gelen şıkkı işaretleyiniz.

a. Daima b. Çok sık c. Sık sık d. Bazen e. Nadiren f. Hiçbir zaman

a	b	c	d	e	f	
( )	( )	( )	( )	( )	( )	1. Başkaları ile birlikte yemek yemekten hoşlanırım.
( )	( )	( )	( )	( )	( )	2. Başkaları için yemek pişiririm ama pişirdiğim yemeği yemem.
( )	( )	( )	( )	( )	( )	3. Yemekten önce sıkıntılı olurum.
( )	( )	( )	( )	( )	( )	4. Şişmanlamaktan ödüm kopar.
( )	( )	( )	( )	( )	( )	5. Acıktığımda yemek yememeye çalışırım.
( )	( )	( )	( )	( )	( )	6. Aklım fikrim yemektedir.
( )	( )	( )	( )	( )	( )	7. Yemek yemeyi durduramadığım zamanlar olur.
( )	( )	( )	( )	( )	( )	8. Yiyeceğimi küçük parçalara bölerim.
( )	( )	( )	( )	( )	( )	9. Yediğim yiyeceğin kalorisini bilirim.
( )	( )	( )	( )	( )	( )	10. Ekmek, patates, pirinç, gibi yüksek kalorili yiyeceklerden kaçınırım.
( )	( )	( )	( )	( )	( )	11. Yemeklerden sonra şişkinlik hissederim.
( )	( )	( )	( )	( )	( )	12. Ailem fazla yememi bekler.
( )	( )	( )	( )	( )	( )	13. Yemek yedikten sonra kusarım.
( )	( )	( )	( )	( )	( )	14. Yemek yedikten sonra aşırı suçluluk duyarım.
( )	( )	( )	( )	( )	( )	15. Tek düşüncem daha zayıf olmaktır.
( )	( )	( )	( )	( )	( )	16. Aldığım kalorileri yakmak için yorulana dek egzersiz yaparım.
( )	( )	( )	( )	( )	( )	17. Günde birkaç kez tartılırım.
( )	( )	( )	( )	( )	( )	18. Vücudumu saran dar elbiselerden hoşlanırım.
( )	( )	( )	( )	( )	( )	19. Et yemekten hoşlanırım.
( )	( )	( )	( )	( )	( )	20. Sabahları erken uyanırım.
( )	( )	( )	( )	( )	( )	21. Günlerce aynı yemeği yerim.
( )	( )	( )	( )	( )	( )	22. Egzersiz yaptığımda harcadığım kalorileri hesaplarım.
( )	( )	( )	( )	( )	( )	23. Adetlerim düzenlidir.
( )	( )	( )	( )	( )	( )	24. Başkaları çok zayıf olduğumu düşünür.
( )	( )	( )	( )	( )	( )	25. Şişmanlayacağım (vücudumun yağ toplayacağı) düşüncesi zihnimi meşgul eder.
( )	( )	( )	( )	( )	( )	26. Yemeklerimi yemek, başkalarınınkinden uzun sürer.
( )	( )	( )	( )	( )	( )	27. Lokantada yemek yemeyi severim.
( )	( )	( )	( )	( )	( )	28. Müshil kullanırım.
( )	( )	( )	( )	( )	( )	29. Şekerli yiyeceklerden kaçınırım.
( )	( )	( )	( )	( )	( )	30. Diyet (perhiz) yemekleri yerim.
( )	( )	( )	( )	( )	( )	31. Yaşamımı yiyeceğin kontrol ettiğini düşünürüm.
( )	( )	( )	( )	( )	( )	32. Yiyecek konusunda kendimi denetleyebilirim.
( )	( )	( )	( )	( )	( )	33. Yemek yeme konusunda başkalarının bana baskı yaptığını hissederim.
( )	( )	( )	( )	( )	( )	34. Yiyecekle ilgili düşünceler çok zamanımı alır.
( )	( )	( )	( )	( )	( )	35. Kabızlıktan yakınırım.
( )	( )	( )	( )	( )	( )	36. Tatlı yedikten sonra rahatsız olurum.
( )	( )	( )	( )	( )	( )	37. Perhiz yaparım.
( )	( )	( )	( )	( )	( )	38. Midemin boş olmasından hoşlanırım.
( )	( )	( )	( )	( )	( )	39. Şekerli, yağlı yiyecekleri denemekten hoşlanırım.
( )	( )	( )	( )	( )	( )	40. Yemeklerden sonra içimden kusmak gelir.

APPENDIX E

Body Image Satisfaction Questionnaire

BEDEN BÖLGELERİNDEN VE ÖZELLİKLERİNDEN HOŞNUT OLMA ÖLÇEĞİ

(ERKEKLER/KADINLAR)

	Son Derece Hoşnutum (5)	Oldukça Hoşnutum (4)	Kararsızım (3)	Pek Hoşnut Değilim (2)	Hiç Hoşnut Değilim (1)
BEDENİN GENEL GÖRÜNÜMÜ					
Beden oranları	☐	☐	☐	☐	☐
Bedenin duruşu	☐	☐	☐	☐	☐
Spor yeteneği	☐	☐	☐	☐	☐
Ten rengi	☐	☐	☐	☐	☐
Kas gücü	☐	☐	☐	☐	☐
Boy	☐	☐	☐	☐	☐
Kilo	☐	☐	☐	☐	☐
YÜZ					
Yüz güzelliği	☐	☐	☐	☐	☐
Saçlar	☐	☐	☐	☐	☐
Gözler	☐	☐	☐	☐	☐
Kulaklar	☐	☐	☐	☐	☐
Burun	☐	☐	☐	☐	☐
Ağız	☐	☐	☐	☐	☐
Dişler	☐	☐	☐	☐	☐
Ses	☐	☐	☐	☐	☐
Çene	☐	☐	☐	☐	☐
Yüzdeki kıl miktarı (**E**)	☐	☐	☐	☐	☐
BEDEN ÜYELERİ					
Omuzlar	☐	☐	☐	☐	☐
Kollar	☐	☐	☐	☐	☐
Eller	☐	☐	☐	☐	☐
Ayaklar	☐	☐	☐	☐	☐
GÖVDE					
Karın	☐	☐	☐	☐	☐
Kalçalar	☐	☐	☐	☐	☐
Bacak ve bilekler	☐	☐	☐	☐	☐
Göğüsler ve üst bölge	☐	☐	☐	☐	☐
Cinsel organ	☐	☐	☐	☐	☐

APPENDIX F

Toronto Alexithymia Scale – 20

TAS-20- Yeni

(TORONTO ALEKSİTİMİ SKALASI)

Lütfen aşağıdaki maddelerin sizi ne ölçüde tanımladığını işaretleyiniz.
Hiçbir zaman (1) ,....., Her zaman (5) olacak şekilde bu maddelere puan veriniz.

		Hiçbirzaman	Nadiren	Bazen	Sık sık	Her Zaman
1-	Ne hissettiğimi çoğu kez tam olarak bilemem.	1	2	3	4	5
2-	Duygularım için uygun kelimeleri bulmak benim için zordur.	1	2	3	4	5
3-	Bedenimde doktorların dahi anlamadığı hisler oluyor.	1	2	3	4	5
4-	Duygularımı kolayca tarif edebilirim.	1	2	3	4	5
5-	Sorunları yalnızca tarif etmektense onları çözümlemeyi yeğlerim.	1	2	3	4	5
6-	Keyfim kaçtığında, üzgün mü, korkmuş mu yoksa kızgın mı olduğumu bilemem.	1	2	3	4	5
7-	Bedenimdeki hisler kafamı karıştırır.	1	2	3	4	5
8-	Neden öyle sonuçlandığını anlamaya çalışmaksızın, işleri oluruna bırakmayı yeğlerim.	1	2	3	4	5
9-	Tam olarak tanımlayamadığım duygularım var.	1	2	3	4	5
10-	İnsanların duygularını tanıması gerekir.	1	2	3	4	5
11-	İnsanlar hakkında ne hissettiği tarif etmek bana zor geliyor.	1	2	3	4	5
12-	İnsanlar duygularımı kolayca tarif etmemi isterler.	1	2	3	4	5
13-	İçimde ne olup bittiğini bilmiyorum.	1	2	3	4	5
14-	Çoğu zaman neden kızgın olduğumu bilmem.	1	2	3	4	5
15-	İnsanlarla, duygularından çok günlük uğraşları hakkında konuşmayı yeğlerim	1	2	3	4	5
16-	Psikolojik dramalar yerine eğlendirici programlar izlemeyi yeğlerim.	1	2	3	4	5
17-	İçimdeki duyguları yakın arkadaşlarıma bile açıklamak bana zor gelir.	1	2	3	4	5
18-	Sessizlik anlarında dahi, kendimi birisine yakın hissedebilirim.	1	2	3	4	5
19-	Kişisel sorunlarımı çözerken duygularımı incelemeyi yararlı bulurum.	1	2	3	4	5
20-	Film veya oyunlarda gizli anlamlar aramak, onlardan alınacak hazzı azaltır.	1	2	3	4	5

APPENDIX G

Beck Depression Inventory

Aşağıda, kişilerin ruh durumlarını ifade ederken kullandıkları bazı cümleler verilmiştir. Her madde bir çeşit ruh durumunu anlatmaktadır. Her maddede o ruh durumunun derecesini belirleyen 4 çeşit seçenek vardır. Lütfen bu seçenekleri dikkatle okuyunuz. Son bir hafta içindeki (şu an dahil) kendi ruh durumunuzu göz önünde bulundurarak, size en uygun olan ifadeyi bulunuz. Daha sonra o maddenin yanındaki harfin üzerine (x) işaretini koyunuz.

1. a) Kendimi üzgün hissetmiyorum.
   b) Kendimi üzgün hissediyorum.
   c) Her zaman için üzgünüm ve kendimi bu duygudan kurtaramıyorum.
   d) Öylesine üzgün ve mutsuzum ki dayanamıyorum.

2. a) Gelecekten umutsuz değilim.
   b) Geleceğe biraz umutsuz bakıyorum.
   c) Gelecekten beklediğim hiç bir şey yok.
   d) Benim için bir gelecek yok ve bu durum düzelmeyecek.

3. a) Kendimi başarısız görmüyorum.
   b) Çevremdeki bir çok kişiden daha fazla başarısızlıklarım oldu sayılır.
   c) Geriye dönüp baktığımda, çok fazla başarısızlığım olduğunu görüyorum.
   d) Kendimi tümüyle başarısız bir insan olarak görüyorum.

4. a) Herşeyden eskisi kadar zevk alabiliyorum.
   b) Her şeyden eskisi kadar zevk alamıyorum.
   c) Artık hiçbir şeyden gerçek bir zevk alamıyorum.
   d) Bana zevk veren hiçbir şey yok. Her şey çok sıkıcı.

5. a) Kendimi suçlu hissetmiyorum.
   b) Arada bir kendimi suçlu hissettiğim oluyor.
   c) Kendimi çoğunlukla suçlu hissediyorum.
   d) Kendimi her an için suçlu hissediyorum.

6. a) Cezalandırıldığımı düşünmüyorum.
   b) Bazı şeyler için cezalandırılabileceğimi hissediyorum.
   c) Cezalandırılmayı bekliyorum.
   d) Cezalandırılacağımı hissediyorum.

7. a) Kendimden hoşnutum.
   b) Kendimden pek hoşnut değilim.
   c) Kendimden hiç hoşlanmıyorum.
   d) Kendimden nefret ediyorum.

8. a) Kendimi diğer insanlardan daha kötü görmüyorum.
   b) Kendimi zayıflıklarım ve hatalarım için eleştiriyorum.
   c) Kendimi hatalarım için çoğu zaman suçluyorum.
   d) Her kötü olayda kendimi suçluyorum.

9. a) Kendimi öldürmek gibi düşüncelerim yok.
   b) Bazen kendimi öldürmeyi düşünüyorum.
   c) Kendimi öldürebilmeyi isterdim.
   d) Bir fırsatını bulsam kendimi öldürürüm.

10. a) Her zamankinden fazla ağladığımı sanmıyorum.
    b) Eskisine göre şu sıralarda daha fazla ağlıyorum.
    c) Şu sıralarda her an ağlıyorum.
    d) Eskiden ağlayabilirdim ama şu sıralarda istesem de ağlayamıyorum.

11. a) Her zamankinden daha sinirli değilim
    b) Her zamankinden daha kolayca sinirlenebiliyorum ve kızıyorum.
    c) Çoğu zaman sinirliyim.
    d) Eskiden sinirlendiğim şeylere bile artık sinirlenmiyorum.

12. a) Diğer insanlara karşı ilgimi kaybetmedim.
    b) Eskisine göre insanlarla daha az ilgiliyim.
    c) Diğer insanlara karşı ilgimin çoğunu kaybettim.
    d) Diğer insanlara karşı hiç ilgim kalmadı.

13. a) Kararlarımı eskisi kadar rahat ve kolay verebiliyorum.
    b) Şu sıralarda kararlarımı vermeyi erteliyorum.
    c) Kararlarımı vermekte oldukça güçlük çekiyorum.
    d) Artık hiç karar veremiyorum.

14. a) Dış görünüşümün eskisinden daha kötü olduğunu sanmıyorum.
    b) Yaşlandığımı ve çekiciliğimi kaybettiğimi düşünüyor ve üzülüyorum.
    c) Dış görünüşümde artık değiştirilmesi mümkün olmayan olumsuz değişiklikler olduğunu düşünüyorum.
    d) Çok çirkin olduğumu düşünüyorum.

15. a) Eskisi kadar iyi çalışabiliyorum.
    b) Bir işe başlayabilmek için eskisine göre kendimi daha fazla zorlamam gerekiyor.
    c) Hangi iş olursa olsun, yapabilmek için kendimi çok zorluyorum.
    d) Hiç bir iş yapamıyorum.

16. a) Eskisi kadar rahat uyuyabiliyorum.
    b) Şu sıralarda eskisi kadar rahat uyuyamıyorum.
    c) Eskisine göre 1 veya 2 saat erken uyanıyor ve tekrar uyumakta zorluk çekiyorum.
    d) Eskisine göre çok erken uyanıyor ve tekrar uyuyamıyorum.

17. a) Eskisine kıyasla daha çabuk yorulduğumu sanmıyorum.
    b) Eskisinden daha çabuk yoruluyorum.
    c) Şu sıralarda neredeyse her şey beni yoruyor.
    d) Öyle yorgunum ki hiçbir şey yapamıyorum.

18. a) İştahım eskisinden pek farklı değil.
    b) İştahım eskisi kadar iyi değil.
    c) Şu sıralarda iştahım epey kötü.
    d) Artık hiç iştahım yok.

19. a) Son zamanlarda pek fazla kilo kaybettiğimi sanmıyorum.
    b) Son zamanlarda istemediğim halde üç kilodan fazla kaybettim
    c) Son zamanlarda istemediğim halde beş kilodan fazla kaybettim.
    d) Son zamanlarda istemediğim halde yedi kilodan fazla kaybettim.
    Daha az yemeye çalışarak kilo kaybetmeye çalışıyorum.
    Evet ☐
    Hayır ☐

20. a) Sağlığım beni pek endişelendirmiyor.
    b) Son zamanlarda ağrı, sızı, mide bozukluğu, kabızlık gibi sorunlarım var
    c) Ağrı, sızı gibi bu sıkıntıların beni epey endişelendirdiği için başka şeyleri düşünmek zor geliyor.
    d) Bu tür sıkıntılar beni öylesine endişelendiriyor ki, artık başka hiçbir şey düşünemiyorum.

21. a) Son zamanlarda cinsel yaşantımda dikkatimi çeken bir şey yok.
    b) Eskisine oranla cinsel konularla daha az ilgileniyorum.
    c) Şu sıralarda cinsellikle pek ilgili değilim.
    d) Artık cinsellikle hiç bir ilgim kalmadı.

CURRICULUM VITAE
(In Turkish)

ÖZGEÇMİŞ

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YAYINLAR

Yates, R., Edwards, K., King, J., Luzon, O., Evangeli, M., Stark, D., McFarlane, F., Heyman, I., **İnce, B.**, Kodric, J., & Murphy, T. (2016). Habit Reversal Training and Educational group treatments for children with Tourette Syndrome: a preliminary randomised controlled trial. *Behaviour Research and Therapy, 80*, 43-50. doi: 10.1016/j.brat.2016.03.003