THE EFFECTS OF MORTALITY SALIENCE AND BODY-RELATED SOCIAL NORMS ON ATTITUDES TOWARDS DIET PILLS: A TERROR MANAGEMENT HEALTH MODEL PERSPECTIVE

A THESIS SUBMITTED TO
THE GRADUATE SCHOOL OF SOCIAL SCIENCES
OF
MIDDLE EAST TECHNICAL UNIVERSITY

BY
BURÇİN CİHAN

FULFILLMENT OF THE REQUIREMENTS
FOR
THE DEGREE OF MASTER OF SCIENCE
IN THE DEPARTMENT OF
PSYCHOLOGY

JUNE 2013

Approval of the Graduate School of Social Sciences

Prof. Dr. Meliha Altunışık
Director

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master of Science

Prof. Dr. Tülin Gençöz
Head of Department

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Science

Assoc. Prof. Dr. Özlem Bozo-İrkin
Supervisor

Examining Committee Members

Prof. Dr. Bengi Öner-Özkan (METU,PSY)

Ass. Prof. Dr. Okan Cem Çırakoğlu (Başkent, PSY)

Assoc. Prof. Dr. Özlem Bozo-İrkin (METU,PSY)

I hereby declare that all the information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name, Lastname: Burçin Cihan

Signature:

ABSTRACT

THE EFFECTS OF MORTALITY SALIENCE AND BODY-RELATED SOCIAL NORMS ON ATTITUDES TOWARDS DIET PILLS: A TERROR MANAGEMENT HEALTH MODEL PERSPECTIVE

Cihan, Burçin

Department of Psychology

Supervisor: Özlem Bozo-İrkin, PHD

June 2013, 117 pages

According to the terror management health model (TMHM), when mortality concerns are unconsciously activated, health related decisions are expected to be shaped by cultural values that are internalized by individuals. Depending on the norm, this could result in health defeating or facilitating outcomes. The aim of the current research was to use TMHM as a theoretical framework to investigate reasons behind using diet pills, one of the most popular and unhealthy weight control methods. Therefore, firstly, a scale measuring attitudes towards using diet pills (SADP) was developed. Then, the main study was conducted. According to the results of the main study, after mortality salience was unconsciously primed, women, who indicated more tendecy to evaluate their physical appearence by body relavent social norms, showed more positive attitudes towards using diet pills as compared to women, who reported less tendecy to evaluate their physical body by body relavent social norms. The results provided evidence for health defeating outcomes due to the interaction between unconscious mortality awareness

and internalized cultural values. Additionally, the effects of conscious mortality awareness and perceived body-related social norms on attitudes towards using diet pills will be presented. Finally, factors associated with using diet pills will also be demonstrated in this study.

Key words: Diet pills, mortality awareness, body-related social norms, terror management health model

ÖZ

ÖLÜMLÜLÜK FARKINDALIĞI VE BEDENLE İLGİLİ SOSYAL NORMLARIN: ZAYIFLAMA HAPLARINA YÖNELİK TUTUMLAR ÜZERİNDEKİ ETKİSİ: DEHŞET YÖNETİMİ SAĞLIK MODELİ BAKIŞ AÇISI

Cihan, Burçin

Psikoloji Bölümü

Tez Yöneticisi: Özlem Bozo-İrkin, PHD

Haziran 2013, 117 sayfa

Dehşet Yönetimi Sağlık Modeline (DYSM) göre, ölümlülük farkındalığı bilinç dışı düzeyde aktive edildiğinde, sağlığa yönelik kararların kişilerin içselleştirdikleri kültürel değerlere göre şekilleneceği belirtilmiştir. Bu kültürel normun özelliğine göre, sağlığa yönelik bir kararın sağlığa zararlı ya da yararlı sonuçlar doğurabileceği öne sürülmüştür. Bu proje çalışmasının amacı DYSM'i çerçevesinde, son yıllarda kullanımı oldukça yaygın olan sağlığa zararlı kilo verme yöntemlerinden zayıflama haplarını kullanmaya yönelik motivasyonların incelenmesi olmuştur. Bu amaçla, öncelikle Zayıflama Haplarına Yönelik Tutum Ölçeği (ZHTÖ) geliştirilmiştir. Sonrasında ise, araştırma sonuçları göstermiştir ki; katılımcılardan dış görünümlerini sosyal normlara göre değerlendirme eğilimi yüksek olan katılımcıların, bu eğilimleri düşük olanlara göre bilinç dışı ölümlülük farkındalığına uğradıklarında zayıflama haplarına yönelik daha olumlu tutum

bildirmişlerdir. Bu sonuçların sağlığa zararlı davranışların bilinç dışı ölümlülük farkındalığı ve içselleştirilmiş kültürel normların birlikte etkisi ile ortaya çıktığına kanıt sayılabileceği düşünülmektedir. Bunun yanı sıra, bu çalışma kapsamında bilinç düzeyindeki ölümlülük farkındalığı ve bedene ilişkin sosyal normların zayıflama haplarına karşı olan tutumlar üzerindeki etkileri de sunulacaktır.

Anahtar kelimeler: Zayıflama hapları, ölümlülük farkındalığı, bedene ilişkin sosyal normlar, dehşet yönetimi sağlık modeli

to all women

ACKNOWLEDGEMENT

Firstly, I would like to express my respect and appreciation to the best supervisor ever Assoc. Prof. Dr. Özlem Bozo-İrkin for her guidance during the thesis process and my whole graduate years. Without her patient guidance and detailed feedbacks, this study would not have been possible. Also, I would like to thank to Bengi Öner-Özkan and Okan Cem Çırakoğlu for being in the jury and making valuable contributions.

I thank to TUBITAK for supporting me during my undergraduate and graduate education by providing scholarship. Moreover, this study was supported by TUBITAK 1002 Short-Term R&D Funding Program (111K555). So, I thank to TUBITAK for giving us project supports and to our scholars Canay Doğulu and Elif Körpe for their great efforts to accomplish project's goals.

I would like to thank my family; Şengül, Hasan, and Şehriban Cihan for their all supports and strong belief in my capacity. I also express my gratefulness to my friends from *Yaşantı Paylaşım Merkezi Gençlik Vakfı*, Seher Gürdil and to the owner of our foundation A.Belkıs Güneş who always make me feel good and valuable.

In addition, a thank to Jamie Lynn Goldenberg who is one of the researchers investigating the Terror Management Health Model (TMHM), and gave me an opportunity for being a visiting scholar in her laboratory at University of South Florida. Thus, I was able to get more insight about TMHM, and use my new knowledge in the current work.

I feel myself very lucky to have great colleagues who provide theoretical and emotional supports during my thesis process; thank you to Ali Can Gök, Ayça Özen, Canan Büyükaşık-Çolak, Fatih Cemil Kavcıoğlu, Ferhat Yarar, Gaye Zeynep Çenesiz, Gizem Ateş, İlker Dalgar, Öznur Öncül,

Pınar Yarar and Selin Salman. Finally, I also thank to all of my participants in this study.

TABLE OF CONTENTS

LIST OF TABLES

TABLES

LIST OF FIGURES

FIGURES

CHAPTER 1

INTRODUCTION

1.1. General Introduction

Definition of beautiful and attractive women has always been shaped by society's expectations; therefore, it has been changing through centuries. Nowadays, the media might be considered as the most important and dominant figure for spreading out body relevant social norms. Hence, examination of women representations in magazines, soap operas, and advertisements would make it possible to understand the social norms related to feminine beauty in current era. Such representations (Field et al., 1999) clearly point out that women have to be low in body weight and, have a slim body shape; further, women are attractive due to their thin physical appearance. Such expectations of the society have been called the "*thin ideal*". In addition, the results of empirical research revealed that body mass index (BMI) seem to be a crucial factor for physical attractiveness of women (Swami, 2008). On the other hand, women in some TV shows and magazines are thinner than the majority of female population. For instance, Wiseman, Gray, and Mosimann, (1992) argued that females in the media also met criteria of anorexia nervosa since their weights were 13-19 % below the expected weight. In other word, it is hard to have such kind of body size and shape and these kinds of representations are generally unrealistic.

Cafri, Yamamiya, Brannick and Thompson (2005) claimed that studies aimed to investigate roles of media in women body image has been dramatically increasing. According to Thompson and Heinberg (1999) there were empirical evidences coming from both correlational and experimental

studies indicating that media has a crucial role on shaping eating disorders and body image distortions. Moreover, Stice (2002), in his meta-analytical study, indicated that body image dissatisfaction is a risk factor for dieting and eating pathology. Thus, it was not surprising that women might attempt to use unhealthy and extreme weight control methods to obtain the *thin ideal* of the society (Chao et al., 2008) in order to be more satisfied with their body image. For instance, both Kruger, Galuska, Serdula, and Jones (2004) and Wharton, Adams and Hampl (2000) suggested that less satisfaction with body image is associated with using dangerous weight control methods such as eating less, skipping meals, fasting, using laxatives, diuretics or diet pills, and vomiting.

Among unhealthy weight control methods, diet pills usage may be considered as one of the most popular and controversial methods due to its unclear ingredients on the labels (Erden & Tanrıyeri, 2004). Golden Strawberry, Hatay Pepper and Apple Chrome are some examples of diet pills on the markets in Turkey. Although, according to Radimer, Subar, and Thompson (2000), people mostly do not inform their physicians about their diet pill consumption, diet pill usage was found as the second most common weight control method after prolonged fasting (Rosen et al., 1988). Hence, there are varieties of the studies in the literature to investigate people's motivations to use diet pills in terms of different aspects such as weight management (Neumark-Straziner et al., 2003), socio-environmental (Allen, Thombs, Mahoney, & Daniel, 1993), and psychological well-being (Patten, 2001). On the other hand, in recent years a new health model was developed Terror Management Health Model (TMHM), and it was investigated that trying health compromising behaviors like binge drinking (Jossep & Wade, 2008) or restricting eating behavior (Goldenberg, Arndt, Hart, & Brown, 2005) might be shaped by the interaction between internalized cultural values and existential concerns. Obtaining the thin ideal of society was considered as a defensive mechanism against feelings of terror, which resulted in unconscious mortality awareness. However, up till now there is no study to

test possible relationship between mortality concerns and attitudes towards diet pills as an unhealthy weight control strategy.

Consequently, the aim of the current study was to evaluate whether the attitudes of young adult female university students towards diet pills usage might be an outcome of the interaction between mortality concerns and socio-cultural attitudes towards their physical appearance. Hence, in the following section, firstly literature about diet pill usage will be demonstrated in terms of prevalence, health consequences, and factors related to diet pill usage. Secondly, terror management theory and its one of the basic assumptions, dual-defense model, will be presented. Then, mortality aspect of human body and its impacts on health related decisions will be demonstrated in the context of terror management health model. In the final part of the introduction chapter, aim and hypotheses of the current study will be demonstrated in detail.

1.2. Non-Prescription Diet Pills

In Turkey, diet pills have been sold without prescription, and their sales licenses have been approved by the Ministry of Agriculture, rather than the Ministry of Health (Turkish Pharmacists' Association, 2009). In recent years, these products were imported from China and India, and there was no study in Turkey in order to evaluate their trustworthiness (Giray, Erkeoğlu, & Şahin, 2009). Moreover, they have been sold either in pharmacy stores or via internet (Erkekoglu, Giray & Şahin, 2009), which made them more accessible to buy.

On the other hand, less is known about the prevalence and epidemiological characteristics of diet pills users since there was no population based study in Turkey. Existing studies generally involved people

who were in their early adolescence. For instance, Güneş and Altınok (2010) illustrated in their study that 7% of 658 high school students were using diet pills. Similarly, Özdemir (2008) conducted a study to investigate the relationship between eating habits and body satisfaction in 326 high school students, and 9% of their sample reported having used diet pills before. Unlike these results, Ayvaz's (2008) study (*N*=273), while examining the association between eating behaviors and dieting methods, revealed that none of the students reported diet pills usage. Consequently, it might be assumed that Turkish literature about using diet pills is restricted and provided inconsistent results.

International literature might be informative to gain insight in diet pills users and their characteristics. For example, in the USA, Blanck, Khan, and Serdula (2001) claimed that the prevalence of the diet pills use has been increasing. They introduced that there were nearly 17.2 million Americans who used nonprescription weight loss products (e.g., diet pills, diet supplements, and laxatives) in years between 1996 and1998. Later, Blanck and colleagues (2007) reported that "Natural" weight loss products were used by approximately 20 million Americans each year, but few patients reported to their physicians about their use (as cited in Smith & Cohen, 2010). Moreover, as in Turkey, the United States Food and Drug Administration (FDA) has found that dozens of these diet pills contained undeclared pharmaceutical agents (as cited Smithh & Cohen, 2010) that might cause severe damages on health, which were proven by many studies.

1.3. Consequences of Using Non-Prescribed Diet Pills and Legal Process

It was well documented (as seen in Haller & Benowitz, 2000) that diet pill usage had dangerous implications for both physical and psychological health. Additionally, depending on their main content each diet pill type

might lead different health consequences. However, only three active ingredients, which have side effects proven by empirical evidence, will be presented as examples in the following section.

The first main content of diet pills that was proved to have side effects is demonstrated will be "*ephedrine"*, also known as *ephedra alkaloids* and *Ma-huang*, and they are all central nervous system stimulants. Haller and Benowitz (2000) reviewed 140 reports by FDA to explain what side effects occur after consuming diet pills containing *ephedra alkaloids*. Results of the review showed that cardiovascular symptoms, acute myocardial infarct, hypertension, arrhythmia, stroke, trembles, and tremor were the physical adverse effects; while anxiety, insomnia, and personality changes were the psychological ones (Haller & Benowitz, 2000). Lastly, there was also a case report of that 32 year old aged woman in US who attempted suicide after she developed mood disorder as a result of using a diet pill containing *Ma-huang* (Trabaulsi, Wisvanattan, & Coplan, 2002). Consequently, in the USA, ephedra alkaloids were withdrawn from markets in April 2000 (Calfee & Fadale, 2006), but, there are still provisions of them in markets with a label for using with doctor advice. However, in Turkey, pills that contain ephedra alkaloids are still on markets, and they are sold as herbal products without doctor advice (http://www.kilovermek.gen.tr/diyetlerimiz_detay.asp?id_diyetlerimiz=746).

The other main content of diet pills will be presented in this study is *sibutramin*, which is another central nervous system stimulant. It was shown that it causes damages especially on the central nervous system (Müller et al., 2009 as cited in Binbay, 2010). In Turkey, two cases were reported; one experienced cardiotoxicity due to usage of pepper pills including sibutramin (Söğüt, Gökdemir, Nimetoğlu, & Solduk, 2010), and the other case developed psychosis (Binbay, 2010). Consequently, dietary products that contain sibutramin were withdrawn from the markets both abroad (Müller et al., 2009) and in Turkey (as cited in Binbay, 2010).

Last main content of diet pills to be presented in this study is phenylpropanolamine (PPA). Usage of this chemical was resulted in cerebrovascular and cardiac problems. Moreover, studies showed that there might be an increasing risk for stroke due to consumption of these pills. Therefore, diet pills including PPA were withdrawn from the market in November 2000 in USA (Blanck, Khan, & Serdula, 2001); while in Turkey they are still on the market.

As seen above, although some diet pills were not approved by some other countries, most of them are still on the market in Turkey. However, both Ministry of Health and Radio and Television Supreme Council (Radyo ve Televizyon Üst Kurulu; RTÜK) warned consumers about dangerous aspects of using diet pills. For instance, Ministry of Health cautioned both providers and celebrities, who played in diet pills commercial, to stop making advertisements and informed the public that these diet pills were not approved by the ministry ("Ünlülere Bakanlık Freni", 2012). At the same time, RTÜK prohibited some commercials in the media, because they encouraged people to use the products that may damage general health (Doğan, 2012).

1.4. Factors Associated with Using Non-Prescribed Diet Pills

Although using diet pills and other dangerous weight control methods gave rise to many negative -even deadly- health consequences as mentioned above, there have been still very high numbers of individuals engaging in these methods to lose weight (Tao, 2010). For this reason, this subject received great attention by researchers. Some studies have focused on personal factors while other studies have explored the social-environmental and psychopathological factors that give rise to try of unhealthy and risky weight control strategies.

1.4.1. Personal Factors

1.4.1.1. Gender

Great deal of the empirical studies revealed gender differences in the usage of unhealthy weight control methods including diet pills. Rosen et al. (1988) found that using diet pills is the second most common weight-control technique after prolonged fasting among native American women and girls. (41% and 33% of the total sample, respectively). Diet pill usage prevalence of girls ranged between 2.5 % and 14 % , while boys' prevalence was almost half that of the girls and ranged from 0.8 % to 7 % (Levy & Heaton, 1993; French, Story, Neumark-Sztainer, Resnick, & Blum, 1995; Neumar-Stzainer, Sztainer, Wall, Story, & Perry, 2003; Xiao, Qian, Huon, & Wang, 2001; Kruger et al., 2004; Tao, 2010). Hence, being female might be considered as a risk factor for unhealthy weight loss methods.

1.4.1.2. Multiple Methods and Dependence

Based on the results of empirical researches it was claimed that diet pill users utilize a combined or multiple usage of other unhealthy weight control methods such as diet powders or dieting at any time (Peters et al., 1997 as cited in Celio, 2006). Similarly, Reba- Harrelson et al. (2008) stated that alcohol abuse or dependence is associated with diet pill usage. In addition to this, Gritz and Crane (1991) showed that smoking and using diet pills were strongly correlated especially in female smokers. Thus, it might be assumed that using one of these health defeating methods, either dangerous weight control or using drug -tobacco, makes using diet pills a more feasible way of weight loss.

1.4.1.3. Body Size

It was stated that increasing rates of obesity in the world is another factor leading people to use diet pills or other unhealthy weight control methods. People who are obese or have risk for being obese could perceive losing weight by using diet pills as advantageous (Berg, 1999), and they could get rid of impacts' of obesity on their health and life. According to Radimer, Subar, and Thompson (2000), healthy ways of weight loss such as decreasing daily calorie intake and increasing physical activity require long term changes in life style. Thus, individuals perceived using diet pills as a perfect solution for losing weight in a shorter period of time without doing exercise or dieting.

However, it might be said that weight management could be influenced by both subjective and objective evaluations of actual body size. For instance, "fear of being obese" (Berg, 2000 as cited in Flynn, 2000) and "weight-body concern", which is composed of weight concerns, weight importance, and body dissatisfaction, (Neumark-Sztainer et al., 2003), might be considered as the interpretations of subjective evaluations of actual body size, and both of them were found to be related to diet pill usage (or other methods). On the other hand, BMI calculation according to actual body size is an objective classification, and the studies aimed to figure out the relationship between BMI and engagement in deviant weight control strategies revealed controversial results. For example, Neurmark-Sztrainer et al. (2003) found BMI as a related factor to the use of diet pills and there was a significant relationship between higher BMI and risky weight control strategies (includes diet pill usage) (Rosen et al. 1988; Blanck, Khan, & Sardula, 2001; Reba-Harrelson et al., 2008). Even so, some of the researchers claimed that there were still normal weighted and even underweighted women according to their BMI who had reported using diet pills (Blanck, Khan, & Sardula, 2001; Tao, 2010).

1.4.2. Socio - Environmental Factors

Socio environmental norms, steming from not only micro (family and peers) but also macro environment (media) of people, impact on dieting behavior and utilizing extreme weight control strategies. For instance, as explained in previous section, media has an important role in developing body relevant social norms, and it may increase the risk for engaging in extreme dieting and exercising to obtain perfect body weight presented (Field et al., 1999).

Furthermore, Dixon, Adair, and O'Connor (1996) pointed the role of parental encouragement on both using weight control methods and dieting (as cited in Neumark-Sztainer et al., 2003). Especially, body relevant social norms imposed by family members and peers are associated with engagement in unhealthy weight control strategies (including diet pills), as well (Neumark-Sztainer et al., 2003).

Findings of Allen et al. (1993) could be the most conclusive one, on which the best discriminating factor for distinguishing diet pill users from non- users was getting *social approval* from family members and significant others in life. In conclusion, regardless from its source, body relevant social norms induced by family members, peers or the media increases the risk for using diet pills or other unhealthy weight control strategies.

1.4.3. Psychopathological Factors

Both Axes I and II psychopathologies were associated with deviant weight control behaviors. For instance, Steffen et al. (2010) found that individuals who were diagnosed with eating disorders utilize diet pills as a compensatory behavior instead of vomiting or using laxatives and diuretics. Reba-Harrelson and colleges concluded from variety of the results of the

studies about diet pill abuse and eating disorder that as high as %50 percent of patients with eating disorders reported abusing diet pills. However, they also figured out some differences in patients group in terms of their diet pill usage. For instance, they indicated that the prevalence of diet pill usage was higher in restricting type of anorexia nervosa (AN) group thin other groups. Additionally, Root et al. (2010) was also emphasized these differences among eating disorder patients. They claimed that compared to the AN, bulimia nervosa (BN) and binge eating disorder (BED) groups, the anorexia–blumia nervosa (ANBN) group reported more diet pils consumptions. Additioanlly, the BN group indicated more diet pills consuption than no eating disorder, AN and BED groups. On the other hand, Hewitt, Flett and Ediger (1995) emphasized the role of different dimensions of perfectionism in development of eating disorders, and they investigated that socially oriented perfectionism was associated with a broad range of eating disorder symptoms, whereas self-oriented perfectionism was only related to anorexia symptoms. Thus, it might be assumed that the relationship between bulimia nervosa which is characterized by compensatory behaviors, and socially prescribed perfectionism may predict intentions to use diet pills.

There were also studies assessing impacts of mood disorders on diet pills usage. For example, Patten (2001) evaluated the relationship between diet pill consumption and major depressive disorder in a Canadian sample. The results revealed that there was strong relationship between usage of appetite-suppressant pills and depressive symptoms.

Trauma literature also indicated some evidence in the relationship between being a trauma victim and using diet pills. For instance, Hirft, Rahman, and Berenson (2011) stated that individuals who suffered from symptoms of post traumatic stress disorder used unhealthy dieting behaviors in order to get relief from their distress. In addition to this, Thompson, Wonderlich, Crosby, and Mitchell (2001) also conducted a community-

based study involving 9 th and 12th grade girls to extent that the relationship between sexual violence victimization and extreme weight control strategies. Their results revealed that being victim of dating violence and unwanted sexual contact were significantly associated with purging and using diet pills.

Lastly, according to Reba- Harrelson et al. (2008), the presence of anxiety disorders, alcohol abuse or dependence, and borderline personality disorder were associated with using diet pills. Apart from psychopathology, they also found that higher novelty seeking as a personality characteristic was related to usage of diet pills. Thus, it might be concluded that eating disorders, anxiety disorders, depression and some personality characteristics were associated with using diet pills or other unhealthy weight control methods.

To conclude, it might be assumed that being women, attempting other dangerous weight control methods (Peters et al., 1997 as cited in Celio et al, 2006), having higher BMI or being unsatisfied with actual body size (Neurmark-Sztrainer et al., 2003), and drug-tobacco dependence or abuse (Reba- Harrelson et al., 2008); Gritz and Crane, 1991) were the personal risk factors to use diet pills. On the other hand, family members, peers (Allen et al., 1993), and media (Field et al., 1999) had the potential to influence individuals to use diet pills in order to reach body relevant social norms. Finally, different types of psychopathological difficulties (such as eating disorders, anxiety disorders, and depressive mood disorders) might lead to consumption of diet pills. However, Reba-Harrelson et al. (2008) claimed that empirical studies for diet pill abuse are still lacking. Furthermore, to our knowledge, these results mostly came from studies using correlational or regressional designs, which indicated no causal relationship, and there was not any research in the literature aiming to investigate reasons behind diet pills usage by utilizing an experimental study in order to give causal explanations. In consequence, current study aimed to enlight the reasons behind diet pills consumption in the framework of Terror Management Theory by an experimental methodology.

1.5. Terror Management Theory

Terror management theory (TMT) was based on evolutionary, existential, and psychodynamic theories, and basically concerned with the effects of mortality awareness on human behavior (Solomon, Greenberg, & Pyszczynski, 1991). From an evolutionary perspective, lots of cognitive abilities of human beings were evolved to survival; however, existential theorists argued that these evolutionary adaptive abilities did also lead humans to become aware of their own existence and their mortality (Becker, 1973; Rank, 1936 as cited in Goldenberg & Arndt, 2008). As a matter of course, it has been claimed that awareness of mortality creates terror in human beings due to unavoidable and unexpected nature of death (Solomon, Greenberg, & Psyszynski 1991).

In order to explain how individuals cope with this terror, TMT theorist borrowed the defense mechanism ideas of Freud (1936) and Breznitz (1983) (Goldenberg & Arndt, 2008). Psychodynamic theory stated that anxiety is not always felt or experienced by individuals, who often engage in variety of behaviors that serve to decrease the effects of anxiety. These behaviors are shaped by defense mechanisms, and it has been assumed that conscious or unconscious sources of threat require different mechanisms. Hence, in the framework of TMT, *"dual defense model"* is utilized to conceptualize the management of "*terror*" that has arisen due to different directions of mortality awareness in consciousness (Pyszczynski, Greenberg, & Solomon, 1999).

1.5.1. Dual Defense Model

According to dual - defense model of TMT (Pyszczynski, Greenberg, & Solomon, 1999), people give different responses to unconscious and conscious levels of mortality concerns. Firstly, it was described that, if mortality concerns of people are at unconscious level, they show tendency to choose *distal defenses,* which provide symbolic meanings for them to feel immortal. Ernst Becker (1973) claimed that people created a world of symbolic meanings in response to their unconscious death awareness. Furthermore, the most important and basic one of these created symbolic meanings are considered as self-esteem and cultural values, which make people to feel different from other animals or species, and safe and remarkable (Pyszczynski, Greenberg, & Solomon,1999). Thus, it was proposed that unconsciously activated mortality salience reduces self-esteem. Since meaningful and permanent concept of real life might be developed by cultural values, individuals tend to internalize societal norms in order to increase or maintain their self-esteem. However, cultural values are only abstractions of meanings, so they might be considered as "distal defense mechanisms" against unconscious mortality awareness. A great deal of research supported this hypothesis of TMT, showing that when thoughts of death have been activated by the unconscious, people respond by defending their cultural worldview and endeavor to maintain their self-esteem so as to feel literally immortal (see meta-analysis of Burke, Martens, & Faucher, 2010)

On the other hand, it was indicated that when mortality concerns are at conscious level, people choose proximal defenses (Pyszczynski, Greenberg, & Solomon, 1999). The aim of these defense mechanisms is to remove threatening stimulus from their focal attention. It was argued that proximal defenses are more related to actual threat, while distal ones do not need any logical or semantic connection with actual threat. Thus, it might be

assumed that in the context of conscious death awareness, human beings could engage in an effort to decrease their perceived vulnerability (Pyszczynski, Greenberg, & Solomon, 1999).

In conclusion, different behaviors might be evoked depending on consciousness level of mortality awareness. However, it would be an important question whether there are specific stimuli or situations that possibly elicit human's mortality. Some of these situations might be exampled such as losing someone in life or witnessing an accident. On the other hand, TMT theorists claimed that physical body is also a stimulus to arise mortality awareness as a result of its creatureliness aspects (Goldenberg, Pyszczynski, Greenberg, & Solomon, 2000).

1.5.2. The Body Problem

According to Goldenberg et al. (2000) "the human body part is subject to death and decay", (p.203) and it was argued that creatureliness aspects of physical body reminds human beings their animalistic nature, which subsequently leads to mortality concerns. Therefore, physical body has been evaluated as the most imposed and inevitable mortality related stimulus for humans.

The mortality aspect of physical body has been called as "the body problem" in TMT literature (Goldenberg et al., 2000), and received great attention from scientists, who aimed to investigate existential meanings of body relevant decisions. Improving physical appearance is one of the body relevant behaviors studied by researchers, and it was suggested that occupations with body such as getting tattoo, being thin, or looking beautiful convert physical body into a symbolic meaning that works as a defense

mechanism against unconscious mortality awareness (Goldenberg et al., 2005).

Besides improving physical appearance, the effects of mortality related aspects of physical body on health promoting behaviors have also been utilized. For instance, exercising-fitness (Arndt, Schimel, & Goldenberg, 2003) and self examination for breast cancer (Arndt, Cook, Goldenberg, & Cox, 2007) are health promoting behaviors studied in the framework of TMT. Apparently, a considerable number of researchers in TMT expanded theory to health related decisions and behaviors, thus, and health model of terror management theory were developed by Goldenberg and Arndt in 2008.

1.6. Terror Management Health Model (TMHM)

Goldenberg and Arndt (2008) claimed that current health psychology literature is generally interested in investigating health-oriented decisions/behaviors, rather than self-oriented ones. They argued that, unlike health oriented ones, self-oriented decisions would not lead to healthy consequences; they even would result in health defeating outcomes. Thus, they adapted dual defense model of TMT to their health model in order to explain both health and self-oriented decisions.

According to Terror Management Health Model (TMHM), health related threats or scenarios have potential to provoke mortality concerns, and health related decisions would be moderated by consciousness level of these concerns. Based on this basic assumption, three main propositions of TMHM were suggested (Goldenberg & Arndt, 2008). The first proposition was related to conscious death thoughts; second proposition was based on unconscious death thoughts, and the last proposition was related to mortality awareness activated by female reproductive functioning (e.g., menstruation,

pregnancy) and its health related outcomes. However, the third proposition will not be provided in this literature review below since it is irrelevant to the aim of the current study.

1.6.1. First Proposition of TMHM: Conscious Death Concerns and Health Decisions

According to Goldenberg and Arndt (2008), it is perceived that better health has connection with prolonged life; therefore, people might respond to conscious death thoughts by increasing their willingness to engage in health promoting behavior. Additionally, in parallel with dual defense model of TMT, consciously activated mortality awareness might lead human beings to attend to proximal defenses that aim to remove threatening stimuli from focal attention. On the other hand, there are empirical evidences showing that it is still possible to respond conscious death concerns by threat avoidance strategies.

There are several studies supporting the idea that after conscious death related thoughts has been made salient, health promoting decisions has arisen. For instance, in the study of Arndt, Schimel, and Goldenberg (2003; Study 1) participants were asked to answer two questions that *"Please briefly describe the emotions that the thought of your own death arouses in you," and "Jot down, as specifically as you can, what you think will happen to you physically as you die and once you are physically dead"* (Asking participants to write about their own mortality is considered as the most classic and effectice way of creating conscious mortality awareness in TMT literature). Participants in the control condition answer the same questions but about dental pain. Then, participants read a paragraph about health benefits and predictions of life long expectancy of fitness. Finally, they evaluated this

paragraph and indicated their future fitness intentions. Based on the result of the study it was claimed that after primed conscious mortality awareness and reading the passage about the longevity promotion of fitness participants reported more future intentions for fitness compared to participants in the control condition. Additionally, in the study of Routledge, Arndt, and Goldenberg (2004, Study 1) participants classically primed conscious mortality or dental pain, and then they reported their intentions to buy sun-protection products. The results of the study revealed that after controlling general self-esteem and frequency of tanning, participants reacted to mortality concerns in their focal attention to higher intentions to buy high degree of sun protection products compared to dental pain condition.

Secondly, coping existential concerns by avoiding from threatening information were examined within the theoretical framework of TMHM, suppressing death thoughts (Arndt et al., 2007), escaping self-awareness (Cox et al., 2008 as cited in Goldenberg & Arndt, 2008), or denial of possible risk factors (Greenberg et al., 2000) were some forms of threat avoidance strategies. As might be expected, it was shown that these defense mechanisms resulted in health defeating outcomes. For instance, Cox et al. (2008) found that after primed conscious mortality awareness, habitual smokers reported higher levels of smoking intensity while casual smokers indicated lower levels of smoking intensity. Cox and colleges asserted that habitual smokers found escaping their self-awareness as an effective way of handling their mortality concerns (as cited in Goldenberg & Arndt, 2008).

On the other hand, a variety of moderating variables in the relationship between conscious death thoughts and health decisions were investigated such as response efficacy, coping styles, health optimism, and age (Goldenberg & Arndt, 2008). For instance, Cooper, Goldenberg, and Arndt (2010) revealed that in the context of conscious mortality awareness, participants who evaluated sun protecting as an effective way of protection indicated greater sun protection intentions than participants who perceived

sun protection as less effective. Furthermore, Arndt, Routledge, and Goldenberg (2006) conducted two studies; in the first one they found that the more the participants have active coping personality, the more health preoccupations they reported in order to cope with their death concerns in focal attention. Also, their second study's results showed that when women were more health optimistic, they indicated more willingness to breast self-examination after primed conscious mortality awareness. Finally, the results of the studies of both Ben-Ari and Findler (2005) and Bozo, Şimşek, and Tuna (2009) indicated that younger adults reported more health promoting behavior intentions in reaction to conscious death concerns compared to not only older adults but also their peers in the control condition.

In conclusion, people might engage in either health oriented or threat avoidance strategies in order to transmit their death related thoughts from focal attention to out of focus attention. Although common aim of both strategies is to reduce perceived vulnerability and thus, to get rid of threatening stimuli, especially threat avoidance strategies might cause health defeating outcomes. On the other hand, Goldenberg and Arndt (2008) suggested that threat avoidance and health oriented mechanisms could come one after another. For example, Arndt et al. (2007) found that after cognitive load which was used to diminish suppression, people tend to show more intention to breast self-examination in the context of conscious mortality awareness.

1.6.2. Second Proposition of TMHM: Unconscious Death Concerns and Health Decisions

According to second proposition of TMHM, when mortality concerns are activated unconsciously, health related decisions are expected to be shaped by either the value of self or cultural norms that are internalized by individuals. Hence, health behavior might cause either health facilitating or

defeating outcomes depending on the cultural values or sources of self-esteem (Goldenberg & Arndt, 2008). To the date variety of behavior based self-esteem and cultural values were examined in terms of their contributions to relationship between unconscious death awareness and health decisions such as tanning (Routledge, Arndt, & Goldenberg, 2004), smoking (Arndt, Vess, Cox, Goldenberg, & Lagle, 2009), binge drinking (Jessop & Wade, 2008), doing fitness (Arndt, Schimel, & Goldenberg, 2004), and restricting eating behavior (Goldenberg et al., 2005). The details of these behaviors within the framework of unconscious death concerns and health decisions are presented in the following subsections.

1.6.2.1. Tanning and Unconscious Mortality Awareness

Several studies were conducted to examine whether tanning behavior and its relevance with self-esteem or cultural values might influence health decisions in response to unconscious mortality concerns or not. For instance, Routledge, Arndt, and Goldenberg (2004; Study 1) found that participants whose self-esteem drive from tanning showed lower tendency to buy sun-screen products after primed unconscious mortality awareness. Furthermore, after primed with "attractiveness of tanned body", participants engaged in distal defenses which led to an increase in their tan intentions. However, when participants primed with "attractiveness of pale skin", they did not distally defended themselves against mortality concerns, and so did not report higher intentions to tan. Moreover, Cox, Cooper, Vess, Arndt, Goldenberg and Routledge (2009) used a questionnaire in order to provoke participants' mortality concerns, and then wanted them fill out a scale for their negative and positive affects to suppress their conscious death thoughts to unconscious level, while participants in the control condition completed a questionnaire about social speak anxiety. After the participants finished their task, they primed with either tanning attractiveness or pale skin attractiveness. The results of the study replicated Routledge's (2004) finding by showing that

after primed unconscious mortality awareness, participants who primed with attractiveness of tanned body indicated more tanning intentions. Moreover, the results showed that pale skin attractiveness led to a decrease in tanning intentions when mortality concerns were out of focus of attention.

It was also proposed that individuals whose self-esteem depends on extrinsic states rather than intrinsic ones might be more sensitive to obtain societal expectations while managing their existential concerns (Goldenberg & Arndt, 2008). For instance, first study of Arndt et al. (2009) showed that in response to unconscious mortality awareness, individuals, whose self-esteem were with greater focus on extrinsic contingencies of worth revealed more intentions to buy tanning products compared to participants whose self-esteems resources were more intrinsic. Moreover, in their Study 3, firstly, participants were wanted to think and visualize a person, who evaluates and accepts them only when they obtain rules. The aim of this task was to prime their extrinsic contingences of self-esteem, so in the control condition participants were asked to think a person who accepts the participant as s/he is. The results of the study revealed that after being primed with attractiveness of tanned skin; participants, who were reminded extrinsic values of the self, reported more tanning intentions in response to unconscious mortality concerns.

In conclusion, if having tanned skin is either a value of self-esteem or one of the social expectations, mortality concerns on out of focal attention might lead to higher willingness to be tan. Indeed, regardless of source of self-esteem whether it is based on tanned body or not, people whose self-esteem are generally derived by extrinsic sources, showed more willingness to have tanned skin in the context of unconscious mortality awareness.

1.6.2.2. Smoking and Unconscious Mortality Awareness

Researcher did also want to understand the relationship between smoking and unconscious mortality awareness. For instance, Arndt et al.

(2009, Study 2) indicated that in response to unconscious mortality awareness, individuals who smoke for extrinsic reasons like feeling part of crowd, reported an antismoking commercial that stressed negative social consequences of smoking, as more influential, and this reaction predicted their increased intentions to quit smoking.

Furthermore, Hansen, Winzeler, and Topolonski (2010) conducted a study in which half of the participants read death related warning labels of smoking -"smokers die earlier" or "smoking leads to deadly lung cancer", while the other half read non-death related warnings –smoking makes you unattractive-. In this study participants engaged in distraction/delay task to suppress their death thoughts to unconscious level. The results revealed that participants who were high on smoking self-esteem and were exposed death related warning labels indicated more smoking intensity compared to participants not only whose self-esteem less depend on smoking but also participants who read non-death related message. Martin and Kamins (2010) also supported this finding that message related to social exclusion of cigarettes resulted in more effective outcomes for increased intentions to quit smoking in near future than health risk related or neutral messages for individuals to whom smoking is more beneficial for self-esteem.

To conclude, smoking might be either a self-esteem resource or perceived it might be as an advantage in order to be more social for some people; therefore, in the context of unconscious mortality concerns these people paradoxically increased their smoking intentions, since smoking might help them to feel immortal by maintaining their self-esteem or values.

1.6.2.3. Binge Drinking and Unconscious Mortality Awareness

In the context of health comprimising behaviors and death concerns, another paradoxical result came from binge drinking study. Jessop and Wade (2008) evaluated different aspects of binge drinking self-esteem in terms of different aspects like direct implications of behavior to their self-esteem,

relevance with cultural worldview, important others' attitudes towards binge drinking, and their own attitudes towards binge drinking. After these evaluations, they asked the participants to read a passage about mortality related feature of binge drinking, then the participants engaged in some questionnaires in order to transmit this awareness to unconscious level. The results revealed that participants who reported binge drinking is beneficial for their self- esteem managed their unconsciously activated existential concerns by showing more willingness to binge drinking.

1.6.2.4. Fitness and Unconscious Mortality Awareness

Another health promoting behavior which was tested in TMHM studies was fitness. Firstly, Arndt, Schimel, and Goldenberg (2003, Study 2) found that unconscious mortality awareness resulted in more fitness intentions for participants who were higher on fitness self-esteem than participants who were lower. Furthermore, in the study of Arndt et al. (2009, Study 4) participants after being reminded of mortality wrote about someone who is prototypal for doing exercise, and at the end they evaluated how much their self-esteem depend on exercise. Based on the results, Arndt et al. (2009, Study 4) claimed that individuals whose extrinsic contingences of self-esteem is higher, managed their existential concerns by perceiving exercising as a basis of their self-esteem after they imagined someone who exercises. Thus, it was claimed that mortality concerns might change according to people's standards for self-esteem towards social expectations.

1.6.2.5. Restricting Eating Behavior and Unconscious Mortality Awareness

As provided above, there are studies to extent that relevance of mortality concerns and impacts of social influences on weight management

behaviors such as exercising. Although thin ideal of the society is the most exposed and salient social norm, there was no study to test the relationship between thin ideal and human's death concerns until Goldenberg et al., (2005) conducted one. Goldenberg and her colleagues (2005) suggested that intentions to obtain thin ideal of society is developed by existential concerns. In their first study to test this hypothesis, both women and men participants completed some personality questionnaires (includes BMI, body self-esteem, and self-objectification) and half of them primed with unconscious mortality awareness. Then, the experimenter asked them to eat nitrous snack but fattening foods as much as they wanted. The results revealed that regardless of their BMI, self-objectification values and body self-esteem scores, women restricted their eating behavior (but not men) in the context of unconscious mortality awareness. Furthermore, in their Study 2, they aimed to prime participants' perceived failure about having a thin body by using social comparison task. Thus, they wanted participants to fill out questionnaires with other participants who relatively thinner than themselves. The results showed that these participants showed less willingness to eat flattering foods when both their mortality concerns are out of current attention and they were with peers who were relatively thinner. Goldenberg et al. (2005) interpreted this finding that mortality awareness made the thin ideal of society salient and so participants who higher in BMI remind their failure to obtain this ideal. Therefore, they restricted to flattering food consumption compared to their peers who are relatively thinner. They also supported this claim with more direct evidence in their Study 3 by testing a model. After writing a task about mortality, participants were asked to indicate their own body appearance on a nine different figures, and then they reported society body expectations from the same figures. The discrepancy between how they feel their own body and society expectation were calculated, and it was assumed that the more discrepancy they indicated, the more they were considered as being failure to obtain body relevant norms of society. Based on the model testing results, unconscious mortality concerns of higher BMI participants

lead to increase their perceived failure to obtain internalized cultural body ideal, then this perceived failure influenced their decreased food consumption. To sum up, the results of the series studies of Goldenberg et al. (2005) are proved that women could strive to obtain thin ideal of society by restricting their eating behaviors while managing their existential concerns.

In conclusion, numerous studies have investigated the role of unconscious existential concerns in improving physical appearance such as tanning. Moreover, health comprimising behaviors were perceived as a solution for unconscious mortality threats like increasing smoking intensity or intentions of binge drinking. Finally, empirical evidences showed that confirming the thin ideal of the society by increasing fitness intentions and restricting eating behavior were some of the reactions to death concerns out of focus.

1.7. Aim of the Current Study

In the lights of the literature given above, in the current study within the framework of TMHM, it was basically aimed to extent that the interaction of consciousness level of mortality awareness and socio-cultural attitudes towards physical appearance would influence young adult female's attitudes towards diet pills. Hence, it was hypothesized that after reminding the participants to differences between their own body appearance and body ideal of society, proximal or distal defenses and their socio-cultural attitudes towards their own physical appearance would lead to cause either health defeating or promoting behaviors in terms of diet pill usage attitudes. Possible confounding effects of participants' BMI (see page 8), body image satisfaction (see page 8), perfectionism (see page 10), state anxiety (see page 11), earlier death anxiety levels (see page 12), and self-esteem (see page 13) will be controlled in the current study.

The hypotheses of the current study:

Firstly, as seen in Figure 1, according to first proposition of TMHM, conscious awareness of mortality lead to proximal defense mechanisms that aimed to transmit focal death concerns to out of focus so as to get rid of death threat. There are two hypotheses about consciously activated death thoughts and attitudes towards diet pills such as health facilitating or defeating consequences.

1. Using diet pills have lots of dangerous implications on health; therefore, young adult females would want to remove current death thoughts from focal attention by reporting less willingness to use diet pills.
2. If young adult females suppress their death thoughts or deny possible risk factors, which are caused by using diet pills, they would show more positive attitudes towards diet pills in the context of conscious death thought activation; therefore, these threat avoidance tactics will cause health defeating outcomes.

Within the framework of second proposition of TMHM, participants will distally defend themselves against non-conscious death thoughts by confirming their cultural values so as to feel immortal. Thus, it was hypothesized that:

3. The more socio-cultural influences on their physical appearance young adult females report, the more positive attitudes towards diet pills would be indicated in response to non-conscious death concerns. Although, using diet pills help them to obtain thin ideal of society that functions as a women meaningful concept of life, the interaction of unconscious mortality awareness and internalized cultural values would cause health defeating outcomes due to unhealthy aspects of using diet pills.
4. If young adult females consider society expectations less while evaluating their physical appearances, they would report less willingness to use diet pills. Thus, health promoting outcomes

would result in a relationship between unconscious mortality concerns and perceived society expectations for physical appearance.

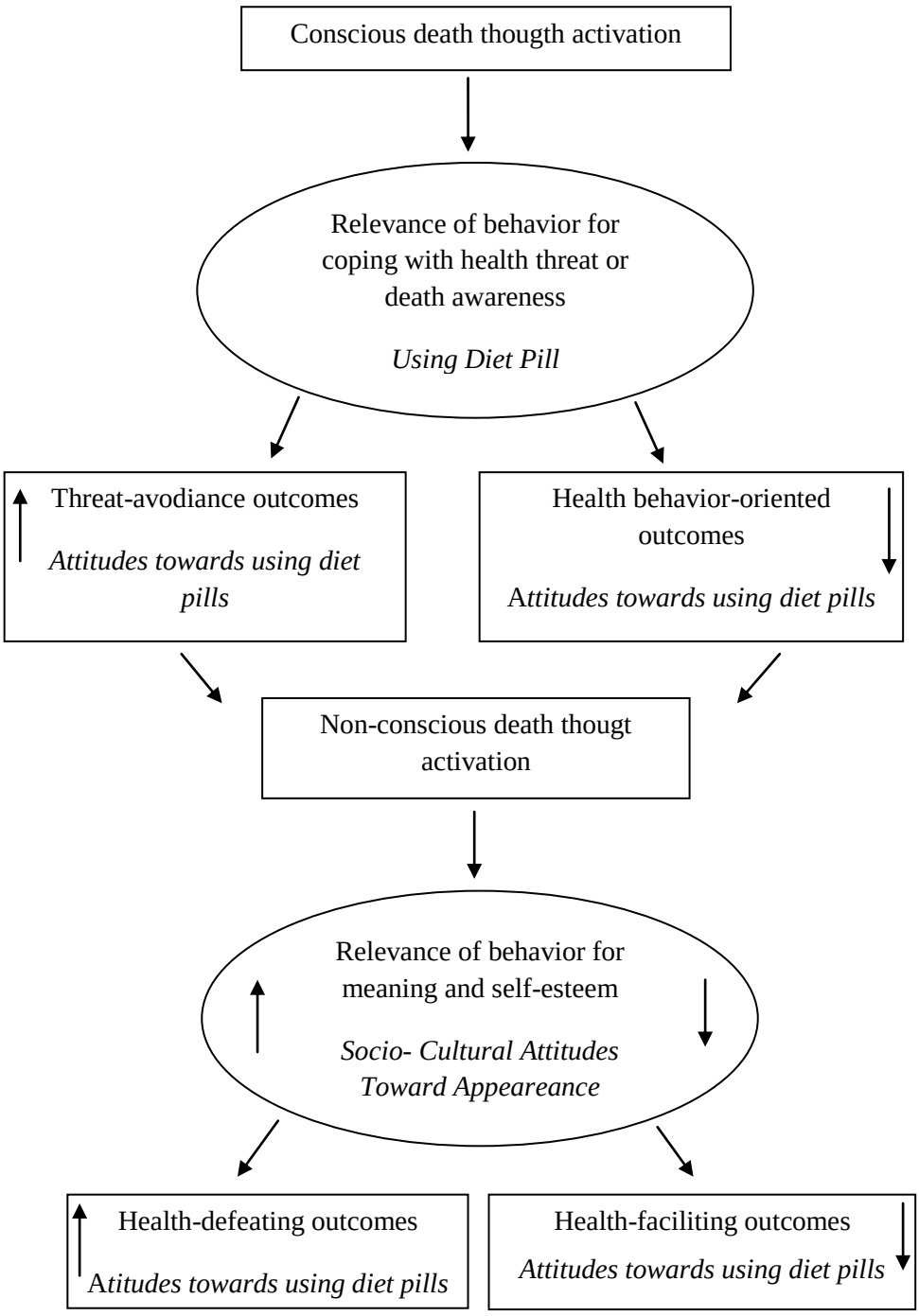


Figure 1. A terror management health model for behavioral health promotion and basic hypotheses of the current study (Adapted from Goldenberg & Arndt, 2008)

CHAPTER 2

In the context of Chapter 2, three studies involving methods and results sections will be presented. The first study was conducted to develop a measurement in order to assess young adult females' attitudes towards using diet pill, so that the outcome variable of the main study can be measured. The second study was a pilot study that aimed to collect data regarding the first independent and several control variables two weeks before conducting the main study. And, finally, the third study was the main one that was done to test the main hypotheses of the present study with an experimental design.

STUDY 1

Since there was no scale in either literatures of psychology/psychiatry or nutrition/dietetics, it was required to develop a valid and reliable psychometric measurement for evaluating young adult females' attitudes towards using diet pills in order to measure the outcome variable of the main study. [1]

[1] In the framework of the study 1, an article was published in Türk Psikoloji Yazıları (Cihan & Bozo, 2012).

2.1. Method

2.1.1. Participants

The Study 1 included 208 female participants, whose age mean was 23.75 (*SD* = 4.34). The education levels of the participants were distributed as follows: 12 high school (5.8 %), 137 undergraduate (65.9 %), 36 master (17.3 %), and 23 doctoral degree (11.1 %). Socio-economic statuses of the participants were evaluated by their monthly income: 79 of them reported their monthly income within 0 and 1999 Turkish Liras (TL) range (38 %); 86 of them within 2000-3999 TL range (41.3 %), and 43 of them reported their monthly income as 4000 TL and above (20 %) (see Table 1 for demographics of participants).

Table 1
Demographic Characteristics of the Participants of Study 1(N = 208)

Characteristics	*M*	*SD*	*N*	%
Age	23.75	4.34		
Education Level				
High School Degree			12	5.8
Undergraduate Degree			137	65.9
Master Degree			36	17.3
Doctoral Degree			23	11.1
Total Income				
0-1999 TL			79	38
2000 TL-3999 TL			86	41.3
4000 TL-above			43	20

Participants were asked to report their body weight and height values in order for us to calculate their body mass indices (BMI) [by dividing weight

(kg) to square of height (m)]. BMI of participants were classified according to criteria presented in Table 2. Participants did also indicate their weight perceptions by answering the question "How do you evaluate/perceive your weight?" Distribution of participants' perceived weights were presented in Table 3.

Table 2

Criteria for BMI Classification

BMI	Class
18.5 kg/m^2'below	Under-weight
18.5-24.9 kg/m^2	Normal-weight
25-29.9 kg/m^2	Over-weight
30-34.9 kg/m^2	Obese
35-39.9 kg/m^2	Extreme Obese

Note. Retrieved from http://www.saglık.tr.net

Table 3

BMI and Weight Perceptions Distributions of Participants of the Study 1

	Actual BMI		Perceived Weight	
	N	*%*	*N*	*%*
Under-weight	26	12.5	16	7.7
Normal-weight	151	72.6	99	47.6
Over-weight	24	11.5	67	32.2
Obese	7	3.4	24	11.5
Extreme Obese	0	0	2	1

Participants' history of deviant weight strategies was also investigated: 106 of participants (51 %) reported that they never used these

kinds of weight control methods in their life, while 102 of them reported engagement in such methods at least once in their life (49 %). However, as seen in Table 4, the number of the people who engaged deviant weight control strategies were diverse: the frequency of dieting without doctor advice were 88 (42.3 %), eating less were 79 (38 %), skipping meals were 66 (31.7 %), using diet pills were 24 (8.6 %), drinking energy beverages were 14 (6.7 %), smoking more were 12 (5.8 %), prolonged fasting were 8 (3.8 %), using laxatives were 5 (2.4 %), vomiting were 3 (1.14 %), and using diuretics were 2 (1 %) (see Table 4).

Table 4
Frequency of Deviant Weight Control Strategies

	N	*%*
Dieting without doctor advice	88	42.3
Eating less	79	38
Skipping meals	66	31.7
Using diet pills	24	8.6
Drinking energy beverages	14	6.7
Smoking more	12	5.8
Prolonged fasting	5	3.8
Using laxatives	5	2.4
Vomiting	3	1.14
Using diuretics	2	1

2.1.2. Measures

The questionnaire packet of the Study 1 involved demographic information form, Screening Form for Dieting and Weight Control Methods (Neumark-Sztainer et al., 2003), Body Image Scale (BIS) (Secord & Jourard, 1953), and Scale of Attitudes towards Diet Pills (SADP).

2.1.2.1. Demographic Information Form

Participants' gender, age, education level, socio economic status (total monthly income), weight-height values, and weight perceptions were gathered via demographic form (see Appendix B).

2.1.2.2. Screening From for Dieting and Weight Control Methods

Screening form (see Appendix B), which was earlier used by Neumark-Sztainer et al. (2003), was utilized to find out participants' unhealthy weight control strategies (i.e., prolonged fasting, eating less, vomiting, using laxative or diuretic, drinking energy beverages, skipping meals, smoking more, and using diet pills). Additionally, "dieting without doctor advice" was also asked to participants in the current study.

2.1.2.3. Body Image Scale

Originally, Body Image Scale (see Appendix C) was developed by Secord and Jourard (1953) to assess levels of individuals' satisfaction with their body functions (e.g., sexual ability) and body parts (e.g, eyes, arms). The scale consisted of 40 items measured on a 5-point Likert type scale (*like much-never like*), and the higher scores on this scale indicated lower levels

of body image satisfaction. It was adapted to Turkish language by Hovardaoğlu (1993), and in the present study its' internal consistency reliability as measured by Cronbach's alpha was .91. The scale was used to evaluate divergent validity of the scale of attitudes towards diet pills (SADP). All items of the scale were reversely coded so that higher scores on the scale meant higher levels of body image satisfaction.

2.1.3. Procedure

In order to develop Likert type attitude scale, firstly, a group of men and women were asked to write a paragraph about their ideas, feelings and knowledge about diet pills. Moreover, internet forums, newspapers, and news about diet pills were also reviewed by the researchers. These statements coming from both resources were analyzed in terms of their common content, and scale items were prepared. Items in the first version of the scale were evaluated by 3 social, 2 clinical, and 1 health psychologists according to its suitability for Turkish grammar rules, semantic, and general structure. Final version of the scale consisted of 49 items with 11 reverse items measured on a 5-point Likert type (*never agree-totally agree*) scale. Thus, higher scores on the scale indicated positive attitudes towards diet pills. Lastly, after getting ethical approval from Middle East Technical University (METU), the scale was administered to participants with other measurements of the Study 1 via internet (see informed contents; Appendix A). It took nearly 30 minutes to complete all off the questionnaires.

2.1.4. Data Analysis

Statistical Package for Social Sciences (SPSS) (Green, Salkind, & Akey, 1997) was used to analyze data. Factor structure of SADP was determined by principal components factor analysis. Internal consistency of

the scale was calculated with Cronbach's alpha value, further, divergent validity was investigated by Pearson product correlation. Additionally, one step simple regression analyses were conducted to examine predictive roles of participants' demographics on diet pill attitudes. Finally, the criterion related validity of the scale was tested by independent sample t-test in order to see the mean difference between participants who engaged in deviant weight control methods at least once in their life and those who never engaged.

2.2. Results

2.2.1. The Effects of Demographic Characteristics of Participants on SADP Scores

To examine the predictive roles of socio-economic status, education level, weight perceptions, and BMI on participants attitudes towards diet pills multiple regression analysis was performed. The results revealed that participants' total income (β = .02, $t(203)$ = 0.30, p = .77), educational level (β = -.09, $t(203)$ = -1.33, p =.19), objective BMI values (β = .11, $t(203)$ = 0.99, p < .321), and perceived weights (β = .10, $t(203)$ = 0.10, p < .371) did not significantly predict their SADP scores. They explained a significant proportion of the variance in SADP scores (R^2 = .05, $F(4,203)$ = 2.43, p < .05).

2.2.2. Psychometric Properties of SADP

First of all, 31 of 49 SADP (see Appendix D) items were excluded from the scale due to being unclear and not being loaded under any factors. The results of principal component factor analysis revealed that SADP had three factors; therefore, reliability analyses were conducted not only for the

whole scale but also for each factor. Table 5 included the results for items' loadings, eingvalues, and explained variance.

The first factor of the scale was consisted of 8 items and named as "*weight management*". The cut off point for the first factor was found as 8.33, and it explained 46.28 % of total variance. The second factor, namely *"subjective norms"* had 6 items with a cut of point 1.25, and it explained 6.94 % of the variance. The final factor of the SADP was called as *"being trustworthy"* and composed with 4 items. Its' cut off point was .95 and it explained 5.27 % of the variance. Therefore, based on these results SADP was considered to have *construct validity*.

Cronbach's alpha internal consistency value of the SADP was found as .93. Moreover, each factor of SADP had sufficient Cronbach alpha values (i.e., weight management .89, subjective norms .83; being trustworthy .79).

Divergent validity of the SADP was determined through its' correlational relationship with body image scale (BIS). Pearson correlation analysis revealed that there was statistically significant negative association between SADP and BIS (r = - .16, p < .05). That is, when young adult females' body satisfaction increased, their positive attitudes towards diet pills decreased. This result clearly indicated that SADP had *divergent validity*. The correlational relationship among each factor of the SADP and BIS were also examined. It was found that there were statistically significant negative relationship between both weight management and subjective (marginally significant) norms factors of SADP and BIS, while the relationship was in the same direction but non-significant for being trustworthy factor ($r_{\text{weight management}}$ = -. 16, p < 0.05, $r_{\text{subjective norms}}$ = -.13, p = .057, and $r_{\text{being trustworthy}}$ = -.096, p = .17) (see Table 5). To sum up, as young adult females' body image satisfaction decreased, they reported more positive attitudes towards diet pills as a weight management strategy and as a fulfillment of subjective norms.

Table 5
Psychometric Properties of SADP

Item	Item-total *r*	α if item deleted	WM	SN	BT
4.Egzersiz yaparak kilo vermeye vaktim yoksa kilo vermek için diyet hapı kullanabilirim	.73	.92	**.79**	.17	.30
2.Daha güzel görünmemi sağlayacaksa diyet hapı kullanarak zayıflamakta tereddüt etmem	.68	.92	**.76**	.23	.19
15.Yaşım ilerledikçe kilo vermemin zorlaşacağını düşünmek, diyet hapı kullanmaya olan mehilimi arttırır	.70	.92	**.71**	.22	.30
18.Diyet hapları diğer kilo verme yöntemlerinden daha ulaşılabilir olduğu için kullanabilirim	.77	.92	**.69**	.43	.23
8.Diyet hapları, kısa sürede hızlı kilo vermek için ideal bir yöntemdir	.70	.92	**.58**	.30	.37
3.Eğer kilosundan çok şikâyetçi olan bir arkadaşım varsa diyet hapı kullanmasını önerebilirim	.60	.93	**.55**	.32	.20
13.*****Kilolarım sağlığımı bozmaya başlasa da diyet hapı kullanmam	.58	.93	**.50**	.17	.40
10.Diyet hapı kişinin kilosunu kendi kendine kontrol edebilmesini sağlar	.66	.92	**.48**	.37	.37
11.Ünlü insanlar diyet hapı kullanıyorlarsa bir bildikleri vardır	.58	.93	.29	**.77**	.05
17.Diyet hapları bitkisel ürünlerden yapıldığından kullanmak için doktora danışmaya gerek yoktur	.73	.92	.39	**.72**	.24
14.Bence diyet haplarını kullanmak için doktor önerisi gerekli değildir	.49	.93	.04	**.70**	.26
12.Doktora/diyetisyene gidecek kadar param olmazsa bunların yerine diyet hapı kullanmayı tercih edebilirim	.69	.92	.51	**.64**	.09
16.İnternette yapılan reklamlar diyet haplarına güvenimi arttırır	.56	.93	.21	**.63**	.24
1.*****Diyet haplarının doktor kontrolü olmadan kullanılmasının sağlığa zararlı olduğunu düşünüyorum	.51	.93	.28	**.45**	.25
9.*****İçeriğini ve nasıl yapıldığını bilsem de diyet haplarına güvenmem	.57	.93	.22	.19	**.73**
7.*****Diyet hapı kullanmış olan arkadaşlarımın/yakınlarımın sağlıkları için endişelenirim	.65	.93	.24	.30	**.72**
6.*****Diyet haplarının insanların paralarını ele geçirmek için üretilmiş bir tuzak olduğunu düşünüyorum	.56	.93	.25	.16	**.70**
5.*****Ailemden birisi diyet hapı kullanmak isterse ona engel olurum	.57	.93	.41	.14	**.54**
Eingvalue			8.33	1.25	.95
Explained Variance (%)			46.28	6.94	5.27
Cronbach Alpha Value (α)			.89	.83	.76
BIS (*r*)			-.16*	-.13***	-.09
SADP (*r*)			.95**	.86**	.83**

Note 1. *reverse coded items

Note 2. * $p < 0.05$; ** ; $p < 0.01$; *** $p = 0.057$

Note 3. BIS: Body Image Scale, SADP: Scale of Attitudes towards Diet Pills, WM: Weight Management, SN: Subjective Norms, BT: Being Trustworthy

Finally, in order to demonstrate criterion related validity of the SADP, independent sample t-test analysis was conducted to test whether there were any diet pill attitude differences between participants according to their pre-existing engagements in risky weight control strategies. The results revealed that the participants who used deviant weight control strategies at least once in their life (m = 36.73, sd = 12.36) indicated significantly higher levels of positive attitudes towards diet pills than the participants who did not (m = 29.84, sd = 9.57) ($t(206) = 4.48$, $p < .001$). Therefore, it might be affirmed that SADP have the potential to differentiate young adult females who engaged in risky health behaviors at once from who never did.

To conclude, the goal of the Study 1 was to develop a scale to assess young adult females' attitudes towards diet pills. After items of the scale were constituted, the scale administered to participants, and the analyses revealed that SADP is a reliable and valid that can be used in the main study.

CHAPTER 3

STUDY 2

In present study, matched sampling method was utilized in order to make the number of the participants in each experimental conditions of the main study, according to their scores on the Socio-cultural Attitudes towards Appearance Questionnaire (SATAQ-3) (see Appendix D). Therefore, the first aim of the Study 2 was to collect young adult females' SATAQ-3 scores. Secondly, it was also planned to assess several control variables such as earlier death anxiety level, perfectionism, and body image satisfaction, two weeks before running experimental sessions.

3.1. Method

3.1.1. Participants

One hundred seventy nine young adult females with a mean age of 20.85 (*SD* = 2.15) from different departments of Middle East Technical University, who were not the same participants in the Study 1, were recruited in Study 2. While most of the participants were undergraduate students (*n* = 172, 96 %), only 7 of them were undergraduate students (4 %). Socio-economic level of the participants were evaluated by their monthly income: 63 of them reported their monthly income as within 0 and 1999 Turkish Liras (TL) range (35.1 %); 87 of them within 2000-3999 TL range (48.6 %), and 29 of them reported their monthly income as 4000-5999 TL range monthly income (20 %) (see Table 6 for demographics of participants).

Table 6

Demographic Characteristic of the Participants of Study 2

	M	*SD*	*N*	*%*
Age	*20.85*	*2.15*		
Education Level				
Undergraduate Level			172	96
Master Level			7	4
Monthly Income				
0-1999 TL			63	35.1
2000 TL- 3999 TL			87	48.6
4000 TL- 5999 TL			29	16.2

3.1.2. Measurements

Demographic information form, Body Image Scale (Secord and Jourard (1953), Socio-Cultural Attitudes towards Appearance, Multidimensional Perfectionism Scale (Hewit & Flett, 1991) and Thorson-Powell's Death Anxiety Scale (Thorson & Powell, 1994) were the measurements used in the Study 2.

3.1.2.1. Demographic Information Form

The form involved questions about participants' gender, age, education level, and socio economic status (total monthly income).

3.1.2.2. The Socio-Cultural Attitudes towards Physical Appearance Questionnaire (SATAQ-3)

The scale was developed to assess individuals' perceptions of socio-cultural attitudes towards their own appearance (Thompson et al., 2004) (see Appendix E). The SATAQ-3 is widely used in studies involving body image satisfaction to assess how much individuals evaluate their physical appearance according to socio-cultural norms. Turkish adaptation study of the SATAQ-3, which involve 25 items measured on a 5-point Likert type scale, was conducted by Kalafat, Özbaşı, and Dilek (2008), and they reported its' Cronbach's alpha as .93. Although, the scale included 4 factors namely, pressure, information, general internalization, and internalization of athletes, in the current study the total score of the scale was used. Hence, higher scores on SATAQ-3 was considered as more dependency on socio-cultural norms while evaluating own body appearance (Cronbach's alpha for the current sample was .92).

3.1.2.3. Multidimensional Perfectionism Scale (MPS)

The scale was originally developed by Hewit and Flett in 1991 (see Appendix F). It involved 45 questions and 3 dimensions of perfectionism, oneself-oriented, others-oriented, and socially prescribed perfectionism. The Turkish adaptation study was carried out by Oral in 1999 (α = .92 for whole scale), and the Cronbach's alpha values of the dimensions ranged between .73 and .91 (Oral, 1999). Participants respond items of MPS on a 7 point Likert type scale (*totally agree-totally disagree*); however, only oneself (1, 6, 8, 12, 14, 15, 17, 20, 23, 28, 32, 34, 36, 40, 42 items) and socially prescribed perfectionism (5, 9, 11, 13, 18, 21, 25, 30, 31, 33, 35, 37, 39, 41, and 44 items) factors were utilized in the current study (Cronbach's alpha values for this study,.92 and .80, respectively). All items of this scale were reversely coded; thus, getting higher scores on self-oriented perfectionism

subscale meant that there are perceived pressure from oneself to be perfect. On the other hand, if person indicated higher scores on socially prescribed perfectionism, it meant that he/she fells pressure from society (i.e., family or friends) to be perfect. In other words, for self-oriented perfectionism (SOP) the expectations of being perfect are sourced by oneself, whereas being perfect is shaped by society expectations in socially prescribed perfectionism (SPP). Thus, in the current study two subscales were examined in terms of their confounding effects on positive attitudes towards diet pills.

3.1.2.4. Body Image Scale (BIS)

This scale was the same scale in the Study 1, used for controlling possible confounding effects of body image satisfaction of participants (see Appendix C). (Cronbach's alpha for the present sample = .91).

3.1.2.5. Thorson-Powell's Death Anxiety Scale (DAS)

In order to assess participants' baseline death anxiety level two weeks before experimental session Death Anxiety Scale (see Appendix G), which developed by Thorson and Powell (1994), was administered. The scale included 25 items about either life after death or different situations related to death (i.e., getting surgery, diagnosing with cancer, forms of the body after death). The scale was adapted to Turkish language by Yıldız and Karaca (2001), and its Cronbach alpha value was found as .84. Higher scores on this scale corresponded to higher death anxiety. In the present sample the Cronbach Alpha value was .90. Participants stated their death anxiety on 5 degree Likert type items (*totally agree-totally disagree*). All items of this scale were reversely coded in the current study, so that higher scores on this scale could mean higher levels of death anxiety.

3.1.3. Procedure

The sample of the study was consisted of the students who were taking psychology courses at METU. Firstly, the researcher introduced herself, and then asked them to voluntarily participate a study which would be composed of two parts; firstly filling out several scales on the internet and secondly joining the experimental sessions which were held two weeks after scale administration. They were also told that extra course credit would be given them for their participation. Appointments for experimental sessions were given, after participants had voluntarily accepted to participate in both part of the study (see Appendix A). For their confidentiality, each participant was wanted to pick a nickname which was used for calling them to experimental sessions. The questionnaire package of the Study 2 took almost 40 minutes to complete via Surveymonkey website.

3.1.4. Data Analysis

Median and standard deviations of the participants' scores on SATAQ-3 were calculated by descriptive analyses via using SPSS (Green, Salkind, & Akey, 1997).

3.2. Results

To obtain matched sampling method, participants were divided into three groups according to their scores on SATAQ-3. Table 7 and 8 present final descriptive characteristics of the sample of Study 2: As seen in Table 8, 53 participants were in the SATAQ-Low group which corresponded to half standard deviation (16.75/2 = 8.36) above the median score of the SATAQ-3 (66) (higher from 74.36). In addition to this, 60 participants were in SATAQ-

High group as half standard deviation below the mean score of the SATAQ-3 (lower from 57.64). Lastly, remaining 60 participants' scores fell into moderate SATAQ-3 group (between 57.65 and 74.35).

Table 7

Descriptive Scores of Socio-Cultural Attitudes towards Appearance

	Median	*SD*	*N*
Socio-Cultural Attitudes towards Appearance	66	16.75	179

Table 8

Distributions of Participants according to Socio-Cultural Attitudes towards Appearance Scores

	N	*%*
Low	53	30
Moderate	66	37
High	60	34

Findings related to control variables (i.e., body image satisfaction, perfectionism, and death anxiety levels) will be provided in the result section of the Study 3 due to the fact that they were used in testing main hypothesis of the current study.

CHAPTER 4

STUDY 3

The aim of the Study 3 was to test whether positive attitudes towards diet pills would be an outcome of the interaction between mortality awareness and socio-cultural attitudes towards appearance, after priming differences between perceived own body type and society ideal.

4.1. Method

4.1.1. Participants

The same participants in the Study 2 participated to the Study 3. Although 179 participants were given appointment for the experimental part, some of them could not attend due to several reasons. For instance, one student stated that she felt bad while filling out death anxiety scale in Study 2; hence she was excluded from the study since there was a possibility for assigning her to one of the mortality awareness conditions in the experimental sessions. Moreover, 8 of the participants did not attend their appointments without any excuse. Thus, 170 young adult female undergraduate students constituted the sample of the main study.

Before running the main analysis, when multivariate outlier analyses were performed, Mahalonobis distances for both SADP and SATAQ-3 scores of 4 participants (between 5.01-5.45) were not higher than chi-square value [(χ^2 *(SD* = 2, *N* = 170) = 5.99, $p < .05$], but, they were very close this value. Thus, scores of these participants were judged as multivariate outliers in both scales. Hence, data obtained from them were deleted from data of the Study 3.

Consequently, the sample of the study 3 involved 166 young adult females (m_{age} = 20.70, *SD*= 1.9). 163 of the participants (98 %) indicated their education level as undergraduate, whereas 3 of them as master's level (2 %). Furthermore, they generally reported their monthly income as moderate level (*n* = 81, 48.8), 61 of them stated lower levels of SES (36.7 %) and 24 ones reported high SES (14.4 %) (see demographics and BMI of participants of Study 3 in Table 9). According to their BMI, most of the participants were normal weight (*n* = 122, 73.49 %), 15.1 % of them were underweight (*n* = 25), and 19 of them were overweight (11.4 %) (see Table 9 for demographic characteristics and BMI of sample).

Table 9

Demographic Characteristics and BMIs of Participants of Study 3(N = 166)

	N	*%*
Education Level		
Undergraduate Level	163	98
Master Level	3	2
Monthly Income		
0-1999 TL	61	36.7
2000 - 3999 TL	81	48.8
4000 - 5999 TL	24	14.4
BMI		
Under weight	25	15.1
Normal weight	122	73.49
Over weight	19	11.4

Note. BMI: Body Mass Index

4.1.2. Measurements

Respondents were presented with a booklet including several scales that are Pictorial Body Image Scale (Thompson & Gray, 1995), State Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970), Rosenberg Self Esteem Questionnaire (Rosenberg, 1963), and Scale of Attitudes towards Diet Pills (Cihan & Bozo, 2012). Depending on the experimental condition that the participants were assigned, they were either asked two open ended questions to prime mortality awareness (with or without puzzle delay task) or they listened to Mozart Concerto. All responses were collected by self-report questionnaires, whereas weight and height values were assessed by the experimenter with a weight machine and a ruler in the laboratory.

4.1.2.1. Pictorial Body Image Scale (PBIS)

This scale developed by Thompson and Gray (1995) (see Appendix H) and consisted of 9 men and women body pictures. However, in this study only women figures were used. There were two aims for using this scale. First, it was used in order to check convergent validity of SATAQ-3. Second, it was considered that PBIS might be employed to prime body relevant society ideals in the beginning of the experiment due to the fact that participants' scores on SATAQ-3 were collected two weeks before the experimental part in order to use matched sampling method.

In this scale, each of the 9 body figures has a number with the skinniest one is labeled with 1 and the most overweight one is labeled with 9. Moreover, the scale includes two questions: With the first one, participants were asked to evaluate which picture resembles their body type. With the second question, they were asked to pick the body type that presents the society ideal for women body. The differences between participants' own body perceptions and society ideal were calculated by the researcher by subtracting the score of perceived body perception from the score of reported

society ideal. Thus, higher scores on PBIS demonstrated greater discrepancy between actual body size and society ideal.

4.1.2.2. State Anxiety Inventory (SAI)

State-Trait Anxiety Inventory was developed by Spielberger, Gorsuch, and Lushene (1970) for evaluating situational or dispositional anxieties of individuals with 40 items measured on a 4 point Likert type questionnaire (see Appendix I). Öner and Le Compte (1985) reported Cronbach's alpha values of Turkish version were ranging between .83 and .87. Nonetheless, in the current study only state anxiety levels' of the participants were taken into account so as to control its' possible effects on attitudes towards diet pills. Higher scores on this scale meant increased level of anxiety at that moment.

4.1.2.3. Rosenberg Self-Esteem Questionnaire (RSEQ)

Morris Rosenberg developed this scale in 1963, and it was adapted to Turkish by Çuhadaroğlu (1986) (see Appendix J). The Cronbach's alpha value of the adapted version of the scale was .92, and half-split reliability was .72. The scale involves 63 items and 11 subscales measured on a 4 point Likert type scale (*so much true-so much false*). However, in the current study only self-esteem subscale consisting of 10 items was used as a control variable, and higher scores on this subscale were associated with higher levels of self-esteem.

4.1.2.4. Mortality Salience Manipulation

Within the framework of terror management theory, participants were asked to answer two open ended questions as the most common method of priming mortality concerns. These questions were (as in Greenberg et al., 1994)*:*

1) "Please briefly describe the emotions that the thought of your own death arouses in you"

2) " Jot down, as specifically as you can, what you think will happen to you physically as you die and once you are physically dead".

4.1.2.5. Scale of Attitudes towards Diet Pills (SADP)

The scale was created in the Study 1 of the current study, and not only total scores but also scores gathered on each factors (weight management, subjective norms, and being trustworthy) were utilized in the Study 3 (see Appendix D).

4.1.3. Instruments

4.1.3.1. Arzum Sottile Digital Weighing Machine and Wall Ruler

To measure participants' weight and height with standard measurement, a weighing machine and a Wall Ruler were used.

4.1.3.2. Anatolian Puzzle 260 (33X48) The Puzzle World

The puzzle involving 260 pieces was utilized as a delay task in order to transmit conscious mortality concerns of participants to unconscious level.

4.1.4. Procedure

Participants joined to study as three people in each experimental session at the laboratory of Psychology Department of METU, which has three separate rooms with same equipments. After participants were welcomed by the experimenter who was blind to experimental conditions, they took their questionnaire packets in closed envelopes. At the end of the experiment they handed their answers in the same closed envelope to the experimenter; their weight and height were assessed by the experimenter before they left the laboratory.

PBIS, RSEQ, and SAI were administered to participants prior to experimental manipulation; however, the experimental task was varied depending on the condition which will be presented in detail below.

4.1.4.1. First Experimental Condition: Unconscious Mortality Awareness

In this condition, firstly participants answered two open ended questions about their own death concerns, and then they solved a puzzle for 7 minutes. When their time was up, the stopwatch program on the computer warned them to stop. Finally, they stated their attitudes towards diet pills, which was the dependent variable.

4.1.4.2. Second Experimental Condition: Conscious Mortality Awareness

Participants in this condition completed the same questionnaires in the first condition; however, they reported their diet pills attitudes immediately after they had finished the writing task for mortality salience. Thus, they provided their scores on dependent variable without engaging in a delay task, i.e., solving the puzzle.

4.1.4.3. Third Experimental Condition: Control Group

In this condition, participants were not expected to write down their mortality concerns. However, they listened to 21th concerto of the Mozart approximately during seven minutes, and then their attitudes towards diet pills were assessed.

4.1.5. Data Analysis

Statistical analyses were performed via using SPSS (Green, Salkind, & Akey, 1997). Firstly, psychometric properties of the whole measures used in the Study 3 were examined by their Cronbach's alpha value; in addition to several descriptive results such as mean, standard deviation, and maximum-minimum scores.

Secondly, in order to test the effect of SES of participants on their attitudes towards diet pills, one way ANOVA was conducted; and to test the predictive roles of age and BMI a multiple regression regressed on the participants' attitudes towards diet pills was run.

Thirdly, the associations among all the scales were analyzed by Pearson correlation; and the, predictive roles of all scales on positive attitudes towards diet pills were investigated by multiple regression analyses in order

to see if the effect of any of variables need to be controlled in the main analyses.

Fourthly, prior to the main analyses, participants' scores on the SATAQ-3 were transformed into a categorical variable by using "median split". Thus, mean differences between SATAQ-3 groups were tested by independent samples t-test. Furthermore, chi-square analysis was performed to test whether the numbers of the participants in SATAQ-3 groups are balanced among mortality awareness conditions.

Finally, after controlling the effects of the body image satisfaction levels of participants, 3 (unconscious mortality salience, conscious mortality salience, and control group) X 2 (SATAQ-Low, High) two way ANCOVA was conducted to test the main hypotheses of the current study. Moreover, again with controlling the influences of body image satisfaction, the effects of the interaction between different consciousness levels of mortality concerns and SATAQ-3 on each factor of SADP was examined by 3 X 2 MANCOVA.

4.2. Results

4.2.1. Psychometric Properties of the Measures

As seen in Table 8; the total Cronbach alpha internal consistency values of SADP, weigh management factor, subjective norms, and being trustworthy factors were .92, .89, .78, and .72, respectively. The total Cronbach Alpha value of SATAQ-3 was calculated as 0.91. Moreover, Pearson corelation analyes were conducted to determine convergent validity of SATAQ-3, and the results showed that there was a statistically significant positive relationship between SATAQ-3 and pictorial body image scale (r = .30, p < .000). Hence, it was revealed that the more body image

dissatisfaction in participants, the higher the discrepancy between their perceived body type and ideal body type of society.

Other measurements of the Study 3 had also sufficient reliability characteristics as seen in Table 10. Furthermore, the number of the items, means, standard deviations, and maximum-minimum values of the scales were presented below.

Table 10

Descriptive Statistics and Cronbach's Alpha Values of the All Measures

Scales	Number of the Items	Mean	*SD*	Range (Min-Max)	Cronbach Alpha
SATAQ-3					
Total	25	66.22	15.95	30-101	.91
SADP					
Total	18	30.54	10.60	18-65	.92
WM	8	14.67	5.95	8-31	.89
SN	6	8.25	2.96	6-20	.78
BT	4	7.63	2.89	4-16	.72
RSEQ	10	31.58	5.47	13-40	.91
SAI	20	39.49	10.61	20-78	.95
DAS	25	81.74	17.17	35-120	.90
SOP	15	69.48	16.92	31-103	.92
SPP	15	53.27	12.51	22-85	.80
BIS	40	139.5	19.89	75-196	.91

Note. SATAQ-3; Socio-Cultural Attitudes towards Appearance, SADP: Scale of Attitudes towards Diet Pills, WM: Weight Management, SN: Subjective Norms, BT: Being Trustworthy; RSEQ: Rosenberg Self-Esteem Questionnaire, SAI: State Anxiety Inventory, DAS: Death Anxiety Scale, BIS: Body Image Scale, SOP: Self-Oriented Perfectionism, SPP: Socially Prescribed Perfectionism.

4.2.2. The Effects of Demographic Variables on Attitudes towards Diet Pills

One way ANOVA was conducted in order to determine the effects of monthly income on attitudes towards diet pills. The results revealed that main effect of income on diet pill attitudes was not statistically significant ($F(2,163) = .89$, $p = .41$), and there were no statistically significant SADP mean differences between different levels of income according to post hoc Tukey HSD analysis.

The predictive roles of participants' ages and BMI on attitudes towards diet pills were examined by multiple regression analysis. When age and BMI were entered to the regression model together, 14 % of the variance in attitudes towards diet pills was explained, but it was not statistically significant ($F(2,163) = 1.70$, $p = .187$). Thus, the results revealed that neither the effects of age nor BMI predicted participants' general positive attitudes towards diet pills ($\beta_{age} = -.04$, $t(165) = -.53$ $p = .596$; $\beta_{BMI} = .14$, $t(165) = 1.75$ $p = .082$). The correlation of between diet pill attitudes with age and BMI were not statistically significant ($r_{age} = -.05$, $p = .567$; $r_{BMI} = 0.14$, $p = .079$), too.

4.2.2. Correlational Relationships among Possible Confounding Variables (Death Anxiety, Body Image Satisfaction, State Anxiety, Perfectionism, Self Esteem), Dependent (Attitudes towards Diet Pill) and Independent Variable (Socio-Cultural Attitudes towards Appearance)

To examine associations between dependent, independent, and possible confounding variables, several Pearson correlation analyses were performed. As seen in Table 11, the levels of self-esteem, death anxiety, body image satisfaction, state anxiety, and socially prescribed perfectionism were significantly associated with attitudes towards diet pills, whereas self-oriented perfectionism was not. Hence, it was asserted that young adult females' positive attitudes towards diet pills increased when their self-esteem

and body image satisfaction decreased. On the other hand, higher levels of their death and state anxieties, and socially prescribed perfectionism were related to higher positive attitudes towards diet pills. Finally, when the results for relationships between socio-cultural attitudes towards appearance and other scales reviewed, it was figured out that except self-esteem and state anxiety values of participants, all of the variables had statistically significant associations with socio-cultural attitudes towards appearance. Thus, the higher scores on SATAQ-3 were associated with lower scores on BIS, and higher scores on SADP, DAS, SAI, SOP and SPP. In other words, when participants' evaluations of their appearance were more depended on society norms, their positive attitudes towards diet pills, death and state anxieties, self-oriented perfectionism and socially prescribed perfectionism levels increased, whereas the level of body image satisfaction decreased.

Table 11

Correlational Relationships among Measures

	SADP	SATAQ-3	RSEQ	SAI	DAS	BIS	SOP	SPP
SADP	-							
SATAQ-3	.31**	-						
RSEQ	-.19*	-.07	-					
SAI	.17*	.07	-.53**	-				
DAS	.16*	.35**	.04	.02	-			
BIS	-.27**	-.23**	.50**	-.31**	-.08	-		
SOP	-.07	.29**	.16*	.04	.26**	.10	-	
SPP	.16*	.24**	-.34**	.17*	.24**	-.31**	.28**	-

Note 1. ** $p < 0.001$ * $p < 0.05$

Note 2. SADP: Scale of Attitudes towards Diet Pills, SATAQ-3; Socio-Cultural Attitudes towards Appearance-3, RSEQ: Rosenberg Self-Esteem Questionnaire, SAI: State Anxiety Inventory, DAS: Death Anxiety Scale, BIS: Body Image Scale, SOP: Self-Oriented Perfectionism, SPP: Socially Prescribed Perfectionism.

To determine covariate variables for the main analyses, multiple regression analysis was conducted with participants' level of self esteem,

state anxiety, death anxiety, socially prescribed perfectionism and body image satisfaction, which showed significant correlational relationships with attitudes towards diet pills. When all independent variables were entered the first step of the regression model, they significantly explained % 10 of the variance of attitudes towards diet pills ($F(5,160) = 3.62$, $p < .004$). However, as seen in Table 12, the only significant predictive variable was found as body image satisfaction. However, the predictive role of death and state anxieties, self-esteem and socially prescribed perfectionisms of participants on positive attitudes towards diet pills were not significant when all variables entered to the model together. Hence, body image satisfaction scores of the participants were judged a covariate variable for further analyses.

Table 12

Regression Analysis Predicting Attitudes towards Diet Pills from the Possible Confounding Variables (Self Esteem, State Anxiety, Death Anxiety, Socially Prescribed Perfectionism, and Body Image Satisfaction)

	B	*SE B*	*β*	*t*	*p*
Positive Attitudes towards Diet Pills					
RSEQ	-.06	.20	-.03	-.32	.750
SAI	.08	.09	.08	.95	.346
DAS	.08	.05	.13	1.70	.092
SPP	.03	.07	.04	.44	.661
BIS	-.11	.05	-.20	-2.30	.023

Note. RSEQ: Rosenberg Self-Esteem Questionnaire, SAI: State Anxiety Inventory, DAS: Death Anxiety Scale, Socially Prescribed Perfectionism, BIS: Body Image Scale.

4.2.3. Transforming Total Continuous Scores of Socio-Cultural Attitudes towards Appearance into Categorical Variable

In order to perform ANCOVA and MANCOVA analyses, the continuous socio cultural attitudes towards appearance variable had to be transformed into a categorical variable. Thus, total scores of 166 young adult females' on SATAQ-3 were divided into 2 categories by performing median split (median value for total score = 66). Consequently, independent sample t-test analysis was conducted to test whether there were significant mean differences between these two groups in terms of their SATAQ-3 scores. The results revealed that the mean scores of two groups were significantly different from each other, ($t(164) = -18.08$, $p < .000$), and the participants who were in SATAQ-3-High group ($m = 3.20$, $n = 78$, $sd = .40$) reported more socio cultural attitudes towards appearance scores than participants who were in SATAQ-3-Low group ($m = 2.16$, $n = 88$, $sd = .40$).

Furthermore, to test whether matched sampling method was obtained or not, Chi-Square analysis was conducted. The results revealed that in the unconscious mortality salience condition the numbers of the participants who reported lower level of socio-cultural attitudes towards appearance (SATA) was 29, whereas who reported higher levels was 25. In addition to this, conscious mortality awareness condition involved 27 participants who reported lower levels of SATA and 29 participants indicated higher levels of SATA. Lastly, in the control condition, 32 participants had lower level of SATA, while 24 of participants had higher levels of SATA. The number of the participants in each cell according to their SATAgroups was not statistically significant [(χ^2 $(SD = 2, N = 166) = 9.11$, $p = 0.634$]. That is to say, the numbers of the participants according to SATAQ groups were similar to each other in each experimental condition (see in Table 13).

Table 13

The Numbers of the Participants in Each Experimental Cell

Socio-Cultural Attitudes towards Appearance	Unconscious Mortality Awareness	Conscious Mortality Awareness	Control Group	χ^2 (2)
High	25	29	24	9.11
Low	29	27	32	*ns*[*]

Note.[*] $p = 0.634$

4.2.4. The Effects of Different Consciousness Levels of Mortality Awareness and Socio-Cultural Attitudes towards Appearance on General Attitudes towards Diet Pills

In order to test main hypothesis of the study, with controlling participants' level of body image satisfaction, the effects of socio-cultural attitudes towards appearance groups and different consciousness levels of mortality awareness were examined by performing two ways ANCOVA. Thus, the design of the study was 3 (Unconscious mortality awareness/Conscious mortality awareness /No mortality awareness-control group) X 2 (Socio-Cultural Attitudes towards Appearance- High/Low) ANCOVA.

As seen in Table 14, Table 15, and Figure 2; the results of ANCOVA and Post Hoc Tukey HSD revealed that:

1) The main effect of mortality awareness in different consciousness levels on general positive attitudes towards diet pills was not statistically significant $F(2,159) = .97$, $p = .380$)

   - Therefore, among to participants assigned to different consciousness levels of mortality awareness there were no

mean differences in terms of their general positive attitudes towards diet pills.

2) The main effect of socio-cultural attitudes towards appearance was significant ($F(1,159) = 5.44$, $p < .021$).

   - Participants in socio-cultural attitudes towards appearance-high ($m = 1.81$) group reported more general positive attitudes towards diet pills than participants in the socio-cultural attitudes towards appearance-low group ($m = 1.60$).

3) The effect of interaction between mortality awareness and socio-cultural attitudes towards appearance was found statistically significant ($F(2,159) = 2.97$, $p < .054$).

   - Participants in socio-cultural attitudes towards appearance-high group after primed unconscious mortality awareness indicated more general positive attitudes towards diet pills ($m = 2.04$) than participants in socio-cultural attitudes towards appearance-low group and primed with unconscious mortality awareness reported ($m = 1.53$) ($p < .001$).

   - The participants socio-cultural attitudes towards appearance-high group after being primed with unconscious mortality awareness, reported more general positive attitudes towards diet pills ($m = 2.04$) than the participants socio-cultural attitudes towards appearance-high group primed with conscious mortality awareness ($m = 1.72$) ($p < .037$)

   - The participants socio-cultural attitudes towards appearance-high group after being primed with unconscious mortality awareness, reported more general positive attitudes towards diet pills ($m = 2.04$) than the participants who socio-cultural attitudes towards appearance-high group primed with no mortality concerns (control condition) ($m = 1.67$) ($p < .021$).

Table 14

The Results of ANCOVA for the Effects of Different Consciousness Levels of Mortality Awareness and Socio-Cultural Attitudes towards Appearance on General Positive Attitudes towards Diet Pills

Variables	*df*	*F*	*p*
BIS (body image satisfaction as covariate)	1,159	12.35	.001
Mortality Awareness in Different Consciousness Levels	2,159	.97	.380
SATA	1,159	5.44	.021
Mortality Awareness in Different Consciousness Levels and SATA Interaction	2,159	2.97	.054

Note. SATA: Socio-Cultural Attitudes towards Appearance

Table 15

The Mean Values among Cells according to Different Consciousness Level of the Mortality Awareness and Socio-Cultural Attitudes towards Appearance

Socio-Cultural Attitudes towards Appearance	Unconscious Mortality Awareness	Conscious Mortality Awareness	Control Group
High	$m = 2.04_{a}$	$m = 1.72_{bc}$	$m = 1.7_{bc}$
Low	$m = 1.53_{bc}$	$m = 1.67_{bc}$	$m = 1.61_{bc}$

Note. The mean scores who not share same subscripts both same line and column are significantly different from each other.

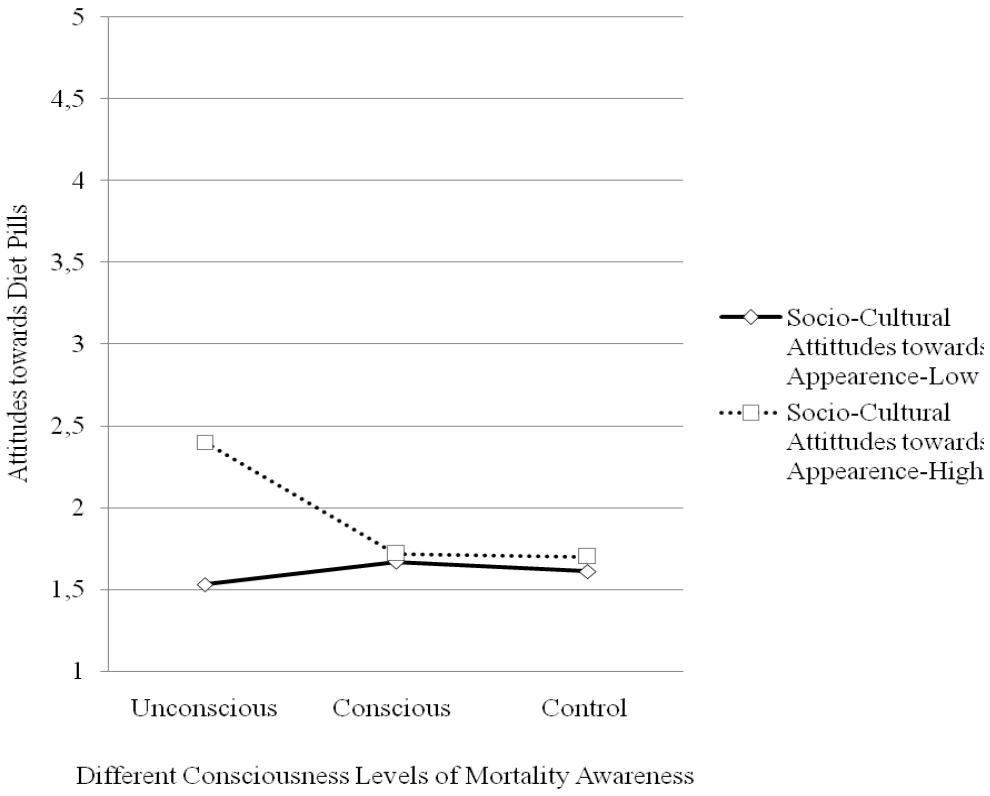


Figure 2. Attitudes towards diet pills in a sample of 166 young adult female as a function of different consciousness levels of mortality awareness and socio-cultural attitudes towards appearance

4.2.5. The Effects of Different Consciousness Levels of Mortality Awareness and Socio-Cultural Attitudes towards Appearance on Each Attitudes towards Diet Pills Factor; Weight Management, Subjective Norms and Being Trustworthy

By controlling the levels of participants' body image satisfaction, two ways MANCOVA were performed to examine the impacts of socio-cultural attitudes towards appearance and different consciousness levels of mortality awareness on each attitudes towards diet pills factors; namely weight management, subjective norms and being trustworthy.

Parallel to the earlier findings of ANCOVA for general attitudes towards diet pills, the results of MANCOVA showed that by controlling the effects of body image satisfaction of participants;

1) The main effect of mortality salience on total attitudes towards diet pills scores was not statistically significant (λ = .95, F(6,157) = 1.28, p = .268)
2) The main effect of socio-cultural attitudes towards appearance was significant (λ = .94, F(3,157) = 3.16, p < .026)
3) The effect of the interaction between different conscious level of mortality awareness and socio-cultural attitudes towards appearance on total attitudes towards diet pills scores were marginally significant (λ = .93, F(6,157) = 2.00, p < .065) (see Table 16).

Table 16

MANCOVA Results for The Effects of Different Levels of Consciousness of Mortality Awareness and Socio-Cultural Attitudes towards Appearance on Positive Attitudes towards Diet Pills: Weight Management, Subjective Norms, and Being Trustworthy

Variables	λ	*F*	*Hypothesis df*	*Error df*	*p*
Body Image Satisfaction	.11	6.11	3	157	.001
SATA	.94	3.16	3	157	.026
Mortality Awareness in Different Consciousness Levels	.95	1.26	6	314	.268
Mortality Awareness in Different Consciousness Levels and SATA Interaction	.93	2.00	6	314	.065

Note. SATA: Socio-Cultural Attitudes towards Appearance

After participants' body image satisfaction had controlled and Bonferroni correction had been made [α (.05) /number of the dependent variables (3) = .017], as seen in Table 17 and 18; the results of univariate analyses of variance and group comparisons revealed that:

1) The main effect of mortality salience was not significant for any of the SADP factors.

   - However, participants who were primed with unconscious mortality awareness (m = 1.89) indicated marginally more positive attitudes towards diet pills on weight management factor than participants in the control condition (m = 1.81) (p < .030).

2) The main effect of socio-cultural attitudes towards appearance on weight management factor of attitudes towards diet pills was significant ($F(2,159) = 7.52$, $p < .007$).

   - Participants who were in socio-cultural attitudes towards appearance-high group (m = 1.99), reported significantly more positive attitudes towards diet pills on weight management factor, than participants who were in socio-cultural attitudes towards appearance-low group (m = 1.69) (p < .007).

3) The effect of the interaction between mortality salience and socio-cultural attitudes towards appearance on weight management factor was significant, as well ($F(1,159) = 4.70$, $p < .010$).

   - For weight management factor;

     - After primed with unconscious mortality awareness, participants who were in socio-cultural attitudes towards appearance-high group (m = 2.20), reported more positive attitudes towards diet pills than participants who were in socio-cultural attitudes towards appearance-low group (m = 1.59), p < .002). However, the mean differences between other experimental conditions were not statistically significant.

- For subjective norm factor;

    - After primed with unconscious mortality awareness, participants who were in socio-cultural attitudes towards appearance-high group (m = 1.67) reported more positive attitudes towards diet pills than participants who were in socio-cultural attitudes towards appearance-low group (m = 1.30) (p < .004).

    - Participants, who were in socio-cultural attitudes towards appearance-high group (m = 1.67), after primed with unconscious mortality awareness, indicated more positive attitudes towards diet pills than participants who were in same group but primed with conscious mortality awareness (m = 1.28) (p < .003).

    - Participants, who were in socio-cultural attitudes towards appearance-high group (m = 1.67), after primed unconscious mortality awareness indicated more positive attitudes towards diet pills than participants who were in same group but were not primed with any mortality concerns (control condition) (m = 1.29) (p < .005).

- For being trustworthy factor;

    - After primed with unconscious mortality awareness, participants who were in socio-cultural attitudes towards appearance-high group (m = 2.73 reported more positive attitudes towards diet pills than participants who were in socio-cultural attitudes towards appearance-low group (m = 1.76), (p < .009).

    - Participants who were in socio-cultural attitudes towards appearance-high group (m = 2.73), after

primed with unconscious mortality awareness, indicated marginally significant more positive attitudes towards diet pills than participants who were in same group but were not primed with mortality awareness (control group) (m = 1.86), (p < .043).

Table 17

The Effects of Socio-Cultural Attitudes towards Appearance and Different Levels of Consciousness of Mortality Awareness on Positive Attitudes towards Diet Pills in Weight Management, Subjective Norms and Being Trustworthy Factors

Variables	SADP Factors	*df*	*F*	*p*
Body Image Satisfaction (as covariate)	WM	1,159	14.31	.000
	SN	1,159	12.23	.001
	BT	1,159	2.27	.134
SATA	WM	2,159	7.52	.007
	SN	2,159	.91	.343
	BT	2,159	3.61	.059
Mortality Awareness in Different Consciousness Levels	WM	1,159	.22	.799
	SN	1,159	2.43	.091
	BT	1,159	1.06	.350
Mortality Awareness in Different Consciousness Levels and SATA Interaction	WM	2,159	1.99	.140
	SN	2,159	4.70	.010
	BT	2,159	1.79	.171

Note 1. SADP: Scale of Attitudes towards Pills

Note 2. SATA: Socio-Cultural Attitudes Towards Appearance, WM: Weight Management, SN: Subjective Norms, BT: Being Trustworthy

Table 18

The Mean Values for Cells according to Different Consciousness Level of the Mortality Awareness and Socio-Cultural Attitudes towards Appearance on Factors for Attitudes towards Diet Pills

Socio-Cultural Attitudes towards Appearance	Unconscious Mortality Awareness	Conscious Mortality Awareness	Control Group
	Weight Management Factor of SADP		
High	$m = 2.20_{a}$	$m = 1.93_{ab}$	$m = 1.86_{ab}$
Low	$m = 1.59_{b}$	$m = 1.73_{b}$	$m = 1.76_{b}$
	Subjective Norms Factor of SADP		
High	$m = 1.67_{a}$	$m = 1.28_{bc}$	$m = 1.29_{bc}$
Low	$m = 1.30_{bc}$	$m = 1.46_{bc}$	$m = 1.29_{bc}$
	Being Trustworthy Factor of SADP		
High	$m = 2.73_{a}$	$m = 1.94_{ab}$	$m = 1.86_{b}$
Low	$m = 1.76_{b}$	$m = 1.89_{ab}$	$m = 1.78_{ab}$

Note 1. The mean scores who not share same subscripts both same line and column are significantly different from each other.
Note 2. SADP: Scale of Attitudes towards Pills

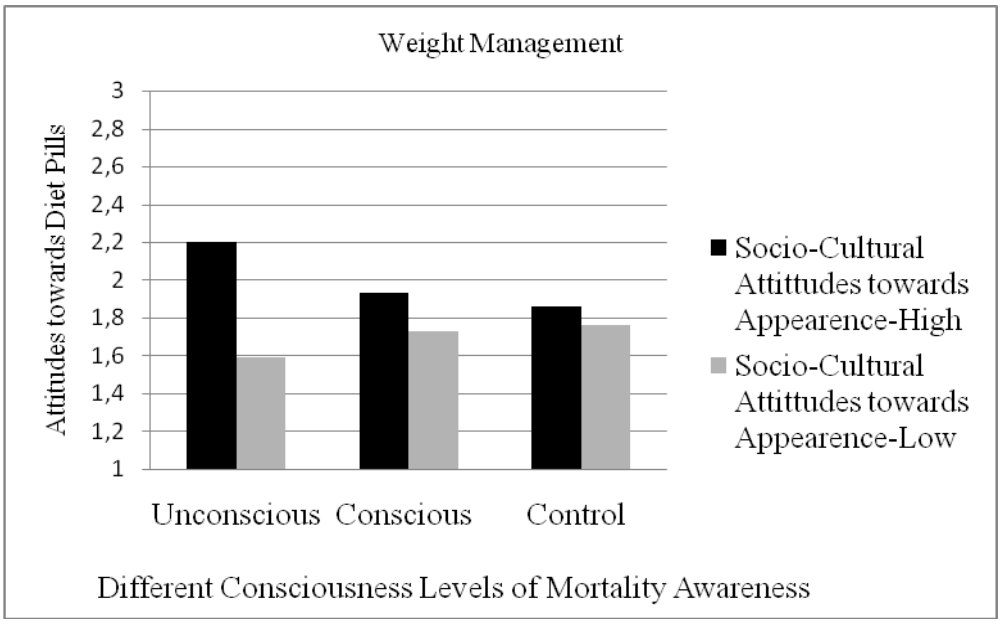


Figure 3. Attitudes towards diet pills in terms of "weight management" as a function of different consciousness levels of mortality awareness and socio-cultural attitudes towards appearance (N = 166)

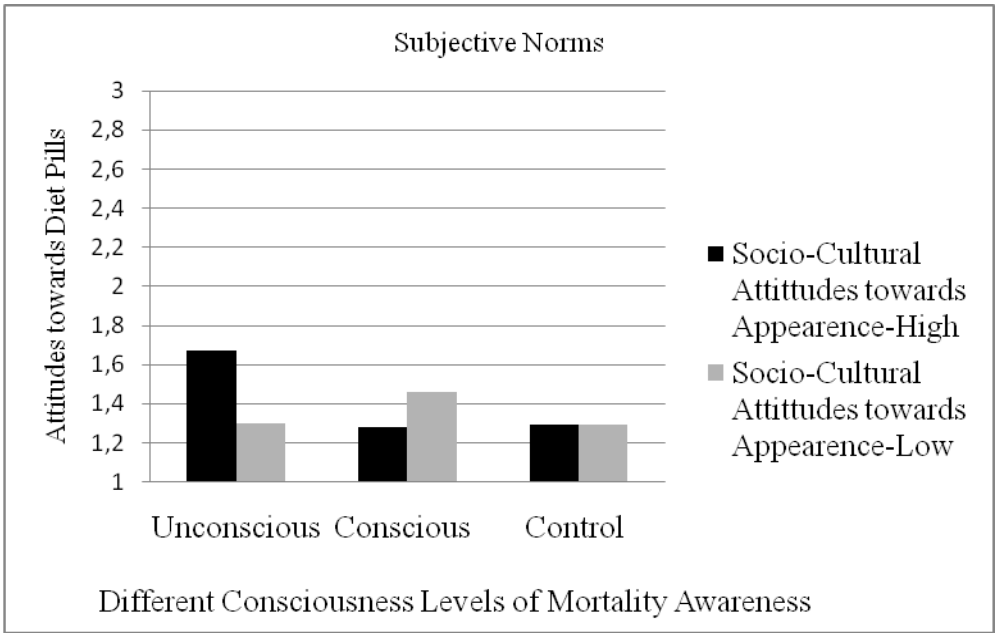


Figure 4. Attitudes towards diet pills in terms of "subjective norms" as a function of different consciousness levels of mortality awareness and socio-cultural attitudes towards appearance (N = 166)

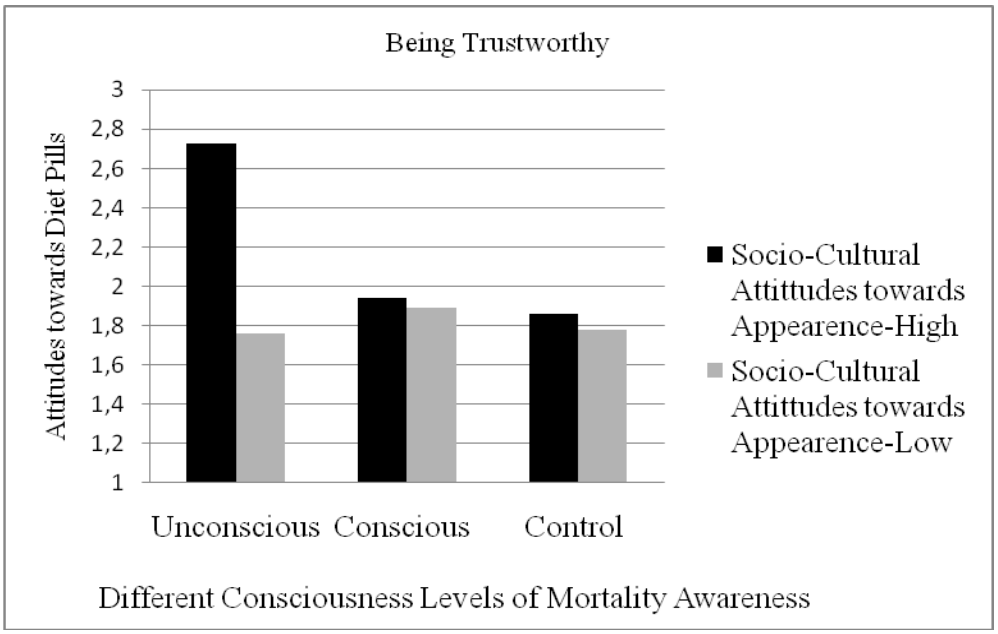


Figure 5. Attitudes towards diet pills in terms of "being trustworthy" factor as a function of different consciousness levels of mortality awareness and socio-cultural attitudes towards appearance (N = 166)

CHAPTER 5

DISCUSSION

The basic aim of the current study was to investigate motivations behind positive attitudes towards using diet pills, which was one of the health compromising weight control strategies. Therefore, based on the dual defense model of Goldenberg and Arndt (2008) in the context of Terror Management Health Model (TMHM), it was hypothesized that the interaction between mortality concerns and internalized body relevant social norms might cause either positive or negative attitudes towards diet pills. To test this basic hypothesis, three studies were conducted with only young adult females due to the fact that in the current literature there have been a great deal of studies showing that females utilize diet pills approximately two times more than males (see Levy & Heaton, 1993; French et al., 1995; Neumark-Stzainer et al., 2003; Xiao et al., 2001; Kruger et al., 2004; Tao, 2010). In addition to this, compared to men, most of the women are expected to obtain the *thin ideal* of the society. Hence, in the first study, it was aimed to develop a scale to assess diet pill attitudes of young adult females. Then, within the context of the second study, participants were evaluated in terms of their socio-cultural attitudes towards appearance, death anxiety, perfectionism, and body image satisfaction. Finally, according to their values on body relevant socio-cultural attitudes, participants of Study 2 were assigned to experimental sessions of the main study, which was conducted two weeks later in order to test the basic hypotheses of the current study. Consequently, topics to be discussed in the first part of this chapter include which psychometric characteristics of the scale of attitudes towards diet pills, and socio-demographic and anthropometric features (i.e., body mass index) of diet pills users. On the other hand, in the second part of this chapter, after summarizing the findings of Study 2 and 3 together, they will be discussed in the light of

TMHM literature. Hence, based on these results, diet pill usage will be evaluated in terms of its' role in proximal or distal defense mechanisms against different consciousness levels of death concerns. The chapter will be ended with possible limitations, directions for future studies, general and clinical implications, and conclusions of all findings.

5.1. Results of the Study 1

Within the context of this part, psychometric properties of the scale of attitudes towards diet pills (SADP), effects of demographics, Body Mass Index (BMI) and weight perceptions on diet pill attitudes, and prevalence of diet pills users in this sample will be presented below.

5.1.1. Psychometric Properties of Scale of Attitudes towards Diet Pills

Since there was no reliable and valid psychometric measurement in the current literature, the goal of Study 1 was to develop a five point Likert type scale to assess diet pill attitudes. Therefore, statements which were derived from the insights of several papers and people's comments on online forums were used to prepare the items of the scale. After items were controlled by several psychologists in terms of different features such as meaning and grammar, they were administered to participants whose numbers were five times higher than the number of the items in the scale, according to suggestions of Child (2006).

The results gathered from 208 young adult females lead to extraction of some items from scale, thus, final version of the SADP has consisted of 18 items (6 reverse coded), and three factors namely, *weight management, subjective norms,* and *being trustworthy*. Indeed, reliability analyses done for each scale and the whole scale illustrated good or sufficient Cronbach's alpha internal consistency values. They were .93 for the whole scale, .89 for

"weight management" factor, .78 for "subjective norms" factor, and .72 for "being trustworthy" factor.

Moreover, to examine the divergent validity of the SADP, its relationship with Body Image Scale (BIS) (Secord & Jourard, 1953) was tested. Several researchers stated that being unsatisfied with body image might be a risk factor for engaging in deviant weight control strategies (Kruger, 2004; Wharton et al., 2000) and developing eating pathologies (Stice, 2002 as cited in Cafri et al., 2005). In parallel with their claims, the results pointed that when young adult females indicated lower levels of body image satisfaction, they reported more willingness to use diet pills, supporting divergent validity of the SADP. Additionally, in terms of different aspects of attitudes towards diet pills, it was figured out that, except the "being trustworthy" factor, both "weight management" and "subjective norms" factors were significantly associated with body image satisfaction, as well. In a consequence, as provided in the earlier studies, losing weight by applying healthy methods such as increasing physical activity or decreasing calorie intakes require more time than by using unhealthy weight control tactics (Radimer, Subar, & Thompson, 2000). Thus, results of this study provided further evidence showing that especially people who were less satisfied with their body image perceived managing their weights by using diet pills as more efficient. Additionally, the results for the factor "subjective norms" of SADP, individuals' diet pills attitudes which are shaped by information coming from the media, doctors, or dietitians, revealed that impacts of this information could be more important when young adult females were unsatisfied with their body image. Hence, being unsatisfied with body image might increase the intentions of taking others' perspectives into account while determining attitudes towards diet pills. However, non-significant role of body image dissatisfaction on scores of the factor "being trustworthy" might be resulted in demographic characteristics of the sample. For instance, most of the participants were in undergraduate level, had moderate level of monthly income, and lived in big cities (i.e., Ankara, İzmir). Thus, it might be possible that regardless of their body image

satisfaction they were already well-informed about the health consequences of using diet pills, which was assessed by the items in the "being trustworthy" factor of SADP.

In addition to construct and divergent validity, criterion related validity was also one of the psychometric features of SADP which were examined. In the current psychology literature, it is stated that individuals might utilize multiple unhealthy weight control tactics together (Peters et al., 1997 as cited in Celio, 2006), and so it might be asserted that using one of these method would be a risk factor for using other health compromising strategies. Therefore, parallel with this suggestion, in the current study it was investigated that young adult females who used at least one of deviant weight control tactics in their lives (i.e., dieting without doctor advice, eating less, skipping meals, drinking special beverages, smoking more, prolonged fasting, using laxative/diuretic, and vomiting), indicated more positive attitudes towards diet pills compared to females who have never attempted these methods. This result not only supported criterion related validity of the SADP but also provided an evidence that SADP might be used for differentiating females who are at risk for trying health compromising weight control behaviors from females who are not.

To conclude based on results provided above; SADP is a reliable and valid scale to assess Turkish young adult females' attitudes towards diet pills.

5.1.2. Effects of Demographics, BMI, and Weight Perceptions of Participants in the Study 1 on Attitudes towards Diet Pills

In the Study 1, several demographic variables and their predictive roles on positive attitudes towards diet pills were examined such as level of education, monthly income and age. Indeed, the question of whether diet pill attitudes was effected by BMI and weight perceptions of participants might also be answered.

Firstly, all of these variables (education level, monthly income, age, BMI and perceived weight) were examined by a multiple regression analysis in which all independent variables were entered one regression step. The results revealed that neither level of education and monthly income nor ages of participants significantly predicted their attitudes towards diet pills. In other words, their attitudes were shaped independently from their education level, socio-economic status, and age. There might be two factors associated with these results. On the one hand, it might be claimed that body relevant social norms, especially *the thin ideal*, are so prevalent among majority of the population that women from different socio-economic and education levels might feel similar pressures to be in perfect body weight and shape. On the other hand, unlike their education and socio-economic levels, ages of the participants were homogenous in order for us to conduct study with only "young adult" females; nevertheless, it is possible that if the current study had involved more deviant age groups, the predictive role of age would have been found.

Secondly, young adult females' attitudes towards diet pills were tested in terms of objective and subjective evaluations of their body weight. Although both BMI and perceived weight groups involved the same categories such as being underweight, normal weight, overweight, obese, and extreme obese, the results showed that neither BMI nor weight perceptions of females predicted their attitudes towards using diet pills. These findings were found as partially consistent with earlier studies demonstrating that regardless of their BMI, people might have tendency to use diet pills, even if they were normal or under-weight (Blanck, Khan, & Sardula, 2001; Tao, 2010). Although there was a negative association between weight perceptions of participants and their attitudes towards diet pills, this relationship was not statistically significant, either. This result might be caused by entering all predictors to one regression step together. That is to say, it is possible that explained variance of each variable for attitudes towards diet pills decreased as it was shared with all variables.

Although BMI was not a significant predictor of attitudes towards diet pills, it still worths discussing why young adult females show tendency to lose weight even if they do not have high BMI. One possible answer for this question might be given by the Table 3 presenting the distributions of participants in terms of their "BMI" and "perceived weighted". On the one hand, the number of the participants who were under or normal weight according to their objective evaluations of body size (BMI) was much more than the number of the participants who perceived themselves as under or normal-weighted. On the other hand, compared to participants whose body weight were classified as overweight or obese according to BMI, number of the participants who perceived their body weight as overweight or obese was more higher. That is to say, females who were actually under or normal weight, did not perceive themselves as under or normal weight, and some of the participants evaluated their body size as overweight or obese even if they are not classified as overweight or obese according to objective criteria. Consequently, these results might shed light to the unrealistic expectations of participants regarding to their body weight and shape.

5.1.3. Using Diet Pill is one of the Most Frequent Ways of Weight Loss Method in the Study 1

In the context of Study 1, young adult females from different socio-economic statutes and education levels provided their earlier engagements with deviant weight control strategies (respectively; dieting without doctor advice, eating less, skipping meals, using diet pills, drinking energy beverages, smoking more, prolonged fasting, using laxative, vomiting, and using diuretics). The results presented that using diet pills was the fourth common method of losing weight in this sample, whereas it was second most common method in the study of Rosen et al. (1988). Nonetheless, it could be still proposed that in this sample, taking diet pills was one of the popular ways of losing weight as emphasized by Erden and Tanrıyeri (2004).

Furthermore, as far as our knowledge, this study is the first one providing prevalence of diet pills usage among Turkish young adult females, and the results revealed that the percentage of diet pills users (% 8.6) was higher than other countries (Tao, 2010; Field et al., 1999). Since current study was not a cross-cultural one, it is not possible to infer cross-cultural differences. However, it might be asserted that diet pills are new products in Turkey and even though there have been some warnings from both Turkish Ministry of Health and The Radio and Television Supreme Council (RTÜK) about negative health consequences of using diet pills, people may still not be aware of diet pills' various dangers, and so they keep going to utilize those pills.

5.2. Limitations of Study 1 and Suggestions for Further Studies

In Study 1, there were several limitations that need to be mentioned. Firstly, SADP should be used for testing only females' attitudes towards diet pills due to the fact that the study did not involve males. Although current literature clearly expressed that using diet pills is more prevalent among females than males (see Levy & Heaton, 1993; French et al., 1995; Neumark-Stzainer et al., 2003; Xiao et al., 2001; Kruger et al., 2004; Tao, 2010), it is necessary to evaluate males' attitudes towards using diet pills, as well. Thus, it could be suggested for researchers to study further for developing a valid and reliable scale to assess young adult males' attitudes towards diet pills.

A key limitation with regards to the psychometric properties of SADP is that predictive validity of the scale was not investigated in the sense of different psychopathologies, although there are a variety of studies in the literature showing that there might be possible associations between using diet pills and some psychopathologies such as anxiety (Hirf, Rahman, & Berenson 2011), mood (i.e., depression) (Patten, 2001), and eating disorders (Root et al., 2010). The relationship between using diet pills and

psychopathologies is bidirectional. For instance, some psychopathologies, such as post traumatic stress disorder (Hirf, Rahman, & Berenson 2011), might lead to consume diet pills, whereas some psychopathologies might be resulted in taking diet pills, for example psychosis (Binbay, 2010). Also, patients with eating disorders take these pills as a compensatory behavior instead of vomiting or using laxatives (Steffen et al., 2010). Despite these findings, the relationship between diet pills usage and psychological well-being was not taken into account. Thus, predictive roles of the scores on SADP in the development of psychopathologies should not be inferred from the current results.

Finally, it might be meaningful to note that the limitation of size in sample of Study 1 is also needed to be taken in to consideration when interpreting the results. As a matter of fact, the number of the participants was sufficient for developing a scale (5 times more than the numbers of the items; Child, 2006); however, it does not present the majority of Turkish young adult females. Therefore, the results should not be generalized to all Turkish population, and further studies which involve females from different age groups and socio-economic statuses are needed.

5.3. Implications of the Study 1

Despite the limitations provided above, the findings of the Study 1 provided valuable contributions to the main study of the current research and field of psychology. For instance, the measure to assess the dependent variable of the main study, scale of attitudes towards diet pills (SADP), was created. Additionally, a valid and reliable psychometric scale was put into use for researchers from different areas such as clinical psychology/psychiatry, health psychology, and nutrition-dietetic; thus, SADP can be used for further empirical studies in order to understand individuals intentions of taking diet pills. In addition to this implication, it was the first

study in the Turkish literature that aimed to develop a scale so as to assess young adult females' attitudes towards diet pills. Moreover, diet pill usage prevalence and different characteristics of diet pill users were examined in a Turkish sample for the first time.

Besides psychometric contributions, the results make important addition to practical areas of psychology. For instance, it is well known that, preventive medicine services have crucial role in protecting members of the society before developing any illness or disorders. Hence, in community-based studies, SADP might be used for determining people who are at an increased risk for engaging unhealthy weight control methods.

Moreover, results revealed that decreased level of body image satisfaction and utilizing at least one of deviant weight control strategies beforehand were the factors which were associated with consuming diet pills. In addition, young adult females' attitudes towards diet pills were shaped independently from their socio-economic status, age, BMI, and perceived weight values, which are personal factors related to utilize diet pills. Thus, the results of earlier studies regarding the association of taking diet pills with body image satisfaction, BMI, perceived weight, and earlier attempts to use health compromising techniques were replicated in a Turkish sample.

Finally, other important findings of the current study are that using diet pills was one of the most frequently used methods of losing weight and that its prevalence in the Turkish sample was higher than other countries. Hence, it might be claimed that in Turkey, increased number of the people who apply to hospitals due to health problems which are caused by diet pills consumption would become a public health issue in the near future. Thus, further research should be aimed to figure out possible motivations behind using diet pills and create etiological models in order to change these motivations into health promoting intentions and improve effectiveness of treatments.

5.4. Results of Study 2 and Main Study

In this part of the discussion chapter, firstly, the effects of demographics and BMI of participants on diet pill attitudes will be demonstrated. Then, since the aim of the Study 2 was to administer participants the measurres of the first independent variable (socio-cultural attitudes towards appearance) and several control variables (i.e., body image satisfaction, earlier death anxiety levels and perfectionisms) two weeks before the experimental part, the findings coming from the Study 2 will be discussed in the "factors associated with using diet pills" topic of this chapter. Then, summaries for results of the main analyses will be provided. Additionally, limitations, suggestions for further studies, general implications and clinical implications will be presented. Finally, this chapter will end with conclusions.

5.4.1. Effects of Demographics and BMIs of Participants in Study 2 and Study 3 on Attitudes towards Diet Pills

In the main study, 166 young adult females, who did not participate in the different from Study 1, and taking psychology course in Middle East Technical University (METU) provided their ages, monthly incomes and education levels. Also, their weight and height values were assessed in the laboratory at Psychology Department of METU by the experimenter. The possible influences of participants' ages, socio-economic levels, and BMIs were examined, whereas the influences of their education level on diet pills attitudes were not analyzed due to the fact that the distribution of participants among undergraduate level (n = 163) and graduate level (n = 3) were not equal to each other.

The results provided that neither ages nor monthly incomes of young adult females predicted their attitudes towards diet pills as consistent with the first study of the current research (Cihan & Bozo, 2012). Similarly, parallel

with the predictive role of BMI was not significant, too. However, since people are not always straightly to present their weight and height values, the result of the Study 1, where BMI was calculated based on participants statement, might be considered as questionable. Thus, replication of this finding in the Study 2, where weight and height values of participants were assessed by standard scales in the laboratory, provided more solid contribution to literature, in which studies about relationship between BMI and taking diet pills exhibited controversial results. Hence, as it was proposed by several studies (e.g., Blanck, Khan, & Sardula, 2001; Tao, 2010) women who are in fact under or normal weighted, they might show tendency to use diet pills.

5.4.2. Factors Associated with Attitudes towards Using Diet Pills

Besides demographic and anthropometric variables (i.e., BMI), other factors associated with using diet pills were tested in the current study. Among these variables, three of them, such as body image satisfaction, perfectionism, and death anxiety, were administered to participants two weeks before experimental part in order to control their priming effects. Next, other confounding variables, such as state anxiety and self-esteem levels of participants were collected during experimental sessions. Finally, as provided below, the result showed some significant associations between scale of attitudes towards diet pills (SADP) and confounding variables.

Firstly, in parallel with claims of Kruger et al. (2004) and Wharton et al. (2000) who emphasized that body image dissatisfactions of individuals might lead to attempts for using unhealthy weight control methods, in the current study, the result illustrated that participants' lower levels of body image satisfaction were associated with higher positive attitudes towards diet pills.

Moreover, it was stated that diet pills have been abused by about half of the patients with eating disorders (Reba-Harrelson et al., 2008), where perfectionism have a crucial role on etiology. According to Hewitt, Flett, and Ediger (1995) dimensions of perfectionism might be related to eating disorder symptoms due to the fact that patients felt pressure to accomplish body size ideal of others or own. Indeed, they (1995) found that socially oriented perfectionism was associated with a broad range of eating disorder symptoms, whereas self-oriented perfectionism was related to only anorexia symptoms. In parallel with these suggestions and findings, in this study, participants, especially who felt higher levels of socially prescribed perfectionism, had increased intentions to use diet pills. Yet, the relationship between self-oriented perfectionism and attitudes towards diet pills was not statistically significant. In the light of the literature given above, these findings might be interpreted as socially prescribed perfectionism might be more risky to develop a desire for obtaining body relevant social norms such as the thin ideal. On the other hand, self-oriented perfectionism was not associated with society ideals. It might be possible to conclude that socially oriented perfectionism might cause more awareness for societal expectations, while self-oriented perfectionism was more related to internal rules.

Furthermore, the aim of the experimental manipulation was to create mortality awareness on participants in order to provoke feeling of terror, which is considered as even more emotion arousing than anxiety. Thus, while designing this study, it was needed to be taken into account whether participants' earlier death anxiety levels might also influence their attitudes towards diet pills apart from feelings of terror created by the experimental manipulation. In other words, variance in attitudes towards diet pills might be resulted in their earlier death concerns; therefore, the relationship between participants' death anxieties, which were collected two weeks before the experimental sessions and diet pill attitudes was also examined. Finally, the result provided that the more death anxiety participants reported the more positive attitudes towards diet pills they stated.

Additionally, studies in the current literature provided that some anxiety disorders such as post traumatic stress disorder (Hirf, Rahman, & Berenson 2011) and mood disorders like depression (Patten, 2001) were associated with taking diet pills. Hence, in order to assess participants' emotional states before being exposed to experimental manipulations, state anxiety inventory (Spielberger, Gorsuch, & Lushene, 1970) was administered in the main study. The results revealed that there was a negative relationship between situational anxieties and diet pill attitudes of participants. That is to say, in parallel with earlier studies, higher levels of emotional discomfort were associated with increased levels of positive attitudes towards diet pills.

Finally, the results also evidenced that decreased level of self-esteem was associated with positive attitudes towards diet pills. This finding might be argued as parallel with the assumption of terror management theory, which expressed that people show tendency to confirm social norms to increase their self-esteem (but it is important to note that within the context of TMT, decreases in self-esteem were associated with mortality concerns) (Solomon, Greenberg, & Pyszczynski, 1991). Thus, it might be claimed that participants who indicated lower levels of self-esteem reported more positive attitudes towards diet pills in order to increase their self-esteem by obtaining the thin ideal of society.

To sum up, the findings showed that there are possible risk factors for having positive diet pill attitudes; which are increased levels of death anxiety, state anxiety and socially prescribed perfectionism, as well as decreased levels of self-esteem and body image satisfaction. As a consequence, a multiple regression analysis was performed to determine the most dominant factor among these four variables in terms of their effects on positive attitudes towards diet pills. The results illustrated that after all variables were entered to a single regression step, only body image satisfaction predicted attitudes towards diet pills significantly. Therefore, it might be asserted that this finding not only provided covariate variable for further analyses but also replicated the findings of earlier studies demonstrating the fact that being

unsatisfied with body image might lead to attempts in utilizing weight control tactics which compromises one's health. In fact, this finding revealed the most powerful factor out of all the associated factors for taking diet pills attitudes, is the body image satisfaction. Finally, the main hypotheses was tested by controlling only confounding effect of participants' body image satisfactions.

5.4.3. Summaries of the Findings of Experimental Sessions

In the experimental sessions of the main study, specifically at beginning of the experiment, all of the participants were reminded about the differences between one's own body ideals and society's ideals for the woman body. Then, they were asked to provide their state anxiety and self-esteem values. Next, all participants, except participants in the control group, answered two open-ended questions for priming their mortality concerns, and then some of them moved directly to the dependent variable (diet pill attitudes), while some of them moved to the dependent variable after they solved a puzzle delay task, which was employed for suppressing their thoughts on conscious death into the unconscious level.

Consequently, in order to test the main hypotheses, after controlling the effects of participants' body image satisfactions, 3 (Unconscious mortality awareness, conscious mortality awareness, control condition) X 2 (High or Low Socio-cultural attitudes towards appearance) two ways of ANCOVA was conducted. Moreover, participants' attitudes towards diet pills were examined in terms of three factors of SADP (i.e., weight management, subjective norms, and being trustworthy) by 3 X 2 two ways of MANCOVA with controlling the effect of body image satisfaction. Hence, the results coming from these two analyses will be discussed in this part with regard to *dual defense model* of terror management health model (Goldenberg & Arndt, 2008).

5.4.3.1. Using Diet Pills as a Distal Defense against Unconscious Mortality Awareness

Firstly, the results revealed that there was a statistically significant effect of interaction between mortality salience and socio-cultural attitudes towards appearance on diet pill attitudes. In this context of unconscious mortality awareness, participants who had previously stated high levels of socio-cultural attitudes towards appearance indicated more positive attitudes towards diet pills compared to participants who had initially stated low levels of socio-cultural attitudes towards appearance. However, these differences were not found in conscious mortality salience or control conditions; that is, young adult females, whose body appearance were depended more on society norms, distally defended themselves against the unconscious existential concerns by showing more willingness for being able to reach the ideal of society, which is being thin. As a consequence of this, in parallel with one of the propositions of terror management health model (Goldenberg & Arndt, 2008); the interaction between unconscious mortality awareness and internalized cultural values caused a health defeating outcome due to the health compromising effects of using diet pills. These findings were also consistent with earlier studies investigating participants who perceived failure to fulfill society's ideal on being thin reported more intentions to restrict their food intake after priming non-conscious mortality concerns (Goldenberg et al., 2005). Moreover, Arndt and his colleagues (2009) argued that participants, who have higher levels of either situational or dispositional self-esteem, demonstrated higher intentions to tan in response to the unconscious death thoughts. Finally, the findings of this research are also supported by other studies, which aimed to test different health behaviors such as binge drinking (Jessop & Wade, 2008), smoking (Hansen, Winzeler, & Topolonski, 2010) and exercising (Arndt, Schimel, & Goldenberg, 2003, Study 2), which show that the outcome of unconscious mortality concerns were depended on the healthy features of extrinsic contingencies of self-esteem or social norms which were internalized by individuals.

Furthermore, when participants' attitudes towards diet pills were examined according to *weight management*, *subjective norms* and *being trustworthy* factors of the SADP, the results pointed out that for all factors, after priming with unconscious mortality salience, participants who had reported increased levels of socio-cultural attitudes towards appearance, reported more positive attitudes towards diet pills than participants who had reported decreased levels of socio-cultural attitudes towards appearance. Nonetheless, these differences were not seen in either conscious mortality awareness or control conditions. In other words, after priming unconscious mortality salience, compared to other conditions, women, who had more tendency to evaluate her body according to values of others (i.e., family members, peers, athletes, and media), might perceived diet pills as a more effective way of weight loss, by taking others' perspectives on diet pills such as advice of a doctor, dietitians or media into account and found taking diet pills as a reliable and healthy technique.

To conclude, in the current study, young adult females who perceived others' perspectives as a reference point in apprehending to what extent her appearance is attractive or adequate, showed more willingness to confirm the society's perception of the ideal body while managing their unconscious existential anxieties, even if the method of weight loss (i.e., diet pills) causes health defeating effects.

5.4.3.2. Not Using Diet Pills as a Proximal Defenses against Conscious Mortality Concerns

According to the other proposition of the terror management health model, in order to get rid of mortality concerns in focal attention, people tended to choose proximal defenses. Thus, it might be possible that people proximally defend themselves against conscious mortality awareness by engaging in either health facilitating behaviors or threat avoidance tactics (Goldenberg & Arndt, 2008). Accordingly, the results of the current study

demonstrated that for participants who had indicated higher levels of socio-cultural attitudes towards appearance and were primed with mortality awareness at the conscious level caused less positive attitudes towards diet pills compared to participants primed with unconscious mortality salience. This result might be seen as consistent with earlier studies revealing that in response to mortality concerns in the focal attention, participants stated more future fitness (Arndt, Schimel, & Goldenberg et al., 2003; Study 1) and sun protective product purchase intentions (Arndt & Goldenberg, 2004; Study 1), in comparison with participants in the unconscious mortality awareness condition. Regardless of their socio-cultural attitudes towards appearance, participants in the conscious mortality awareness condition reported as equal diet pill attitudes as participants in the control condition did. Possible explanation for these results might be that when education (mostly undergraduate) and socio-cultural (mostly moderate) levels of participants were taken into account, it might be asserted that individuals who took this study were already aware of the dangerous health consequences of using diet pills. Hence, they did not need to be motivated for using this health compromising weight control method, since they wanted a prolonged and healthy life.

Additionally, when participants' diet pill attitudes on factors of SADP are examined, the results showed that regardless of their socio-cultural attitudes towards appearance, there were no differences between participants in terms of their attitudes toward pills in the bases of *weight management*, *subjective norms*, and *being trustworthy* factors of SADP. Thus, it could be concluded that after priming conscious death thoughts, young adult females whether their body ideal depended on social norms or not, they did not perceive using diet pills as an effective way of losing weight, and did not report importance of others' advices for using diet pills. On top of these, they also did not find using diet pills as a reliable and healthy method, like participants whose mortality concerns were not primed. On the other hand, in parallel with the earlier results regarding all factors, after primed with conscious mortality awareness, participants who had stated higher levels of

socio-cultural attitudes towards appearance reported less diet positive pill attitudes than participants who primed with unconscious mortality awareness.

In conclusion, as expected, similar to Goldenberg and Arndt's (2008) suggestions, young adult females in the current study proximally defended themselves against conscious mortality awareness by choosing health promoting behavior (i.e., less positive attitudes towards diet pills) so as to remove threatening death thoughts from focal attention. Undoubtly, distress evoked by awareness of mortality was transmitted into the unconscious level and no longer felt at the conscious level.

5.5. Limitations of the Study 2 and Study 3 and Directions for Further Studies

The main study of the current master thesis research had several limitations. For instance, according to dual defense model of terror management, it was expected that participants primed with conscious mortality awareness would indicate less positive attitudes towards diet pills compared to participants in the control condition since they would want to get rid of the threatening stimuli (i.e., mortality salience) at their focal attention by increasing health facilitating behaviors. However, the results revealed that regardless of their socio-cultural attitudes towards appearance, there were similar diet pill attitudes among participants in both conscious mortality awareness and control condition. Thus, one explanation of this result might be that they chose threat avoidance strategies to cope with mortality threat in their focal attention. On the other hand, as mentioned earlier, this result might also be due to the fact that university students were already well-informed about health consequences of using diet pills. Hence, it is suggested that in the further studies, at beginning of the experimental sessions, dangerous health consequences of using diet pills should be taken into consideration in order to investigate less positive attitudes towards diet

pills in the conscious mortality salience condition compared to the control condition.

Another limitation of this study was that within the context of the present research, participants' mortality concerns were manipulated via asking them to write about their thoughts on what emotions arose by thinking their own death and what could happen to their bodies after they died. Nonetheless, their statements were not analyzed in terms of the contents of comments. Florian and his colleagues, who had conducted several studies to investigate multidimensional aspects of fear of death during 1979 and 1984, claimed that fear of death consisted of three dimensions namely, intrapersonal (i.e., decomposition of the body), interpersonal (i.e., the cessation of close relationships), and transpersonal (i.e., punishment in the hereafter). Therefore, it might be possible that there might be differences between some participants in terms of these dimensions. Some of them are perhaps afraid of death due to its interpersonal meanings, and others may experience death anxiety because of its transpersonal meanings, in terms of their willingness for obtaining social norms related to body by utilizing diet pills. Thus, further qualitative and quantitative analyses will need to be performed for examining fear of death based on participants' statements about their own mortality concerns within the different dimensions.

As opposed to the usual ways of preparing the control condition by utilizing a writing task for dental pain or broken bone, the current study used a neutral task in the control condition (i.e., listening Concerto of Mozart). However, in their meta-analytic study for terror management theory, Burke, Martens, and Faucher (2010) stated that there were no differences between employing control manipulation via a neutral task or a writing task about dental pain or a broken bone, which are the most widely used methods of creating similar a anxiety level with a writing task for mortality awareness. Still, the results of this research should be supported by the further studies in which the control conditions will be as similar as possible with the experimental conditions in terms of evoking unpleasant emotions. Additionally, another way of controlling the effect of music might be that

before and after listening Mozart Concerto, emotional states of participants would be assessed by a questioannire such as PANAS.

In addition to the limitations mentioned above, although most of the personal factors of using diet pills were analyzed in the present study, some other personal factors such as smoking (Gritz & Crane, 1991) and alcohol dependence (Reba-Harrelson et al., 2008), and multiple attempts of unhealthy weight control methods (Peters et al., 1997 as cited in Celio, 2006) were not involved since they were decided as beyond the scope of this study. In this manner, it could be suggested that in the further studies, the participants' histories of utilizing other weight control strategies or alcohol-drug dependencies should be asked, as well.

Furthermore, the results provided us with the answer that being unsatisfied with one's body image was the most powerful confounding variable for diet pill attitudes of participants, and thus its effects on attitudes towards diet pills were controlled in the main analyses so as to see the unique influence of the interaction between mortality salience and socio-cultural attitudes towards appearance. Nonetheless, investigating the impact of interaction between these three variables on diet pill attitudes, instead of controlling the effect of body image satisfaction, might provide further insights to understand the underlying motivations behind using diet pills. It would not be wrong to say that the results should be replicated in further analyses such as structural equation modeling.

It is also noteworthy that psychopathologies which might be associated with using diet pills were not directly tested such as eating disorders (Steffen et al., 2010), post traumatic stress disorder (Hirft, Rahman, & Berenson, 2011), depression (Patten, 2001), and borderline personality disorders (Reba-Harrelson et al., 2008). Only, participants' perfectionisms, which has crucial role in developing eating pathology (Hewitt, Flett, & Ediger, 1995), and state anxiety levels were evaluated. However, it is possible that participants' diet pill attitudes might be affected by their

psychopathologies. On that account, studies in the future, participants' psychopathologies should also be taken into account.

Moreover, analyses of the current study might also cause some limitations. For instance, since data set used did not move away from homogenous of scores on socio-cultural attitudes appearance scale (SATAQ) (Thompson et al., 2004), which was one of the independent variables, scores on this variable had to be divided into two groups by median split in order to perform ANOVA. Indeed, it is known that while creating groups, scores which were one or half standard deviation both above and below the mean value should be omitted from the data; however, the numbers of the participants in this range were too high, so they were not removed from the data set. Hence, it could be suggested that further studies should include participants who have more variant scores on SATAQ. Also, transforming scores on SATAQ from continuous variable into categorical variable might cause to a decrease in the explained variance of the diet pill attitudes. Under these circumstances, it is also suggested that regression analyses should be performed to examine this kind of variable in further studies.

Additionally, there was one factor which was limited to generalizability of the results. The results of this study are not demonstrative of the majority of Turkish female population due to the fact that only university students were involved in the main study. Hence, it is highly suggested that the results should not be generalized to all young adult Turkish females. Indeed, it might be recommended that further studies should be replicated with young adult females from different education and socio-economic backgrounds.

The final limitation was caused by the nature of outcome variable. Participants' intentions of using diet pills were assessed with an attitude scale; nonetheless, it is possible that attitudes could not always confirm to actual behavior (e.g., LaPiere, 1934; Wicker, (1969). From this point onwards, it could be suggested that in the future, the results should be affirmed by assessing the actual diet pill consumptions of participants. To be

in line with that suggestion, long term effects of being exposed to mortality awareness on future diet pill attitudes or consumptions should also be tested in the future studies.

5.6. Implications of the Study 2 and Study 3

5.6.1. General Implications

Besides its limitations given above, current study made valuable contributions to both practical and research areas of psychology. It was the first empirical attempt to test diet pill attitudes of young adult females in the framework of the terror management health model. Hence, it contributed to current literature by supporting *dual defense* explanations of the terror management health model in a Turkish sample. As expected, in conjunction with Goldenberg and Arndt (2008) suggestions, in the context of unconscious mortality awareness, terror management defenses led to an increase in willingness levels to obtain the societies' thoughts on being thin by utilizing diet pills. Therefore, the study contributed to health psychology literature by explaining why people make decisions which may lead to health defeating outcomes. Likewise, the results of conscious mortality awareness impacts on health facilitating behavior (less positive attitudes towards diet pills compared to unconscious mortality condition) emphasized the role of internalized social norms in attempts to unhealthy weight control method.

Another contribution was that it is the first study in the literature which aimed to test diet pill attitudes by an experimental study. Additionally, sample size might also be considered as strength. For instance, as it is known that most experimental studies were run with a lower sample size such as including 15 or less subjects in each experimental cell at least (see Arndt, Schimel, & Goldenberg, 2003; Routledge, Arndt, & Goldenberg, 2004; Study 1, Cox et al., 2009; Study 2); however, in this study each experimental

condition had at least 24 participants. What is more, participants among experimental conditions were equal to each other in terms of their scores on independent variables.

Moreover, another benefit of the present study is that apart from the terror management defenses (proximal and distal), several factors of using diet pills, which were conceptualized as personal, socio-environmental and psychopathological, were also examined. For instance, in terms of personal factors of using diet pills, as provided earlier, women are more likely to use diet pills than men (see Levy & Heaton, 1993; French et al., 1995; Neurmark-Stzainer et al., 2001; Xiao et al., 2001; Kruger et al., 2004; Tao, 2010), and thus the effect of gender was controlled by involving only young adult females. In addition to this, the impact of body size, which was another personal factor associated with using diet pills, on diet pill attitudes were controlled in the current study by involving not only its objective classification (BMI) (Neurmark-Sztrainer et al., 2003) but also subjective evaluations such as body image satisfaction (Kruger, 2004; Wharton et al., 2000). Plus, impacts of family members, peers, and the media (Allen et al., 1993; Field et al., 1999) were emphasized in the current literature within the context of socio-environmental factors of utilizing diet pills or other deviant weight control strategies. Correspondingly, the aim of the one of the independent variables was to assess how much participants' attitudes towards their appearance depended on socio-cultural norms which comes from family members, peers, media, or athletes. Thus, the results provided further insight for, existential concerns that lead to an increase in the intentions for utilizing diet pills, especially for women who indicated more socio-cultural attitudes towards appearance of their bodies. Finally, among psychopathologies associated with using diet pills, only the effect of state anxiety were examined. On the other hand, perfectionism, which has a crucial role in etiology of eating pathology, was also tested in the framework of the current study. In conclusion, approximately all associated factors of using diet pills were investigated, and so; interpretations based on the results can be considered as reliable.

Also, in addition to the factors associated with taking diet pills, possible impacts of earlier death anxiety levels and participants' self-esteem, which are thought as confounding variables for the effect of mortality salience manipulation, were included in the analyses of this study. Therefore, an important finding was discovered. Among these factors, the predictive one was only the body image satisfaction after all of them entered to equation together. Hence, it might be asserted that the findings give valuable contributions to the literature. It does so by showing that the most predictive variable of engaging in risky weight control method is being unsatisfied with one's body image which is also consistent with Stice's (2002) finding that body image satisfaction is a risk factor for developing eating pathologies.

The final contribution of this study is related to marketing. For instance, it might be affirmed that using undesirable women body images in the advertisements of diet pills may evoke mortality concerns (as TMT suggested), thus, if women already feel pressure to obtain thin ideal of society, this kind of representations would make them more vulnerable for using diet products which help them to reach society ideal, and so to feel themselves immortal. Hence, the marketing sector should carefully choose the images for advertisement use. Parallel with this suggestion Hansen, Winzeler, and Topolonski (2010) showed that mortality related warning labels on cigarette packets may increase the levels of smoking intensity. To be concluded, fear of death should not be used as a method of selling diet products.

5.6.1. Clinical Implications of the Study 2 and Study 3

Apart from the abovementioned general implications, the present study also had several clinical implications as well. One of the implications is that unconscious death anxiety/mortality concerns might be a risk factor to develop positive attitudes towards diet pills for people whose body appearances were depended on social norms. Moreover, clinicians should be

aware of the possible priming effect of death anxiety on consuming diet pills while examining their patients. Another implication might be that feeling less pressurized socially to obtain body relevant social norms served an anxiety-buffer mechanism against unconscious mortality awareness since it was found that after primed with unconscious mortality awareness, participants, whose appearance were less depended on socio-cultural attitudes, indicated less positive attitudes towards diet pills than participants whose appearances were more depended on socio-cultural attitudes. Therefore, the treatments or interventions with diet pill users should be aimed at transforming their body relevant evaluations that are based on external resources and change them into internal resources.

Within the scope of existential psychology, it might not be wrong to claim that the results also enriched etiological explanations of psychological problems. Yalom (1980) believes that mental illnesses might develop as a result of losing meaning of life in response to knowledge of existence (at least one reason). Accordingly, a great deal of researchers has conducted several studies in order to test the impacts of existential anxiety on developing psychopathologies. For instance, the results of the non-clinical studies of O'Connor, Simmons, and Cooper (2003) and Fox and Leug (2004) revealed that individuals who had higher levels of existential anxieties indicated more anorexia tendencies. Consequently, despite the fact that participants in the present study were not examined in terms of possible symptoms of eating disorders, it was shown that unconscious existential concerns of participants who evaluate their appearance according to socio-cultural attitudes lead to an increase in the eating pathology tendencies, which was operationalised as attitudes towards one type of compensatory behavior such as using diet pills. On these grounds, it might be assumed that earlier findings in the existential psychology literature were also supported by an experimental design.

On the other hand, the results must also be interpreted in the context of trauma literature where a relationship between being a trauma victim and

utilizing diet pills was proved to be present (Reba-Harrelson et al., 2008; Hirf, Rahman, & Berenson, 2011). As a matter of fact, experiencing a trauma and exposing mortality concerns in the laboratory by the writing task are different from one another in terms of their potential to create affective arousal and long term effects on daily life; however, it might be possible that both of them could arouse feelings of meaninglessness of life during shorter or longer periods of time. Consequently, according to the results of the current study, it can be argued that trauma victims use diet pills not only to feel relief from the effects of post traumatic stress disorder, as suggested by Hirf, Rahman, and Berenson (2011), but also to confirm the societies' idea to be thin, which helps them to reconstruct the meaning of life, that had been destroyed by some traumatic events they underwent. Hence, our results produced a new research question which needs to be answered in further studies. The question is whether utilizing diet pills or other health compromising weight control strategies might be terror management defenses that are used during covering process from effects of post traumatic disorders. To summarize, the results of this study and previous studies which are present in the literature might be replicated in the framework of *Anxiety-Buffer Disruption Theory* (Pyszczynski & Kesebir, 2011), which is an extended version of terror management theory for understanding major trauma.

REFERENCES

Allen, K. M., Thombs, D. L., Mahoney, C. A., & Daniel, E. L. (1993).

Relationships between expectancies and adolescent dieting behaviors. Journal of School Health, 63(4), 176–181.

Arndt, J., Cook, A., Goldenberg, J. L., & Cox, C. R. (2007). Cancer and the threat of death: The cognitive dynamics of death thought suppression and its impact on behavioral health intentions. Journal of Personality and Social Psychology, 92, 12–29.

Arndt, J., Routledge, C., & Goldenberg, J. L. (2006). Predicting proximal health responses to reminders of death: The influence of coping style and health optimism. Psychology and Health, 21(5), 593–614.

Arndt, J., Schimel, J., & Goldenberg, J. L. (2003). Death can be good for your health: Fitness intentions as a proximal and distal defense against mortality salience. Journal of Applied Social Psychology, 33, 1726–1746.

Arndt, J., Vess, M., Cox, C. R., Goldenberg, J. L., & Lagle, S. (2009). The psychosocial effect of personal thoughts of mortality on cardiac risk assessment. Medical Decision Making, 29(17), 175–181.

Ayvaz, G. (2008). İlköğretim 8. sınıf öğrencilerinin diyet uygulamaları ve beslenme davranışları. Unpublished Master Thesis. Gazi University, Ankara, Turkey.

Becker, E. (1973). The denial of death. New York: Free Press.

Berg, F. M. (1999). Health risks associated with weight loss and obesity treatment programs. Joumal of Social Issues, 55(2), 277–297.

Binbay, T. (2010). Sibutramin içerdiği saptanan reçetesiz zayıflama ürününün yol açtığı psikotik bulgulu ilk manik dönem. Türk Psikiyatri Dergisi, 21(4), 335–337.

Blanck, H. M., Khan, L. K., & Serdula, M. K. (2001). Use of nonprescription weight loss products: results from a multistate survey. Journal of American Medical Association, 286(8), 930–935.

Bozo. Ö., Tunca, A., & Şimşek, Y. (2009). The impact of death anxiety and age on health promoting behaviors in a Turkish sample: A terror management theory perspective. Journal of Psychology: Interdisciplinary and Applied, 143(4), 28–37.

Burke, B. L., Martens, A., & Faucher, E. H. (2010). Two decades of terror management theory: A meta-analysis of mortality salience research. Personality and Social Psychology Review, 14(2), 155–195.

Cafri, G., Yamamiya, Y., Brannick, M., & Thompson, J. K. (2005). The impact of thin-ideal internalization on body dissatisfaction: A meta-analytic review. Clinical Psychology: Science and Practice, 12, 421–433.

Calfee, R., & Fadale, P. (2005). Popular ergogenic drugs and supplements in young athletes. Pediatrics, 117, 577–589.

Celio, C., Luce, K. H., Bryson, S. W., Winzelberg, A. J., Cunning, D.,

Rockwell, R. et al. (2006). Use of diet pills and other dieting aids in a college population with high weight and shape concerns. International Journal of Eating Disorders, 39(6), 492–497.

Chao, Y. M., Pisetsky, E. M., Dierker, L. C., Dohm, F. A., Rosselli, F., May, A. M. et al. (2008). Ethnic differences in weight control practices among U.S. adolescents from 1995 to 2005. International Journal of Eating Disorders, 41(2), 124–133.

Child, D. (2006). The essentials of factor analysis (3rd ed.). London: Continuum.

Cihan, B., & Bozo, Ö. (2012). Genç yetişkin kadınlarda zayıflama haplarına yönelik tutumları ölçen bir ölçeğin geliştirilmesi. Türk Psikoloji Yazıları, 15(30), 62–68.

Cooper, P. D., Goldenberg, J. L., & Arndt, J. (2010). Examining the terror management health model: The interactive effect of conscious death thought and health-coping variables on decisions in potentially fatal health domains. Personality and Social Psychology Bulletin, 20(10), 1–10.

Cox, C. R., Cooper, D. P., Vess, M., Arndt, J., Goldenberg, J. L., Routledge, C. (2009). Bronze is beautiful but pale can be pretty: The effects of appearance standards and mortality salience on sun-tanning outcomes. Health Psychology, 28(6), 746–752.

Çuhadaroğlu, F. (1986). "Adölesanlarda Benlik Saygısı". Unpublished Master's Thesis, Middle East Technical University, Ankara.

Doğan, V. (2012, 07, 05). RTÜK 92 bitkisel ürünün reklamını yasakladı. Radikal. Retrieved from http://www.radikal.com.tr/saglik/rtuk_92_bitkisel_urunun_reklamini_yasakladi-1093254

Erden, F. B., & Tanriyeri, P. (2004). Ülkemizde vitamin ve mineral eklentilerin akılcı kullanımı. Sürekli Tıp Eğitim Dergisi, 11(13), 411–414.

Erkekoğlu, P., Giray, B., & Şahin, G. (2009). Türkiye'de zayıflama amacıyla kullanılan toz karışımların ve likit preparatların toksikolojik açıdan değerlendirilmesi. Hacettepe Tıp Dergisi, 40, 205.

Field, A. E., Cheung, L., Wolf, A. M., Herzog, D. B., Gortmaker, S. L., & Colditz, G. A.(1999). Exposure to the mass media and weight concerns among girls. Official Journal of the American Academy of Pediatrics, 103(3), 1–5.

Flynn, M. A. T. (2000). Book Rewiev: Women afraid to eat ± breaking free in today's weight–obsessed world. Frances (M. Berg). British Journal of Nutrition, 84, 255–256.

Fox, A. P., & Leung, N. (2004). The role of existential anxiety in anorexia nervosa. Somerset and Wessex Eating Disorders Association. Retrieved June 5, 2013, from http://www.swedauk.org/Research/published/eanx.htm

Florian, V., & Mikulincer, M. (2004). A multifaceted perspective on the existential meanings, manifestations, and consequences of the fear of personal death. In J. Greenberg, S. L. Koole & T. Pyszczynski (Eds), Handbook of experimental existential psychology. (pp. 56–72). New York: The Guilford Press.

French, S. A., Story, M., Neumark–Sztainer, D., Resnick, M., & Blum, R. (1997). Ethnic differences in psychosocial and health behaviors correlates of dieting, purging, and binge eating in a population–based sample of adolescent females. International Journal of Eating Disorder, 22, 315–322.

Giray, B., Erkekoğlu, P., & Şahin Ş. (2009). Zayıflama amacıyla kullanılan çok etken maddeli bazı preparatların toksikolojik açıdan değerlendirilmesi: fen-phen ve usnik asit. Hacettepe Üniversitesi Eczacılık Fakültesi Dergisi, 29(2), 131–148.

Goldenberg J. L., & Arndt J. (2008). The implications of death for health: a terror management health model for behavioral health promotion. Psycholgy Review, 115(4), 1032– 1053.

Goldenberg J. L., Arndt, J., Hart, J., & Brown, M. (2005). Dying to be thin: The effects of mortality salience and body mass index on restricted eating among women. Personality and Social Psychology Bulletin, 31, 1400–1412.

Goldenberg, J. L., Pyszczynski, T., Greenberg, J., & Solomon, S. (2000). Fleeing the body: A terror management perspective on the problem

ofhuman corporeality. Personality and Social Psychology Review, 4, 200–218.

Green, S. B., Salkind, N. J., & Akey, T. M. (1997). Using SPSS for windows: Analyzing and understanding data. New York: Prentice.

Greenberg, J., Pyszczynski, T., Solomon, S., Simon, L., & Breus, M. (1994). Role of consciousness and accessibility of death-related thoughts in mortality salience effects. Journal of Personality and Social Psychology, 67, 627-637.

Gritz E. R., & Crane L. A. (1991). Use of diet pills and amphetamines to lose weight among smoking and nonsmoking high school seniors, Health Psychology, 10(5), 330–335.

Güneş, G., & Altınok Y. A. (2010). Malatya'da lise öğrencilerinin kilo kontrolüyle ilgili inanışları ve kilo verme davranışlar, Türk Pediatri Arşivi Dergisi, 45, 41–48.

Haller, C. A., & Benowitz, N. L. (2000). Adverse cardiovascular and central nervous system events associated with dietary supplements containing ephedra alkaloids. The New England Journal of Medicine, 343(25), 1833–1838.

Hansen, J., Winzeler, S., & Topolinski, S. (2010).When the death makes you smoke: A terror management perspectiveon the effectiveness of cigarette on-pack warnings. Journal of Experimental Social Psychology, 46, 226–228.

Hewitt, E. L., & Flett, G. L. (1991). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. Journal of Personality and Social Psychology, 60, 456–470.

Hewitt, P. L., Flett, C. L., & Ediger, E. E. (1995). Perfectionism traits and perfectionistic self-presentation in eating disorder attitudes, characteristics, and symptoms. International Journal of Eating Disorders, 18(4), 317–326.

Hirth, J. M., Rahman, M., & Berenson, A. B. (2011). The association of posttraumatic stress disorder with fast food and soda consumption and unhealthy weight loss behaviors among young women. Journal of Women's Health, 20(8), 1141–1149.

Hovardaoğlu, S. (1993). Vücut algısı ölçeği. Psikiyatri, Psikoloji, Psikofarmakoloji (3P) Dergisi, 1(1), 26.

Jessop, D. C., & Wade, J. (2008). Fear appeals and binge drinking: A terror management theory perspective. British Journal of Health Psychology, 13, 773–788.

Kalafat, T., Özbaşı, D., & Dilek, C. (2008, 14-16 May,). Görünüme yönelik sosyokültürel tutumlar ölçeği (göysto)'nin uyarlanması. Paper presented at I. Ulusal Eğitimde ve Psikolojide Ölçme ve Değerlendirme Kongresi, Ankara, Turkey.

Kruger, J., Galuska, D. A., Serdula, M. K., & Jones, D. A. (2004). Attempting to lose weight specific practices among U.S. adults. American Journal of Preventive Medicine, 26(5), 402–406.

LaPiere, R. T. (1934). Attitude versus action. Social Forces, 13, 230-237.

Levy, A. S., & Heaton, A. W. (1993). Weight control practices of U.S. adults trying to lose weight. Annals of internal Medicine, 119(7), 661–666.

Martin, I. M. & Kamins, M. A. (2010). An application of terror management theory in the design of social and health-related anti-smoking appeals. Journal of Consumer Behaviour, 9, 172–190.

Neumark–Sztainer, D., Wall, M. M., Story, M., & Perry, C. L. (2003). Correlates of unhealthy weight–control behaviors among adolescents: implications for prevention programs. Health Psychology, 22(1), 88–98.

O'Connor, M., Simmons, T., & Cooper, M. (2003). Assumptions and beliefs, dieting, and predictors of eating disorder-related symptoms in young women and young men. Eating Behaviours, 4, 1-6.

Oral, M. (1999). The relationship between dimensions of perfectionism, stressful life events and depressive symptoms in university students a test of diathesis-stress model of depression. Unpublished Master's Thesis, The Middle East Technical University, Ankara, Turkey.

Öner, N., & Le Compte, A. (1985). State-trait anxiety guide. İstanbul: Boğaziçi University Publishing.

Özdemir, N. (2008). Liseye devam eden kız öğrencilerin beslenme alışkanlıkları ve bulundukları kilolarından memnuniyet durumlarının incelenmesi. Unpublished Master's Thesis, Gazi University, Ankara, Turkey.

Pyszczynski, T., & Kesebir, P. (2011). Anxiety buffer disruption theory: a terror management account of posttraumatic stress disorder. Anxiety Stress Coping, 24(1), 3–26.

Pyszczynski, T., Greenberg, J., & Solomon, S. (1999). Dual-process model of defense against conscious and unconscious death-related thoughts an extension of terror management theory. Psychological Review, 106(4), 835–845.

Radimer, K. L., Subar, A. F., & Thopmson, F. E. (2000). Nonvitamin, nonmineral dietary supplements: issues and findings from NHANES III. Journal of the American Dietetic Association, 100, 447–454.

Reba-Harrelson, L., van Holle, A., Thornton, L. M., Klump, K. L., Berrettini, W. H., Brandr, H. et al. (2008). Features associated with diet pill use in individuals with eating disorders. Eating Behaviors, 9(1), 73–81.

Root, T. L., Pisetsky, E. M, Thornton, L., Lichtenstein, P., Pedersen, N. L., & Bulik, C. M. (2010). Patterns of co-morbidity of eating disorders and substance use in Swedish females. Psychological Medicine, 40, 105–115.

Rosen, L. W., Shafer, C. L., Dummer, G. M., Cross, L. K., Deuman, G. W., & Malmberg, S. R. (1988). Prevalence of pathogenic weight-control behaviors among Native American women and girls. International Journal of Eating Disorders, 6, 807–811.

Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, NJ: Princeton University Press.

Routledge, C., Arndt, J., & Goldenberg, J. L. (2004). A time to tan: Proximal and distal effects of mortality salience on sun exposure intentions. Personality and Social Psychology Bulletin, 30, 1347–1358.

Secord, P. F., & Jourard, S. M. (1953). The appraisal of body-cathexis: body-cathexis and the self. Journal of Consulting Psychology, 17, 343–347.

Smith, B. R. & Cohen, P. A. (2010). Dependence on the Brazilian diet pill: a case report. The American Journal on Addictions, 19, 291–292.

Solomon, S., Greenberg, J., & Pyszczynski, T. (1991). A terror management theory of social behavior: The psychological functions of self-esteem and cultural worldviews. In M. P. Zanna (Ed.), Advances in Experimental Social Psychology (Vol. 24, pp. 93–159). San Diego, CA: Academic Press.

Söğüt, Ö., Kaya, H., Gökdemir, M. T., Nimetoğlu, M. S., & Solduk, L. (2010). Zayıflama amacıyla acı biber hapı kullanımı sonrasında gelişen kardiyotoksisite: iki olgu sunumu. Türkiye Acil Tıp Dergisi, 10(3), 133–136.

Spielberger, C. D., Gorsuch, R.L., & Lushene. R.E. (1970). Manual for the state-trait anxiety inventory. Palo Alto, CA: Consulting Psychologists Press.

Steffen, K. J., Mitchell, J. E., le Grange, D., Crow, S. J., Attia, E., Bulik, C. M. et al. (2010). A prevalence study and description of alli1 use by patients with eating disorders. International Journal of Eating Disorder, 43, 472–479.

Stice, E. (2002). Risk and maintenance factors for eating pathology: A meta-analytic review. Psychological Bulletin, 128, 825−848.

Swami, V. (2008). The influence of body weight and shape in determining female and male physical attractiveness. A. M. Colombus (Ed). In Advances in Psychology Research (Vol. 56, pp.45–70). New York: Nova Science Publisher.

Tao, Z. L. (2010). Epidemiological risk factor study concerning abnormal attitudes toward eating and adverse dieting behaviors among 12– to 25–years–old Chinese students. European Eating. Disorders Review, 18, 507–514.

Taubman-Ben-Ari, O., & Findler, L. (2005). Proximal and distal effects of mortality salience on willingness to engage in health promoting behavior along the life span. Psychology & Health, 20(3), 303–318.

Thompson, J. K., & Heinberg, L. J. (1999). The media's influence on body image disturbance and eating disorders: We've reviled them, now can we rehabilitate them? Journal of Social Issues, 55, 339–353.

Thompson, J. K. van den Berg, P., Roehrigh, M., Guarda, A. S., & Heinberg, L. J. (2004). The sociocultural attitudes towards appearance scale-3 (sataq-3): development and validation, International Journal of Eating Disorders, 35(3), 293-304.

Thompson, M. A., & Gray, J. J. (1995). Development and validation of new body-image assessment scale. The Journal of Personality Assessment, 64(2), 258–269.

Thompson, K. M., Wonderlich, S. A., Crosby, R. D., & Mitchell, J. E. (2001). Sexual violence and weight control techniques among adolescent girls. International Journal of Eating Disorders, 29(2), 166–176.

Thorson, J. A., & Powell, F. C. (1994). A revised death anxiety scale. In R. A. Neimeyer (Ed) Death Anxiety Handbook (pp. 31–43). Washington, DC: Taylor & Francis.

Traboulsi, A. S., Viswanathan, R., & Coplan, J. (2002). Suicide attempt after use of herbal diet pill. American Journal of Psychiatry, 159, 318–319.

Türk Eczacılar Birliği. (2009). Reçetesiz ilaçlar ve ilaç dışı ürünler: Betimleme ve müdahale. Türk Eczacılar Birliği, Raporlar Dizisi I, Ankara.

Ünlülere Bakanlık Freni: Bakanlık yasaklı olduğu halde internette satılan zayıflama ürünlerine karşı halkı uyardı (2012, 05, 17). Radikal. Retrieved from http://www.tazehaber.com/haberoku.php/909045/unlulere-bakanlik-freni

Yalom, I. (1980). Existential psychotherapy. New York: Basic Books.

Yıldız, M., & Karaca, F. (2001). Thorson-Powell ölüm kaygı'sı ölçeği'nin Türkçe çevrisinin normal populasyonda geçerlik ve güvenilirlik çalışması. Tabula Rasa, 1(1), 43–55.

Wharton, C. M., Adams, T., & Hampl, J. S. (2008). Weight loss practices and body weight. Journal of American College Health, 56(5), 579–584.

Wicker, A. W. (1969). Attitudes versus actions: The relationship of verbal and overt behavioral responses to attitude objects. Journal of Social Issues, 25, 41-78.

Wiseman, C. V., Gray, J. J., Mosimann, J. E., & Ahrens, A. H. (1992). Cultural expectations of thinness in women: An update. International Journal of Eating Disorders, 11, 85–89.

Xiao, G. L., Qian, Y. M., Huon, G., & Wang, X. P. (2001). Rate of eating disorder in Beijing girls. Chinese Journal of Mental Health, 5, 362–364.

APPENDICES

Appendix A: Informed Consents and Debriefing Forms

Gönüllü Katılım Formu (Study 1)

Sayın Katılımcı,

Bu çalışma, ODTÜ Klinik Psikoloji Yüksek Lisans Programı öğrencisi ve araştırma görevlisi olan Psk. Burçin Cihan tarafından Doç. Dr. Özlem Bozo danışmanlığında, diyet haplarına yönelik tutumları değerlendirmesi istenilen bir ölçek geliştirmek amacıyla, yüksek lisans tezi kapsamında yürütülmektedir. Sizden, bu amaçla hazırlanmış olan ve yaklaşık olarak 30 dakika sürecek olan anketimizi doldurmanızı istiyoruz.

Anket genel olarak, kişisel rahatsızlık verecek sorular içermemektedir. Ancak, katılım sırasında herhangi bir nedenden ötürü kendinizi rahatsız hissederseniz, cevaplama işini istediğiniz an bırakmakta serbestsiniz. Araştırmadan elde edilen bilgiler yalnızca bilimsel amaçlarla kullanılacak, akademik veya idari amaçla kullanılması söz konusu olmayacaktır.

Çalışma hakkında daha fazla bilgi almak için ODTÜ Psikoloji Bölümü'nde araştırma görevlisi olarak görev yapmakta olan Psk. Burçin Cihan (Tel: 507 716 44 69) ; E-posta: (burcin.cihan@metu.edu.tr) ile iletişim kurabilirsiniz.

Katılımınız için şimdiden teşekkür ederiz!

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda bırakıp çıkabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum.

Evet Hayır

Gönüllü Katılım Formu (Study 2)

Sayın Katılımcı,

Bu çalışma, ODTÜ Klinik Psikoloji Yüksek Lisans Programı öğrencisi ve araştırma görevlisi olan Psk. Burçin Cihan tarafından Doç. Dr. Özlem Bozo danışmanlığında, bireylerin çeşitli kişilik özellikleri ve ürün satın alma davranışlarının incelenmesi amacıyla yüksek lisans tezi kapsamında yürütülmektedir.

Sizden bu amaçla hazırlanmış olup yaklaşık 30 dakika sürecek olan ve içerisinde çeşitli bireysel özelliklerin incelendiği soruların olduğu anketleri doldurmanızı istiyoruz.

Anketler genel olarak, kişisel rahatsızlık verecek sorular içermemektedir. Ancak, katılım sırasında herhangi bir nedenden ötürü kendinizi rahatsız hissederseniz, cevaplama işini istediğiniz an bırakmakta serbestsiniz. Araştırmadan elde edilen bilgiler yalnızca bilimsel amaçlarla kullanılacak, akademik veya idari amaçla kullanılması söz konusu olmayacaktır.

Çalışma hakkında daha fazla bilgi almak için ODTÜ Psikoloji Bölümü Araştırma Görevlisi Psk. Burçin Cihan (Tel: 507 716 44 69; e-posta: burcin.cihan@metu.edu.tr) ile iletişim kurabilirsiniz.

Katılımınız için şimdiden teşekkür ederiz!

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda kesip çıkabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum.

Evet Hayır

Gönüllü Katılım Formu (Study 3)

Sayın Katılımcı,

Bu çalışma, ODTÜ Klinik Psikoloji Yüksek Lisans Programı öğrencisi ve araştırma görevlisi olan Psk. Burçin Cihan tarafından Doç. Dr. Özlem Bozo danışmanlığında, kişilik özellikleri ve ürün satın alma davranışları arasındaki ilişkinin incelenmesi amacıyla, yüksek lisans tezi kapsamında yürütülmektedir.

Sizden bu amaçla yaklaşık 30 dakika sürecek olan ve psikoloji bölümü laboratuarlarında gerçekleştirilecek olan deneye katılmanızı istiyoruz.

Deneyler sırasında herhangi bir nedenden ötürü kendinizi rahatsız hissederseniz, cevaplama işini istediğiniz anda bırakmakta serbestsiniz. Araştırmadan elde edilen bilgiler yalnızca bilimsel amaçlarla kullanılacak, akademik veya idari amaçla kullanılması söz konusu olmayacaktır.

Çalışma hakkında daha fazla bilgi almak için ODTÜ Psikoloji Bölümü Araştırma Görevlisi Burçin Cihan (Tel: 507 716 44 69) ; E-posta: (burcin.cihan@metu.edu.tr) ile iletişim kurabilirsiniz.

Katılımınız için şimdiden teşekkür ederiz!

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda kesip çıkabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum. (Formu doldurup imzaladıktan sonra uygulayıcıya geri veriniz).

Evet Hayır

Katılım Sonrası Bilgi Formu

Bu çalışma ODTÜ Klinik Psikoloji Yüksek Lisans Programı öğrencisi ve araştırma görevlisi olan Burçin Cihan tarafından Doç.Dr.Özlem Bozo danışmanlığında yüksek lisans tezi kapsamında yürütülmektedir.

Dehşet Yönetimi Kuramı'na göre yürütülen çalışmalar insanların ölümlü olduklarına dair farkındalıkları yaşadıklarında kültürel normlara daha uygun davrandıklarını göstermiştir. Bu bağlamda kuramın öngördüğü şey; eğer ölüm farkındalığı bilinç düzeyinde ise insanlar kültürel normlara uygun davranmaya daha az eğilimliyken, bilinç dışındayken daha fazla eğilimli olduklarıdır. Kuramcılar son yıllarda sağlık psikolojisi konuları kapsamında olan sağlığa yönelik davranışları da bu şekilde açıklamaya çalışmışlardır. Özellikle sağlığa zararlı davranışların altındaki motivasyonu açıklamak için DYK kullanılmaktadır.

Son zamanlarda özellikle medyanın etkisi ile kadın vücuduna yönelik atıfların genelde kadınların zayıf ve ince bir bedene sahip olması yönünde olması, kadınların aşırı egzersiz ve diyet yapma eğilimlerinin artmasına olumsuz anlamda katkıda bulunmuş olduğu söylenebilir. Bunun en yeni örneği de diyet hapı kullanımıdır. Sağlığa yararları bilinmediği ve hatta kullanılması halinde ölüm riski olmasına rağmen, birçok kadın bu hapları kullanmayı tercih etmekte ve bu hapların satışlarının günden güne arttığı görülmektedir.

Bu çalışmada, DYK'nın sağlığa zararlı davranışları açıklamaya yönelik bakış açısı kullanılarak, ölümlülük farkındalığın, diyet hapı kullanmaya yönelik tutumlar üzerindeki etkisinin incelenmesi amaçlanmıştır. Katıldığınız çalışmadan elde edilecek sonuçlar, araştırmacı tarafından yüksek lisans tezi için kullanılacaktır. Sadece gruplardan elde edilen sonuçlar rapor edilecek, bireysel sonuçlar rapor edilmeyecektir. Çalışmanın sonuçlarını öğrenmek ya da daha fazla bilgi sahibi olmak için Burçin Cihan [(Tel507 716 44 69) ; E-posta: (burcin.cihan@metu.edu.tr)] ile iletişime geçebilirsiniz.

Appendix B: Demographic Information List and Screening Form for Dieting and Weight Control Methods

Demografik Bilgiler İle Diyet Ve Kilo Kontrol Etme Yöntemleri İçin Tarama Formu

1) Lütfen yaşınızı belirtiniz: _____

2) Eğitim durumunuz nedir?

   Okur-yazar_____ İlkokul_____ İlköğretim_____ Lise_____

   Üniversite_____ Yüksek Lisans_____ Doktora_____

3) Evinize giren toplam geliriniz ne kadar Türk Lirasıdır?

   0-999 TL _____

   1000-1999 TL _____

   2000-2999 TL _____

   3000-3999 TL _____

   4000-4999 TL _____

   5000-5999 TL _____

   6000 ve üzeri _____

4) Boyunuz (cm) _____

5) Kilonuz (kg) _____

6) Kendi kilonuzu nasıl değerlendiriyorsunuz?

   Zayıf _____

   Normal _____

   Hafif Kilolu _____

   Şişman _____

Aşırı Şişman _____

7) Daha önce diyet yaptınız mı?

Evet _____ Hayır _____

8) Bu diyeti diyetisyen ya da doktor kontrolünde mi yaptınız?

Evet _____ Hayır _____

9) Bugüne kadar kilo vermek ya da kilonuzu korumak için aşağıdaki yöntemlerden hangisini kullandınız (birden çok seçenek işaretleyebilirsiniz)

Neredeyse hiç yemek yemedim _____

Çok az yemek yedim _____

Kendimi kusturdum _____

Laktasif kullandım _____

Diüretik kullandım _____

Güçlendirici ya da özel zayıflatıcı içecekler içtim _____

Öğün atladım _____

Çok daha fazla sigara içtim _____

Bunlardan hiçbiri _____

10) Daha Önce Diyet Hapı Kullandınız mı (Hatay biberi, altın çilek)

Evet _____ Hayır _____

Appendix C: Body Image Scale (Sample Items)

Vücut Algısı Ölçeği

Aşağıda çeşitli vücut özellikleri ve beğenip beğenmeme ifadeleri bulunmaktadır. Yapmanız gereken, bir vücut özelliğiniz hakkındaki duygularınızı bu ifadelere göre değerlendirmektir. Herhangi bir vücut özelliğinizi genel olarak beğenip beğenmediğinize göre duygularınızı değerlendiriniz.

		Çok beğeniyorum	**Oldukça beğeniyorum**	**Kararsızım**	**Pek beğenmiyorum**	**Hiç beğenmiyorum**
1.	Saçlarım	1	2	3	4	5
2.	Yüzümün rengi	1	2	3	4	5
3.	İştahım	1	2	3	4	5
4.	Ellerim	1	2	3	4	5
5.	Vücudumdaki kıl dağılımı	1	2	3	4	5

Appendix D: Scale of Attitudes Towards Diet Pills
Zayıflama Haplarına Yönelik Tutum Ölçeği

Aşağıdaki ölçek, bireylerin diyet hapı ***(Altın çilek, Hatay biberi, elma krom, lahana hapı vb.)*** kullanmaya yönelik tutumlarını ölçmek amacı ile geliştirilmiştir. Lütfen her bir maddeyi dikkatlice okuyarak, o maddenin"sizin" için ne ifade ettiğini **1-5 arasında (kesinlikle Katılmıyorum-Kesinlikle Katılıyorum** şeklinde) değerlendiriniz.

		Kesinlikle Katılmıyorum	**Katılmıyorum**	**Kararsızım**	**Katılıyorum**	**Kesinlikle Katılıyorum**
1.	Diyet haplarının doktor kontrolü olmadan kullanılmasının sağlığa zararlı olduğunu düşünüyorum	1	2	3	4	5
2.	Daha güzel görünmemi sağlayacaksa diyet hapı kullanarak zayıflamakta tereddüt etmem	1	2	3	4	5
3.	Eğer kilosundan çok şikâyetçi olan bir arkadaşım varsa diyet hapı kullanmasını önerebilirim	1	2	3	4	5
4.	Egzersiz yaparak kilo vermeye vaktim yoksa kilo vermek için diyet hapı kullanabilirim	1	2	3	4	5
5.	Ailemden birisi diyet hapı kullanmak isterse ona engel olurum	1	2	3	4	5
6.	Diyet haplarının insanların paralarını ele geçirmek için üretilmiş bir tuzak olduğunu düşünüyorum	1	2	3	4	5
7.	Diyet hapı kullanmış olan arkadaşlarımın/yakınlarımın sağlıkları için endişelenirim	1	2	3	4	5

8.	Diyet hapları, kısa sürede hızlı kilo vermek için ideal bir yöntemdir	1	2	3	4	5
9.	İçeriğini ve nasıl yapıldığını bilsem de diyet haplarına güvenmem	1	2	3	4	5
10.	Diyet hapı kişinin kilosunu kendi kendine kontrol edebilmesini sağlar	1	2	3	4	5
11.	Ünlü insanlar diyet hapı kullanıyorlarsa bir bildikleri vardır	1	2	3	4	5
12.	Doktora/diyetisyene gidecek kadar param olmazsa bunların yerine diyet hapı kullanmayı tercih edebilirim	1	2	3	4	5
13.	Kilolarım sağlığımı bozmaya başlasa da diyet hapı kullanmam	1	2	3	4	5
14.	Bence diyet haplarını kullanmak için doktor önerisi gerekli değildir	1	2	3	4	5
15.	Yaşım ilerledikçe kilo vermemin zorlaşacağını düşünmek, diyet hapı kullanmaya olan mehilimi arttırır	1	2	3	4	5
16.	İnternette yapılan reklamlar diyet haplarına güvenimi arttırır	1	2	3	4	5
17.	Diyet hapları bitkisel ürünlerden yapıldığından kullanmak için doktora danışmaya gerek yoktur	1	2	3	4	5
18.	Diyet hapları diğer kilo verme yöntemlerinden daha ulaşılabilir olduğu için kullanabilirim	1	2	3	4	5

Appendix E: Socio-Cultural Attitudes towards Appearance Questionnaire

Görünüme Yönelik Sosyokültürel Tutum Ölçeği

Lütfen aşağıdaki her bir maddeyi, "Kesinlikle Katılmıyorum (1) " - "Kesinlikle Katılıyorum (5) " arasındaki cevaplardan size uygun olan bir tanesini seçerek yanıtlayınız

		Kesinlikle Katılmıyorum	**Katılmıyorum**	**Kararsızım**	**Katılıyorum**	**Kesinlikle Katılıyorum**
1.	Dergilerdeki resimler moda ve çekici olma konusunda önemli bir bilgi kaynağıdır.	**1**	**2**	**3**	**4**	**5**
2.	Dergi reklâmları moda ve çekici olma konusunda önemli bir bilgi kaynağıdır.	**1**	**2**	**3**	**4**	**5**
3.	Filmler moda ve çekici olma konusunda önemli bir bilgi kaynağıdır.	**1**	**2**	**3**	**4**	**5**
4.	TV moda ve çekicilik konusunda bilgi kaynağıdır.	**1**	**2**	**3**	**4**	**5**
5.	Dergi yazıları moda ve çekici olma konusunda önemli bir bilgi kaynağı değildir.	**1**	**2**	**3**	**4**	**5**

Appendix F: Multi-Dimensional Perfectionism Scale (Sample Items)

Çok Boyutlu Mükemmeliyetçilik Ölçeği

Aşağıda kişilik özellikleri ve davranışlarına ilişkin bir dizi ifade bulunmaktadır. Her ifadeyi okuduktan sonra o ifadede belirtilen fikre katılma derecenizi 7 (kesinlikle katılıyorum) ve 1 (kesinlikle katılmıyorum) arasında değişen rakamlardan size uygun olanı işaretleyerek belirtiniz. (Örneğin; kesinlikle katılıyorsanız 7'yi, katılıyorsanız 6'yı, biraz katılıyorsanız 5'i, kararsızsanız 4'ü, bir miktar kaıtlmıyorsanız 3'ü, katılmıyorsanız 2'yi ve kesinlikle katılmıyorsanız 1 rakamını işaretleyiniz).

1.	Bir iş üzerinde çalıştığımda iş kusursuz olana kadar rahatlamam	1	2	3	4	5	6	7
2.	En iyisinden aşağısına razı oldukları için arkadaşlarımı nadiren eleştiririm	1	2	3	4	5	6	7
3.	Genelde kişileri, kolay pes ettikleri için eleştirmem	1	2	3	4	5	6	7
	Yakınlarımın başarılı olmaları gerekmez	1	2	3	4	5	6	7
4.	Başkalarının benden beklentilerini karşılamakta güçlük çekerim	1	2	3	4	5	6	7
5.	Başkalarının yaptığı her şeyde üstün başarı göstermelerini nadiren beklerim	1	2	3	4	5	6	7

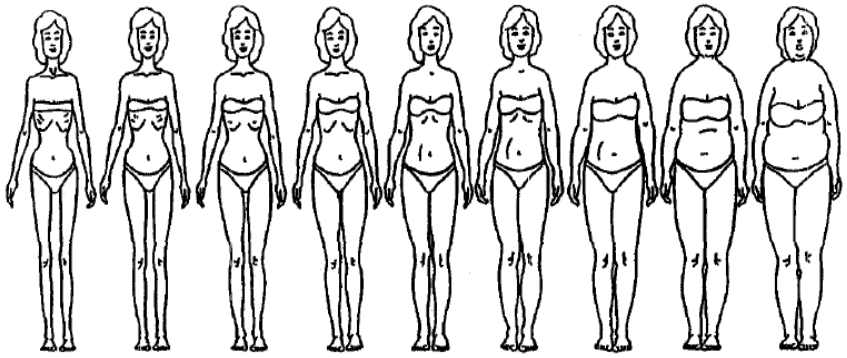
Appendix G: Thorson-Powell's Death Anxiety Scale (Sample Items)
Thorson-Powell Ölüm Anksiyetesi Ölçeği

Her bir cümleye katılma ya da katılmama durumunuzu en iyi sekilde gösteren numarayı isaretleyiniz.

		Fikrime Çok Uygun	**Fikrime Uygun**	**Kararsızım**	**Fikrime Aykırı**	**Fikrime Çok Aykırı**
1.	Acı çekerek ölmekten korkuyorum	0	1	2	3	4
2.	Ölümden sonrasının nasıl bir yer olduğunu bilmemek beni korkutur	0	1	2	3	4
3.	Öldükten sonra bir daha düsünmemek fikri beni dehsete düsürür	0	1	2	3	4
4.	Gömüldükten sonra bedenime ne olacağı beni kaygılandırmıyor	0	1	2	3	4
5.	Tabutlar beni huzursuz eder	0	1	2	3	4

Appendix H: Pictorial Body Image Scale (Sample Items)
Resimsel Beden Algısı Ölçeği

Lütfen, aşağıdaki beden tiplerinden, <u>sizin beden tipinize</u> benzer olduğunu düşündüğünüz bir tanesini işaretleyiniz.



1	2	3	4	5	6	7	8	9

Appendix I: State Anxiety Inventory (Sample Items)

Durumsal Kaygı Envanteri

Aşağıda kişilerin lendilerine ait duygularını anlatmada kullandıkları bir takım ifadeler verilmiştir. Her ifadeyi lütfen dikkatle okuyun. Sonra, şu an kendinizi nasıl hissettiğinizi, ifadelerin sağ tarafındaki seçeneklerden en uygun olanını işaretleyerek belirtiniz.

		Hemen hiç	**Biraz**	**Oldukça**	**Tamamiyle**
1.	Kendimi sakin hissediyorum	1	2	3	4
2.	Kendimi güvenli hissediyorum	1	2	3	4
3.	Huzursuzum	1	2	3	4
4.	Pişmanlık duygusu içindeyim	1	2	3	4
5.	Kendimi rahat hissediyorum	1	2	3	4

Appendix J: Rosenberg Self-Esteem Questionnaire (Sample Items)

Rosenberg Benlik Saygısı Ölçeği

Aşagıdaki ifadeleri okuyunuz ve size uygun olan seçeneklerden bir tanesini seçiniz. Doğru ya da yanlış cevap yoktur. Önemli olan seçtiğiniz ifadenin sizin görüşünüzü yansıtıyor olmasıdır.

1. Kendimi en az diğer insanlar kadar değerli buluyorum.

a. Çok Doğru b. Doğru c. Yanlış d. Çok Yanlış

2. Bazı olumlu özelliklerim olduğunu düşünüyorum.

a. Çok Doğru b. Doğru c. Yanlış d. Çok Yanlış

3. Genelde kendimi başarısız bir kişi olarak görme eğilimindeyim.

a. Çok Doğru b. Doğru c. Yanlış d. Çok Yanlış

4. Ben de diğer insanların birçoğunun yapabildiği kadar birşeyler yapabilirim.

a. Çok Doğru b. Doğru c. Yanlış d. Çok Yanlış

5. Kendimde gurur duyacak fazla birşey bulamıyorum.

a. Çok Doğru b. Doğru c. Yanlış d. Çok Yanlış

Appendix K: Tez Fotokopisi İzin Formu

TEZ FOTOKOPİSİ İZİN FORMU

ENSTİTÜ

Fen Bilimleri Enstitüsü ☐

Sosyal Bilimler Enstitüsü ☐

Uygulamalı Matematik Enstitüsü ☐

Enformatik Enstitüsü ☐

Deniz Bilimleri Enstitüsü ☐

YAZARIN

Soyadı : Cihan

Adı : Burçin

Bölümü : Psikoloji

TEZİN ADI: The Effects of Mortality Salience and Body-Related Social Norms on Attitudes towards Diet Pills

TEZİN TÜRÜ : Yüksek Lisans ☐ Doktora ☐

1. Tezimin tamamından kaynak gösterilmek şartıyla fotokopi alınabilir. ☐
2. Tezimin içindekiler sayfası, özet, indeks sayfalarından ve/veya bir bölümünden kaynak gösterilmek şartıyla fotokopi alınabilir. ☐
3. Tezimden bir bir (1) yıl süreyle fotokopi alınamaz. ☐

TEZİN KÜTÜPHANEYE TESLİM TARİHİ: