THE MEDIATING ROLE OF COGNITIVE FUSION AND ACCEPTANCE ON THE RELATIONSHIP BETWEEN OBSESSIVE-COMPULSIVE SYMPTOMS, SHAME, GUILT, AND SELF-DISGUST

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ABSTRACT

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Master's Program in Clinical Psychology

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This study examines the mediator roles of thought-action fusion and experiential avoidance on the relationship between shame and obsessive-compulsive symptoms; self-disgust and obsessive-compulsive symptoms; guilt and obsessive-compulsive symptoms. The sample consists of 316 adults with the ages of 18 years old and above. Vancouver Obsessive-Compulsive Inventory, Acceptance and Action Questionnaire-II, Thought- Action Fusion Scale, Self-Disgust Scale, Shame and Guilt Scale were used to measure the hypotheses of this study. The results indicated that thought-action fusion significantly mediates the relationship between shame, self-disgust, guilt and obsessive-compulsive symptom. Findings also showed that experiential avoidance

significantly mediates the relationship between shame, self-disgust, and obsessive-compulsive symptoms. However, experiential avoidance did not significantly mediate the relationship between guilt and obsessive-compulsive symptoms. The occurrence of shame and self-disgust is associated with the beliefs about the self, whereas guilt is associated with the beliefs about particular behaviors. Therefore, individuals prefer reparative actions to rectify committed behavior in the past instead of avoidance and suppression in case of guilt. However, individuals exhibit experiential avoidance in shame and self-disgust since no concrete action is committed. Also, getting fused with shame, self-disgust, and guilt leads to obsessive-compulsive symptoms. It was thought that the concepts of inflated responsibility, catastrophic misinterpretation, and fear of acting irresponsibly have a role in the development of obsessive-compulsive symptoms in this process. The results, limitations, strengths, and implications of the current study are discussed, and suggestions for future discussion are presented in this study.

Keywords: OCD, shame, guilt, self-disgust, thought-action fusion, experiential avoidance, acceptance

ÖZET

BİLİŞSEL BİRLEŞME VE KABULÜN OBSESİF KOMPULSİF SEMPTOMLAR, UTANÇ, SUÇLULUK, VE ÖZ-TİKSİNME ARASINDAKİ İLİŞKİDEKİ ARACI ETKİLERİ

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Bu çalışmanın temel amacı düşünce-eylem kaynaşması ve yaşantısal kaçınmanın utanç ve obsesif-kompulsif semptomlar; öz-tiksinme ve obsesif-kompulsif semptomlar; suçluluk ve obsesif-kompulsif semptomlar arasındaki ilişkiye olan aracı rollerinin incelenmesidir. Örneklem 18 yaş ve üzeri 316 yetişkinden oluşmaktadır. Bu çalışmanın amaçlarını ölçmek için Vancouver Obsesif-Kompulsif Envanteri, Kabul ve Eylem Formu-II, Düşünce-Eylem Kaynaşması Ölçeği, Öz-Tiksinme Ölçeği-Revize Formu, Suçluluk Utanç Ölçeği kullanılmıştır. Sonuçlar, düşünce-eylem kaynaşmasının utanç ve obsesif-kompulsif semptomlar; öz-tiksinme ve obsesif-kompulsif semptomlar; suçluluk ve obsesif kompulsif semptomlar arasındaki ilişkiye önemli ölçüde aracılık ettiğini göstermiştir. Bulgular, ayrıca deneyimsel kaçınmanın utanç ve obsesif kompulsif semptomlar; öz-tiksinme ve obsesif-kompulsif semptomlar üzerindeki ilişkiye anlamlı şekilde aracılık ettiğini, ancak suçluluk ve obsesif-kompulsif semptomlar üzerinde anlamlı bir aracılık etkisi olmadığını göstermiştir.

Utanç ve kendinden iğrenme, benlik hakkındaki inançlarla ilişkilendirilirken, suçluluk belirli bir davranış hakkındaki inançlarla ilişkilidir. Bu nedenle, bireyler suçluluk durumunda kaçınma ve bastırma yerine geçmişte işlenen davranışları düzeltmek için genellikle onarıcı eylemleri tercih ederler. Ancak bireyler, somut bir eylem yapılmadığı için utanç ve öz-tiksinme durumlarında deneyimsel kaçınma sergilerler. Somut eylemin varlığının, deneyimsel kaçınmanın utanç, öz-tiksinme, suçluluk ve obsesif-kompulsif belirtiler arasındaki ilişkiye önemli ölçüde aracılık edip etmeyeceğini belirlediği düşünülmüştür. Bununla birlikte utanç, öz-tiksinme ve suçluluk duygusuyla kaynaşmanın, obsesif kompulsif semptomlara yol açacağı düşünülmüştür. Bu süreçte obsesif-kompulsif semptomların gelişmesinde abartılmış sorumluluk, katastrofik yanlış yorumlama ve sorumsuzca hareket etme korkusu kavramlarının rolü olduğu düşünülmüştür. Mevcut çalışmanın sonuçları, sınırlamaları, güçlü yönleri ve etkileri tartışılmış ve gelecekteki tartışmalar için öneriler bu çalışmada sunulmuştur.

Anahtar Kelimeler: OKB, utanç, suçluluk, öz-tiksinme, düşünce-eylem kaynaşması, deneyimsel kaçınma, kabul

Dedicated to my grandmother…

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PREFACE

The current study was prepared as a master's dissertation and examined the mediating role of thought-action fusion and experiential avoidance on the relationship between shame and obsessive-compulsive symptoms; self-disgust and obsessive-compulsive symptoms; guilt and obsessive-compulsive symptoms. A total of 316 adults participated in this study, and they were asked specific questions about their demographics and applied specific measurements through the aims of the study.
Everyone has a tendency to experience obsessive-compulsive symptoms in a nonpathological way from time to time. However, what makes nonpathological obsessions and compulsions turn into pathological is a very intriguing question for researchers to search.

Throughout this writing journey, searching for the roles of shame, self-disgust, guilt provided me to see the similarities and differences between three emotions and their influence on obsessive-compulsive symptoms. Along with that, investigating the effects of thought-action fusion, experiential avoidance, and acceptance on obsessive-compulsive symptoms gave me insight into the nature of obsessive-compulsive symptoms.

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Izmir
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Aslıhan Kaymak

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LIST OF ABBREVIATIONS

OCD: Obsessive-Compulsive Disorder

ERP: Exposure and Response Prevention

ACT: Acceptance and Commitment Therapy

VOCI: Vancouver Obsessive-Compulsive Inventory

AAQ- II: Acceptance and Action Questionnaire- II

TAFS: Thought- Action Fusion Scale

SDS: Self-Disgust Scale

GSS: Guilt- Shame Scale

GSS Guilt: Guilt- Shame Scale Guilt Subscale

GSS Shame: Guilt- Shame Scale Shame Subscale

OCS: Obsessive-Compulsive Symptoms

EA: Experiential Avoidance

TAF: Thought-Action Fusion

M: Mediator

SE: Standard Error

DSM: Diagnostic and Statistical Manual of Mental Disorders

CHAPTER 1: INTRODUCTION

Many people have obsessions and compulsions. For instance, some people like order, some care about cleanliness. However, in some cases, these obsessions and compulsions might affect social, occupational, and other areas of life dysfunctionally and cause obsessive-compulsive disorder. Therefore, the nature of nonpathological and pathological obsession was examined in Rachman, and Silva's study (1978), and it was concluded that nonclinical individuals also have obsessive thoughts. Even though the authors found similarities between pathological and nonpathological obsessions, they also indicated some differences. The results showed that individuals with pathological obsessions are likely to have difficulty accepting their obsessions compared to individuals with nonpathological obsessions. Individuals with pathological obsessions are more likely stuck with their obsessions for a longer time and generally with specific situations than individuals with nonpathological obsessions. The nature of pathological obsessions seems intense and creates more distress. Pathological obsessions are experienced more frequently, along with resistance to having these obsessions. Thus, compulsive rituals occur as an attempt to neutralize pathological obsessions. As a result, even though pathological and nonpathological obsessions are similar in both form and content, they show some differences in frequency, intensity, and consequences (Rachman, and Silva, 1978). Thus, Obsessive-Compulsive Disorder (OCD) is considered one of the life-debilitating disorders due to its time-consuming nature (Masellis, Rector, and Richter, 2003), congruent with those mentioned above. The time-consuming nature of the disorder results from overt and covert compulsions such as repetitive checking, counting, and handwashing, which reduces the individual's life quality. These compulsions inhibit the individual from living a value-based life, such as not attending social occasions or missing deadlines (Masellis, Rector, and Richter, 2003). Also, lack of recognition of obsessive-compulsive symptoms and distress about experiencing those symptoms inhibit individuals with OCD from applying for psychological and psychiatric services (Heyman, Mataix-Cols, and Fineberg, 2006).

When the literature is examined, it is seen that the model of Acceptance and Commitment Therapy is found to be very effective in comprehension and treatment of the nature of OCD (Twohig, Hayes, and Masuda, 2006). Therefore, fusion with

thoughts and experiential avoidance are considered factors that play a role in the development of OCD, whereas acceptance is regarded as an effective notion in the treatment of OCD. In addition, it is also expected that nonpathological obsessions turn into pathological obsessions via the emotions that create distress and discomfort. Literature shows that the emotions such as shame, self-disgust, and guilt are associated with OCD and contribute to the development of OCD (Olatunji, Cox, and Kim, 2015; Singh et al., 2016; Melli et al., 2017).

In the light of this information, both clinical and nonclinical individuals are affected by obsessive-compulsive symptoms to some degree. Therefore, examining the obsessive-compulsive symptoms and the mechanism behind obsessive-compulsive symptoms is essential.

1.1. Obsessive-Compulsive Disorder

Obsessions are characterized as recurrent, persistent, intrusive thoughts, images, or urges that cause an increase in distress. In contrast, compulsions are defined as ritualistic, repetitive behaviors to reduce the distress one has due to obsessions (APA, 2013). Fusion with intrusive, unwanted thoughts increases the attempt to neutralize thoughts with particular behaviors called compulsions (Rachman, and Shafran, 1999). However, compulsive actions performed to dismiss intrusive, unwanted thoughts are considered as what maintains obsessions in the first place (Zucker et al., 2002). Compulsive actions would instantly reduce distress and discomfort related to intrusive, unwanted thoughts, images, and urges in the short term (Rachman et al., 1996). However, overuse of compulsions would consolidate the idea that the intrusive, unwanted thought was dangerous or wicked in the long term. Therefore, compulsive behaviors would be seen as obligatory to dismiss distress and discomfort from intrusive, unwanted thoughts (Rachman, 1998).

In the following paragraphs, the definition of OCD will be given. The Etiology, epidemiology, different types of obsession and models of development of OCD will be presented.

1.1.1. Definition of Obsessive-Compulsive Disorder

When the diagnostic criteria of obsessions and compulsions in OCD are evaluated since DSM-III (APA, 1980), it has been seen that the main criteria for OCD, the

presence of obsessions and compulsions, are comparatively unchanged (Abramowitz, and Jacoby, 2014). OCD was put in the group of anxiety disorders with DSM-IV-TR. The specifier "poor insight" was also added to DSM, indicating an individual is not aware of the senselessness of the obsessions or compulsions most of the time (APA, 1994). Also, a few changes have been made in DSM-V (APA, 2013). For instance, the word "*impulse*" used in DSM-IV-TR to describe the obsessions has been changed with the word "*urge*" in DSM-V, and the word "*inappropriate*" is used to define the content of obsessions altered with the word "*unwanted*." The requirement of finding the nature of obsessions and compulsions as senseless and excessive has been excluded in DSM-V. Also, denotes about recognizing the senselessness of OCD symptoms is refined in the insight specifier to improve the differential diagnosis and stress that individuals with OCD have diverse insight. A tic-related specifier also has been added to the DSM-V to diagnose individuals with a tic OCD disorder. OCD without tic-relation causes emotional distress like anxiety, yet a tic-related OCD contains physical discomfort in some parts of the body like the face, psychological distress, and particular motor responses such as blinking of the eyes. Therefore, it is stated the difficulty of differentiating a tic-related OCD from Tourette's syndrome. In addition, the classification of OCD has been changed; OCD was taken from anxiety disorders and was placed in a new category of disorders called obsessive-compulsive and related disorders (Abramowitz, and Jacoby, 2014). According to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (APA, 2013), criteria are defined in Table 1.

Table 1. The Diagnostic Criteria of Obsessive-Compulsive Disorder

A. Presence of obsessions, compulsions, or both:

   Obsessions are defined by (1) and (2):

   1. Recurrent and persistent thoughts, urges, or images that are experienced at some time during the disturbance, as intrusive and unwanted and that in most individuals cause marked anxiety or distress.
   2. The individual attempts to ignore or suppress such thoughts, urges, or images or to neutralize them with some other thought or action (i.e., by performing a compulsion).

   Compulsions are defined by (1) and (2):

Table 1. (continued) The Diagnostic Criteria of Obsessive-Compulsive Disorder

	1. Repetitive behaviors (e.g., hand washing, ordering, checking) or mental acts (e.g., praying, counting, repeating words silently) that the individual feels driven to perform in response to an obsession or according to rules that must be applied rigidly. 2. The behaviors or mental acts are aimed at preventing or reducing anxiety or distress, or preventing some dreaded event or situation; however, these behaviors or mental acts are not connected in a realistic way with what they are designed to neutralize or prevent, or are clearly excessive. **Note:** Young children may not be able to articulate the aims of these behaviors or mental acts.
B.	The obsessions or compulsions are time-consuming (e.g., take more than 1 hour per day) or cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
C.	The obsessive-compulsive symptoms are not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication) or another medical condition.
D.	The disturbance is not better explained by the symptoms of another mental disorder. (e.g., excessive worries, as in the generalized anxiety disorder; preoccupation with appearance, as in body dysmorphic disorder; difficulty discarding or parting with possessions, as in hoarding disorder; hair pulling, as in the trichotillomania [hair-pulling disorder]; skin picking, as in excoriation [skin-picking] disorder ; stereotypies, as in stereotypic movement disorder; ritualized eating behavior, as in eating disorders; preoccupation with substances or gambling, as in substance-related and addictive disorders; preoccupation with having an illness, as in illness anxiety disorder; sexual urges or fantasies, as in paraphilic disorders; impulses, as in disruptive, impulse-control, and conduct disorders; guilty ruminations, as in major depressive disorder; thought insertation or delusional preoccupations, as in schizophrenia spectrum and other psychotic disorders; or repetitive patterns of behavior, as in autism spectrum disorder).

Table 1. (continued) The Diagnostic Criteria of Obsessive-Compulsive Disorder

	Specify if: **With good or fair insight**: The individual recognizes that obsessive-compulsive disorder beliefs are definitely or probably not true or that they may or may not be true. **With poor insight**: The individual thinks obsessive-compulsive disorder beliefs are probably true. With absent insight/delusional beliefs: The individual is completely convinced that obsessive-compulsive disorder beliefs are true. Specify if: **Tic-Related**: The individual has a current or past history of a tic disorder.

Note: Adopted from American Psychological Association, 2013.

1.1.2. Etiology

This part of the study will focus on the etiology of OCD, explaining the factors such as shared environment, genetic, culture's influence on the development of OCD.

Shared Environment

The shared environment is one of the etiological factors that have a role in the development of OCD. The studies measure which notions have a role in this process. A shared environment searches for the parenting styles and their influence in developing OCD (Taylor, 2011). Parental styles contain three categories which are permissive, authoritative, and authoritarian (Baumrind, 1971). Timpano, and colleagues (2010) researched the association between parental style and found that authoritarian parental behavior is associated with obsessive-compulsive symptoms (Timpano et al., 2010). In another study, Ayçiçeği, and colleagues (2002), reached that there is an association between psychologically manipulative, controlling parenting style and obsessive-compulsive symptoms (Ayçiçegi, Harris, and Dinn, 2002). Hoover, and Insel (1984), interviewed ten individuals with OCD and collected information about the family background. The authors found that these families are mostly isolated and pay great attention to cleanness and perfection (Hoover, and Insel, 1984). Coles, Schofield, and Pietrefesa (2006), investigated the relationship between behavioral inhibition and obsessive-compulsive disorder. Findings indicated a strong

correlation between obsessive-compulsive symptoms and severity of childhood behavioral inhibition, particularly between checking, doubting, obsessing, hoarding, and neutralizing. Thus, results showed that levels of childhood inhibition significantly predicted the levels of obsessive-compulsive symptoms, and overprotective parenting has a moderation role between childhood inhibition and obsessive-compulsive symptoms (Coles, Schofield, and Pietrefesa, 2006).

Additionally, several studies found a positive association between obsessive-compulsive symptoms and the perception that its parents are overprotective (Cavedo, and Parker, 1993; Merkel et al., 1993; Turgeon et al., 2002). Authoritarian parenting behaviors include discontentment, detachment, control, and being less warm than the other parental styles (Baumrind, 1971). Therefore, these studies' results seem congruous and support the hypothesis that certain parental styles, controlling, overprotecting, and authoritarian parenting behaviors, have a role in developing OCD.

Genetic

Family and twin studies indicate that genes have an essential role in the development of OCD (Pauls, Mundo, and Kennedy, 2002). Comparison of identical and fraternal twin pairs indicated that genes have a substantial effect on the development of OCD. Thus, research about genetic involves gene-gene interaction and dominance effects (Taylor, 2011). Iervolino, and colleagues (2015), reached that concordance rates are higher for monozygotic twins compared to dizygotic twins for OCD dimensions which consisted of checking, hoarding, obsessions, ordering, washing, even though the most significant concordance was found for hoarding dimension (Iervolino et al., 2015). From this point of view, the hypothesis that genetics has a substantial role in developing OCD is supported. Comparison between the concordance of identical twins and fraternal twins would be a helpful way to interpret the effect of genetic material on the etiology of OCD. Goldsmith, and Gottesman (1981), conducted a study about the criteria of obsessive-compulsive symptoms on the participants of 15 identical twins and 15 fraternal twins. Findings indicated that 87 % of identical twins seemed concordant than 47 % of fraternal twins in developing OCD. Thus, identical twins have a higher disposition to develop OCD than fraternal twins. Findings related to a study that participated in 4-years-old twin pairs stressed that 65 % of obsessive-compulsive behaviors were related to heritability, and 35 % of the remaining were related to

unshared environmental influences (Eley et al., 2003). Unshared environment investigates the events which experienced by just one of the twin. (Taylor, 2011). Hudziak, and colleagues (2004), investigated the etiology of OCD with the participation of 4246 child twin pairs. They concluded that estimated heritability on obsessive-compulsive symptoms ranges between 45% - 61% and unique environmental influences ranging between 42% - 55% (Hudziak et al., 2004).

In conclusion, both genetic and environmental factors have roles in the development of OCD.

Culture and OCD

People who live in different parts of the world with different cultures could suffer from obsessive-compulsive symptoms due to its main characteristics of OCD are similar across all cultures. However, researchers have been investigating the culture's effect on OCD and searching for distinct features of OCD in different samples (Elsarrag, 1968; Silva, 2006; Li et al., 2009; Yorulmaz, Gençöz, and Woody, 2009; Yorulmaz, and Işık, 2011; İnözü, and Clark, 2012; İnözü, Karanci, and Clark, 2012).

Several studies supported that some of the obsessive-compulsive symptoms are particular to the culture. The research conducted in Sudan found that obsessions were not related to distress about whether having cancer. However, the obsessions were related to fear of tuberculosis and leprosy. On the other hand, the western culture showed the opposite (Elsarrag, 1968). The disease rate of the two cultures should take into account at that time to interpret the difference. The era is also substantial in terms of the development of some specific types of obsessive-compulsive symptoms. For instance, obsessions about asbestos were common in people who have OCD in the U.K. about two or three decades ago (Silva, 2006).

Religion would also differ from culture to culture, and there is a link between religion and OCD. Therefore, there is an implicit connection between religion and culture (Silva, 2006). Yorulmaz, and Işık (2011), conducted a study to investigate the relationship between thought-action fusion, thought-control strategies, and OCD symptoms. The sample consisted of three groups with nonclinical participants, stressing the immigration factor. These three groups were Turkish people who live in Turkey, Turkish people who live in Bulgaria, and Turkish people who remigrated to

Turkey from Bulgaria. The authors indicated that even though the control strategy of worry is common among all the groups, different Thought-Action Fusion Scale subscales significantly predicted OCD. Findings showed that the likelihood of fusion significantly predicted OCD for the participants who remigrated to Turkey and lived in Bulgaria. On the other hand, the morality fusion significantly predicted OCD for participants who live in Turkey. The authors explained this difference because Islam is more rigorous in Turkey, and therefore morality fusion subscale got high scores in Turkey (Yorulmaz, and Işık, 2011).

The obsessive-compulsive symptoms related to the contamination and dirt are mostly connected through participants' social background, which fulfills the rule of being clean and pure demanded by religious practices. When the religious rules are not executed very well in a person's eyes, the person will start self-doubting whether she or he did it correctly. Therefore, self-doubt causes repetition of the rule repeatedly to avoid feeling discontent about the rituals or religious rules. For instance, when it looked at how culture affects OCD in Jewish communities, it has seemed that handwashing is the most prevalent compulsion executed due to feeling pure because of religious beliefs (Huppert, Siev, and Kushner, 2007).

İnözü, Karancı, and Clark (2012), conducted a study to measure OCD symptoms, obsessive-beliefs, guilt, religiosity, and negative affect among Muslim Turkish and Cristian Canadian students. Both samples were divided into two groups called the high religious group and the low religious group. Results indicated that religiosity has a relationship with obsessional symptoms in both samples. However, Muslim students with highly religious beliefs reported more compulsive symptoms than Christian students with highly religious beliefs. In addition, importance/control of thoughts and responsibility/threat beliefs, and generalized guilt significantly mediated the relationship between religiosity and obsessionality in both samples (İnözü, Karanci, and Clark, 2012).

İnözü, and Clark (2012), also conducted another study to compare Muslim Turkish and Canadian Christian students regarding low and high religiousness and its relation with scrupulosity, living in a recurrent and untrue doubt about sinning and fearing the punishment that comes with it. Turkish students with highly religious beliefs reported significantly more fear of God than Canadian students with highly religious beliefs.

Therefore, Muslim Turkish students reported more fear of punishment from God than Cristian Canadian students. Both Muslim Turkish and Christian Canadian students with high religiosity reported significantly higher fear of sin than the low groups. There was no significant difference between both Turkish and Canadian students with low religious beliefs. In addition, results showed that guilt predicts scrupulosity and dysfunctional beliefs about cognitive control (İnözü, and Clark, 2012).

Yorulmaz, Gençöz, and Woody (2009), conducted a study investigating the relationship between religiosity, OCD symptoms, and cognitions among Muslim Turkish students and Christian Canadian students. Results indicated that Muslim Turkish participants with high scores in OCD symptoms reported that they are worrying more about their thoughts. Therefore as a strategy to deal with their unwanted thoughts, they tried to control them and worry about them. Both sample's high religious participants reported experiencing more obsessional thoughts with getting fused with morality dimension and executed checking behaviors (Yorulmaz, Gençöz, and Woody, 2009).

The research which the National Comorbidity Survey Replication conducted in the USA put obsessive-compulsive symptoms from the prevalence of the most seen to the least, and the top three obsessions found as checking (79.3 %), hoarding (62.3 %), and ordering (57 %) (Ruscio et al., 2010). The research aimed to measure the prevalence of obsessive-compulsive symptoms in China, and findings indicated that symmetry (67 %), contamination (43.2 %), and aggression (31.7 %) are the most seen obsessive-compulsive symptoms in China (Li et al., 2009). Based on both studies, it is inferred that Western and Eastern cultures have different obsessions rates, and culture influences OCD.

Different cultures have different superstitions, and therefore, there could be an idiocratic association between particular superstitions and obsessive-compulsive symptoms (Silva, 2006). In addition to that, obsessive-compulsive symptoms are seen in the nonclinical population along with the clinical population. In addition to the obsessive-compulsive symptoms, both groups might also show superstitious behaviors (Rachman, and Silva, 1978). Vyse (2013), suggested that superstitious actions increase when one does not know what will happen next. Also, not being able to control the situations or conditions increase superstitious behaviors. Believing that situation or

condition will be controlled if the person's behaviors include superstitious items leads compulsions. Also, trying to control the situation which likely to happen in the future might contain superstitious behaviors. Therefore, superstitious behaviors increase to control the future's possible events if the belief about superstitious behavior is intense (Vyse, 2013). Association between superstition and checking obsession was found in one study, indicating a positive correlation between the two terms (Frost et al., 1993).

1.1.3. Epidemiology

Prevalence of Obsessive-Compulsive Disorder

Researchers have found the nature of obsessive-compulsive disorder very intriguing over the years (Karno et al., 1988; Rasmussen, and Eisen, 1992; Bebbington, 1998; Cilliçilli et al., 2004; Kessler et al., 2005; Ruscio et al., 2010). Several studies have been conducted to investigate the lifetime prevalence of OCD in the general population. For instance, a study which is conducted in five U.S. communities with 18.500 participants to measure the prevalence of obsessive-compulsive disorder indicated that the lifetime prevalence of the obsessive-compulsive disorder is found between 1.2 % and 2.4 % with DSM-III without comorbidity and found between 1.9 % and 3.3 % with comorbidity (Karno et al., 1988). Rasmussen, and Eisen (1992), indicated the prevalence of OCD as 1-2 % in their research. The study conducted in 1998 found that the prevalence of OCD was shown as approximately 1 % in the general population and changed across 1.1 - 3.9 % in all age groups measured in five cities (Bebbington, 1998). Another study investigating the prevalence rate of OCD indicated a 3 % prevalence rate during twelve months of study (Cilliçilli et al., 2004). The range of lifetime prevalence of OCD was found as 1.6 % in the population and changed across 0.7 - 2.3 % of all age groups in a study conducted in 2005 (Kessler et al., 2005). The study conducted by Ruscio and colleagues found the lifetime prevalence of OCD as 2.3 % (Ruscio et al., 2010). Even though there is a diversity in the results, the prevalence was changed between 1-3 %. For instance, while the prevalence rate was 3 % in Turkey (Cilliçilli et al., 2004), it was found to change between 1-2 in the USA (Karno et al., 1988; Bebbington, 1998; Ruscio et al., 2010). Prevalence across age groups was found as 2 % for 18-29 ages, 2.3 % for 30-44 ages, 1.3 % for 45-59 ages, and 60 and above for .7 %. (Kessler et al., 2005). In summary, the lifetime prevalence for OCD ranges between 1-3 % depending on the culture, country, and age.

The Age of Onset and Sex Distribution of Obsessive-Compulsive Disorder

Several studies have been conducted about the relationship between demographic variables of age, sex, and obsessive-compulsive disorder. These studies referred to the fact that the nature of obsessive-compulsive disorder is heterogeneous (Torresan et al., 2013). When researchers focused on the age of onset of OCD and sex, findings indicated that males have an earlier onset of OCD than females (Castle, Deale, and Marks, 1995; Minichiello et al., 1990; Rasmussen, and Tsuang, 1986; Tükel et al., 2004). Minichiello, and colleagues (1990), found the onset of OCD as 19.8 years in males and 24.6 years in females (Minichiello et al., 1990). The study which Rasmussen, and Tsuang (1986), conduct found that the age of onset of OCD is 15.5 years in males and 22.9 years in females (Rasmussen, and Tsuang, 1986). Castle, and colleagues (1995), also measured that the age of onset of OCD is 22 years in males and 26 years in females (Castle et al., 1995). Tükel, and colleagues (2004), found that the age of onset of OCD is 18.2 years in males and 21.7 years in females (Tükel et al., 2004). These studies have indicated that the age of onset of OCD is earlier among males than females. As a result, in the USA, the age of onset of OCD is 19 in males and changes between 22-24 in females (Minichiello et al., 1990; Rasmussen, and Tsuang, 1986); in the U.K., the age of onset of OCD is 22 in males and 26 in females (Castle, Deale, and Marks, 1995); in Turkey, age of onset of OCD 18.2 in males and 21.7 in females (Tükel et al., 2004).

When it is investigated, the male-female ratio of obsessive-compulsive disorder is nearly the same, and it is found that prevalence in females is slightly more than males (Stein, 2002). The study investigated by Weissman (1998), showed that the lifetime prevalence of females and males in OCD ranges from 0.9 % to 3.4 % in females and ranges from 0.5 % to 2.5 % in males (Weissman, 1998). These results indicate that females tend to be diagnosed with OCD in adult life than males (Castle, Deale, and Marks, 1995).

Minichiello, and colleagues (1990), investigated the age of onset of major subtypes of OCD, and they hypothesized that major subtypes of OCD like cleaning rituals, checking rituals, mixed rituals, and those with only obsessions without rituals would have a different age of onsets. The result indicates that the age of onset of cleaning rituals 21.8 years in males and 29 years in females, checking rituals 14.4 years in males

and 21.1 years in females, mixed rituals 18.4 years in males and 20.1 years in females, obsessions alone 25.6 years in males and 30.1 years in females and all subtypes 19.8 years in males and 24.6 years in females (Minichiello et al., 1990).

Comorbidity

The relationship between OCD and other disorders has been investigated over the years, and studies indicated that there is comorbidity between OCD and other disorders (Lochner et al., 2014; Milos et al., 2002; Perugi et al., 1997; Pinto et al., 2006; Tükel et al., 2002). It is found that major depressive disorder is the most common disorder comorbidity rate with OCD, which is 39. 5 % in the study conducted by Tükel, and colleagues in 2002. In addition, other disorders in terms of comorbidity with OCD are dysthymia with 20.4 %, simple phobia with 17.7 %, social anxiety disorder with 15.6 %, generalized anxiety disorder with 12.2 %, and panic disorder with 9.5 % (Tükel et al., 2002). Lochner, and colleagues (2014), investigated the disorders with comorbidity with OCD. The results indicated that major depressive disorder has the highest rate, with 15.42 % comorbidity with OCD. Also, other findings related to comorbidity with OCD were social anxiety disorder with 14.37 %, general anxiety disorder with 13.35 %, dysthymia with 13.13 % (Lochner et al., 2014). Research related to comorbidity between OCD and eating disorders showed a 29.5 % comorbidity rate between the two disorders, even though the prevalence did not significantly differ between individuals with anorexia or bulimia (Milos et al., 2002). A comparison is made between the early-onset and late-onset of OCD and panic disorder. Findings indicated that lifetime comorbidity of panic disorder in the early onset of OCD group is significantly higher with 22 % than late-onset of OCD, which is 13 % (Pinto et al., 2006). The study, which investigates the differences between the two groups' comorbidity of OCD-major depressive disorder as group one and OCD- bipolar disorder group two, found a significant difference between the sex distribution and marital status (Perugi et al., 1997). It is referred that a higher rate of individuals who have OCD - bipolar disorder were unmarried males compared to OCD - major depressive disorder. On the other hand, it is also indicated that people who have the comorbidity of OCD and major depressive disorder had a higher number of hospitalizations than those with the comorbidity of OCD and bipolar disorder (Perugi et al., 1997).

In sum, OCD has a high comorbidity rate with major depressive disorder, dysthymia, simple phobia, social anxiety disorder, general anxiety disorder, panic disorder, eating disorders, and bipolar disorder.

1.1.4. Subtypes of Obsessive-Compulsive Disorder

Obsessive-compulsive disorder has been assessed as a symptomatically heterogeneous condition that exists itself through various obsessions and compulsions. Therefore, these obsessions and compulsions could show themselves with different symptoms and rituals among people (McKay et al., 2004; Mataix-Cols, Do Rosario-Campos, and Leckman, 2005).

Therefore, McKay, and colleagues (2004), constituted five main dimensions based on the tendency to the occurrence of particular obsessions and compulsions together. These are listed as (1) obsessions of feeling responsible for causing or failing to prevent any harm along with checking compulsions and reassurance-seeking, (2) symmetry obsessions along with ordering and counting rituals, (3) contamination obsessions along with washing and cleaning rituals, (4) repugnant obsessions concerning sex, violence, and religion and lastly (5) hoarding which is keeping object along with collecting compulsions (Abramowitz, Taylor, and Mckay, 2009).

The most common obsessions seen in society are contamination, pathologic doubt, somatic obsessions, need for symmetry, aggressive and sexual obsessions, and multiple obsessions that include more than one obsession (Rasmussen, and Eisen, 1992). On the other hand, the most common compulsions seen in society are checking, washing, counting, the need to ask or confess, symmetry and precision, hoarding, and multiple compulsions, including more than one compulsion (Rasmussen, and Eisen, 1992).

Tükel, and colleagues (2002), investigated the most common obsessions and compulsions in the population. The authors found that the most common obsessions as concerns about contamination with 74.1 % and aggression with 60.5 %, religious obsession with 46.3 %, somatic obsession with 36.1 %, sexual obsession with 31.3 %, hoarding, saving obsession with 17.7 %. In addition to obsessions, the most common compulsions were listed as checking compulsion 72.1 %, cleaning/washing compulsion 65.3 %, repeating compulsion 47.6 %, counting compulsion 39.5 %,

ordering/arranging compulsion 34.0 %, hoarding/collecting compulsion 17 % (Tükel et al., 2002). Subtypes of OCD are presented in detail below.

Contamination Obsessions

Contamination obsession is mainly paired with handwashing with rituals or, without rituals, and avoiding the object (Rasmussen, and Eisen, 1992). It is found that there are two distinct groups in the subtype of contamination obsession. The first categorization is fear and distress that come from the germs and not the thought of harming anyone. The second categorization is the feeling of fear and distress with the thought that someone will be harmed by contamination unless certain handwashing rituals would be performed. (Feinstein et al., 2003). Individuals experiencing distress by the thought of getting harm from contamination tend to show more compulsions due to focusing on the assumption of the life-threatening aspect of contamination compared to people who have a fear of contamination without harm thought (McKay et al., 2004).

Sexual Obsessions and Aggressive Obsessions

Sexual and aggressive obsessions include sexual and aggressive thoughts, images, and impulses towards others and the self, which are considered repugnant and unacceptable. Individuals are in tremendous pain due to believing that those thoughts, images, and impulses reflect reality (Rasmussen, and Eisen, 1992). Aggressive obsessions include harming someone such as a family member, children, and acquaintances when being weak and defenseless (Moulding, Aardema, and O'Connor, 2014). The study focused on obsessions among mothers who have newborn babies reached that all mothers had intrusive thoughts of accidentally falling on their infants at the end of four weeks interview. Furthermore, the authors also concluded that 45 out of 91 mothers thought of harming their infants, and 39 out of 45 mothers thought of physical harm toward their babies (Fairbrother, and Woody, 2008).

On the other hand, sexual obsession includes sexual perversion, AIDS, incest, blasphemous thoughts regarding religion and sex, infidelity. These obsessions are mostly hypotheticals, and it includes *"what if"* form such as *"What if I sexually abuse my child?", "What if I got AIDS?"*(Gordon, 2002). Sexual and aggressive thoughts are paired with both covert and overt compulsions. For example, if one suffers from fear of becoming a pedophile, one would check its arousal level in the presence of

children, or one hit itself in the head to ward off the thought of hurting someone. Aggressive and sexual compulsions would also be in the form of mental rituals such as silent counting and repeating the magical word (Gordon, 2002). Moreover, asking or confessing for seeking reassurance is referred to as other forms of aggressive and sexual compulsion, regarded as the most common compulsions seen in society (Rasmussen, and Eisen, 1992).

Religious Obsessions

The notion of scrupulosity is referred to in religious obsessions due to moral fears, committing a sin, being a horrible person, and going to hell. People spend plenty of time carrying out religious requirements properly for moral reasons (Huppert, Siev, and Kushner, 2007). People who have religious obsessions tend to be in a state of extreme morality to follow the rules of the religion, which felt attached. If one considers its thoughts as blasphemy and feels agitated in the religious obsessions, the compulsion of the compelling need to confess or religious rituals like praying or taking ablution to reduce the anxiety would occur (Rasmussen, and Eisen, 1992; Huppert, Siev, and Kushner, 2007). Therefore, the time-consuming nature of the compulsion would create dysfunctionality in one's life.

Need for Symmetry

Obsession of the need for symmetry and precision requires things to be in a particular position, order, and symmetry. Otherwise, one would experience tension or discontent due to imperfections in order, line, or symmetry. Another reason for an obsession with symmetry and precision is to believe that one will prevent the so-called disaster by executing the need for symmetry obsessions (Rasmussen, and Eisen, 1992). Empirical findings indicated that symmetry obsession with ordering and arranging compulsions are frequently paired (Mataix-Cols et al., 2002). However, there would be different motivations to act to create symmetry and ordering. Ordering is applied to get rid of potential harm if the environment is arranged in a certain way or to preserve the same state of the environment with little sense of threat.

On the other hand, symmetry and order would be related to dissatisfaction with the things in the environment that is not just right (Summerfeldt, 2007). Therefore, just not right phenomenon means the sense of incompleteness in OCD. Therefore,

compulsions are performed to deal with dissatisfaction and to achieve the state of just-right (Coles et al., 2003).

Somatic Obsessions

The irrational, constant fear of developing an illness that is assumed as life-threatening is related to somatic obsessions. Somatic obsessions are coupled frequently with checking and seeking reassurance. People who have somatic obsessions are afraid of dying due to heart attack, cancer, venereal disease. In addition to this, it would also be said that it is hard to distinguish people who have somatic obsessions from a hypochondriac, except in cases of obsessions and compulsions are noticeable (Rasmussen, and Eisen, 1992). When investigating the relationship between OCD subdimensions and insight, findings indicated a negative correlation between somatic preoccupation and a level of insight (Marazziti et al., 2002).

Hoarding

Keeping all the possessions and not throwing out any single items and the excessive worry of whether some of the possessions are missing indicate hoarding symptoms. Hoarding is mainly paired with checking compulsion to determine any missing items (Rasmussen, and Eisen, 1992). Features of hoarding would be listed as excessive possession of large numbers of unnecessary items, irrational and emotional attachment to them, sensitiveness about possessed items, and resistance to discarding (Rachman et al., 2009). The mindsets of individuals with hoarding obsession are defined as preoccupied rather than intrusive, unwanted, and repugnant features due to their mundane content (Rachman, 1973). Even though individuals who are involved with other compulsions such as cleaning are aware of the irrational nature of their compulsions, individuals who are engaging in hoarding are not aware of the irrational nature of hoarding. Contrary, they mostly show a tendency to justify their actions. Hoarding restrains one's life if there is excessive hoarding, but the social pressure from others also puts one in great distress (Rachman et al., 2009). However, hoarding is not regarded as a symptom of OCD in the recent edition of DSM-5; instead, hoarding disorder was classified as a distinct diagnostic entity and ranked among the compulsive spectrum disorders (APA, 2013). The reason behind that is, firstly, excessive hoarding behaviors would occur with several disorders such as dementia, cerebral lesions, schizophrenia, or major depressive disorder. Secondly, most of the individuals with

hoarding behaviors do not experience other symptoms of OCD and, therefore, would not be diagnosed with OCD (Albert et al., 2015).

Pathological Doubt

Pathological doubt includes intrusive thoughts that create excessive distress due to the worrisome nature of the thoughts. Therefore, pathological doubt shows itself across many subtypes of OCD (Hodgson, and Rachman, 1977; Rasmussen, and Eisen, 1992). Individuals who suffer from pathological doubt tend to be not sure of the order of the ritualistic performance. It also shows itself in the form of having doubts about doing blasphemy, washing their hands properly, and hesitation about whether to turn off the stove or not. These intrusive thoughts generally would end up with checking repeatedly (Hodgson, and Rachman, 1977; Rasmussen, and Eisen, 1992). Checking is regarded as one of the most used compulsions to deal with pathological doubt (Tolin et al., 2003).

1.1.5. Models of Development of OCD

Behavioral Model

Dollar, and Miller (1950), proposed adapting the two-factor theory into OCD to explain the development and factors of OCD regarding fear, anxiety, and avoidance. The two-factor model is composed of classical conditioning and operant conditioning (Mowrer, 1956). At first, matching neutral stimulus with fearful stimulus through classical conditioning and losing its neutrality and turning neutral stimulus into a distressing stimulus and then reinforcing via operant conditioning maintains the two-factor learning in Mowrer's view. An example of a conditioned stimulus would be a mental activity like a thought or physical object such as a trash can. Obtaining anxiety or fear with conditioned stimulus causes avoidance or escape behavior to decrease the anxiety or fear. Avoidance and escape behaviors show themselves in the form of repeated compulsions or rituals in OCD (Foa, 2010). For instance, fear of getting a disease from the doorknob would be through hearing the trauma experienced by someone else (the unconditioned stimulus). However, touching with the dirty doorknob in a public place causes to cross that fear in mind and cause discomfort (the conditioned stimulus). Thus, avoiding touching the doorknob or compulsive washing of the hands after touching it (the negative reinforcement) decreases distress in the short term, but fear of getting infected by the doorknob increases anxiety in the long

term. This example would be given as the development of OCD according to Mowrer's two-factor theory (Taylor, 2005).

Cognitive and Behavioral Model

Salkovskis (1985), offered a model to explain the development of OCD which includes both cognition and behaviors. According to the model, feeling responsible for the thoughts that one has plays an essential role in developing and maintaining OCD. There are five assumptions in the development and maintenance of OCD. These assumptions are listed below;

1) Having some thoughts is the same as executing those thoughts.
2) Not being able to prevent the harm is the same as causing the harm.
3) Particular conditions do not alleviate responsibility for harm
4) Not fulfilling the ritual for a response to thought about harm is the same as harming on purpose.
5) Exercising control over the thoughts should be practiced.

As a result, one sees its obsessions as not acceptable for those assumptions mentioned above. On the other hand, one does not see compulsions as unacceptable due to their effect on reducing distress over thoughts. Therefore, one views compulsions as obligatory (Salkovskis, 1985). However, while compulsions reduce distress and anxiety based on feeling responsible due to having such intrusive thoughts in the short run, preoccupation with obsessions and compulsions and becoming triggered by them will be increased in the long run.

Rachman (1998), proposed that catastrophic misinterpretations of the significance of one's intrusive thoughts, images, and impulses lead to the formation of obsessions. According to this model, maintenance or diminish of OCD depends on misinterpretations existence. If misinterpretations stop, then OCD would disappear. If misinterpretations remain, OCD will remain as well (Rachman, 1998).

Foa, and Kozak (2019), proposed that erroneous cognition has an essential role in the characterization of OCD. For example, if one has a belief that tapping the floor two times every day to prevent something disastrous to happen and one does not tap the floor two times every day, that person will be in extremes distress compared to an individual who does not have this belief. The authors also asserted that individual with

OCD assesses the relatively safe situation as dangerous. As an example, thoughts of getting flu would cause an idea that horrible things could happen. They also suggested that individuals with OCD exaggerate the consequences in the adverse perspective and tendency to think worse even though the result is not that bad. Lack of evidence that situation or object is safe means to the individuals with OCD that they would be in danger. Therefore they search for constant proof of the object or situation's safety. For instance, to ask for assurance about dishes cleanness of the restaurant even though there is no indication that the plates are dirty. Contrarily, individuals without OCD assume that if there is no proof to show that the object or the situation is dangerous, they would conclude that it is safe. As a result, when they go to a restaurant, they eat without looking for any evidence that the dish is not clean unless they see the dirtiness on the plate (Foa, 2010).

In summary, classical and operational conditioning, feeling responsible for having particular thoughts such as harming, catastrophic misinterpretations of the significance of one's intrusive thoughts, images, and impulses, erroneous cognitions are considered as factors that influence the development of OCD.

Effectiveness and Limitations of Cognitive Behavioral Therapy

Exposure and response prevention (ERP) is a cognitive-behavioral therapy technique used to treat OCD (Abramowitz, 1996). It is characterized as being directly exposed to the anxiety-evoking stimuli and preventing behaviors such as compulsive rituals from applying to decrease the distress (Abramowitz, 1996). ERP was found as one of the most effective treatment techniques for OCD, with effectivity ranging from 60 % to 85 %, according to the study conducted by Abramowitz in 1997. Furthermore, the author stressed that even though exposure and response prevention is beneficial in treating OCD, it has some limitations. It was found that between 40 % - 15 % of individuals with OCD cannot respond to the treatment of OCD (Abramowitz, 1997).

Foa and colleagues (2005), conducted a study to compare the groups of ERP, Clomipramine (Psychopharmacol), response prevention plus Clomipramine, and placebo. The sample consisted of participants with OCD. Results showed that exposure with response prevention was more effective than placebo. The effect of exposure with response prevention did not significantly differ from response

prevention plus Clomipramine, and both groups were more effective than Clomipramine only (Foa et al., 2005).

Williams, and colleagues (2014), conducted a study to measure the exposure with ritual prevention on obsessive-compulsive symptoms. The sample consisted of individuals with OCD. ERP was applied to all of the participants as a prevention technique. OCD scores were tested at the beginning and end of the intervention. Results showed an average 43 % decrease in scores. However, ERP showed significantly poor outcomes as a treatment technique in working with repugnant and hoarding obsessions. Findings also indicated a significantly smaller decrease in religious and moral obsessions, somatic concerns, and hoarding obsessions (Williams et al., 2014).

Lack of motivation, the client's manner towards the technique would be some explanations for the ineffectiveness of the technique. In addition, the type of compulsion that one has would be another reason for the ineffectiveness of exposure and ritual prevention (Salkovskis, Kirk, and Clark, 1989). Findings suggest that covert compulsions are much more difficult to treat compared to overt compulsions. (Salkovskis, and Westbrook, 1989). Therefore, new approaches are required for individuals who cannot respond to the ERP, and one of these approaches is considered the Acceptance and Commitment Therapy model.

Acceptance and Commitment Therapy and Obsessive-Compulsive Disorder

Acceptance and Commitment Therapy (ACT) which takes its place in the third wave of behavioral and cognitive therapies focus on the functionality of the cognition and emotion rather than content as an alternative to exposure and response prevention in Cognitive and Behavioral Therapy (Twohig, Hayes, and Masuda, 2006). One of the concepts of Acceptance and Commitment Therapy is cognitive defusion, which aims to change the literal and functional context to defuse dysfunctional thoughts (Masuda et al., 2004). Cognitive defusion also focuses on disconnecting, distancing, and not responding to the thoughts instead of modifying the content of the thoughts (Gutiérrez et al., 2004). It is found that cognitive defusion techniques that Acceptance and Commitment Therapy uses reduce both of discomfort and believability of the thoughts more than other approaches' techniques such as control tasks for abnormal breathing and instructions to shift attention to the more pleasant thoughts (Masuda et al., 2004).

Therefore, these findings indicate that people who are going through hard times and experiencing difficult emotions can benefit from cognitive defusion techniques by allowing emotions and thoughts to come and go. Thus, it will be possible for them to focus on the present and engage in their current activities (Eifert, and Heffner, 2003). This approach opens a space for the individuals to accept and to feel their emotions and bodily sensations without avoidance and to focus on altering their behaviors towards the values they have in their life (Levitt et al., 2004). From this perspective, Acceptance and Commitment Therapy elements, particularly defusion and acceptance, offer a way to cope with OCD by altering the relationship with the obsessive thoughts and distressing feelings (Twohig, Hayes, and Masuda, 2006). Comparing the effectiveness of eight sessions of Acceptance and Commitment Therapy and progressive relaxation training for people who have OCD showed that Acceptance and Compulsive Therapy is more effective than progressive relaxation training to reduce the severity of OCD (Twohig et al., 2010).

Twohig, and colleagues (2015), researched to compare the psychological flexibility session by session in forty-one participants with OCD treated with ACT and thirty-eight participants with OCD treated with progressive relaxation training. It was a randomized control design with pre-assessment and post-assessment, and eight weeks therapy sessions were applied as an intervention. Findings indicated treatment effects were gradual in both groups. However, results also showed significantly greater outcomes in participants with OCD treated with ACT in the last two sessions (Twohig et al., 2015).

In this study, OCD will be examined based on the ACT model. Therefore, the concepts of acceptance and experiential avoidance, fusion with thoughts and images, will be explained below.

1.2. Acceptance and Experiential Avoidance

Acceptance emerged as one of the ways to cope with experiential avoidance with the formation of therapy approaches such as Acceptance and Commitment Therapy (Hayes, Strosahl, and Wilson, 1999) and Rational-Emotive Therapy (Ellis, 2005). As mentioned above, experiential avoidance, cognitive fusion, or thought-action fusion are considered the concepts that have a role in psychological disorders such as OCD

(Twohig et al., 2010). Therefore, the notions of acceptance, experiential avoidance, and thought-action fusion will be explained below.

1.2.1. Nature of Acceptance and Experiential Avoidance

Acceptance is considered as an alternative to experiential avoidance in the Acceptance and Commitment approach (Hayes, Strosahl, and Wilson, 1999). Individuals are taught to experience and to feel full without any defense to suppress or ignore (Hayes, Strosahl, and Wilson, 1999; Twohig, Hayes, and Masuda, 2006). Notions of acceptance and defusion are not just aimed to be achieved. Instead, it is seen as one of the steps to reach living a life based on values (Hayes, Strosahl, and Wilson, 1999). Acceptance is considered one of the core targets that ACT aims to reach psychological flexibility (Hayes, Strosahl, and Wilson, 1999). Acceptance contains actively embracing events or situations that happened during a particular time in the past or present without changing their frequency and form (Hayes, Strosahl, and Wilson, 1999).

Acceptance is also characterized as realizing and making a space for painful feelings, thoughts, sensations rather than struggling with them (Harris, 2009; Hayes, Strosahl, and Wilson, 1999). In addition to that, acceptance contains instead of fighting, resisting, avoiding, running away with those thoughts, emotions, urges, allowing them to be just what it is (Harris, 2009). However, acceptance does not refer to want or like those thoughts, emotions, urges. It points out to open up a room for them via acceptance (Harris, 2009). Both acceptance and defusion's goals are to separate from thoughts and emotions, see their true nature, appraise them as just thoughts and just feelings, and let those thoughts and feelings come and go without making any effort (Harris, 2009). *"Dropping the struggle," "sitting with the feeling," "letting it be," "making room for it,"* and *"willingness to have it"* would be exemplified as some of the metaphors for acceptance (Harris, 2009).

On the other hand, the ACT approach does not claim that all thoughts and feelings should be accepted under all circumstances. It would be too rigid, and rigidity is not a term that ACT advocates, and rigidity is not seen to accomplish psychological flexibility in the ACT (Harris, 2009; Hayes, Strosahl, and Wilson, 1999). Therefore, acceptance is used when the controlling techniques cause a reduction in the quality of

life. The critical point is whether control or acceptance enables one to live a life based on the values (Harris, 2009).

Experiential avoidance is defined as attempts to change the form and frequency of the events such as emotions, thoughts, memories which is unwilling to experience (Hayes, Strosahl, and Wilson, 1999). The term would also be used as emotional avoidance or cognitive avoidance instead of experiential avoidance when the event is related to emotion or cognition (Hayes, Strosahl, and Wilson, 1999). Avoiding is done without realizing it due to getting rid of unworthiness and related emotions (Luoma, Hayes, and Walser, 2007).

In a context that contains cognitive fusion and experiential avoidance, thoughts, feelings, memories are evaluated as toxic and harmful. However, in a context containing defusion and acceptance, those thoughts, feelings, and memories are evaluated as what it is (Harris, 2009).

1.2.2. Comparison between Acceptance and Suppression

A study that investigated the comparison between acceptance or suppression in strategies of intrusive thought management reached that suppression causes much more distress and a tremendous urge to do something than acceptance (Marcks, and Woods, 2005). Marcks, and Woods (2007), also conducted research based on the comparison of suppression, acceptance, and monitors-only group regarding the level of distress and frequency related to intrusive thoughts measured. The sample consists of nonclinical individuals who scored above the mean from the OCD symptoms. Findings revealed that the suppression group scored a significant level of distress and associated more with intrusion than the acceptance group. It is suggested that acceptance-based techniques are a valuable alternative to cope with intrusive thoughts (Marcks, and Woods, 2007). Najmi, Rieman, and Wegner (2009), conducted a study to measure the effectiveness of three notions, lined as suppression, focused distraction, and acceptance, on coping with intrusive thoughts regarding frequency and level of distress. The sample consisted of individuals with OCD and non-OCD groups based on the structural clinical interview for DSM-IV. Results showed that suppression leads to a greater level of distress but not a greater frequency of intrusive thoughts. Findings also indicated that focused distraction and acceptance are significantly more effective techniques than suppression in coping with intrusive thoughts, and suppression has a

counterproductive effect on dealing with intrusive thoughts (Najmi, Riemann, and Wegner, 2009).

Hofmann, and colleagues (2009), conducted a study consisting of students to measure the effects on emotion regulation of suppression, acceptance, and reappraisal techniques after giving an improv speech in front of the camera. Findings indicated that the suppression group has a more significant increase in heart rate from the baseline compared to acceptance and reappraisal groups. It is suggested that both techniques of acceptance and reappraisal are more effective than suppression in terms of emotion regulation (Hofmann et al., 2009). Techniques of suppression and acceptance via the task of watching an emotion-provoking film were compared in a study with participants who have mood or anxiety disorders. The suppression group showed a higher heart rate than the acceptance group after watching the movie (Campbell-Sills et al., 2006). Eifer, and Heffner (2003), compared the effects of both acceptance and control techniques on panic-related symptoms. Findings showed that the acceptance group had less intense fear, less catastrophic thoughts, and less avoidant behaviors than control and non-instruction groups (Eifert, and Heffner, 2003).

1.3. Cognitive Fusion

Cognitive fusion is characterized as the assumption that one's thoughts reflect reality, and therefore, one acts upon this assumption (Gillanders et al., 2014). Along with that, cognitive defusion is defined as putting a distance from the thoughts, which is considered the reverse of cognitive fusion (Hayes, Strosahl, and Wilson, 1999). The notion of cognitive fusion and its relationship with OCD will be explained over the notion of thought-action fusion below.

1.3.1. Nature of Thought-Action Fusion

Some people suffer from intrusive thoughts compared to other people due to the differences in interpretations (Rassin et al., 1999). People who feel responsible for having intrusive thoughts are more likely to feel distressed and discomfort whenever they experience intrusive thoughts than people who do not feel responsible for having intrusive thoughts (Salkovskis, 1985; Rachman, 1993; Rachman, 1998).

Thought-Action Fusion (TAF) is an internal source of inflated responsibility due to having particular thoughts. TAF has two components. Firstly, TAF is characterized as

an assumption that having specific thoughts increases the likelihood of occurrence of these thoughts. This component of TAF is referred to as “TAF-likelihood.” Then, secondly, it is assumed that having intrusive thoughts regarded as immoral is as unacceptable as performing those intrusive thoughts. This component of TAF is referred to as “TAF-morality” (Shafran, Thodarson, and Rachman, 1996).

A man with an obsession with death who wakes himself up during his sleep to check whether he is still alive is an example of TAF-likelihood. He rates the probability of his death during sleep as 20 % while rating the probability of others' death during sleep as one in a million. According to him, having this particular thought increases the likelihood of this thought happening in reality.

On the other hand, a woman who works as a nursing assistant for older people has intrusive thoughts of attacking and killing her patients even though she does her job excellently. Having these intrusive thoughts and believing that having those intrusive thoughts are morally equivalent to causing actual harm puts her in a great deal of distress, guilt, and loss of self-regard. This example refers to TAF-morality.

Even though TAF-likelihood and TAF-morality are not identical, it is proposed that they are related and they are intertwined in some instances. For instance, a man who has intrusive thoughts about sexually assaulting his baby while undressing his baby considers himself dangerous, immoral, and repugnant. He believes that having these kinds of intrusive thoughts in high frequency causes him to lose control and abuse his son. Then, he experiences the feeling of self-disgust as a consequence. He simultaneously experiences TAF-likelihood and TAF-morality (Rachman, and Shafran, 1999). Therefore, both aspects of TAF have a common feature of inflated responsibility. Along with inflated responsibility, getting fused with the intrusive thoughts would increase the likelihood of frequency and aversiveness of intrusions (Rassin et al., 1999). Findings referred that nonpathological obsessions and pathological obsessions are similar in terms of form and content, but they differ in frequency, intensity, and consequences (Rachman, and Silva, 1978).

The Acceptance and Commitment Therapy approach focuses on altering functions of thoughts or particular situations rather than trying to change their content, frequency, or sensitivity. Therefore, considering thoughts as thoughts, emotions as emotions are

attempted to show that they are not detrimental and do not need to be controlled or eliminated (Hayes, and Strosahl, 2005). Cognitive defusion contains to step back and detach from thoughts, images, and memories. Therefore, letting thoughts come and go as if they are the cars passing around rather than sticking with thoughts, images and memories are characterized as the purpose of cognitive defusion (Harris, 2009). Therefore, it is said that cognitive defusion techniques aim to put some distance with thoughts, images, memories (Hayes, and Strosahl, 2005).

1.3.2. Thought-Action Fusion and Obsessive-Compulsive Symptoms

In a study that compares participants with obsessions and participants without obsessions, findings indicated that participants with obsessions got higher scores than participants without obsessions on the subscale of TAF-Moral and TAF-Likelihood-for-others (Shafran, Watkins, and Charman, 1996). Another study that compared the groups of OCD, generalized anxiety disorder, panic disorder, social phobia, and non-clinical samples reached that participants who have obsessive-compulsive disorder had higher scores on the subscales of TAF-Likelihood-for-others and TAF-Likelihood-for-self than other groups (Abramowitz et al., 2003). Amir, and colleagues (2001), conducted a study on thought-action fusion in OCD. The sample consisted of undergraduate students, and the students were divided into two groups as students with OCD symptoms and without OCD symptoms. Findings showed that students with OCD symptoms significantly differ from students without OCD symptoms in terms of TAF-Likelihood-for-others (Amir et al., 2001).

In the study of Salkovskis, and colleagues (1997), non-clinical participants are divided into two groups. The experimental group is asked to neutralize whenever they heard their intrusive thoughts from the tape, and the control group is asked to distract themselves whenever they heard their intrusive thoughts from the tape. Findings indicated that the experimental group asked to neutralize their intrusive thoughts had more discomfort and strong urge to neutralize their intrusive thoughts than the control group, which is asked to distract their intrusive thoughts (Salkovskis et al., 1997). In another study conducted by Rachman, and colleagues (1996), participants were asked to visualize a relative in their mind and write a sentence indicating their wish that their relative will die in a car accident. Findings indicated that participants getting fused with the sentence reported a higher level of distress, inflated responsibility, and

neutralization attempts (Rachman et al., 1996). Therefore, it would be said that fusion increases neutralizing behaviors due to inflated responsibility (Rachman, and Shafran, 1999).

1.4. Distinction between Shame and Guilt

Individuals with OCD feel guilt and shame due to their attributions to their behaviors or their self for having particular obsessions and compulsions (Shapiro, and Stewart, 2011; Wetterneck, Singh, and Hart, 2014). The distinction between shame and guilt depends on how one interprets the situation. Therefore, the subjective nature of interpretation should be considered when naming the feeling, whether as shame or guilt (Woien et al., 2003). Even though shame and guilt were used interchangeably at times, recently, researchers have searched for the differentiation between guilt and shame (Gilbert, Pehl, and Allan, 1994).

The following paragraph will contain the nature of guilt and its relationship with OCD. After explaining the nature and role of shame, the relationship between shame and OCD will be presented.

1.4.1. Nature of the Guilt

Lewis (1971), defined guilt as a feeling which occurs after a negative evaluation of behavior related to a particular situation, not the negative evaluation of the entire self. Therefore, the central role of specific actions and behaviors related to guilt formation is highlighted. Guilt is also defined as a feeling experienced after violating ethical norms, moral values, sense of responsibility, and religious codes (Wicker, Payne, and Morgan, 1983; Kugler, and Jones, 1992). Violation of ethical norms, moral values, sense of responsibility, and religious code lead to reparative actions or to make amends for compensation (Wicker, Payne, and Glen, 1983). Furthermore, tension, regret, or remorse, which come with guilt, would be experienced as uncomfortable and even more intense, especially in times of lack of reparative actions (Tangney, Wagner, and Gramzow, 1992). In addition to that, it was asserted that expectation of punishment, confession, and asking for forgiveness is considered behaviors that come with guilt (Wicker, Payne, and Morgan, 1983). Premises of feeling guilty are lined up as accepting specific rules or standards, which is regarded as right or wrong, and obligation to feel that the actions should be taken based on those rules or standards.

For that reason, the realization of inconsistency between the actions and the moral rules and standards creates the feeling of guilt (Ausubel, 1955).

1.4.2. Guilt and Obsessive-Compulsive Disorder

Taking inflated responsibility for taking action over a situation would lead to depression and guilt (Shafran, Watkins, and Charman, 1996). The term of inflated responsibility contains the firm belief of sufficient ability to prevent catastrophic outcomes (Salkovskis, and Forrester, 2002). Inflated responsibility is prominent, especially with the dysfunctional thoughts of harming the self and others. However, any stimuli have the potential of evoking obsessional thoughts. These dysfunctional thoughts put one in doubt about the possibility of not having responsibility for a situation in the past. As a result, one feels guilt for not taking any responsibility to prevent the outcomes (Rheaume et al., 1995).

On the other hand, it is also suggested that behaving irresponsibly would evoke guilt and subsequently obsessions. It is hypothesized that behaving irresponsibly, which is an inconsistency between the executed behavior and the sense of duty, is more fearful than preventing adverse outcomes in the maintenance of obsessions (Mancini, and Gangemi, 2004a). Mancini, D'Olimpio, and Cieri (2004), investigated fear of guilt by acting irresponsibly, and its effect on obsessive-like behaviors, and findings indicated that participants in the group of personal responsibility plus fear of guilt by acting irresponsibly displayed more obsessive-like behaviors than both participants in personal responsibility group and participants in the control group (Mancini, Olimpio, and Cieri, 2004).

Most of the findings reached a conclusion, which indicates the relationship between guilt and OCD is specific for people who have obsessions about responsibility for causing harm, making mistakes, and checking rituals (Melli et al., 2017). Foa, and colleagues (2002), conducted a study to focus on the inflated perception of responsibility for harm used low-risk, moderate-risk, and high-risk scenarios to measure the relationship between OCD and inflated responsibility for harm. Low-risk scenarios contain the low-risk possibility for harming someone such as *"You see a piece of string on the ground,"* moderate-risk scenarios contain the situation that the degree of threat is not precise, like *"You see some nails on the road,"* high-risk scenarios include conditions that higher risk for harm to someone *"You see a person*

in a subway has an epileptic seizure." Findings showed that the participants with obsessive-compulsive checking behavior showed more inflated responsibility for harm and tremendous relief after rectifying the situation than participants in the non-OCD controls group in the low-risk and moderate-risk scenarios. Results suggest that participants with obsessive-compulsive symptoms checking behavior have more inflated responsibility for harm and need of rectifying the situations than participants with obsessive-compulsive symptoms without checking behavior and participants in the nonanxious control group (Foa et al., 2002). Another study that aimed to measure the inflated perception of responsibility in obsessive-compulsive disorder found that participants with obsessive-compulsive symptoms showed more urges, distress, and responsibility in low-risk and obsessive-compulsive relevant scenarios than participants in the anxious with generalized social phobia and participants in the non-anxious control group (Foa et al., 2001). It is also found that decreasing in the inflated perception of responsibility and thus decreasing in guilt leads to a decline in distress and compulsive checking behaviors (Lopatka, and Rachman, 1995; Shafran, 1997). It is reached that people with obsessive-compulsive disorder showed more tendency to experiencing guilt feelings than non-clinical and anxious participants (D'Olimpio et al., 2013), and the severity of obsessive-compulsive symptoms is positively correlated with the severity of guilt (Steketee, Quay, and White, 1991).

On the other hand, findings are also showed that obsessive-compulsive symptoms do not predict the guilt trait (Melli et al., 2015). Investigation of guilt sensitivity in symptom dimensions of obsessive-compulsive disorder found that guilt sensitivity would be seen as one of the predictors of obsessive-compulsive symptoms related to the checking compulsion. It is reached that checking compulsion plays a central role in assessing guilt sensitivity in obsessive-compulsive symptoms (Melli et al., 2017). Furthermore, it is found that therapeutic intervention such as acceptance of being guilty also leads to a decrease in obsessive-compulsive symptoms (Cosentino et al., 2012). Therefore, acceptance of the emotions like guilt and engaging in the present moment would benefit the treatment of obsessive-compulsive symptoms (Melli et al., 2017).

1.4.3. Nature of Shame

According to Lewis (1971), both shame and guilt occur with specific actions or situations. However, when shame is experienced, evaluation of the action or situation goes beyond its behavioral aspect, and the one makes deduction of defective and objectionable self. Thoughts, including *"What I did was horrible. Therefore, I am an incompetent, bad person,"* would pass through one's mind.

Shame is related not just to a particular behavior that comes out in a situation but a negative evaluation, which tackles the entire self with thoughts of being small and being shrinking and put the one in agony (Lindsay-Hartz, 1984; Tangney et al., 1996a; Wicker et al., 1983). The one who experiences shame would think that one's worthlessness and inadequacy schemas will be exposed to everyone and, therefore, assumes that everyone will see the worthlessness and inadequacy of that person (Lindsay-Hartz, 1984; Tangney et al., 1996a). Thus, when shame is experienced, the likelihood of desire to hide and run away from interpersonal situations increases, and thereby, these experiences would possibly trigger the schemas of worthlessness and inadequacy (Lindsay-Hartz, 1984).

Shame is regarded as social emotion due to internalizing others' criticisms and judgments as a reference point (Ausubel, 1955; Scheff, 1988). This hypothesis is supported by the cross-cultural study which is conducted by Wallbott, and Scherer (1995). Participants were asked to rate their experiences of shame and guilt regarding phenomenological, behavioral, and situational aspects to determine whether these feelings are associated with external or internal references. Findings indicated that a sense of shame is significantly attached to external sources such as other people, and a sense of guilt is attributed to internal sources like one's behavior.

1.4.4. Shame and Obsessive-Compulsive Disorder

Research about which obsessive-compulsive disorder symptom is related to shame proneness indicated a correlation between shame proneness and harm, symmetry symptom dimensions (Wetterneck, Singh, and Hart, 2014). In addition to that, the symmetry dimension in obsessive-compulsive disorder is positively correlated with shame in another research (Singh et al., 2016). One of the explanations for this is that relationship between symmetry and perfectionism (Calamari et al., 2006) and the relationship between perfectionism and shame (Ashby, Rice, and Martin, 2006)

indicates that there would be a relationship between symmetry and shame through perfectionism. Therefore, individuals who have high perfectionism feel shame when they do things not symmetrically. A study assessing the relationship between subtypes of obsessive-compulsive disorder and shame showed that the relationship between harm obsession and shame was significantly higher than the relationship between checking, washing obsession, and shame (Simonds, and Thorpe, 2003). A significant relationship between shame and unacceptable intrusive thoughts such as harm obsessions and taboo obsessions would be explained through stigmatization (McCarty et al., 2017). Research conducted among the Danish OCD Association members showed that OCD symptoms cause low-esteem, shame, and concerns about symptoms' possible effects on the future (Sørensen, Kirkeby, and Thomsen, 2004).

A comparison between the individuals with OCD and individuals with trichotillomania indicated that the individuals with OCD scored more on shame/defectiveness than the individuals with trichotillomania (Lochner et al., 2005). The study, which compares fifty-seven participants in the OCD group and seventy participants in the control group, showed that the OCD group reported higher scores on shame/defectiveness, isolation/alienation, and failure than the control group (Lee, Kim, and Park, 2014). Another study focused on the association between implicit shame characterized as a sense of shame associations that are less consciously controllable, body dysmorphic disorder group, obsessive-compulsive disorder group, social anxiety disorder, and control groups. The results showed that the obsessive-compulsive disorder group had greater implicit shame than other groups (Clerkin et al., 2014).

Investigating the moderating role of thought-action fusion on the relationship between obsessions and shame proneness and compulsions indicated that the relationship between shame-proneness, thought-action fusion, and obsessions predicts compulsions in nonclinical participants (Valentiner, and Smith, 2008).

1.5. Self-Disgust

Shame has a leading role in experiencing disgust towards the self. Therefore, one who feels self-disgust is likely to exhibit symptoms related to some disorders (Dalgleish, and Power, 2000). Since the findings related to the role of shame in the development of OCD are shown above, it is also possible that individuals who feel self-disgust experience obsessive-compulsive symptoms.

1.5.1. Nature of Self-Disgust

Disgust is considered one of the universal emotions characterized by its unique expression and physiological arousal, such as nausea, particularly actions like distancing oneself from the items that create disgust (Rozin, and Fallon, 1987; Ekman, 1992). Definition of disgust in terms of food contains features that the food is a contaminant and consequently detrimental. Therefore, there is a tendency to regard the food as unacceptable with disgust (Rozin, and Fallon, 1987). Then, disgust is defined as an experience that comes out due to an aversion to getting in touch with contagious or dirty objects (Rozin, Markwith, and McCauley, 1994). It is suggested that socio-moral topics such as racism, brutality, hypocrisy, and violations of social relationships that are considered unacceptable by society also trigger the feeling of disgust (Haidt et al., 1997). Findings indicated that disgust has an adaptive role in preventing the threat of possible diseases via exhibiting avoidant behaviors when encountering disgust-evoke stimuli (Curtis, Aunger, and Rabie, 2004). It is also suggested that avoidance of interacting with individuals who have a tendency to violate societal norms is considered advantageous in staying alive (Olatunji, David, and Ciesielski, 2012).

Disgust towards the self includes physical appearance, behaviors, personality traits instead of external stimuli such as food (Overton et al., 2008). Self-disgust has been recently regarded as a personality trait that includes evaluating the self from a critical perspective (Overton et al., 2008). It is proposed that an increment in moral self-perception would lead to harsher moral judgment about the self (Olatunji, David, and Ciesielski, 2012).

Self-disgust would be experienced due to negative evaluation of one's actions or features and internalization of the external stimuli such as other people's reactions or comments (Clarke, Simpson, and Varese, 2019). In addition to that, if one is ruminating a lot about how disgusting its actions are or getting feedback from others that highlights the disgust, these would affect one's perception, attention, and cognitive process in affirming self-disgust schema (Clarke, Simpson, and Varese, 2019). It is also considered that emotion affects appraisal as much as appraisal affects emotion (Clarke, Simpson, and Varese, 2019).

Disgust has distinctive features in terms of differentiating self-disgust from shame and guilt. Self-disgust possesses a strong physical sense of revulsion and nausea. On the

other hand, shame and guilt do not have this characteristic compared to self-disgust (Powell, Simpson, and Overton, 2015b). Therefore, self-disgust is differentiated from shame in terms of contamination-based appraisal. For instance statement *"I have been made a fool of myself"* would be attributed to the feeling of shame but not self-disgust. However, appraisals that include *"I look rotten"* or *"I make other people feel sick"* would be considered as self-disgust but not particularly shameful (Powell, Simpson, and Overton, 2015b). Overall, self-disgust and shame could co-occur in explaining mental health difficulties like sexual abuse (Clarke, Simpson, and Varese, 2019).

Both self-disgust and self-hatred contain self-criticism (Gilbert, Durrant, and McEwan, 2006). The difference between self-disgust and self-hatred in terms of behavioral aspect is explained that self-disgust triggers social withdrawal behavior due to the tendency to affect one's relationship with the self and one's relationship with others. On the other hand, self-hatred does not mainly possess this behavioral activation (Clarke, Simpson, and Varese, 2019).

1.5.2. Self-Disgust and Obsessive-Compulsive Disorder

In a study about whether immoral deeds might damage the moral identity of the one, findings showed that participants tend to do compensating actions such as cleansing of the self or the environment to gain the one to feel morally pure again. Therefore, it is suggested that self-disgust due to committing unethical acts would increase OCD symptoms (Zhong, and Liljenquist, 2006). In a study, participants who have OCD and participants without OCD were asked to write immoral actions they committed in the past. After the task is completed, half of the participants in each group have received a wipe to clean their hands. Then participants were offered to help voluntarily to a fictitious graduate student for its research. Findings showed that physical cleaning reduces the willingness to help in both groups, particularly participants with OCD. Therefore, it is offered that cleansing action, which is related to washing rituals in OCD, would reduce feelings of self-disgust momentarily (Reuven, Liberman, and Dar, 2014). A study conducted by Olatunji, and colleagues (2015), focused on the mediation role of self-disgust on the relationship between shame and symptoms of bulimia and OCD. Findings indicated that proneness to shame is significantly correlated with self-disgust. Results also showed a partial mediation role of self-

disgust on the relationship between shame proneness and symptoms of bulimia and OCD (Olatunji, Cox, and Kim, 2015).

Based on the findings mentioned above, it was concluded that guilt, shame, and self-disgust would be considered essential factors in developing and maintaining OCD.

1.6. Aim of the Present Study

Obsessions are recurrent, intrusive, and persistent thoughts, urges, or images that cause excessive anxiety. On the other hand, attempts to avoid, ignore, suppress or neutralize the intrusive thoughts, images, or urges with other thoughts or actions are seen as ways to deal with the intrusive thoughts, images, or impulses called compulsions (APA, 2013). Even though ERP effectively treats OCD, some clients do not benefit from this therapeutic intervention (Abramowitz, 1997; Williams et al., 2014). Along with that, as an alternative to ERP, acceptance and cognitive defusion concepts of the ACT approach are seen as effective in treating OCD for those individuals that do not benefit from ERP (Twohig, Hayes, and Masuda, 2006). Acceptance is the phenomenon that is the reverse of experiential avoidance, and it is characterized by feeling full and present without any defense to suppress or ignore what is experiencing or thinking (Hayes, Strosahl, and Wilson, 1999; Twohig, Hayes, and Masuda, 2006). On the other hand, experiential avoidance is defined as an attempt to shift the form and the frequency of emotions, memories, and thoughts which is unwilling to experience.

In addition, it is also found that getting fused with intrusive, unwanted thoughts and images due to the concepts of feeling responsible, acting irresponsibly, and catastrophic misinterpretations cause the development of OCD (Rachman, 1998; Rachman, and Shafran, 1999; Mancini, and Gangemi, 2004a). Furthermore, the literature also showed that shame and guilt are the factors in the development of OCD (Steketee, Quay, and White, 1991; Sørensen, Kirkeby, and Thomsen, 2004; Lochner et al., 2005; D'Olimpio et al., 2012; Lee, Kim, and Park, 2014; Wetterneck, Singh, and Hart, 2014; Singh et al., 2016). Due to both shame and self-disgust have similar concepts (Lewis, 1971; Overton et al., 2008), it is thought that self-disgust also has a role in the development of OCD (Olatunji, Cox, and Kim, 2015). Overall, it is thought that OCD is a life-impaired disorder associated with shame, self-disgust, guilt, thought-action fusion, and experiential avoidance. Furthermore, research regarding thought-action fusion, experiential avoidance, obsessive-compulsive symptoms found

that the phenomenon of inflated responsibility, acting irresponsibly, catastrophic misinterpretations as important in the treatment of OCD. Studies investigated the relationship between shame, self-disgust, guilt, thought-action fusion, experiential avoidance, and obsessive-compulsive symptoms separately. However, it has not been conducted comprehensive studies to cover all of these variables. Based on this research, it is thought that shame, self-disgust, and guilt would predict obsessive-compulsive symptoms via the mediator roles of thought-action fusion and experiential avoidance. It is planned to do simple mediation analyses to examine the roles of thought-action fusion and experiential avoidance separately to see the unique effect of the mediator roles of thought-action fusion and experiential avoidance on the relationship between shame, self-disgust, guilt, and obsessive-compulsive symptoms. It is aimed to reach a better understanding of the mechanisms underlying OCD symptoms. In addition, it is thought that comprehension of this mechanism will be beneficial to the therapeutic process. In addition, it is also considered that examining acceptance over experiential avoidance due to their opponent nature will generate insight into obsessive-compulsive and might be useful in reducing symptoms during therapy sessions.

It is aimed to search for two research questions and six hypotheses in this study. These are presented below.

1.7. Research Questions

1) Will there be any difference between females and males based on OCD scores?

2) Will there be any significant correlations between obsessive-compulsive, shame, guilt, self-discuss, thought-action fusion, and experiential avoidance?

1.8. Hypotheses

Based on the literature, the following hypothesis was proposed;

H1: Thought-action fusion will significantly mediate the relationship between shame and obsessive-compulsive symptoms.

H2: Thought-action fusion will significantly mediate the relationship between self-disgust and obsessive-compulsive symptoms.

H3: Thought-action fusion will significantly mediate the relationship between guilt and obsessive-compulsive symptoms.

H4: Experiential avoidance will significantly mediate the relationship between shame and obsessive-compulsive symptoms;

H5: Experiential avoidance will significantly mediate the relationship between self-disgust and obsessive-compulsive symptoms.

H6: Experiential avoidance will significantly mediate the relationship between guilt and obsessive-compulsive symptoms.

CHAPTER 2: METHOD

This section contains information about the characteristics of the sample and the measurement tools used in this research, the research process, and the statistical analysis used in analyzing the data.

2.1. Sample of the Study

A total number of 317 participants took part in the current study. The age range of the participants expected to attend this study was determined as 18 years and above. One participant was excluded from the data for having an extreme score from the Guilt and Shame Scale. The features of the demographic are shown in Table 2.

The data consists of 207 female (65.5 %) and 109 male (34.5 %) participants. The ages of the participants are ranged from 18 to 75 (M = 34.39, SD = 12.27). 118 participants are single (37.3 %), 53 participants are not married but in a relationship (16.8 %), 132 participants are married (41.8 %), 11 participants are divorced/separated (3.5 %), 2 participants lost its spouse (0.6 %).

Related to the level of education, four participants graduated from elementary school (1.3 %); four participants graduated from middle school (1.3 %); fifty participants graduated from high school (15.8 %). Thirty participants had an associate degree (9.5 %); one hundred seventy-nine participants had a bachelor's degree (56.6%); forty-three participants had a master's degree (13.6 %); six participants had a Ph.D. (1.9%).

One hundred eighteen participants (37.3%) stated that they got psychological help in the past or are still getting psychological help. Sixty (19.0 %) participants indicated that they got physical or chronic problems in the past or have still it. Eighty-two participants (25.9 %) marked that they used medical or psychiatric medicine in the past or are using it now.

Table 2. Demographic Characteristic of the Sample

		N	*%*
Relationship Status	Single	118	37.3
	Being in a Relationship	53	16.8
	Married	132	41.8
	Divorced/Separated	11	3.5
	Lost a Spouse	2	0.6
Level of Education	Elementary School	4	1.3
	Middle School	4	1.3
	High School	50	15.8
	Associate Degree	30	9.5
	Bachelor Degree	179	56.6
	Master Degree	43	13.6
	PhD	6	1.9
Socioeconomic Status	2000-2999 Turkish Lira	37	11.7
	3000-4999 Turkish Lira	61	19.3
	5000-6999 Turkish Lira	77	24.4
	7000 Turkish Lira and above	142	44.6
Psychological Help	Yes	118	37.3
	No	198	62.7
Physical and Chronic Problem	Yes	60	19.0
	No	256	81.0
Medical or Psychiatric Medicine	Yes	82	25.9
	No	234	74.1

2.2. Instruments

The instruments of this study contain Demographic Information Form, Vancouver Obsessive-Compulsive Inventory, Thought-Action Fusion Scale, Acceptance and Action Questionnaire II, Self-Disgust Scale, Guilt and Shame Scale.

2.2.1. Demographic Information Form

The researcher developed a demographic information form to obtain detailed data about gender, age, marital status, level of education, socioeconomic status, therapy experience, physical and chronic problems, and medical or psychiatric medicine use. (Appendix C).

2.2.2. Vancouver Obsessive-Compulsive Inventory

Vancouver Obsessive-Compulsive Inventory is a self-assessment scale developed to assess six different OCD symptom groups (Thordarson et al., 2004). The scale is consisted of 55 questions with 5-point Likert type *(0 = not at all, 1 = very little, 2 = a little, 3 = quite, 4 = very)*. Total scores which are likely to get from the scale ranges between 0-220. High scores obtained from the scale indicate higher severity of OCD symptoms. Based on factor analysis, the authors found the following subscales: Contamination (12 items), Checking (6 items), Obsession (12 items), Hoarding (7 items), Just Right (12 items), Indecisiveness (6 items). The psychometric properties of the original study showed a high internal consistency, which is α = .94 for the total scale, α = .88 - .96 for the subscales (Thordarson et al., 2004).

İnözü, and Yorulmaz (2013), adapted the Turkish version and tested the validity and reliability in the Turkish population. The psychometric properties of the study indicated that Cronbach alpha value of the total scale, which is α = .96, and Cronbach alpha value of the subscales, which are α =.77 - .89. Target Rotation Analysis was used to evaluate to what extent the item distribution, which constitutes the factor structure of the scale obtained in the Turkish sample, overlaps with the factor structure of the original scale. Findings indicate that the Proportional Agreement Coefficient for all subscales ranged from .95 to .89. Therefore the Turkish version of the VOCI largely overlapped with the original factor structure of the scale (İnözü, and Yorulmaz, 2013).

In this study, the Cronbach alpha value of the total scale is α = .96, and the Cronbach alpha value of the subscales is α =. 82 - .91.

2.2.3. Acceptance and Action Questionnaire II

Acceptance and Action Questionnaire II is a self-assess developed to measure experiential avoidance and psychological flexibility (Bond et al., 2011). The questionnaire consists of 7 self-report items with a 7-point Likert type (*from 1 = Never*

true" to 7 = "Always true). Total scores that are likely to get from the scale ranges between 7-49, with higher scores indicating a higher level of psychological inflexibility. Therefore, a high-level experiential avoidance. The researchers conducted the study of *AAQ-II* with six different samples from clinical and non-clinical conditions. Findings showed the average Cronbach alpha value as .84 (.78-.88) (Bond et al., 2011).

Yavuz, and colleagues (2016), adapted the Turkish version and tested the validity and reliability of the scale in the Turkish population. Principal component analysis was used to analyze structural validity. Investigating the sampling adequacy was examined via Kaier-Meyer-Index and found as .83. (r= .83). Therefore, it was inferred that the data were convenient for one-factor analysis (Bartlett chi-square = 1151.20; p < 0.0001). Findings related to the screen plot criterion indicated the one-factor structure. Cronbach alpha value of the entire scale is .84 in the study of adaptation into the Turkish version. Results related to test-retest reliability analysis showed the correlation coefficient between the two measurements as .85 (Yavuz et al., 2016).

This study's findings indicated that Cronbach alpha value of the total scale, which is α = .92. Because the Acceptance and Action Questionnaire II measures experiential avoidance, this questionnaire will refer to experiential avoidance through the text.

2.2.4. Thought-Action Fusion Scale

Thought-Action Fusion Scale is a self-assessment scale developed to assess psychological fusion between thoughts and actions (Shafran, Thordarson, and Rachman, 1996). The scale consists of 19 self-report items with a 5-point Likert type (*range from 0 = I do not agree at all to 4 = I totally agree*). Total scores that are likely to get from the scale ranges between 0-76, with higher scores indicating higher TAF features. TAF has three subscales called as TAF-Morality, TAF-Likelihood-others, TAF-Likelihood-self. TAF-Likelihood-Self and TAF-Likelihood-Others refer to believing that having particular thoughts increases the likelihood of those thoughts happening in the life of the self and the others. Also, believing that having specific thoughts considered immoral is as unacceptance as exhibiting those thoughts is called TAF-Morality (Shafran, Thordarson, and Rachman, 1996). People with OCD, students, and adults attended the study of measuring the psychometric features of the

scale. As a result, the internal consistency of the subscales of TAF ranges between .85 and .96.

Yorulmaz, Yılmaz, and Gençöz (2004), adapted the Turkish version and tested the validity and reliability in the Turkish population (Yorulmaz, Yılmaz, and Gençöz, 2004). Following the screen plot and item distribution, instead of three, the two-factor solution was preferred. The first factor, called TAF-Likelihood, comprises seven items with the Cronbach alpha value of .92. The second factor, called TAF-Morality, consisted of twelve items with the Cronbach alpha value of .85. Findings indicated the internal consistency of the total scale as .86. The authors also examined the Split-half reliability for the total scale and the subscales. Findings showed that Guttman split-half reliability for the total scale was .92, which the first ten items of the scale's Cronbach alpha coefficient were .75, and the second part of the scale's Cronbach alpha which contains nine items, was .78. Guttman split-half reliability of the subscale of TAF-Likelihood, which includes seven items, was .92, where the first half of the Cronbach alpha was .86 and the second half of the Cronbach alpha was .84. Gutmann split-half reliability of the subscale of TAF-Morality, which consists of twelve items, was .88, where the first half of the Cronbach alpha was .73 and the second half of the Cronbach alpha was .72 (Yorulmaz, Yılmaz, and Gençöz, 2004).
This study's findings indicated a Cronbach's alpha value of .92 for the total scale. Cronbach's alpha value of the subscale TAF-Morality is α = .91, and TAF-Likelihood is α = .94.

2.2.5. Guilt and Shame Scale

Şahin, and Şahin (1992), developed The Guilt and Shame Scale to measure guilt and shame under various conditions. The researchers borrowed twenty-eight items from the Dimensions of Conscience Questionnaire to construct the Guilt and Shame Scale (Johnson et al., 1987). After implementing these items to one hundred students, the researchers developed a thirty-six items scale. Then, this scale was measured with the participation of three hundred eleven students and asked the participants to choose one of the four terms: guilt, shame, both, and either for each item's condition. As a result, based on this evaluation, a total of twenty-four questions were composed of twelve guilt questions, and twelve shame questions were constituted (Sahin, and Sahin, 1992). Shame and Guilt Scale has a five-point Likert type ranging from *"not at all"* to

"extremely." Total scores that are likely to get from the scale ranges between 24-120, with higher scores indicating a higher level of guilt and shame. Internal consistency of the total scale is .89, and Cronbach alpha values of both guilt and shame subscale found respectively as .81 and .80.

This study's results showed that the Cronbach alpha value of the total scale is .89, and the Cronbach alpha value of guilt and shame subscales are respectively .87 and .86.

2.2.5. Self-Disgust Scale-Revised

Overton, and colleagues (2008), developed that the self-disgust scale measures how disgusted the one from its behavior, look, or self. The self-disgust scale consists of eighteen items. Six items are filler, and nine items are reverse coded in the original study. Findings in the original study indicated that Cronbach alpha value was .91 and test-retest reliability was .94. (Overton et al., 2008). Powell, Overton, and Simpson (2015), revised the scale and changed five items, and instead, they added four items, one item as a filler item. The revised form consists of two subscales named the disgust for behaviors and the disgust for physical appearance and a total of twenty-two items (Powell, Overton, and Simpson, 2015a).

Bahtiyar, and Yıldırım (2019), adapted the Turkish version and tested the validity and variability of the scale in the Turkish population. The scale consists of twenty-one self-report items with a seven-point Likert type (*from 1 = I strongly disagree to 7 = I strongly agree*). The scale has seven fillers and nine reverse-coded items in the Turkish adaptation. As expected, filler items are not included in the scoring. Total scores that are likely to get from the scale ranges between 14-98 with higher scores indicate a higher level of self-disgust. Construct validity was examined via exploratory factor analysis of the factor structure on items from the scale. Researchers removed seven filler items before analysis and used the remaining fifteen items. Kaiser Meyer Olkin (KMO) and Bartlett tests were conducted to decide that the data was suitable for factor analysis. Findings indicated the value of KMO (.85, which is above .60) and the value of the Bartlett test (1489.695, $p < .001$) as significant. Therefore, the results also showed that the data is convenient to perform factor analysis. According to the principal components analysis applied to the items using the Varimax rotation technique, the researchers found two factors found with an eigenvalue higher than the value of one and support for the screen plot. This two-factor structure, consistent with

the original scale and explains 42.48 % of the total variance. The scale has two subscales called the behavioral self-disgust scale and the physical self-disgust scale. One item with the content of "I do not want to be seen" had a factor load of less than .30 and had low face validity in the Turkish adaptation. Therefore, it was removed from the Turkish version. The Cronbach alpha value of the total scale is .83, and the Cronbach alpha value of behavioral self-disgust and physical self-disgust subscale subscales are respectively .78 and .71. Test-retest reliability analysis showed the correlation coefficient between the two measurements as .84 for the total scale (Bahtiyar, and Yıldırım, 2019).

The Cronbach alpha value in the present study was .85 for the total scale.

2.3. Procedure

Ethical approval was obtained from the Scientific Research and Publication Ethics Committees of the Izmir University of Economics for the current study. Due to the Covid-19 pandemic, data collection was administered online via Google Forms, using different social media platforms such as Instagram and WhatsApp. Participants were informed about the study's subject and asked to contact the researcher if they have any questions. Participants' right to withdraw from the research at any time and the researcher's contact information was clearly stated in the informed consent form. After confirming that the participants agreed to attend this study voluntarily, firstly, they approved the informed consent. Then, they completed the Demographic Information Form, Vancouver Obsessive-Compulsive Inventory, Thought-Action Fusion Scale, Acceptance and Action Questionnaire II, Self-Disgust Scale, Guilt and Shame Scale. The completion of scales by participants took approximately 15 minutes.

2.4. Statistical Analysis

Before the primary test analysis, the data were screened for accurate data entry, missing values, and normal distribution and homogeneity assumption. First, there were 317 subjects with no missing value. Due to its extreme score, one outlier was extracted from the dataset, and the analyses were conducted with 316 participants.

Affirming the normality assumption, skewness and kurtosis values would be lie between -1.5 and 1.5. (Tabachnick, and Fidell, 2013). Findings showed that skewness

and kurtosis of the data lie between -1.5 and 1.5 for every measuring tool. The result indicated that the data is normally distributed.

Pearson Correlation Analysis was applied to calculate the correlation coefficients between the variables of the study. Then, to show whether there are any gender differences, *t*-tests analyses were conducted. In order to test the main hypotheses of the research, simple mediation analyzes were performed with the Bootstrapping method. Simple mediation analyses were performed with version 3.5 of the PROCESS Macro program developed for SPSS (Statistical Package for Social Sciences) by Hayes (Hayes, 2017).

The researchers who support the contemporary approach have criticized Baron, and Kenny's method (1986) to analyze the mediation effect due to certain conditions required (Darlington, and Hayes, 2017; Fritz, and MacKinnon, 2007; Hayes, 2017; Hayes, and Rockwood, 2017; Williams, and MacKinnon, 2008).
Researchers who support the contemporary approach have claimed that the Bootstrap method gives more reliable mediation analysis results than the traditional method of Baron, and Kenny (1986), and the Sobel test (Hayes, 2017; Zhao, Lynch, and Chen, 2010). Therefore, if the predictor variable's (*X*) indirect effect is significant, the mediation model is supported when the bootstrap test is significant. Thus, there would be no requirement to do any other analyses (Hayes, 2017; Fritz, and MacKinnon, 2007; Preacher, and Hayes, 2004, 2008). In the contemporary approach, 5000 resampling options with the bootstrap technique have been used. The values in the 95% confidence interval (CI) obtained to support the research in instrumental effect analyzes made with the bootstrap technique should not include the value zero (*0*) (MacKinnon, Lackwood, and Williams, 2004).

Model 4 will be used to perform the simple mediation analysis in this study. The figure of Model 4 is given below (Hayes, 2017).

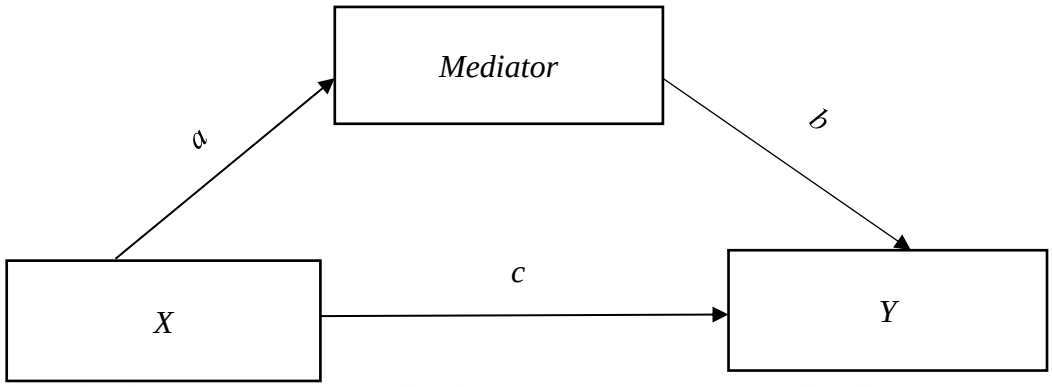


Figure 1

Figure 1. Model 4

CHAPTER 3: RESULTS

This chapter represents the statistical analysis of the data collected from the adults who are 18 years old and above to test the hypothesis asserted above. The results of *t*-test analysis regarding gender, correlation analysis of the variables, and simple mediation analyses of the variables will be shown below.

3.1. Preliminary Analysis

3.1.1. Descriptive Statistic for the Scales

Table 3. Descriptive Statistics of the Measures (N=316)

Variables	Mean	*SD*	Range
VOCI	60.01	33.60	0-194
VOCI-Checking	6.57	5.67	0-24
VOCI- Contamination	15.33	9.72	0-47
VOCI- Obsessions	11.39	8.33	0-41
VOCI- Hoarding	4.87	4.75	0-24
VOCI-Just Right	14.38	8.21	0-43
VOCI- Indecisiveness	7.48	4.83	0-22
AAQ- II	21.05	10.12	7-49
TAFS	22.94	16.40	0-73
SDS	30.35	12.29	14-72
GSS	93.78	13.99	51-120
GSS- Guilt	51.43	7.10	18-60
GSS- Shame	42.35	9.03	29-60

Note: VOCI: Vancouver Obsessive-Compulsive Inventory, VOCI Checking: Vancouver Obsessive-Compulsive Inventory Checking Subscale, VOCI Contamination: Vancouver Obsessive-Compulsive Inventory Contamination Subscale, VOCI Obsessions: Vancouver Obsessive-Compulsive Inventory Obsessions Subscale, VOCI Hoarding: Vancouver Obsessive-Compulsive Inventory Hoarding Subscale, VOCI Just Right: Vancouver Obsessive-Compulsive Inventory Just Right Subscale, VOCI Indecisiveness: Vancouver Obsessive-Compulsive Inventory Indecisiveness Subscale, AAQ- II: Acceptance and Action Questionnaire- II, TAFS: Thought- Action Fusion Scale, SDS: Self-Disgust Scale, GSS: Guilt- Shame Scale, GSS Guilt: Guilt- Shame Scale Guilt Subscale, GSS Shame: Guilt- Shame Scale Shame Subscale.

3.1.2. Results of t-test Regarding Females and Males

Findings regarding independent t-test comparing women and men on main measures are given in Table 4.

When female and male participants were compared regarding obsessive-compulsive symptoms, the outcome showed that, on average, female participants got higher scores from obsessive-compulsive symptoms compared to male participants. This difference was not significant $t(314) = 1.05$, $p = .296$. Findings related to comparing the scores of experiential avoidance between females and males showed that female participants got slightly higher scores from experiential avoidance than male participants as average. However, this difference, was not significant $t(314) = 1.00$, $p = .318$. The comparison of the score of thought-action fusion regarding gender showed that female participants got higher scores from thought-action fusion than male participants on average. This difference was significant $t(314) = 2.16$, $p = .031$; it did represent a small-sized effect, $d = .26$.

Examining the comparison of self-disgust scores in terms of gender showed that male participants got higher self-disgust scores than female participants on average. However, this difference was not significant $t(314) = -1.51$, $p = .132$. The results related to comparing shame scores regarding females and males showed that female participants got higher scores from the shame than male participants. This difference was significant $t(314) = 5.90$, $p = .000$; it did represent a medium-sized effect, $d = .69$. Findings related to comparing the scores of guilt between females and males show that female participants got higher scores from guilt compared to male participants, on average. This difference was significant $t(314) = 4.75$, $p = .000$; it did represent a medium-sized effect, $d = .56$.

Table 4. Independent *t*-test Results Comparing Participants in Terms of Gender

Variables	Women		Men	
	Mean	*SD*	Mean	*SD*
VOCI	61.44	34.35	57.28	32.09
VOCI-Checking	6.62	5.66	6.47	5.70
VOCI-Contamination	16.29	10.03	13.50	8.87
VOCI-Obsessions	11.56	8.66	11.07	7.67
VOCI-Hoarding	4.75	4.80	5.08	4.67
VOCI-Just Right	14.43	8.37	14.28	7.92
VOCI-Indecisiveness	7.79	5.08	6.88	4.27
AAQ- II	21.46	10.79	20.27	8.69
TAFS	24.38	17.14	20.21	14.59
SDS	29.60	11.96	31.79	12.82
GSS	97.18	12.68	87.33	14.13
GSS- Guilt	52.76	6.27	48.90	7.88
GSS- Shame	44.42	8.42	38.43	8.88

Note: VOCI: Vancouver Obsessive-Compulsive Inventory, VOCI Checking: Vancouver Obsessive-Compulsive Inventory Checking Subscale, VOCI Contamination: Vancouver Obsessive-Compulsive Inventory Contamination Subscale, VOCI Obsessions: Vancouver Obsessive-Compulsive Inventory Obsessions Subscale, VOCI Hoarding: Vancouver Obsessive-Compulsive Inventory Hoarding Subscale, VOCI Just Right: Vancouver Obsessive-Compulsive Inventory Just Right Subscale, VOCI Indecisiveness: Vancouver Obsessive-Compulsive Inventory Indecisiveness Subscale, AAQ- II: Acceptance and Action Questionnaire- II, TAFS: Thought- Action Fusion Scale, SDS: Self-Disgust Scale, GSS: Guilt-Shame Scale, GSS Guilt: Guilt- Shame Scale Guilt Subscale, GSS Shame: Guilt- Shame Scale Shame Subscale.

3.1.3. Correlations of Variables in the Study

Correlations related to the variables were measured considering Pearson's correlation coefficients.

Correlations between Obsessive-Compulsive Symptoms and Experiential Avoidance, Thought-Action Fusion, Self-Disgust, Guilt and Shame

Findings regarding the correlations are given in Table 5. The correlation between obsessive-compulsive symptoms, experiential avoidance, thought-action fusion, self-disgust, shame, and guilt are reported below.

Findings show a significant positive relationship between obsessive-compulsive symptoms and thought-action fusion with r = .45 p = .000. When the participants reported more obsessive-compulsive symptoms, they also reported higher thought-action fusion. A significant positive relationship between obsessive-compulsive symptoms and experiential avoidance indicated that individuals with higher obsessive-compulsive symptoms also showed higher experiential avoidance r = .68, p = .000. Another significant positive relationship was found between obsessive-compulsive symptoms and self-disgust with r = 48, p = .000. Obsessive-compulsive symptoms and shame were significantly positively correlated, r = .37, p = .000, showing that individuals with higher obsessive-compulsive symptoms also experience more shame. On the other hand, there was no significant relationship between obsessive-compulsive symptoms and guilt, r = .09, p = .110.

Findings also show a significant positive relationship between thought-action fusion and experiential avoidance, r = .37, p = .000. Therefore, individuals that more getting fused with their thoughts also exhibit more experiential avoidance. Along with that, a significant positive relationship between experiential avoidance and self-disgust r = .60, p = .000; a significant positive relationship between experiential avoidance and shame, r = .27, p = .000 are found. These results indicate that individuals that exhibit more experiential avoidance feel more self-disgust and shame. On the other hand, there was no significant relationship between experiential avoidance and guilt, r = -.03, p = .646.

Findings related to the correlations between thought-action fusion and other variables showed that a significant positive relationship between thought-action fusion and self-

disgust, r = .28, p = .000; a significant positive relationship between thought-action fusion and shame, r = .31, p = .000, a significant positive relationship between thought-action fusion and guilt, r = .18, p = .001. These outcomes show that individuals more getting fused with their thoughts experience more severe self-disgust, shame, and guilt. When the correlation between emotions of self-disgust, shame, and guilt are examined, findings indicated that there is a significant positive relationship between shame and self-disgust, r = .11, p = .045; a significant positive relationship between shame and guilt, r = .50, p = .000. On the other hand, the correlation between self-disgust and guilt showed a significant negative relationship, r = -.13, p = .018. According to these results, individuals that feel more shame experience more self-disgust and guilt. However, individuals that feel more self-disgust experience less guilt.

Table 5. Correlation of Study Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1- VOCI	-	-	-	-	-	-	-	-	-	-	-	-	-
2- VOCI-Contamination	.78**	-	-	-	-	-	-	-	-	-	-	-	-
3- VOCI-Checking	.78**	.55**	-	-	-	-	-	-	-	-	-	-	-
4- VOCI-Obsessions	.86**	.55**	.58**	-	-	-	-	-	-	-	-	-	-
5- VOCI Hoarding	.71**	.39**	.48**	.63**	-	-	-	-	-	-	-	-	-
6- VOCI Just Right	.87**	.58**	.65**	.69**	.55**	-	-	-	-	-	-	-	-
7- VOCI Indecisiveness	.80**	.47**	.54**	.71**	.59**	.71**	-	-	-	-	-	-	-
8- AAQ-II	.68**	.38**	.45**	.71·	.46**	.62**	.70**	-	-	-	-	-	-
9- TAFS	.45**	.35**	.32**	.44**	.32**	.38**	.38**	.37**	-	-	-	-	-
10- SDS	.48**	.23**	.30**	.52**	.40**	.43**	.49**	.60**	.28**	-	-	-	-
11- GSS	.29**	.30**	.22**	.22**	.15**	.22**	.21**	.16**	.29**	.01	-	-	-
12- GSS-G	.09	.14*	.06	.07	.03	.06	.05	-.03	.18**	-.13*	.88**	-	-
13- GSS-S	.37**	.36**	.29**	.29**	.22**	.30**	.30**	.27**	.31**	.11*	.90**	.50**	-

*$p < .05$. **$p < .01$.

Note: VOCI: Vancouver Obsessive-Compulsive Inventory, VOCI Checking: VOCI Checking Subscale, VOCI Contamination: VOCI Contamination Subscale, VOCI Obsessions: VOCI Obsessions Subscale, VOCI Hoarding: VOCI Hoarding Subscale, VOCI Just Right: VOCI Just Right Subscale, VOCI Indecisiveness: VOCI Inventory Indecisiveness Subscale, AAQ- II: Acceptance and Action Questionnaire- II, TAFS: Thought-Action Fusion Scale, SDS: Self-Disgust Scale, GSS: Guilt-Shame Scale, GSS G: Guilt- Shame Scale Guilt Subscale, GSS S: Guilt-Shame Scale Shame Subscale.

3.2. Main Analyses

3.2.1. Results of Mediating Role of Thought-Action Fusion on the Relationship between Shame and Obsessive-Compulsive Symptoms

Results of the mediating role of thought-action fusion on the relationship between shame and obsessive-compulsive symptoms are given in Table 6 and Figure 2.

When the direct paths were examined for the mediation model 4, shame significantly predicted thought-action fusion in a positive direction (β = .31, *SE* = .10, *B* = .56, 95% CI [.372, .755], $p < .001$). Meanwhile, thought-action fusion significantly predicted obsessive-compulsive symptoms in a positive direction (β = .37, *SE* = 10, *B* = .76, 95% CI [.558, .970], $p < .001$). Shame also significantly predicted obsessive-compulsive symptoms in a positive direction (β = .26, SE = .19, *B* = .26, 95% CI [.576, 1.323], $p < .001$). When the mediator effect of thought-action fusion was examined, findings showed that thought-action fusion significantly mediates the relationship between shame and obsessive-compulsive symptoms (β = .12, *SE* = .03, *B* = .43, 95% CI [.067, .170]).

Regarding the results, the hypothesis of thought-action fusion significantly mediated the relationship between shame and obsessive-compulsive symptoms is supported. Findings indicated that the entire model is significant [$F(2, 313) = 55.924$; $p < .001$] and the entire model explains 26 % (R^2 = .26) of the variance in obsessive-compulsive symptoms.

Table 6. Results of Mediating Role of Thought-Action Fusion on the Relationship between Shame and Obsessive-Compulsive Symptoms

		Consequent				
		M (*TAF*)			*Y* (*OCS*)	
Antecedent		*b*	*S.E.*		*b*	*S.E*
X (Shame)	α	.31***	.10	*c*	.26***	.19
M (*TAF*)	-	-	-	*b*	.37***	.11
Constant	i_m	-.92	4.22	i_y	2.28	7.82
		R^2 = .09			R^2 = .26	
		$F(1, 314) = 33.42$; $p < .001$			$F(2, 313) = 55.92$; $p < .001$	

Note. *$p < .05$, **$p < .01$, ***$p < .001$; *β*: Standardized Coefficients, *S.E.*: Standard Error, *X*: Predictor Variable *M*: Mediator, *Y*: Outcome Variable, *TAF*: Thought-Action Fusion, *OCS*: Obsessive Compulsive Symptoms.

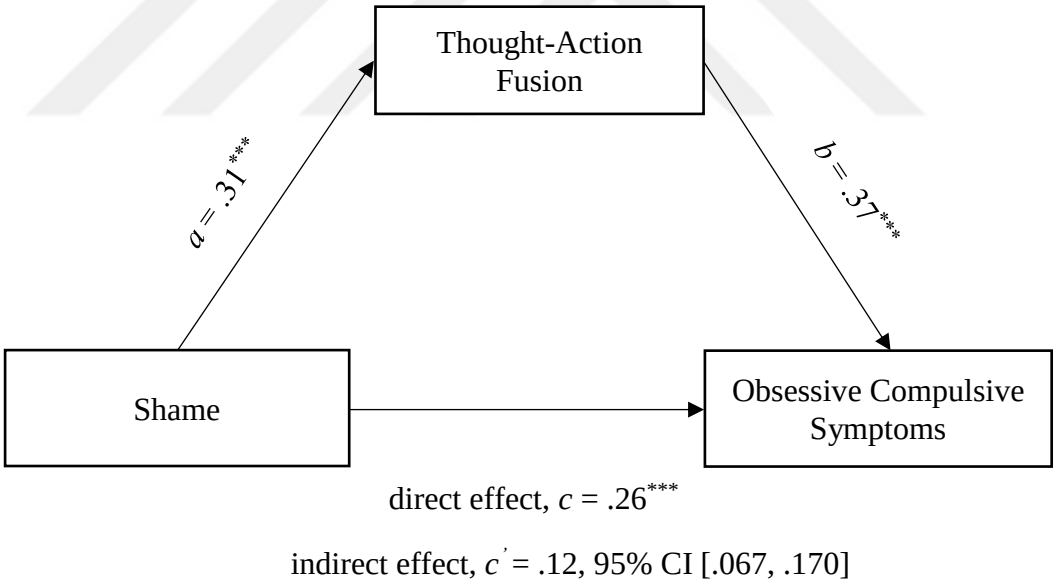


Figure 2. Results of Mediating Role of Thought-Action Fusion on the Relationship between Shame and Obsessive-Compulsive Symptoms

3.2.2. Results of Mediating Role of Experiential Avoidance on the Relationship between Shame and Obsessive-Compulsive Symptoms

Results of the mediating role of experiential avoidance on the relationship between shame and obsessive-compulsive symptoms are given in Table 7 and Figure 3.

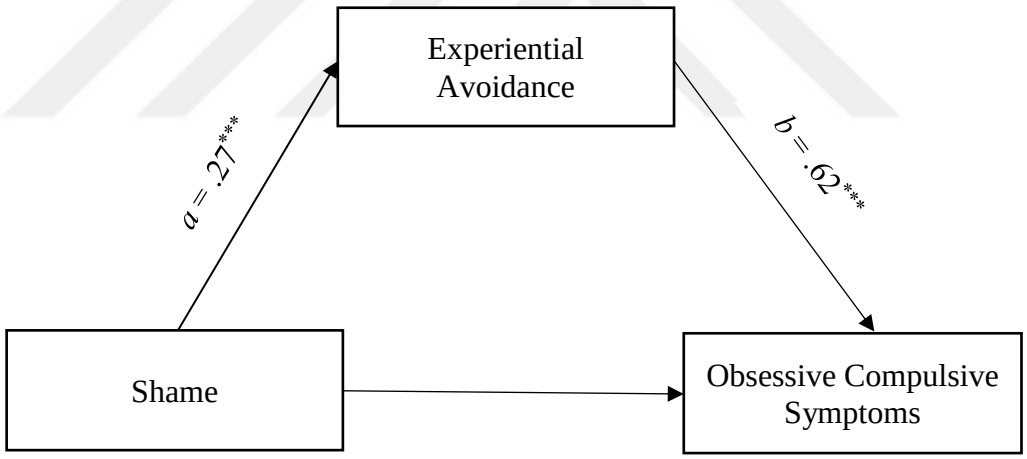
When the direct paths were examined for the mediation model 4, shame significantly predicted experiential avoidance in a positive direction (β = .27, *SE* = .06, *B* = .30, 95% CI [.181, .421], $p < .001$). Meanwhile, experiential avoidance significantly predicted obsessive-compulsive symptoms in a positive direction (β = .62, *SE* = .14, *B* = 2.07, 95% CI [1.798, 2.341], $p < .001$). Shame also significantly predicted obsessive-compulsive symptoms in a positive direction (β = .20, SE = .14, *B* = .76, 95% CI [.451, 1.060], $p < .001$). When the mediator effect of experiential avoidance was examined, findings showed that experiential avoidance significantly mediated the relationship between shame and obsessive-compulsive symptoms (β = .17, *SE* = .03, *B* = .62, 95% CI [.105, .231]).

The results verified the hypothesis that experiential avoidance significantly mediated the relationship between shame and obsessive-compulsive symptoms. The outcomes showed that the entire model is significant [$F = (2, 313) = 155.25$, $p < .001$]. In addition, the entire model explains 50 % (R^2 = .50) of the variance in obsessive-compulsive symptoms.

Table 7. Results of Mediating Role of Experiential Avoidance on the Relationship between Shame and Obsessive-Compulsive Symptoms

	Consequent					
	M (*EA*)				*Y* (*OCS*)	
Antecedent		*b*	*S.E.*		*b*	*S.E*
X (Shame)	α	.27***	.06	*c*	.20***	.16
M (*EA*)	-	-	-	*b*	.62***	.14
Constant	i_m	8.28**	2.64	i_y	-15.56*	6.55
		R^2 = .07			R^2 = .50	
		$F(1, 314) = 24.50$; $p < .001$			$F = (2, 313) = 155.25$; $p < .001$	

Note. *$p < .05$, **$p < .01$, ***$p < .001$; β: Standardized Coefficients, *S.E.*: Standard Error, *X*: Predictor Variable *M*: Mediator, *Y*: Outcome Variable, *EA:* Experiential Avoidance, *OCS*: Obsessive Compulsive Symptoms.



direct effect, $c = .20^{***}$

indirect effect, $c' = .17$, 95% CI [.105, .231]

Figure 3. Results of Mediating Role of Experiential Avoidance on the Relationship between Shame and Obsessive-Compulsive Symptoms

3.2.3. Results of Mediating Role of Thought-Action Fusion on the Relationship between Self-Disgust and Obsessive-Compulsive Symptoms

Results of the mediating role of thought-action fusion on the relationship between self-disgust and obsessive-compulsive symptoms are given in Table 8 and Figure 4.

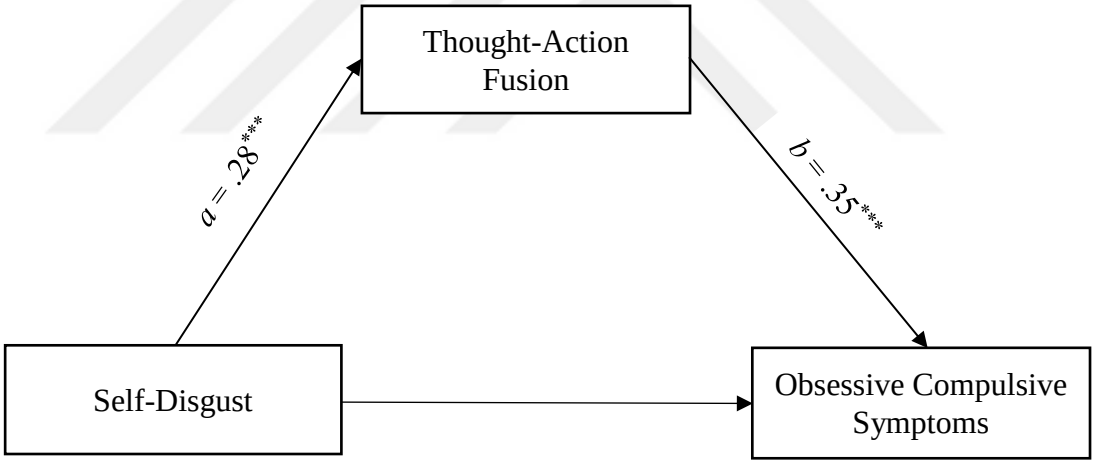
When the direct paths were examined for the mediation model 4, self-disgust significantly predicts thought-action fusion in a positive direction (β = .28, SE = .07, B = .37, 95% CI [.225, .510], p < .001). Meanwhile, thought-action fusion significantly predicted obsessive-compulsive symptoms in a positive direction (β = .35, SE = .10, B = .71, 95% CI [.517, .901], p < .001). Self-disgust also significantly predicted obsessive-compulsive symptoms in a positive direction (β = .38, SE = .13, B = 1.05, 95% CI [.79, 1.31], p < .001). When the mediator effect of thought-action fusion is examined, findings showed that thought-action fusion significantly mediated the relationship between self-disgust and obsessive-compulsive symptoms (β = .10, SE = .02, B = .26, 95% CI [.051, .145]).

According to the results, the hypothesis of the thought-action fusion has a significant mediator effect on the relationship between self-disgust and obsessive-compulsive symptoms were confirmed. Findings showed that the entire model is significant [F(1, 314) = 93.79; p < .001]. Also, the outcomes show that the entire model explains 23 % (R^2 = .23) of the variance in obsessive-compulsive symptoms.

Table 8. Results of Mediating Role of Thought-Action Fusion on the Relationship between Self-Disgust and Obsessive-Compulsive Symptoms

		Consequent				
	M (*TAF*)				*Y* (*OCS*)	
Antecedent		*b*	*S.E.*		*b*	*S.E*
X (SD)	α	.28***	.07	*c*	.38***	.13
M (*TAF*)	-	-	-	*b*	.35***	.10
Constant	i_m	11.79***	2.37	i_y	11.86**	4.27
		R^2 = .08			R^2 = .23	
		$F(1, 314) = 25.77$; $p < .001$			$F(1, 314) = 93.79$; $p < .001$	

Note: *$p < .05$, **$p < .01$, ***$p < .001$; β: Standardized Coefficients, *S.E.*: Standard Error, *X*: Predictor Variable *M*: Mediator, *Y*: Outcome Variable, *SD*: Self-Disgust *TAF*: Thought-Action Fusion, *OCS*: Obsessive Compulsive Symptoms.



direct effect, $c = .38^{***}$

indirect effect, $c' = .10$, 95% CI [051, .145]

Figure 4. Results of Mediating Role of Thought-Action Fusion on the Relationship between Self-Disgust and Obsessive-Compulsive Symptoms

3.2.4. Results of Mediating Role of Experiential Avoidance on the Relationship between Self-Disgust and Obsessive-Compulsive Symptoms

Results of the mediating role of experiential avoidance on the relationship between self-disgust and obsessive-compulsive symptoms are given in Table 9 and Figure 5.

When the direct paths were examined for the mediation model 4, self-disgust significantly predicted experiential avoidance in a positive direction (β = .60, *SE* = 03, *B* = .50, 95% CI [.424, .570], $p < .001$). Meanwhile, experiential avoidance significantly predicted obsessive-compulsive symptoms in a positive direction (*b* = .61, SE = .17, *B* = 2.03, 95% CI [1.692, 2.378], $p < .001$). Self-disgust also significantly predicted obsessive-compulsive symptoms in a positive direction (β = .11, *SE* = .14, *B* = .30, %95 CI [.024, .580], $p < .05$). When the mediator effect of experiential avoidance was examined, findings showed that experiential avoidance significantly mediated the relationship between self-disgust and obsessive-compulsive symptoms (β = .37, *SE* = .04, *B* = 1.01, 95% CI [.286, .449]).

Therefore, the hypothesis is confirmed by the result that indicates experiential avoidance has a significant mediation effect on the relationship between self-disgust and obsessive-compulsive symptoms. Findings also indicated that the entire model is significant [$F(2, 313) = 40.24$, $p < .001$] and explains 47 % (R^2 = .47) of the variance in obsessive-compulsive symptoms.

Table 9. Results of Mediating Role of Experiential Avoidance on the Relationship between Self-Disgust and Obsessive-Compulsive Symptoms

	Consequent					
	M (*EA*)				*Y* (*OCS*)	
Antecedent		*b*	S.E.		*b*	S.E
X (*SD*)	α	.60***	.04	*c*	.11*	.14
M (*EA*)	-	-	-	*b*	.61***	.17
Constant	i_m	5.96***	1.17	i_y	8.12*	3.83
		R^2 = .37			R^2 = .47	
		F(1, 314) = 180.18; *p* < .001			*F* (2, 313) = 137.39; *p* < .001	

Note. *p < .05, **p < .01, ***p < .001; β: Standardized Coefficients, *S.E.*: Standard Error, *X*: Predictor Variable *M*: Mediator, *Y*: Outcome Variable, *SD*: Self-Disgust, *EA*: Experiential Avoidance, *OCS*: Obsessive Compulsive Symptoms.

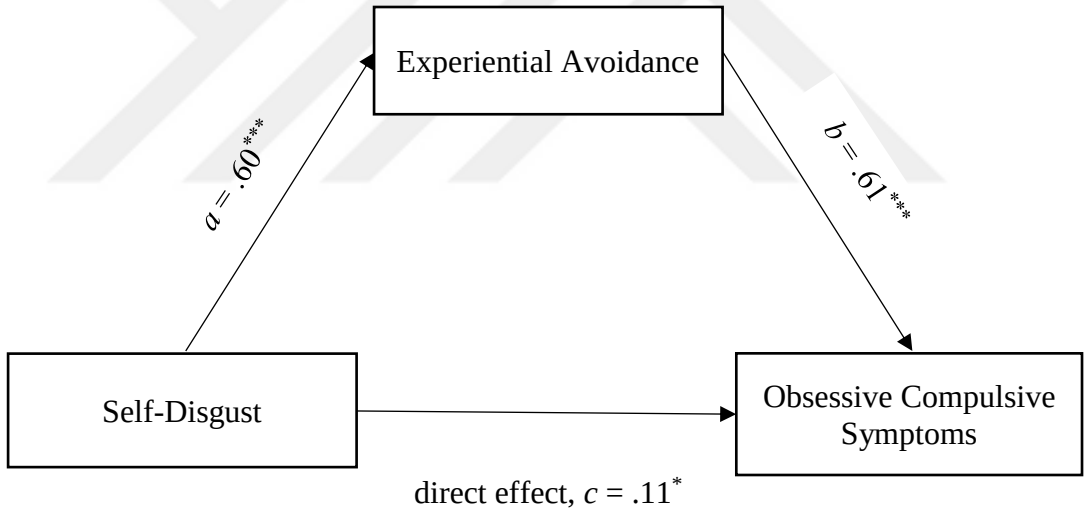


Figure 5. Results of Mediating Role of Thought-Action Fusion on the Relationship between Self-Disgust and Obsessive-Compulsive Symptoms

3.2.5. Results of Mediating Role of Thought-Action Fusion on the Relationship between Guilt and Obsessive-Compulsive Symptoms

Results of the mediating role of thought-action fusion on the relationship between guilt and obsessive-compulsive symptoms are given in Table 10 and Figure 6.

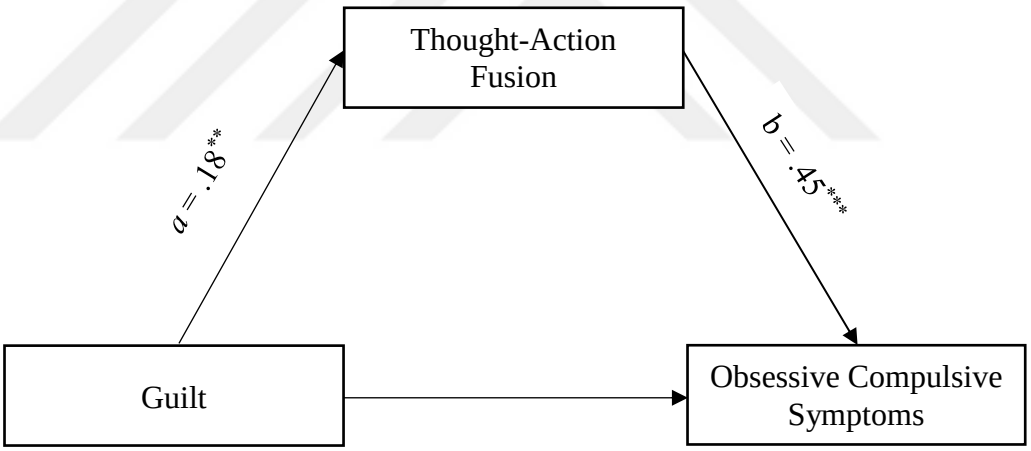
When the direct paths were examined for the mediation model 4, guilt significantly predicted thought-action fusion in a positive direction (β = .18 , *SE* = .13, *B* = .42, 95% CI [.167, .672], p < .01). Meanwhile, thought-action fusion significantly predicted obsessive-compulsive symptoms in a positive direction (β = .45, *SE* = .11, *B* = .92, 95% CI [.717, 1.130], p < .001). However, guilt did not significantly predict obsessive-compulsive symptoms (β = .01, *SE* = .24, *B* = .04, 95% CI [-.439, .516], p > .05). When the mediator effect of thought-action fusion was examined, findings showed that thought-action fusion significantly mediated the relationship between guilt and obsessive-compulsive symptoms (β = .08, *SE* = .03, *B* = .39, 95% CI [.027, .143]).

The result verified the hypothesis that thought-action fusion significantly mediated the relationship between guilt and obsessive-compulsive symptoms. In addition, findings pointed out that the entire model is significant [$F(2, 313) = 40.24$; p < .001], and along with that, the entire model explains 21 % (R^2 = .21) of the variance in obsessive-compulsive symptoms.

Table 10. Results of Mediating Role of Thought-Action Fusion on the Relationship between Guilt and Obsessive-Compulsive Symptoms

	Consequent					
	M (*TAF*)				*Y* (*OCS*)	
Antecedent		*b*	*S.E.*		*b*	*S.E*
X (Guilt)	α	.18**	.128	*c*	.01	.24
M (*TAF*)	-	-	-	*b*	.45***	.11
Constant	i_m	1.38	6.653	i_y	36.85**	12.38
		R^2 = .03			R^2 = .21	
		$F(1, 314) = 10.71$; $p < .01$			$F(2, 313) = 40.24$; $p < .001$	

Note: *p < .05, **p < .01, ***p < .001; β: Standardized Coefficients, *S.E.*: Standard Error, *X*: Predictor Variable *M*: Mediator, *Y*: Outcome Variable, *TAF*: Thought-Action Fusion, *OCS*: Obsessive Compulsive Symptoms.



direct effect, c = .01

indirect effect, c' = .08, 95% CI [.027, .143]

Figure 6. Results of Mediating Role of Thought-Action Fusion on the Relationship between Guilt and Obsessive-Compulsive Symptoms

3.2.6. Results of Mediating Role of Experiential Avoidance on the Relationship between Guilt and Obsessive-Compulsive Symptoms

Results of the mediating role of experiential avoidance on the relationship between guilt and obsessive-compulsive symptoms are given in Table 11 and Figure 7.

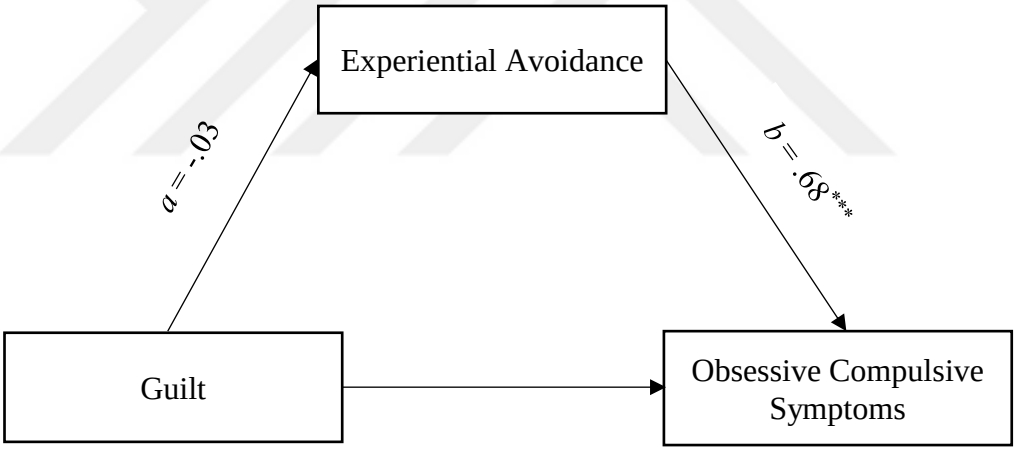
When the direct paths were examined for the mediation model 4, guilt did not significantly predicted experiential avoidance (β = -.03, *SE* = .08, *B* = -.04, 95% CI [-.195, .121], $p > .05$). Meanwhile, experiential avoidance significantly predicted obsessive-compulsive symptoms in a positive direction (β = .68, *SE* = .14, *B* = 2.26, 95% CI [1.992, 2.528], $p < .001$). Guilt significantly predicted obsessive-compulsive symptoms (β = .11, *SE* = .19, *B* = .51, 95% CI [127, .892], $p < .05$). When the mediator effect of experiential avoidance was examined, findings showed that experiential avoidance did not significantly mediate the relationship between guilt and obsessive-compulsive symptoms (β = -.02, *SE* = .04, *B* = -.08, 95% CI [-.094, .057]).

Therefore, the hypothesis that experiential avoidance significantly mediates the relationship between guilt and obsessive-compulsive symptoms was not supported. However, outcomes indicated that the entire model is significant [$F(2, 313) = 139.52$, $p < .001$] and, along with the results, that the entire model explains 47 % ($R^2 = .47$) of the variance in obsessive-compulsive symptoms.

Table 11. Results of Mediating Role of Experiential Avoidance on the Relationship between Guilt and Obsessive-Compulsive Symptoms

	Consequent					
	M (*EA*)				*Y* (*OCS*)	
Antecedent		*b*	*S.E.*		*b*	*S.E*
X (Guilt)	α	-.03	.08	*c*	.11**	.19
M (*EA*)	-	-	-	*b*	.68***	.14
Constant	i_m	22.95***	4.17	i_y	-13.76	10.57
		R^2 = .00			R^2 = .47	
		F(1, 314) = .21; *p* >.05			*F*(2, 313) = 139.52 ; *p* < .001	

Note: *p < .05, **p < .01, ***p < .001; β: Standardized Coefficients, *S.E.*: Standard Error, *X*: Predictor Variable *M*: Mediator, *Y*: Outcome Variable, E*A*: Experiential Avoidance, *OCS*: Obsessive Compulsive Symptoms.



direct effect, c = .11**

indirect effect, c' = -.02, 95% CI [-.094, .057]

Figure 7. Results of Mediating Role of Experiential Avoidance on the Relationship between Guilt and Obsessive-Compulsive Symptoms

For an overview, the results of the mediating roles of thought-action fusion and experiential avoidance are given in Table 12.

Table 12. Mediation Model Analysis Findings

Variables	Thought-Action Fusion (*M*)	Experiential Avoidance (*M*)
Shame and OC Symptoms	Yes	Yes
Self-Disgust and OC Symptoms	Yes	Yes
Guilt and OC Symptoms	Yes	No

Note. *OC symptoms*: Obsessive-Compulsive Symptoms, *M*: Mediator.

CHAPTER 4: DISCUSSION

This study indicated a significant and positive relationship between obsessive-compulsive symptoms and, respectively, shame, self-disgust, thought-action fusion, and experiential avoidance. The results also showed that thought-action fusion significantly mediated the relationship between shame and obsessive-compulsive symptoms; self-disgust and obsessive-compulsive symptoms; guilt and obsessive-compulsive symptoms. In addition, findings show that experiential avoidance significantly mediated the relationship between shame and obsessive-compulsive symptoms; self-disgust and obsessive-compulsive symptoms. However, it was reached that experiential avoidance did not significantly mediate the relationship between guilt and experiential avoidance.

In the following paragraphs, the present study results will be discussed in light of the current literature.

4.1. Independent t-test Results Comparing Women and Men on the Main Measures

Findings indicated that thought-action fusion, guilt, and shame differ significantly in gender. Female participants scored higher than male participants from the measures of thought-action fusion, guilt, and shame. On the other hand, obsessive-compulsive symptoms, self-disgust, and experiential avoidance did not significantly differ in gender.

Researchers focusing on the female-male ratio on obsessive-compulsive symptoms found no significant difference in gender, even though females got slightly higher scores than males in the literature (Castle, Deale, and Marks, 1995; Stein, 2002; Weissman, 1998). Therefore, this study's results are coherent with the literature. The findings of this study also showed that even though there is no significant difference, female participants got slightly higher scores on experiential avoidance than males. These findings are seemed congruous with the literature (Bond et al., 2011; Hayes et al., 2006). In line with the literature, female participants scored higher on both shame and guilt subscales from the guilt and shame than male participants, pointing out that females tend to experience guilt and shame more than males (Plant et al., 2000). Even though there was no significant difference between male and female participants in self-disgust, male participants got slightly higher scores than female participants.

However, literature has not supported this result. In one study, results indicated that female participants significantly experience a higher level of self-disgust than male participants (Azlan et al., 2016). When both studies were examined, it was reached some differences in both samples. In Azlan and colleague's study, participants consist of individuals with heterogeneous cancer. However, this criterion was not searched for in this study. From this point of view, it was thought that the side effects of taking medication to their appearance during the treatment of cancer lead women to feel more self-disgust than men. Literature showed that women have less content with their appearance compared to men. However, it was thought that other factors such as low-esteem or critics that come from others affect the self-disgust level more in men than women other than appearance. Azlan, and colleagues (2016), used the Self-Disgust scale developed by Overton, and colleagues (2008), in their study. However, Powell, and colleagues' revised version of the self-disgust scale (2015), was used in this study. It was also thought that revision on the scale might explain the inconsistency between the two results.

On the contrary, female participants got significantly higher scores from the thought-action fusion than male participants in this study. However, there were no significant differences between gender for thought-action fusion in the study conducted by Yorulmaz, Yılmaz, and Gençöz in 2004. It is thought that using different samples would explain the inconsistency in the outcomes. Yorulmaz, Yılmaz, and Gençöz (2004), determined their participants as college students. However, in this study, participants consisted of individuals 18 ages and above. Even though both studies were conducted in the same culture, it is thought that individuals with a different age range affect the outcomes.

4.2. Correlation Analysis

The first hypothesis of this study stated that there is a positive and significant relationship between obsessive-compulsive symptoms and shame, self-disgust, guilt, thought-action fusion, and experiential avoidance. The results showed a significantly positive relationship between obsessive-compulsive symptoms and the experimental avoidance, thought-action fusion, self-disgust, and shame. However, the relationship between guilt and obsessive-compulsive symptoms was not significant. Therefore, except for the relationship between guilt and obsessive-compulsive symptoms, the first

hypothesis is confirmed. This result means that when experiential avoidance, thought-action fusion, shame, and self-disgust increase, obsessive-compulsive symptoms increase. However, this is not the case in the relationship between guilt and obsessive-compulsive symptoms. The results of these correlations will now be discussed in detail.

4.2.1. The Result of Correlation between Thought-Action Fusion and Obsessive-Compulsive Symptoms

In line with the literature, the relationship between thought-action and obsessive-compulsive symptoms is significant and positive (Rassin et al., 2001). As mentioned in the introduction section, getting fused with the thoughts increases the likelihood of exhibiting compulsive actions (Rachman, and Shafran, 1999). Therefore, individuals who show compulsions get more fused with their thoughts and assume that their thoughts reflect reality. This mindset does not allow one to see their thoughts just as thoughts or images just as images. Therefore, assuming their thoughts reflect reality increases the fusion with the thoughts and maintains to experience obsessive-compulsive symptoms more severe (Zucker et al., 2002). From this perspective, it was thought that the results implied that the cognitive defusion that is the opposite nature of thought-action fusion decreases experiencing obsessive-compulsive symptoms by altering the context. It also seems congruent with the literature (Masuda et al., 2004).

4.2.2. The Result of Correlation between Experiential Avoidance and Obsessive-Compulsive Symptoms

The results of the present study showed a significant association between experiential avoidance and obsessive-compulsive symptoms. As mentioned in the literature, individuals tend to avoid their thoughts to eliminate the unworthiness beliefs (Luoma, Hayes, and Walser, 2007). Therefore, individuals exhibit experiential avoidance to eliminate unworthiness schema by changing the frequency and form of the intrusive thoughts or images that the individuals are reluctant to have (Hayes et al., 1996). However, as pointed out in the literature, avoidance-like strategies such as suppression cause to experience more distress and a tremendous urge to do something (Marcks, and Woods, 2005). In addition, findings also showed that coping strategies like avoidance and suppression have a counterproductive effect on dealing with intrusive thoughts (Najmi, Riemann, and Wegner, 2009). From this perspective, avoidance and

avoidance-like strategies cause compulsions, and performing compulsion leads to acting more in avoidance and avoidance-like strategies. It is thought that the belief that only avoiding the obsession would decrease compulsions causes one to exhibit more avoidance when one fails to accomplish avoiding the obsession. Therefore, this rigidity comes from experiential avoidance creates more obsessive-compulsive symptoms every time trying to avoid the obsession.

On the other hand, since experiential avoidance has the opposite nature of acceptance (Harris, 2009), it was deduced from this study's findings that showing psychological flexibility by allowing these thoughts to come and go reduces experience the obsessive-compulsive symptoms.

4.2.3. Result of Correlation between OCD and Respectively Shame, Self-Disgust, and Guilt

The findings of this research indicated a significant positive correlation between shame, self-disgust, and obsessive-compulsive symptoms. Therefore, individuals that experience more severe shame and self-disgust will exhibit more obsessive-compulsive symptoms.

In literature, it is stated that self-disgust is an extreme form of shame (Roberts, and Goldenberg, 2007), and from this perspective, both emotions' common feature is the negative beliefs about the self. As mentioned in the introduction section, self-disgust distinguishes from shame on the contamination-based feature such as the thought of "I make other people sick." On the other hand, shame contains the feature of inadequateness beliefs about the self instead of the contamination-based feature. Thus, self-disgust also might contain the features of shame due to the deduction of "I am rotten, and therefore, I am inadequate." As a result, it is expected that individuals who feel more shame also feel more self-disgust with additional thoughts such as "I make other people sick." The occurrence of these thoughts would increase the worthlessness and inadequateness beliefs related to shame and self-disgust simultaneously.

Thus, people who experience shame and self-disgust based upon particular thoughts are likely to exhibit compulsive actions to eliminate these feelings. However, compulsive rituals consolidate the idea that intrusive thoughts are wicked, and those compulsions are essential to dismiss them (Rachman, 1998). From that point of view,

to exhibit compulsions to eliminate the belief of worthlessness and inadequateness consolidates those beliefs, which will create more severity of shame and self-disgust. As mentioned in the introduction section, there is a significantly positive correlation between shame and symmetry (Wetterneck, Singh, and Hart, 2014). Thus, it is expected that individuals with obsessive-compulsive symptoms exhibit symmetry compulsion to eliminate the beliefs of worthlessness and inadequateness that derive from shame, as consistent with the literature. Therefore, it was thought that they would try to prove themselves that they are indeed worthy and adequate by putting everything in order or symmetrical. Since self-disgust also contains worthlessness and inadequateness beliefs, it was thought that it also expected that individuals with self-disgust also try to overcome worthlessness and inadequateness belief with the compulsions like symmetry or order. However, fusing with the emotions to overcome those beliefs leads to experience more shame or self-disgust, like mentioned before.

On the other hand, the relationship between guilt and obsessive-compulsive symptoms in the study was not significant. Even though Vancouver Obsessive-Compulsive Inventory (Thordarson et al., 2004) has an obsession subscale with checking subscales that are considered most related to guilt, it is thought that the participants attributed the thoughts and beliefs inferred from those thoughts statements to the self. However, guilt occurs due to the attribution of negative beliefs or thoughts to the behavior, not the self (Lewis, 1971). For instance, some statements from the obsession subscale are

> *"I find that almost every day I am upset by unpleasant thoughts that come into my mind against my will"* or "*I repeatedly experience upsetting and unacceptable thoughts of a religious nature."*

Therefore, it is not known the nature of the unpleasant thoughts; it is considered relatively as vague. As related to the statements from the checking subscale, these statements are primarily associated with checking the stove, windows, and door. Therefore, it is thought that these statements are not related to producing guilt. In this perspective, it is reasonable not to reach a significant relationship between guilt and obsessive-compulsive symptoms since most statements in the subscales do not point out the specific behaviors.

4.3. Interpretation of Mediation Analysis

This study investigated whether experiential avoidance and thought-action fusion play a mediating role in the relationship between shame, guilt, self-disgust, and obsessive-compulsive symptoms. In this part of the study, the findings regarding the mentioned mediation relationship will be discussed.

4.3.1. Result of the Mediator Role of Experiential Avoidance on the Relationship between Obsessive-Compulsive Symptoms and Respectively Shame and Self-Disgust, and Guilt

Regarding the mediating role of experiential avoidance, results showed that experiential avoidance significantly mediates the relationship between shame and obsessive-compulsive symptoms; self-disgust and obsessive-compulsive symptoms.

The studies showed that individuals with OCD have a higher level of defectiveness schema with shame (Lochner et al., 2005). The findings seem consistent with this study's results. Therefore, it was thought that individuals justify their schemas of defectiveness, worthlessness by avoiding the situations or conditions while trying to eliminate related schemas. Since exhibiting experiential avoidance leads one to be in tremendous stress and performing more obsessive-compulsive symptoms, the aim of getting rid of the feeling of shame due to schemas of defectiveness, worthlessness, or inadequateness will not be accomplished.

Along with that, withdrawal behaviors are also seen while experiencing self-disgust (Clarke, Simpson, and Varese, 2019). These withdrawal behaviors were thought of as experiential avoidance since a mechanism tries to control the frequency or severity of self-disgust via withdrawal. Therefore, it is expected that the same pattern will be processed with self-disgust. Because individuals with self-disgust also have the beliefs defectiveness, worthlessness, and inadequateness mentioned above with the addition of rottenness belief. Therefore, exhibiting experiential avoidance via suppressing or ignoring the emotion of self-disgust and related schemas will only lead to experience more obsessive-compulsive symptoms due to the consolidating effect of experiential avoidance. For instance, asking one not to think pink elephants will bring out more pink elephants in one's mind (Eifert, and Forsyth, 2005). Therefore, trying not to have intrusive thoughts and not to feel shame and self-disgust will cause more intrusive thoughts with related feelings. As a result, compulsive behaviors will be executed to

cope with the thoughts and emotions of shame and self-disgust. It was also thought that individuals exhibit experiential avoidance since there are no concrete behaviors executed in the condition of shame and self-disgust. Therefore, it seems that individuals who feel shame and self-disgust choose to cope with the dysfunctional belief about the self with experiential avoidance. However, in this case, showing experiential avoidance puts one in agony and leads one to develop obsessive-compulsive symptoms.

This study showed that experiential avoidance did not significantly mediate the relationship between guilt and obsessive-compulsive symptoms. Even though experiential avoidance predicts obsessive-compulsive symptoms, guilt does not predict experiential avoidance in the model. As mentioned before, guilt leads to reparative actions or to make amends for compensation (Wicker, Payne, and Morgan, 1983). The literature also showed that guilt sensitivity mainly predicts checking compulsions (Melli et al., 2017). The reason behind that is regarded as the urge to rectify the behavior, which is considered irresponsible or horrible (Mancini, and Gangemi, 2004a). From this point of view, it was thought that individuals with guilt mostly prefer to do reparative actions or make amends for compensation than experiential avoidance since the formation of guilt requires concrete actions.

On the other hand, the literature showed that accepting the emotions instead of suppressing or avoiding them leads to a decrease in obsessive-compulsive symptoms (Melli et al., 2017). It was thought that stop being in a struggle to change thought or belief leads to a decrease in related emotions like shame, self-disgust, and guilt and, therefore, a decrease in exhibiting obsessive-compulsive symptoms. As a result, individuals do not feel obligated to prove themselves that they are indeed worthy and adequate regarding shame and self-disgust and do not try to do compensation behaviors to rectify the beliefs related to committing a horrible behavior.

In literature, Kroska, and colleagues (2018), conducted studies with college students and high school students with a high risk of academic failure, substance abuse, and psychosocial difficulties to examine the mediating role of experiential avoidance on the relationship between previous traumatic experiences and obsessive-compulsive symptoms. The studies were conducted separately. The results showed that experiential avoidance significantly mediated the relationship between the previous

traumatic experience and obsessive-compulsive symptoms for both samples (Kroska et al., 2018). Literature also showed that shame and self-disgust could exist together in abuse and neglect cases (Clarke et al., 2019). Therefore, it was thought that traumatic experiences and the severity of traumatic experiences determine the occurrence of shame, self-disgust, or co-existence of both shame and self-disgust. Along with that, coping strategies like experiential avoidance to eliminate the schemas of defectiveness, worthlessness leads to obsessive-compulsive symptoms. Therefore, this study's findings seem coherent with the of Kroska, and colleagues (2018).

De la Cruz, and colleagues (2013), conducted a study to investigate experiential avoidance and emotion regulation difficulties with four groups called individuals with hoarding disorder, individuals with OCD, individuals with comorbidity of hoarding disorder and OCD, and control group. The findings indicated that scores of experiential avoidance and emotion regulation difficulties were higher in the group of participants with hoarding disorder-OCD comorbidity compared to the other groups. Therefore, whether it is about discarding some possessions related to hoarding disorder or urge to check the oven related to OCD, it was thought that suppressing or avoiding intrusive thoughts do no assist to regulate the emotions and, therefore, consolidate the obsessive-compulsive symptoms (De la Cruz et al., 2013). Besides, the literature showed that there is a significant relationship between shame and experiential avoidance (Carvalho et al., 2015); shame and OCD (Wetterneck, Singh, and Hart, 2014; Singh et al., 2016; Simonds, and Thorpe, 2003). Since withdrawal or avoidance behaviors are seen in both shame and self-disgust (Lindsay-Hartz, 1984; Clarke, Simpson, and Varese, 2019), there is a decrease in emotion regulation when individuals with shame and guilt exhibit experiential avoidance. As a result, it is shown that disturbance in emotion regulation could lead to OCD. Therefore, the findings of this study related to the effect of experiential avoidance on shame, self-disgust, and OCD seem consistent with De la Cruz, and colleagues' study outcomes (2013).

As a result, the study’s findings showed that experiential avoidance is an essential agent in experiencing obsessive-compulsive symptoms and should be considered during the process of treatment. From this perspective, accepting intrusive thoughts, images, or drives and creating a space for them seem beneficial in working on obsessive-compulsive symptoms during the therapeutic process.

4.3.2. Result of the Mediator Role of Thought-Action Fusion on the Relationship between Obsessive-Compulsive Symptoms and Respectively Shame and Self-Disgust, and Guilt

Regarding the mediating role of thought-action fusion, results showed that thought-action fusion significantly mediates the relationship between shame and obsessive-compulsive symptoms; self-disgust and obsessive-compulsive symptoms; guilt and obsessive-compulsive symptoms. The thought-action fusion scale was used to examine emotion-fusion in this study. However, the thought-action fusion scale was used since there has not been come across any emotion-fusion scale which adapted into Turkish.

It was thought that inflated responsibility, fear of acting irresponsibly, catastrophic misinterpretations, and inflated responsibility were considered essential in interpreting the mediator role of thought-action fusion (Salkovskis, 1985; Rachman, 1998; Mancini, and Gangemi, 2004a). It was thought that getting fused with emotions like shame, self-disgust, and guilt due to the catastrophic misinterpretations of the thoughts and beliefs and feeling responsible for catastrophic outcomes leads to obsessive-compulsive symptoms. Therefore, one is getting fused with the thoughts before taking any action like reparative or suppressive.

According to this study's findings, thought-action fusion mediated the relationship between shame, self-disgust, guilt, and obsessive-compulsive symptoms. Therefore, it was thought that it is hard to distinguish between the self or the behavior in the mediation effect of thought-action fusion regarding the emotions of shame, self-disgust, and guilt. Therefore, the heterogeneous nature of obsessive-compulsive symptoms is considered; getting fused with the emotions derived from the thoughts is essential for exhibiting the compulsions. For instance, it was thought that checking compulsion is required to get fused with guilt, cleaning compulsion is required to get fused with self-disgust, and symmetry compulsion is required to get fused with shame (Zhong, and Liljenquist, 2006; Wetterneck, Singh, and Hart, 2014; Melli et al., 2017).

Fear of acting irresponsibly (Mancini, and Gangemi, 2004a), would be seen as especially important in guilt since it refers to behavior. Experiencing the fear of acting irresponsibly was thought to make the individuals scrutinize their thoughts and, therefore, cause them to fuse with the emotions derived from their thoughts and lead

to obsessive-compulsive symptoms. In addition, guilt might lead to the experience of shame and guilt regarding the content of the thoughts and personal interpretation of the thought. For instance, the thought of *"What I did was terrible."* might turn into the thought of *"What I did was terrible. Therefore, I am a horrible person."* These thoughts might turn into *"What I did was terrible. Therefore, I am a horrible person. Moreover, I make other people sick."*

İnözü, and colleagues (2014), conducted a study with college students to examine the mediating role of disgust sensitivity and thought-action fusion between religiosity and obsessive-compulsive symptoms. Findings showed that thought-action fusion and disgust sensitivity significantly mediated the relationship between religiosity and obsessive-compulsive symptoms (İnözü et al., 2014). It was thought that violation of religious codes would produce guilt, shame, and self-disgust. Therefore, when the nature of guilt is examined, it is found that guilt could also be experienced in the case of violating religious codes. Mead (1940), also proposed that shame is experienced due to disapproval of others. From that point of view, it was thought that shame would occur due to disapproval of God. Regarding self-disgust, it was suggested that self-disgust could come out due to the violation of social norms, and it was thought that religion would also be accepted as a social norm (Ille et al., 2014). Thus, the findings of this study regarding the effect of thought-action fusion on shame, self-disgust, and OCD seem consistent with İnözü, and colleagues' study outcomes (2014).

Marino-Carper, and colleagues (2010), conducted a study with 139 university students who have a higher score on the thought-action fusion to examine the effect of a psychoeducational intervention on thought-action fusion. The participants were randomly assigned to three groups. These groups are listed as a group of participants who received psychoeducation about the thought-action fusion, a group of participants who received psychoeducation about the nature of the thoughts, and a control group. The findings showed that participants who received psychoeducation about thought-action fusion scored significantly lower than the participants who received psychoeducation about the nature of the thoughts and control group (Marino-Carper et al., 2010). From this point of view, it was thought that psychoeducation about thought-action fusion and the concept of acceptance would assist the regulate emotions and reduce obsessive-compulsive symptoms.

4.4. Limitations and Future Suggestions

In addition to its contributions to the literature and clinical practice, the research has some limitations. It is essential to consider these limitations when interpreting the findings of the study.

The sample of the study consists of 316 individuals reached through simple random sampling and did not show an equal distribution in terms of gender. It seems that female participants outnumbered the male participants. It is thought that conducting future studies with a simple random sampling method with relatively more equal in terms of gender will increase generalizability. Therefore, it is stated that the research findings are limited in terms of generalizability in the context of gender.

It is also thought that the Covid-19 pandemic might influence this study. It is considered that individuals exhibit more obsessive-compulsive symptoms such as washing their hands more or cleaning more compared to before times. Therefore, the subsequent studies related to obsessive-compulsive symptoms should be conducted via control of the variables associated with the pandemic, or measuring tools for a pandemic should be used to eliminate the confounding variable.

This study was conducted with nonclinical participants. Even though most of the hypotheses are confirmed, investigating these variables with individuals with OCD would give more reliable results. Therefore, future studies should be conducted with the clinical population, and also a comparison between clinical and control groups should be examined to comprehend the nature of OCD, shame, self-disgust, guilt, thought-action fusion, and experiential avoidance more clearly.

In this study, acceptance aims to be measured with experiential avoidance, considered the opponent term of acceptance. Because this study is quantitative, it is difficult to investigate the acceptance role of reducing obsessive-compulsive symptoms. Therefore, it is recommended to conduct a qualitative to examine the role of acceptance in decreasing the likelihood of developing obsessive-compulsive symptoms. A qualitative study plan would enable the researchers to see the improvements that participants show. When the heterogeneous nature of OCD is considered, future studies investigating which self-conscious emotions are related to which dimension of OCD are thought to give the literature valuable findings.

The fact that the thought-action fusion scale was used to measure emotion with fusion would be seen as another limitation in this study. It is recommended that future studies would use a scale that examines emotion-fusion to eliminate this limitation.

CHAPTER 5: CONCLUSION

5.1. Results

The present study was the first that examined the mediator roles of experiential avoidance and thought-action fusion on the relationship between shame, self-disgust, and guilt within the same study. Thus, it compares different constructs such as thought-action fusion, experiential avoidance, shame, self-disgust, and guilt.

In conclusion, this study showed that experiential avoidance had a significant mediating role in the relationship between shame and obsessive-compulsive symptoms; self-disgust and obsessive-compulsive symptoms; guilt and obsessive-compulsive symptoms. Furthermore, thought-action fusion also played an essential role in mediating shame and obsessive-compulsive symptoms; self-disgust and obsessive-compulsive symptoms.

Thus, the study highlights that being fused with emotions, thoughts, and avoiding those emotions and thoughts, instead of accepting them increases obsessive-compulsive symptoms. In line with the literature and the present study's findings, ACT components play an essential role in reducing OCD.

Overall, the findings give a critical and better understanding of the concepts relating to obsessive-compulsive symptoms and contribute to the literature and clinical practice.

5.2. Clinical Implications

Even though previous researches indicated the significant relationship between thought-action fusion and obsessive-compulsive symptoms, experiential avoidance, and obsessive-compulsive symptoms, quite a limited study in the literature investigated the mediating role of thought-action fusion and experiential avoidance. Therefore, determining the mediating role of thought-action fusion and experiential avoidance will contribute to understanding the relationship between shame, self-disgust, guilt, and obsessive-compulsive symptoms.

Besides, it is thought that investigating thought-action fusion and experiential avoidance's mediator's effects on obsessive-compulsive symptoms will contribute both to literature and the therapeutic process. It is thought that using the concepts of experiential avoidance and thought-action fusion during the therapeutic process will

give insights into the nature of OCD. Also, it is thought that using the techniques and the metaphors related to acceptance and cognitive defusion would be effective in the treatment of OCD.

In addition, even though individuals with OCD experience thought-action fusion and experiential avoidance, these concepts are not specific to OCD. Disorders like anxiety disorder and phobias also contain the features of thought-action fusion and experiential avoidance. Therefore, it is thought that conducting prevention studies would raise awareness about the roles of thought-action fusion and experiential avoidance in psychopathology.

Results related to experiential avoidance implied as a phenomenon increases the likelihood of experiencing obsessive-compulsive symptoms. The reverse of experiential avoidance is acceptance which is called psychological flexibility. Therefore, the deduction of psychological flexibility as acceptance would reduce the likelihood of experiencing obsessive-compulsive symptoms is reached in this study. However, a limited study, particularly qualitatively in the literature, was conducted to see the role of acceptance on obsessive-compulsive symptoms (Twohig et al., 2006). Determining how the mechanism of acceptance, in other words, psychological flexibility, affects obsessive-compulsive symptoms during the therapy session will contribute to both the field and the literature.

Investigating the roles of self-reflecting emotions (Dalgleish, and Power, 2000) on obsessive-compulsive symptoms and investigating the roles of thought-action fusion and experiential avoidance on obsessive-compulsive symptoms in the same study enables one to comprehend the nature of emotions better. Therefore, having insight into self-conscious emotions is beneficial in working on obsessive-compulsive symptoms during the therapeutic process.

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APPENDIX A.
ETHICS COMMITTEE APPROVAL

SAYI : B.30.2.İEÜ.0.05.05-**020**-*107* 22.01.2021

KONU : Etik Kurul Kararı hk.

Sayın Aslıhan Kaymak,

"The Mediating Role of Cognitive Fusion and Acceptance on the Relationship between Obsessive Compulsive Symptoms, Shame, Guilt, and Self-Disgust" başlıklı projenizin etik uygunluğu konusundaki başvurunuz sonuçlanmıştır.

Etik Kurulumuz 25.12.2020 tarihinde sizin başvurunuzun da içinde bulunduğu bir gündemle toplanmış ve projenin incelenmesi için bir alt komisyon oluşturmuştur. Projenizin detayları alt komisyon üyelerine gönderilerek görüş istenmiştir. Üyelerden gelen raporlar doğrultusunda Etik Kurul 22.01.2021 tarihinde tekrar toplanmış ve raporları gözden geçirmiştir.

Sonuçta 22.01.2021 tarih ve 116 numaralı **"The Mediating Role of Cognitive Fusion and Acceptance on the Relationship between Obsessive Compulsive Symptoms, Shame, Guilt, and Self-Disgust** konulu projenizin etik açıdan uygun olduğuna oy birliği ile karar verilmiştir.

Gereği için bilgilerinize sunarım.

Saygılarımla,

Prof. Dr. Murat Bengisu
Etik Kurul Başkanı

APPENDIX- B.

PARTICIPATION CONSENT FORM/ KATILIMCI FORMU

Bu çalışma, İzmir Ekonomi Üniversitesi bünyesinde, Klinik Psikoloji Yüksek Lisans programı kapsamında, Dr. Öğretim Üyesi Yasemin Meral Öğütçü danışmanlığında Aslıhan Kaymak tarafından yürütülmektedir.

Bu araştırma yetişkin bireylerde bilişsel birleşmenin ve kabulün obsesif kompulsif semptomlar, utanç, suçluluk ve öz-tiksinme arasındaki ilişkiye olan etkisini ölçmek amacıyla planlanmıştır.

Araştırmaya katılmayı kabul ederseniz, bu aşamada sizden yaklaşık 20 dakikanızı alacak anketimizi doldurmanız istenecektir. Soruların doğru ya da yanlış cevapları yoktur. Bundan dolayı soruları kendiniz yanıtlamanız ve size en doğru gelen yanıtları tercih etmeniz araştırmanın niteliği ve güvenilirliği açısından önemlidir. Lütfen her bir ölçeğin yönergesini dikkatli okuyunuz ve sorulara sizi en iyi ifade eden cevabı vermeye çalışınız.

Araştırmada kimse sizden kimlik bilgilerinizi ortaya çıkaracak bilgiler istemeyecektir. Verdiğiniz yanıtlar gizli tutulacak, yalnızca araştırma görevlisi tarafından değerlendirilecektir. Araştırmadan elde edilecek sonuçlar, yalnızca bilimsel amaçlar doğrultusunda kullanılacaktır.

Araştırmaya katılım tamamen gönüllülük esasına dayanmaktadır. Araştırmaya katılmama veya katıldıktan sonra istediğiniz herhangi bir anda araştırmadan ayrılma hakkına sahipsiniz.

Çalışma sonuçları ile ilgili bilgi almak isterseniz Aslıhan Kaymak (aslihankymk@gmail.com) ile iletişime geçebilirsiniz. Çalışmaya katılımınız için şimdiden teşekkür ederiz.

Bu çalışmaya tamamen gönüllü olarak katılmayı kabul ediyor ve istediğim zaman araştırmadan ayrılabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayınlarda kullanılmasını kabul ediyorum.

Evet □ Hayır □

APPENDIX-C

Demografik Bilgilendirme Formu

Tarih:

Yönerge: Sizden diğer ölçekleri cevaplandırmadan önce öncelikle aşağıda kişisel bilgilerinizle ilgili olan soruları cevaplandırmanızı rica ediyoruz.

1) **Cinsiyet:** Kadın □ Erkek □ Diğer □

2) **Yaşınız:_____**

3) **Medeni Durumunuz:**

   a) Bekar □ b) İlişkisi var □ c) Evli □ d) Boşanmış/Ayrılmış □

   e) Eşini kaybetmiş □

4) **Ailenizin Gelir Düzeyi:**

   a) 1000-1999 □ b) 2000-2999 □ c) 3000-3999 □

   d) 4000 ve üstü □

5) **Herhangi bir kronik ya da psikolojik rahatsızlığınız var mi?**

   Evet □ Hayır □

6) **Herhangi kullandığınız bir ilaç var mi? (tıbbi ve psikiyatrik)**

   Evet □ Hayır □

7) **Herhangi bir psikolojik destek alıyor musunuz?**

   Evet □ Hayır □

APPENDIX-D

VANCOUVER OBSESİF KOMPULSİF ENVANTERİ (VOKE)

Her bir ifadeyi, ifadenin sizin için kadar doğru olduğunu en iyi tanımlayan sayıyı daire içine alarak belirtiniz. Lütfen, belirli bir madde üzerinde çok fazla vakit harcamadan her bir maddeyi yanıtlayın.

Aşağıdaki ifadeler sizin için ne kadar doğru?	**Hiç**	**Çok az**	**Biraz**	**Oldukça**	**Çok**
1. Mektupları postalamadan önce, her harfi tekrar tekrar kontrol etme mecburiyeti hissederim.	0	1	2	3	4
2. Kesici bir alet kullanmakla ilgili istenmeyen düşüncelerim nedeniyle sıklıkla keyfim kaçar.	0	1	2	3	4
3. Paraya dokunduktan sonra kendimi çok kirli hissederim.	0	1	2	3	4
4. Önemsiz kararları almak bile bana çok zor gelir.	0	1	2	3	4
5. Kendimi, tamamıyla mükemmel olmaya mecbur hissederim.	0	1	2	3	4
6. Bir kaza hakkındaki aynı istenmeyen düşünce veya imge (hayal) tekrar tekrar aklıma gelir.	0	1	2	3	4
7. Musluk ve elektrik düğmesi gibi şeyleri kapattıktan sonra tekrar tekrar kontrol ederim.	0	1	2	3	4
8. Evi veya kendimi mikroplardan korumak için aşırı miktarda dezenfektan (mikrop öldürücü) kullanırım.	0	1	2	3	4
9. Sıklıkla önemsiz şeyleri (ör. araba plakaları, levhalardaki talimatlar) ezberlemeye mecbur hissederim.	0	1	2	3	4
10. Evim, biriktirdiğim eşyalarla darmadağınık olduğu için günlük ev işlerini yapmakta zorlanırım.	0	1	2	3	4
11. Bir şeye karar verdikten sonra, çoğunlukla kararım konusunda uzun süre endişe duyarım.	0	1	2	3	4

12. Hemen hemen her gün, zihnimde istem dışı beliren olumsuz düşüncelerden dolayı rahatsız olurum.	0	1	2	3	4
13. Ellerimi yıkamak için çok zaman harcarım.	0	1	2	3	4
14. Her şeyi tam olarak doğru yapmaya çalıştığım için işleri tamamlamakta sıklıkla zorluk yaşarım.	0	1	2	3	4
15. Ayakkabılarımın tabanına dokunmak beni çok huzursuz eder.	0	1	2	3	4
16. Cinsel içerikli istenmeyen düşünce ve imgelerimden (hayallerden) sıklıkla rahatsız olurum.	0	1	2	3	4
17. Çok önemsiz bir karar bile vermek zorunda olsam, kendimi gergin hissederim.	0	1	2	3	4
18. Kendimi günlük işleri yaparken, çok katı bir sıralama takip etmeye mecbur hissederim.	0	1	2	3	4
19. Mobilyalarımın veya diğer eşyalarımın her zaman tam olarak aynı pozisyonda/konumda olmaması beni rahatsız eder.	0	1	2	3	4
20. Her ne kadar bunu yapma isteğine karşı koymaya çalışsam da kapı ve pencerelerin kilitli olup olmadığını tekrar tekrar kontrol ederim.	0	1	2	3	4
21. Çöp ya da çöp kutusuna dokunmak bana çok zor gelir.	0	1	2	3	4
22. Bir şeyi atmam gerektiğini düşündüğümde kendimi çok gergin veya üzgün hissederim.	0	1	2	3	4
23. Mikroplar ve hastalık konusunda gereğinden fazla endişeliyimdir.	0	1	2	3	4

24. Günlük işleri zamanında tamamlayamadığım için çoğunlukla geç kalırım.	0	1	2	3	4
25. Bir şey bulaşma (kirlenme) olasılığı nedeniyle umumi telefonları kullanmaktan kaçınırım.	0	1	2	3	4
26. Biriktirdiğim gereksiz eşya yığınlarından dolayı insanları evime davet etmeye utanırım.	0	1	2	3	4
27. Ölüm ile ilgili aynı üzüntü verici düşünce veya imge (hayal) aklıma tekrar tekrar gelir.	0	1	2	3	4
28. Herkesin içinde birdenbire küfür etmek ve hakaret etmek ile ilgili istenmeyen düşünce ve imgeler beni sıklıkla rahatsız eder.	0	1	2	3	4
29. Diğer insanları üzmüş olabileceğime dair çok endişelenirim.	0	1	2	3	4
30. Sıklıkla, akıp giden bir trafiğin içine arabayla veya koşarak dalma dürtüsü beni korkutur.	0	1	2	3	4
31. Rutin işlerimi yaparken neredeyse her zaman sayı sayarım.	0	1	2	3	4
32. Bir hayvana dokunduğum zaman kendimi çok kirlenmiş hissederim.	0	1	2	3	4
33. En büyük sorunlarımdan biri, bir şeyi tekrar tekrar kontrol etmektir	0	1	2	3	4
34. Aklıma sıklıkla, kontrolü kaybedeceğime dair rahatsız edici istem dışı düşünceler gelir.	0	1	2	3	4
35. Neyi saklayıp neyi atmam gerektiğine karar vermek benim için neredeyse imkânsızdır.	0	1	2	3	4
36. Güçlü bir şekilde, bir şeyleri saymaya kendimi mecbur hissederim.	0	1	2	3	4

37. Bunu yapma dürtüsüne karşı koysam bile, ocağı kapatıp kapatmadığımı tekrar tekrar kontrol ederim.	0	1	2	3	4
38. Yatmadan önceki rutin hazırlığımı kesinlikle aynı şekilde tamamlayamazsam çok rahatsız olurum.	0	1	2	3	4
39. Vücut salgıları (kan, idrar ve ter vb.) ile en ufak bir temastan bile çok korkarım.	0	1	2	3	4
40. Sıklıkla, diğer insanlara zarar vermeye yönelik istem dışı istek ve dürtülerimden çok rahatsız olurum.	0	1	2	3	4
41. Her gün, aynı şeyleri tekrar tekrar kontrol etmekle çok zaman harcarım.	0	1	2	3	4
42. İsraf etmekten korktuğum için bazı şeyleri atmakta çok zorlanırım.	0	1	2	3	4
43. Sıklıkla elektrik düğmesi, musluk, araç-gereç ve kapı gibi şeyleri birkaç defa kontrol etmek zorunda kalırım.	0	1	2	3	4
44. En büyük sorunlarımdan biri, temizlik konusunda aşırı endişeli olmamdır.	0	1	2	3	4
45. Gelecekte ihtiyacım olabilir diye korktuğum için, eski dergi, gazete ve fişleri biriktirme zorunluluğu hissederim.	0	1	2	3	4
46. Aklıma tekrar tekrar dinsel içerikli rahatsız edici ve kabul edilemez düşünceler gelir.	0	1	2	3	4
47. Aynı şeyleri tekrar tekrar yaptığım için genellikle işlerimi yetiştiremem.	0	1	2	3	4

48. Hata yapmaktan çok korktuğum için bir konuda karar vermeyi ertelemeye çalışırım.	0	1	2	3	4
49. Sıklıkla aklıma hastalık konusunda rahatsız edici ve istenmeyen düşünceler gelir.	0	1	2	3	4
50. Mikroplar konusunda oldukça hassas olduğum için bakımlı olsa bile, umumi tuvaletleri bile kullanmaktan korkarım.	0	1	2	3	4
51. Karşı koymaya çalışmama rağmen, hiç kullanmayacağım çok sayıdaki nesneyi biriktirme mecburiyeti hissederim.	0	1	2	3	4
52. Rahatsız edici ve istenmeyen biçimdeki ahlak dışı düşünceler aklıma tekrar tekrar gelir.	0	1	2	3	4
53. En büyük sorunlarımdan biri ayrıntıya çok fazla takılmamdır.	0	1	2	3	4
54. Kendime zarar verme dürtüsünden sıklıkla rahatsız olurum.	0	1	2	3	4
55. Her şeyi tamamen doğru yapmaya çalıştığım için hazırlanıp evden dışarı çıkmam çok fazla zaman alır.	0	1	2	3	4

APPENDIX- E

KABUL VE EYLEM FORMU – 2

Aşağıda bir dizi eylem bulunmaktadır. Her bir ifadenin sizin için ne kadar doğru olduğunu yanında yazan rakamı yuvarlak içine alarak belirtiniz. Seçimizi yapmak için aşağıdaki cetveli kullanınız.

1	2	3	4	5	6	7
Hiçbir zaman doğru değil	Çok nadiren doğru	Nadiren doğru	Bazen doğru	Sıklıkla doğru	Neredeyse her zaman doğru	Daima doğru

1. Geçmişte olan acı veren yaşantılarım ve hatıralarım değer verdiğim bir hayatı yaşamayı zorlaştırıyor.	1	2	3	4	5	6	7
2. Hislerimden korkarım.	1	2	3	4	5	6	7
3. Kaygılarımı ve hislerimi kontrol edememekten endişelenirim.	1	2	3	4	5	6	7
4. Acı hatıralarım dolu dolu bir hayat yaşamamı engelliyor.	1	2	3	4	5	6	7
5. Duygular hayatımda sorunlara yol açar.	1	2	3	4	5	6	7
6. İnsanları çoğu hayatlarını benden daha iyi idare ediyor gibi görünüyor.	1	2	3	4	5	6	7
7. Endişelerim başarılı olmamı engelliyor.	1	2	3	4	5	6	7

APPENDIX- F

DÜŞÜNCE EYLEM KAYNAŞMASI ÖLÇEĞİ

Aşağıda bazı düşünce ve davranışlara ilişkin ifadeler yer almaktadır. Her ifadeyi dikkatlice okuduktan sonar bu ifadeye ne kadar katıldığınızı belirtiniz. Tamamen katılıyorsanız 4, Hiç katılmıyorsanız 0 rakamını işaretleyiniz. Doğru ya da yanlış cevap yoktur. Hiç bir maddeyi bırakmamaya özen gösteriniz.

	Hiç Katılmıyorum				Tamamen Katılıyorum
1. Eğer birinin zarar görmesini istersem, bu neredeyse ona zarar vermem kadar kötüdür.	0	1	2	3	4
2. Bir akrabamın ya da arkadaşımın trafik kazası geçirdiğini düşünürsem, bu onun kaza geçirme riskini arttırır.	0	1	2	3	4
3. Düşerek yaralandığımı düşünürsem, bu benim düşüp yaralanma riskimi arttırır.	0	1	2	3	4
4. Din karşıtı bir düşünceye sahip olmak, bence neredeyse böyle davranmak kadar günahtır.	0	1	2	3	4
5. Başka birine küfretmeyi akıldan geçirmek, bence neredeyse gerçekten küfür etmek kadar kabul edilemez bir durumdur.	0	1	2	3	4
6. Bir arkadaşım hakkında kaba şeyler düşündüğümde, ona neredeyse kaba davranmış kadar vefasızlık etmiş olurum.	0	1	2	3	4
7. Bir insanla ilişkimde onu kandırmayı düşünmek, bence neredeyse gerçekten kandırmak kadar ahlaksızlıktır.	0	1	2	3	4
8. Bir akrabamın ya da arkadaşımın işini kaybettiğini düşünürsem, bu onun işini kaybetme riskini arttırır.	0	1	2	3	4
9. Bir başkasıyla ilgili müstehcen şeyler düşünmem, neredeyse bu şekilde davranmam kadar kötüdür.	0	1	2	3	4

10. Bir akrabamın ya da arkadaşımın hastalandığını düşünürsem, bu onun hastalanma riskini arttırır.	0	1	2	3	4
11. Saldırganlık içeren düşüncelere sahip olmak, bence neredeyse saldırgan davranmak kadar kabul edilemez bir durumdur.	0	1	2	3	4
12. Kıskançlık içeren bir düşüncem olduğunda, bu durum neredeyse bunu söylemiş olmamla aynıdır.	0	1	2	3	4
13. Trafik kazası geçirdiğimi düşünürsem, bu benim kaza geçirme olasılığımı arttırır.	0	1	2	3	4
14. Bir başkasına müstehcen hareketler yapmayı düşünürsem, bu neredeyse öyle davranmam kadar kötüdür.	0	1	2	3	4
15. Kutsal yerlerde müstehcen şeyler düşünmek, bence kabul edilemez bir durumdur.	0	1	2	3	4
16. Bir akrabamın ya da arkadaşımın düşerek yaralandığını düşünürsem, bu onun düşüp yaralanma riskini arttırır.	0	1	2	3	4
17. Hastalandığımı düşünürsem, bu benim hasta olma riskimi arttırır.	0	1	2	3	4
18. Bir arkadaşa olumsuz bir eleştiride bulunmayı akıldan geçirmek, bence neredeyse bunu söylemek kadar kabul edilemez bir durumdur.	0	1	2	3	4
19. Kutsal yerlerde müstehcen şeyler düşünmem, neredeyse oralarda böyle şeyleri gerçekten yapmam kadar günahtır.	0	1	2	3	4

APPENDIX- G

SUÇLULUK UTANÇ ÖLÇEĞİ

Bu ölçeğin amacı bazı duyguların hangi durumlarda ne derece yoğun olarak yaşandığını belirlemektir. Aşağıda bazı olaylar verilmiştir. Bu olaylar sizin başınızdan geçmiş olsaydı, ne kadar rahatsızlık duyardınız. Lütfen her durumu dikkatle okuyup öyle bir durumda ne kadar rahatsızlık duyacağınızı aşağıdaki ölçekten yararlanarak maddelerin yanındaki sayıların üzerine (X) işareti koyarak belirleyiniz.

1. Hiç rahatsızlık duymazdım
2. Biraz rahatsızlık duyardım
3. Oldukça rahatsızlık duyardım
4. Epey rahatsızlık duyardım
5. Çok rahatsızlık duyardım

	Sizi ne kadar rahatsız eder? Hiç				Çok
1. Bir tartışma sırasında büyük bir hararetle savunduğunuz bir fikrin yanlış olduğunu öğrenmek.	1	2	3	4	5
2. Evinizin çok dağınık olduğu bir sırada beklenmeyen bazı misafirlerin gelmesi.	1	2	3	4	5
3. Birinin size verdiği bir sırrı istemeyerek başkalarına açıklamak.	1	2	3	4	5
4. Karşı cinsten birinin kalabalık bir yerde herkesin dikkatini çekecek şekilde size açıkça ilgi göstermesi.	1	2	3	4	5
5. Giysinizin, vücudunuzda kapalı tuttuğunuz bir yeri açığa çıkaracak şekilde buruşması ya da kıvrılması.	1	2	3	4	5
6. Bir aşk ilişkisi içinde sadece kendi isteklerinizi elde etmeye çalıştığınızı ve karşı tarafı sömürdüğünüzü fark etmeniz.	1	2	3	4	5
7. Sorumlusu siz olduğunuz halde bir kusur ya da bir yanlış için bir başkasının suçlanmasına seyirci kalmak.	1	2	3	4	5

8. Uzman olmanız gereken bir konuda, bir konuşma yaptıktan sonra dinleyicilerin sizin söylediğinizin yanlış olduğunu göstermesi.	1	2	3	4	5
9. Çok işlek bir iş merkezinin bulunduğu bir köşede herkesin size bakmasına sebep olacak bir olay yaşamak.	1	2	3	4	5
10. Lüks bir restoranda çatal bıçak kullanmanız gereken yerde elle yemek yediğinizin fark edilmesi	1	2	3	4	5
11. Başkalarını aldatarak ve onları sömürerek büyük kazanç sağlamak	1	2	3	4	5
. 12. İşçilerinizin sağlığına zarar vereceğini bildiğiniz halde, bir yönetici olarak çalışma koşullarında bir değişiklik yapmamak	1	2	3	4	5
13. Sözlü bir sınav sırasında kekelediğiniz ve heyecandan şaşırdığınızda, hocanın sizin bu halinizi kötü bir sınav örneği olarak bütün sınıfa göstermesi.	1	2	3	4	5
14. Tanıdığınız birinin sıkıntıda olduğunu bildiğiniz ve yardım edebileceğiniz halde yardım etmemek.	1	2	3	4	5
15. Bir partide yeni tanıştığınız insanlara açık saçık bir fıkra anlattığınızda birçoğunun bundan rahatsız olması.	1	2	3	4	5
16. Akılsızca, bencilce ya da gereksizce büyük bir harcama yaptıktan sonra ebeveyninizin mali bir sıkıntı içinde olduğunu öğrenmek.	1	2	3	4	5

17. Arkadaşınızdan bir şeyler çaldığınız halde arkadaşınızın hırsızlık yapanın siz olduğunuzu hiçbir zaman anlamaması.	1	2	3	4	5
18. Bir davete ya da toplantıya rahat gündelik giysilerle gidip herkesin resmi giyindiğini görmek.	1	2	3	4	5
19. Bir yemek davetinde bir tabak dolusu yiyeceği yere düşürmek.	1	2	3	4	5
20. Herkesten sakladığınız ve hoş olmayan bir davranışın açığa çıkarılması.	1	2	3	4	5
21. Bir kişiye hak etmediği halde zarar vermek.	1	2	3	4	5
22. Alış-veriş sırasında paranızın üstünü fazla verdikleri halde sesinizi çıkarmamak.	1	2	3	4	5
23. Ailenizin sizden beklediklerini yerine getirememek.	1	2	3	4	5
24. Çeşitli bahaneler bularak yapmanız gereken işlerden kaçmak.	1	2	3	4	5

APPENDIX-H

Öz-Tiksinme Ölçeği-Revize Formu

1	2	3	4	5	6	7
Kesinlikle Katılıyorum	Çoğunlukla katılıyorum	Kısmen katılıyorum	Kararsızım	Kısmen katılmıyorum	Çoğunlukla katımıyorum	Kesinlikle katılmıyorum

1. Kendimi itici bulurum. (T)	1 2 3 4 5 6 7
2. Kendimle gurur duyarım.	1 2 3 4 5 6 7
3. Kendi davranışlarımdan bıktım. (T)	1 2 3 4 5 6 7
4. Bazen yorgun hissederim.*	1 2 3 4 5 6 7
5. Kendim olmaya katlanamam. (T)	1 2 3 4 5 6 7
6. Başkaları ile bir arada olmaktan hoşlanırım.*	1 2 3 4 5 6 7
7. Pek çok yönden tiksindici biriyim. (T)	1 2 3 4 5 6 7
8. Kendimi çekici bulurum.	1 2 3 4 5 6 7
9. İnsanlar benden uzak durur. (T)	1 2 3 4 5 6 7
10. Dışarıda vakit geçirmekten hoşlanırım.*	1 2 3 4 5 6 7
11. Davranışlarımdan hoşnutum.	1 2 3 4 5 6 7
12. Sosyal bir insanım.*	1 2 3 4 5 6 7

13. Çoğu zaman bende tiksinti uyandıran şeyler yaparım. (T)	1 2 3 4 5 6 7
14. Kendi görüntüme bakmaktan kaçınırım. (T)	1 2 3 4 5 6 7
15. Kendimi bazen mutlu hissederim.*	1 2 3 4 5 6 7
16. İyimser bir insanım.*	1 2 3 4 5 6 7
17. Davranışlarım diğer insanlarınki kadar düzgündür.	1 2 3 4 5 6 7
18. Kendi görüntüme bakmak beni rahatsız eder. (T)	1 2 3 4 5 6 7
19. Bazen üzgün hissederim.	1 2 3 4 5 6 7
20. Görüntümü mide bulandırıcı bulurum. (T)	1 2 3 4 5 6 7
21. Davranışlarım insanları benden uzaklaştırıcak kadar iticidir. (T)	1 2 3 4 5 6 7

Not: *Puanlamaya dahil edilmeyen dolgu maddeleri; (T) Ters kodlanan maddele