A CROSS-CULTURAL INVESTIGATION OF OBSESSIVE COMPULSIVE DISORDER SYMPTOMATOLOGY: THE ROLE OF RELIGIOSITY AND RELIGIOUS AFFILIATION

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ABSTRACT

A CROSS-CULTURAL INVESTIGATION OF OBSESSİVE COMPULSIVE DISORDER SYMPTOMATOLOGY: THE ROLE OF RELIGIOSITY AND RELIGIOUS AFFILIATION

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The main aim of the present study was to better understand the influence of nationality/religious affiliaiton and degree of religious devoutness on OCD symptoms, more specifically scrupulosity symptoms and beliefs by comparing the Turkish Muslim students with the Canadian Christians who show different degrees of religiosity. To clarify the effect of religiosity on OCD symptomatology, Bible school and Divinity school students were included in the present study as an extreme religious group. Furthermore, the present study was aimed to examine the cross-cultural differences in the prevalence, content, appraisal and control of intrusions, using a structured interview methodology. Religiosity, guilt and scrupulosity scales and interview schedule were adapted into Turkish. The analyses revealed that the psychometric properties of the adapted measurements were satisfactory. Then, the effect of religiosity and religious affiliation on the experience of OCD symptoms, scrupulosity, and OCD relevant beliefs were examined via univariate and multivariate analyses. Results revealed that the effect of religiosity and nationality were significant for general distress. Results also revealed that regardless of nationality, high religious

individuals reported higher degree of OCD and scrupulosity symptoms, and dysfunctional obsessive beliefs than low religious ones. The effect of religiosity on OCD and scrupulosity symptoms differed by religious affiliation. High religious Muslim students reported higher degree of compulsions, and fear of God symptoms than high religious Christians. Furthermore, religiosity and nationality affected obsessive beliefs differently. Turkish students reported higher level of perfectionism and intolerance for uncertainty in comparison with Canadian students. These results were supported by subsequent regression analyses. Furthermore, interview data showed that except for the frequency of the intrusions, the content of the intrusions was almost universal, and frequency and distress as a response to intrusions is very low in the normal population. Nationality and degree of religiosity revealed some minor differences in primary and secondary appraisals, and control strategies. These factors were specifically significant for religious and sexual intrusions. Results suggested that the religious affiliation and degree of religiosity may provide content for intrusions, rather being a causal factor.

Keywords: Intrusive thoughts, Obsessive-Compulsive Symptoms, Faulty belief domains and appraisal, Religiosity and Religious Affiliation

ÖZ

OBSESİF-KOMPULSİF BOZUKLUK SEMPTOMATOLOJİSİNİN KÜLTÜRLERARASI İNCELENMESİ: DİN VE DİNDARLIĞIN ROLÜ

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Bu çalışmada din ve dindarlık düzeyinin Obsesif -Kompulsif Bozukluk (OKB) semptomları, dinsel obsesyonlar ve obsesif inanışlar üzerindeki etkisi farklı dindarlık düzeyine sahip Türk ve Kanadalı üniversite öğrencileri karşılaştırılarak incelenmesi amaçlanmıştır. Dindarlığın OKB semptomları üzerindeki etkisinin daha iyi anlaşılabilmesi için dini okul/ ilahiyat fakültesi öğrencileri uç dindarlık grubu olarak araştırmaya dahil edilmiştir. Öncelikle dindarlık, suçluluk, dinsel obsesyonlar ve intrusif düşünceleri değerlendirmek için dört yeni ölçüm aracı dilimize çevrilmiştir. Analizler, bu dört ölçeğin Türk öğrencileri için tatminkar psikometrik özelliklere sahip olduğunu göstermiştir. Varyans analizi sonuçları genel stres semptomlarında Türk ve Kanadalılar ve farklı dindarlık düzeyleri arasında anlamlı farklar bulunduğuna işaret etmiştir. Ayrıca analizler, katılımcıların hangi dine/kültüre ait olduklarından bağımsız olarak yüksek dindarlık düzeyine sahip bireylerin daha fazla OKB semptomu, dinsel obsesyon ve obsesif inanış sergilediğini ortaya koymuştur. Bunlara ek olarak dindarlık düzeyinin, bireylerin ait olduğu kültüre göre OKB ve dinsel obsesyon semptom şiddetini farklı etkilediği bulunmuştur. Ilahiyat Fakültesi'nde okuyan müslüman öğrenciler Teoloji Okulu'nda okuyan Hristiyan öğrencilerden daha fazla kompulsif

semptom ve dinsel obsesyon sergilemişlerdir. Ayrıca, Türk öğrenciler daha fazla mükemmelliyetçilik ve belirsizliğe tahammülsüzlük eğilimi gösterdiği bulunmuştur. Üç tür intrusif düşüncenin (şüphe, din ve cinsel) frekansı, şiddeti, birincil değerlendirme ölçütleri, kontrol değerlendirmeleri ve başa çıkma stratejileri ile ilgili kültürler arası karşılaştırmalar, bazı farklılıklara rağmen intrusif düşüncelerin frekansının, stres düzeyinin, birincil ve ikincil değerlendirme ölçütlerinin her iki kültürde de ortak özellikler sergilediği, kültürel yapının değerlendirmeler için bir içerik oluşturabileceğini düşündürmüştür. Bu ortak ve özgül ilişkilere dair bulgular ise, din ve kültürün özellikleriyle ilgili literatür bulguları ışığında tartışılmıştır.

Anahtar Kelimeler: İntrusif Düşünceler, Obsesif -Kompulsif Bozukluk, Hatalı değerlendirme inançları, Kültür, Dindarlık.

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To My Husband and Family

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INTRODUCTION

1.1. Overview

Over the last 100 years obsessive compulsive disorder (OCD) has received a great theoretical and practical interest from a wide range of different mental health professionals, ranging from psychoanalysts to psychiatrists (Stein & Stone, 1997). The present literature review is composed of four sections. The first section reviews the relevant literature on the key features of OCD, including characteristics that distinguish this disorder from other anxiety disorders, the phenomenology and etiological models of OCD, as well as cultural factors (i.e. religious affiliation and religiosity) that affect the symptom presentation, and severity of the disorder. This study mainly aims to understand the effect of religion and religiosity as a cultural and vulnerability factor on general OCD symptomatology as well as scrupulosity as a symptom subtype of OCD. Therefore, the second section that follows describes the complexity of scrupulosity, with attention to the characteristics that distinguish this condition from normal religious beliefs and behaviors, clinical features, and related dysfunctional beliefs. The third section presents cross-cultural differences in OCD, scrupulosity and unwanted intrusive thoughts. The last section presents the objectives of the present study, research questions and hypotheses.

1.2. Review of the Literature on Obsessive Compulsive Disorder

1.2.1. Phenomenology of Obsessive-Compulsive Disorder

OCD is a chronic and often disabling anxiety disorder characterized by obsessions and compulsions (DSM-IV-TR; American Psychiatric Association [APA], 2000). Obsessions are intrusive and distressing thoughts, images, or impulses that cause significant distress or anxiety, and a strong motivation to get rid of these intrusive thoughts from the stream of consciousness. Compulsions are repetitive, intentional overt (e.g., checking) or covert (e.g., memorizing certain words to undo or replace a bad thought) behaviors that the person feels a strong urge to perform, often with a desire to resist. Compulsions are usually performed to avert some feared consequences or to reduce anxiety that is caused by obsessions. Alternatively, compulsions may be performed in accordance with certain rules, such as cleaning a part of body a certain number of time and in a particular order. The person usually recognizes that compulsions are excessive and irrational. As a diagnostic criteria, the obsessions and compulsions should be time-consuming (e. g., more than 1 hour per day) and they should seriously prevent the person from performing daily life activities, or cause significant distress. It is also stressed that these features are not secondary to another mental disorder (APA, 2000).

Although obsessions and compulsions usually accompany each other, in clinical cases, an obsession may be experienced without associated compulsions. Akhtar et al. (1975) examined the features of OCD in a larger series of patients with OCD, and found that 25 % of them had obsessions without related compulsive behaviors. Similarly, even if it is very rare, compulsions without obsessions may occur. An example is a man who had a compulsion to multiply by two, or squared each car number plate he saw (Rachman, 1993) Consistent with this clinical example, Wilner et al., (1976) reported that 6 % of their series of 150 patients had only compulsive behaviors. Furthermore, Rachman and Shafran (1998) have recently pointed out that occasionally the compulsive behaviors can trigger an obsession; as

repeated checking of stove, for example, can be followed by an obsessional thought that one's mental stability and reliability are impaired.

1.2.1.1. Prevalence of OCD

Current epidemiological data suggests that the lifetime prevalence rates for OCD range from 1.9 to 3.3 % across five epidemiologic catchments areas. The most striking finding of this data is that OCD is 50 to 100 times more frequent than previously thought (Karno, Golding, Sorenson, & Burnam, 1988). According to these results, OCD is much more prevalent than schizophrenia, but less prevalent than major depression. These figures suggest that OCD is the fourth most common psychiatric disorder, following phobias, substance abuse and major depression (Cosyns, & Ödberg, 2000). However, these findings have been criticized for using lay interviewers rather than psychiatrists to assess symptoms. The Epidemiologic Catchments Area study used psychiatrists as interviewers have found lower prevalence rates of OCD. Thus, a more likely life prevalence figure may be around 1-2% (Ramussen & Eisen, 1989). Even so, it is apparent that OCD is a highly prevalent disorder in many countries (Okasha, 2002). The Mental Health Profile Survey of Turkey (1998) interviewed 7479 people aged 18 or older to investigate the prevalences, characteristics and consequences of common adult mental disorder. The prevalence of OCD in the last 12 months according to ICD-10 was 0.5 %. Consistent with Cross-National Epidemiological study, the gender rate of OCD in Turkey confirmed a slight preponderance of females among OCD patients (Rasmussen & Eisen, 1991; Rasmussen & Tsuang, 1986; Weissmann et al., 1994). The prevalence of OCD was 0.6% in women and 0.2% in males.

1.2.1.2. Clinical Presentations and Subtypes of OCD

Many studies have consistently pointed out that obsessive-compulsive disorder is a multidimensional and etiologically heterogeneous condition. Patients with OCD

present with a broad range of obsessions and compulsions, and they have been observed to experience a high rate of comorbidity with other psychiatric conditions and to vary in their response to treatment. Identification of homogeneous subgroups of OCD patients may have important implications for understanding the variability in treatment response and may also advance etiological models of the disorder (Leckman, Dorothy, Boardman, Zhang, Vitale et al., 1997).

An obsessive fear of contamination coupled with a washing compulsion is the most common phenomenological presentation of OCD, found in 45% of the patients (Rasmussen & Eisen, 1991; Rasmussen & Tsuang, 1986; Rasmussen & Eisen, 1989). Contamination obsessions can take many forms, among the most common being the fear of unseen dirt, germs, pollution from some specific substance (e.g. urine, seminal fluid, animal fur, poisons, or toxins). The patients with contamination obsessions usually perform repeated washing or cleaning compulsions (Jones & Krochmalik, 2003). Research indicates significant differences between OCD subtypes with regard to the onset of their OCD symptoms. It has been suggested that fear of contamination concerns may occur quite early in the course of the disorder. Consistent with this suggestion, March and Leonard (1998) found that fear of contamination, and washing and cleaning behaviors are one of the most common obsessions and compulsions in childhood OCD. Similarly, Swedo and colleagues (1989) identified washing compulsions in more than 85% of a group of 70 childhood cases of OCD (Swedo, Schapiro, Grady, Cheslow, Leonard et al., 1989)

The next common obsessive thought, present in 42% of the patients, is pathological doubt or fear that one would be responsible for something terrible happening. These patients are continually worried about the possibility that something terrible will happen, even if the possibility is very small. Inflated perceived responsibility plays a crucial role in this obsession (Rasmussen & Eisen, 1989). In this subtype of obsessions, the patients usually perform repetitive, intentional, and time consuming checking to prevent possible feared outcome. The results of a community study in Canada demonstrated that checking was the most common compulsion, seen in 15.1 % of the community (Stein et al, 1997). Rachman (1974) pointed out that while

many OCD patients may be slow in their daily activities due to time consuming repetitive compulsions, some have primary obsessional slowness, and this symptom should be distinguished from the slowness that is secondary to the time taken by repetitive compulsions, such as checking the lock over and over again. Patients with primary slowness perform simple everyday tasks, such as washing and dressing, or going to sleep, in an extremely meticulous, exact manner and sequence.

Somatic obsessions are another form of common obsession, found in 36 % patients, and is characterized by compulsive checking rituals carried out to reassure them that they do not have a serious illness (Rasmussen & Eisen, 1989).

Twenty-six percent of the patients have sexual and/or aggressive obsessions. These patients suffer from fears of committing an unacceptable sexual or aggressive thought an act towards others. They are often unable to make a clear distinction between having an unacceptable thought and acting on it. Guilt and anxiety are the dominant affective symptoms (Rasmussen & Eisen, 1991). The patients with sexual obsessions have internal conflicts between their sexual and aggressive impulses and their moral value systems. The frequently seen compulsions in this group are to ask reassurance from significant others frequently and to offer confessions (Grabe, Meyer, Hapke, Rumpf, Freyberger, et al., 2000).

Thirty-one percent of the patients had obsessive thoughts that involve the need for symmetry, order, or exactness (Rasmussen & Eisen, 1989). These patients try to arrange objects or events in a certain order or position, to do certain motor activities in an exact fashion, or to do things exactly symmetrical or “even up”. These patients can be divided into two groups: patients with obsessive slowness, and patients with primary magical thinking. Both of these patients reported minimal anxiety related to their compulsions except for that due to time pressure. Their greatest fears were that something would not be done right and that they would have to start the entire sequence over again from the beginning (Rasmussen & Eisen, 1991).

A minority of OCD patients exhibit hoarding behaviors. Hoarding is the repetitive collection of excessive quantities of poorly usable items of little or no value with failure to throw away these accumulated items over time (Seedat & Stein, 2002).

Part of this problem involves excessive accumulation of possessions. These difficulties range from compulsive buying to the compulsive accusation of free things. Some hoarders spend enormous amounts of time shopping in discount stores, while others look for some valuable things on the streets to hoard (Frost & Hartl, 1996). For example, Frost and Gross (1993) found that hoarders reported buying significantly more items in order to put away for future use than did non hoarders. Similarly, Frost et al. (1998) found that Hoarding Scale scores showed a significant positive correlation with compulsive buying among collage students. These findings strongly suggest that compulsive acquisition is an integral component of hoarding.

Obsessions with religious themes, reffered as scrupulosity, were the fifth most common type of obsessions identified in the *DSM-IV* field trials for OCD (Foa et al, 1995) and may be present in up to one quarter of patients with OCD (Antony, Downie, & Swinson, 1998). A detailed discussion of scrupulosity is given in the following section.

Correlational studies that evaluate the inter relationship of OCD symptoms have consistently paired washing and cleaning compulsions with contamination obsessions. Similarly, aggressive, sexual, somatic, and religious obsessions tend to co-occur with checking compulsions. Obsessions of symmetry and exactness have been found to accompany repeating rituals, counting compulsions, and ordering/ arranging compulsions. Hoarding and collecting compulsions co-occur with hoarding obsessions (Calamari, Wietgartz, & Janeck, 1999; Leckman et al., 1997; Rasmussen & Eisen, 1991; Rasmussen & Eisen, 1989; Rasmussen & Tsuang, 1986; Summerfeld et al., 1999).

1.2.1.3. Demographic Features and Course of OCD

Gender Differences. Although OCD is found equally common in both males and females in clinical samples (Karno et al, 1988; Rasmussen & Eisen, 1991; Bogetto, Venturello, Albert, Mania, & Ravizza, 1999), the epidemiological studies showed that females have a slightly higher likelihood of developing the disorder (Rasmussen &

Tsuang, 1986). The National Commorbity study indicated that the lifetime prevalence of OCD ranged between 0.9 % and 3.4% in women and between 0.5% and 2.5% in males, with a female/male ratio ranging from 0.8 to 3.8 (Weissman, Bland, Canino, Greenwal, & Hwu et al., 1994). Research revealed that males and females presented different phenomenological features, including OCD symptom presentation, prevalence and onset of illness. For instance, females suffer more from the OCD-cleaning subtype, while males predominately suffer from OCD-checking symptoms. Furthermore, men reported an earlier and more insidious onset and greater chronic course than females (Bogetto et al, 1999; Fontenelle, Mendlowicz, Marques & Versani, 2003; Juang &Liu, 2001; Lensi et al, 1996; Lochner & Stein, 2001; Matsunaga et al, 2000; Noshirvani et al, 1991; Rasmussen & Eisen, 1991; Sobin et al., 1999).

Onset of OCD. OCD typically begins by the age of 25 or in the late adolescence and early adulthood (Rasmussen & Tsuang, 1986). Most patients (65%) develop OCD before the age of 25 years, some as young as age 6, with only a small percentage (15%) after the age of 35 years. Males seem to present with an earlier mean age of onset than females (Karno, Golding, Sorenson, & Burnam, 1988). Research indicated that age of onset of illness influences symptom presentation, prognoses of the disorder, and the nature of comorbid disorders (Fontenelle, Mendlowicz, Marques, & Versiani, 2004). Early onset OCD was found to be associated with more severe symptom presentation and poor prognosis. For instance, Sobin, Blundell, and Karayiorgou (2000) found that early onset patients had a greater number of obsessions and compulsions, and a more aggressive clinical course (shorter time between the onset of sub-clinical symptoms and the appearance of the full-blown syndrome) than those with late onset OCD. Importantly, epidemiological studies indicate that three times as many prepubertal boys as girls are diagnosed with OCD, but that the incidence of OCD in females increases markedly after puberty (Fontenelle, Mendlowicz, Marques & Versani, 2003).

The role of Life Events. Although most of the clinical descriptions of OCD report that initial symptoms are often triggered by stressful life events (McKeon, Roa, & Mann, 1984; Neziroglu, Anemone, &Yaryura-Tobias, 1992; Rasmussen & Eisen, 1991; Rasmussen & Eisen, 1989; Rasmussen & Tsuang, 1986), the relationship between triggering life events and OCD is still controversial. For example, McKeon et al. (1984) found that obsessive-compulsive patients reported a significant excess of life events in the year prior to the onset of the illness (McKeon, Roa, & Mann, 1984), while Khanna et al., (1988) found no significant difference in the occurrence of events between the patients and the controls in the year prior to the onset of the disorder (Khanna, Rajendra, Channabasavanna, 1988). Furthermore, the percentage of subjects referring to at least one life event prior to OCD onset revealed a wide range, of 25% to 92% (Albert, Mania, & Bogetto, 2000). Despite the inconsistent findings, a review of the literature on this topic showed that increases in responsibility, such as the birth of child or promotion to a new job, or significant losses such as death of family members, loss of a job were among the most common precipitants reported (Mania, Albert, Bogetto, Vaschetto, & Ravizza, 1999; Rasmussen & Tsuang, 1986).

Course. The course of OCD is remarkably variable, ranging from episodic to chronic. Earlier retrospective follow-up studies of OCD have consistently shown that an overwhelming majority of patients have a chronic waxing and waning course, with patients rarely symptom-free at follow-up. Relatively few patients described either a progressively deteriorative course or truly episodic course with complete absence of symptoms between episodes (Rasmussen & Eisen, 1992). Skoog and Skoog (1999) examined the long-term course of OCD with a 40-year follow-up study. Results showed that the duration of the disorder was lengthy for most patients, with half still experiencing clinically relevant symptoms at follow-up. They conclude that despite adequate pharmacotherapy and effective psychotherapy techniques, the likelihood of full remission of OCD is low.

Prognosis. Several studies have examined the prognosis of OCD. However, little is known about the course of this disorder in terms of patterns of remission and relapse and the factors that influence these patterns. Early age of oneset especially in men, having both obsessive and compulsive symptoms, low social functioning at baseline (Skoog, 1999), sexual/religious obsessions (Alonso, Maina, Pifarre, Mataix, Torres et al., 2001), and the presence of cleaning vs. checking rituals (Drummond, 1993) have been found to be associated with poorer outcome.

1.2.1.4. Comorbidity

Patients with OCD show high rates of comorbidity with major depression and other anxiety disorders, as well as Axis II psychopathology. An analysis of data from a large health maintenance organization study showed that about 25% of patients with OCD had no comorbid psychiatric condition, while 37% of patients with OCD had one, and 38% had two or more comorbid disorder. Major depressive disorder is the most common comorbid condition seen in OCD (e.g., Fireman, Koran, Leventhal, & Jacabson, 2001; Perugi, Akiskal, Ramacciotti, Nassini, Toni et al., 1999). Lifetime prevalence of depression among OCD patients ranged from 12% to 60% across seven countries (Horwath & Weissman, 2000; Okasha, Saad, Khalil, Seif El Dawla & Yehia, 1994; Weissman et al., 1994). Six percent of the patients also had bipolar disorder (Fireman, Koran, Leventhal, & Jacabson; 2001). Comorbidity of OCD with other anxiety disorders is also very common, including panic disorder, social phobia, simple phobia, and generalized anxiety disorder (Rasmussen & Eisen, 1992). Clinical studies indicate that OCD and delusional disorders may coexist or alternate (Fear, Sharp, & Healy, 2000). Rasmussen and Eisen (1989) reported that 30 of 250 OCD (approximately 10% of their patient) patients had delusions, hallucinations and/ or thought disorder.

Literature reviews indicate that comorbidity of OCD is not only limited to Axis I disorders in DSM-IV but is also common with Axis II personality disorders. The most frequent diagnoses among Axis II pathologies are mixed personality disorder,

dependent (12%), histrionic (9%), compulsive (6%), and, have equal frequencies (5% each) for schizotypal, paranoid, and avoidant personality disorder (Baer, Jenike, Ricciardi, Hollan, & Seymour, 1990).

Another group of disorders comorbid with OCD may be grouped under the label of obsessive-compulsive spectrum disorders (Hood, Alderton, & Castle; 2001; Bievvenu, Samuels, Riddle, Hoehn-Saric, Liang et al. 2000). OC Spectrum Disorder (OCSD) is a term that has been used to classify a group of disorders whose clinical features intersect with those of OCD, such as pathological gambling, sexual addictions; Tourette's syndrome, autism; body dysmorphic disorder, bulimia, and dissociative disorders (Hood, Alderton & Castle; 2001; Bievvenu et al. 2000).

There are some research findings that suggest that a majority of people experience unpleasant intrusions similar to the obsessions seen in OCD. In their study, Rachman and De Silva (1978; see also Clark & de Silva, 1985; Freeston, Ladouceur, Thibodeau, & Gagnon, 1992, 1991; Purdon & Clark, 1993; Salkovskis & Harrison, 1984) examined the differences and similarities between obsessive thinking in a non-clinical sample and OCD patients. These authors reported that almost 80% of the non-clinical subjects experienced obsessions. In addition, they found remarkable similarities between "abnormal" and "normal" obsessions as far as the content of these obsessions is concerned. However, abnormal obsessions were found to be more frequent, intense, of longer duration and to produce more discomfort than normal obsessions. Later, Muris et al. (1997) found that compulsions performed by OC patients were more frequent and intense, evoked more discomfort and were more often associated with distressing thoughts and negative mood state than compulsions performed by non-clinical subjects.

In conclusion, despite some minor differences in the frequency and content of symptoms across cultures, the diagnostic characteristics of OCD seem to have consistent patterns across various Western and non-Western countries (Weissman et al., 1994; Okasha et al., 1994).

1.2.1.5. Etiology of OCD

There are many psychological and biological theories of OCD. However, most of the theories offer only sketches of putative mechanism and unfortunately fail to account for the full picture of pathological processes. Some theories account for only a subset of OC phenomena, while others fail to account for why a wide range of the population experience OC-like phenomena but only a minority of them develop pathological obsessions and compulsions. Although several etiological theories of OCD have been proposed including psychogenic factors, learning theory, neurological and biological models, it is the cognitive models that have received more research attention and have lead to the development of theories researching the onset, persistence and treatment of OCD (Clark, 2004; Rachman, 1997; Salkovskis, 1985, 1989). Since the present study aims to evaluate the cognitive model, only brief space is allotted to other models.

Psychogenic Models. Based on the basic principles of psychoanalytic theory, psychogenic models of OCD development stress early life experiences and fixation and regression of the OCD patient from the oedipal to the earlier anal stage. This fixation is due to over investment in anal eroticism (Hales, Yudofsky & Talbot, 1996). The psychodynamic formulation proposes that OCD patients utilize various unconscious mechanisms to suppress their unwanted sexual and aggressive thoughts, impulses or images. However, research showed that although the content of obsessions may include themes of sexuality and aggression, most OCD patients do not show symptom reduction with psychodynamic interventions (Jenike, 1998).

Neurobiological Models. A wide range of psychopharmacological medications have been used to treat OCD, including tricyclc antidepressants, MAO inhibitors, lithium carbonate, antipsychotic medications, and anxiolytic medications. However, the most comprehensively studied and most effective drugs fot the treatment of OCD are the serotonin reuptake inhibitors including clomipramine, fluoxetine, fluvoxamine, and

sertraline. Based on the effectiveness of these medications relative to other pharmacological agents, a serotonin hypothesis about the etiology of OCD has been advanced (Zohar & Insel, 1987). The serotonin level in OCD patients has been directly manipulated by administering the serotonin agonist metachlorophenylpoprazine (mcpp), and the administration of mcpp has been followed by increases in OC symptoms in a clinical sample. This result provides empirical support for the role of the serotonergic system in the etiology or maintenance of OCD symptoms (Zohar & Insel, 1987, Zohar, Mueller, Insel, 1987; Zohar, Zohar-Kadouch, & Kindler, 1992).

Conditioning Model. Learning model of OCD was originally developed by Mower (1939). According to this theory, fears are acquired by classical conditioning and maintained by operant conditioning. This process can be explained by two stages. In the first stage, anxiety becomes classically conditioned to an environmental event (e.g., becoming anxious in the presence of dirt on one's hand) or an intrusive thought. In the second stage, the person performs a ritualized or compulsive behavior, such as hand washing or thought suppression, in order to reduce anxiety. If the compulsive behavior successfully decreases the anxiety it is negatively reinforced and the compulsive behavior is more likely to be performed again in response to the conditioned anxiety stimuli. Unfortunately, the compulsive behavior provides transient relief and in the long term, it maintains the fear response because it prevents the person from remaining in contact with feared stimulus long enough for habituation to occur (Salkovskis & Westbrok, 1989).

The learning model of compulsion acquisition is the basis of a behavioral treatment formulation of OCD. The most effective behavioral intervention for the treatment of OCD includes exposure to feared stimuli and response prevention (Dar & Greist, 1992). Studies on the effectiveness of behavioral therapy indicate that 60% to 70% of patients who complete treatment show significant symptom reduction that is maintained for up to 3 years (e.g., Ball, Baer & Otto, 1996). However, there are a number of problems with the behavioral model of OCD and behavior therapy for OCD. The first problem includes high rate of drop-out, poor treatment compliance, and

limitation of exposure and response prevention for many patients. Furthermore, approximately 20% of patients with OCD do not benefit from behavioral therapy for a variety of reasons, including strong beliefs in the necessity of rituals to prevent future feared outcome, the presence of severe depression and personality disorders, and the presence of obsessions without overt compulsions (Rachman & Hodgson, 1980). The second difficulty is related to the equality of effectiveness of behavioral therapy in other anxiety disorders. Salkovskis (1998) indicated that the two-stage theory of anxiety can be applied equally well to all anxiety disorders, such as phobias, and panic disorder, and not just OCD. The last problem in behavioral treatment is its ineffectiveness in treating obsessions without compulsions. This is clearly incongruent with the hypothesis of behavioral theory of OCD since it has been proposed that compulsive rituals are the maintaining factor in this disorder. In that case, people who have obsessions without compulsions should be the easiest to treat since there is no overt compulsion present to prematurely terminate exposure before habituation. In contrast to this predicton, treatment studies have shown that this group of individuals is the most difficult patient group to successfully treate with behavioral techniques (Salkovskis & Westbrook, 1989).

It is clear alternative approach is needed to treat patients with OCD who are either unwilling to undergo behavioral therapy or who have been treatment resistant to behavioral and medical therapy. Therefore, in an attempt to overcome some limitations of behavioral theory and therapy for the treatment of OCD (Foa, Steketee, Grayson, & Doppelt, 1983), recent theories have focused on understanding the dysfunctional cognitive attitudes, beliefs, and assumptions that may play an important role in the persistence of OCD. The following section presents literature review of the contemporary cognitive models of OCD.

1.2.2. Cognitive Theories of OCD

Clark and Purdon (1993) suggested that the treatment resistant nature of pure obsession and the previously stated limitations of ERP (Salkovskis & Westbrook,

1989) have led to researchers to explore cognitive processes in the etiology and treatment of OCD. This section presents current cognitive models of OCD, including Carr's cognitive model (Carr, 1974), McFall and Wollersheim' model (McFall and Wollersheim, 1979) Salkovskis' model (Salkovkis, 1985, 1989), Rachman's model (1997), and D. A. Clark's cognitive model (Clark, 2004).

1.2.2.1. Carr's Cognitive Model

The first attempt to conceptualize OCD according to a cognitive model was made by Carr (1974) in which he proposed that individuals with OCD have abnormally high degree of threat perception regarding the occurrence of negative outcomes. Carr's cognitive model of obsessions and compulsions is based on Lazarus' theory of threat appraisals (1966). Threat appraisal involves the individual's evaluation of the probability and subjective cost of negative outcomes. Carr further suggested that since anxiety is dependent on the perception of threat, individuals with OCD must have unusually high expectations of negative outcome and so they will experience a high degree of anxiety. In this model, compulsions are performed in order to reduce the probability of a feared outcome, and compulsions are reinforced by anxiety reduction. To support this cognitive formulation, Carr cited the findings of Steiner's (1972) study which revealed that OCD patients were less likely to become involved in risk-taking behavior than persons with other psychiatric disorders. However, as a behavioral model of OCD, Carr characterized obsessional content as an exaggeration of normal concerns, but his model failed to explain how OCD differs from other anxiety disorders that also involve dysfunctional threat appraisal. Further, he made no mention of how these subjective probability and cost overestimations develop (Riggs and Foa, 1993).

1.2.2.2. MacFall and Wollersheim's Model.

MacFall and Wollersheim (1979) developed a cognitive model of OCD by expanding on Carr's (1974) formulation. According to this theory, threat plays an aggravating function of the person's primary appraisal of the danger of an upcoming event and perceived ability to cope with the harmful outcome. They argued that threat is generated by an immediate "primary appraisal" process whereby the individual estimates the danger of an event relative to his perceived resources to cope with it which lead to an exaggerated evaluation of dangerousness of the possible outcome. Once a primary appraisal of threat has been made, anxiety rises and OC behavior is initiated on the basis of the person's "secondary appraisal" of the possible consequence of his or her efforts to cope with the threat. The authors suggest that in OCD patients, there is a large discrepancy between appraisal of threat and perceived ability of cope with it. In other words, appraisals which lead to an exaggerated evaluation of threat and a subsequent underestimation of one's ability to cope with it represented by obsessions are central to the maintenance of OCD. This nature of appraisal then motivates the person to perform compulsions in order to avoid obsessions, prevent a harmful outcome, and restore a sense of control. Thus, based on this formulation, obsessions and compulsions are considered as less anxiety-provoking and more acceptable than the more terrible outcomes that may occur because of a person's inability to prevent it.

Although MacFall and Wollersheim's cognitive formulation expanded Carr's theory, their formulation still has a number of theoretical difficulties. First, the formulation stresses that influential cognitions are at preconscious and unconscious levels and individuals may not be aware of them. This feature of the model makes validation of the theory difficult. Consistent with this criticism, they presented no data and to date, have published no research validating their theory. Second, as stated by Salkovskis (1985), they do not elaborate on the processes involved in the development, maintenance, or termination of the obsessions and compulsions, other than to state that persons with OCD have a disproportionate belief in the usefulness of magical rituals.

Third, like Carr (1974), they fail to explain how threat appraisals of individuals with OCD differ from appraisals in other anxiety disorders.

1.2.2.3. Salkovskis' Model: The Role of Inflated Sense of Responsibility in OCD

The first comprehensive cognitive model of OCD has been developed by Salkovskis (1985, 1989). His theory draws heavily on Beck's cognitive theory (Beck et al., 1983) as well as studies of normally occurring obsessions in nonclinical populations (e.g., Rachman & de Silva, 1977). Salkovskis' model is based on two primary assumptions. The first assumption is that intrusive thoughts are a universal human experience. The second assumption is related to the differences between clinical and normal intrusions. Consistent with previous studies in noncinical populations (e.g. Rachman & de Silva, 1977), Salkovskis suggested that cognitive intrusions are universally experienced and may be triggered by external and internal stimuli and only cause a problem to individuals if they appraise the intrusions as having important adverse personal implications for them. In other words, not all intrusions will become obsessional. Salkovskis' (1985) model is mainly based on the assumption that an individual's interpretation of an intrusion plays a more significant role in determining whether the intrusions are transformed into pathological obsessions than merely experiencing of the intrusions themselves. His conceptualization provides a distinction between negative automatic thoughts defined by Beck (1976) and obsessions. Salkovskis noted that negative automatic thoughts are relatively autonomous, idiosyncratic, experienced as reasonable, and ego-syntonic, whereas obsessions are perceived as unacceptable, irrational and implausible. Obsessions are incongruent with the individual's belief system, whereas negative automatic thoughts are congruent and are an expression of the belief system. Obsessional thoughts are generally highly accessbile, while the accessibility of negative automatic thoughts can be difficult even with training. Both automatic thoughts and obsessions are perceived by individuals as being generated from within their own mind.

Salkovskis further stated that the negative automatic thoughts of OCD patients are related to ideas of personal responsibility for negative consequences. In his cognitive theory of OCD, it is hypothesized that an inflated sense of responsibility plays a salient role in the development and maintenance of OCD, and responsibility appraisals are made in response to both the occurrence and content of unwanted intrusive thoughts and obsessions**.** For example, when an intrusive thought of harming someone occurs, the thought will become more frequent and distressing if individuals believe they are responsible to prevent any possibility of harm occurring to the person. This negative appraisal of responsibility or negative automatic thoughts also leads to an increased urge to suppress or neutralize the unwanted thought, image or impulse, which in turn can strengthen and maintain the dysfunctional responsibility appraisal, and finally causes a vicious cycle between neutralizing and the intrusion (Rachman, 1993; 1997; Salkovskis, 1985).

Salkovskis argued that if an appraisal does not include an element of responsibility, the person is likely to be anxious or depressed rather than having obsessional problems. Responsibility appraisals lead both to more adverse mood such as anxiety and depression, and the decisions and motivation to engage in neutralizing behaviors to decrease discomfort, diminish the intrusion, and avoid being responsible for the feared catastrophic consequences. The successful completion of these neutralizing behaviors not only increases the likelihood of further intrusions, but also increases the perceived threat and the perception of responsibility.

The pathological definition of responsibility characteristic of people suffering from OCD is described by Salkovskis (1996) as having the belief that one has pivotal power to start or prevent subjectively crucial negative outcomes. These outcomes may be at a concrete level, such as a car accident or on a moral level such as having unacceptable thoughts means that I'm a bad person. Rheaume and her colleagues (1995) conducted two studies to empirically test the validity of this definition of inflated responsibility. They found that consistent with the operational definition of responsibility, influence and pivotal influence were highly correlated with responsibility ratings, whereas severity and probability weakly correlated with

responsibility. The second study was conducted to examine the effects of the order of the questions on the responsibility ratings. Results replicated the findings of the first study, showing that pivotal influence remained the strongest predictor of responsibility ratings. More detailed research findings supporting the role of responsibility in OCD are presented in the obsessive belief section.

In summary, Salkovkis' model proposes three tenets of the etiology of OCD: (a) clinical obsessions drawn from normal, unwanted intrusive thoughts, (2) assumptions and appraisals of personal responsibility play an important role in the transformation of normal intrusions into clinical obsessions and compulsive behaviors to reduce anxiety caused by obsessions, and (c) compulsions as neutralizing acts that provide only temporary relief, but, in the long term, increase the frequency and intensity of the intrusions due to providing validation of the responsibility appraisals.

1.2.2.4. Rachman's Model: The Role of Catastrophic misinterpretations in OCD.

Rachman (1997, 1998, 2003) proposed and elaborated a cognitive model of obsessions that is based upon Salkovskis' (1985) cognitive behavioral theory of OCD and D. M. Clark's (1986) cognitive model of panic. Rachman (1997) summarizes his cognitive theory of obsessions as

> "Obsessions are caused by catastrophic misinterpretations of the significance of one's intrusive thoughts (images, impulses). By deduction: (a) the obsessions will persist for as long as the misinterpretations continue; and (b) the obsessions will diminish or disappear as a function of the weakening/ elimination of the misinterpretations" (p.793).

Thus, individuals who appraise the intrusions as important and personally significant, and interpret them catastrophically will experience significantly more intrusions, will be more distressed by them, and will feel the need to neutralize them. In other words, interpreting intrusions as having important meaning makes them significantly more distressing and aversive (Rachman, 1993)

Rachman's (1997) theory is based on the notion that almost everyone occasionally experiences intrusive thoughts that are like obsessions in nature, but the

difference between obsessions and nonclinical obsession-like thoughts is related to their frequency and degree of severity rather than content. Rachman (1971, 1976) and Rachman and Hodgson (1980) proposed that while most individuals are able to ignore or diminish such thoughts, only a minority of them find intrusions very distressing. Rachman proposed that there are four main sources of vulnerability to the development of clinically significant obsessions: (a) elevated moral standards, such as sensitivity, introversion, and strict and rigid morality, (b) specific cognitive biases, (c) depression, and (d) anxiety proneness.

First, Rachman (1997) referred to elevated moral standards as "moral perfectionism" that is "as a general background, people who are thought, or learn, that all of their value-laden thoughts are of significance will be more prone to obsessions- as in particular types of religious beliefs and instructions" (p. 798). Second, certain cognitive biases predispose individuals to interpret normal intrusions in a catastrophic ways. The catastrophic interpretation cause increases in distress/anxiety, which in turn motivates the individual to perform compulsions to reduce distress and anxiety. Third, it is proposed that depressive schemas may make individuals more vulnerable to interpret obsessions more negatively and catastrophically (Shafran, Thorson, Rachman, 1996). Consistent with this argument, several studies showed that the severity of depression increases obsessionality in OCD (e.g., Ricciardi & McNally, 1995). Lastly, Rachman noted that anxiety proneness forms a vulnerability to develop obsessions in a manner very similar to anxiety-proneness in panic disorder as conceptualized by D.M. Clark (1986). The cognitive model of panic disorder proposes that individuals with panic disorder may interpret physiological sensations as indicators of a catastrophe (e.g., "I have a difficulty in taking a breath, may be I am going to have a heart attack and I will die!"). Just as individuals with panic disorder, an individual may interpret the occurrence and content of intrusions as a sign of moral failure and doom (e.g., "I just thought about cheating my husband, so deep down I must be a sinful and immoral person").

Rachman (1993, 1997, 2003) proposed that the catastrophic misinterpretation of the intrusive thoughts as personally important, significant and threatening has the

effect of transforming an ordinary intrusion into recurrent and resistant obsessions. He indicated that patients with OCD often have beliefs about the exaggerated importance of thoughts (e.g., if an intrusive thought pops into my mind, it must be important). He termed this cognitive bias thought-action fusion (TAF) that covers two different types of beliefs; having a thought focused on an immoral thing is as bad as carrying it out in real life (TAF-Morality), and having a thought increases its chance of happening in real life (TAF-Likelihood) (Shafran, Thordarson & Rachman, 1996). He suggested that TAF may be a common factor that functions to inflate the importance of intrusive thoughts via two different mechanisms. Firstly, if a person believes that thoughts are morally equivalent to actions, he/she will experience remarkable distress and anxiety, and seek to neutralize these thoughts in order to relieve the feeling of distress. Secondly, if a person believes that thinking something increases the possibility it will occur in real life then he/she will feel a strong urge to perform neutralizing behaviors such as checking, saying certain words, counting to reduce the distress, or use avoidance as a way to prevent the intrusion from being triggered. Unfortunately, the neutralization and avoidance behavior only provides temporary relief, which in turn further strengthens the underlying catastrophic beliefs which then increases the likelihood of experiencing more intrusions.

Rachman, Thordarson, Shafran, and Woody (1995) developed a scale to measure responsibility related beliefs, but they wanted to choose the items that were free of OC related content. This scale included five non-OCD related responsibility domains including responsibility for property damage and physical harm coming to others, responsibility in social contexts, a positive outlook on responsibility, and the beliefs in thought action fusion. Findings indicated that TAF had the most reliable associations with OC symptomatology. TAF also correlated significantly with measures of obsessionality and depression. The significant correlation between TAF and obsessionality remained even after controlling for the effect of depression. Furthermore, when the group was split into high and low scores on an OC symptom measure, only the TAF scores significantly differed high and low OCD groups. The authors concluded that the original idea proposed by Salkovskis (1985) that people

affected by obsessional problems have inflated responsibility was not supported. The results suggested that only TAF, as a dysfunctional cognitive belief, may play a more specific role in exacerbating OCD symptoms.

Following this preliminary research, Shafran, Thordarson, and Rachman (1996) assessed the role of two components of TAF (i.e., TAF-Likelihood and TAF-Morality) in OCD symptomatology and administered it to a group of obsessionals and a nonclinical control group. As expected, TAF was found to be greater in the obsessional population and it was positively correlated with OC symptoms. They also compared each group in terms of the two structures of TAF and it was found that likelihood TAF appears to take two distinct forms, including likelihood for self and others. Individuals with OCD frequently endorse a belief in likelihood of harm to self as well as to others. Nonclinical group tended only to endorse beliefs about fusion of thought and likelihood of harm to self. In other words, individuals without OCD were able to discriminate between Likelihood TAF for self and others, whereas the obsessional group did not. The authors attributed these differences to an inability of obsessional subjects to discriminate between the influence of their thoughts over own behavior and the behavior of others. They concluded that the specific belief that one's thoughts affect another person may be the critical aspect of TAF in patients with OCD. The detailed literature review that supports the role of TAF in OCD is presented in the following section.

In conclusion, Rachman's cognitive model of OCD underlies the role of exaggerated importance of thoughts in OCD. He suggests that responsibility in general is not sufficient to account for OCD. Rigid moral values (e.g., aggression, sex, and blasphemy) are reflected in the main themes of obsessions/intrusive thoughts. Because of TAF beliefs, certain types of thoughts may more readily experienced as sinful, disgusting, or threatening and, therefore, cause distress to the individual who believes they are indicative of their true self, are likely to actually come true, or imply that he or she is in danger of doing something "catastrophic". Once an intrusive thought is interpreted as threatening to the self-perception, it automatically gains an excessive

importance which motivates the performance of compulsive acts to gain control over intrusions.

1.2.2.5. D. A. Clark's Model: Over Importance of Controlling One's Thoughts.

Purdon and Clark (1999) suggested that the ego-dystonic nature of intrusive thoughts and efforts were important in understanding OCD cognitions. Recognition of an intrusive thought as incongruent with one's self-view may increase thought salience and require more attentional resources. Non-clinical individuals are able to more readily dismiss their intrusive thoughts because they recognize the intrusions as senseless and inconsistent with their-view. They do not recognize their thoughts as reflecting their true personality. In contrast, OCD patients appraise their intrusions as evidence of true personal characteristics. If an individual holds beliefs such as "my thoughts reveal my true personality", he/she is more likely to interpret cognitive intrusions as threatening and distressing, which in turn leads to more attempts to control or suppress them. However, thought control efforts such as neutralization or suppression can only temporarily restore one's self-view and reduce distress. Thus, obsessionals differ from normal individuals who are able to dismiss intrusive thoughts through recognition of their nonsensical nature in terms of belief that controlling thought is the only way to restore their sense of self (Clark, 2004).

Clark (2002, 2004) draws attention to beliefs about the need to control thoughts as a process that leads to the exacerbation of intrusive thoughts. He proposed that holding unrealistic beliefs about the occurrence of unwanted intrusive thoughts and personal capacity to control them has an important effect on the severity of obsessions. Furthermore, obsession-prone individuals hold unrealistic beliefs about failed thought control efforts, and have a greater tendency to appraise their lack of control as a catastrophic experience. The misinterpretations of occurrences and consequences of unwanted intrusive thoughts, and of failed thought control promote intentional attempts to control one's thoughts. However, suppression efforts paradoxically

increase the frequency of these unwanted thoughts, and may even evoke stronger and more persistent intrusions in the future.

Despite some conflicting findings (e.g., Belloch, Morillo, Gime´nez, 2004; Janeck & Calamari, 1999; Kelly & Kahn, 1994; Purdon, Rowa & Antony; 2005), subsequent studies have consistently supported the role of thought suppression in the exacerbation of OC symptoms (e.g., McLaren & Crowe; 2003; Rassin, Muris, Schmidt, & Merckelbach, 2000; Smári & Hólmsteinsson, 2001, Trinder & Salkovskis, 1994). The detailed literature findings can be found in following section.

In conclution, the contemporary cognitive models of OCD propose that it is not the intrusion but how people perceive, evaluate and cope that is important in defining the obsessive nature of the intrusion. In other words, specific beliefs and appraisals play an important role in the transformation of intrusions into clinical obsessions.

1.2.3. Obsessional Beliefs Underlying Obsessive-Compulsive Cognitions

Forty leading experts in cognitive approaches to OCD from nine different countries formed the Obsessive-Compulsive Cognition Working group (OCCWG) in order to identify the belief domains that play an important role in the genesis and maintenance of OCD. They first compiled 16 instruments that were currently being used to assess cognitive aspects of OCD. From those instruments the working group delinated 19 belief domains partially involved in the development and maintenance of OCD (OCCWG, 1997). The working group then reviewed the 19 belief domains to identify the most OCD relevant beliefs, and they identified six domains that appear to be highly specific to OCD, including inflated sense of responsibility, over-importance of thoughts, over-importance of thought control, intolerance of uncertainty, overestimation of threat, and perfectionism. Subsequently an 87-item Obsessive Beliefs Questionnaire was developed to evaluate these belief domains, and Interpretations of Intrusions Inventory were constructed to assess appraisals of unwanted, intrusive thoughts (1997, 2001, 2003a, 2003b). Recently, the OCCWG (2003b) published a 44-item version of the OBQ (OBQ-44). Specificity and

psychometric properties of these instruments for OCD have been examined in different cultures. Results showed that the six belief domains play an essential role in the transformation of normal intrusions into abnormal obsessions (e.g., Sica, Coradeschi, Sanavio, Dorz, Manchisi & Novara, 2004; Woods, Tolin & Abramowitz, 2004). Below each of the six belief domains will be described and critically examined, and where applicable, links to scrupulosity will be discussed.

Inflated Sense of Responsibility. OCCWG (1997) defined inflated sense of responsibility as "the belief that one has power which is pivotal to bring about or prevent subjectively crucial negative outcomes" (p.677). Pivotal power is an important dimension in this factor (Ladouceur et al., 1997; Rheaume et al., 1995). Since OCD sufferers show a tendency to feel responsible for things that they believe they might have an even slight chance of affecting. Salkovskis et al.(1998) noted that OCD patients tend to believe that "any influence over outcome = responsibility for outcome"(p.51; Salkovskis, Forrester, Richards, and Morrison, 1998).

The role of the exaggerated responsibility in OCD was supported by clinical observations (e.g., Rachman, 1993), questionnaires (e.g., Altın & Gençöz, 2007; Altın & Karanci, 2008; Foa, Sacks, Tolin, Preworski & Amir, 2002; Rachman, Thordarson, Shafran & Woody, 1995; Salkovskis et al., 2000; Scarrabelotti, Duck & Dickerson, 1995; Yorulmaz, Karancı & Tekok-Kılıç, 2006), experimental manipulations (Arntz, Voncken & Goosen, 2007; Ladouceur, Rheaume, Freeston, Aublet, Jean, Lachance et al., 1995; Lopatka & Rachman, 1995; Shafran, 1997), and treatment efficacy studies (e.g., Freeston, Rheaume & Ladouceur, 1996; Ladouceur, Leger, Rheaume, & Dube, 1996).

The exaggerated influence of inflated responsibility on OCD symptomatology was further supported with the findings from non-Western countries. For example, Ghassemzadeh, Bolhari, Birashk and Salavati (2005) supported the role of responsibility in OCD in Iran. In addition, similar findings were also obtained in studies conducted with both non-clinical and clinical samples in Turkey (Yorulmaz, Yılmaz & Gençöz, 2004; Yorulmaz et al., 2006; Yorulmaz, Karancı & Tekok-Kılıç,

2002; Yorulmaz, Karancı, Baştuğ, Kısa & Göka, 2007). Recently, Altın and Gencöz (2008) examined the role of inflated responsibility, TAF, and thought suppression in OCD and depressive symptoms. Participants completed a set of questionnaires, including the Responsibility Attitude Scale (RAS), the Thought Action Fusion Scale (TAF), the White Bear Suppression Inventory (WBSI), the Maudsley Obsessive–Compulsive Inventory (MOCI), and The Beck Depression Inventory (BDI). After a 4-week interval, participants were again asked to complete the MOCI and BDI to examine the factors significantly accounting for the residual changes from Time 1 to Time 2 assessments of OC and depressive symptoms. Results indicated that while thought suppression played a significant role in the persistence of both OC and depressive symptoms across time, the role of inflated sense of responsibility was specific to the persistence of OC symptoms. Consistent with this study, the role of inflated responsibility in OCD symptomatology was also supported in Turkish adolescent samples (Altın & Karanci, 2008; Yorulmaz, Altin & Karanci, 2008). Altin and Karanci (2008) found that a inflated sense of responsibility was significantly related to severity of OCD symptoms, and the combination of inflated responsibility and low sense of control produced the highest level of OCD symptoms in senior high school students.

Overimportance of Thoughts. Overimportance of thought is often considered a subcomponent of TAF as conceptualized by Rachman (1997). However, this appraisal is considered by OCCWG to be significant enough to merit special attention (Frost & Steketee, 2002). The OCCWG (1997) defined overimportance of thoughts as "the belief that the mere presence of a thought indicates that it is important. Included in this domain are beliefs that reflect thought-action fusion and magical thinking" (p.678). Thordarson and Shafran (2002) defined overimportance of thoughts as

a) "negative intrusive thoughts indicate something significant about oneself (e.g., that one is terrible, weird, abnormal)
b) Having negative intrusive thoughts increases the risk of bad things happening (e.g., having the thoughts means they are likely to come true, having impulses means one is likely to act on them).

c) Negative intrusive thoughts must be important merely because they have occurred." (p.15)

The hypothesis about a connection between TAF and obsessive intrusions was supported by Rassin, Merckelbach, Muris & Spaan (1999). They reported that experimentally induced TAF resulted in more intrusions, more discomfort, and more resistance. Nevertheless, TAF led subjects to engage in neutralizing behavior in about 50% of the intrusions. Taken together, these findings demonstrate that TAF may contribute to the transformation of normal intrusions into obsessive intrusions.

Based on the findings of two studies that found nonsignificant differences between normal and clinical samples on Moral TAF (Rassin, Merckelbach, Musris, & Schmidt, 2001; Shafran, Thordarson et.al., 1996), the authors concluded that Moral TAF may be common and less pathological than likelihood TAF. Consistent with these findings, Abramowitz et al. (2003) examined the specific role of TAF in OCD by comparing it with other anxiety disorders. Results indicated that OCD was characterized by TAF-Likelihood, which might be mediated by negative affect. The relation of TAF-Likelihood with OCD symptoms was supported by many studies mainly from Western countries (e.g., Shafran et al., 1996; Rassin et al., 2001). Parallel to these findings, it is suggested that Moral TAF may be more problematic for certain subtypes of OCD than others. For example, individuals with OCD-scrupulosity would be expected to have high scores on Moral TAF whereas individuals with ordering symptoms would not. The detailed examination of the relationship between TAF, religiosity, and scrupulosity will be presented in the following sections.

Importance of Controlling Thoughts. This belief reflects the "overvaluation of the importance of exerting complete control over intrusive thoughts, images, and impulses, and the belief that this is both possible and desirable" (OCCWG; 1997, p.678). Furthermore, they identified four ways that importance of controlling thoughts (ICT) could be manifested:

(1) Beliefs about the importance of tracking and over-vigilance for mental events;
(2) Beliefs about the moral consequences of failure to control thoughts;

(3) Beliefs about the psychological and behavioral consequences of failure in thought control;
(4) Beliefs about the efficiency of thought control (i.e., that one's efforts at control should meet with success, especially long-term success). (p. 678)

The OCCWG (1997) heavily referred to the work of Clark and Purdon (1993), who noted that individuals' vulnerable to developing obsessional problems resides in the beliefs obsessional thoughts are evidence that undesirable personality characteristics exist and their thoughts can and should be controlled. Therefore, failures in thought control are experienced as devastating because OCs tend to attach internal, negative meaning to their suppression failure. These negative and internal appraisals may lead to increased distress, which increase the motivation to suppress in future. In other words, OCD patients tend to show "Too much thinking about thinking", which is also known as meta-cognitive beliefs. Recently, Janeck, Calamari, Riemann and Heffelfinger (2003) found that "Too much thinking about thinking" is an important factor in OCD, and it differentiated OCD from generalized anxiety disorder. Tolin et al. (2002) have reported consistent findings that people with OCD have a greater tendency to attribute their thought suppression failure to internal factors and give negative meaning (e.g., "I am mentally weak") than subjects in a control group.

In a series of experiments, Salkovskis and Campbell (1994) demonstrated that the suppression of personally relevant thoughts resulted in increased intrusions. That is, the more vigilant the person monitors and suppresses thoughts, the more distressing and intrusive the thoughts are likely to become. In a subsequent study, suppression over a four day period was evaluated, and the results showed that subjects who suppressed their thoughts experienced more thoughts and reported significantly more discomfort than subjects who thought about intrusions and recorded them without suppression (Trinder & Salkovskis, 1994). These findings supported the work of Clark and Purdon (1993), who described the characteristics and beliefs of OCD sufferers as:

> "Excessively monitoring for the presence of mental intrusions; belief that these intrusions portend some catastrophe; belief that one is responsible for this harm because of the thoughts; belief that one must control the thoughts to avoid harm and reduce distress. (p.672)"

Purdon and Clark (2002) proposed that most people try to suppress thoughts from time to time; however, people with OCD tend to have very strict meta-cognitive beliefs which motivate the person to perform active and extensive attempts to control unwanted intrusions (see also, Clark, 2004). Unfortunately, as stated by Wegner and Zanakos (1994) such suppression attempts result in more rather than less intrusion because complete suppression is usually not possible; and in a paradoxical way, such suppression efforts may increase the frequency of these unwanted thoughts, and may evoke more intense and persistent intrusive thoughts. Consistent with this argument, Purdon and Clark (2002) noted that

> "Individuals who believe that mental control is an important part of self-control will have a high stake in being able to control thoughts. Individuals who believe that unwanted thoughts represent a lapse in mental control and who strive for perfect control will be invested in regaining mental control after such a thought occurs. (p.31)"

The ineffectiveness of beliefs about controling unwanted thoughts have significant implications for scrupulous individuals who continuously strive to protect "purity in thought." As stated by Rachman and Shafran (1999), although only a very small part of our daily thoughts are the results of deliberate selection, people with OCD have a great tendency to believe that they should have complete control over each thought. Interestingly, the Penn Inventory of Scrupulosity (Abramowitz et. al., 2002) consists mainly of items related to distress about immoral/unwanted thoughts. Thus it would appear that control of thoughts may play a central role in scrupulosity. Consistent with this hypothesis, Sica et al. (2002) found that obsessive-compulsive cognitions were significantly related to impaired mental control for highly religious individuals, whereas there was no significant association between these variables for less religious individuals. Therefore, control of thoughts may be particularly salient for individuals with highly religious beliefs.

Studies evaluating the effectiveness of thought suppression and OCD have produced mixed results. While some studies found an increase in obsessions after thought suppression (Clark, Ball, & Pape, 1991; Clark, Winton, & Thynn; 1993, Lavy & van den Hout, 1990; Salkovskis & Campbell, 1994; Tolin, Abramowitz, Przeworski,

Foa, 2002), other studies found no paradoxical effect of suppression on thought frequency at all (Belloch, Morillo, Gime´nez, 2004; Janeck & Calamari, 1999; Kelly & Kahn, 1994; Purdon, Rowa & Antony; 2005; for comprehensive reviews see; Abramowitz, Tolin, & Street, 2001; Purdon, 2004; Purdon, 1999; Purdon & Clark, 2000; Rassin, Merckelbach, & Muris, 2000). Researchrs attribute these inconsistent findings to weak methodological designs that greatly limit external validity (Purdon, 1999).

As a conclusion, in spite of inconsistent findings, beliefs about the importance of controlling thoughts are influential in the cognitive models due to five reasons. First, these beliefs motivate the person to use some active control strategies. Second, control efforts terminate the exposure to thought and strengthen the validity of the obsessions. Third, these efforts provide anxiety reduction and the person feels successful as a result of anxiety reduction, which motivates the person to again perform these control efforts. Fourthly, complete control is usually impossible and failure in control will further contribute to problematic appraisals (Clark, 2004).

Perfectionism. Perfectionism is a multidimensional construct of varying intensity and expression that is frequently seen in many types of psychopathology, such as depression (Blatt, Zuroff, Bondi, Sansinow, & Pilkonis, 1998; Hewitt, Flett & Turnbull-Donovan, 1992), eating disorders and social phobia (Shafran & Mansell, 2001), and even in varying degrees in nonclinical samples (Flett &Hewitt, 2002; Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991). The OCCWG (1997) defined perfectionism in OCD as “the tendency to believe there is a perfect solution to every problem, that doing something perfectly (i.e., mistake free) is not only possible, but also necessary, and that even minor mistakes will have serious consequences” (p.678). This definition focuses on the desire to find “the” correct and error free solution to “every” problem. However, the OCCWG’ definition does not include social aspects of perfectionism (i.e., other-oriented perfectionism; or socially prescribed perfectionism), as conceptualized by Hewitt and Flett (1991).

Although several authors proposed that perfectionism plays a role in obsessive-compulsive issues, little research has been performed to understand the role perfectionism in the etiology, maintenance, and treatment of OCD (Frost& DiBartolo, 2002). One reason for this, is that, while research on cognition and OCD has found that perfectionism is distinct from the other belief domains, evidence indicates that it is highly related to the other belief domains (Obsessive Compulsive Cognitions Working Group, 2001). For example, Bouchard, Rheaume, and Ladouceur (1999) found that high perfectionism may lead OCD sufferers to overestimate their level of responsibility (i.e., inflated responsibility) for controlling negative events. Conversely, inflated responsibility beliefs may predispose an OCD sufferer to be perfectionist as a tactic to reduce threat or risk of harm (Frost et al. 2002). Furthermore, researchers still debate over whether perfectionism is a specific facet of OCD or is a common vulnerability factor that plays a significant role in the maintenance of several emoyional disorders. Frost and Steketee (1997) found that individuals with OCD did not score significantly higher than individuals with other anxiety disorders on overall perfectionism. Furthermore, dysfunctional perfectionistic participants reported more beliefs about responsibility, compared to functional perfectionistic participants (Rheaume, Freeston, Ladouceur, Bouchard, Gallant et al., 2000).

In spite of these diferences, some empirical studies indicate that maladaptive perfectionism plays an important role in OCD. For example, subclinical OC subjects were more perfectionist than non-compulsive individuals (Frost, Streketee, Cohn & Griess, 1994; Yorulmaz & Karanci, 2006) and anxious controls (Gershuny & Sher, 1995). In studies among psychiatric patients, Hewitt and Flett (1991) obtained a significant correlation between perfectionism and OCD symptoms. Also, in a non-clinical study, hierarchical regression analysis demonstrated that perfectionism still accounted for a significant amount of variances Padua Inventory Total Score (a measure of OCD symptoms) when the other variables (responsibility, perceived danger) were partialled out (Reheaume, Ladouceur & Freeston, 2000).

Overestimation of Threat. The tendency to overestimate the presence of threat in patient with OCD was first hypothesized by Carr (1974) and the McFall and Wollersheim (1979). They identified two main component of this belief: (1) beliefs about the likelihood of an aversive event; and (2) beliefs about the cost of the aversive event. Parallel to this definition, OCCWG (1997) defined overestimation of threat as "exaggeration of the probability of severe harm" (p. 678).

While overestimation of threat is considered a key variable in OCD, the cognitive theory of anxiety (Beck & Clark, 1997) assumes that it also plays a key role in most of the anxiety disorders. According to Beck and Clark (1997), experience of pathological anxiety results from unrealistic interpretation of threat and danger which includes the seriousness of consequences, lack of ability to cope with the situation, existence of an external rescue factor, as well as past experience, present context and mood state. Salkovkis, Forrester, and Richards (1998) recommended the use of Beck, Emery, and Greenberg's (1985) formula for understanding overestimation of threat in OCD. Accordingly, a possible mathematical equation would be

$$\text{Estimation of threat} = \frac{\text{Perceived probability of threat x perceived cost/awfulness of danger}}{\text{Perceived ability to cope + Perceived "rescue factors"}}$$

This equation illustrates that the perceived probability and seriousness of the threat are multiplicative. This formulation highlights why trying to provide reassurance to OCD sufferers by using logical reasoning is fruitless. In other words, perceived danger is not sufficient alone, but is part of a multiplicative process. Therefore, Carr (1971) proposed that optimal treatment procedures for OCD must aim to maximize patient's opportunity to decrease excessive danger beliefs (Carry, 1971, 1974, cited in Menzies, Harris, Cumming, & Einstein, 2000).

The mediational role of danger expectancies in OCD has been supported by recent studies of compulsive washers. It has been found that danger expectancies are the most likely mediator of washing-related behavior in OCD when compared to rating of responsibility, perfectionism, anticipated anxiety, and self-efficacy. No other

variable remained significantly related to any of the four measures of OCD washing when danger expectancies, which included likelihood and severity of illness ratings, were held constant (Jones & Menzies, 1997a). In a subsequent study, experimentally increasing danger expectancies led to similar increases in cognitive and behavioral symptomatology among washers (Jones & Menzies, 1998b). Furthermore, treatment procedures aiming at decreasing danger expectancies (Danger ideation reduction Therapy, DIRT) lead to significant reductions in OCD symptomatology among washers. These treatment procedures do not include exposure, response prevention, or procedures attacking inflated personal responsibility (Jones & Menzies, 1997b, 1998a).

Several studies indicated that OCD sufferers tend to hold vulnerability schemas. These schemas may lead individuals with OCD to selectively focus on potentially threatening stimuli and to underestimate their ability to cope (Sookman, Pinard, & Beuchemin, 1994; Sookman, Pinard, & Beck, 2001). In the context of OCD, limited questionnaire -based evidence suggests that individuals with OC symptoms may hold a higher level of desire for control (e.g. Sookman et al., 2001), and a lower sense of control over the self and the world (e.g. McLaren & Crowe, 2003; Zebb & Moore, 2003). Consistent with these findings, Zebb and Moore (2003) found that a lower sense of control in relation to threat was associated with a higher severity of OCD symptoms. Recently, Moulding and Kyrios's (2007) found that in a non-clinical student population, higher levels of desire for control and lower sense of control were related to higher levels of OC beliefs and OC symptoms. These results support the general view that individuals with OCD may hold a higher level of desire for control and lower sense of control over events in their lives, and the big differences between desired control and sense of control may cause significant distress, which in turn may motivate individuals to perform some overt or covert behaviors to gain control over undesirable outcomes (see for review, Moulding & Kyrios, 2006). In addition, Altin and Karanci (2008) found that the interaction between external locus of control and responsibility was significantly related to obsessive symptoms in Turkish senior high school students.

Based on these results, it has been suggested that cognitive behavioral therapy of OCD should help the person identify and change a) the dysfunctional appraisals associated with anxiety, b) selective attention towards the source of threat, c) the possibility of preventing feared outcomes, d) safety-seeking behaviors aimed at reducing threat, d) general beliefs (attitudes & assumptions) that lead to problematic threat appraisals, and e) current situations that confirm these interpretations (Salkovkis et al., 1998).

Intolerance of Uncertainty (IOU). The OCCWG (1997) defined IOU as: "(1) beliefs about the necessity of being certain; (2) beliefs that one has a poor capacity to cope with unpredictable change; and (3) beliefs about the difficulty of adequate functioning in inherently ambiguous situations" (p. 678). Parallel to this definition, Dugas, Gosselin and Ladouceur (2001) define intolerance of uncertainty as "the excessive tendency of an individual to consider it unacceptable that a negative event may occur, however small, the probability of its occurrence" (p.552).

While IOU appears to be a feature that leads to many compulsions, to date, there is little empirical research conducted to clarify its role in OCD. Sookman and Pinard (2002) noted that "individuals who are intolerant of uncertainty may have a lower threshold for perceiving a variety of ambiguous situations as threatening. Difficulty with unpredictability, newness, and change could increase the range of situations in which 'degree of danger' is overestimated and 'capacity to cope' is underestimated" (p.82). Consistent with this, Frost and Shows (1993) demonstrated that people with OC symptoms as compared to a control group appeared to be more cautious and display greater doubt about the correctness of their decisions. This finding is replicated by subsequent studies which it was found that OCD patients generally report lower tolerance about uncertainty, and this low tolerance of uncertainty may generalize to memory deficit compared to non-OCD controls (Constans, Foa, Franklin, & Mathews, 1995; Sookman and Pinard, 2002). This finding is consistent with the previous results that a tendency for OCD sufferers to determine

adequacy of this performance is based on an internal sense of "just right" rather than objective data.

Pathological doubt is often observed in individuals with OCD (Rasmussen & Eisen, 1989). According to Reed (1985; cited in Tolin et al., 2001, p.914), OCD related doubt reflects uncertainty about the properties of the situation, or the action. Patients with OCD frequently report uncertainty about whether they have performed actions correctly. In order to reduce their doubt, they are likely to engage in compulsive behaviors such as checking, washing, assurance-seeking, or repetitive activities. However, it has been suggested that repeated checking reduces confidence in memory, rather than enhance it because repeated checking increases familiarity, which decreases vividness and detail of recollection. Decreased vividness/detail of recollection undermines memory confidence about any special case from a class of familiar events (Hout & Kindt, 2003; Tolin et. al., 2001). In line with these expectations, Hout & Kindt (2003) carried out three experimental studies with healthy participants. Results indicated that memory confidence was significantly reduced by repeated checking. Their experimental studies confirmed that repeated checking reduces vividness and detail of the memory about the last check, which in turn, diminishes trust in memory. Therefore, they suggest that a need for certainty and a critical attitude towards memory performance may not be problematic or abnormal. Clinical problems arise when the patient tries to counter memory distrust by repeated checking, because repeated checking increases distrust and the patient may become trapped in a vicious cycle reinforced by checking behavior and memory distrust (Hout & Kindt, 2003).

Although there is empirical evidence that suggest IUC plays a role in OCD (e.g., Tolin et al, 2003), some authors suggest that it is not specific to OCD, but it also has a function in GAD (Holaway, Heimberg & Coles, 2006; Ladouceur, Gosselin & Dugasi 2000). Because of the high correlation between worry and intolerance of uncertainty, researchers suggest that IOU may be a necessary but an not sufficient factor in the development of OCD (Dugas, Hedayati, Karavidas, Buhr, Phillips,et al., 2001).

1.4.Review of the Literature about Scrupulosity

The second main aim of the present study is to examine the effect of religious affiliation (i.e., Christianity and Islam) and degree of religiosity on the maintenance and persistence of scrupulosity symptoms by comparing the Canadian Christian and Turkish Muslim participants. Consistent with this objective, the present section reviews relevant literature. Similar to the previous section, a literature review of phenomenology and etiology of scrupulosity is presented first, followed by a discussion of the cognitive model of scrupulosity.

1.4.1. Phenomenology of Scrupulosity

Scrupulosity is a psychological condition primarily characterized by obsessions and compulsions involving religious themes, pathological guilt, doubt and/or worry about sin, and excessive religious behaviors that are highly distressing and dysfunctional. The following has been about scrupulosity.

> “The word "scruple" is derived from the Latin "scrupulus," a rough or hard pebble that causes discomfort if trodden on; a later meaning was a minute apothecaries' weight, one twenty-fourth of an ounce, so small as to affect only the most sensitive scales. The term in English acquired a moral interpretation of a thought or circumstance so insignificant as to affect only a very delicate conscience. In religious terminology a scruple is an "unhealthy and morbid kind of meticulousness, which hampers a person's religious adjustment." (Weisner & Riffel, 1960, p. 29)

Epidemiologic studies found that obsessions with religious themes were the fifth common type of obsessions identified in the DSM-IV field trials for OCD (Foa et al., 1995). De Mathis, Diniz, Rosa´rio, Torres, Hoexter, Hasler et al. (2006) reported that OCD had a lifetime prevalence of approximately 2.0–2.5%. However, the prevelance of scrupulosity can be only speculated because subsequent studies reported different ranges on the portion of the patients who suffer from religious obsessions.

Recent clinical research based on the Yale-Brown Obsessive–Compulsive Scale (Y-BOCS) suggests that a fairly large portion of OCD patients (5-33%) suffer from scrupulosity (Miller & Hedge, 2008). Also Mataix-Cols et al. (2002) estimate that approximately 30.0% of OCD patients suffer from religious obsessions (Mataix-Cols, Marks, Greist, Kobak, & Baer, 2002). Using a larger sample (n = 395), Tolin and his colleagues (2001) found that 5% of OCD patients experience religious obsessions as a primary type of obsessions (Tolin, Abramowitz, Kozak, & Foa, 2001). In addition, based on an unpublished research report, Abramowitz et al. (2002) found that 24.2% of a clinical sample of OCD patients had religious obsessions. Miller and Hedge (2008) reviewed the scrupulosity research and estimated that approximately 5% of OCD patients have primarily religious obsessions or scrupulosity. However, higher percentages of scrupulosity were reported in research conducted in from work in highly religious societies. The rate among OCD sample is 60% in Egypt and 50% in Saudi Arabia (Tek & Ulug, 2001).

From these studies, it is difficult to arrive at a reliable estimate about how frequently patients with scrupulosity present themselves to clinicians. The researchers argue that defining the exact proportion of the individuals suffering from scrupulosity is a difficult task due to the content of the obsession; individuals suffering from religious obsessions often initially present their symptoms to clergy as religious or moral concerns (Pollard, Henderson, Frank, & Margolis, 1989; Witzig, 2005). For example, Greenberg and Shefler (2002) found that although patients tended to talk with mental professional about non-religious symptoms, they tended to talk with religious authorities about OCD symptoms dealing with religious matters. Pollard, Henderson, Frank, and Margolis (1989) also found that only 28% of people in the general population with OCD seek help for their symptoms, and, almost half of them approach clergy or non-psychiatric medical professionals.

1.4.2. Clinical presentations of scrupulosity

The following section discusses the essential symptoms of scrupulosity, which are grouped into cognitive, behavioral, affective, and social symptoms. In a recent review study, Miller and Hedges (2008) preferred to use the term "feature" rather than "symptoms"which describing scrupulosity. They prefer this terminology because of the imprecise nature of the scrupulosity concept and of unknown causal factors. Thus, in this section the term "features" is used. Since scrupulosity has received only minimal direct research attention, little empirical work exists regarding its most essential and common symptoms. Therefore, this brief section illustrates only some of the most apparent and identifiable features of scrupulosity.

1.3.2.1. Behavioral Features of Scrupulosity

Scrupulosity is characterized by persistent obsessions and compulsions regarding religious issues. Obsessions can occur as thoughts, images, or impulses that one feels are very wrong or sinful. The obsessive thought, image or impulse usually involves something that is a violation of the person's religious belief system. For example it may be the thought, image or impulse of doing something the person considers sinful or it may include doubts about something that is important to a person's faith like whether he/she confessed a sin, completely purified himself, said the right prayer, entirely trusted in God, etc. It may also be the sudden intrusion of blasphemous thoughts or swear words against God (DMS-IV, 1994).

The DSM-IV (1994) notes that compulsions can be behavioral acts or mental rituals that often manifest as the need to get reassurance from religious leaders about whether the person has adequately prayed, confessed a sin, repetitive confessions, repeating a prayer over and over, checking whether the person has done all of the necessary things in an appropriate way, or washing to guarantee one is clean enough before praying.

Researchers point out that in therapy or when conducting research on scrupulosity one should be sensitive to differentiate normal religious behavior/ritual from obsessive-compulsive behavior. Greenberg (1984) suggested that the clinician should be aware of the nuance and the practices of the normal religious rituals in different religious groups. For example, counting rosary beads and praying may be part of normal religious practice for a Muslim devout; while for another it may a part of an obsessive-compulsive ritual that entirely consumes the person's life. In addition, individuals may start praying as part of normal religious practice, but then looses control and shift, into an obsessive-compulsive cycle in which intrusive images of blasphemy appear while praying. Witzig (2005) noted five criteria for clinical scrupulosity:

1. "The individual' practices far exceed what is required by the particular religious group (e.g., a scrupulous individual who is fasting may believe that it is sinful to swallow his own saliva).
2. The individual's beliefs and practices become very narrowly focused on "getting it right" and lose sight of developing a relationship with God (e.g., an individual becomes so consumed with whether or not he committed blasphemy that he compulsively studies all of the passages on blasphemy and feels that he cannot afford to spend time reading or learning about anything else until his dilemma is solved).
3. Scrupulosity interferes with normal religious practice (e.g., the person stops attending religious services in order to complete rituals).
4. The individual may focus so much time and energy on perfectly performing rituals that he overlooks more important aspects of faith (e.g., doing good toward others).
5. Scrupulosity closely resembles other subtypes of OCD in that mental or behavioral compulsions (e.g., repeating prayers, checking, confessing multiple times, and seeking reassurance) occur in response to distressing, intrusive, unwanted, and repetitive thoughts, images, or impulses"(p. 11)

Ciarrocchi (1998) noted that the most important difference between scrupulosity and normal religious rituals is the inability to solve doubt. OCD sufferers constantly think about the same topic and can never reach a final conclusion. Thus, normal religious ritual can be differentiated from obsessive-compulsive behavior when the rituals cause significant distress, resistance, and some type of impairment in the person's life (Greenberg, 1984).

1.3.2.2. Cognitive Features of Scrupulosity

Miller and Hedges (2008) defined seven cognitive features of scrupulosity, which can be summarized as follow:

1) Scrupulous patients most characteristically exhibit dysfunctional thought patterns regarding moral issues and religious themes. Most noticeably, scrupulous patients have an excessive sense of guilt and personal responsibility, which may render them to pathologically exaggerate the seriousness of misconduct or misclassify ordinary and acceptable behavior as sinful and unacceptable. This excessive sense of guilt is more probably the result of thought action fusion (TAF), in which a person judges a particular thought, either wanted or unwanted, as morally equivalent to the actual behavior (Muris, Meesters, & Rassin, 2001). Such assumptions are more likely to result in the catastrophic appraisal of sexual, aggressive, or other morally suspect fantasies that cause exaggerated sense of guilt and responsibility.

2) Patients with scrupulosity frequently experience remarkably high, unusual and disabling confusion or doubt. This pathological confusion is usually related to possible violations of morality, or the exact content of a moral precept. As stated by Ciarrocchi (1995), who labels the disorder ‘‘the doubting disease”, scrupulous patients ‘‘feel uncertain about religious experience and do not find reassurance through the normal means available to them’’ (p. 5).

3) Patients with scrupulosity often engage in long periods of highly distressing moral rumination, or deep and intense episodes of thinking and reflection. Periods of rumination may involve “philosophical analysis of currently bothersome moral issues or a meticulous review of past indiscretions “(Abramowitz, 2001, p. 79)

4) Patients with scrupulosity often display negative cognitive styles, or the psychological tendency to interpret ambiguous stimuli in the most severe and dismal manner. Under the influence of a negative cognitive style, fundamental messages of religion can be interpreted so rigidly that it often becomes a radical source of anxiety and increased confusion

5) Patients with scrupulosity exhibit attentional fixation on religious issues. It is quite understandable that many religious individuals attach high value on their religious beliefs; however, scrupulosity patients feel a great burden because of religious issues and moral implications. Even ordinary and mundane information can easily catch the attention of a scrupulous person and can trigger long periods of rumination.This feature can deprive patients of the capacity to relax and enjoy daily activities and ordinary pleasures, which may make them more vulnerable to other forms of anxiety and depression (Beck & Emery, 2005).

6) Patients with scrupulosity have poor insight and awareness. Patients with scrupulosity may become so overwhelmed with moral and religious concerns that they are actually incapable of fully processing all of their thoughts, which contributes to poor awareness. As noted by Taylor (2002) scrupulous patients "guess at what normal is [They] have no sense of what a normal life is like because of the oppressive rules and rigid, black and white thinking. They are in constant turmoil and have feelings of fear, guilt and shame'' (p. 306).

7) Finally, some scrupulous patients may also frequently experience de-realization and de-personalization, or the loss of attachment with reality and personal identity because of various aspects of religious principle and practice, which often unduly distruct a person's attention.

1.3.2.3. Affective Features

Insofar as scrupulosity is a subtype of OCD, persistent anxiety is the most prominent affective feature of scrupulosity. However, as described in the cognitive theory of emotional disorders, anxiety in scrupulosity not only involves subjective feelings of vulnerability and uncertainty about the future, but also involves a frequent orientation toward the past (Abramowitz, 2001; Greenberg et al., 1987). In addition to anxiety, Olatunji, Tolin, Huppert, and Lohr (2005) conducted research to address other affective features of scrupulosity. They examined the relation among fearfulness, disgust sensitivity, and religious obsessions in a non-clinical sample. Overall, the data

indicated that there was a positive significant relationship among fearfulness, disgust sensitivity and religious obsessions. Furthermore, the relation between disgust sensitivity and religious obsessions remained significant even after controlling for general fearfulness and cleanliness fears.

The available OCD research does suggest that degree of religious devotion is significantly related to feelings of guilt about committing sinful acts (Steketee, Quay, & White, 1991). Therefore, persistent and exaggerated feelings of guilt are another consuming affective dimension of scrupulosity. In addition to excessive feelings of guilt, some scrupulous patients consistently experience periods of extreme and disabling hopelessness. Religious patients usually center their entire personal lives on spirituality and moral failure to reach perfect faith opens the way to overwhelming feelings of despair. Consequently, they may also report pervasive apathy or emotional numbness and being unable to respond emotionally to other situations or people (Ciarrocchi, 1995; Greenberg et al., 1987).

1.3.2.4. Social Features

Patients with scrupulosity often experience distressing social isolation. As a natural result of the affective distress, these patients withdraw themselves physically and psychologically from close family members and friends (Ciarrocchi, 1995; Greenberg et al., 1987). Rogers (1980) described the effect as follows:

> ‘‘To share something that is very personal with another individual and it is not received and not understood [or to feel like one can never share at all], this is a very deflating and a very lonely experience. I have come to believe that such an experience makes some individuals psychotic. It causes them to give up hoping that anyone can understand them. Once they have lost that hope, then their own inner world, which becomes more and more bizarre, is the only place where they can live. They can no longer live in any shared human experience’’ (p. 14).

Researchers believe that social interaction may temporarily alleviate affective distress and may provide a healthy and therapeutic source of continuing support; therefore, this issue should be addressed during individual therapy. Additionally, in some cases, the

patient can direct his/her frustration at undeserving family members who are not aware of the patient's psychological distress, which may strain familial relationships and create other secondary social problems.

1.3.3. Etiology of Scrupulosity: Cognitive Model of Scrupulosity

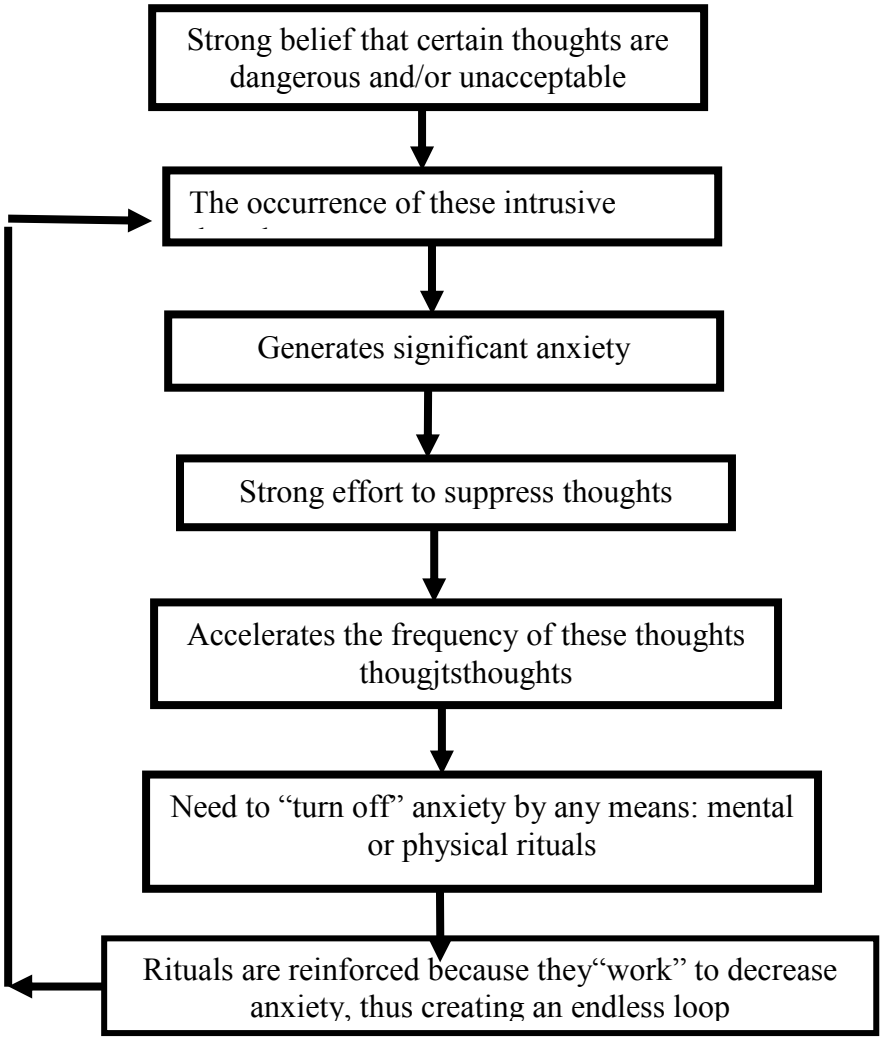
Several theoretical approaches exist to explain the potential origins of scrupulosity, including psychodynamic psychology, existential, behavioral, cognitive, and neurobiological perspective. Given the orientation of the present research, only the cognitive model of scrupulosity is described (for detailed information see Miller and Hedges, 2008).

As previously discussed, the cognitive-behavioral model of OCD proposed that the misinterpretation of the occurrence of innocuous intrusions play an essential role in the transformation of these intrusions into clinical obsessions. Ciarrocchi (1998) noted that "scrupulosity fits this picture perfectly". People with scruples believe, "if I have this thought, image or impulse, I must be that kind of person or be willing to do those things." The person then focuses on religious statements about the importance of a clean mind or a "pure spirit." Furthermore, God knows what is in our hearts." (pp.25). Consistent with the cognitive model of OCD, research has aimed to understand why all people of faith hear essentially the same messages, but only a few respond with scrupulosity. It is proposed that scrupulous patients may exhibit dysfunctional thought patterns regarding moral issues and religion.

Consistent with the theoretical description of Barlow (1988) and Wegner (1994), and cognitive models of OCD (e.g., D.A.Clark, 2004; Rachman, 1998; Salkovskis, 1985), Ciarrocchi (1998) described how the stage is set for scruples and OCD. According to his model, first, the person believes that certain thoughts, images and impulses are dangerous. Appraisal of thoughts, images and impulses as unacceptable evokes significant distress and anxiety. The higher the anxiety increases the more the person believes that these thoughts are important and significant. Anxiety forces the person to perform some control efforts to get the thoughts out of his/her

mind. Unfortunately, complete control is usually impossible, and in a paradoxical way, these control efforts increase the frequency and intensity of these unacceptable thoughts. Since the thought is unacceptable and violates the person is belief system, the person cannot just ignore the intrusion. The person searches for the best way to neutralize it. However, the neutralization acts relieve anxiety only temporarily, and this transient decrease in anxiety reinforces the continual use of corrective action in the future, which sets a vicious cycle of intrusions-anxiety-neutralizing-temporary elief from anxiety- …, and the scruples cycle is thus born. Figure 1 depicts how Ciarrocchi (1998) conceptualized the cognitive process in scrupulosity.

Figure1. M*odel of Development of Scrupulosity*



In their study Abramowitz et al. (2002) proposed a similar process regarding the phenomenology of scrupulosity; this condition can develop as individuals misinterpret the occurrence of the innocuous intrusive thoughts and magnify their importance. The authors suggested that scrupulous patients have remarkable guilt and personal responsibility. This significant guilt and personal responsibility may motivate the person to engage in obsessions and compulsions of scrupulosity to minimize the feeling of guilt and doubt. However, in a paradoxical way, such neutralization efforts may increase the frequency of these religious intrusions, and may evoke more intense and persistent intrusions.

More recently, Abramowitz et al. (2006) found that scrupulosity was correlated with obsessional symptoms and several cognitive domains of OCD, including beliefs about the importance of and need to control intrusive thoughts, an inflated sense of responsibility, and moral thought–action fusion. Subsequent research findings suggested that religious obsessions may be associated with poorer insight, more perceptual distortion, and more magical ideation than are most other types of obsessions (Tolin, Abramowitz, Kozak, & Foa, 2001). Simiarly, individuals with intense religious scruples scored significantly higher than those low in religiosity on measures of obsessionality, overimportance of thoughts, control of thoughts, perfectionism and responsibility (Sica et al., 2002; Tek & Ulug, 2001). Rassin and Kosher (2003) proposed that Thought-Action Fusion may also contribute to the inflation of moral responsibility in individuals with intense religious scruples. As explained before, TAF is the assumption that inappropriate thoughts are equivalent to actions. Such assumptions are more likely to result in the catastrophic appraisal of sexual, aggressive, or other morally suspect fantasies, which trigger anxiety and strong urge to control unwanted thoughts, as detailed above.

1.4. Culture and Psychopathology

Over the last two decades, understanding the intricate interplay between culture and human behavior and experience has received great interest from contemporary

psychology. Some research has focused on psychopathologic manifestations of a specific disorder across cultures (Draguns & Matsumi, 2003), while other studies have aimed to specify the differences and similarities in disorders and typical symptoms across cultures (e.g., Kleinknecht, Dinnel, Kleinknecht, Hiruma, & Harada, 1997).

Herskovits (1949) equated culture with the part of the environment that was created by human beings. Marsella (1988, pp. 8–9) provided a more elaborate, psychologically oriented, description of the attributes of culture as follows:

> "Shared learned behavior which is transmitted from one generation to another for purposes of individual and societal growth, adjustment, and adaptation: culture is represented externally as artifacts, roles, and institutions, and it is represented internally as values, beliefs, attitudes, epistemology, consciousness, and biological functioning."

From a behavioral stand-point, Seiden (1999) defined culture as

> "aspects of past learning common to members of a society, resulting in shared patterns of behavior (including cognitive, affective, somatic, and motor responses to intra-personal, inter-personal, and physical environmental stimuli) that overlap more with the behavior of other members of that society than with members of other societies" (p. 200).

The effect of culture on the manifestations of psychological disturbance has been studied from two contrasting points of view, namely, the universalist and the relativist perspective. Universalists have focused upon differences in degree and number in preexisting, presumably worldwide, dimensions and categories. This approach assumes cultural invariance of mental disorder and mostly compares the rates of some psychiatric disorders defined according to classification systems developed in the West. Epidemiological or phenomenological research of a psychiatric disorder is a good example of this orientation. On the other hand, relativists have emphasized the uniqueness of phenomena within any given culture and examine the meaning of illness in that cultural context like in the cases of culturally bound syndromes such as koro syndrome (an anxiety syndrome over imaginary penis shrinkage seen in Southern China), Egytian kabsa (fear of reproductive infertility attributed to symbolic pollution), or homophobia (fear of homosexuals) typical of Western and Latin countries

(Ficarrotto, 1990; Inhorn, 1994) It has been emphasized that both of these orientations have their strength and weaknesses (Cheung, 1998; Friedman, 1998).

Hofstede (2001) defined four national dimensions to provide a framework of definition that can be used to examine the impact of culture on psychopathology : a) Individualism-Collectivism focuses on the degree the society reinforces individual or collective achievement and interpersonal relationships, b) Masculinity-Femininity defines the degree the society reinforces, or does not reinforce, the traditional masculine work role model of male achievement, control, and power, c) Power Distance focuses on the degree of equality, or inequality, between people in the country's society, d) Uncertainty Avoidance refers to the level of tolerance for uncertainty and ambiguity within society. Hofstede found that countries differ from each other on these four dimensions. For example, Turkey seems to be a more collectivist, relatively masculine, and uncertainty avoidant society (low tolerance for ambiguity) with inequalities of power. Canada, on the other hand, is a more individualistic country that is also high in tolerance for uncertainty with low power distance (Hofstede, 2001). Despite some methodological critiques about his work (McSweeney, 2002), there are also studies that provide supporting evidence for these cultural dimensions and psychopathological constructs. For example, Shupper et al. (2004) examined Canadian and Japanese individuals and replicated Hofstede's table of national dimensions that Canadian participants were higher in uncertainty orientation, and resolving uncertainty, while Japanese participants were higher in certainty orientation. They found that uncertainty avoidant countries were more likely to have collectivist tendencies characterized by willingness to maintain clarity and displeasing ambiguity, while uncertainty oriented countries were more likely to have individualist tendency which is characterized by more self-focus, preferring uncertain situations and seeking discovery (Shupper et al., 2004). It is also asserted that high uncertainty avoidant people experience more anxiety, distress and aggression (Hofstede, 2001).

Mesquita (2001) compared emotions in individualist cultures with emotions in collectivist cultures, and he found that in collectivist cultures emotions "(a) were more grounded in assessments of social worth and of shifts in relative social worth, (b) were

to a large extent taken to reflect reality rather than the inner world of the individual, and (c) belong to the self-other relationship rather than being confined to the subjectivity of the self" (p. 73). He concluded that culture might provide a context for emotions and might influence how anxiety symptoms are described and experienced.

Tseng (1997) proposed that culture may influence psychopathology in a variety ways: (1) culture may shape phenomenology of psychopathology (i.e., when a person becomes obsessive he/she may feel guilty for sins committed or ashamed for socially non-compliant performance.); (2) cultural factors may affect not only the content of symptoms but also the syndrome as a whole; (3) culture may cause the development of unique psychopathology that can be observed only in a certain cultural environment (i.e., fear of reproductive infertility is observed only in Egyptian [Ficarrotto, 1990]); (4) culture may favor or hinder the development of psychopathology (Tseng, 1997).

In sum, several researchers showed that cultural factors can influence presentation, frequency and even occurrence of psychopathology. As stated by Draguns and Tanaka-Matsumi (2003):

> "Although culture has a considerable impact upon psychopathology, there is a lack of knowledge about ''kinds of features or dimensions of culture'' that ''are implicated in generating the distinctive manifestations of disturbance of a given time and place'' (p. 767).

Therefore, we need more studies to clarify the effect of culture on psychopathology. The following sections present a literature review regarding cultural differences in OCD. The present study, especially, focuses on understanding the influence of religious affiliations and strength of devoutness on OCD symptomatology, scrupulosity as a symptom subtype of OCD, and obsessive related beliefs that play a significant role in the etiology of OCD. The relevant information about these issues is summarized in the following sections. Firstly, cultural differences in general OCD symptomatology is examined, and then a review of the psychological literature on religious beliefs and OCD, as well as scrupulosity is considered. Lastly, cultural differences in unwanted intrusive thoughts in non-clinical samples are presented.

1.4.1. Culture and OCD

The cross-cultural studies on OCD reveal that OCD and other anxiety disorders may vary across cultures in prevalence and form of expression but not in essential structure (e.g., Good & Kleinman, 1985). Cross-cultural epidemiological studies have demonstrated that OCD has been found in all cultures that have been the subject of epidemiological study (Greenberg & Witzum, 1994). Weissman, Bland, Canino, and Greenwald (1994) examined the lifetime and annual prevalence rates, age at onset, symptom profiles, and comorbidity of OCD in communities from seven industrialized and developing countries. They found that the clinical picture of OCD is relatively uniform. The OCD annual prevalence rates, age of onset, and comorbidity with major depression and other anxiety disorders were quite consistent among these countries. However, based on differences in the frequency of subtypes and predominance of obsessive over compulsive symptoms across countries, the researchers concluded that OCD is a valid diagnostic category cross-culturally, but the variability in symptom presentations suggests that cultural factors may affect the frequency and symptom presentation of OCD. These data were replicated by Sasson et al. (1997), they found that the worldwide prevalence of OCD is approximately 2% of the general population (Sasson et al., 1997). However, the researchers point out that when population differences such as degree of urbanization, religiosity, and level of development are taken into consideration, a tenfold degree of variation of OCD can be observed.

Cross-cultural epidemiological studies have been conducted in most western cultures, as well as many other parts of the world including India, Pakistan, Hong Kong, Taiwan, Egypt, Singapore, Saudi Arabia, Turkey and Sri Lanka (de Silva & Rachman, 2004). Published case reports and epidemiological studies indicate that the basic phenomenological features of OCD are similar across cultures. Fontenelle et al. (2004) compared Brazil OCD patients with those from North and Latin America, Europe, Africa, and Asia, and found that patients with OCD were almost universally characterized by: (1) a predominance of females, (2) a relatively early age of onset, and (3) a preponderance of mixed obsessions and compulsions. Consistent with these

data, studies in Western and Eastern countries indicate that the frequency of obsessions is quite similar across cultures. For example, dirt and contamination obsessions are the most common obsessions in these countries and contamination obsessions is followed by harm or aggression, somatic issues, religious issues, and finally sexual issues (Mataix-Cols et al., 1999, 2002; Sasson et al., 1997). It is clear from these data that OCD is not specific to one culture or one period of time. OCD is found in different parts of the world, and in different cultures (Steketee, Quay, White, 1991).

Although their basic characteristics transcend cultures and eras, it can not be concluded that OCD is entirely free from cultural influences (de Silva & Rachman, 2004; Steketee, Quay, White, 1991). de Silva (2006) proposed that people of a particular culture, or particular era, share common concerns and these common concerns can be seen in the obsessions and compulsions of the people. He defined four possible pathways in which cultural factors are significant in OCD:

(a) The content of obsessions/compulsions may reflect common concerns within a culture (e.g., while obsessions and compulsions related to possible contamination by asbestos was a relatively common problem among OCD patients in the UK two to three decades ago, in recent years, the obsessions and associated compulsions related to HIV/AIDS have been the most common theme of OCD symptoms)

(b) Obsessions/compulsions may be linked to religious beliefs and/or practices (e.g., religious obsessions is more related to keeping kosher in the Jewish OCD patients, while they are more concerned with fallowing certain rituals in the Muslim patients with OCD)

(c) Those with strict religious beliefs may be more prone to developing clinical obsessions, as a result of attaching high significance to unwanted intrusive thoughts (e.g., highly religious individuals scored higher than the low religious person on measures of obsessionality, perfectionism, overimportance of thoughts and control of thoughts, and inflated responsibility (Sica et.al., 2002)

(d) Superstitions prevalent in a culture may be reflected in the OCD symptoms in members of that culture (e.g., measures of superstition were correlated with overall compulsiveness, compulsive checking, perfectionism and responsibility (Frost, Krause, McMahon, Peppe, Evans, McPhee et.al., 1993).

The findings of cross-cultural studies of OCD patients reveal an interesting fact that OCD symptoms can act like a lens that magnifies certain aspects of culture that have salience for individual experience (Lemelson, 2003). Subsequent studies support this hypothesis that the content of OCD symptoms can be affected by certain aspect of the culture. As compared to other countries, a predominance of aggressive and religious obsessions was found only in Brazilian and Middle Eastern samples, respectively (Fontenelle et al., 2004). Sexual themes is overpresented in Mexico (Nicolini, 2002), whereas religious issues appeared more salient in the content of obsessions in Egypt and India (Okasha et al., 1994), Saudi Arabia (Mahgoup & Abdel-Hafciz, 1991), Israel (Greenberg, 1984; Zohar, Goldman, Calamary & Mashiah, 2005), and Turkey (especially the eastern region; Tezcan & Millet, 1997).

Research on cross-cultural variability of OCD symptomatology has mainly focused on examining how religion shapes obsessions and compulsions. The literature examining the relationship between religion and OCD is presented in the following section.

1.4.2. Research on the Relationship between Religion, Religiosity and OCD

One cultural factor that may play a role in OCD is religion. The association between religion and mental health remains a complex and ambiguous area for psychological research. Religion has been described by Geertz (1973) as “a system of symbols which acts to establish powerful, persuasive, and long-lasting moods and motivations by formulating conceptions with such an aura of factuality that the moods and motivations seem uniquely realistic” (p. 90) Religion may be ‘exoteric’ which emphasizes the public, concrete, outer form or doctrines, or ‘esoteric’ which focuses

on a personal experience of the Divine reality (Smith, 1976). Exoteric religion is concerned with outward observances, dogmas, and generally accepted beliefs. In other words, exoteric religion is a social phenomenon that involves drawing people together around a faith perfective. Esoteric religion is concerned with inner practices and with teachings that are bestowed to elite or only discovered through inner explorations. Esoteric religion can be distinguished from exoteric religion, and is assumed to be more detrimental for mental health than the latter because it includes meditation and other practices that can be misused and can cause many psychological disturbances, including anxiety and mood disorders (Faiver, O'Brien, & Ingersoll, 2000).

Although religion represents and determines individuals' beliefs, concerns and behaviors, and it is expected that OCD can be influenced by one's belief system, the psychological literature on the relationship between OCD and religion is relatively scarce and incomplete. The theoretical rationale for expecting such a positive relationship between religion and OCD is derived from Freud's writings about similarity between religious practices and obsessive actions (1912/1953). He describes the similarity between obsessive actions and religious practices by pointing out that rituality is involved in both kinds of behaviors. According to Freud, both kinds of behaviors may evoke guilt if these actions are neglected and not implemented in a perfect and complete way. Furthermore, Freud argues that obsessional neurosis and religious practices are both responses to instinctual demands. He concludes that "one might venture to regard obsessional neurosis as a pathological counterpart of the formulation of a religion, and to describe that neurosis as an individual religiosity and religion as a universal obsessional neurosis". (p. 126-127) However, Freud also indicated that there are certain differences between the two constructs, noting "the differences are equally obvious, and a few of them are so glaring that they make the comparison a sacrilege" (p. 119). He stated that the person has recognized that the neurotic rituals are excessive and unreasonable, whilst religious ceremony is meaningful in every detail. Furthermore, in contrast to neurotic rituals, sacred rites are performed in accordance with others. In light of the described similarities and

differences, an empirical examination of the relationship between obsessive actions and religious practices should be taken into consideration (Lewis, 1998).

Understanding the role of religious and cultural factors in the etiology of OCD is a difficult process because it is not clear, of the extent that religious factors influence OCD, nor is it certain whether they play a causal role or are only part of the symptomatology. Furthermore, if religious factors play a significant role in the development and persistence of OCD, it is still unclear whether their effects are limited to secondary effects on family functioning or can also result in unique forms of the disorder. Fitz (1990) reviewed studies that have examined this relationship and defined three specific questions that studies have aimed to understand:

> "(a) does religion predispose to the development of OCD? (b) what are the familial factors involved in OCD and how do they interact with religious factors to influence the onset and course of this disorder?and (c) what kinds of studies need to be done to present us with a clearer picture of the relationship between religion and OCD?" (p. 141).

Regarding the relationship between religiosity and OCD, Rachman (1997, p. 798) hypothesized that "people who are taught, or learn, that all their value-laden thoughts are of significance will be more prone to obsessions — as in particular types of religious beliefs and instructions". He emphasized that the content of obsessions can reflect religious themes.

Studies that aimed to examine the relationship between religion and OCD can be classified in two main topics. One group examined the effect of religious affiliation on OCD. They have been mainly interested in understanding whether different religious doctrines and beliefs would make individuals more vulnerable to develop OCD, while the other group has aimed to understand the impact of degree of religiosity on OCD. Empirical studies that aim to understand the role of religious affiliation are limited in that they only use data provided by demographic information. For example, in a follow-up study of 150 patients, Welner et al. (1976) found that 33 % were Catholic, 51% Protestant, 11% Jewish, and 5% other religious or agnostic. Similar findings were reported by Roy (1979) using a chart review of 51 OCD patients seen in Canada. He found that 39% were Catholic, 23% Jewish, 6% Muslim or Hindu,

and 4% had no religion. However, the meaning of these percentages is unclear, because the authors did not compare these religious groups with the relative distribution of these groups in the general population. The researchers concluded that the findings of these studies suggest that if religious factors play a significant role in OCD, it can not be discovered simply by looking at the religious affiliation of persons with OCD (Fitz, 1990).

Subsequent data investigating OCD in different cultural settings provided further evidence to support the hypothesis that religious values, customs and practices may provide the content for obsessions, which in turn render the individual vulnerable to develop certain types of OC symptoms (Greenberg & Shefler, 2002). For example, Sharma (1968) reported that in Nepal, a predominantly Hindu country, the themes of obsessions are mainly related to religious practice. Consistent with this finding, a report by Mohamed and Abdel-Hafeiz (1991) showed that OCD sufferers from Saudi Arabia reported a high frequency of obsessions and compulsions about religious ritualistic worships and washing that has not been found in epidemiological studies of non-Muslim Western countries (Mohamed & Abdel-Hafeýz, 1991). Similarly, in a transcultural study, Okasha et al. (1994) showed that while OCD patients from Egypt and Jerusalem were mainly concerned with religious content, the patients with OCD from India and England very rarely reported religious content in OCD symptoms (Okasha, Saad, Khalil, El-Dawla, and Yehia, 1994). They explained these differences in terms of the religious nature of upbringing and education styles. The authors proposed that the emphasis on religious rituals, the importance of getting rid of blasphemous thoughts through repeated religious phrases, such as "I seek refuge with the Lord from the accursed Satan" can explain the high prevalence of religious obsessions and repeating compulsions among Egyptian OCD patients. Furthermore, the ritualistic cleaning procedure, ritual purity, the importance of performing prayers in an exact number and order, or the number of prayers and verbal content can be a source of obsessions and compulsions about religious purity. This data was supported by the reports from other Islamic countries such as Turkey. Teket, Uluşahin and Orhon (1998) found that a Turkish sample resembled the western and Indian samples in the

order of the frequency of symptoms (i.e. obsessions of contamination, aggressive, symmetry/exactness and religious vs. compulsions of cleaning/washing, checking and ordering). The magnitude of these frequencies was also similar to the reports from other Islamic countries such as Egypt (Okasha et.al., 1994), and Eastern Saudi Arabia (Mohamed & Abdel-Hafeýz, 1991). These data supported the findings of the phenomenological studies that examined family history and characteristics of patients with OCD and found that OCD appeared to be more prevalent in individuals who are raised by rigid and strict religious or moral codes (Rasmussen & Tsuang, 1986; Steketee, Quay, & White, 1991).

As stated above, the psychological literature on the relationship between OCD and religion is relatively small and incomplete. However, some inferences about this relationship may be obtained from the literature on cognitive beliefs/styles and religion. There was some evidence that the differences in religious dogma were responsible for the differences in moral judgment. Consequently, this may render one to develop some dysfunctional beliefs that play an important role in the maintenance of OC symptoms. For example, Cohen and Rozin (2001) found that American Jews and American Protestants judged negative behavior equally harshly, whereas Protestants showed a higher tendency to believe that thoughts about immoral actions are likely to lead to action (i.e., TAF-Likelihood), and one has more control on immoral thoughts than did Jews. Furthermore, American Jews and Protestants differed strongly in their moral evaluations of thoughts about immoral actions. Specifically, American Protestants are more disposed than are American Jews to believe that thoughts are as morally important as actions. For example, a married man who thinks about having an affair with the actress Julia Roberts is unlikely to act on this ambition, but Protestants still consider such thoughts to be significantly more immoral than do Jews (Cohen, Siegel & Rozin, 2003).

The researchers explained these findings by referring to the differences in religious dogma between Judaism and Protestantism. Judaism teaches that people were created with an inclination to do good and an inclination to do evil. Consequently, inclinations to perform immoral acts are inherent in humans, and the requirement of

being a moral person is to overcome the temptation. For example, the Talmud (*Kiddushin* 40a) explained that "A good thought is regarded as a good deed…but that the Holy One, blessed be He, does not regard a bad thought…as an actual deed". Therefore, there is no belief, in Judaism, that thoughts about immoral actions are equivalent to actually performing out action in such thoughts. In contrast, Protestant Christians believe that looking at a woman lustfully is the same as having an affair with her (Matthew 5: 27–28). Cohen, Seigel, and Rozin (2003) found that Jews focus much more on religious practice than on religious belief, whereas various denominations of Christianity focus about equally on religious practice and faith. Furthermore, Jewish participants' self-rated religiosity was predicted by their extent of practice but not knowledge of Judaism or religious beliefs. In contrast, Protestants' self-rated religiosity was predicted both by their extent of practice and belief, but not knowledge. In all, the results show that Jews and Protestants view the importance of practice in being religious similarly, but that belief is more important for Protestants. Cohen and Rozin (2001) noted that religious doctrines affect how individuals interpret thoughts and intentions. Thus, research using participants from different specific religions (i.e., Christian, Jewish, Muslim) may be able to provide more clarity on the relationship between religion and OCD.

The different influence of religious affiliation on OCD related beliefs was replicated by Rassin and Koster (2003). They found that religiosity was significantly correlated with certain aspects of TAF; however, the correlation between religiosity and TAF was different for Catholic and Protestant individuals. In the Catholic sample, religiosity correlated moderately with morality, but also with TAF-Likelihood (for-others), and MOCI total sum. However, in the Protestant sample, religiosity showed a fairly strong correlation with morality, but was negatively correlated with TAF-Likelihood (for-self), and there was no significant relationship between religiosity and TAF total sum. Also the correlation with MOCI total sum did not reach a significant level for Protestant individuals. As expected, no significant correlations were observed in an Atheist group. These findings indicate that religious affiliation and strength of

devotion are associated with cognitive biases about thoughts that may underlie the development and maintenance of OCD symptoms

In addition to research investigating the impact of religious affiliation on OCD, there are some studies examining the effects of degree of religiosity on OCD symptoms and beliefs. For example, Steketee, Quay, and White (1991) examined the relationships among type and severity of OC symptoms, degree of religiosity and guilt in 33 OCD and 24 patients with other anxiety disorders. The OCD individuals were not significantly more religious or guiltier than other anxious subjects. Nonetheless, religiosity in OCD patients was significantly and positively correlated with measures of obsessive–compulsive symptoms but not with measures of general and social anxiety, and depression, which suggests a specific association of religiosity with OCD symptoms. In addition, those with religious obsessions were more religious than those who did not report such obsessions.

Abramowitz, Deacon, Woods, and Tolin (2004) carried out a study in order to examine the relationship between Protestant religiosity, obsessive-compulsive symptoms, and OCD-related beliefs by comparing highly religious Protestants with moderately religious Protestants, and atheist/agnostic participants. They found that, relative to moderately religious Protestants and atheists/agnostics, highly religious Protestants reported more obsessional symptoms and compulsive washing. In addition, high devoutness to Protestanism was found to be more related to intolerance for uncertainty, need to control thoughts, beliefs about the importance of thoughts, and inflated sense of responsibility as compared to non religious individuals. Similarly, Sica, Novara, and Sanavio (2002) studied the relationship of religiosity and OC behavior in a sample of Italian college students. They found that religious individuals scored significantly higher on measures of OC symptoms, perfectionism, responsibility, control of thoughts, and over-importance of thoughts than individuals with a low degree of religiosity, even after controlling for the effects of anxiety and depression. Furthermore, they found that the over-importance of thoughts and need to control thoughts were the best factors to discriminate the high religious and low religious subjects, because only these two variables were found to be related to OC

symptomatology for highly religious individuals. These studies indicate that the degree of religiosity may influence the maladaptive assumptions and beliefs which are assumed to underline the development and maintenance of OCD.

In a recent cross-cultural study, the OCCWG collected data from several countries, including students from Greece, Italy, and USA. Greek, Italian, and US students were compared by using their scores on anxiety, depression, and OC symptoms and belief measures (Sica, Frost, & Sanavio, 2001). Results revealed some differences in beliefs among participants from three different countries based on observed differences in cultural style. The authors expected to find that, given the strong influence of Catholicism, when the Italian students were compared with US and Greek students, Italian students would show more over-importance of thoughts and its component thought-action fusion, as well as more desire for control of thoughts. Furthermore, it was anticipated that US subjects would exhibit greater perfectionism. The results were consistent with some of them expections with the cognitive domains of Italian students consistently associated with depression and with all OCD symptom scales. However, contrary to prediction, Importance of Thoughts and Responsibility appraisals showed a weaker pattern of correlation with OC symptoms in Italians compared to the US students. The results also revealed some other interesting findings. For example, although the OCD domains identified by OCCWG are thought to be relevant to OCD symptoms, in Greek students. The OCD cognitive domains were unrelated to symptoms of contamination and checking, and each of the cognitive domains showed the highest correlations with the Impaired Mental Control subscale of the Padua Inventory and with depression. Lastly, the US students appeared more concerned about their own thoughts compared to the other two groups. Overall, with few exceptions, US students showed the highest correlations between OC cognitions and symptoms, Greek students the lowest, with Italians are the middle. Thus, they concluded that the effects of cognitions on OC symptoms moderated by cultural factors (Sica, Frost, & Sanavio, 2001).

Kyrios et al. (2001) compared large, non-clinical, samples of Australian and Italian college students on several dimensions of OCD. They focused on examining the

cultural differences in OCD related beliefs, including inflated responsibility and perfectionism, and in five types of symptoms: impaired mental control, contamination, checking, urges/worries and overall obsessionality. The results indicated that the most striking cross-cultural differences centered around self-oriented perfectionism and urges/worries. Self-oriented perfectionism showed stronger correlations with obsessive-compulsive phenomena in the Australian cohort, and for the Australian students the Padua Inventory Urges/Worries scale exhibited consistently stronger relationship with various affective and cognitive measures. The results suggested that the Anglo-Celtic culture (represented by the Australian sample) might be more concerned about the experience of urges and issues of personal control than the Italian culture. Furthermore, with regard to obsessive related beliefs, inflated responsibility for preventing harm and control, and all aspects of perfectionism were mostly related to intrusive urges. The researchers concluded that the higher emphasis on an individualist orientation in Anglo Celtic culture might increase concerns about high personal standards (e.g. self control) more than the Italian culture. More specifically, concerns with self oriented perfectionism are likely to lead to negative self appraisals because of perceived imperfection due to the experience of intrusive urges and contamination. In light of these results, the researchers suggested that the cognitive formulations of OCD can be generalized across these two different cultural contexts, although culture-specific factors must be taken into consideration in developing cognitive-behavioral treatments.

Worthington et al. (2003) suggested that religious commitment may function as a schema for highly religious individuals to determine how the person defines, interprets, and responds to moral issues in their life. They defined religious commitment as "the degree to which a person adheres to his or her religious values, beliefs, and practices and uses them in daily living, evaluate the world through religious schemas and thus will integrate his or her religion into much of his or her life" (p. 85). As stated in previous sections, the cognitive theory of OCD states that a catastrophic interpretation of intrusions plays a more significant role in the transformation of intrusions into clinical obsessions than merely experiencing intrusive

thoughts. It has been suggested that highly religious commitment may facilitate the formation of some vulnerability factors, (e.g., perception of increased threat), which may underlie catastrophic interpretations of obsessions (Frost & Steketee, 2002; Riskind, Williams, Gessner, Chrosniak, & Cortina, 2000; Sookman, Pinard, & Beck, 2001). Thus, research into how religious beliefs and practices shape schemas may increase our understanding of the development of OCD.

In spite of the previously mentioned studies showing a positive relationship between religiosity and OC symptoms, and cognitions, there are also some contradictory findings which raise some questions about the impact of religiosity on OCD and OC cognitions (Lewis, 1998). Steketee, Quay, and White (1991) found that OCD individuals were not significantly more religious or guiltier than other anxious subjects. Similarly, Rapheal, Rani, Bale, and Drummond (1996) compared the country of birth and religious affiliation of three groups of 50 patients in order to investigate the aetiological role played by religion in the development of OCD. In this study, three different groups of participants were compared, including patients with OCD seeking treatment, patients without OCD seeking general psychotherapy, and a non-clinical adult sample. It was found that more patients with OCD affiliated themselves with a religion as opposed to either of the other two groups. This difference, however, disappeared when the type of religion was taken into account so that authors concluded that it is quite difficult to qualify variations in religious beliefs, and there does not seem to be strong relationship between religion and OCD. However, the findings do not diminish the importance of religion in the development of OCD in some individuals and suggest that future research in this area should examine the rigidity of upbringing and personal perception of the experience of strict rules or imposed religious practices. Consistently, Greenberg and Witztum (1994) noted that instead of being a reason for the development of OCD, religion may just provide a context where OCD expresses itself. In support of this view Greenberg and Witztum, Tek and Ulug (2001) found no association between religious practices and obsessions and compulsions. However, they noted that 42% of the patients with OCD reported religious obsessions. This rate was nearly two times the rate reported in OCD samples

from the U.S. In line with these findings, Ciarrocchi (1998) concluded that "telling children to wash their hands before eating does not cause compulsive hand washing any more than reading the Bible causes scrupulosity. Religious belief does not cause a person with schizophrenia to have the delusion of being theVirgin Mary any more that the study of European history causes the delusion of being Napoleon. (p. 567)."

In conclusion, in spite of some contradicting findings, cross-cultural studies showed some association between religion, religiosity and OCD, and obsessive beliefs, which encourages the future studies to systematically assess the effect of cultural factors (e.g. religiosity, religion) on the OCD domains and symptoms.

1.4.3. Research on the Relationship between Religion and Scrupulosity

Studies have also shown that OCD patients with religious obsessions tend to be significantly more religious than those who don't experience such obsessions. The first religious presentation of scrupulosity was described by Bishop John Moore (1962, cited in Greenberg, et al., 1987) in his monograph of "Religious Melancholy" as " naughty and sometimes blasphemous thoughts arose in the minds of certain worshipers, despite their attempt to suppress them, and despite their being good moral people."(p. 29). The clearest examples of the scrupulosity-religiosity relationship can be found in the personal lives of two of the giants of Christianity: Martin Luther and John Bunyan (de Silva 2006). John Bunyan (1628-1988), the author of Pilgrim's Progress, suffered from severe distressing obsessional thoughts. His most distressing was that, instead of words of praise for God, he might utter blasphemous words. In his autobiographica book, *Grace Abounding to the Chief of Sinners*, following passage vividly describes his unwanted intrusive thoughts:

> "But it was neither my dislike of the thought, nor yet any desire and endeavour to resist it, that at the least did shake or abate the continuation of force and strength thereof; for it did always in almost whatever I thought, intermix itself with, in such sort that I could neither eat my food, stoop for a pin, chop a stick, or cast mine eye to look on this or that, but still the temptation would come, Sell Christ for this, or Sell Christ for that; Sell him, Sell him."

The Protestant Reformer Martin Luther is another famous religious leader who suffered from melancholia that was related to, and exacerbated by religious obsessions. Even though he wanted to see religion as a secure place to alleviate his pathology, his religion did not provide any relief for him. Instead his religion manifested obsessive-compulsive features of its own, which in turn exacerbated his exiting pathology. Smith's translation of the Table Talk contains numerous passages of Luther's own thoughts, which suggests that not only did he struggle with OCD, but also, the locus of his struggle was his religious faith and practices. For instance, when recalling his experience in the monastery at Erfurt, beginning at age twenty two, Luther states that:

> "When I was a monk I did not want to omit any of the prescribed prayers, and when I was pressed by lecturing and writing I often could not to say the appointed hours for a whole week , or sometimes two or three weeks. Then I would take two or three days off, and would eat or drink nothing until I said all prayers omitted. That made me head so crazy that for hours together I never closed my eyes, and became deathly sick and went out my senses" (Smith, 1915, p. 13; cited in Cole, 2000)

Scrupulosity continues to draw attention from modern psychology. The studies about the phenomenology of scrupulosity have shown that the content of the religious symptoms in OCD reflects the beliefs of the sufferer. For example, Jewish OCD patients are mainly distressed about keeping Kosher; Muslim patients with OCD have obsessions about ritualized washing and prayers, and Catholic patients with OCD may have a need to repeatedly confess the same sin over and over again (Greenberg & Witztum, 1994). In spite of the diversity in the content of the religious obsessions, Greenberg and Witztum (2001) proposed that scrupulosity symptoms can be classified into two main areas: cleanliness and purity, and liturgy. Consistent with specific doctrines of their religious theology and practices, Jewish and Islamic individuals tend to exhibit scrupulosity symptoms related to cleanliness and purity (e.g., washing, praying in the right way, avoiding eating certain foods) while Catholic and Protestant patients with OCD tend to suffer from symptoms related to liturgy (e.g., repetitive confessions, intrusive blasphemous thoughts during prayers).

In line with research, indicating that culture and religion may play an important role in the development and persistence of OCD, epidemiological studies are needed to

determine if scrupulosity is seen more frequently within some religious groups than others(Abramowitz, Huppert, Cohen, Tolin, & Cahill, 2002). Abramowitz et al. (2002) developed a scrupulosity scale to assess the severity of religious obsessions. The findings of this study indicated that religious obsessions could be classified into two main symptom clusters, namely Fear of God and Fear of Sin. Results indicated that regardless of religious affiliation, highly religious participants reported higher scrupulosity symptoms as compared to less religious participants. Furthermore, the authors compared three different religious affiliations, including Protestants, Catholics, and Jews to understand whether scrupulosity symptoms were disproportionately represented within some religious groups. They found that highly religious Protestants in a non-clinical sample scored significantly higher on the Fear of Sin subscale than Jews and Catholics. Jews had less Fear of God and Fear of Sin than did Catholics and Protestants. Consistent with the specific tenets of their religious theologies and practices, the authors suggested that this finding is evidence that scrupulosity symptoms are sensitive to differences between religious doctrines. The explanation for this pattern of results is that Jews may differ from Protestants and Catholics in how much religious and moral importance they give to thoughts. This argument is supported by Cohen and Rozin's study (2001). They identified differences in how Protestants and Jews appraise thoughts about immoral actions. They found that Protestants considered unwanted negative intrusive thoughts are more controllable and significant than did Jews. Moreover, Protestants were more likely to consider people who had such thoughts as immoral.

Greenberg and Shepler (2002) conducted research with 28 ultra-orthodox Jewish psychiatric patients with OCD in order to examine the relationship between religiosity and religious symptoms of OCD. They compared patients' experience of their religious and non-religious symptoms of OCD. The most striking finding is that when all of sample of OCD patients are from one very religious group, 93 % of the sample reported religious symptoms. They reported twenty six religious symptoms, and 18 non-religious symptoms. On average, each patient had three times more religious symptoms than non-religious symptoms. The authors also reported that there

was no significant difference between the distress, resistance, sense of irrationality and hours spent daily on religious and non-religious symptoms. Further, there was no significant difference between the age of onset, age when felt to be a disturbed, and duration until help was sought. Based on these findings, it may be concluded that the religious and non-religious symptoms of obsessive compulsive disorder in ultra-orthodox Jews are experienced in markedly similar ways by the sufferers.

In conclusion, although some research differences were found, the religion-scrupulosity relitionship has not been shown to apply consistently across religious groups. Results suggest that the religion-scrupulosity relationship appears to be specific to certain religious groups than to others. The researchers suggested that examining the interaction between vulnerability factors (e.g., high moral standards, inflexibility, prohibition, rigidity, guilt) and cognitive biases in different religious groups may increase our understanding in the role of cross-cultural factors in scrupulosity.

1.4.4. Cultural Differences in Unwanted Mental Intrusions

Intrusive distressing thoughts (obsessions) are one of the core features of obsessive-compulsive disorder. These thoughts, images or impulses just pop into the person' mind without any deliberate intention. Although intrusions refer to a broad category of cognitions, D.A. Clark and Rhyno (2005) defined five distinct characteristics of obsession-relevant intrusive thoughts: (a) intrusive thoughts are distinct identifiable cognitive events, (b) they are unwanted, unintended, and recurrent, (c) they interrupt the flow of thought, (d) they interfere in task performance, (e) they evoke negative affect, and (f) they are usually difficult to control.

Research has consistently shown that a majority of people experience unwanted intrusive thoughts that usually appear suddenly, interrupt one's stream of thought, and provoke some anxiety or distress. For example, Rachman and deSilva (1978; see also Clark & de Silva, 1985; Freeston, Ladouceur, Thibodeau, & Gagnon, 1992; Purdon & Clark, 1993) reported that almost 80% of non-clinical individuals

experience unwanted intrusive thoughts that are similar to the content of the obsessional thoughts that characterize obsessive compulsive disorder (i.e., themes of dirt, contamination, uncontrolled aggression, unacceptable sex, religion, etc). However clinical obsessions were found to be more frequent, intense, and longer in duration and associated with more discomfort than intrusions experienced by non-clinical persons. Related to compulsions, Muris et al. (1997) found that compulsions performed by OC patients were more frequent and intense, evoked more discomfort and were more often associated with distressing thoughts and negative mood state than compulsions performed by non-clinical subjects.

The notion of "normal obsessions" or a continuity between clinical and nonclinical obsessional phenomena has now become a fundamental assumption of cognitive behavioral theories (CBT) of OCD. The cognitive models of OCD propose that obsessions derive from unwanted intrusive thoughts, images and impulses that are frequent in the normal population. As described in detail in previous sections, contemporary psychological theories of OCD emphasize a crucial role for cognitive variables in the etiology and maintenance of the disorder (e.g., D. A. Clark, 2004; Rachman, 1993, 1997, 1998; Salkovskis, 1985, 1989). Therefore, accurate measurement of key theoretical constructs is a critical process in the elaboration and refinement of current theories of psychopathology (Clare, 2003).

Clark (2005) developed a structured interview for the assessment of contamination/illness, harm/injury/aggression, doubt, religion, sex, and victim of violence intrusions called the International Intrusive Thoughts Interview Schedule (IITIS). Frequency, distress, and perceived control ratings are obtained on an individual reported intrusion in each of these six domains. To understand what makes the intrusions significant or important for the individual, the interview schedule includes ratings on overestimated threat, importance, control, responsibility, and intolerance of anxiety/distress, perfectionism, intolerance of uncertainty, thought-action fusion and ego-dystonicity. It also examines individuals' appraisals of their lack of control over intrusions across 6 dimensions, and frequency of using different thought control strategies.

The interview schedule was first administered to 32 Canadian students, 10 Greek medical students, and 42 Italian students. Differences were evident on sex, religion and victim of violence intrusions (D.A. Clark, Radomsky, Sica, Simos, 2005). The Canadians had more "victim of violence" intrusions and the Greek medical students had more sex and religion intrusions (however the sample sizes were small). The authors selected out doubting intrusions to assess primary appraisals because doubt had the highest number of endorsements. Italian students rated doubt as significantly more distressing than the Canadians. There were few other group differences in appraisal of doubt. There were differences in control, with the Italian students reporting lower perceived control of doubt and lower appraisals on the possibility of control. Finally the groups showed significant differences on 5/9 control strategies. Italians used more positive thought replacement and neutralization in response to doubt and the Greek medical students more rationalization. These results provided some support for cultural differences in the content and in the control of unwanted intrusive thoughts.

Kyrios, Nedeljkovic, McCarthy, Ahern, and O'Connor (2007) compared Canadian and Australian students in order to investigate cultural differences in frequency and nature of intrusive thoughts using a structural interview methodology (i.e. IITIS). They also examined the nature and role of key appraisal constructs based on the current cognitive theories of OCD. They found that the percent of Canadians who reported specific intrusions (i.e., harm, doubt, sexual, victim & contamination) were significantly higher than the Australian students. Results also revealed some cultural differences in primary appraisal ratings of intrusions. For contamination and harm intrusions, Australian students scored significantly higher on TAF and ego-dystonicity appraisal than did Canadian students. In other words, Australian students showed a higher tendency to believe that the experience of these intrusions imply that these events may actually occur. They also rated the contamination and harm intrusions as more ego-dystonic than Canadians. Furthermore, Australian students found these intrusions more distressing, and used more control strategies to control them. In terms of sexual intrusions, Canadian students rated responsibility,

perfectionism, TAF and ego-dysntonicity appraisals as more significant than Australians. They also used more control strategies to control sexual intrusions. Overall, (a) OC-appraisals were moderately to highly associated with OC-intrusions, distress and frequency for Australians and Canadians, (b) TAF demonstrated moderate associations with OC-intrusions, distress and frequency for Australians and Canadians, (c) control beliefs and strategies were moderately associated with frequency and distress in OC-intrusions for Australians, while strategies associated with distress were higher for Canadians. The authors concluded that the expected patterns of relationships between OC intrusions, appraisal and control strategies were found supporting evidence for the nomothetic model (i.e., CBT model of OCD). However, further research should be conducted to understand whether these appraisals are specific to OC-intrusions.

1.5. Rationale for the Present Study

1.5.1. Need for research on the impact of cultural factors on obsessive beliefs and OC Symptomatology

It is a well known fact that psychological phenomena are influenced by many factors such as education, age, gender, socio-economic status and family background, as well as ethic and cultural factors. Consistent with this argument, the research indicated that there are some cultural differences in the form of expression of OCD, as well as OCD cognitions and beliefs. However, when the relevant literature findings are taken into consideration, although the rapid expansion and focus on cognitive theory and therapy provides an exciting new field for OCD research, the literature that specifically examines the impact of cultural factors on obsessive beliefs and appraisals, and OCD has not grown at the same rate. Another shortcoming in the relevant literature is that the samples of the majority of the studies were mostly drawn from Western countries. Recently, Yorulmaz (2008) compared Canadian and Turkish undergraduate students, and found significant differences between the two cultural groups regarding vulnerability factors for OCD, OCD related beliefs, and control

strategies. The present study will be the second study that compares Canadian and Turkish samples using the same research design. It will help in identifying the similarities and the differences between two different cultures in terms of the cognitive components of OCD.

In conclusion, if there is consistency across cultures in the patterns of interrelationships between cognitive, affective, and OC phenomena, a greater confidence in the universality of the CB models and measures that have been mainly developed in western countries can be advanced. In turn, evidence of cross-cultural applicability can lend support for the generalization of CBT for OCD to other non-western countries.

1.5.2. Need for Research on the Impact of Religious Affiliation and Degree of Religiosity upon OCD, and OCD Relevant Beliefs and Appraisal

There is some evidence that religion is an important cultural factor that may alter our emotional experiences, including beliefs and assumptions that play a role in negative emotion (e.g., Sica, Novara, & Sanavio, 2002a). In spite of some contradictory findings, there has been speculation in the literature that individuals with high religiosity may be more vulnerable to develop OCD. For example, Rasmussen and Tsuang (1986) found that if an individual had an inordinately strict or orthodox religious upbringing, religious themes were subsequently involved in their obsessions and compulsive rituals. Similarly, Sica et al. (2002a) found that after controlling for anxiety and depression, highly religious groups scored higher than individuals with low degree of religiosity on measures of obsessionality and OCD beliefs, such as perfectionism, responsibility, and threat estimation. Recently, Yorulmaz (2008) found that religiousness was a significant factor only for Turkish subjects as compared with Canadian subjects, in OCD symptoms and contributed to several belief and control factors toward these symptoms. Furthermore, the analyses of the religiousness differences indicated that TAF more generally and TAF-Moral specifically were more related to religiosity for Canadian Christians.

The specific presentation of OCD symptoms may be different across religious groups because each religious belief system holds specific worldviews and norms to adherents. For example, different from Christianity, Islam is a more ritualistic religion in which there are pre-defined behavioral requisites, rules and rituals. During ritual prayers, the Muslims should follow strict religious rules in a certain sequence and rituals with complete faith. In addition to the faith, salvation is attained by following these rules and rituals. For instance, cleanliness, purity and regular prayers are important issues in Islam (Ghassemzadeh et al., 2002; Karadağ, Oğuzhanoğlu, Özdel, Ateşçi, Amuk, 2006; Okasha, 2002; Siev & Cohen, 2007). On the other hand, Christianity tends to focus significantly less on religious ritual and church hierarchy. It emphasizes higher value on individual conscience and maintaining certain beliefs. Faith is proven by belief in Jesus (Favier et al., 2000; Sica, Novara & Sanavio, 2002; Siev & Cohen, 2007). These different religious characteristics may favor or hinder the development of certain beliefs and appraisals, which in turn may aggravate the severity of the intrusions. Consistent with this argument, in an Italian sample, Sica et al. (2002) found that highly and moderately religious Catholics showed higher scores on measures of OCD-related cognitions relative to less religious Catholics. Similarly, Rassin and Koster (2003) found that compared to Catholics, atheists, and members of other religions, Protestants evidenced stronger religiosity and a greater tendency to believe that their thoughts were morally equivalent to actions. Moreover, this cognitive bias was more strongly related to OCD symptoms among Protestants. These findings indicate that both religious affiliation and strength of devotion to a religion are associated with cognitive biases thought to underlie the development and maintenance of OCD symptoms.

In spite of some positive relationship between religiosity and OCD, Fitz (1990) suggested that the role of religion in the development and maintenance of OCD symptoms is not clear because many studies found no difference between low and high religious individuals in the severity of OCD. However, the authors noted that many studies failed to recognize the multi-dimensional aspects of religious phenomena and are poorly designed to address this issue. Therefore, examining the impact of the

degree of religiosity and religious affiliation on OCD symptoms and beliefs in two different samples drawn from Muslim and Christian countries in the same research design could provide deeper insight into the effect of religion, as a cultural diversity factor, on the development of OCD symptoms. Furthermore, when we examine the literature on OCD and religion, significantly less information is known about OCD and OCD beliefs and appraisals in Muslim samples than in Christian samples.As a result, the present study will offer some insight into the differential role of Christianity and Islam in the manifestation of OCD beliefs, as well as symptoms.

1.5.3. Need for Research on Scrupulosity in Highly Devoted Christian and Muslim Samples

Although religious obsessions and compulsions are a dominant symptom in only 10% of patients with obsessive compulsive disorder, prevalence rates and symptom presentation does vary between countries depending on their religious values, customs and practices. In the literature it has been suggested that individuals from conservative religious groups, such as conservative Christians, may be more inclined to develop scrupulosity than low religious individuals (Rasmussen & Tsuang, 1986; Steketee et al., 1991). In addition, several researchers have noted that the emphasis on correctly performed religious ritual in Catholic Christianity may play an important role in the transformation of normal religious thoughts and behaviors into scrupulosity symptoms. However, there is no study that directly examined scrupulosity in highly religious Muslim samples. The Quran delineates five pillars of Islam (i.e., Shahadah, Salat, Zakat, Sawm, and Hajj). Carrying out these obligations provides the framework of a Muslim's life. No matter how sincerely a person may believe, Islam regards it as pointless to live life without putting that faith into action and practice. Carrying out the Five Pillars demonstrates that Muslims are putting their faith first, and not just trying to fit it in around their secular lives. Therefore, persistent doubting about whether the individual puts these obligations into action and practice perfectly, or denying Allah's Decree and doubts about existence and uniqueness of God are significant sins in Islam,

and some unwanted intrusive thoughts about these sin may generate significant distress, and motivate the person to get rid of these thoughts from his/her mind or suppress them. However, according to the literature, these efforts usually have a paradoxical effect on the frequency and severity of these unwanted thoughts.

The present study will compare Christian and Muslim students from a Bible School and a School of Divinity who can be regarded as highly devoted to their faith this study will further our understanding of cross-cultural differences in scrupulosity.

1.5.4. Need for Research on Obsessive Beliefs Underlying Scrupulosity

In an attempt to overcome some limitations of behavioral therapy for the treatment of OCD (Foa, Steketee, Grayson, & Doppelt, 1983), recent research has focused on understanding the dysfunctional attitudes, beliefs, and assumptions that may play an important role in the persistence of OCD (Frost & Steketee, 2002). Several studies have shown that different types of obsessional beliefs play an important role in the generation and the maintenance of the various subtypes of OCD (Emmelkamp & Aardema, 1999). To date, only two studies have been conducted on obsessional beliefs in individuals with scrupulosity. Witzig (2004) found that obsessional belief scores discriminated between individuals who are high and low in scrupulosity even after controlling for the effects of trait anxiety and depression. While each of the three subscales of the OBQ-44 (i.e., Importance/Control of Thoughts, Responsibility/Threat Estimation, and Perfectionism/Certainty) significantly predicted scrupulosity, only the Importance/Control of Thought remained significant when trait anxiety was entered. Consistent with these findings, Nelson et al. (2006) examined the relationship among scrupulosity symptoms, OCD symptoms and obsessional beliefs in a large patient sample with OCD. Results indicated that scrupulosity was correlated with obsessional symptoms and several cognitive domains of OCD, including beliefs about the importance of, and need to control intrusive thoughts, an inflated sense of responsibility, and moral thought–action fusion. However, to date no research has been conducted on obessional beliefs in scrupulosity among Muslim and Christian samples

in the same research study. The present study will enable an understanding on the association between religious affiliations, degree of religiosity, scrupulosity and obssesional beliefs.

1.5.5. Need for Constructing an Interview Methodology to Assess Unwanted Intrusions, Their Appraisal and Control Strategies

Contemporary psychological theories of OCD emphasize a crucial role for cognitive variables in the etiology and maintenance of the disorder (e.g., Clark, 2004; Rachman, 1993, 1997, 1998; Salkovskis, 1985, 1989). Therefore, accurate measurement of key theoretical constructs is a critical process in the elaboration and refinement of current theories of psychopathology (Clare, 2003).

Most of the research on obsessional intrusive thoughts has relied on questionnaires. The following is a sample of the better known instruments that assessed obsessive like intrusions that they are in the literature: (1) Rachman & de Silva Questionnaire was used by Rachman & de Silva (1978) and Salkovskis & Harrison (1984); (2) Distressing Thoughts Questionnaire used by Clark and de Silva (1985) assessed 6 types of depressive and anxious thoughts along 6 dimensions; (3) Cognitive Intrusions Questionnaire developed by Freeston and Ladouceur (1993) to assess whether individuals experienced any intrusive thoughts in six areas; and (4)Intrusive Thoughts & Impulses Survey developed by Niler and S. Beck (1989) with 60 ITs presented in checklist form and based on Rachman and de Silva (1978) to name but a few unfortunately we are not sure of the accuracy of responses given to these self-report questionnaires. Researchers often point out that specific item presentation may prompt or bias particular responses.

Very few studies have used an interview methodology to assess unwanted intrusions. There are a number of advantages to interviews including the ability to use probes to follow-up on individuals' responses. Furthermore, the interviewer can ensure that the participant is correctly targeting intrusive thoughts and not confusing them with other types of cognitions. It also allows the participant to obtain further

explanation and clarification, which may be particularly important when assessing the complex constructs found in CBT theories of OCD.

There are two examples of interviews used for OCD and related cognitions in the published literature. Parkinson & Rachman (1981) developed probably the most thorough interview on appraisals of intrusive thoughts in a nonclinical sample. However this work predates much of the later cognitive theorizing on OCD and it is not clear how the interview was structured. The Structured Interview on Neutralization (Ladouceur, Freeston, Rheaume, Dugas, Gagnon, Thibodeau et al., 2000) is a semi used interview that assesses aspects of the control of intrusive thoughts and obsessions. However the interview did not examine appraisals of intrusions.

Clark (2005) developed a structured interview for the assessment of contamination/illness, harm/injury/aggression, doubt, religion, sex, and victim of violence, called the International Intrusive Thoughts Interview Schedule (IITIS). Frequency, distress, and perceived control ratings are obtained on individual' reported intrusion in each of these six domains. The interview schedule is used to obtain ratings on overestimated threat, importance, control, responsibility, and intolerance of anxiety/distress, perfectionism, intolerance of uncertainty, thought-action fusion and ego-dystonicity. It also examines individuals' appraisals of their lack of control over intrusions across 6 dimensions, and frequency of using different thought control strategies.

The present study will determine the prevalence of unwanted intrusive thoughts in different cultures, the impact of cultural differences on the content of intrusions, the effects of culture on appraisal and control of intrusions, and examinecultural differences in the relationship between unwanted intrusive thoughts and psychopathology. The results of the present study may enable an understanding of how normal intrusions turn into abnormal obsessions, and whether there are cultural differences in this process.

1.6. The Aims of the Present Study and Its Unique Contribution to the OCD Literature.

The present research mainly has three aims. First, it will adapt some instruments into Turkish so that they can be used with Turkish samples (i.e., Religious Fundamentalism scale, Guilt Scale, The Penn Inventory of Scrupulosity, and International Intrusive Thoughts Interview Schedule). Second, it will investigate the influence of religious beliefs and degree of religiosity on obsessive compulsive symptoms, more specifically scrupulosity symptoms as a symptom subtype of OCD, and OC like beliefs/appraisals**.** And, third, the study will examine cultural differences in the prevalence, content, appraisal and control of intrusions, using an interview methodology.

The specific aims of the present study are;

1. To provide adaptations of some instruments into Turkish so they can be used with Turkish samples (i.e., Religious Fundamentalism scale, Religious Commitment Scale, Guilt Scale, The Penn Inventory of Scrupulosity).
2. To investigate the effect of religious affiliation and degree of religious commitment on OCD symptoms and on the key appraisal constructs based on the current cognitive theories of OCD.
3. To investigate whether the degree of religiosity is more related to scrupulosity symptoms as an OCD symptom subtype rather than other OCD symptoms such as cleaning, checking, or symmetry.
4. To investigate whether belonging to a specific religious affiliation is associated with higher levels of scrupulosity symptoms by comparing Muslim and Christian students..
5. To determine the prevalence of unwanted intrusive thoughts in different cultures, and examine cultural differences in the content, appraisal and control of intrusions using a structured interview methodology.
6. To examine cultural differences in vulnerability factors (i.e. guilt, worry, self-esteem, depression, anxiety) and their interactions with religiosity and

obsessive beliefs to produce OCD symptoms and more specifically scrupulosity.

7. To investigate whether different obsessive beliefs underlie the development of scrupulosity symptoms in Muslim and Christian university students.

1.7. Research Questions

Research question 1: Do religiosity and religious affiliation play a more specific role in OCD as compared with their roles in general distress factors?

Research question 2: What role does religion and religious affiliation play in obsessional symptoms and beliefs, and scrupulosity?

Research question 3: Do highly religious Christian and Muslim students report more OCD symptoms (i.e., obsessions and compulsions) and OCD related beliefs than low religious students?

Research question 4: Do highly religious Christian and Muslim students have more distressing religious thoughts and feelings than low religious students?

Research question 5: Are there significant differences in OCD symptom presentation, scrupulosity and OCD relevant beliefs between the Turkish Muslim and the Canadian Christian students?

Research question 6: What factors are associated with increased obsessionality and religious obsessions in highly religious participants? Are there differences in these factors between the two religious affiliations?

Research question 7: Does a higher degree of religiosity result in higher OCD symptoms, scrupulosity and OCD relevant beliefs? Are religious school students more obsessional than high religious undergraduates?

Research question 8: Are there differences in the types of intrusive thoughts reported by the Turkish Muslim and the Canadian Christian nonclinical samples?

Research question 9: Do highly religious Muslim students appraise their intrusive thoughts differently than highly religious Christian Students?

Research question 10: If highly religious individuals are more obsessional, how do they deal with their troubling unwanted intrusive thoughts? Are there differences in control strategies between Muslim and Christian samples?

1.7. Research Hypotheses

Hypothesis 1: High religious participants will score significantly higher than low religious participants on OCD symptoms as measured by the total score on the Clark Beck Obsessive Compulsive Inventory

Hypothesis 2: When the Turkish Muslim and the Canadian Christians are compared, highly religious Muslim students will report a higher level of compulsive symptoms, while highly religious Christian students will report higher obsessive symptoms.

Hypothesis 3: Highly religious participants will score significantly higher than low religious participants in scrupulosity symptoms, as measured by the Total Score on the Penn Inventory of Scrupulosity. .

Hypothesis 4: Highly religious Muslim students will score significantly higher than highly religious Christians on scrupulosity symptoms as measured by the Total Score on the Penn Inventory of Scrupulosity?

Hypothesis 5: High religious Muslim students will score significantly higher than highly religious Christians on Fear of God symptoms as measured by the Fear of God subscale scores on the Penn Inventory of Scrupulosity.

Hypothesis 6: High religious participants will score significantly higher than higher religious participants on obsessional beliefs, as measured by the total score on the Obsessive Beliefs Questionnaire - 44.

Hypothesis 7: Highly religious Muslim students will appraise their intrusive thoughts differently than highly religious Christian Students

CHAPTER

METHOD

2.1. Overview

The aim of the present study was to examine the relative roles of religiosity and religious affiliation in the maintenance and persistence of OCD symptoms, especially in scrupulosity, and unwanted intrusive thoughts in samples of Turkish and Canadian students. Furthermore, the present study aimed to understand whether different factors (i.e. obsessive-like beliefs, guilt, worry, and self esteem) interact with religiosity to produce more severe and persistent OCD symptoms by comparing two religious affiliations (i.e., Islam and Christianity) and three groups with different degrees of religiosity (i.e., low religious, high religious and religious school students) from Turkey and Canada. The Canadian sample was composed of two main groups. The first sample consisted of high and low religious Christian undergraduates, and the second sample was Bible school students. Similarly, the Turkish sample consisted of high and low religious Muslim students, and a sample of students from a Muslim Divinity school. To compose these groups, the study in the two countries mainly consisted of three phases: screening study for identifying high and low religious students, interview study, and religious school student evaluation study. In order to make it easier to follow these phases of data collection, the methodology for the Canadian and Turkish studies are presented separately. First, the method of the first part of study conducted in Canada will be presented, and then the sample characteristics and procedure of the Turkish study will be given. At the end of this

section, the psychometric properties of the instruments will be presented. The presentation of the data collection process on the method section is summarized in Table 1.

Table 1. *The Presentation order of the Stages in the Method Section*

2.2. First Part :Canadian Study

2.2.1. The First Phase: Screening for High and Low Religious Undergraduates

2.2.1.1. Sample Characteristics of the Canadian Screening Study
2.2.1.2. Instrument
2.2.1.3. Procedure

2.2.2. The Second Phase: Interview Study

2.2.2.1. The Sample Characteristics of the Interview Study
2.2.2.2. Instrument
2.2.2.3. Procedure

2.2.3. The Third Phase: Canadian Religious School Students

2.2.3.1. Sample Characteristics of the Religious School Student Data
2.2.3.2. Instrument
2.2.3.3. Procedure

2.3. The Second Part :Turkish Study

The same phases were followed in Turkey

2.4. Psychometric properties of the instruments used in the present study.

	Canadian Study			**Turkish Study**		
	Phase1	Phase2	Phase3	Phase1	Phase2	Phase3
2.4.1. Background Information Sheet	*	*	*	*	*	*
2.4.2. Beck Anxiety Inventory		*	*	*	*	*
2.4.3. Beck Depression Inventory	*	*	*	*	*	*
2.4.4. Clark Beck Obsessive Compulsive Inventory	*	*	*	*	*	*
2.4.5. Guilt Inventory	*		*	*	*	*
2.4.6. International Intrusive Thoughts Interview Schedule		*			*	
2.4.7. Obsessive Belief Questionnaire		*	*	*	*	*
2.4.8. Penn Inventory of Scrupulosity		*	*	*	*	*
2.4.9. Penn State Worry Questionnaire		*	*		*	*
2.4.10. Religious Fundamentalism Scale	*	*	*	*	*	*

* The scale was used in this phase.

2.2. FIRST PART: CANADIAN STUDY

As stated above, the Canadian part of the study consisted of three phases: a screening study for identifying high and low religious students, an interview study, and a religious school data collection phase. The details of these phases are presented below.

2.2.1. The First Phase: Screening Study for High and Low Religious Commitment

As mentioned above, the purpose of this research is to better understand the influences of religious beliefs on the experience of unwanted intrusive thoughts, obsessive compulsive symptoms, beliefs, and appraisals. For this aim, an initial screening study was performed to select students with high and low religious beliefs.

2.2.1.1. The Sample Characteristics of the Canadian Screening Study

The sample was composed of 107 male (32.6 %) and 219 female (66.8%) students with the mean age of 19.56 (Sd = 3.24). Their Ethnic origins were mostly Caucasian (94.5 %), with 5.7 % of the sample was composed of other ethnic groups, including Asian (2.4%), Black (0.6%), Aboriginal (0.9%), and none specified (1.8%). To control for the effect of ethnicity origins, only Caucasian participants were invited to the second part of the study. Religious affiliation reported by this group consisted of 76% Christians (i.e., 39% Roman Catholic; 18% Evangelical Protestant; 19% Mainline Protestants, and 6% others (i.e., 1% Jewish; 1% Greek/Russian Orthodox; 1% Islam; and 3% none specified). Twenty one percent reported that they did not have any religious affiliation. In order to control for the effect of religious affiliation, only Christian participants were invited for the second part of the study. 6.4 % of the participants reported that they had a current mental health problem (n = 21). The other characteristics of the sample are summarized in Table 2.

Table 2. *Means, Standards Deviations and Ranges of the Main Variables of the Sample of Screening Study*

Variables	Mean	SD	Range
Age	19.56	3.22	17-25
BDI	11.69	8.36	0-57
GI	128.77	20.64	74-208
RSES	30.67	5.10	10-40
CBOCI Total	16.62	9.68	0-58
CBOCI-Obsessions	8.89	5.63	0-35
CBOCI-Compulsions	7.73	5.36	0-24
RFS	61.47	8.06	35-89

Note: BDI: Beck Depression Inventory; GI: Guilt Inventory; RSES: Rosenberg Self Esteem Scale, CBOCI-Obsessions: Clark Beck Obsessive Compulsive Inventory-Obsessions Subscale; CBOCI-Compulsions: Clark Beck Obsessive Compulsive Inventory-Compulsions Subscale; RFS: Religious Fundamentalism Scale

2.2.1.2. Instruments for the Screening Study

The instruments used in the screening study were the Background Information Form, Beck Depression Inventory (BDI), Rosenberg Self Esteem Scale (RSES), Guilt Inventory (GI), Clark Beck Obsessive Compulsive Inventory (CBOCI), and Religious Fundamentalism Scale (RFS). Detailed information regarding psychometric properties of the instruments is presented at the end of the method section.

2.2.1.3 Procedure

The first screening study was conducted with Canadian undergraduate students from various departments of the University of New Brunswick, Fredericton. The Canadian sample consisted of 326 voluntary undergraduates who were compensated with one credit point by the Department of Psychology Research Participation System.

An email announcement was used to inform students about the time and place of the study. Voluntary participants signed-up for the study online and attended to complete a questionnaire set on the announced time. Participants first read and signed two copies of the consent form (see appendices, one consent form was signed for our records, and the second consent form was for their own purposes). As mentioned above, the main aim of the screening study was to select high and low religious participants. Therefore, the participants were given an opportunity to record their names and telephone numbers on the "Contact Information Sheet for Future Research" if they would like to participate in a follow-up study. Then, they completed a set of questionnaires that included Information Background Sheet, BDI, GI, RFS, and CBOCI.

Confidentiality of questionnaire responses was protected in the following manner. First, the consent forms were stored separately from the completed questionnaire packet. Second, a participant number was provided to all participants who completed the "Contact Information Sheet for Future Research", and the participant number was entered into the data file along with questionnaire responses and other data. The participants' name and contact information were not shown on the data file.

2.2.2. The Second Phase: Interview Study in Canada

As mentioned before, the main aim of the present study was to assess the effect of religiosity and religious affiliation on the experience of OCD symptoms, especially scrupulosity, and three types of unwanted intrusive thoughts, namely doubting, religious, and sexual intrusions. During the second part of the study, high and low religious participants (as identified in study 1) were interviewed individually using the International Intrusive Thoughts Interview Schedule. These participants were selected based on their response a 5-point rating scale that indicated "how important are religious beliefs in guiding your decisions and behavior" (1 = Not at all, 1= Somewhat, 3 = Important, 4= Very Important, 5= Extremely Important). The selection criteria are

described in detail in the procedure section. The procedure and sample characteristics of the second phase are presented below.

2.2.2.1 Sample Characteristics of the Interview Study

High and low religious Christian groups were composed of 59 high and 55 low religious Canadian undergraduate students. They were 76 female (67%) and 38 male (33%) students with the mean age of 20.20 (Sd = 3.22). The ethnic origins reported were Caucasian (96%), Asian (1 %), and Black (1%). Only Caucasian participants who have spent their whole life in North America were included in the analyses. Religious affiliation consisted of only Christians (i.e., 27% Roman Catholics; 19% Mainline Protestants; 25% Evangelical Protestants). Twenty eight percent of the low religious group reported that they did not have any religious belief. Other demographic characteristics of the high and low religious groups are presented in Table 3. As can be seen, there were no significant differences between high and low religious groups in terms of their demographic characteristics.

Table 3. Demographic Characteristics of the High and Low Religious Groups

Variables	Low religious (n = 55)		High Religious (n = 59)			
	M	SD	M	SD	Significance Test	
Age	19.67	3.32	20.69	3.84	F (1.113) = 2.91ns	
	N	%	N	%	df	χ^2
Gender					**1**	**2.13 ns**
Male	22	40	16	27.1		
Female	33	60	43	72.9		

Table 3 (continued)

Variables	Low religious (n = 55)		High Religious (n = 59)			
	N	%	N	%	df	χ^2
Relationship Status					**2**	**1.27 ns**
Single	51	92.7	52	98.1		
Married	4	7.3	6	10.2		
Separated/Divorced	---	---	1	1.7		
Having Physical Health Problem					**1**	**2.18 ns**
Yes	2	3.6	---			
No	53	96.4	59	100		
Ever been Officially Diagnosed with a Mental Disorder					**1**	**0.70 ns**
Yes	5	9.1	3	5.1		
No	50	90.9	56	94.9		
Types of Treatment for Mental Disorder					**2**	**1.60 ns**
No treatment	---	---				
Counseling	2	---	---	---		
Medication/psychotherapy	3	---	3	---		

We also tested whether high and low religious individuals significantly differed from each other in religiosity measurements. A series of One-way ANOVA analyses were performed on the scores of the RFS, and frequency of Church attendance, praying, reading religious book, and making donation to religious organizations. As can be seen Table 4, high religious individuals had significantly higher scores on all religiosity measurements than did low religious ones. The results of ANOVAs demonstrated that high and low religious individuals differed significantly in several different features of religiosity, namely religious practices, commitment and fundamentalism.

Table 4. Descriptive Data Regarding Religious Practices and Beliefs

Variables	Low religious (n = 55)		High Religious (n = 58)		
Frequency of	M	SD	M	SD	Significance Test
Attendance at place of Worships	1.27	0.56	3.45	0.94	F (1,112) = 220.52*
Prayer	1.22	0.46	4.31	0.86	F (1,112) = 556.95*
Reading Religious Books	1.18	0.43	3.38	1.28	F (1,112) = 145.73*
Making Donation to Religious Organization	1.13	0.34	2.86	1.05	F (1,112) = 136.66*
RFS	25.04	13.30	76.97	21.45	F (1,112) = 237.11*

p*<.001 *Note:* RFS: Religious Fundamentalism Scale

2.2.2.2. Instruments of the Interview Study

The instrument package consisted of the BDI (2nd administration), CBOCI (2nd administration), RFS (2nd administration), Beck Anxiety Inventory, (BAI), Obsessive Beliefs Questionnaire (OBQ-44), Penn Inventory of Scrupulosity (PIOS), and Penn State Worry Questionnaire (PSWQ). Information on the psychometric properties of the scales is presented at the end of the method Section.

2.2.2.3. Procedure

After completion of the screening study, high and low religious groups were formed based on a 5-point rating scale that indicated "how important are religious beliefs in guiding your decisions and behaviors" (1 = Not at all, 1 = Somewhat, 3 = Important, 4= Very Important, 5= Extremely Important). Low religious group was composed of the participants who indicated that religion was not important in guiding their decisions and behaviors (i.e., ratings of 1), high religious group consisted of the participants who reported that their religious beliefs were very important or extremely important in guiding their decisions and behavior (Ratings of 4 and 5).

The examination of the scores on this item indicated that 27% of the sample (n = 88) would be classified as low religious while 25% of them (n = 83) would be classified as high religious. As mentioned before, to protect confidentiality, students who met criteria for the high or low scoring groups were simply identified by a previously given subject number. Furthermore, for interview the study, two lists of participant numbers were generated for individuals who met the selection criteria. One list was divided into participant numbers of the high scoring and low scoring groups. Only the principal investigator (Dr. Clark) and research coordinator had access to this list. The second list consisted of only participant numbers without categorization into high and low scoring groups. This list was given to the research assistants who then matched the participant number with the number recorded on the "Contact Information" sheet so that the student could be contacted for the second part of this study. Therefore, the research assistants were blind to the group assignment of potential participants.

Finally, a standard e-mail message was sent to the participants who filled in the Contact Information Sheet and met the specific selection criteria of the present study (n = 171). Students who agreed to participate in this study (n = 114) were provided an e-mail address to contact the research assistant, and a private interview time was arranged for each participant.

During the interview each participant was first interviewed using the International Intrusive Thoughts Interview Schedule. After completing the interview, students were given a questionnaire packet to complete. Students were debriefed and provided the educational feedback information sheet when they finished the questionnaires.

2.2.3. The Third Phase: Canadian Religious School Students

To further clarify the effect of religiosity, extreme religious groups were included in the present study. For this, Religious School Christian students were

selected from a Bible school in New Brunswick, Canada. The procedure and sample characteristics are presented below.

2.2.3.1. Sample Characteristics of the Religious School Students

This sample consisted of 25 female (62%) and 41 male (38%), with the mean age of 20.98 (1.38 SD - range: 18-32). Religious affiliations that were reported by this group consisted of different denominations of Christianity, including Greek-Orthodox: (2%), Mainline Protestants (9%), Evangelical Protestants (76%), and self- labeled Christian (6%). All participants reported that they spent their whole life in Canada. The ethnic origins reported were; Caucasian (94%), Black (5%), and other (1%). Consistent with the undergraduate sample from Canada, only Caucasian participants who spent their whole life in North America were included in the analyses. The sample consisted of mainly single participants (88 %). Only eight participants (12.2%) were married, and one participant reported to be diagnosed with a mental disorder.

2.2.3.2. Instruments for the Religious School Study

The same measures that are described in the second phase of the Canadian university study were used including the Background Information Sheet, the Beck Depression Inventory, Beck Anxiety Inventory, Obsessive Beliefs Questionnaire-44, Penn Inventory of Scrupulosity, Penn State Worry Questionnaire, Guilt Inventory, Clark Beck Obsessive Compulsive Inventory, and Religious Fundamentalism Scale.

2.2.3.3. Procedure

After obtaining required permission, an email announcement was sent to the Bible School students, and the students were informed about day and time of the study. Voluntary participants signed-up for the study online and attended to complete a

questionnaire set on the announced day and time. Participants first read and signed two copies of Consent Form, and completed the questionnaire set.

2.3. STUDY II: TURKISH PART OF THE RESEARCH

During the Turkish part of the study, the same procedure as applied and described above in Canada was followed in Turkey. First, the Guilt Inventory, Religious Fundamentalism Scale, Penn Inventory of Scrupulosity, and International Intrusive Thoughts Interview Schedule were translated and adapted into Turkish. During the adaptation process, the translation and back-translation method suggested by Brislin, Lonner and Thorndike (1973) was followed. First, to establish the Turkish versions, the items of the scales were initially translated into Turkish by two separate graduate students in the Clinical Psychology Ph.D. Program of the Middle East Technical University, Psychology Department who were fluently bilingual in English and Turkish. Afterwards these two alternative translations, which were in fact quite similar to each other with some minor differences, were given to three additional judges having Ph.D. degrees in Clinical Psychology, who were asked either to choose one of the translations as the best one or to make their own translation suggestions for each item. Then, these three judges met together and decided on the final form. Finally, the final forms of the Turkish version of the inventories were back translated by an independent translator. The items of the back translated form was quite close to the items of the original scale. Finally, the English and the back translated Turkish version of the items was listed and they were compared by a professor of psychology in the University of New Brunswick, Canada, who also supervised the first part of the study. During this last assessment, very minor changes were suggested, and based on these, the last form of the Turkish version of the scales were obtained. Then, comprehensibility of the new Turkish versions of these three instruments was also examined by administering them to 20 Turkish students, which proved that they had adequate clarity.

The second phase of data collection involved screening study to select high and low religious Muslim students. After this, high and low religious participants were interviewed to assess frequency, intensity, and duration of three types of unwanted intrusive thoughts, as well as primary and secondary appraisals of intrusions and control strategies used to dismiss intrusions with the low and high religious Turkish Muslim students. Finally, religious school data were collected from the Divinity School students. The procedure and sample characteristics are explained below.

2.3.1. The First Phase: Screening Study for High and Low Religious Commitment

As similar to the Canadian part of the study, to select high and low religious students a screening study was performed among undergraduate students from various departments of the Middle East Technical University. The procedure and sample characteristics of the sample are presented below.

2.3.1.1. Sample Characteristics of the Turkish Muslim Screening Study

The Muslim sample consisted of 420 university students who were 243 male (57.8%) and 177 female (42.2%), with the mean age of 21.73 (Sd = 1.87). They mostly described themselves as Turkish (93.7%), and a minority of them reported their ethnic origins as Kurdish (6.3 %). Seventy seven percent of the Turkish subjects (n = 322) reported their religious affiliation as Islam. 16 % of this group (n = 68) reported that they believe in God however, they did not have any religion, while 4 % of students (n = 17) described themselves as Atheist. Finally, 2% of the sample (n = 10) stated that they had religious belief but did not specify type of belief. 99% of the participants were single (n = 418) and only four participants (1%) were married, and they did not report any mental disorder. The other characteristics of the sample are presented in Table 5.

Table 5. Means, Standards Deviations and Ranges of the Main Variables of the Screening Study

Variables	M	Sd	Range
Age	21.73	1.88	2-32
BDI	8.01	7.04	0-46
BAI	12.33	9.52	0-49
GI	117.08	22.83	59-186
CBOCI Total	19.25	10.65	0-60
CBOCI-Obsessions	11.38	6.27	0-33
CBOCI-Compulsions	7.93	5.23	0-27
RFS	52.45	24.12	12-108

Note: BDI: Beck Depression Inventory; BAI, Beck Anxiety Inventory, GI: Guilt Inventory, CBOCI-Obsessions: Clark Beck Obsessive Compulsive Inventory-Obsessions Subscale; CBOCI-Compulsions: Clark Beck Obsessive Compulsive Inventory-Compulsions Subscale; RFS: Religious Fundamentalism Scale.

2.3.1.2. Instrument of the Screening Study

As stated before, four instruments were newly adapted into Turkish. In order to evaluate the psychometric properties of the adapted scales, as different from the screening study in Canada; all scales were given to the students in the screening study. The questionnaire packed consisted of the Background Information Sheet (BIS), the Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Obsessive Beliefs Questionnaire-44 (OBQ), Penn Inventory of Scrupulosity (PIOS), Penn State Worry Questionnaire (PSWQ), Guilt Inventory (GI), Clark Beck Obsessive Compulsive Inventory (CBOCI), and the Religious Fundamentalism Scale (RFS).

2.3.1.3. Procedure

Different from the study conducted in Canada, the instruments were administered to the undergraduate students in their normal classroom settings. Each

administration took approximately 40-45 minutes. During classroom administration, the aims and procedure of the study were first explained to the participants, and then they were asked to record their name and contact information on the "Contact Information Sheet" if they are willing to participate in a follow-up study. Then, they completed the questionnaire battery.

Similar to the Canadian Study, a unique participant number was provided to all participants who completed the "Contact Information Sheet for Future Research", and the participant number was entered into the data file along with questionnaire responses and other data to protect confidentiality of questionnaire responses.

2.3.2. The Second Phase: Interview Study in Turkey

The interview study was conducted with high and low religious participants who were selected from the screening study. The low and high religious participants were selected based on their response to a 5-point rating scale that indicated "how important are religious beliefs in guiding your decisions and behavior" (1 = Not at all, 2= Somewhat, 3 = Important, 4= Very Important, 5= Extremely Important). The detail of the selection process and sample characteristics were explained below.

2.3.2.1 Sample Characteristics of the Interview Study

The high and low religious Muslim groups involved 47 male (57%) and 35 female (43%) students, with the mean age of 22.23 (Sd = 2.14; range: 17-32). Sixty two of the Turkish subjects stated their religious affiliation as Islam; while 32 percent of the Turkish sample reported that they did not have religion and 6 percent defined themselves as Atheist. Except for three participants, all were single. Other demographic characteristics of the sample are summarized in Table 6. Chi-square analysis indicated that low and high religious groups only differed in gender, χ^2 (1, N = 82) = 6.76, $p<.01$. Low religious group consisted of more female participants than the high religious group.

Table 6. *Frequencies and Percentages of Demographic Variables for Turkish Sample*

Variables	Low religious (n = 45)		High Religious (n = 37)			
	M	SD	M	SD	Significance Test	
Age	21.67	1.69	22.92	2.14	F (1,80) = 8.76*	
	N	%	N	%	df	χ^2
Gender					**1**	**6.76***
Male	20	44.4	27	73		
Female	25	55.6	10	27		
Relationship Status					**1**	**3.78 ns**
Single	45	100	34	91.9		
Married	-----	-----	3	8.1		
Separated/Divorced	---	---	---			
Having any Physical Health Problem					**1**	**1.64 ns**
Yes	8	17.8	3	8.1		
No	37	22.2	34	91.9		
Ever been Officially Diagnosed with a Mental Disorder					**1**	**2.93 ns**
Yes	6	13.3	2	5.4		
No	39	86.7	35	94.6		
Types of Treatment for Mental Disorder					**2**	**4.44 ns**
No treatment	3	50	1	50		
Counseling	1	16.7	----	----		
Medication/ psychotherapy	2	33.3	1	50		
Ever experienced Traumatic Event					**1**	**0.04 ns**
Yes	2	4.4	2	5.4		
No	43	96.6	35	94,6		

2.3.2.2. Instruments of the Interview Study

The interview study involved administration of the International Intrusive Thought Interview Schedule (IITIS), BDI, BAI, OBQ-44, GI, PIOS, PSWQ, CBOCI and RFS.

2.3.2.3. Procedure

As explained in the Canadian study, after completion of the screening study, high and low religious groups were formed based on their response to a 5-point rating scale, that indicated "how important are religious beliefs in guiding your decisions and behavior" (1 = Not at all, 2= Somewhat, 3 = Important, 4= Very Important, 5= Extremely Important). The low religious group was composed of participants who indicated that religion was "not at all important" (Rating of 1) in guiding their decisions and behaviors, whereas the high religious group consisted of students who reported that their religious beliefs were very important or extremely important in guiding their decisions and behavior (ratings of 4 and 5). The examination of scores on this item revealed that 27% of the participants would be classified as low religious (n = 114) while 18.6% of them would be classified as high religious (n = 78). Selected high and low religious participants were invited to participate in the second part of the study by e-mail announcements. 45 low religious participants (41%) and 37 high religious participants (43%) volunteered to complete the interview study. During the second part of the study, each participant was interviewed to assess their experience of unwanted intrusive thoughts, images and impulses of doubt, sex and religion using IITIS, and then they were asked to complete a questionnaire packet. All students were debriefed and provided the educational feedback information sheet at the end of their individual interview session.

2.3.3. The Third Phase: Turkish Religious School Student Data Collecting

As explained previously, to further clarify the effect of religiosity, extreme religious groups were included in the present study. For this, Religious school students were selected from a Muslim Divinity School. The sample characteristics and procedure are presented below.

2.3.3.1 Sample Characteristics of the Religious School Students

The religious school data were collected from 132 students, 59 of whom were from the Division of Basic Islamic Sciences, and 73 were student from the Division of Teacher Training for The Culture of Religion and Ethics for Primary School. As mentioned before, conservative Christian data were collected from Bible School students. Therefore, only data from the Division of Turkish Basic Islamic Sciences students were included in the present analyses. Therefore, this sample consisted of 23 male (39 %) and 36 female (61%), with mean age of 21.8 (1.61 SD - range: 18-27). All participants reported their religious affiliation as Islam. Only one participant was married and two participants reported that they had been officially diagnosed with a mental disorder, although, they did not receive any treatment for their disorder. All participants reported that they spent their whole life in Turkey.

2.3.3.2. Instruments of the Religious School Study

The questionnaire packet was composed of Background Information Sheet (BIS), the Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Obsessive Beliefs Questionnaire-44 (OBQ), Penn Inventory of Scrupulosity (PIOS), Penn State Worry Questionnaire (PSWQ), Guilt Inventory (GI), Clark Beck Obsessive Compulsive Inventory (CBOCI), and Religious Fundamentalism Scale (RFS).

2.3.3.2. Procedure

After obtaining required official permission, Religious school Muslim students were drawn from Ankara University Faculty of Divinity. Questionnaire sets were administered to students in their regular clasroom setting. Participants first read and signed two copies of the Consent Form (one consent form was signed for our records, and the second consent form was for their own purposes), and students not willing to take part left the classroom. Voluntary subjects completed the questionnaire battery,

including the BDI, BAI, OBQ-44, PIOS, CBOCI, PSWQ, and RFS. After completion of the scales, students were debriefed and provided the educational feedback information sheet.

2.4. Instruments Used in the Present Study.

2.4.1. Background information Form

The Background Information Form was designed for the present study. It was used to collect demographic data about participants. It consisted of information about gender, age, education, occupation, marital status, duration of marriage, and psychiatric history. This form also included five questions on religiosity, including religious affiliation, frequency of religious practices, attendance at religious services, reading religious books, and making donations. Participants rated the frequency of their religious practices using a five point rating scale (1 for "Not at all" and 5 for very frequently [at least daily]). The last question assessed the importance of religious beliefs in guiding of person's behaviors and decisions (i.e., How important are your religious beliefs in guiding your decision and behavior). Responses on this scale are based on a 5 point Likert scale (1 = Not at all Important, 5 = extremely important). The rating on this scale was used to differentiate high and low religious groups for the second phase (See Appendix A).

2.4.2. Beck Anxiety Inventory (BAI)

The Beck Anxiety Inventory (BAI, Beck, Epstein, Brown, & Steer, 1988) is a 21-item self-report measure of general anxiety symptoms. The inventory has good reliability and validity. The scale has high internal consistency and item-total correlations ranging from .30 to .71 (median = .60). A subsample of patients (n = 83) completed the BAI after 1 week, and the correlation between intake and 1-week BAI scores was .75 (Beck et al., 1988).

To provide further information about the psychometric characteristics of the BAI the BAI was administered to 470 outpatients with mixed psychiatric disorders along with the revised Beck Depression Inventory (BDI) and the SCL-90-R (Beck et al., 1988). The BAI's internal consistency was high (alpha = .92), and it was significantly more correlated with the SCL-90-R Anxiety subscale (r = 81) than it was with SCL-90-R Depression subscale (r = .62). However, it was also significantly correlated with the BDI (r = .61). The mean BAI scores of the 141 (30.0%) outpatients with mood disorders and the 86 (18.3%) outpatients with anxiety disorders were comparable, but higher than the mean BAI score of the 243 (51.7%) outpatients with other disorders.

The Beck Anxiety Inventory (BAI) was adapted into Turkish by Ulusoy, Şahin, and Erkmen (1998) and found to have good reliability and validity coefficients comparable to values of the original scale. In the present study, the Cronbach's alpha coefficient of the Turkish version was .90, and test-retest over four week reliability was .68 (n = 168; p < .01) (See Appendix A).

2.4.3. Beck Depression Inventory (BDI)

The Beck depression Inventory (BDI) is a 21-item scale. It was initially developed in 1961 and revised in 1978 by Beck, Ward, Mendelsohn, Mock, and Erlbaugh to measure emotional, somatic, cognitive, and motivational symptoms of depression. Subjects answer how they felt over the last week by choosing the best option. All items are rated between 0-3 points with 4 response options that indicates the level or severity of depressive symptoms. The highest cumulative score is 63.

The internal consistency of the BDI is ranges from .73 to .95 and the test-retest reliability ranges from .60 to .83 for non-psychiatric patients, and.48 to .86 for psychiatric patients (Beck, Steer and Garbin, 1988).

Two independent adaptation studies were performed in Turkey one by Tegin (1980) and the other by Hisli (1988, 1989). The first study was carried out on the original BDI developed in 1961 and the second study used the revised form. The only

difference between the two forms is in the wording of some of the items. The reliability and validity of both Turkish forms are similar. The split half reliability of BDI was between .74 and .78 for university students, and .61 for depressive patients. Test-retest reliability was .65 and .73 for students and patients respectively (Tegin, 1980; Hisli, 1988. 1989). The concurrent validity of the BDI, when correlated with Minnesota Multiphasic personality Inventory Depression Scale was found .63, for the psychiatric sample (Hisli, 1988) and .50 for the university sample (Hisli, 1989).

In the present study, the Cronbach's alpha coefficient for the Turkish students was .90, and test-retest reliability was .81 ($\underline{n} = 168$; $\underline{p} < .01$). (See Appendix A).

2.4.4. Clark-Beck Obsessive Compulsive Inventory (CBOCI).

The Clark-Beck Obsessive Compulsive Inventory (CBOCI, Clark, Antony, Beck, Swinson, Steer, 2005) is a 25-item self-report measure of obsessive-compulsive symptoms. This questionnaire consists of two subscales. The item content of the Obsessions Subscale is made up of 14 items that assesses the frequency, distress, uncontrollability, salience, responsibility, insight for obsessions, effort to control obsessions, and cognitive avoidance of obsessions. The item content of the Compulsions Subscale consists of 11 items that assess frequency, precision and uncontrollability of compulsions as well as distress caused by compulsions and avoidance behavior used to deal with them. Responses are on a 5 point (0-4) Likert scale with higher scores reflecting greater levels of obsessions and compulsions.

The psychometric properties of the scale were examined in a sample that included OCD patients (n = 83), non-OCD patients with other anxiety disorders (n = 43), nonobsessional depressed patients (n = 32), nonclinical community adults (n = 26), and undergraduate students (n = 308). Analysis revealed that the CBOCI subscales had satisfactory internal consistency. The 14-item CBOCI Obsessions subscale had an $\alpha = .90$ for the OCD sample, $\alpha = .93$ for the combined clinical sample, and $\alpha = .79$ for the students sample. The internal cocsistency for the 11-item CBOCI Compulsions subscale was .87 for the OCD sample, $\alpha = .93$ for the combined clinical

sample, and α =.81 for the student sample. Reliability coefficients were also satisfactory for the total score. Coefficients were .93 for OCD patients, .95 for combined clinical sample, and .86 for the student sample. Although the students' alpha coefficients are lower, especially for the CBOCI Obsessions subscale, the range of the latter alpha coefficients for the patients with OCD is considered to reflect good to excellent internal consistency for clinical purposes.

To assess the stability of the scale score, 67 students completed the same questionnaire battery a second time after a 1 month interval. After deletion of missing data, the final sample consisted of 55 students. Test- retest correlation coefficients revealed that the CBOCI Obsessions (r = .69, p < .001), Compulsions (r = .79, p < .001), and Total Score (r = .77, p < .001) showed a moderate level of temporal stability. Although there was a significant decline in the mean CBOCI Obsessions, $t(54) = 4.66$, $p < .001$, Compulsions, $t(54) = 3.79$, $p < .001$, and Total, $t(54) = 5.01$, $p < .001$, scores, the CBOCI stability coefficients were comparable to those achieved by other measures in the questionnaire battery such as the BDI-II ($r = .81$, $p < .001$), PSWQ ($r = .74$, $p < .001$), and BAI ($r = .65$, $p < .001$). However, in comparison to CBOCI Total Score, the PI–WSUR Total Score achieved an unusually high test–retest correlation ($r = .93$, $p < .001$), and the YBOCS Total Score produced a much lower test–retest coefficient ($r = .52$, $p < .001$).

In terms of criterion-related validity, one-way MANOVA on CBOCI Obsessions and Compulsions was significant. Scheffe´s post hoc comparisons indicated that the OCD group scored significantly higher than all other groups on both CBOCI subscales. Similarly, a one-way ANOVA on the CBOCI Total Score was highly significant, with the OCD group scoring significantly higher than all other groups. The depressed, anxious, and student groups scored at a similar level and the community adults scored significantly lower than any other participants

In terms of the concurrent and discriminant-related validity, the squared eta values associated with the ANOVAs indicated that concurrent and discriminant validity of the scale were comparable to the YBOCS and PI–WSUR. The CBOCI and YBOCS total scores were able to differentiate OCD from nonclinical status better than

the PI–WSUR or the nonobsessional symptom measures. Furthermore, the partial correlations indicated that the CBOCI is more relevant to OC symptoms than to worry. The results indicated satisfactory psychometric properties and that the CBOCI can be used to assess symptom severity in a complex clinical condition like OCD with as much discriminability as longer, more time-consuming measures.

The CBOCI has been translated and adapted into Turkish by Besiroglu, Yucel, Boysan and Gulec (2007). The psychometric properties of the Turkish version of the scale were examined in five different samples: OCD patients (n = 52), patients with major depression (n = 36), patients with other anxiety disorders (n = 32), university students (n= 278) and non-clinical community sample (n = 75). They found reliability and validity coefficients, as well as a two-factor structure that was comparable to the values of the original study (Clark et al., 2005). The alpha coefficients were .86 for the obsession subscale, .82 for the compulsion subscale, and .91 for the total score. The test-retest correlations were .81 for the obsession subscale, .85 for the compulsion subscale, and .85 for the total score. Furthermore, OCD patients scored significantly higher on CBOCI obsessions, compulsions, and total score than non- obsessional anxious, depressed patients, and healthy control subjects. In terms of concurrent validity, the obsession, compulsion and total score of both the OCD and the nonclinical sample were significantly correlated with obsessions and compulsions subscales of the Yale Brown obsessions and compulsions scale, and the Padua Inventory.

In the present study, the Cronbach alpha coefficient was .91 for the total score, .89 for the obsessions subscale, and .83 for the compulsions scale. Furthermore, test-retest reliabilities over a four week period were .75, .74, and .69 for total scores, obsessions, and compulsions scores, respectively (n = 168; $p < .01$) (See Appendix A).

2.4.5. Guilt Inventory (GI)

The Guilt Inventory (GI, Kugler, & Jones, 1992) consists of 45 items which assesses three domains of guilt, (a) trait guilt, which is defined as a continuing sense of

guilt beyond immediate circumstances, (b) state guilt, which is defined as present guilt feelings based on recent circumstances; and (c) moral standards, which is defined as subscription to a core of moral principles without reference to either specific behaviors or overly specific beliefs. In other words, the trait guilt items assess how one generally or usually feels, the state guilt items assess how one is currently feeling, and the moral standard items assess the degree to which one reports having a set of moral standards and values that guide their behaviors. Responses on this scale are based on a 5 point (0-4) Likert scale. The scale has shown good reliability, as measured by Cronbach's alphas, ranging from .81 to .89 for combined college students and adult samples. Test-retest reliabilities were assessed by test-retest administrations in a student sample at intervals of two weeks and 36 weeks. Results indicated that the moral standards scale was most stable for both the 10-week, $r\ (134) = .81$, $p < .01$, and the 36-week, $r\ (44) = .77$, $p < .01$, period (Kugler, & Jones, 1992). Furthermore, consistent with expectation, test-retest correlations were higher for trait guilt than state guilt at both the 10-weeks, $r\ (134) = .72$, $p < .01$ vs. $r\ (134) = .56$, $p < .01$, and the 36-weeks $r\ (44) = .75$, $p < .01$ vs. $r\ (44) = .58$, $p < .01$. In terms of the intercorrelations of the three subscales, a significant correlation was found between trait and state guilt, $r\ (1040) = .67$. However, moral guilt did not show significant correlations with state and trait guilt.

In terms of convergent validity, the GI was found to significantly and positively relate to a variety of other measures of guilt and shame. More specifically, both the trait and state guilt subscales showed significant correlations with seventeen out of the eighteen other measures of guilt and shame while the moral standards scale was found to significantly relate to other measures that contain items that assess values standards or behaviors, but not the emotion of guilt itself (Kugler & Jones, 1992). The GI was adapted into Turkish for the present study. Relevant information is given in the result section of the present research. (See Appendix A).

2.4.7. International Intrusive Thought Interview Schedule

The International Intrusive Thoughts Interview Schedule (IITIS) was developed by Clark (2005). The IITIS assesses: (a) occurrence and frequency of intrusive thoughts; (b) distress caused by intrusions; (c) the appraisals associated with six different intrusive thoughts, (d) the secondary appraisals associated with unsuccessful control attempts, and (e) dysfunctional control strategies when having intrusive thoughts. The interview schedule originally consisted of six different intrusive thoughts, namely contamination/illnesses, harm/aggression/injury, doubts, sex, religion, and threats of violence intrusive thoughts. Interviewees provide demographic information, medical and psychiatric history information. The interviewer first defines and gives examples of unwanted intrusive thoughts to participants, and then participants identify if they have experienced a specific unwanted intrusion type over the past 3 months (e.g., doubt question- *"... in which doubt suddenly and unexpectedly entered your mind about some action, conversation or decision"*). Participants then describe the intrusion in more detail, and rate its frequency, distress, appraisals and responses.

Participants are then asked to provide ratings on a 6-point scale from 0 "never" to 5 "extremely true" on how important or relevant various appraisal constructs were in making intrusions significant for them. The primary appraisal dimensions are overestimated threat, importance of the thought, intolerance of distress, need to control, responsibility, intolerance of uncertainty, perfectionism, thought-action fusion and ego-dystonicity. These questions about primary appraisal allow for the assessment of various interpretation biases that the CBT model of OCD purports as significant in characterizing the obsessive qualities of intrusions.

It is generally accepted that obsessions and compulsions persist because of individuals' faulty and dysfunctional beliefs about complete control over unwanted intrusive thoughts, as well as their ways of evaluating their unsuccessful attempts to control them (Clark, 2004). Therefore it is important to assess secondary appraisal processes to further understand the nature of OCD. IITIS consists of a number of

questions on the paticipants' perceived level of control over intrusions, and how they appraised their difficulty in controlling their intrusions.

The last section of the IITI assesses the control strategies that individuals may employ in response to an intrusion. This section makes it possible to assess the dysfunctional control strategies that may play an important role in obsessional tendencies. The IITIS consists of 9 control strategies (i.e., distraction, replacement, thought stopping, reassurance from others, reassuring self, neutralization, reasoning, checking, do nothing) and asks participants to rate them on a 0 to 5 scale , on how often they would use the specified mental control strategy in response to the unwanted intrusive thought.

Kyrios et al., (2007) examined the psychometric properties of the interview schedule in undergraduates. To assess reliability of the interview, internal reliability and inter-rater reliability coefficients were examined. Two student researchers independently identified the IITIS intrusion dimensions into autogenous (i.e., doubts/religious/sexual) or reactive groups (e.g., contamination/doubt), for which inter-rater reliability was high (Kappa=.96).

The internal reliability of appraisals for main intrusions could be calculated only for participants who reported at least one main type of intrusion (autogenous or reactive). Therefore, internal reliability could not be calculated for IITIS primary appraisal across all intrusions as too few participants reported experiencing all intrusion types. Given the limitations of this approach, as can be seen from Table 7, alpha coefficients were generally adequate, especially for the total primary appraisal scores (Kyrios et al., 2007).

Table 7. Reliability Coefficients of the Primary Appraisal Items

IITIS Scales	M	Sd	Alpha	Theoretical Ranges
Autogenous Total	22.29	9.46	72	0-30
Autogenous Resp/Threat	8.57	3.97	.60	0-12
Autogenous Perf/Certainty	8.23	4.18	.79	0-12

Table 7 (continued)

IITIS Scales	M	Sd	Alpha	Theoretical Ranges
Autogenous Imp/Contol Tht	5.53	2.58	.79	0-12
Reactive Total	19.28	9.57	.81	0-30
Reactive Resp/Threat	6.57	3.71	.56	0-12
Reactive Perf/Certainty	8.23	4.18	.67	0-12
Reactive Imp/Control Tht	5.53	2.58	.64	0-12

Note: Resp/Threat: Responsibility/Threat estimation, Perf/Certainty: Perfectionism/Certainty, Imp/Control Tht: Importance/Control Thoughts

Results provided evidence for the reliability of some IITIS appraisal domains. Total scores for appraisals of the Autogenous and Reactive dimensions were satisfactory (i.e., alpha coefficients > 0.70). However, individual appraisal dimensions (i.e., responsibility/threat, perfectionism/uncertainty, and importance/control of thoughts) were less satisfactory. It is suggested that the aggregated nature of the specific appraisal dimensions across different intrusions, and low item numbers and sample sizes may account for some unreliability.

Kyrios et al. (2007) examined the convergent validity of the IITIS in terms of the correlation with the Obsessive Beliefs Questionnaire, and other symptom measures (i.e., Vacouver obsessive Compulsive Inventory (VOCI), Depression, Anxiety, Stress Scale (DASS) were examined. As can be seen from Table 8, there were moderate associations between the appraisal dimensions of the IITIS and the OBQ, and symptom measures. However, the IITIS appraisals did not show specificity with respect to OBQ scales. It is suggested that this may be a reflection of the considerable overlap or high intercorrelations of the OBQ subscales as noted in previous research (OCCWG, 2003, 2005).

Table 8. *Correlations between IITIS Primary Appraisals (across all intrusions) and other Cognitions/Symptom Measures*

IITIS Scales	OBQ Total	Resp/ Threat	Import/ Cont.thgt	Perf/ Certainty	VOCI	DASS Total
IITIS Responsibility/Threat	.37 ***	.31 **	.36 ***	.40 ***	.32 **	.23*
IITIS Importance / Control Thoughts	.30 **	.33 **	. 28 **	.26 *	.39 ***	.46 ***
IITIS Perfectionism/ Certainty	.40 ***	.37 ***	.35 ***	.38 ***	.48 ***	.20
IITIS Thought Action Fusion	.26 *	.29 **	.24 *	.24 *	.36 ***	.36 ***
IITIS Ego-Dystonicity	.10	.13	.21	.08	.18	.16
IITI Distress	.48 ***	.43 ***	.34 **	.47 ***	.55 ***	.55 ***

*P <.05, **p < .01, p < .001

Note: OBQ: Obsessive Beliefs Questionnaire; Resp/Threat: Responsibility/Threat estimation, Perf/Certainty: Perfectionism/Certainty, Imp/Control Thght: Importance/Control Thoughts; VOCI: Vancouver obsessive Compulsive Inventory; DASS: Depression, Anxiety, Stress Scale.

In conclusion, the IITIS is applicable to general research on intrusions, and researchers can use IITIS to examine idiosyncratic appraisals and strategies for personally meaningful intrusions using a nomethetic model (i.e. CBT model of OCD). Kyrios et al. (2007) suggested that in spite of its satisfactory psychometric properties, the IITIS still requires further development in order to overcome some of its inherent limitations (e.g., length, internal reliability, non-specificity, lack of inter-rater data).

The IITIS was adapted into Turkish for the present study. Relevant information is given in the resultssection of the present research (See Appendix A).

2.4.7. Obsessive Beliefs Questionnaire (OBQ)

The Obsessive Beliefs Questionnaire (OBQ-44, Obsessive-Compulsive Cognition Working Group [OCCWG], 1992, 2002) is a 44 item self-report measure that evaluates the cognitive belief domains underlying OCD. The OBQ-44 was derived

from a factor analysis of the Obsessive Beliefs Questionnaire-87 (OBQ-87; OCCWG, 2001).

The OBQ-87 was derived from the cognitive theory of OCD and developed in order to measure the presence and intensity of core belief domains underlying OCD. To identify core obsessive-like beliefs, the OCCWG reviewed 16 established measures specific to obsessive-compulsive cognitions, and first delineated 19 belief domains related to OCD. After discussion, the expert panel narrowed down the list to six core beliefs dimensions (Taylor, Kyrios, Thordarson, Steketee, & Frost, 2002) included Overestimation of Threat, Tolerance for Uncertainty, Control of Thoughts, Importance of Thoughts, Responsibility, and Perfectionism (OOCWG, 1997).

The results of the factor analysis of the OBQ-87 indicated that the six subscales were highly intercorrelated (ranging from .59 to .81; OCCWG, 2001, 2003) and these six theoretically derived scales actually fell into three subscales, Responsibility/Threat Estimation, Importance/Control of Thoughts and Perfectionism/Uncertainty. Below is a description of each factor as provided by the OCCWG (2003):

1. Responsibility/Threat Estimation (16 items) beliefs about "preventing harm from happening to oneself or others, the consequences of inaction, and responsibility for bad things happening."
2. Perfectionism/Certainty (16 items): "high, absolute standards of completion, rigidity, concern over mistakes and feelings of uncertainty."
3. Importance/Control of Thoughts (12 items): "concerned with the consequences of having intrusive and/or distressing thoughts or images, thought-action fusion, and the need to rid oneself of intrusive thoughts"

The psychometric properties of the scale were examined in individuals with OCD, non OCD anxious patients, healthy adult controls from community, and undergraduate students (OCCWG, 2001, 2003). The results showed satisfactory internal consistency and test-retest reliability values. Internal reliability of the three OBQ-44 subscales ranged from 0.89 to 0.93 in clinical OCD samples, and 0.88 to 0.93

in non-clinical control groups that included non-OCD anxious patients, community controls and student controls. The results showed satisfactory internal consistency and test-retest reliability values. However, the discriminant validity of the OBQ was mixed. For example, the OBQ-44 scales exhibited significant correlation not only with measures of OCD, but also with measures of worry, anxiety and depression. Cross-cultural studies in patient and control groups supported satisfactory internal consistency and test-retest reliability of the OBQ-44. However, low discriminatory power of the scale has also been found in subsequent studies.

The OBQ scale was adapted into Turkish by two independent studies (Çağ, 2006; Yorulmaz, 2008). There are some wording differences between the two adaptations. Because of some methodological concerns (e.g., the change in the factor structure of the scale and inability to make cross-cultural comparisons efficiently), Yorulmaz (2008) performed a new adaptation as well as an examination of the psychometric properties of the OBQ on the basis of factor congruency by comparing the factor structures obtained from Turkish and Canadian samples via the Target Rotation Technique (Vijver & Leung, 1997). A Proportionality agreement coefficient or Tucker phi indicated that there was a high degree of similarity between the factors of Importance and Control of Thoughts (ICT, Tucker phi = 0.88), Responsibility and Threat estimation (RT, Tucker phi = 0.92), and Perfectionism and Certainty (PC, Tucker phi = 0.93). These results supported the satisfactory construct validity of the Turkish version of the scale. Moreover, in terms of the concurrent validity, the Turkish version of OBQ-44 showed high to moderate correlations with OCD measures (e.g. Padua Inventory).

In terms of the internal reliability of the scale, the Cronbach alphas and item-total correlations' indicated that the Turkish version of the OBQ-44 had satisfactory psychometric properties. Cronbach Alpha coefficients were .92 for the total score and .80, .86, .85 for ICT, PC, and RT, respectively. In the present study, the Cronbach's alpha coefficient of the Turkish version was .94 for the total score, .82, .85, .87 for ICT, PC, RT, respectively. (See Appendix A)

2.4.8. Penn Inventory of Scrupulosity (PIOS)

PIOS is a 19 item self-report measure was developed by Abramowitz, Huppert, Cohen, Tolin, Cahill, (2002) to assess religious obsessive-compulsive symptoms. Responsesare measured on a five-point scale (0 (never) to 4 (Constantly)) that indicates how frequently the participant experiences the phenomenon. During the development of the PIOS, the authors first generated 77 items based on statements taken from clinical patients with OCD who had religious obsessions and compulsions. The results of factor and item analyses resulted in a 19 item scale. The scale has a two factor structure, labelled Fear of God and Fear of Sin. The Fear of Sin factor is composed of 12 items which assesses the frequency of fear about committing religious or moral sin, whereas the Fear of God factor consisted of 7 items which assessed fears related to God and punishment.This includes concerns about a poor relationship with God, being an evil person, and future disobedience of religious commandments.

Abramowitz et.al. (2001) examined the psychometric properties of the PIOS. Cronbach's alpha coefficients were high for the full scale ($\alpha = .93$), as well as for the two subscales: Fear of Sin, $\alpha = .90$; Fear of God, $\alpha = .88$ (2001). In terms of convergent and discriminant validity, the scale had good convergent validity with significant positive correlations with the Maudsley Obsessive-Compulsive Inventory total and subscale scores (Hodson & Rachman, 1977). Among the subscales, the strongest correlation was observed between the PIOS-Fear of Sin subscale and MOCI doubting subscale. Furthermore, a moderate significant relationship was found between religiosity and PIOS. Discriminant validity of the scale was supported by a nonsignificant correlation with the Anger Expression Inventory (Speilberger, 1988).

The psychometric properties of PIOS were also studied in clinical sample with OCD (n = 71). Analyses indicated that the PIOS had high reliability and validity. The scale correlated with obsessional symptoms (i.e., r = .40 for Obsessive–Compulsive Inventory—Revised neutralizing) and several cognitive domains of OCD, including beliefs about the importance of (r = .44), and need to control intrusive thoughts (r =

.60), an inflated sense of responsibility (r = .44), and moral thought–action fusion (r = .44) (Nelson, Abromowitz, Whiteside, Deacon, 2006)

The PIOS was adapted into Turkish for the present study. Relevant information is given in the result section of the present research. (See Appendix A).

2.4.9. Penn Sate Worry Inventory (PSWI)

The Penn Sate Worry Inventory (PSWQ, Meyer et al., 1990) is a 16-item measure of the tendency to worry. Scores can range from 16 to 80. Several studies in both clinical and nonclinical samples have reported high internal consistency, short-term retest reliability, and convergent and criterion-related validity (e.g., Brown, Antony, & Barlow, 1992; Davey, 1993).

The scale was adapted into Turkish by Yilmaz, Gençöz and Wells (submitted for publication). To examine the construct validity of the scale, factor analysis was performed. Consistent with the previous studies, the results of this analysis revealed a two factor solution, namely presence of worry and absence of worry factors. Cronbach's alpha reliability coefficient for the presence of the worry factor was .92, and it was .68 for the absence of worry factor. Furthermore, the positive significant correlations of the PSWQ with the PI-WSUR, STAI-T, BAI, and the BDI supported the concurrent validity of the scale. These coefficients were in parallel with previous research findings. The reliability of the PSWQ was determined by computing the internal consistency coefficient, split-half reliability, and test-retest correlations. Cronbach's alpha coefficient for the total score was.91, which is consistent with published findings. Furthermore, the test-retest reliability of the PSWQ was assessed via zero-oerder correlations on a sub-sample of twenty six participants. The retest coefficient for the PSWQ was .88 ($\underline{p} < .01$), and it was .88 for the positive items, and .72 for the negative items. The researchers also performed paired samples *t*-tests to examine any change of the PSWQ and its factors over the test-retest interval. The result of this analysis revealed that there was no significant mean difference between these two intervals for the PSWQ total scores and two factors of the scale. In the

present study, for the Turkish students, the Cronbach's alpha coefficient was .93. (See Appendix A).

2.4.10. Revised Religious Fundamentalism Scale (RFS-R)

The Revised Religious Fundamentalism Scale (RFS-R, Altemeyer & Hunsberger, 2004) consists of 12 items designed to measure "fundamentalist" attitudes about one's religious beliefs. Items are rated on a 9-point Likert scale, ranging from -4 (very strongly disagree) to +4 (Very Strongly Agree). In order to avoid response bias, half of the items are reverse scored. The RFS-R was designed for use in a wide range of religious groups and, therefore, does not contain items specific to any particular religion. Subsequent research indicated that the scale had strong psychometric properties across several religion, including Christian, Jewish, Muslim, and Hindu groups (Hunsberg, 1996). Consistent findings across different religious groups have provided some initial empirical support for the hypothesis that religious fundamentalism may include essentially the same attitudes and beliefs across diverse religions.

The RFS originally was composed of 20 items. Internal consistency of the RFS was .91 for a student sample and .93 for an adult sample. In addition, the scale was shown to have convergent validity as indicated by positive correlations with measures of Christian orthodoxy, dogmatism, prejudice, and right wing authoritarianism (Altemeyer & Hunsberger, 1992). In terms of criterion related validity, results indicated that fundamentalist Protestants scored significantly higher on the RFS that did other religious groups who would be expected to score lower on fundamentalism Subsequent studies provided some additional data supporting that the RFS has good discriminant validity. For example, Genia (1996) found that fundamentalism showed significant negative correlation with a quest orientation to religiosity (i.e. an exploratory, open-minded religiosity).

Despite its relatively good psychometric properties and the empirical validation of the 20-item RFS, the researchers suggested that the scale has some problems

(Altemeyer & Hunsberger, 2004). For one thing, at least half of the items involve the "one true religion" theme, such as, "Of all the people on this earth, one group has a special relationship with God because it believes the most in his revealed truths and tries hardest to follow his laws," and "No one religion is especially close to God, nor does God favor any particular group of believers". The results of factor analysis and exanimation of correlations between items suggest that six items were redundant and could be omitted from the scale. Subsequent analyses indicated that the 12-item revision is as reliable as the longer original scale, despite being 40% shorter, and at least as empirically valid. The alpha reliability coefficient was .91 for the adult sample and was .93 for the student sample. Furthermore, the revised version of the scale showed significant positive correlations with right-wing authoritarianism (r = .79, and 72 for parents and students respectively), religious emphasis during childhood (r = .56, and .42), belief in the traditional God (r = .56, and 63), frequency of church attendance(r = .62, and 64), belief in creation science(r = .77, and 73), and dogmatism(r = .75, and 70) (Altemeyer & Hunsberger, 2004).

The RFS-R was adapted into Turkish for the present study. Relevant information is given in the result section of the present research. (See Appendix A).

2.5. Statistical Analysis

Prior to the analyses, two sets of data were examined in terms of data accuracy, missing values, univariate and multivariate outliers. Statistical analyses were conducted with the Statistical Package for the Social Sciences (SPSS) Program (Green, Salkind & Akey, 1997), and LISREL (Jöreskog & Sörbom, 1996) was performed for confirmatory factor analysis and model testing.

Psychometric properties of the newly adapted instruments were evaluated for reliability and validity. Internal consistency was assessed by Cronbach alpha values. Based on Nunnally (1978) criteria, values over than .70 were viewed as acceptable and values more than .80 were accepted as good. Validation of the scales was indicated by measurement of criterion-related, convergent, and discriminant validity.

Factor congruency was evaluated with Target Rotation Analysis (van de Vijver & Leung, 1997). A proportional agreement coefficient higher than .85 was accepted as a good indicator for sufficient factor congruency (van de Vijver & Leung, 1997). This value was also utilized as a sign for construct validity of the Turkish version of the relevant instruments. For the criterion-related validity, extreme group comparisons between high and low OCD symptoms scorers, and high and low religiosity scores were contrasted in Turkish versions of the instrument. Moreover, zero-order correlations between relevant and divergent measures were used for the assessment of concurrent and discriminant validity. The criteria for the high correlation were coefficients over than .50. The coefficients between .30 and .49 were accepted as moderate, while values between .10 and .29 were viewed as low (Cohen, 1988). To make group comparisons of Turkish and Canadian samples on the measures of the present study, ANCOVA's and MANCOVA's were performed respectively for the total and subscale scores of the scales. Finally, separate hierarchical regression analyses were conducted for the prediction of OCD and scrupulosity symptoms from

CHAPTER

RESULTS

3.1. Overview

In this section, the results of the analyses that were performed to evaluate the research hypotheses of the present study are presented. There are three sections. First, the psychometric properties of the newly adapted instruments in the Turkish sample are presented. Second, the impact of culture and religiosity on OCD symptoms and cross-cultural differences in OCD-relevant belief measures are examined via group comparisons between Canadian and Turkish samples. Then, predictors of OCD symptoms and scrupulosity symptoms in Canadian and the Turkish data are examined via hierarchical regression analysis. Finally, cross-cultural differences in the frequency, distress, appraisal and control strategies of three types of intrusive thoughts (i.e., doubting, religious, and sexual intrusions) are presented.

3.2. Psychometric Properties of the Turkish Versions of the Guilt Inventory, Penn Inventory of Scrupulosity, Religious Fundamentalism Scale, and International Intrusive Thought Interview Schedule

3.2.1. Psychometric Properties of the Turkish Version of the Guilt Inventory (GI)

The psychometric properties of the scales were examined in the screening study. In order to obtain information about the psychometric properties of the scale,

first, reliability properties of the scale were examined via internal consistency, split-half reliability, and re-test reliability coefficients.

Reliability Studies. The corrected item-total correlations for the total GI ranged from .14 to .61. These correlations were between .12 and 58 for the Moral standards subscale, .22 and .71 for the Trait Guilt subscale, and .46 and .65 for State Guilt subscale. These coefficients demonstrated that the subscale consisted of acceptable items as they were higher than the conventional level of 0.20 (Kline, 1986). The reliability of the GI was determined by computing the internal consistency coefficient, split-half reliability, and test-retest correlations. Cronbach's alpha coefficient for the total score was found .90, supporting the high reliability of the scale that is consistent with past studies. The alpha coefficients were also high for the three subscales of the inventory with .85, .76, .89 for State Guilt, Moral Standards, and Trait Guilt, respectively. The Guttman split-half reliability for GI total score was .91, where the Cronbach's alpha coefficient for the first half composed of 23 items was .80, and the second half which consisted of 22 items was .85. Moreover, the Cronbach alphas and item-total correlations range for both the Turkish and the Canadian samples were satisfactory (see Table 9)

The test-retest reliability of the GI total score was assessed via Pearson correlation, on a sub-sample of 168 participants. The test-retest correlation after a 4-week interval was .83 (N = 168, $p < .01$). It was .74 for State Guilt ($p < .01$), and .82 for Moral standards ($p < .01$), and .77 for Trait Guilt ($p < .01$).

Validity Studies

Construct Validity. Consistent with the original study (Kugler & Jones, 1992), construct validity of the GI was not examined by explanatory factor analysis. Instead, the cross-cultural similarity of the GI was examined on the basis of factor congruency by comparing the factor structures obtained with the Turkish (n = 420) and Canadian (n = 326) samples using Target Rotation Technique (Vijver & Leung, 1997). Proportionality agreement coefficient or Tucker phi was calculated with the criterion

of 0.85 (Lorenzo-Seva & Ten Berge 2006). As can be seen from Table 9, proportionality agreement coefficients showed that there was a high degree of consistency in the factors of Trait Guilt (Tucker phi = 0.96), State Guilt (Tucker phi = 0.90), and Moral Standards (Tucker phi = 0.87) between Canadian and Turkish samples.

Table 9. *Factor Congruency, Internal Consistency and Item Total Range of the GI.*

	Guilt Inventory				
		Trait	State	Moral	Total
Turkish Data	Tucker phi	0.96	0.90	0.87	
	Cronbach Alpha	0.90	0.86	0.78	0.91
	Item-Total Correlation	0.19-0.71	0.44-0.65	0.13-0.55	0.21-.66
	Guilt Inventory				
		Trait	State	Moral	Total
Canadian Data	Cronbach Alpha	0.90	0.82	0.76	0.89
	Item-Total Correlation	0.34-0.70	0.44-0.61	0.26-0.51	0.21-0.73

Criterion Validity. To evaluate the criterion related validity of the GI, the instrument ability to discriminate people with low OC symptoms from those with high OC symptoms was examined. Extreme group comparisons were performed for the total and the subscale scores. High and low OC symptoms groups were generated based on the CBOCI Total Scores. The sample scoring within the highest and lowest 25th percentile formed the "high OC symptoms" (N = 114, M [Sd] = 32.88 [6.61], scores over 26) and "low OC symptoms" groups (N = 111, M [Sd] = 6.28 [3.14], scores below 11) respectively. Because of a high correlation between Guilt scores and symptoms of anxiety and depression, for these analyses depression and anxiety scores were employed as covariates. One way ANCOVA for the total scale score and one way MANCOVA for the subscales were conducted.

As can be seen from Table 10, consistent with expectations, the high OCD symptom group differed from the low OCD symptom group with higher scores on the

GI Total Score (F [1, 122] = 42.30, $p < .001$) and its subscales (Wilks $\lambda = .64$, F (3, 212) = 13.83, $\acute{\eta} = .16$, $p < .001$), indicating that the people with high OC symptoms reported higher level of guilt and its dimensions than those with low OC symptoms. Thus, it can be asserted that the GI Total Score and Subscale scores successfully discriminated people who reported low OC symptoms from those who experienced high OC symptoms, even after controlling for the significant effect of depression (Wilks $\lambda = .80$, F (3, 212) = 17.27, $p < .001$) and anxiety symptoms (Wilks $\lambda = .94$, F (3, 212) = 4.49, $p < .001$).

Table 10. *Means and Standard Deviations of the High and Low OCD Symptom Groups on GI and its Subscales*

	Low OC Symptoms		High OC Smptoms		Significance Tests
Variables	*M*	Sd	*M*	Sd	
BDI	4.21	4.13	13.02	8.58	F (1, 222)= 21.78*
BAI	8.40	8.03	17.18	10.49	NS
GI	103.14	19.04	132.78	20.98	F (1, 222) = 42.30*
For Subscales					
Trait	42.93	11.13	59.42	11.88	F (1, 218) = 36.13*
State	19.04	5.97	26.81	6.63	F (1, 214) = 14.17*
Moral	38.89	9.27	43.23	9.20	F (1, 218) = 15.56*

* $p < .001$,

Note- BDI: Beck Depression Inventory, BAI: Beck Anxiety Inventory, GI: Guilt Inventory

Criterion related validity of the GI was also assessed with high and low religious group comparison. High and low religious groups were contrasted on GI to understand whether the GI Total Score and its subscale scores significantly differed between high and low religious individuals. As expected, after controlling for the significant main effect of depression and anxiety, the high religious individuals differed significantly from the low religious individuals with higher scores on GI Total (F [1, 192] = 63.78, $p < .001$) and its subscales (Wilks λ (3, 181) = 41.77, $\acute{\eta} = .41$, $p <$

.001). These results indicated that highly religious individuals have a greater tendency to experience guilt than did low religious individuals. Means, standard deviations and significance tests for the analyses are presented in Table 11

Table 11. *Means and Standard Deviations of High and Low Religious Groups in GI and Its Subscales*

	Low Religious Group		High Religious Group		Significance Tests
Variables	*M*	Sd	*M*	Sd	
BDI	10.01	8.81	6.65	6.51	*F* (1, 192)= 74.59**
BAI	14.31	10.81	10.71	8.01	*NS*
GI	111.88	25.93	127.74	21.15	*F (*1, 187) = 63.78***
For Subscales					
BDI					F (3, 181) = 25.80**
BAI					F (3, 181) = 2.91*
Trait	49.09	1.09	34.00	8.20	*F (*1, 183) = 9.83**
State	21.66	5.97	24.67	0.55	*F (*1, 183) = 11.5**
Moral Standards	35.98	0.78	50.12	0.97	*F (*1, 183) = 124.06***

*** p<.0001, ** p < .001, * p < .05.

Convergent Validity. To determine the convergent v*a*lidity, the correlations of the GI with the Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Clark Beck Obsessive Compulsive Inventory (CBOCI), Penn Inventory of Scrupulosity (PIOS), and Religious Fundamentalism Scale (RFS) were examined. Consistent with expectations, the GI Total Score were significantly and positively correlated with the CBOCI Total Score (r = .51), BDI (r = .52), BAI (r = .31), and PIOS (r = 55), and RFS (r = .28).

Summary: The results of the present study indicated good reliability and validity information for the Turkish version of the GI, supporting the cross-cultural validity of the scale. Internal consistency coefficients for the scale and its subscales were highly

acceptable. Similarly, test-retest reliability, assessed after 4-week interval, demonstrated an acceptable level of temporal stability. In terms of construct validity, cross-cultural similarity of the factor structure of the scale was examined. Results revealed a high degree of consistency in the factor structure between the Canadian and Turkish samples. The criterion-related validity of the GI was examined in terms of its effectiveness in differentiating individuals with high OCD symptom severity from those with low symptom severity on the basis of the CBOCI Total Score. Analyses indicated that high and low obsessive symptoms groups were successfully differentiated on the basis of the scores of GI. That is the GI successfully discriminated people with higher OCD symptoms from those with lower OCD symptoms. Furthermore, the scale scores successfully discriminated low religious from high religious individuals, supporting the discriminant validity of the measure. Finally, significant positive relationships of the GI with depression, anxiety, OCD symptoms, and scrupulosity provided further support for the validity of the sale. In the light of all these findings, this study presents acceptable test-retest and internal consistency coefficients, and also good construct, concurrent, and criterion-related validity for the Turkish version of the GI.

3.2.2. Psychometric Properties of the Turkish Version of the Penn Inventory of Scrupulosity (PIOS)

Reliability Studies. In order to determine the reliability of the PUOS, the internal consistency, split-half reliability, and test-retest reliability coefficients were examined in the Turkish screenig study (n = 420). Cronbach's alpha for the PIOS Total Score was .95, supporting its high reliability, where the corrected item-total correlations for the inventory ranged from .34 to .81. Guttman split-half reliability was .93, with .89 Cronbach's alpha coefficient for the first part (10-item) and .92 for the second part (9-item) of the total scale. The test-retest correlation after a 4-week interval was .84 for Total Score (N = 168, $p < .001$), and .89 and .77 (N = 168, $p < .001$) for Fear of God and Fear of Sin subscales, respectively.

Validity Studies

Construct Validity. Construct validity of the PIOS was assessed by examining the cross-cultural similarity based on factor congruency, as determined by the Target Rotation Technique (Vijver & Leung, 1997). Proportionality agreement coefficient or Tucker phi was calculated with the criterion of 0.85 (Lorenzo-Seva & Ten Berge 2006). As can be seen from Table 12, there was a high degree of similarity between the factors of Fear of God (Tucker phi = 0.96), and Fear of Sin (Tucker phi = 0.98) for the Canadian and Turkish samples. Moreover, the Cronbach alphas and item-total correlations were satisfactory for both the Turkish and Canadian samples.

Table 12. *Factor Congruency, Internal Consistency and Item Total Range of the PIOS.*

		PIOS	
		Fear of God	Fear of Sin
Turkish Data	Tucker phi	0.96	0.98
	Cronbach Alpha	0.93	0.93
	Item-Total Correlation	0.76-0.83	0.40-0.79
Canadian Data	Cronbach Alpha	0.92	0.93
	Item-Total Correlation	0.42-0.82	0.70-0.83

*p < .001

Criterion-related Validity. To evaluate the criterion validity of the PIOS, extreme group comparisons were performed for the PIOS Total Score and subscales. High and low OC symptoms groups were generated based on the CBOCI Total Score. Because depression and anxiety scores were significantly related to scrupulosity symptoms, these variables were entered into the analysis as a covariate variable, and one way ANCOVA for the Total Scores and one way MANCOVA for the subscales were conducted.

The results of the ANCOVA and MANCOVA analyses revealed that after controlling for the effect of the BDI and BAI, the PIOS Total Score significantly

differed between high and low OCD symptoms groups (F [1, 222] = 36.58, ή = .14, p < .001) and its subscales (Wilks λ = .78, F (2, 229) = 27.96, ή = .20, p < .001). As can be seen from Table 13, individuals with high OCD symptoms scored higher on PIOS Total Score and its subscales than did individuals with low OCD symptoms.

Table 13. *Means, Standard Deviations, and Group differences for High and Low OC Symptoms Groups*

	Low OC Symptoms		High OC Symptoms		Significance Tests
Variables	*M*	Sd	*M*	Sd	
BDI	4.21	4.13	13.01	8.58	*F (*1, 222) = .04 ns
BAI	8.40	8.03	17.18	10.49	*F*(1, 222) = 1.51 ns
PIOS	14.09	11.19	28.62	15.98	*F (*1, 222) = 36.58
For Subscales					
BDI					F(2, 229) = 1.99 ns
BAI					F (2, 229) = .3.36 ns
FOS	8.30	0.84	17.40	0.83	F (1, 229) = 50.16**
FOG	6.27	0.71	10.74	0.70	F (1, 229) = 17.04**

** p < .001, * p < .05.

Note- PIOS: Penn Inventory of Scrupulosity, FOG: Fear of God Subscale; FOS: Fear of Sin Subscale.

To further support the criterion-related validity of the PIOS, we investigated whether scores on the measure varied by degree of religiosity (i.e., low religiosity and high religiosity). One way ANCOVA for the Total Scores and one way MANCOVA for the subscales were conducted, with the BDI and BAI scores as covariates. Results showed that after controlling for effect of depression and anxiety, the main effect of religiosity was significant on the PIOS Total Score (F [1, 192] = 281.63, p < .001) and subscale scores (Wilks λ = .37, F (2, 187) = 162.70, ή = .64, p < .001). As can be seen from Table 14, Results revealed that high religious participants scored significantly higher on the PIOS total and its subscales than did low religious participants. Thus, it can be asserted that the PIOS total and subscale scores successfully discriminated high

religious individuals from low religious individuals, even after controlling for the depression (Wilks λ = .90, *F* (2, 187) = 10.36, p < .001) and anxiety symptoms (Wilks λ = .97, *F* (2, 187) = 2.51 ns)

Table 14. *Means, Standard Deviations, and Group differences for High and Low Religious Groups*

	Low Religious Group		High Religious Group		Significance Tests
Variables	*M*	Sd	*M*	Sd	
BDI	10.01	8.81	6.65	6.51	F (1, 192)= 18.07*
BAI	14.31	10.81	10.71	8.01	F (1, 192)= 2.71 ns
PIOS	9.21	1.07	37.83	1.30	F (1, 192) = 281.63*
For Subscales					
BDI					F (2, 187) = 10.36*
BAI					F (2, 187) = 2.51
FOS	7.69	6.90	20.67	9.43	F (2, 187) = 187.11*
FOG	2.50	4.14	15.73	6.76	F (2, 187) = 324.72*

p<.0001

Convergent Validity. As Table 15 shows, there were significant relationships between the PIOS and the convergent measures. The PIOS Total Score was significantly correlated with the CBOCI Total Score and subscales. Among the CBOCI subscales, the strongest relationship was observed between the Fear of Sin subscale and the CBOCI-Obsessions subscale. The PIOS and subscales also showed very strong correlations with guilt and religious fundamentalism, but a minimal relationship with worry.

To ensure that the relationship between the PIOS and CBOCI was not due to the underlying construct of negative affect or distress, we calculated partial correlations between these two measures by partialing out the BAI and BDI. Results indicated that the relationships between the PIOS and CBOCI Total Score, and

Obsessions and Compulsions subscales were small but remained significant (*pr* = .19 for total scale and *pr* = .17 for subscales).

Table 15. *Means and Standard Deviations, and Correlations between the PIOS and Validity Measures*

		PIOS		
	MS (SD)	Total Score	Fear of Sin	Fear of God
PIOS Total Score	21.74 (14.71)	-	.95*	.93*
Fear of Sin	12.99 (8.56)	-	-	.80*
Fear of God	8.75 (6.93)	-	-	-
Convergent Validity Measures				
CBOCI	19.19 (10.65)	.83*	.44*	.26*
CBOCI-Obsessions	11.35 (6.28)	.37*	.44*	.24*
CBOCI-Compulsions	7.90 (5.22)	.33*	.37*	.23*
GI	116.86 (22.91)	.55*	.57*	.45*
RFS	18.49 (24.13)	.67*	.55*	.74*
PSWQ	42.71(12.77)	.19*	.27*	.08

* $p < .001$

Summary: The results of the present study revealed strong reliability and validity for the Turkish version of the PIOS, supporting the cross-cultural generalizability of the measure. Internal consistency coefficients for the scale and its subscales were highly acceptable. Similarly, test-retest reliability, assessed after 4-week interval, demonstrated a strong temporal stability. To evaluate the validity of the Turkish version of the PIOS, construct, concurrent, and criterion validity information were examined. In terms of construct validity, cross-cultural similarity of the factor structure of the scale was examined. Analyses revealed a high degree of consistency in the PIOS factor structure between the Canadian and Turkish samples. The PIOS Total Score successfully discriminated people with higher OCD symptoms from those with lower OCD symptoms in support of its criterion-related validity. Furthermore, high religious participants were different from low religious ones on the basis of scores in the PIOS

total and subscale scores. These results indicate that the PIOS is sensitive to group differences. Furthermore, significant positive relationships of the PIOS with OCD symptoms, guilt, and religious fundamentalism scales provide further support for the validity of the measure. Thus acceptable test-retest and internal consistency coefficients, and also good construct, concurrent, and criterion-related validity was found for the Turkish version of the PIOS, indicating that it can be utilized in the Turkish culture in order to evaluate individual differences in scrupulosity symptoms.

3.2.3. Construct Validity and Internal Consistency of the Turkish Version of the Religious Fundamentalism Scale Revised Form (RFS-R)

Reliability Studies.

The reliability of the RFS-R was examined via internal consistency, split-half reliability, and test-retest reliability coefficients. As for the internal consistency of the RFS-R, Cronbach's alpha coefficient was .93, and the corrected item-total correlations for the inventory ranged from .64 to .80. Guttman split-half reliability was .93, with .86 for the first half of the scale (6-items) and .87 for the second half (6-items). The test-retest correlation after a 4-week interval was .94, $p < .001$.

Validity Studies

Construct Validity. Because the original scale is a unidimensional measure, Target Rotation test could not be used to assess the construct validity of the RFS-R. Therefore, the factor structure of the RFS was initially inspected using principle components factor analysis with Varimax rotation. The Kaiser-Meyer-Olkin measure of sampling adequacy showed that the coefficient was .95, which is higher than its minimum required value of .60 (Tabachnick & Fidell, 2001). Bartlett's test of sphericity was significant ($df = 66$, $p < .001$), indicating the suitability of the correlation matrix for factoring. The component analysis revealed only one factor with eigenvalues greater than 1.0. Inspection of a scree plot of the eigenvalues (Cattell, 1966) also suggested a one-factor solution. Accordingly, one component was extracted

with an eigenvalue of 6.73, which accounted for 56.07 % of the total variance. As can be seen from Table 16, the factor loadings for this single factor ranged between .67 and .85. The one factor structure dimensional of the scale is consistent with the findings of the original study (Altemeyer & Hunsberger, 2004), and subsequent reliability and validity studies (e.g., Genia, 1996).

Table 16. *Factor loadings of the RFS-R Items*

Item and Item Number	Loadings
1. To lead the best, most meaningful life, one must belong to the one, fundamentally true religion.	.85
8. God has given humanity a complete, unfailing guide to happiness and salvation, which must be totally followed.	.83
12. All of the religions in the world have flaws and wrong teachings. There is no perfect true, right religion.	.80
1. Whenever science and sacred scripture conflicts, science is probably right.	.77
5. There is a particular set of religious teachings in this world that are so true; you can't go any "deeper" because they are the basic, bedrock message that God has given humanity	.76
7. It is more important to be a good person than to believe in God and the right religion.	.73
2. No single book of religious teachings contains all the intrinsic, fundamental truths about life.	.72
3. The basic cause of evil in this world is Satan, who is still constantly and ferociously fighting against God.	.72
2. The fundamentals of God's religion should never be tampered with, or compromised with others' beliefs.	.70
6. When you get right down to it, there are basically only two kinds of people in the world: the Righteous, who will be rewarded by God; and the rest, who will not.	.70

Table 16 (continued)

Item and Item Number	Loadings
7. Scriptures may contain general truths, but they should NOT be considered completely, literally true from beginning to end.	.69
4. To lead the best, most meaningful life, one must belong to the one, fundamentally true religion.	.67

Criterion-related Validity. To evaluate the criterion-related validity of the RFS-R, the ability of the RFS-R to discriminate low from high religious groups was examined. The procedure followed to form high and low religious group was presented above. Because depression and anxiety scores showed a weak relationship with RFS-R scores, these variables were not entered as covariates. One way ANOVA indicated that there was a significant difference between groups *(F* [1, 190] = 605.71, $p < 0.001$). As expected, high religious students scored significantly higher on the RFS-R (*M* = 79.87, *Sd* = 11.59) than did low religious students (*M* = 27.46, *Sd* = 19.12). These results supported the the criterion-related validity of the RFS-R showing that it is sensitive to differences in degree of religiosity.

Convergent Validity. The convergent and discriminant validity of the RFS-R was assessed by computing Pearson correlation coefficients between RFS scores and scores on measures of related and unrelated constructs. Means and standard deviations for each measure, and the results of the correlation analyses are presented in Table 17. RFS-R showed moderate to high positive significant correlations with PIOS, frequency of attending places of worships, reading religious book, praying, and being voluntary or giving money to religious organizations. Consistent with some research findings, religious fundamentalism showed a slight negative correlation with depression and anxiety. Interestingly, the RFS-R scores did not have significant relationship with obsessions and compulsions scores.

Table 17. *Means and Standard Deviations, and Correlations between the RFS-R and Validity Measures*

Convergent Validity Measures	*M*	Sd	r
Frequency of Attending Place of Worship	1.85	1.17	.65**
Frequency of Reading Religious Book	3.14	1.46	.53**
Frequency of Praying	1.68	1.04	.68**
Frequency of Being Voluntary or Giving Money to Religious Organization	1.29	.72	.33**
Importance of Religiosity in Defining Person's Decision and Behaviors	2.37	1.19	.75**
PIOS	21.74	9.37	.67**
GI	116.86	22.91	.28*
CBOCI-O	11.90	6.28	.09
CBOCI-C	7.90	5.22	.08
BDI	7.97	7.03	-.10*
BAI	12.30	9.53	-.11*

p **<.001, p* <.05.

Note: GI. Guilt Inventory, PIOS: Penn Inventory of Scrupulosity, CBOCI-O: Clark-Beck Obsessive Compulsive Inventory Obsessions Subscale, CBOCI-C: Clark-Beck Obsessive Compulsive Inventory Compulsions Subscale, BDI: Beck Depression Inventory, BAI: Beck Anxiety Inventory.

Summary: The results of the present study revealed a satisfactory reliability and validity for the Turkish version of the RFS-R. Internal consistency coefficients for the scale were highly acceptable. Similarly, test-retest reliability revealed that the scale produced reliable scores overtime. To evaluate the validity of the Turkish version of the RFS-R, construct and concurrent validity studies were carried out. In terms of construct validity, the factor structure of the RFS-R was examined through principle components analysis and the results supported a one factor solution which was consistent with the findings of the original study (Altemeyer & Hunsberger, 2004). Considering the concurrent validity of the scale, RFS-R scores were found to be significantly and positively correlated with various religious practices and

commitment, and scrupulosity symptoms. The criterion-related validity of the scale to distinguish low from high religious individuals provided further evidence for the validity of the measure. In conclusion, the results of the present study indicated satisfactory reliability and validity for the Turkish version of the RFS, supporting the cross-cultural generalizability of the scale.

3.2.4. Psychometric properties of the International Intrusive Thoughts Interview Schedule

Reliability Studies. In order to assess the reliability of the IITIS, first inter-rate reliability was assessed to determine whether the interviewers correctly unwanted intrusive thoughts which were reported by participants. Two researchers independently classified reported intrusions into doubting, religious and sexual intrusions, for which inter-rater reliability was high. Inconsistent ratings between the researchers (n = 3) were not used in the analysis.

To further assess the reliability of the interview schedule, internal consistency coefficients of the primary and secondary appraisal items were examined for each intrusive thought. As can be seen from Table 18, internal consistency coefficients were satisfactory (i.e., alpha coefficients > 0.70). However, for the Turkish sample, Cronbach's alpha coefficient for the secondary appraisal of sexual intrusions was less satisfactory. Low sample sizes (n = 10) may have influenced this result.

Table 18. *Means, Standard Deviations and Internal Consistency Coefficients of the Primary and Secondary Appraisal Ratings*

	Turkish Muslims				Canadian Christians			
	N	M	Sd	α	N	M	Sd	α
PAR of Doubting Intrusions	50	22.18	7.92	.78	98	20.20	8.4	.84
PAR of Religious Intrusions	26	22.73	8.39	.76	49	23.51	9.59	.87
PAR of Sexual Intrusions	25	17.96	8.00	.75	39	18.66	7.85	.79

Table 18 (continued)

	Turkish Muslims				Canadian Christians			
	N	M	Sd	α	N	M	Sd	α
SAR of Doubting Intrusions	21	16.00	6.80	.84	49	14.08	6.48	.82
SAR of Religious Intrusions	12	15.50	5.97	.76	25	16.72	6.23	.75
SAR of Sexual Intrusions	10	17.60	4.24	.61	21	13.95	6.29	.83

Note. PAR: Primary Appraisal Ratings, SAR: Secondary Appraisal Ratings

Validity Studies. In order to obtain information about the validity of the IITIS, convergent validity of the interview schedule was assessed by examining the relationship between primary appraisal ratings and three subscales of the Obsessive Beliefs Questionnaire (i.e., Responsibility/Threat Estimation, Importance/Control Thoughts, and Perfectionism/Certainty). As can be seen from Table 19, there was weak to moderate significant associations between the appraisal dimensions of the IITIS and the OBQ. This is generally consistent with cognitive theory, in that dysfunctional beliefs may influence appraisals and appraisals may influence dysfunctional beliefs. However, IITIS appraisals did not show specificity with respect to OBQ scales. For example, for sexual and religious intrusions, IITIS Perfectionism/Certainty appraisal dimension showed significant correlations with the three subscales of OBQ. This may be a reflection of the considerable overlap or high intercorrelations of the OBQ domains as noted in contemporary research (OCCWG, 2003, 2005). Interestingly, IITIS Importance/Control Thoughts appraisals did not exhibit a significant relationship with the Importance/Control Thought dimensions of the OBQ-44. Except for sexual intrusions in the Turkish sample, this appraisal had a significant positive correlation with OCD symptoms measured by CBOCI. As expected, the distress ratings of intrusions showed significant positive relationships with the total and subscale scores of OBQ. For doubting intrusions, the distress scores were also significantly related to OCD and anxiety symptoms.

Table 19. *Correlations between IITIS Primary Appraisals (across all intrusions) and other Cognitions/Symptom Measures*

	OBQ Total	Resp/ Threat	Imp/Con Thght	Perf/ Certanity	CBOCI	BAI
Turkish Data Doubting Intrusions						
IITIS Resp/Threat	.18	.25*	.04	.14	.-01	.03
IITIS Imp/ConThght	.30*	.26*	.13	.34*	.36*	.18
IITIS Perf/Certainty	.31*	.21*	.11	.42**	.22*	.26*
IITIS Ego Dystonicity	.17	.17	.13	.12	.24	-.10
IITIS Distress	.25*	.14	.22*	.31*	.51**	.31*
Canadian Data Doubting Intrusion						
IITIS Resp/Threat	.13	.15	.09	.10	.19*	.12
IITIS Imp/ConThght	.19	.17*	.08	.21**	.35**	.22**
IITIS Perf/Certainty	.32*	.22**	.24**	.35**	.35**	.33**
IITIS Ego Dystonicity	.13	.10	.14	.12	.06	.24**
IITIS Distress	.34*	.30**	.30**	.28**	.46**	.47**
Turkish Data Religious Intrusions						
IITIS Resp/Threat	.29*	.25*	.30*	.17	.35*	.19
IITIS Imp/ConThght	.35*	.28*	.12	.43**	.36*	.34*
IITIS Perf/Certainty	.35*	.37*	.27*	.22*	.12	.11
IITIS Ego Dystonicity	.04	-.11	-.09	.28	.35	.30
IITIS Distress	.44**	.34*	.31*	.43**	.07	.12
Canadian Data Doubting Religious Intrusions						
IITIS Resp/Threat	.28*	.23*	.34**	.20	.36**	.26*
IITIS Imp/ConThght	.29*	.25*	.25*	.26*	.40**	.20
IITIS Perf/Certainty	.30*	.29*	.29*	.22	.30**	.23*
IITIS Ego Dystonicity	.05	-.07	.04	.16	.36**	.27*
IITIS Distress	.25*	.21	.20	.23*	.27*	.19
Turkish Data Sexual Intrusions						
IITIS Resp/Threat	.24	.26	.31	.14	-.02	.01
IITIS Imp/ConThght	.11	.10	-.01	.17	.12	.11

Table 19 (continued)

	OBQ Total	Resp/ Threat	Imp/Con Thght	Perf/ Certanity	CBOCI	BAI
			Turkish Data Sexual Intrusions			
IITIS Perf/Certainty	.51**	.51**	.53**	.37*	.50**	.34*
IITIS Ego Dystonicity	.30*	.23*	.21*	.35*	.09	.12
IITIS Distress	.28*	.28*	.16	.28*	.01	.04
			Canadian Data Sexual Intrusions			
IITIS Resp/Threat	.36**	.33**	.41**	.24	.28*	.16
IITIS Imp/ConThght	.19	.22	.21	.08	.31*	.16
IITIS Perf/Certainty	.44**	.32*	.58**	.33**	.37**	.31*
IITIS Ego Dystonicity	.31*	.30*	.24	.22	.22	.05
IITIS Distress	.28*	.26*	.25*	.29*	.31*	.19

*p < .05, **p < .01

Note: IITIS Resp/Threat: International Intrusive Thoughts Interview Schedule Responsibility /Threat Appraisal; Imp/ConThght: Importance/ Control of Thought; Perf/Certainty: Perfectionism/ Certainty; OBQ: Obsessive Beliefs Questionnaire; CBOCI: Clark Beck Obsessive Compulsive Inventory, BAI: Beck Anxiety Inventory.

3. 3. Internal Consistency of other Instruments for Turkish and Canadian Data

As can bee seen in Table 20, the internal consistency and item-total correlations of other measures were evaluated with for both Canadian and Turkish samples.

Table 20. *Internal Consistency Coefficients of the Instruments used for Turkish and Canadian Subjects*

	Cronbach Alpha (Item Total Correlation Range)	
Measures	Canadian Data	Turkish Data
BDI	0.90 (0.37-0.65)	0.87 (0.18-0.63)
BAI	0.91 (0.23-0.69)	0.89 (0.35-0.59)
CBOCI Total	0.89 (0.15-0.68)	0.91 (0.31-0.60)

Table 20 (continued)

	Cronbach Alpha (Item Total Correlation Range)	
Measures	Canadian Data	Turkish Data
CBOCI-Obsessions Subscale	0.82 (0.14-0.59)	0.86 (0.30-0.60)
CBOCI-Compulsions Subscale	0.85 (0.27-0.57)	0.83 (0.44-0.60)
PSWQ	0.95 (0.57-0.85)	0.93 (0.43-0.75)
OBQ-44 Total	0.95 (0.27-0.64)	0.94 (0.33-0.63)
OBQ-ICT	0.88 (0.35-0.69)	0.82 (0.28-0.61)
OBQ-44-PC	0.89 (0.39-0.71)	0.89 (0.25-0.64)
OBQ-44-RT	0.89 (0.57-0.85)	0.87 (0.39-0.61)

Note- BDI: Beck Depression Inventory, BAI: Beck Anxiety Inventory, CBOCI: Clark Beck Obsessive Compulsive Inventory; PSWQ: Penn State Worry Questionnaire, OBQ-44: Obsessive-Beliefs Questionnaire, ICT: Importance/Need for Control of Thoughts, PC: Perfectionism/Uncertainty, RT: Responsibility/Threat Estimation.

Analyses indicated that all of the reliability coefficients were satisfactory and in the acceptable range (Nunnally, 1978).

3.4. Main Study

In this section the results of the study are divided into three sections. First, comparisons of Turkish high and low religious, and religious school student groups with Canadian groups are provided in order to understand the effect of religious affiliations and degree of religiosity on the measures of general psychopathology (e.g., depression, anxiety, guilt, and worry), and OCD-symptoms but especially scrupulosity symptoms and obsessive beliefs. The second section contains the statistical analyses that examine the predictors of OCD and scrupulosity symptoms in both Canadian and Turkish samples. Finally, the third section presents the findings of the cultural differences in three types of intrusive thoughts (i.e., doubting, religious, and sexual), appraisals of these intrusions and association control strategies.

3.4.1. Correlations between OCD Symptoms and Measures for both Canadian and Turkish Subjects

Before examining the group differences in general distress, OCD symptoms, scrupulosity, and OC-like beliefs, a correlational analysis was performed to examine the relationships among religiosity, general distress, obsessive beliefs, and scrupulosity and OCD symptoms separately in Turkish and Canadian data. Tables 21 and 22 present the interrelationships among the variables.

First, RFS-R scores had different relationship with the CBOCI, in the Christian and Muslim samples. While the RFS-R scores showed a significant but slight positive correlation with OCD symptoms total and compulsion scores in the Christian Canadian students, the RFS-R was unrelated to OCD symtomatology in the Turkish Muslim students. However, consistent with previous research findings, in both sets of data, there were positive and significant relationships between OCD-relevant beliefs and OCD symptoms.

In terms of general distress measures (i.e., depression, anxiety, worry, and guilt), these variables were positively related to CBOCI total and subscales, and scrupulosity scores for both Turkish and Canadian samples. It was also observed that scrupulosity symptoms were positively associated with OCD total and subscale scores with the magnitude, direction of the relationship between these variables quite similar in the. In spite of the weak relationship between religiosity (i.e. religious fundamentalism) and OCD symptoms, this variable had a very strong relationship with scrupulosity symptoms, such as fear of God and fear of sin. In conclusion, the correlation coefficients revealed that there were some slight cross cultural differences between the Canadian and Turkish samples in the relationship between religiosity and other variables. However, overall the direction and magnitude of the relationships among OCD symptoms and the other variables were fairly similar in the Turkish and Canadian sample.

Table 21. *Correlation Coefficients among Measures in Turkish Sample*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1- BDI															
2- BAI	.51**														
3- PIOS	.20**	.17**													
4- PIOS-FOS	.27**	.23**	.96**												
5-PIOS-FOG	.09	.08	.94**	.80**											
6- OBQ-44	.29**	.28**	.37**	.39**	.29**										
7- OBQ-44 -RT	.29**	.27**	.33**	.37**	.25**	.90**									
8- OBQ-44 -PC	.21**	.24**	.22**	.23**	.19**	.86**	.64**								
9- OBQ-44- ICT	.25**	.22**	.43**	.45**	.35**	.79**	.65**	.48**							
10- PSWQ	.52**	.45**	.19**	.27**	.08	.32**	.29**	.28**	.21**						
11- CBOCI	.53**	.38**	.37**	.44**	.24**	.46**	.44**	.33**	.42**	.53**					
12- CBOCI-O	.47**	.35**	.33**	.38**	.23**	.47**	.44**	.37**	.38**	.45**	.71**				
13- CBOCI-C	.54**	.39**	.38**	.44**	.26**	.49**	.48**	.37**	.44**	.53**	.94**	.91**			
14- RFS	-.10*	-.10*	.67**	.56**	.74**	.17**	.13*	.09	.27**	-.11*	.09	.09	.08		
15- GI	.52**	.31**	.55**	.58**	.44**	.41**	.39**	.28**	.39**	.47**	.52**	.41**	.51**	.28**	

* Correlation is significant at the 0.05 level (2-tailed),
**Correlation is significant at the 0.01 level (2-tailed)

Note: BDI: Beck Depression Inventory, BAI: Beck Anxiety Inventory, PIOS: Penn Inventory of Scrupulosity, PIOS-FOS: Penn Inventory of Scrupulosity Fear of Sin Subscale, PIOS-FOG: Penn Inventory of Scrupulosity Fear of God subscale, OBQ-44: Obsessive Beliefs Questionnaire-44, OBQ-44-RT: Obsessive Beliefs Questionnaire Responsibility/Threat Estimation Subscale; 44-PC: Obsessive Beliefs Questionnaire Perfectionism/Certainty Subscale, OBQ-44-ICT: Obsessive Beliefs Questionnaire Importance/Control of Thoughts, CBOCI: Clark-Beck Obsessive Compulsive Inventory Total Score; CBOCI-O: Clark-Beck Obsessive Compulsive Inventory Obsessions Subscale, CBOCI-C: Clark-Beck Obsessive Compulsive Inventory Compulsions Subscale; RFS: Religious Fundamentalism Scale, GI: Guilt Inventory.

Table 22. *Correlation Coefficients among Measures in Canadian Sample*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1- BDI															
2- BAI	.54**														
3- PIOS	.23**	.49**													
4- PIOS-FOS	.27**	.51**	.96**												
5-PIOS-FOG	.11*	.39**	.91**	.75**											
6- OBQ-44	.40**	.52**	.53**	.58**	.37**										
7- OBQ-44 -RT	.25**	.39**	.46**	.52**	.31**	.88**									
8- OBQ-44 -PC	.35**	.46**	.36**	.39**	.25**	.89**	.64**								
9- OBQ-44- ICT	.39**	.52**	.58**	.63**	.42**	.82**	.59**	.63**							
10- PSWQ	.56**	.61**	.49**	.49**	.41**	.61**	.50**	.58**	.49						
11- CBOCI	.60**	.55**	.49**	.49**	.39**	.26**	.21**	.15*	.31**	.53**					
12- CBOCI-O	.67**	.49**	.33**	.33**	.26**	.21**	.20**	.12*	.21**	.53**	.89**				
13- CBOCI-C	.38**	.50**	.56**	.55**	.46**	.26**	.18*	.15*	.34**	.43**	.87**	.55**			
14- RFS	.02	.18*	.65**	.42**	.81**	.04	-.07	-.07	.29**	.10*	.14*	.06	.19**		
15- GI	.62**	.45**	.59**	.55**	.55**	.45**	.38**	.35**	.47**	.55**	.53**	.57**	.35**	-.52**	

* Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

Note: BDI: Beck Depression Inventory, BAI: Beck Anxiety Inventory, PIOS: Penn Inventory of Scrupulosity, PIOS-FOS: Penn Inventory of Scrupulosity Fear of Sin Subscale, PIOS-FOG: Penn Inventory of Scrupulosity Fear of God subscale, OBQ-44: Obses Beliefs Questionnaire-44, OBQ-44-RT: Obsessive Beliefs Questionnaire Responsibility/Threat Estimation Subscale; OBQ-44-PC: Obsessive Beliefs Questionnaire Perfectionism/Certainty Subscale, OBQ-44-ICT: Obsessive Beliefs Questionnaire Importance/Cor Thoughts, CBOCI: Clark-Beck Obsessive Compulsive Inventory Total Score; CBOCI-O: Clark-Beck Obsessive Compulsive Inven Obsessions Subscale, CBOCI-C: Clark-Beck Obsessive Compulsive Inventory Compulsions Subscale; RFS: Religious Fundamenta Scale, GI: Guilt Inventory.

3.4.2. Group Differences in General Distress Scales: BDI, BAI, PSWQ, and GI.

The present study first examined of the influence degree of religious devoutness and religious affiliation on general distress scales by comparing Turkish Muslim and Canadian Christian samples. The aim of these analyses was determine whether the effect of religion and religiosity is specific to OCD symptomatology, or whether religiosity and religious affiliation are also related to other general psychopathology measures. Due to the high correlation among BDI, BAI, PSWQ, and GI, group differences were examined by 2 (Nationality: Turkish and Canadian) by 3 (levels of religiousness: Low, High and Religious School Groups) MANOVA. Because of the large number of comparison, a Bonferroni- corrected significance level of p <.01 (.05/4) was used. Separate ANOVAs on each dependent variable were conducted as follow-up tests to the MANOVA. Similar to MANOVAs, each ANOVA was tested at the .01 level.

A 2 by 3 MANOVA conducted on the BDI, BAI, PSWQ and GI Total Score yielded main effects of religious affiliaiton (Wilks $\lambda = .86$, F (4, 310) = 15.06, $\acute{\eta} = .16$, $p < .001$) and of religiousness (Wilks $\lambda = .77$, F (8, 620) = 10.34, $\acute{\eta} = .12$, $p < .001$). The interaction between religion and degree of religiosity was also significant (Wilks $\lambda = .93$, F (8, 620) = 2.89, $\acute{\eta} = .04$, $p < .01$). Univariate analysis indicated Nationality differences in depression (F (1, 320) = 10.26, $\acute{\eta} = .03$, $p < .01$), anxiety (F (1, 320) = 7.42, $\acute{\eta} = .03$, $p < .01$), and guilt scores (F (1, 320) = 9.57, $\acute{\eta} = .03$, $p < .01$). Results indicated that while Turkish students reported higher level of depression (M [Sd] = 9.03 [.58] and anxiety symptoms (M [Sd] = 14.96 [0.84] in comparison with Canadian students (M [Sd] = 6.55 [50] and M [Sd] = 11.03 [0.73], respectively), Canadian students experienced a higher level of guilt (M [Sd] = 135.04 [1.64] than did Muslims (M [Sd] = 127.59 [1.89]).

The main effect of degree of religiosity (F (2, 319) = 22.60, $\acute{\eta} = .13$, $p < .001$) was only significant for guilt. As expected, regardless of Nationality, high religious participants reported higher degree of guilt (M [Sd] = 134.84 [2.29] for high religious students, M [Sd] = 138.10 [1.97] for religious school students) than did low religious

participants (*M* [*Sd*] = 118.98 [2.20]). There were no significant differences between high religious students and religious school students in terms of level of guilt.

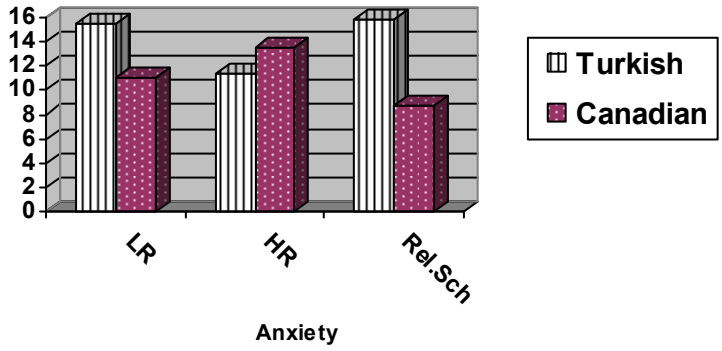
Table 23. *Interaction of Nationality and Levels of Religiousness on BAI*

	Religiousness					
	Low		High		Religious School	
	M	Sd	M	Sd	M	Sd
Turkish sample	15.37a	1.46	11.35a	1.61	15.77a	1.28
Canadian sample	11.07ab	1.32	13.50ab	1.27	8.78b	1.21

Note: Different subscripts on the same row or on the same column represent significant difference between groups ($p < .05$)

The interaction effect was significant only for anxiety (F (2, 319) = 5.82, ή = .04, $p < .01$). As can be seen from Table 23 that includes post-hoc comparisons with Bonferroni test, there were no significant differences in the level of anxiety of the three religiousness groups for the Turkish and Canadian samples. The unique difference was observed between Christian and Muslim Religious School student groups. That is Muslim religious school students reported a significantly higher level of anxiety (M = 15.77) than did the Christian religious school group (M = 8.78). The group differences are depicted in Figure 2.

Figure 2. *Interaction Effect of Religiosity and Nationality on Anxiety Symptoms*



Summary: These results indicated that nationality resulted in significant differences on all general distress measures, including depression, anxiety, and guilt. The findings suggested that while Turkish students reported higher levels of depression and anxiety symptoms than Canadian, Canadian students experienced a higher degree of guilt as compared with Turkish students. The degree of religiosity only significantly affected feelings of guilt in both the Canadian and Turkish samples. That is, the higher a person holds religious beliefs the higher he/she experiences guilt. However, there were no significant differences between high religious and religious school participants. More importantly, the interaction of religiosity and nationality was significant only for anxiety symptoms, with religious school Muslim students experiencing a higher degree of anxiety as compared with Christian religious school students. Overall, then significant differences were evident on measures of general psychopathology between Canadian and Turkish samples, with both guilt and anxiety is influenced by high level of religiosity.

3.4.3. Group Differences in OCD Symptoms, Scrupulosity and Obsessive Beliefs

As stated before, the main aim of the present study was to understand the effect of nationality and degree of religiosity on the experience of OCD symptoms and OCD related beliefs and appraisals that play an important role in the maintenance and exacerbation of the OCD symptoms. Thus group comparisons were made in the CBOCI Total score, obsession and compulsion subscales. Then the effect of nationality and religiosity on the experience of scrupulosity, as an OCD symptom subtype, was examined. Finally, the groups were compared on the OBQ Total Score and its subscales to understand the role of culture and religiosity in the maintenance and persistence of obsessive like beliefs.

3.4.3.1. Group Differences in OCD Symptoms

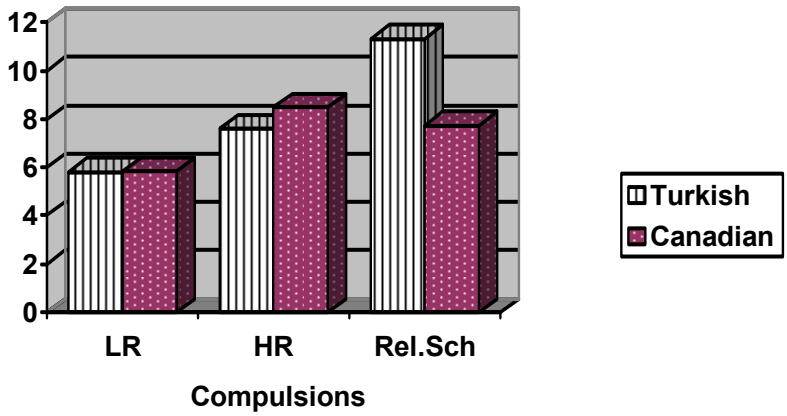
The groups were compared on the CBOCI Total Score and CBOCI obsession and compulsion subscales. A 2 (nationality : Canadian and Turkish by 3 (levels of religiousness: Low, High and religious school student groups) ANCOVA and MANCOVA were performed for the total CBOCI and subscale scores with Bonferroni correction and post-hoc comparison with Tukey HSD (where appropriate), in which BDI scores were entered as a covariate.

The results of univariate analysis demonstrated only a significant main effect of religiosity (F (2, 313) = 22.24, ή = .12, $p < .001$) after controlling for the significant effect of depression (F (2, 313) = 102.61, ή = .25, $p < .001$. Post-hoc comparison found that regardless of nationality, religious school students had the highest score on total OCD symptoms (M [Sd] = 23.35 [.80]), low religious students the lowest (M [Sd] = 14.51[.91]), and highly religious ones the middle (M [Sd] = 18.82 [.86]). The severity of OCD symptoms did not change according to nationality. That is, there was no significant difference between Turkish and Canadian groups on the CBOCI Total Score (F (2, 313) = 1.08, $p > .05$).

Similarly, MANCOVA on CBOCI obsession and compulsion subscales revealed a significant main effect of religiosity (Wilks λ = .85, F (4, 622) = 12.79, ή = .08, $p < .001$) as well as an interaction effect (Wilks λ =. 95, F (4,622) = 3.59, ή = .02, $p < .01$), after controlling the significant main effect of BDI (Wilks λ = .72, F (2,311) = 58.01, ή = .27, $p < .01$). However, the main effect of nationality was not significant (Wilks λ = .99, F (2,311) = .91, ή = .01, $p > .05$). That is severity of obsessions and compulsions did not differ significantly between the Canadian and the Turkish students. Univariate ANCOVAs indicated that degree of religiosity differed on obsessions (F (2,312) = 25.09, ή = .14 $p < .001$), and compulsions. (F (2,321) = 12.91, ή = .08, $p < .001$). According to post-hoc comparisons, for the CBOCI obsessive subscale, a higher level of religiosity was found to be associated with a higher level of obsession symptoms. To put it another way, religious school students reported a higher level of obsessive symptoms (M [Sd] = 14.01 [.45]) than both highly religious (M [Sd]

= 10.78 [.53]) and low religious individuals (*M* [*Sd*] = 8.69 [.51]). Moreover, highly religious individuals suffered from higher severity of obsessive symptoms than those who had low religiosity. In terms of compulsions, religious school group (*M* [*Sd*] = 9.53 [.45]) and highly religious participants (*M* [Sd] = 8.03 [.53]) scored higher on the CBOCI compulsions subscale compared to the low religious students (*M* [Sd] = 5.87 [.51]).

Figure 3. *Interaction of Nationality and Levels of Religiousness on Compulsions*



In terms of the interaction effect, univariate ANOVAs revealled that the interaction effect was significant only for CBOCI compulsions, *F (*2,312) = 4.60, ή = .03, $p < .01$, (depicted in Figure 3). As presented in Table 24, according to the post-hoc test for interaction effect on compulsions, for the Canadian sample, there were no significant differences among the three levels of religiosity, while there was only a significant difference between the religious school students and low religious students in the Turkish sample. Religious school Muslim students reported a higher degree of compulsive symptoms than did low religious Turkish students. There was no significant difference between high religious and low religious Turkish students. Furthermore, religious school Muslim students had higher scores (*M* = 11.32) on the CBOCI compulsions subscale than religious school Christian students (*M* = 7.74).

Table 24. *The Interaction Effect of Religiosity and Nationality on CBOCI Compulsion Subscale*

	Religiousness					
	Low		High		Religious School	
Religious Affiliaiton	M	Sd	M	Sd	M	Sd
Canadian	5.85a	0.76	8.47a	0.83	7.74a	0.65
Turkish	5.80a	0.67	7.59ab	0.65	11.32b	0.62

Note: Different subscripts on the same row or on the same column represent significant differences between groups ($p < .01$)

Summary: Regardless of nationality, a higher degree of religiosity was related to a higher degree of OCD symptoms. In other words, religious school students presented with the highest OCD symptoms in both the Muslim and the Christian samples. The low religious participants had the lowest level of symptom and the high religious students reported moderate levels of OCD symptoms. In terms of OCD symptom presentation, again regardless of nationality, heightened religiosity resulted in more severe obsessive and compulsive symptoms in Canadian and Turkish sample. Moreover, degree of religiosity affected Christian and Muslim participants differently in terms of presentation of OCD symptoms. Religious school Muslim students presented with a higher degree of compulsions than religious school Christians students. These results suggest that religiosity can have a negative effect on the severity of the OC symptoms in both the Christian and Muslim students, irrespective of nationality. Furthermore, only the highly religious Muslim students had elevated levels of compulsivesymptoms, whereas both Canadian and Turkish religious students had highest levels of obsessionality.

3.4.3.2. Group Differences in Scrupulosity Symptoms

As stated in previous sections, another aim of the present study was examine the effect of nationality and degree of religiosity on scrupulosity. Thus, a 2 (nationality) by 3 (degree of religiosity) ANCOVA and MANCOVA was conducted on the total and subscale scores of the PIOS (i.e., Fear of God and Fear of Sin) to determine whether scrupulosity scores were different among undergraduates who had a different degree of religiosity and nationality, when adjusted for depression scores.

First, a 2 x 3 between subjects analysis of covariance was performed on the PIOS Total Score, with BDI Total Score as the covariate. After adjusting for the by covariate (F (1, 330) = 92.54, ή = .21, $p < .001$), the results for PIOS Total Score revealed a significant main effect of religiosity (F (2, 330) = 140.58, ή = .46, $p < .001$) and nationality (F (1,330) = 4.45, $p < .01$), and an interaction effect F (2, 330) = 4.36, ή = .03, $p < .01$). The strength of the relationship between nationality and scrupulosity symptoms was weak, however, with ή = .01. The adjusted marginal means showed that Turkish students reported a higher degree of scrupulosity symptoms (M [Sd] = 28.76 [.94]) as compared with Canadian students (M [Sd] = 23.07 [.87]). In terms of the significant effect of religiosity, the strength of the association between degree associaiton between degree of religious devotion and severity of scrupulosity was very strong, as indicated by the partial eta square with degree of religiosity accounting for 46 percent of the variance in the dependent variable holding constant depression scores. Post hoc comparisons using Tukey HSD revealed that religious school students (M [Sd] = 34.45 [1.03]) and highly religious individuals (M [Sd] = 31.59 [1.09]) reported more severe scrupulosity symptoms compared with low religious students (M [Sd] = 9.89 [1.16]). However, there was no significant difference between high religious and religious school groups.

Finally, the nature of the significant interaction effect was examined by post hoc test with Tukey HSD. As can be seen from Table 25, results revealed that for both Christian and Muslim students, a higher degree of religiosity was associated with a higher level of scrupulosity symptoms. That is high religious undergraduate and

religious school students scored significantly higher on the PIOS than did low religious students, but there was no significant differences between high religious and religious school students. Among Turkish and Canadian groups, only the religious school groups differed from each other, with the Turkish Muslim religious school groups reporting a higher degree of scrupulosity ($M = 37.82$) than the Canadian Christian religious school group ($M = 31.08$).

Table 25. *Interaction of Nationality and Degree of Religiosity on the PIOS Total Score*

	Religiousness					
	Low		High		Religious School	
	M	Sd	M	Sd	M	Sd
Canadian	11.08a	1.56	29.70b	1.50	31.08b	1.43
Turkish	8.70 a	1.76	33.49 b c	1.60	37.82c	1.49

Note: Different subscripts on the same row represent significant difference between groups ($p < .001$).

A 2 x3 between-subjects multivariate analysis of covariance was performed on the PIOS. Fear of God and Fear of Sin subscale with the BDI entered as a covariate.

After adjusting for differences on the covariate, the MANCOVA revealed a main effect of religion (Wilks $\lambda = .87$, F (2, 329) = 24.68, $\acute{\eta} = .13$, $p < .001$), religiousness (Wilks $\lambda = .48$, F (4, 628) = 72.19, $\acute{\eta} = .30$, $p < .001$), as well as an interaction effect (Wilks $\lambda = .94$, F (4, 630) = 5.02, $\acute{\eta} = .03$, $p < .01$). Analyses of variance on each dependent variable were conducted as follow-up tests to the MANCOVA by using the Bonferroni correction. In terms of nationality , as can be seen from Table 26, the ANOVAs on Fear of God and Fear of Sin scores revealed that only the ANOVA on the Fear of God scores was significant, F (1, 330) = 25.81, $p < .001$. There was a modest association between nationality and Fear of God, with $\acute{\eta} = .12$. Analyses indicated that Turkish students reported significantly higher Fear of God than Canadian students. Then, the effect of religiosity was examined by performing

ANOVA on both subscales. The ANOVAs on the Fear of God and Fear of Sin scores were significant, $F(2, 330) = 171.97$, $\acute{\eta} = .51$, $p < .00$, $F(2, 330) = 88.52$, $\acute{\eta} = .35$, $p < .001$, respectively. Post hoc comparison with Tukey HSD to the univariate ANOVA for the Fear of Sin and Fear of God scores consisted of pairwise comparisons to determine which degree of religiosity affected scrupulosity symptoms most strongly. As can be seen from Table 26, both the religious school and the high religious groups reported higher Fear of Sin and Fear of God than did low religious groups. However, the religious school students group and the high religious group did not differ significantly on either of the PIOS subscales

Table 26. *Main Effect of Religiosity and Nationality on PIOS Subscales*

	Religiousness					
	Low		High		Religious School	
PIOS Subscales	M	Sd	M	Sd	M	Sd
Fear of Sin	7.80a	0.84	18.54b	0.87	20.72b	0.74
Fear of God	2.09a	0.50	13.05b	0.55	13.73b	0.47
	Nationality					
	Turkish			Canadian		
Fear of Sin	15.62a		0.61	15.77a		0.56
Fear of God	11.05a		0.41	8.19b		0.38

Note: Different subscripts on the same row represent significant difference between groups ($p < .001$)

Finally, the nature of the significant interaction between religiosity and nationality was examined. As can be seen from Figure 4, the univariate ANOVAs revealed that the interaction effect was significant for Fear of God subscale, with religious school (M = 16.52) and highly religious Muslim students (M = 14.65) reporting significantly higher levels of fear of God than did religious school (M = 10.94) and highly religious Christian Students (M = 11.45). There was no significant

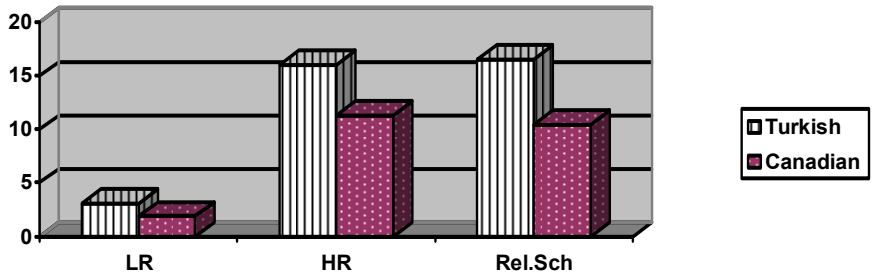
difference for low religious Turkish and Canadian students. Means and standard deviation are presented in Table 27.

Table 27. *Interaction of Nationality and Levels of Religiousness on Fear of God*

	Religiousness					
	Low		High		Religious School	
	M	Sd	M	Sd	M	Sd
Turkish	2.01a	1.14	14.65b	1.04	16.52b	0.97
Canadian	2.17a	1.01	11.45c	0.98	10.95c	0.93

Note: Different subscripts on the same row or on the same column represent significant difference between groups ($p < .001$)

Figure 4. *Interaction of Nationality and Levels of Religiousness on Fear of God*



Summary: These results indicated that nationality and religiosity had a significant association with scrupulosity. Overall, Turkish students reported higher scrupulosity symptoms in comparison with Canadian students. As expected, a high degree of religiosity was associated with higher levels of scrupulosity. That is, regardless of nationality, religious school students and highly religious individuals experienced more scrupulosity than low religious participants. Furthermore, there were significant differences between group in terms of Fear of Sin and Fear of God. Religious school and highly religious Muslim groups reported higher PIOS Fear of God than religious

school and high religious Christian groups. Furthermore the findings suggest that the cognitive basis of scrupulosity may differ between Christians and Muslims, with the latter more concerned about Fear of God than the former. In terms of Fear of Sin, Turkish Muslim amd Canadian Christian students reported higher score than low religious students. Overall the findings indicate that religious values may influence which beliefs and attitudes characterize the cognitive basis of religious obsessions.

3.4.3.3. Group Differences in OCD-relevant beliefs and appraisals: OBQ Responsibility/Threat Estimation (RT), Perfectionism/Certainty (PC), and Importance /Control of thoughts (ICT)

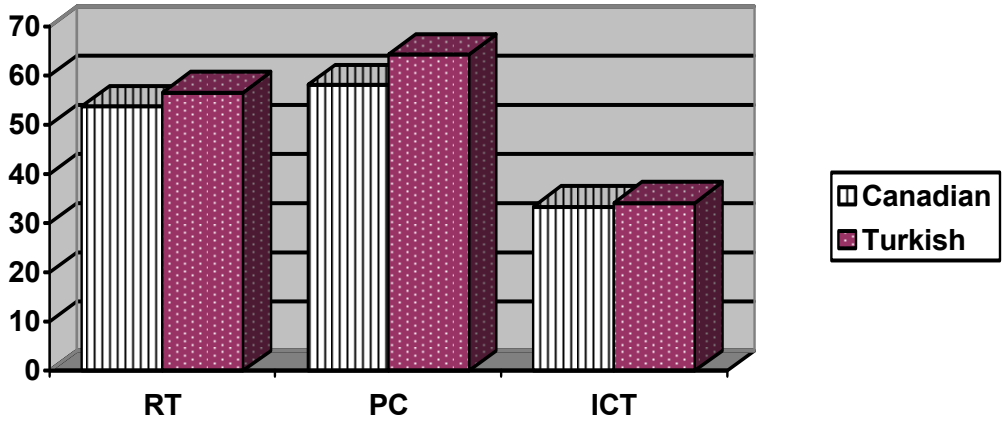
After investigating the effect of religiosity and nationality on OCD symptomatology, the effect of religiosity and nationality on obsessive beliefs was examined. A, 2 (nationality) by 3 (levels of religiousness) ANCOVA and MANCOVA with Bonferroni-corrected significance level of P <.02 (.05/3) were performed for the total score and subscales of the OBQ-44 with the BDI Total Score as a covariate.

The results of univariate analysis on the OBQ Total Score demonstrated that after holding constant the significant main effect of depression (F (1, 326) = 98.14, ή = .23, p < .001), only the main effect of degree of religiosity (F (2, 326) = 33.44, ή = .17, p < .001) was significant. Post-hoc comparison with Tukey HSD revealed that religious school subjects had the highest scores (M [Sd] = 164.88 [2.79]), low religious participants the lowest (M [Sd] = 130.15 [3.18]), and high religious participants (M [Sd] = 150.78 [3.02]) middle. In terms of nationality, there was no significant difference between Turkish and Canadian students in OBQ Total Score

Similarly, after controlling for the significant effect of depression (Wilks λ = .77, F (3, 324) = 32.98, ή = .23, p < .01), a MANCOVA on the three OBQ-44 subscales revealed a main effect of nationality (Wilks λ = .97, F (3, 324) = 3.31, ή = .03, p < .02) as well as a main effect of religiousness (Wilks λ = .78, F (6, 648) = 14.12, ή = .12, p < .001), but no significant interaction effect. Analyses of variances (ANOVA) on each dependent variable were conducted as follow-up tests to the

MANOVA by using the Bonferroni correction. In terms of the effect of nationality , as depicted in Figure 5, the ANOVA on OBQ PC scores was significant, *F (*1, 332) = 12.69, ή = .09, $p < .001$, while the ANOVA on OBQ the R/T and I/CT were not significant. That is, Turkish students reported a higher level of perfectionism and intolerance for uncertainty (*M* [*Sd*] = 64.29 [1.14]) in comparison to Canadian students (*M* [*Sd*] = 58.10 [1.15]).

Figure 5. *The Main Effect of Nationality s on OBQ Subscales.*



Separate analyses of variance were conducted to examine the significant effect of religiosity on the OBQ-44 subscales. The ANOVA on the three subscales was significant, (F *(*2, 330) = 13.75, ή = .08, $p < .001$ for RT; *F (*2, 331) = 6.48, ή = .04, $p < .01$ for PC, and *F (*2, 330) = 29.97, ή = .15, $p < .001$ for ICT). As presented in Table 28, post hoc analyses of ANOVA for the OBQ RT scores consisted of conducting pairwise comparisons to determine which degree of religiosity affected the experience of beliefs about RT most strongly. Low religious individuals (M = 49.10) experienced significantly lower inflated sense of responsibility and threat estimation in comparison with both of the other two religious groups. There were no significant differences between the religious school (M = 59.42) and high religious (M = 55.39) groups, as depicted in Figure 6. Post hoc comparison for PC demonstrated that there was only a

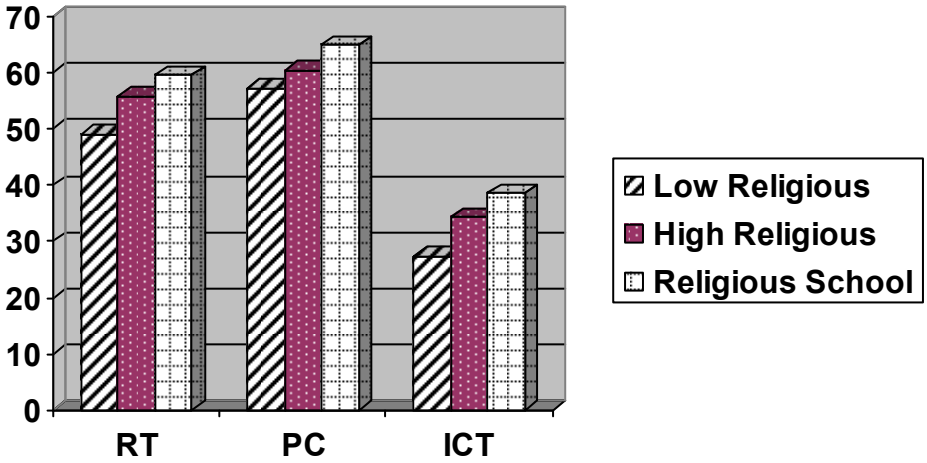
significant difference between low religious and religious school participants. To put it differently, Religious School students (M = 64.85) had higher scores on the OBQ PC subscale than low religious students (M = 57.28).

Table 28. *Main Effect of Religiosity on OBQ Subscales*

	Religiousness					
	Low		High		Religious School	
OBQ Subscales	M	Sd	M	Sd	M	Sd
RT	49.10a	1.49	55.39b	1.55	59.42b	1.31
PC	57.28a	1.57	60.41ab	1.63	64.85b	1.38
ICT	27.25a	1.12	34.27b	1.16	38.56c	.98

Note: Different subscripts on the same row represent significant difference between groups ($p < .01$). RT: Responsibility/Threat Estimation, PC: Perfectionism/Certainty, ICT: Importance /Control of thoughts.

Figure 6. *The Main Effect of Religiosity on OBQ Subscales.*



Finally, pairwise comparisons were conducted to examine mean differences on ICT subscale scores in terms of religiosity. Results revealed that the religious school group (M = 38.55) reported a higher degree of importance and need to control thoughts in comparison with both of the other two groups. Furthermore, the high religious

group (M = 34.27) had an elevated tendency to give importance to their thoughts and to control their unwanted thoughts than the low religious group (M = 27.25).

Summary: These findings indicated that the experience of obsessive related beliefs was affected only by the degree of religiosity. High religious individuals reported higher obsessive like beliefs than did low religious individuals. However, Canadian and Turkish students did not differ in their endorsement obsessive beliefs. Consistent with a significant effect of religiosity on OCD symptoms, three degrees of religiosity were significantly different from each other in the OBQ total score and its subscales. That is, religiosity has an increasing effect on appraisals of RT, PC, and ICT. Religious school students reported a higher degree of RT, PC, and ICT as compared with low religiosity participants. While there were significant differences between the high and low religious group in responsibility/threat estimation, and importance/control of thoughts, they did not differ in perfectionism/certainty beliefs. However, Turkish students reported higher level of perfectionism and intolerance for uncertainty in comparison with Canadian students.

3.4.4. Predictors OCD Symptoms in Canadian Christian and Turkish Muslim Data

To answer the questions of what predicts OCD symptoms and whether the predictors of OCD symptoms differ in Canadian Christian and Turkish Muslim samples two separate hierarchical regression analyses were conducted on the Turkish and Canadian samples. Depression and anxiety symptoms constituted general distress factors and were entered in the first block. As mentioned in the method section, the Guilt Inventory consisted of three subscales; Trait Guilt, State Guilt, and Moral Standards. Because the items of Moral Standards subscales and items of rthe Religious Fundamentalism Scale are highly overlapping, moral guilt items were excluded from the GI Total Score, so that the guilt score consisted of only trait and state guilt items. Then guilt and religious fundamentalism scores (RFS) were included in the second

block. Three subscales of OBQ as obsession related beliefs were entered in the third step. Finally, PIOS scores were entered into the analyses.

3.4.4.1. Predictors of Obsessive Symptoms in the Canadian and Turkish Sample

The first regression analysis was performed to examine the predictors of CBOCI-obsession subscale score in the Turkish sample. Variables were entered into the analyses in the same order as previously described. After step one, anxiety and depression explained 31% of the total variance in obsessive symptoms (F_{change} [2, 365] = 84.80, R^2 = .31, p <. 001). The addition of GI and RFS scores in the second step accounted for a significant portion of the variance and they explained an additional 9 % of the variance (F_{change} [2, 363] = 27.22, R^2 = .09, p <. 001). In the third step, the three subscales of OBQ explained an additional 6 % variance; F change was statistically significant (F [3, 360] = 12.69, R^2 = .06, p <. 001). In the last step, entering PIOS scores accounted for a significant portion of the variance, and increased the explained variance to 44% (F_{change} [1, 359] = 5.45, R^2 = .01, p <. 01).

As presented in Table 29, examination of the beta weights for individual predictors revealed that the BAI and BDI were significant predictors of CBOCI-obsession symptoms (pr = .19, β =. 19, t [365] = 3.78, p < .001; pr = .41, β =. 43, t [365] = 8.60, p < .001, respectively). In the second step, both guilt and religiosity significantly contributed to the prediction of obsessive symptoms (pr = .26, β =. 28, t [363] = 5.31, p < .001; pr = .18, β = .15, t [363] = 3.68, p < .001, respectively). Higher level of religiosity and guilt scores was associated with a greater higher degree of obsessive symptoms. In the third step, among the three obsessive beliefs, only importance of thought and need to control thoughts (OBQ-ICT) was significant predictor of obsessive symptoms (pr = .14, β =. 15, t [360] = 2.69, p < .01.) Finally, on the last step, scrupulosity symptoms significantly predicted severity of obsessions (pr = .14, β =. 16, t [359] = 2.33, p < .05) with all variables in the equation scrupulosity, depression, guilt, and importance/control of thoughts scores were still significantly related to obsessive symptom severity in the Turkish sample.

Table 29. *Predictors of Obsessive Symptoms in the Turkish Muslim Students.*

		Turkish Data				
Steps	Variables	β	t	pr.	R^2 Δ	(df) F change
1	**Control Variables**				**.31**	**(2. 365) 84.80*** **
	Depression	.43	8.60***	.41		
	Anxiety	.19	3.78***	.19		
2	**Vulnerability Variables**				**.09**	**(2. 363) 27.22*** **
	RFS	.15	3.68***	.18		
	GI	.28	5.31***	.26		
		Turkish Data				
Steps	Variables	β	t	pr.	R^2 Δ	(df) F change
3	**Obsessive Beliefs**				**.06**	**(3. 360) 12.69*** **
	OBQ-RT	.08	1.33	.07		
	OBQ-PC	.08	1.43	.07		
	OBQ-ITC	.15	2.69**	.14		
4	**Scrupulosity**				**.01**	**(1. 359) 5.45***
	PIOS	.16	2.33*	14		
	Depression	.254	4.73*	.09		
	Anxiety	.085	1.81	-.01		
	RFS	-.018	-.30	.18		
	GI	.181	3.39**	.06		
	OBQ-RT	.078	1.19	.08		
	OBQ-PC	.080	1.44	.12		
	OBQ-ITC	.135	2.35*	.12		
			Total R^2	.47		

*** $p < .001$, ** $p < .01$, * $p < .05$.

Note: GI: Guilt Inventory, RFS: Religious Fundamentalism Scale, OBQ: Obsessive Beliefs Questionnaire, RT: Responsibility/Threat Estimation, PC: Perfectionism/Certainty, ICT: Importance /Control of thoughts; PIOS: Penn Inventory of Scrupulosity.

The second regression analysis was performed to examine the predictors of CBOCI-obsession subscale in the Canadian sample. The result of the regression analysis (see Table 30.) revealed a significant association between the control variables and obsessive symptom severity, and explained 27 % of the total variance in obsessive symptoms (F_{change} [2, 205] = 37.82, p <. 001). GI and RFS scores were the second set of variables entered into the equation, that explained 16 % of the variance (F_{change} [1, 203] = 29.38, p < .001), and both of them had a significant association with obsessive symptom severity (pr = .29, β = .28, t [203] = 4.28, p< .001; pr = .35, β = .29, t [203] = 5.28, p < .001, respectively). In the third step, the OBQ were subscales entered into the equation and the explained variance increased to 48% (F_{change} [3, 200] = 6.10, p < .01), with OBQ-RT and OBQ-ITC having a significant association with obsessive symptoms (pr = .14, β = .15, t (200) = 2.03, p < .05; pr = .15, β = .17, t (200) = 2. 11, p < .05, respectively). Finally PIOS scrupulosity increased the explained variance to 51% (F_{change} [1, 199] = 11.88, p <. 01) and this variable showed a significant association with obsessive symptom (pr = .24, β = .26, t (199) = 3.44, p < .01). In the final step with all variables entered into the regression equation, only the BDI, GI, and PIOS were still significant predictors of the obsession symptoms.

Table 30. *Predictors of CBOCI-Obsession Subscale in the Canadian Students*

		Canadian Data				
Steps	Variables	β	t	pr.	R^2 Δ	(df) F change
1	**Control Variables**				**.27**	**(2, 205) 37.82*** **
	BDI	.34	4.45***	.29		
	BAI	.23	2.98***	.20		
2	**Vulnerability Variables**				**.16**	**(2, 203) 29.38*** **
	GI	.28	4.28***	.29		
	RFS	.29	5.28***	.35		

Table 30 (continued)

Canadian Data						
Steps	Variables	β	t	pr.	R^2 Δ	(df) F change
3	**Obsessive Beliefs**				**.01**	**(1, 200) 6.10****
	OBQ-RT	.15	2.03*	.14		
	OBQ-PC	-.05	-.62	-.04		
	OBQ-ITC	.17	2.11*	.15		
4	**Scrupulosity**				**.02**	**(1, 199) 11.88****
	PIOS	.26	3.44**	.24		
	BDI	.20	2.90**	.20		

Canadian Data						
Steps	Variables	β	t	pr.	R^2 Δ	(df) F change
	BAI	.09	1.33	.09		
	GI	.16	2.47*	.17		
	RFS	.10	1.68	.12		
	OBQ-PC	-.03	-.55	-.03		
	OBQ-RT	.11	1.54	.10		
	OBQ-ITC	.10	1.35	.09		
			Total R^2	.51		

*** $p < .001$, ** $p < .01$, * $p < .05$.

Note: GI: Guilt Inventory, RFS: Religious Fundamentalism Scale, OBQ: Obsessive Beliefs Questionnaire, RT: Responsibility/Threat Estimation, PC: Perfectionism/Certainty, ITC: Importance /Control of thoughts; PIOS: Penn Inventory of Scrupulosity.

In conclusion, after controlling for the effect of depression and anxiety, religious fundamentalism, guilt, OBQ-I/CT and scrupulosity were significant predictors of the obsessive symptom scores. However, belief about the importance and control of unwanted thoughts (OBQ-ITC) was significant only in the Turkish sample. Thus cultural differences may be apparent in the certain belief and appraisals about the control of unwanted intrusive thoughts.

3.4.4.2. Predictors of Compulsive Symptoms in Canadian and Turkish Sample

Similar to the previous analyses, as can be seen from Table 31, depression and anxiety scores were the first variables entered into the equation, and explained 28 % of the variance (F_{change} [2, 363] = 68.14, p <. 001), and these variables had a significant association with CBOCI- compulsions (pr = .32, β =. 34, t [363] = 6.58, p < .001; pr = .24, β =. 25, t [363] = 4.84, p < .001, respectively). On the second step, GI and RFS scores were entered into the equation and explained a further 5% of the total variance (F_{change} [2, 361] = 14.60, p < .001), and these variables had a significant positive association with CBOCI-compulsion (pr =. 15, β = .16, t [361] = 2.89, p < .001; pr =. 19, β = .16, t [358] = 3.72, p < .001, respectively). In the third step, OBQ subscales scores significantly improved the explained variance (F_{change} [3, 358] = 14.84, p < .05), and only responsibility that beliefs had a significant association with compulsive symptoms. That is a higher level of responsibility that had a significant positive relationship with compulsive symptoms in Muslim students. In the last step, scrupulosity scores weakly but significantly increased explained variance to 41% (F_{change} [1, 357] = 4.85, p < .05), and this variable had a significant relationship with compulsive symptoms (pr =. 12, β = .16, t [357] = 2.55, p < .05).

Table 31. *Predictors of CBOCI-Compulsions Symptoms in the Turkish Muslim Students*

		Turkish Data				
Steps	Variables	β	t	pr.	R^2 Δ	(df) F change
1	**Control Variables**				**.28**	**(2, 363) 68.14*** **
	BDI	.34	6.58***	.32		
	BAI	.25	4.84***	.24		
2	**Vulnerability Variables**				**.05**	**(2, 361) 14.60*** **
	RFS	.16	3.72***	.19		
	GI	.16	2.89**	.15		

Table 31 (continued)

		Turkish Data				
Steps	Variables	β	t	pr.	R^2 Δ	(df) F change
3	**Obsessive Beliefs**				**.07**	**(3, 358) 14.84*** **
	OBQ-RT	.18	2.69**	.14		
	OBQ-PC	.11	1.87	.09		
	OBQ-ITC	.06	.95	.05		
4	**Scrupulosity**				**.01**	**(1, 357) 4. 85***
	PIOS	.16	2.55*	.12		
	BDI	.22	3.92*	.20		
	BAI	.14	2.96*	.15		
	RFS	.00	.05	.00		
	GI	.05	1.01	.05		
	OBQ-RT	.17	2.56*	.13		
	OBQ-PC	.11	1.89	.10		
	OBQ-ITC	.04	.66	.04		
				Total R^2	.41	

*** $p < .001$, ** $p < .01$, * $p < .05$.

Note: GI: Guilt Inventory, RFS: Religious Fundamentalism Scale, OBQ: Obsessive Beliefs Questionnaire, RT: Responsibility/Threat Estimation, PC: Perfectionism/Certainty, ITC: Importance /Control of thoughts; PIOS: Penn Inventory of Scrupulosity

The second regression analysis was performed to examine the predictors of CBOCI-compulsion in the Canadian sample. The result of the regression analysis (see Table 32) revealed a significant association between the control variables and compulsive symptoms that explained 23% of the total variance in compulsive symptoms (F_{change} [2, 205] = 29.76, $p <$. 001). Different from the Muslim sample, only anxiety had a significant relationship with compulsive symptoms (pr =. 33, β = .39, t [205] = 4.95, $p < .001$). GI and RFS scores were the second set of variables entered into the equation, and explained a further 4 % of the variance (F_{change} [1, 203] = 5.99, p

< .01), but only guilt had a significant association with compulsive symptoms (*pr* = .18, β = .19, *t* [203] = 2.54, *p*< .05). In the third step, OBQ subscales were entered into the equation the explained variance increased to 34 % (F_{change} [3, 200] = 7.47, *p* < .001), but only OBQ-ITC had a significant association with compulsive symptoms (*pr* = .19, β = .25, *t* (200) = 2. 77, *p* < .01). Finally, the addition of the PIOS did not significantly improve explained variance in compulsive symptoms. In the last step with all variables in the equation, only anxiety and importance and control of thought appraisals maintained significant associations with compulsive symptoms in the Canadian students.

Table 32. *Predictors of CBOCI-Compulsions Symptoms in the Canadian Christian Students*

		Canadian Data				
Steps	Variables	β	t	pr.	R2 Δ	(df) F change
1	**Control Variables**				.23	(2, 205) 29.76***
	BDI	.12	1.46	.10		
	BAI	.39	4.95***	.33		
2	**Vulnerability Variables**				.04	(2, 203) 5.99**
	GI	.19	2.54*	.18		
	RFS	.11	1.74	.12		
3	**Obsessive Beliefs**				.07	(3, 200) 7.47***
	OBQ-RT	.01	.15	.01		
	OBQ-PC	.10	1.23	.09		
	OBQ-ITC	.25	2.77**	.19		
4	**Scrupulosity**				.00	(1, 199) 6.53ns
	PIOS	.04	.44	.03		
	BDI	-.01	-.18	-.01		
	BAI	.29	3.71***	.25		
	GI	.11	1.42	.10		
	RFS	.01	.06	.01		

Table 32 *(continued)*

Canadian Data					
Steps Variables	β	t	pr.	R2 Δ	(df) F change
OBQ-RT	.01	.08	.01		
OBQ-PC	.10	1.24	.09		
OBQ-ICT	.24	2.61*	.18		
			Total R^2	.34	

*** $p < .001$, ** $p < .01$, * $p < .05$.

Summary: there were more familirities than differences in the predictors of OCD symptoms in the Turkish and Canadian students. For both Christian and Muslim individuals, obsessions was best accounted for by the occurance of (a) religiosity, (b) feeling of guilt, (c) beliefs about the importance and the necessity of controlling unwanted intrusive thoughts, and (d) scrupulosity. Results also revealed some hint of cultural differences. Different from the Muslim sample, severity of obsessional symptom was also associated with beliefs about responsibility and overestimated threat estimation in the Christian sample. Thus, a high degree of religiosity and excessive guilt may increase the possibility of experiencing of unwanted mental intrusions, which may arise from the fear of negative religious consequences (e.g., punishment from God, eternal damnation) which result in distress and anxiety, and motivate the person to control intrusive thoughts (e.g., sexual, sacrilegious) that are perceived as sinful and morally unacceptable. However, these purposeful control efforts usually provide transient relief, and paradoxically increase the frequency and severity of obsessions. Overall, these results support the cognitive model of OCD.

When the predictors of compulsive symptoms were examined, the analyses revealed more cross-cultural differences. After excluding the effects of depression and anxiety, the severity of compulsive symptoms in the Turkish Muslim sample was accounted by religiosity, guilt, beliefs about responsibility and threat estimation, and scrupulosity. Different from obsessive symptoms, beliefs about importance and need to control thoughts was not related to severity of compulsive symptoms. However, in the

Canadian sample strength of religious devotion and severity of scrupulosity were not related to compulsive symptoms. In terms of maladaptive cognitive biases, beliefs about importance and control of thoughts was a significant predictor of compulsive symptoms.

3. 4.5. Predictors of Scrupulosity in Canadian and Turkish Sample

The present study also sought to examine the role of religiosity and nationality in scrupulosity. Analyses are specifically aimed to understand whether scrupulosity and obsessions and compulsions share common feature or whether different factors are associated with scrupulosity as compared to OCD symptoms. To achive this aim two seperate two separate regression analyses were conducted on the PIOS Fear of Sin and Fear of God subscales in the Canadian and Turkish samples.

Given the relationship between OCD and general distress, depression and anxiety scores were entered in step 1. Based on a significant relationship between religiosity, guilt, and scrupulosity symptoms, Step 2 incorporated guilt and Religious fundamentalism scores. The cognitive measures found to be significantly related with scrupulosity (i.e., Responsibility/Threat Estimation, Importance/ Control of Thought, Perfectionism/Intolerance of Uncertainty subscales) were entered in the Step 3 of the model. Finally, the CBOCI-obsessions and compulsions subscales were included in Step 4.

3.4.5.1. Predictors of PIOS Fear of Sin in Turkish and Canadian Samples

The first multiple regression analysis was conducted to predict the PIOS- Fear of Sin score in the Turkish sample. Table 33 shows the results of this analysis.

As expected, the depression and anxiety scores were entered into the equation and explained 14% of the variance (F_{change} [2, 365] = 28.45, p <. 001), and these variables had a significant association with the fear of sin scores (pr =. 19, β = .21, t [365] = 3.73, p < .001; pr =. 18, β = .21, t [365] = 3.66, p < .001, respectively). In Step

2, the RFS and Guilt Inventory scores contributed significantly to the explanatory power of the model (F_{change} [2, 363] = 119.75, p <. 001), and explained a further 34% of the total variance. Examination of the beta weights for individual predictors revealed that both guilt and religious fundamentalism were significant predictors of fear of sin symptoms (pr =. 54, β = .48, t [363] = 12.30, p < .001; pr =. 34, β = .33, t [363] = 6.97, p < .001, respectively). In Step 3, OBQ subscales added significantly to the regression model (F_{change} [3, 360] = 14.29, p <. 001), and the explained variance increased to 54%. Analysis revealed that only the OBQ- ICT subscale had a significant association with fear of sin (pr =. 21, β = .22, t [360] = 4.16, p < .001). In the final regression model, the CBOCI obsession subscale (pr =. 15, β = .17, t [358] = 2.94, p < .001), but not the compulsions Subscale, was significant predictor (F_{change} [3, 358] = 8.52, p <. 001). At the final step, all variables accounted for 56% of the variance in the Fear of Sin subscale score.

Table 33. *The Predictors of Fear of Sin scores in the Turkish Muslim Students*

		Turkish Data				
Steps	Variables	β	t	pr.	R^2 Δ	(df) F change
1	**Control Variables**				.14	(2, 365) 28.45***
1	BDI	.21	3.73***	.19		
	BAI	.21	3.66***	.18		
2	**Vulnerability Variables**				.34	(2, 363) 119.75***
	GI	.48	12.30***	.54		
	RFS-R	.33	6.97***	.34		
3	**Obsessive Beliefs**				.06	(3, 360) 14.29***
	OBQ-RT	.09	1.46	.08		
	OBQ-PC	-.03	-.54	-.03		
	OBQ-ITC	.22	4.16***	.21		
4	**OCD Symptoms**				.02	(2, 358) 8.52*
	CBOCI- Compulsions	.04	.74	.04		
	CBOCI- Obsessions	.17	2.94**	.15		

Table 33 (continued)

		Turkish Data				
Steps	Variables	β	t	pr.	R^2 Δ	(df) F change
	BDI	-.01	-.37	-.02		
	BAI	.12	2.91	.15		
	RFS-R	.40	10.62	.49		
	GI	.23	4.99	.26		
	OBQ-RT	.06	1.06	.06		
	OBQ-PC	-.04	-.87	-.05		
	OBQ-ICT	.18	3.53	.18		
				Total R^2	.54	

*** $p < .001$, ** $p < .01$, * $p < .05$.

Note: BDI: Beck Depression Inventory, BAI: Beck Anxiety Inventory; GI: Guilt Inventory, RFS: Religious Fundamentalism Scale, OBQ: Obsessive Beliefs Questionnaire, RT: Responsibility/Threat Estimation, PC: Perfectionism/Certainty, ITC: Importance /Control of thoughts; PIOS: Penn Inventory of Scrupulosity; CBOCI: Clark Beck Obsessive Compulsive Inventory.

The second multiple regression analysis was conducted to predict the PIOS-Fear of Sin score in the Canadian Christian sample. Table 34 presents the results of this analysis. The results were very consistent with the findings of Turkish Muslim sample. in the first step, the depression and anxiety scores significantly predicted scores on the Fear of Sin subscale, and accounted 17 % of the total variance (F_{change} [2, 206] = 20.94, $p < .001$). In Step 2, the RFS and Guilt inventory contributed significantly to the explanatory power of the model, and explained a further 25% of the variance (F_{change} [2, 204] = 42.71, $p < .001$). In Step 3, the OBQ subscales were entered into the equation and explained an additional 12 % of the variance (F_{change} [3, 201] = 16.89, $p < .001$). In the final regression model, the addition of the two CBOCI subscales explained an additional 4% of the variance (F_{change} [2, 199] = 8.81, $p < .001$). When all variables were entered into the analysis, the accounted total variance was 55%.

Examination of the beta weights for individual predictors revealed that anxiety and depression were significant predictors of fear of sin (*pr* = .23, β = .28, *t* [205] = 3.44, p < .001; *pr* = .14, *β* = .17, *t* [205] = 2.07, p < .001, respectively). In the second step, both guilt and religiosity significantly contributed to the prediction of fear of sin (*pr* = .23, *β* = .24, *t* [203] = 3.45, *p* < .001; *pr* = .37, *β* = .35, *t* [203] = 5.70, *p* < .001; respectively). Higher level of religiosity and guilt scores were associated with elevated fear of sin. In the third step, OBQ- ICT and RT subscales, but not OBQ- PC, added significantly to the regression model (*pr* = .26, *β* = .29, *t* [200] = 3.88, *p* < .001; *pr* = .18, *β* = .19, *t* [200] = 2.65, *p* < .001, respectively). Finally, on the last step, the CBOCI obsession subscale (*pr* = .28, *β* = .28, *t* [198] = 4.17, p < .001), but not compulsions subscale, was a significant predictor of fear of sin scores.

Table 34. *The Predictors of Fear of Sin scores in the Canadian Christian Students*

		Canadian Data				
Steps	Variables	β	t	pr.	R2 Δ	(df) F change
1	**Control Variables**				.17	(2, 206) 20.94***
	Depression	.17	2.07*	.14		
	Anxiety	.28	3.44**	.23		
2	**Vulnerability Variables**				.25	(2, 204) 42.71***
	Guilt	.24	3.45**	.23		
	Religiousness	.35	5.70***	.37		
3	**Obsessive Beliefs**				.12	(3, 201) 16.89***
	OBQ-RT	.19	2.65**	.18		
	OBQ-PC	-.04	-.58	-.04		
	OBQ-ITC	.29	3.88**	.26		
4	**OCD Symptoms**				.04	(2, 199) 8.81***
	CBOCI- Compulsions	-.06	-.95	-.07		
	CBOCI- Obsessions	.28	4.17***	.28		
	Depression	-.02	-.42	-.03		
	Anxiety	.16	2.50*	.17		

Table 34 (continued)

Canadian Data				
Steps Variables	β	t	pr.	R2 Δ (df) F change
GI	.10	1.66	.11	
RRS	.23	4.36**	.29	
OBQ-RT	.13	1.86	.13	
OBQ-PC	-.02	-.30	-.02	
OBQ-ICT	.25	3.51**	.24	
			Total R^2 .55	

** $p < .001$, * $p < .05$

3.4.5.2. Predictors of Fear of God Symptoms in Turkish Muslim and Canadian Christian Samples

Similar to the previous analysis, predictors of PIOS Fear of God symptoms were examined for the Turkish Muslim sample. In Step 1, depression and anxiety were entered into the regression model and explained 3 % of the total variance in Fear of God symptoms (F_{change} [2, 365] = 5.99, $p <$. 01). Examination of the beta weights for individual predictors revealed (see Table 35) significant association between anxiety and fear of God scores (pr =. 10, β = .12, t [365] = 2.01, $p < .01$), but not for depression. GI and RFS scores were the second set of variables entered into the equation, and explained 49% of the variance (F_{change} [2, 363] = 186.30, $p< .0001$), and both religious fundamentalism and guilt had a significant association with Fear of God (pr = .67, β = .64, t [363] = 17.29, $p< .0001$; pr = .27, β = .24, t [363] = 5.25, $p<$ .0001). In step 3, the OBQ subscales were entered into the equation and the explained variance increased to 51% (F_{change} [3, 360] = 5.83, $p< .01$). In spite of a significant increase in explained variance, none of the OBQ subscales had a significant unique association with Fear of God. In other words, in the third step, the OBQ subscale scores significantly increased the explained variance; even though, their individual weights were not significant. Finally, the addition of the CBOCI subscale scores

significantly improve explained variance in the Fear of God scores (F_{change} [2, 358] = 5.84, p< .01). Examination of the beta weights for individual predictors revealed that only the CBOCI compulsions subscale had a significant association with Fear of God scores (*pr* =. 15, β = .16, *t* [358] = 2.83, *p* < .01).

Table 35. *The Predictors of Fear of God scores in the Turkish Muslim Students*

		Turkish Data				
Steps	Variables	β	t	pr.	R^2 Δ	(df) F change
1	**Control Variables**				.03	(2. 365) 5.99**
	BDI	.08	1.36	.07		
	BAI	.12	2.01*	.10		
2	**Vulnerability Variables**				.49	(2. 363) 186.30***
	GI	.24	5.25***	.27		
	RFS	.64	17.29***	.67		
3	**Obsessive Beliefs**				.02	(3. 360) 5.83*
	OBQ-RT	.07	1.15	.06		
	OBQ-PC	.05	.98	.05		
	OBQ-ITC	.08	1.44	.08		
4	**OCD Symptoms**				.01	(1. 358) 5.84**
	CBOCI- Compulsions	.16	2.83**	.15		
	CBOCI- Obsessions	.00	-.01	.00		
	BDI	-.05	-1.0	-.06		
	BAI	.06	1.41	.07		
	RFS	.60	15.9***	.64		
	GI	.19	4.0***	.21		
	OBQ-RT	.04	.66	.04		
	OBQ-PC	.03	.65	.03		
	OBQ-ICT	.06	1.20	.06		
				Total R^2	.55	

p < .05, **p < .01, ***p < .001

A second hierarchical regression analysis was performed to examine the predictors of PIOS Fear of God in the Canadian Christian sample. As can be seen from Table 36, the results were very similar to the findings with the Muslim data. In set 1, depression and anxiety explained 11 % of the total variance in Fear of God (F_{change} [2, 206] = 12.03, p <. 001). GI and RFS scores were the second set of variables entered into the equation, and explained 38 % of the variance (F_{change} [2, 204] = 74.88, p< .01), and both religiosity and guilt had a significant positive association with Fear of God (pr = .27, β= .24, t [204] = 3.97, p< .001; pr = .56, β = .55, t [204] = 10.70, p< .001). On the third step, the OBQ subscales were entered into the equation and the explained variance increased to 51 % (F_{change} [3, 201] = 3.27, p< .05), although none of OBQ subscales had significant unique association with Fear of God. Finally, the addition of the two CBOCI subscales did not significantly improve explained variance in PIOS Fear of God.

Table 36. *The Predictors of Fear of God scores in the Canadian Christian Students*

		Canadian Data				
Steps	Variables	β	t	pr.	R^2 Δ	(df) F change
1	**Control Variables**				.11	(2. 206) 12.03***
	BDI	.14	1.66	.12		
	BAI	.21	2.52*	.17		
2	**Vulnerability Variables**				.38	(2. 204) 74.88***
	GI	.24	3.97***	.27		
	RFS	.55	10.70***	.56		
3	**Obsessive Beliefs**				.02	(3. 201) 3.27*
	OBQ-RT	.10	1.24	.08		
	OBQ-PC	.01	.03	.00		
	OBQ-ITC	.10	1.35	.09		
4	**OCD Symptoms**				.01	(1. 199) 1.91
	CBOCI- Compulsions	-.02	-.28	-.02		
	CBOCI- Obsessions	.14	1.89	.13		

Table 36 (continued)

Canadian Data				
Steps Variables	β	t	pr.	R^2 Δ (df) F change
BDI	.01	.14	.01	
BAI	.14	2.12**	.15	
GI	.17	2.65**	.18	
RFS	.47	8.30***	.50	
OBQ-RT	.07	.95	.06	
OBQ-PC	.01	.13	.01	
OBQ-ICT	.09	1.09	.07	
			Total R^2	.52

** p < .001, * *p* < .05

All findings of the questionnaire data were summarized in Table 37.

Table 37. *Summary of the Findings of the Group Comparisons*

Variables	Group 1 Low Religiosity	Group 2 High Religiosity	Group 3 Religious School Students	Covariance Analysis outcome	Post-Hoc Outcome
BDI	11.08 (1.03)	7.81 (0.07)	6.75 (0.62)	F (2, 3.19) = 6.49	-
BAI	15.37 (1.51)	12.43 (1.06)	12.28 (0.91)	F (2, 319) = 1.66	-
PSWQ	43.29 (1.98)	45.82 (1.39)	44.20 (1.19)	F (2, 319) = .66	-
GI	118.98(2.20)	134.84 (2.34)	138.10 (2.01)	*F (*2, 319) = 22.60 p < .001	2, 3 > 1
CBOCI-Total	14.51 (.91)	18.82 (0.86)	23.35 (.080)	F (2, 328) = 22.24 p < .001	2, 3 > 1
CBOCI-O	8.69 (0.51)	10.78 (0.53)	14.01 (0.45)	F (2, 312) = 25.09 p < .001	3 > 2 >1
CBOCI-C	5.87 (0.51)	8.03 (0.53)	9.53 (0.45)	F (2, 312) = 12.91 p < .001	2, 3 >1
PIOS-Total	9.89 (1.16)	31.59 (1.09)	34.45 (1.03)	F *(*2, 330) = 140.58 p < .001	2, 3 >1
PIOS-FOS	7.80(0.84)	18.54(0.87)	20.72(0.74)	*F (*2, 330) = 88.52 p < .001	2, 3 >1

Table 37(continued)

Variables	Group 1 Low Religiosity	Group 2 High Religiosity	Group 3 Religious School Students	Covariance Analysis outcome	Post-Hoc Outcome
PIOS-FOG	2.09(0.50)	13.05(0.55)	13.73(0.47)	*F (*2, 330) = 171.97 p < .001	2, 3 >1
OBQ-44 Total	130.15 (3.18)	150.78 (3.02)	164.88 (2.79)	*F (*2, 326) = 33.44 p < .001	3>2>1
OBQ-RT	49.10(1.49)	55.39(1.55)	59.42(1.31)	F (2, 330) = 13.75 p < .001	2, 3 >1
OBQ-PC	57.28 (1.57)	60.41(1.63)	64.85(1.38)	*F (*2, 331) = 6.48 p < .001	3 >1
OBQ-ICT	27.25(1.12)	34.27(1.16)	38.56(0.98)	*F (*2, 330) = 29.97 p < .001	3>2>1

Nationality

Variables	Group 1 Canadian	Group 2 Turkish	Covariance Analysis outcome	Post-Hoc Outcome
BDI	6.55 (0.50)	9.03 (0.58)	*F* (1, 320) = 10.26, p < .01	2 > 1
BAI	11.03 (0.73)	14.96 (0.84)	*F* (1, 320) = 7.42, p < .01	2 > 1
PSWQ	46.09(1.19)	43.51(1.14)	*F* (1, 320) = 2.26, p < .01	-
GI	135.04 (1.64)	127.59 (1.89)	F (2, 260) = 16.33, p < .001	1 > 2
CBOCI-Total	19.91(0.68)	20.95(0.73)	*F (*2, 313) = 1.08, NS	-
CBOCI-O	11.95(0.37)	12.24(0.43)	F (2, 312) = .52, NS	-
CBOCI-C	8.00(0.37)	8.77(0.43)	F (2, 312) = 1.77, NS	-
PIOS-Total	23.07 (.87)	28.76 (0.94)	*F (*1,330) = 4.45, *p* < .01	2 > 1
PIOS-FOS	15.77(0.56)	15.62(0.61)	*F (*1, 330) = .03, NS	-
PIOS-FOG	8.19(0.38)	11.05(0.41)	*F (*1, 330) = 25.81, p < .001.	2 > 1
OBQ-44 Total	147.04 (2.35)	150.17 (2.57)	*F (*2, 326) = .79,NS	-
OBQ-RT	54.38 (1.01)	54.75 (1.10)	F (2, 330) = .06, NS	-
OBQ-PC	58.10(1.15)	64.29(1.14)	*F (*2, 331) = 12.69 p < .01	2 > 1
OBQ-ICT	33.82(0.75)	32.82(0.83)	*F (*2, 330) = .58, NS	-

Table 37 (continued)

	Predictors of Obsessive Symptoms	
	Canadian Christians	Turkish Muslim
I. Step : Control Variables	Depression	Depression
	Anxiety	Anxiety
II. Step: Vulnerability	GI	RFS
Factors	RFS	GI
III. Step: Obsessive Beliefs	OBQ-ITC	OBQ-ITC
	OBQ-RT	
IV. Step: Scrupulosity	PIOS	PIOS
	Predictors of Compulsive Symptoms	
	Canadian Christians	Turkish Muslim
I. Step : Control Variables	Anxiety	Depression
		Anxiety
II. Step: Vulnerability	GI	RFS
Factors		GI
III. Step: Obsessive Beliefs	OBQ-ITC	OBQ-RT
IV. Step: Scrupulosity	*NS.*	PIOS
	Predictors of Fear of Sin	
	Canadian Christians	Turkish Muslim
I. Step: Control Variables	Depression	Depression
	Anxiety	Anxiety
II. Step: Vulnerability	GI	RFS
Factors	RFS	GI
III. Step: Obsessive Beliefs	OBQ-ITC	OBQ-ITC
	OBQ-RT	
IV. Step: OCD Symptoms	CBOCI-Obsessions	CBOCI-Obsessions

Table 37 (continued)

	Predictors of Fear of God	
	Canadian Christians	Turkish Muslim
I. Step : Control Variables	Depression Anxiety	Anxiety
II. Step: Vulnerability Factors	GI RFS	RFS GI
III. Step: Obsessive Beliefs	*NS.*	*NS.*
IV. Step: OCD Symptoms	*NS.*	CBOCI-Compulsions

Note:, PIOS: Penn Inventory of Scrupulosity, PIOS-FOS: Penn Inventory of Scrupulosity Fear of Sin Subscale, PIOS-FOG: Penn Inventory of Scrupulosity Fear of God subscale, OBQ-44: Obsessive Beliefs Questionnaire-44, OBQ-44-RT: Obsessive Beliefs Questionnaire Responsibility/Threat Estimation Subscale; OBQ-44-PC: Obsessive Beliefs Questionnaire Perfectionism/Certainty Subscale, OBQ-44-ICT: Obsessive Beliefs Questionnaire Importance/Control of Thoughts, CBOCI: Clark-Beck Obsessive Compulsive Inventory Total Score; CBOCI-O: Clark-Beck Obsessive Compulsive Inventory Obsessions Subscale, CBOCI-C: Clark-Beck Obsessive Compulsive Inventory Compulsions Subscale; RFS: Religious Fundamentalism Scale, GI: Guilt Inventory.

3.5. Group Differences in Intrusive Thoughts, Appraisals, and Control Strategies: Results of the Interview Data (IITIS)

As stated before, intrusive distressing thoughts (obsessions) are one of the core features of obsessive-compulsive disorder. They usually pop into a person's mind without any deliberate intention. It has now become a fundamental assumption of cognitive behavioral theories (CBT) of OCD that obsessions derive from unwanted intrusive thoughts, images and impulses that are frequent in the normal population (e.g., Salkovskis, 1985, Rachman, 1997, Clark & Purdon, 1993). A major objective of the present study was to examine the effect of nationality and degree of religiosity on the experience, content, appraisal and control of intrusive thoughts using a structured

interview methodology (i.e., International Intrusive Thoughts Interview Schedule). This section presents the results of the individual interview data. This research mainly focuses on three types of intrusive thoughts; doubting, religious and sexual intrusions. The analyses were performed to examine four research questions:

1. Are there differences in the types of intrusive thoughts reported by the Turkish and the Canadian nonclinical samples?
2. Are there significant differences between Turkish and Canadian individuals in terms of the beliefs and appraisals associated with intrusive thought subtypes (i.e., primary appraisals)?
3. Do highly religious Muslim students appraise their intrusive thoughts differently from highly religious Christian students?
4. If highly religious individuals are more obsessional, how do they deal with their troubling unwanted intrusive thoughts? Are there differences in the control strategies used by between Turkish and Canadian students?

Because only high and low religious participants were interviewed, subsequent analyses only included these two groups as a level of religiosity. Religious school student group was not included in the analyses.

3.5.1. Group Differences in Doubting Intrusions

The first part of the interview focused on doubting intrusions. After giving participants a definition and examples of doubting intrusions, they were asked: *"In the last three months, did you experience unwanted intrusive thoughts, images or impulses in which doubt suddenly and unexpectedly entered your mind about some action, conversation or decision?."* If the participant answered yes, then he/she was asked to give two or three examples of doubt to determine whether the reported intrusion could be classified as a doubting intrusion.

To examine whether there was significant difference between Christian and Muslim students in terms of the experience of doubting intrusions, a chi-square test

was performed. As presented in Table 38, results indicated that there was a significant difference between Canadian Christian and Turkish Muslim groups in experiencing doubting intrusions, with significantly more Christian students reporting doubting intrusions than Muslims (χ^2 (1, N = 196) = 18.92, p < .0001). While 86.84 % of the Canadian sample reported they experienced at least one doubting intrusions in the last three months, the rate was 59% in the Turkish sample. However, there was no significant difference between high and low religious participants in the experience of doubting intrusions.

Table 38. *The Experience of Doubting Intrusions*

		Experience of Doubting Intrusion		
		No	Yes	Total
Participant Group	Canadian	15 (13.16%)	99 (86.84%)	114
	Turkish	33 (40.24%)	49 (59.76%)	82
		Experience of Doubting Intrusion		
Degree of Religiosity	Low	24 (24 %)	76 (76%)	100
	High	24 (25%)	72 (75%)	96
Total		48	148	196

Examples of Doubting Intrusions Mentioned.

Group differences in the content of reported doubting intrusions were examined. Table 39, presents examples and the percentage of doubting intrusions reported by Canadian and Turkish students.

Table 39. *Content of Doubting Intrusions Reported by Muslim and Christian Data*

Examples of Doubting Intrusions	Turkish Muslims	Canadian Christians
	N (%)	N (%)
Doubt Whether She/He Locked The Door	**21 (44 %)**	**34 (34 %)**
Doubt Whether Left Appliances Or Lights On	7 (14 %)	33 (33 %)
Doubts About Conversation (Offend Someone)	1 (2 %)	4 (4 %)
Doubts About Actions (Forget Assignment, Answer Exam Question Correctly, Etc.)	10 (20 %)	20 (20 %)
Doubts About Forgetting to Take personal things (Mobile Phone, Key, or Wallet, etc.)	10 (20 %)	9 (9 %)

It would appear from these data that the content and the most frequent type of doubting intrusions seem to be universal. In both samples, doubt about locking the door is the most frequent intrusion. However, this finding might be due to interview style or to the nature of the samples (i.e., students). When probing for this type of intrusion, the interviewer gave the example. *"You may have doubted whether you locked the door to your room or apartment even though you are quite certain that you locked it"*. This may have increase of the frequency of reporting this type of intrusion.

3.5.1.2. Group Differences in Frequency and Distress of Doubting Intrusions

Separate, 2 (Nationality: Canadian, Turkish) by 2 (degree of religiosity: Low, High) ANOVAs were performed to evaluate the effect of nationality and degree of religiosity on the frequency and distress of doubting intrusions. As can be seen from Table 40, the analysis revealed that the groups did not differ significantly in frequency and distress of doubting intrusions. Most rated them as happening at least monthly and as slightly distressing.

Table 40. *Group Differences in Frequency and Distress of Doubting Intrusions*

Frequency of Doubting Intrusions				
		M	SD	F
Participant Group	Canadian	3.13	.11	
	Turkish	3.46	.15	F (1, 144) = .24 ns
Degree of Religiosity	Low	3.34	.12	
	High	3.25	.14	F (1, 144) = 3.33 ns
Distress Caused by doubting Intrusions				
		M	SD	F
Participant Group	Canadian	1.81	.10	
	Turkish	2.12	.15	F (1, 144) = .09 ns
Degree of Religiosity	Low	1.83	.12	F (1, 144) = 2.22 ns
	High	2.09	.13	

3.5.1.3. Primary Appraisals of Doubt

Participants were next asked to provide ratings on a 6-point scale from 0 "never" to 5 "extremely true" on how important or relevant various appraisal constructs were in making doubting intrusions significant for them. The appraisal dimensions were overestimated threat, importance of the thought, intolerance of distress, need to control, responsibility, intolerance of uncertainty, perfectionism, thought-action fusion and ego-dystonicity.

Perfectionism, thought importance, need to control, intolerance of distress, and intolerance of uncertainty were moderately correlated (*r's* ranged .50 to .30). Therefore, these variables were analyzed with 2x 2 MANOVA, whereas responsibility, overestimation of threat, TAF and ego-dystonicity were not highly correlated and therefore were analyzed separately with 2 by 2 ANOVAs.

MANOVA for perfectionism, thought importance, need to control, intolerance of distress, and intolerance of uncertainty revealed only a main effect of nationality (Wilks $\lambda = .84$, $F (5, 141) = 3.15$, $\acute{\eta} = .10$, $p < .01$). The main effect of degree of

religiosity and the interaction term were not significant. Analyses of variances (ANOVA) on each dependent variable were conducted as follow-up tests to the MANOVA. As presented in Table 41, in terms of the effect of nationality , only the ANOVA on intolerance of anxiety/distress was significant, F (1, 145) = 14.20, ή = .09, $p < .0001$. The Turkish students reported more intolerance of anxiety and distress as a response to doubting intrusions (M = 2.61) than the Canadian (M = 1.74) sample.

Table 41. *Group Differences in Primary Appraisals of Doubting Intrusions*

	Canadian		Turkish		Significance Test
Primary Appraisals	*M*	Sd	*M*	Sd	
Perfectionism	2.34	.155	2.8	.22	*F* (1, 145) = 3.19ns
Intolerance of anxiety/distress	**1.74**	**.13**	**2.61**	**.19**	***F* (1, 145) =14.20****
Importance of thought	2.44	.15	2.45	.21	*F* (1, 145) =.004ns
Need to control	1.57	.14	1.87	.20	*F* (1, 145) = 1.48ns
In tolerance of Uncertainty	2.66	.11	2.83	.16	*F* (1, 145) = .77ns
Over Estimation of Threat	3.06	.15	2.95	.21	*F* (1, 145) = .19 ns
TAF	2.48	.15	2.67	.21	*F* (1, 144) = .53 ns
Ego-dystonicity	1.61	.15	1.49	.21	*F* (1, 145) = .19 ns
Responsibility	2.43	.15	2.50	.21	*F* (1, 144) = .09 ns
	Degree of Religiosity				Significance Test
	Low		High		
Primary Appraisals	*M*	Sd	*M*	Sd	
Perfectionism	2.35	.182	2.82	.200	*F* (1, 145) = 3.09ns
Intolerance of anxiety/distress	2.06	.155	2.28	.171	*F* (1, 145) =.89ns
Importance of thought	2.24	.169	2.66	.187	*F* (1, 145) = 2.80ns
Need to control	1.67	.165	1.77	.182	*F* (1, 145) = .14ns
In tolerance of Uncertainty	2.67	.133	2.83	.147	*F* (1, 145) = .62ns
Over Estimation of Threat	2.92	.17	3.09	.19	*F* (1, 145) = .51 ns
TAF	2.31	.18	2.83	.20	*F* (1, 145) = 3.71 ns
Ego-dystonicity	1.59	.17	1.51	19	*F* (1, 145) = .11 ns
Responsibility	**2.16**	**.17**	**2.77**	**.19**	***F* (1, 148) = 5.65***

*p<.05, **p < .001

ANOVAs for overestimation of threat, TAF and ego-dystonicity there were no significant group differences, however; differences were apparent on responsibility, F (1, 144) = 12.21, ή = .09, $p < .05$). For responsibility, only the main effect of religiosity was significant with high religious students rating these appraisals as moderately true in making the doubting intrusion significant for them (M = 2.16) whereas low religious students tended to rate responsibility slightly to somewhat relevant for their doubting (M = 2.16).

Summary: Overall there is little evidence that cultural difference on nationality and degree of religiosity influence primary appraisals of doubting intrusions. In terms of cultural, Turkish students reported a higher degree of intolerance of anxiety and distress than Canadian students. Furthermore, degree of religiosity revealed a significant difference only on responsibility. The results indicate that most of the primary appraisals may generalize across cultural and religious differences. In other words, except for intolerance of anxiety / distress and responsibility, appraisals of doubt appear quite similar across cultures and religious differences.

3.5.1.3. 1. Primary Appraisals Predict Distress of Doubting Intrusions

As mentioned above, the previous analyses revealed few differences between the Turkish Muslim and the Canadian Christian students in their appraisals of doubting intrusions. For CBT theory, a more important question is how these appraisals relate to the frequency and subjective distress of doubting intrusions. Consistent with previous research in non-clinical samples, the frequency of intrusions was somewhat low in nonclinical Turkish and the Canadian samples.Therefore, prediction of distress is a more relevant variable to examine the role of appraisals in the exacerbation of the intrusions.

Two separate stepwise multiple regression analyses were conducted with the 9 primary appraisals entered simultaneously as independent variables regressed onto the subjective rating of distress for doubting intrusions (DV). Because data were collected

from extreme groups (i.e., high and low religious students), degree of religiosity was entered into the equation in the first step as a control variable.

The first stepwise regression analysis was performed to examine the predictors of distress rating for doubting intrusions in the Turkish sample. As presented in Table 42, in the first step, degree of religiosity did not significantly predict the distress level experienced as a response to intrusions. In the second step, appraisal of need to control ("was the doubt more noticeable because you were having difficulty controlling it?") was the significant predictor of distress with 31 % of the variance in distress accounted for by this appraisal (F (1, 46) = 20.75, $p < .001$). In the third step, ego-dystonicity emerged as a significant unique predictor of distress (F (1, 45) = 8.93, $p < .001$), and explained an additional 11 % of the variance ("did the doubt seem important because it was inconsistent or different from how you see yourself?").

Table 42. *Primary Appraisals Predict Distress of Doubting Intrusions in the Turkish Muslim and the Canadian Christian Samples*

Turkish Data						
Steps	Variables	β	t	pr.	R^2 Δ	(df) F*change*
1	Religiosity	.12	.80	.12	.01	(1, 47) .42
2	Need to Control	.554	4.55	.56	.31	(1, 46) 20.75**
3	Ego Dystonicity	.352	2.98	.41	.11	(1, 45) 8.3*
				Total R^2	.44	
Canadian Data						
Steps	Variables	β	t	pr.	R^2 Δ	(df) F*change*
1	Religiosity	.17	1.72	.17	.03	(1, 96) 2.98
2	Intolerance of Anxiety Distress	.52	5.87**	.51	.26	(1, 95) 34.53**
3	Importance of Thoughts	.31	3.60*	.35	.09	(1, 94) 12.95*
				Total R^2	.38	

*p < .05, **p < .01

These results suggest that individuals, who believe they should have perfect control over their doubting intrusions, and who find their doubting intrusions

inconsistent or different from their real character, will find their doubting intrusions more distressing.

The second stepwise regression analysis with was performed to examine the predictors of distress for doubting intrusions in the Canadian sample. In the first step, degree of religiosity did not significantly predict the degree of distress experienced as a response to intrusions. In the second step, intolerance of anxiety ("did the doubt seem important because it make you feel upset?") emerged as a significant variable and explained 26% of the variance in distress caused by intrusions (F (1, 96) = 34.53, $p <$ .001). In the third step, importance of thought emerged as a significant factor to predict degree of distress, and explained variance increased to 38 %.

These results indicated that the Canadian students, who tend to pay attention drawn to doubting thoughts because they make them feel upset, will find their doubting intrusions more distressing. Furthermore, the results indicate that for the Canadian and the Turkish students, different factors seem to be related to the subjective distress of doubting intrusions. While need to control and ego dystonicity were important factors related to distress levels of intrusions in the Turkish students, importance of thought and intolerance of anxiety were the significant appraisals related to distress level of intrusions in the Canadian sample.

3.5.1.4. Control of Doubting Intrusions

An important facet of CBT theories of OCD is the issue of control. During the interview, students were asked a number of questions to assess their perceived level of control over doubting intrusions, including how they appraised their difficulty in controlling doubts, and the type of control strategies used in response to doubts.

3.5.1.4.1. Group Differences in Control

First, students were asked to rate on a scale of 0 ("not at all") to 5 ("extremely") how successful they were at controlling their doubts. Results of 2

(Nationality) by 2 (Degree of Religiosity: Low and High) ANOVA analysis revealed that there were no significant group differences between two different nationality and religiosity groups on this single rating scale. All participants reported that their intrusions somewhat difficult to control (M = 2.01 for Canadian Christian, M = 2.20 for Turkish Muslim).In other words, all reported that they moderately successful in controlling doubts

The second ANOVA analysis was performed to examine the effect of religiosity and nationality on the importance of controlling doubting intrusions. Results revealed that there were no significant group differences on this single rating scale. Regardless nationality and degree of religiosity, all participants reported that controlling their doubting intrusion was slightly important.

3.5.1.5.2. Group Differences in Secondary Appraisals

The students were also asked to rate how important a variety of secondary appraisal variables might be in contributing to a failure or difficulty in controlling doubting intrusions. The appraisals included misinterpretations of control significance, TAF, the possibility of thought control, unrealistic control expectations, inflated responsibility for control and faulty inference of control. Except for the possibility of thought control, all appraisals were moderately intercorrelated so a MANOVA with Bonferroni correction was performed to examine group differences in secondary appraisal dimensions. Results revealed no significant group differences in TAF, unrealistic control expectations, and inflated responsibility. Thus, nationality and degree of religiosity did not have a significant effect on the control and faulty inference of control. Because the appraisal of possibility of thought control was not highly intercorrelated group differences an appraisal rates was examined by a separate running 2 by 2 ANOVA. Similar to the other appraisals, the results indicated that nationality and degree of religiosity did not significantly affect individuals' appraisals of the possibility of control. All subjects rated this appraisal as somewhat to moderately relevant for their doubting intrusions.

3.5.1.5.3. Secondary Appraisals Predict Perceived Better Control of Doubting Intrusions

This analysis examined whether individual's evaluations or appraisals of their control efforts (i.e., secondary appraisals) are associated with an overall perceived success at control over doubting intrusions. This study interested in understanding the role of secondary appraisals of control (i.e., beliefs about the possibility of control and the consequences associated with failed thought control) in the perceived success at control over doubting intrusions. The appraisals included misinterpretations of control significance, TAF, the possibility of thought control, unrealistic control expectations, inflated responsibility for control and faulty inference of control. The secondary appraisal ratings were obtained from only individuals who reported at least one occasion that they had difficulty dismissing a doubting intrusion from their mind. As expected, the sample size reporting difficulty dismissing a doubting getting rid of their intrusive doubts was very low. Therefore, the total sample of students reporting difficulty in controlling doubt intrusions was ($N = 70$). Because this is a low variable: a subject ratio the results must be interpreted with caution.

A standard multiple regression analysis was conducted with the 6 secondary appraisals entered simultaneously as independent variables (IVs) regressed onto rating of success in controlling doubt (DV). To control for the effects of degree of religiosity and nationality, these variables were entered in the analysis on the first step.

Degree of religiosity and nationality were the first variables entered into the equation as control variables, and explained 2 % of the variance, but these variables did not significantly predict overall perceived success at control over doubting intrusions (F [2, 67] = .87, p >.05). As can be seen from Table 43, the addition of the 6 secondary appraisals scores in the second step accounted for a significant portion of the variance and explained 27 % of the total variance (F [6, 61] = 4.46, $R^2 = 32$, $p <$ .01). Results revealed that only two variables emerged as a significant unique predictors of control at $p < .01$; the possibility of control ("do you believe it is entirely possible to control your doubt?", $pr =$ .36, $\beta =$-. 33, t [67] = 2.86, $p < .01$) and

TAF/threat appraisal ("When you had difficulty controlling the doubt, were you concerned this might increase the chance of a negative consequence or outcome as a result of your action or decision?", *pr* = -.29, *β* = -. 40, *t* [67] = -2.40, *p* < .05). Contrary to expectations, the greater the belief that one can actually exercise control over his/her doubts and the less the belief that failure to control doubt might increase chance of a negative consequence or outcome were predictive of better subjective control over doubting intrusions.

The analyses suggest that all second appraisals are not equally associated with perceived success; that is some lead to better perceived control (believing you can control your thoughts) whereas others are associated with poorer control (believing that failed control might increase the probability of a negative outcome).

Table 43. *Secondary Appraisals Predict Control of Doubting Intrusions*

Steps	Variables	β	t	Zero-order	Partial	R^2 Δ	(df) F change
1	RELGRP	.05	.43	.06	.05	.02	(2,66) .78
	Nationality	-.14	-1.16	-.14	-.14		
2	Misinterpreted significance	.19	1.02	-.14	.13	.27	(6,60) 3.76**
	TAF/threat	**-.40**	**-2.38***	**-.31**	**-.29**		
	Possibility of control	**.33**	**2.86****	**.26**	**.35**		
	Unrealistic standards	-.12	-.74	-.22	-.10		
	Inflated responsibility	-.16	-.90	-.30	-.12		
	Faulty inference of control	.04	.28	-.17	.04		
					Total R^2	.29	

** $p < .01$, * $p < .05$.
Note: RELGRP = Degree of religiosity (High and Low)

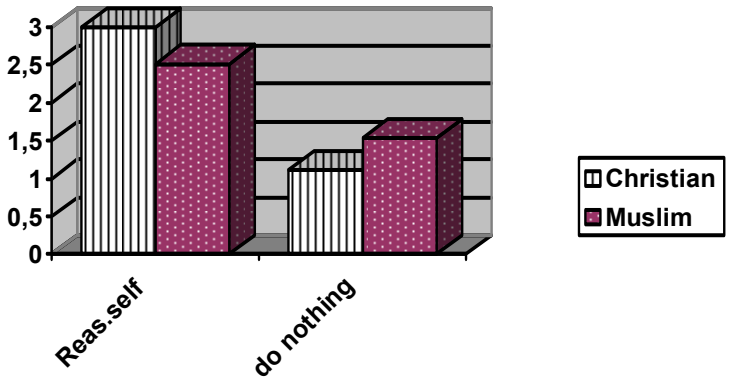
3.5.1.5.4. Group Differences in Control Strategies

In the final analysis of possible cross-cultural differences, it was aimed to investigate whether there might be differences in how the groups responded to their

doubting intrusions. Students were presented 9 control strategies and asked to rate them on a 0 to 5 point scale on how often they would use the mental control strategy in response to unwanted intrusive thoughts of doubt. Because they were moderately intercorrelated seven of the control strategies were entered in a 2 x 2 MANOVA whereas the "repeated checking" and "do nothing" strategies were analyzed in separate ANOVAs because they had weak correlations with the other response strategies.

As seen in Table 44, the MANOVA test revealed that the main effect of degree of religiosity (Wilk's $\lambda = .85$, F (7, 137) = 3.33, $p < .01$, $\eta^2 = .15$) and nationality (Wilk's $\lambda = .90$, $F(7, 137) = 2.16$, $p < .01$, $\eta^2 = .10$) was significant for the 7 control strategies. Follow-up univariate F tests indicated that the main effect of nationality was only significant for reassuring yourself. The Canadian students used reassuring yourself ("try to reassure myself that everything will be fine") significantly more (M = 2.99) than Turkish students (M = 2.51).

Figure 7. *The Main Effect of Nationality s on Control Strategies.*



Similarly, separate ANOVAs on the do nothing and repeated checking revealed only a significant main effect of nationality on doing nothing (F (1, 144) = 5.57, $\acute{\eta}$ = .04, $p < .05$), with Muslim students employing this strategy significantly more often than Canadian students (See Figure 7)

Table 44. *The Group Differences in Control Strategies Used to Control Doubting Intrusions*

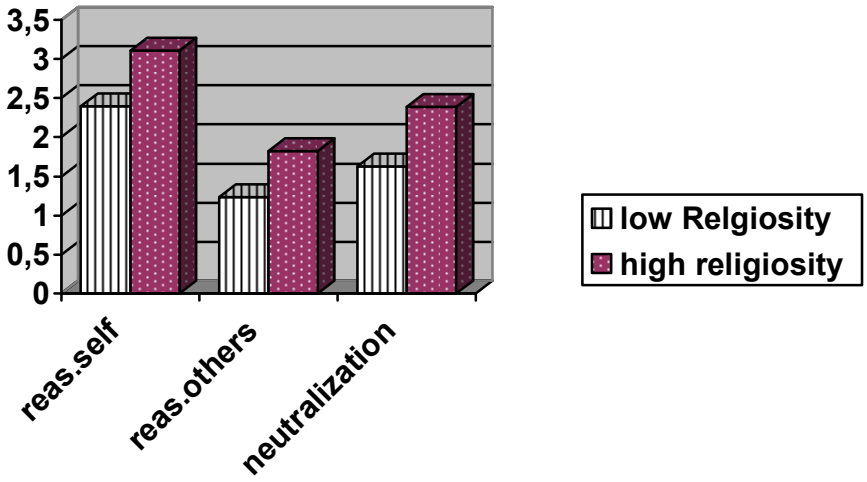
Nationality					
Dependent Variables	Christian		Muslim		Significance Test
Primary Appraisals	*M*	Sd	*M*	Sd	
Distraction	2.31	.15	2.21	.20	F (1, 145) = .14
Replacement	2.95	.14	2.53	.19	F (1, 145) = 3.05
Thought Stopping	2.37	.15	2.59	.21	F (1, 145) = .71
Reassuring Self	**3.00**	**.13**	**2.51**	**.19**	**F (1, 145) = 4.47***
Seeking Reassurance from others	1.58	.13	1.48	.19	F (1, 145) = .22
Repeated Checking	2.37	.15	2.18	.21	F (1, 145) = .53
Neutralization	2.06	.14	1.96	.19	F (1, 145) = .17
Reasoning	2.61	.13	3.02	.18	F (1, 145) = 3.62
Doing Nothing	**1.11**	**.11**	**1.54**	**.15**	**F (1, 145) = 5.51***
Degree of Religiosity					
Dependent Variables	Low		High		Significance Test
Primary Appraisals	*M*	Sd	*M*	Sd	
Distraction	2.12	.17	2.40	.19	F (1, 145) = .1.22
Replacement	2.64	.16	2.83	.18	F (1, 145) = .59
Thought Stopping	2.41	.18	2.54	.19	F (1, 145) = .27
Reassuring Self	**2.39**	**.15**	**3.10**	**.17**	**F (1, 145) = 9.50****
Seeking Reassurance from others	**1.23**	**.15**	**1.82**	**.17**	**F (1, 145) = 6.08****
Repeated Checking	2.13	.17	2.43	.19	F (1, 145) = 1.34
Neutralization	**1.62**	**.16**	**2.39**	**.18**	**F (1, 145) = 10.10****
Reasoning	2.68	.14	2.94	.16	F (1, 145) = 1.38
Doing Nothing	1.16	.12	1.16	.13	F (1, 145) = 3.48

*p < .05, ** p < .01

In terms of the significant main effect of religiosity, ANOVAs on the reassuring yourself, ask reassurance from other people ("ask other people whether they think everything will be fine"), and neutralization ("think certain thoughts or phrases to neutralize the doubt") were significant. As can be seen from Figure 8, analysis indicated that high religious individuals used reassuring yourself (*M* = 3.10), provide

reassurance from others (M = 1.82), and neutralization (M = 2.39) significantly more frequently than low religious participants (M = 2.39, M = 1.24, M = 1.69, respectively). Results are summarized in Table 44.

Figure 8. *The Main Effect of Religiosity on Control Strategies*



Summary: These analyses indicated that cuntural differences are associated with some differences in how people try to control intrusive doubt. Differences on 5 out of the 9 control strategies are summarized as follows:

(a) The Turkish students employed reassuring yourself significantly less than Canadians, while Canadian students used do nothing less frequently than the Turkish students.

(b) Highly religious students employed reassuring yourself, ask reassurance from others and neutralization significantly more often than did low religious participants.

3.5.2. Group Differences in Religious Intrusions:

The effect of religiosity and nationality on religious intrusions was examined by conducting a series of analyses. Similar to the previous section, group differences in

frequency and distress of religious intrusions were examined first. Then, the group differences in primary appraisals of religious intrusions were investigated. After this, the effect of nationality and religiosity on secondary appraisals of control was examined. Finally, group differences in actual control strategies were examined to understand how the groups responded to their religious intrusions

Similar to the first part of the interview, the experience of religious intrusions was assessed by asking the question "*over the last three months, had you had thoughts, images or impulses that you felt were very wrong or sinful. That is that the thought, image or impulse involved something that was a violation of your moral or religious beliefs".* If the participant said yes, then he/she was asked to give two or three examples of religious intrusions to determine whether the reported intrusion could be classified as religious intrusions.

To examine whether there were significant differences in the experience of religious intrusions, a chi-square test was performed. As expected, the results revealed there was a significant difference between high religious and low religious individuals, with high religious individuals reporting they experienced more religious intrusions in the last three months as compared to the low religious individuals, χ^2 (1, N = 194) = 74.76, p < .0001. While 69.79 % of the high religious students reported they experienced at least one religious intrusion in the last three months, the rate was 9.18% for the low religious group. A second chi-square analysis revealed there was no significant difference between Canadian and Turkish students, χ^2 (1, N = 194) = 3.32, p > .05. The findings are summarized in Table 45.

Table 45. *Experience of Religious Intrusions*

		Experience of Religious Intrusion			
		No	Yes	Total	χ^2
Religious Groups	Low	89 (90.82%)	9 (9.18%)	98	χ^2 (1, N = 194) = 74.76, p < .0001.
	High	29 (30.20%)	67 (69.79%)	96	

Table 45 (continued)

		Experience of Religious Intrusion			
		No	Yes	Total	χ^2
Nationality	Canadian	62 (55.36 %)	51 (44.64 %)	113	χ^2 (1, N = 194) = 3.32 Ns.
	Turkish	56 (68.29%)	28 (31.70)	82	

Content of Religious Intrusions. The present research also examined whether the content of religious intrusions is different across Canadian and Turkish sample. As can be seen from Table 46, the results revealed that the content of religious intrusions is remarkably similar in Canadian and Turkish samples. For both samples, thoughts against God or doing immoral things were the most frequently reported religious intrusion. However, there were some differences in the frequency of other reported intrusions. For example, doubts about the existence of God and accuracy of person's religious beliefs were the second most common religious intrusion in the highly religious Canadian sample whereas doubts about living up to the perfect life and complete faith were the second most reported religious intrusions in the highly religious Muslim sample.

Table 46. *Content of Religious Intrusions in Christian and Muslim Sample*s

The Content of intrusions	HR Christians (n = 51)	HR Muslims (n = 28)
Thoughts against God or doing immoral things (e.g., Immoral sexual thoughts, cheating, lying, etc.)	**16 (31 %)**	**9(32 %)**
Doubts about complete faith in God and performing enough religious duties	6(12 %)	**7 (25%)**
Questions of existence of God and accuracy of his/her religion	**12 (24 %)**	5 (18 %)
Doubts about God is right with him/her	4 (8 %)	-
Doubts about committing sin	4 (8 %)	5 (17 %)
Blasphemous thoughts	4 (8 %)	1 (3 %)
Doubts about forgetting confession	3(5 %)	-
Doubts about performing correctly religious activities	2 (4 %)	1 (3 %)

3.5.2.1. Group Differences in the Frequency and Distress of Religious Intrusions

Because only 9 low religious participants reported they experienced religious intrusions, group comparisons were conducted using only highly religious Canadian and highly religious Turkish students. Therefore, only the effect of nationality on the experience, appraisal, and control of religious intrusions was examined. Thus one way ANOVA was performed on the frequency and distress items. High religious Christians and Muslims did not differ significantly in the frequency of religious intrusions. All rated them as happening often (more than monthly but less than weekly).

There were significant group differences in the rated level of distress (F (1, 64) = 5.04, $p < .05$). Highly religious Muslim students rated the religious intrusions as significantly more distressing (M = 2.73; somewhat to moderate distressing) than the Canadian Christian students (M = 2.07; somewhat distressing).

Summary: The present analyses revealed some cultural differences in the perceived distress but not in the frequency of religious intrusions. Muslim students reported they felt higher levels of distress are response to religious intrusions. The results suggest that holding specific religious beliefs may not make individuals more vulnerable to experience religious intrusions, but it may affect their level of distress as a response to intrusions.

3.5.2.2. Primary Appraisals of Religious Intrusions

Participants were next asked to provide ratings on a 6-point scale from 0 "never" to 5 "extremely true" on how important or relevant various appraisals constructs were in making religious intrusions significant for them. As stated above, because only nine low religious participants reported religious intrusions, group comparisons was performed only for high religious Christians and Muslims. Correlation coefficients revealed that all measures were moderately correlated (*r's* ranged .50 to .20), therefore; a one way MANOVA with Bonferroni- corrected significance level of P <.005 (.05/9) analysis were performed on nine primary

appraisal. Separate ANOVAs on each dependent variable were conducted as follow-up tests to the MANOVA. Similar to the MANOVA, each ANOVA was tested at the .01 level.

Analyses revealed significant group differences between high religious Muslim and Christian students (Wilks $\lambda = .66$, $F\ (9, 56) = 3.26$, $\eta = .34$, $p < .005$). As presented in Table 47, an ANOVA on each dependent variable indicated that only the ANOVAs on responsibility and TAF were significant, $F\ (1, 65) = 4.85$, $\eta = .09$, $p < .05$; $F\ (1, 65) = 18.05$, $\eta = .09$, $p < .0001$, respectively.

On responsibility the high religious Turkish students rated this appraisal more relevant to the significance of their religious intrusions (M = 3.27; moderately to very much relevant for their religious intrusions) than the Canadian students (M = 2.36; somewhat to moderately relevant). For TAF, the Canadian students rated this appraisal as higher (M = 2.69; somewhat to moderately true in making their intrusions significant for them) than highly religious Muslim students (M = 1.14; slightly relevant for making their religious intrusions important.

Table 47. *Primary Appraisals of Religious Intrusions in Turkish Muslim and Canadian Christian Data*

	High Religious Christians		High Religious Muslims		Significance Test
Primary Appraisals	*M*	Sd	*M*	Sd	
Over Estimation of Threat	2.84	.23	3.32	.32	*F (*1. 64) = 1.46
Importance of Thought	2.73	.23	2.59	.32	*F (*1. 64) = .12
Intolerance distress	2.93	.22	3.23	.31	*F (*1. 64) = .63
Need to control	2.50	.23	1.96	.33	*F (*1. 64) = 1.81
Responsibility	2.36	.24	3.27	.34	*F (*1. 64) = 4.66*
Intolerance uncertainty	2.73	.22	2.36	.31	*F (*1. 64) = .91
Perfectionism	3.09	.26	3.05	.36	*F (*1. 64) = .01
Thought-action fusion	2.66	.21	1.14	.30	*F (*1. 64) = 17.21**
Ego-dystonicity	2.48	.23	1.96	.32	*F (*1. 64) = 1.73

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

Summary: Overall, the results revealed that the degree of religiosity significantly increases the experience of religious intrusions. That is a greater number of highly religious individuals indicated they experienced at least one religious intrusion as compared to low religious individuals. However, there was no evidence to that certain types of religious beliefs make individuals more vulnerable to experience more frequent intrusions because there was no significant difference between Christians and Muslim students in terms of experience and frequency of religious intrusions. Furthermore, the results revealed some indication of cultural differences in the perceived distress but not frequency of religious intrusions. In other words, highly religious Muslim students found their intrusions significantly more distressing than highly religious Christian students. Findings also indicated some significant cultural differences on the ratings of primary appraisals of religious intrusions. While the highly religious Muslim students found their religious intrusions significant because they feel higher level of responsibility related to the religious intrusion, highly religious Christian students exhibited a greater tendency to believe that their unwanted religious intrusions were significant and important for them because they may actually make them sinful or unfaithful.

3.5.2.2.1. Primary Appraisals Predict Distress of Religious Intrusions

The role of appraisals in the exacerbation of the distress of the religious intrusions was examined via two separate stepwise regression analyses with the 9 primary appraisals entered simultaneously as independent variables regressed onto subjective rating of distress for religious intrusions (DV).

The first stepwise regression analysis was performed to examine the predictors of degree of distress for religious intrusions in the high religious Turkish Muslims (n = 28; note that this is a low variable: subject ratio and so results must be interpreted with caution.). Findings revealed that in the first step, only the appraisal of perfectionism ("did the religious intrusion make you feel like you needed to be perfect or complete in your faith?") entered into the equation as a significant predictor of distress (F (1, 28) =

12.93, $p < .01$) with 39 % of the variance in distress accounted for by this appraisal. In the second step, appraisal of intolerance of anxiety/distress emerged as a significant variable, and explained 14% of the variance. These two appraisal dimensions explained a total of 53 % of the variance in distress of religious intrusions. These results suggest that individuals, who believe they need to perform perfect control over their unwanted religious intrusions, and who believe they should be perfect or complete in their faith will find their religious intrusions more distressing. (See Table 48)

Table 48. *Primary Appraisals Predict Distress of Religious Intrusions*

Turkish Data						
Steps	Variables	β	t	pr.	R^2 Δ	(df) F change
1	Perfectionism	.62	3.59	.62	.39	(1, 28) 12.93**
2	Intolerance of Anxiety/Distress	.41	2.41	.48	.14	(1, 26)5.81*
				Total R^2	.53	
Canadian Data						
Steps	Variables	β	t	pr.	R^2 Δ	(df) F change
1	Need to control	.57	4.54**	.57	.33	(1, 44) 26.61**
				Total R^2	.33	

The second stepwise regression analysis was performed to examine the predictors of distress of religious intrusions in the Canadian Christians (n = 51). Results revealed that only appraisal of need to control emerged as a significant unique predictor of distress in the Canadian Christian students ($F (1, 44) = 26.61$, $p < .001$). This result suggests that the Canadian Christian individuals, who believe they should perform complete control over their religious intrusions, will experience a higher degree of distress as a result of their intrusions.

These findings suggest that different appraisals seem to play a significant role in defining the distressing qualities of the religious intrusions in Muslim and Christian students. Perfectionism and intolerance of anxiety/distress were important factors

associated with distress of intrusions in the high religious Turkish Muslim students, whereas need to gain perfect control over intrusions was a significant appraisal in the high religious Canadian Christian students. However, because of the low variable:subject ratio, the results must be interpreted with caution.

3.5.2.3. Secondary Appraisals of Control

In this section, analyses examinedwhether highly religious Muslims and Christians would be different from each other in how they appraised their difficulty in controlling religious intrusions, and the type of control strategies they used in response to these intrusions.

3.7.2.5.1. Group Differences in the Control of Religious Intrusions

Students were asked to rate on a scale of 0 ("not at all") to 5 ("extremely") how important it is to get religious intrusions out of their mind, and how successful they were at controlling their religious intrusions. One-way analysis of variance was conducted group differences between high religious Muslims and Christians. Results revealed that there were no significant group differences on these two single rating scales ($F(1, 66) = .00$, $p > .05$ for importance of control; $F(1, 66) = 1.17$, $p > .05$ for perceived success). All participants reported that controlling their religious intrusions was moderately important ($M = 3.31$ for Canadian Christian, $M = 3.32$ for Turkish Muslim). Furthermore, Christian ($M = 3.06$) and Muslim students ($M = 3.36$) reported they were moderately successful at controlling their religious intrusions.

3.5. 2. 3. 2. Group Differences in Control Appraisals

In order to understand whether nationality is associated with a significant differences in a variety of secondary appraisal variables, students were asked to rate their appraisals of difficulty in controlling their intrusions. Correlations among the

secondary appraisal items revealed that two set of appraisals showed moderate correlations with each other. The first set of variables consisted of misinterpretations of control significance, TAF/threat appraisal and faulty inference of control (*r's* ranged .49 to .47) whereas the second set included unrealistic control expectations and inflated responsibility for control (r = .45), thus two one-way MANOVAs were conducted on these variables. Appraisals of possibility did not show a significant relationship with other appraisal dimensions; therefore, this variable was analyzed separately in a oneway ANOVA.

The first MANOVA was conducted to examine differences on the three appraisals of difficulty in controlling religious intrusions: misinterpretations of control significance, TAF/threat appraisal and faulty inference of control. As can be seen from Table 49, Significant differences were found between high religious Christian and high religious Muslim students on the dependent variables (Wilk's $\lambda = .75$, F (3, 29) = 3.22, $p < .01$, $\eta^2 = .25$). The multivariate $\acute{\eta}^2$ based on Wilk's λ was moderate. Analyses of variance (ANOVA) on each dependent variable were conducted as follow-up tests to the MANOVA. The ANOVA on the TAF/threat appraisal scores was significant, F (1, 31) = 6.60, $p < .01$, $\acute{\eta}^2 = .18$, while the ANOVAs on the misinterpretations of control significance and faulty inference of control were not significant (F (1, 31) = .06, p =.89, $\acute{\eta}^2 = .001$; F (1, 31) = .65, p =.43, $\acute{\eta}^2 = .02$, respectively).

Table 49. *Group Differences in Secondary Appraisals of Failure at Control Religious Intrusions*

	Canadian		Turkish		Significance Test
Primary Appraisals	*M*	Sd	*M*	Sd	
Misinterpreted significance	2.57	.30	2.70	.46	*F (*1, 31) = .06ns
TAF/threat	**3.04**	**.29**	**1.70**	**.44**	***F (*1, 31) = 6.60***
Possibility of control	2.74	.29	3.20	.44	*F (*1, 31) =.76ns
Unrealistic standards	3.91	.24	3.60	.37	*F (*1, 31) = .50ns
Inflated responsibility	2.78	.35	3.30	.53	*F (*1, 31) = .67ns
Faulty inference of control	2.61	.35	2.10	.53	*F (*1, 31) = .65 ns

* p < .01

The second one-way MANOVA analysis was conducted on unrealistic control expectations and inflated responsibility for control appraisal scores, and significant differences were not found between highly religious Muslim and Christians on the dependent measures (Wilk's $\lambda = .93$, $F(2, 30) = 1.08$, $p = .35$, eta2 = .07).

Finally a one-way ANOVA was conducted on appraisals of possibility scores. The results revealed nonsignficant group differences between Muslim and Christian students in appraisals of possibility scores ($F(1, 31) = .76$, $p = .39$, $\eta^2 = .02$).

Summary: Overall there were few cross-cultural difference in ratings of secondary appraisals of religious intrusion. There was only a hint of differences on TAF/threat appraisal scores. Highly religious Christian students rated this appraisal as more relevant for their failure of control than highly religious Muslims. These findings suggest that except for TAF/threat appraisal, appraisals of difficulty in controlling intrusions are generalizable Canadian Christians and the Turkish Muslims. Both rated other appraisals are somewhat to moderately relevant in their failure at controlling religious intrusions.

3.5.2.3.3. Secondary Appraisals Predict Control of Religious Intrusions

This analysis examined whether individual's evaluations or appraisals of their control efforts are associated with overall perceived success at control over religious intrusions. A standard multiple regression analysis was conducted with the 6 secondary appraisals entered simultaneously as independent variables (IVs) regressed onto rating of success in controlling religious intrusions (DV). To control the effect of degree of religiosity and nationality, these variables were entered into the analysis on the first step. The total sample of students reporting religious intrusions was $N = 30$ (note that this is a low variable: subject ratio and so results must be interpreted with caution).

Degree of religiosity and nationality were the first variables entered into the equation, and explained 2 % of the variance. These variables did not significantly predict overall perceived success at control over religious intrusions (F [2, 44] = .49, p

>.05). After excluding this variance, the addition of the 6 secondary appraisals scores in the second step did not significantly increase explained variance, (F [6, 38] = 1.58, R^2 = 24, p >.05. In other words, individual's evaluations or appraisals of their control efforts were not associated with overall perceived success at control over religious intrusions. (See Table 50)

Table 50. *Secondary Appraisals Predict Control of Religious Intrusions*

Steps	Variables	β	t	pr.	R^2 Δ	(df) F change
1	Nationality	.62	3.59	.62	.04	(1. 31) 1.41
2	Misinterpreted significance	.22	.93	.18		
	TAF/threat	-.11	-.47	-.09		
	Possibility of control	-.34	-1.67	-.32		
	Unrealistic standards	.11	.53	.11		
	Inflated responsibility	.21	1.01	.20		
	Faulty inference of control	.25	1.20	.23	24	1.40
				Total R^2	.28	

Summary: These analyses found showed that appraisals were not important factors in defining subjective control over intrusions. However, these results should be interpreted with caution because of the low variable: subject ratio. When questioned "Do you recall an occasion when you had difficulty getting rid of your unwanted religious intrusive thoughts, images or impulses, only 30 subjects reported to experience difficulty controlling their intrusions. Therefore, the regression analysis was performed on 30 subjects' ratings.

2.5.2.3.4. Group Differences in Control Strategies of Religious Intrusions

Finally, group difference in control strategies was examined. Students were presented 9 control strategies and asked to rate on a 0 to 5 scale how often they would use the mental and overt control strategy in response to unwanted religious intrusive

thoughts. “Replacement”, “thought stopping”, “neutralization”, and “repeated checking “ were entered in a one-way MANOVA because these control strategies were moderately intercorrelated, whereas the other five strategies were analyzed in separate ANOVAs because they had weak or no correlations with the other response strategies.

The MANOVA for the 4 control strategies was significant (Wilk’s lambda = .78; $F(4, 61) = 4.31$, $p < .01$ eta2 = .22) with follow-up univariate F tests indicating significant group differences only on repeated checking (“Engage in a compulsive ritual like repeatedly crossing yourself, washing, bathing, or repeatedly reciting a comforting phrase or prayer of forgiveness”). As depicted in Figure 9, results revealed that highly religious Turkish Muslim students used significantly more repeated checking to control their religious intrusions (M = 2.96) than highly religious Canadian Christians (M = 1.39).

There were no significant group differences on the ANOVAs in the other control strategies (see Table 51).

Figure 9. *The Main Effect of Nationality s Repeated Checking*

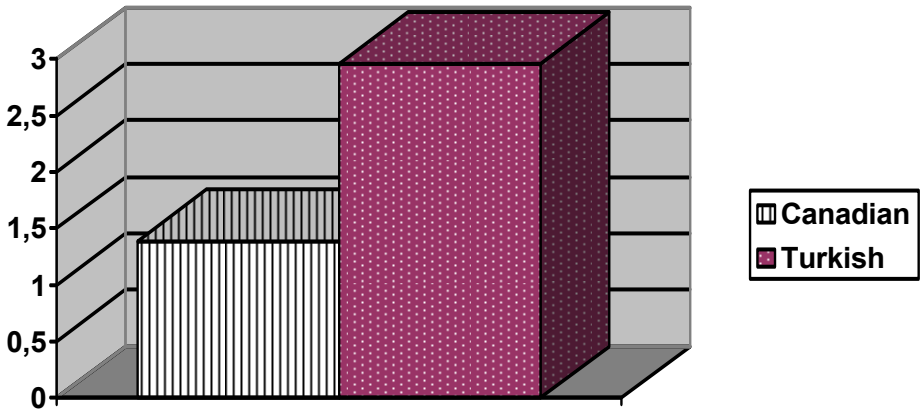


Table 51. *Group Differences in Control Strategies*

	Nationality				
Dependent Variables	Canadian		Turkish		Significance Test
Primary Appraisals	*M*	Sd	*M*	Sd	
Distraction	2.20	.23	2.36	.32	*F (*1, 64) = .17
Replacement	3.27	.20	3.14	.28	*F (*1, 64) = .29
Thought Stopping	2.66	.22	2.86	.31	*F (*1, 64) = .69
Reassuring Self	2.66	.22	3.23	.32	*F (*1, 64) = .94
Seeking Reassurance from others	1.34	.20	1.32	.29	*F (*1, 145) = .22
Repeated Checking	**1.39**	**.23**	**2.96**	**.33**	***F (*1, 64) = 14.8***
Neutralization	2.00	.21	2.14	.30	*F (*1, 64) = .13
Reasoning	2.27	.24	2.32	.34	*F (*1, 64) = .91
Doing Nothing	1.07	.16	1.09	.23	*F (*1, 64) = .94

* $p < .001$

3.5. 3. Group Differences in Sexual Intrusions:

Similar to the first two sections, group differences in the experience of sexual intrusios were examined to determine if there was a significant difference between Canadian and Turkish students in terms of experiencing sexual intrusions, Chi-square analysis revealed that there was no significant difference between Canadian and Turkish students in the experience of sexual intrusions (χ^2 (1, N = 196) = .95, p>.05). As can be seen from Table 52, approximately the same number of Canadian and Turkish students reported at least one sexual intrusion in the last three months. The rate of participants reporting sexual intrusions was 34 % in the Christian sample and 30 % in the Muslim sample. Furthermore, there was no significant difference between high and low religious participants in the experience of sexual intrusions.

Table 52. *Experience of Sexual Intrusions*

Experience of Sexual Intrusion				
		No	Yes	χ^2
Participant group	Canadian	75 (66 %)	39 (34 %)	(1, N = 196) = .95 ns.
	Turkish	58 (70 %)	24 (30 %)	
Degree of Religiosity	Low	68 (68 %)	32 (32 %)	(1, N = 196) = .97 ns.
	High	65 (67 %)	31 (33 %)	
Total		133	63	

Content of sexual Intrusions. As presented in Table 53, when the content of sexual intrusions was examined results revealed some nationality differences in the frequency of reported intrusions between Cnanadian and Turkish students. Sexual thoughts about having sex with unattractive and repulsive person was the most frequently reported intrusion in the Canadian students, whereas for the Turkish students, the most common sexual thoughts was about having sex with best friends. Overall there was a high consistency in the content of the intrusions, although the most frequent sexual intrusion was different in the Canadian and Turkish students.

Table 53. *Content of Sexual Intrusion in Turkish Muslim and Canadian Christian Data*

The Content of intrusions	Christians (n = 39)	Muslims (n = 31)
Sexual thoughts about unattractive, repulsive person	**10 (25 %)**	6(19 %)
Sexual thoughts about forcing sex and raping	8(21 %)	3 (10 %)
Sexual thoughts about Sex with best friends	7 (18 %)	**8 (26 %)**
Sexual thoughts about sex with same gender	4 (10 %)	5 (16 %)
Repulsive sexual thoughts and images (e.g. anal sex as a punishment, oral sex etc.)	5 (13 %)	3 (10 %)
Sexual images of ex-boyfriend	2 (5 %)	1 (3 %)
Skip question	3(8 %)	5 (16 %)

3. 5. 3. 1. Group Differences in Frequency and Distress of Sexual Intrusions

Two separate 2 (Nationality) x 2 (degree of religiosity) ANOVAs were performed to evaluate the effect of nationality and degree of religiosity on the frequency and distress of sexual intrusions. First, group differences in the frequency of sexual intrusions were examined. As can be seen from Table 54, there was no significant main effects of group or degree of religiosity, or an interaction effect. Second group differences in perceived distress because of sexual intrusions were examined. Results indicated only a significant main effect of religiosity (F (1, 61) = 6.27, $p < .02$, $\eta^2 = .09$). There were significant group differences in the rated levels of distress between low and high religious participants. As expected, highly religious students rated their sexual intrusions as significantly more distressing (somewhat to moderate distressing) than did low religious students (slightly to somewhat distressing).

Table 54. *Group Differences in Frequency and Distress of Sexual Intrusions*

Frequency of Sexual Intrusions				
		M	SD	F
Participant Group	Canadian	2.43	.15	F (1, 61) = 3.66 ns
	Turkish	1.97	.19	
Degree of Religiosity	Low	2.08	.16	F (1, 61) = .98 ns
	High	2.31	.18	

Distress Caused by sexual Intrusions				
		M	SD	F
Participant Group	Canadian	1.89	.21	F (1, 144) = 3.79 ns
	Turkish	2.55	.27	
Degree of Religiosity	Low	1.79	.23	F (1, 144) = 6.27*
	High	2.65	.25	

p* < .01

3. 5. 3. 2. Primary Appraisals of sexual Intrusions

To assess primary appraisals of sexual intrusions, participants were next asked to provide ratings on a 6-point scale from 0 "never" to 5 "extremely true" on how important or relevant various appraisals constructs were in making their sexual intrusions significant for them. All appraisals were moderately correlated; therefore a 2 x 2 MANOVA was performed on the nine primary appraisal scores. Results revealed a non significant effect of group (Wilk's $\lambda = .78$, F (9, 52) = 2.42, $p = .06$, $\eta^2 = .25$), degree of religiosity (Wilk's $\lambda = .82$, F (9, 52) = 1.24, p = .29, $\eta^2 = .17$), as well as the interaction effect (Wilk's $\lambda = .95$, F (9, 52) = .33, p = .96, $\eta^2 = .05$)

Overall, this analysis revealed that degree of religiosity and cultural differences had no significant effect on the appraisals of occurrence and content of sexual intrusions. Based on these results it is apparent that appraisal of sexual intrusions has broad generalizability across cultural and religious groups.

3.5.3.2.1. Primary Appraisals Predict Distress of Sexual Intrusions

In order to understand how primary appraisals relate to the subjective distress of sexual intrusions, two separate stepwise regression analyses were performed in the two samples. Nine primary appraisals were entered simultaneously as independent variables regressed onto subjective rating of distress for sexual intrusions (DV). As explained previously, because only high and low religious students were interviewed, in the first step degree of religiosity (i.e., 1 for low religiosity, 2 for high religiosity) was entered in the analysis as a control variable.

The first stepwise regression was conducted to predict the degree of distress for sexual intrusions in the Turkish Muslim students (n = 28; note that this is a low variable: subject ratio and so results must be interpreted with caution.). Analysis revealed that in the first step, the degree of religiosity significantly predicted subjective distress of sexual intrusions (F (1, 23) = 5.07, $p < .05$), and explained 18 % of the variance. In the second step, appraisal of need to control entered into the equation as a

significant predictor of distress (F (1, 22) = 14.27, p < .01) with 32 % of the variance in distress accounted for by this appraisal. In the third step, appraisal of intolerance of anxiety/distress emerged as a significant variable, and explained 9 % of the variance. These two appraisal dimensions explained a total of 59% of the variance in distress for sexual intrusions. These results suggest that individuals who believe they need to perform complete control over their unwanted sexual intrusions, and who can not tolerate distress and anxiety experienced as a result of sexual intrusions, will find their sexual intrusions more distressing (See Table 55)

Table 55. *Primary Appraisals Predict Distress of Sexual Intrusions*

Turkish Data						
Steps	Variables	β	t	pr.	R^2 Δ	(df) F change
1	Degree of religiosity	.62	3.59	.43	.18	(1, 23) 5.07*
2	Need to control			.63	.32	(1, 22) 14.27**
3	Intolerance of Anxiety/Distress	.41	2.41	.42	.09	(1, 21) 4.39*
				Total R^2	.59	
Canadian Data						
Steps	Variables	β	t	pr.	R^2 Δ	(df) F change
1	Importance of thoughts	.69	4.84**	.69	.47	(1, 37) 32.76**
2	Intolerance of Anxiety/Distress	.28	2.31*	.36	.07	(1, 36) 5.32*
				Total R^2	.54	

*p < .05, ** p < .01

The second stepwise regression analysis was performed to examine the predictors of distress of sexual intrusions in the Canadian sample. Analyses revealed that appraisals of importance of thought ("did the sexual intrusion seem important because it kept coming back into your mind?") and intolerance of anxiety ('did the sexual thought seem important because it made you feel upset) were important variables that significantly explained variance in distress of sexual intrusions (F (1, 37) = 32.76, p < .001; F (1, 36) = 32.76, p < .001, respectively). These two appraisal

constructs explained 54 % of the variance in distress. Based on these results, for the Canadian students, beliefs about the importance of thought and low tolerance of anxiety appear to be better predictors of the distress of sexual intrusions.

These results suggest that whereas intolerance of anxiety/distress seems to be a common factor that increases the level of distress in both the Canadian and Turkish samples, need to control and importance of thought might play a differential role in the experienced distress However, it is important to note that because of low variable: subject ratio, the results must be interpreted with caution.

3.5.3.3. Secondary Appraisals of Control

3.5.3.3.1. Group Differences in Control

First, students were asked to rate on a scale of 0 ("not at all") to 5 ("extremely") how important it is to get sexual intrusions out if their mind. The aim was to determine whether the importance of controlling unwanted intrusions would differ between different cultures and religiosity. Thus a 2 (Nationality: Turkish and Canadian) x 2 (Degree of Religiosity: Low and High) ANOVA was performed, and the results indicated that only the main effect of degree of religiosity (F (1, 61) = 4.27, p < .05, η^2 = .06). As expected, high religious individuals rated that dismissing their intrusions out of mind was more important (M = 3.79, Sd = .19) than low religious students (M = 3.19, Sd = .21).

The second ANOVA analysis was performed to examine the effect of religiosity and nationality on their perceived level of control over religious intrusions. Results revealed that there were no significant group differences The Muslim (M = 3.46, Sd = .18) and Christian students were moderately successful in controlling sexual intrusions (M = 3.16, Sd = .14).

3.5.3.3.2. Secondary Appraisals of Control

To understand group differences in person's appraisals of difficulty in controlling sexual intrusions, participants were asked to rate 6 secondary appraisal items in terms of particular characteristics of the thought that were associated with his/her control efforts.

The misinterpretations of control significance, unrealistic control expectations, inflated responsibility for control and faulty inference of control were highly intecorrelated (r' ranged .57 to .75), Therefore these variables were analyzed together in a 2 x 2 MANOVA, whereas TAF and the possibility of thought control were not highly correlated so these appraisals were analyzed in separate 2 x 2 ANOVAs.

As presented in Table 56, the MANOVA revealed only a significant main effect of religiosity (Wilk's $\lambda = .55$, $F\ (4, 24) = 4.88$, $p < .01$, $\eta^2 = .44$). Follow-up univariate F tests indicated that the main effect of religiosity was only significant for the responsibility appraisal ($F\ (1, 27) = 9.46$, $\eta^2 = .26$, $p < .01$). Highly religious students rated this appraisal more relevant for their sexual intrusions (M = 3.67) than low religious participants students (M = 2.16).

The ANOVAs for TAF and possibility of control were not significant with all students rating these appraisals as somewhat true in making the sexual intrusion significant for them.

Table 56. *Group Differences in Secondary Appraisals of Difficulty in Controlling Sexual Intrusions.*

	Canadian		Turkish		Significance Test
Secondary Appraisals	*M*	Sd	*M*	Sd	
Misinterpreted significance	1.55	.29	2.75	.43	*F (*1, 27) = 5.07ns
TAF/threat	1.12	.33	2.29	.49	*F (*1, 27) = 3.76ns

Table 56. Cont.

	Canadian		Turkish		Significance Test
Possibility of control	2.97	.22	2.91	.32	*F (*1, 31) = .02ns
Unrealistic standards	3.38	.22	3.91	.33	*F (*1, 31) =. 1.73ns
Inflated responsibility	2.50	.27	3.33	.40	*F (*1, 31) = 2.93ns
Faulty inference of control	1.97	.36	2.41	.53	*F (*1, 31) = .47 ns
	Degree of Religiosity				
	Low		High		Significance Test
Secondary Appraisals	*M*	Sd	*M*	Sd	
Misinterpreted significance	1.64	.36	2.67	.39	*F (*1, 27) = 3.75ns
TAF/threat	1.42	.41	2.00	.44	*F (*1, 27) = .94ns
Possibility of control	3.31	.27	2.58	.29	*F (*1, 31) =.3.28ns
Unrealistic standards	3.31	.27	4.00	.30	*F (*1, 31) = .3.00ns
Inflated responsibility	**2.17**	**.33**	**3.67**	**.36**	***F (*1, 31) = .9.47***
Faulty inference of control	2.14	.44	2.25	.48	*F (*1, 31) = .03 ns

* p < .01

3.5.3.3.3. Secondary Appraisals Predict Perceived Control of Sexual Intrusions

This analysis examined whether individual's evaluations or appraisals of their control efforts, and beliefs about the possibility of control and the consequences associated with failed thought control would be associated with overall perceived success at control over sexual intrusions.

A stepwise regression analysis was conducted with the 6 secondary appraisals entered simultaneously as independent variables (IVs) regressed onto rating of success in controlling sexual intrusions (DV). To control for the effects of degree of religiosity and cultures, these variables were entered in the analysis on the first step. The total sample of students reporting sexual intrusions was employed ($N = 65$).

Degree of religiosity and nationality were the first variables entered into the equation, and explained 18 % of the variance with only degree of religiosity significantly predicting overall perceived success at control over sexual intrusions (*F*

[1,29] = 6.43, R^2 = 18, p <05). Higher degree of religiosity was found to be associated with less degree of perceived success over sexual intrusions. After excluding this variance, the addition of the 6 secondary appraisals scores in the second step accounted for a significant portion of the variance and explained 14% of the total variance (F [1, 28] = 5.62, R^2 = 32, $p < .01$). Table 57, presents the zero-order correlation between the IV and DV, standardized beta weight, and partial correlation coefficient. Analysis revealed that only appraisal of failure of control in terms of responsibility emerged as a significant unique predictor of control at $p < .05$. A decreased sense of responsibility for gaining better control over the thoughts was predictive of better subjective control over sexual intrusions.

Table 57. *Secondary Appraisals Predict Control of Sexual Intrusions*

Steps	Variables	β	t	Zero-order	Partial	R^2 Δ	(df) F change
1	Religiosity	.43	2.53	.43	.43	.18	(1, 29)6.43
2	Inflated responsibility	.43	- 2.37	.53	-.40	.14	(1, 28)5.62
				Total R^2		.32	

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

Summary: These results indicate that some appraisals were important in defining subjective control over intrusions. Furthermore, the results suggest that not all appraisals play the same role in the perceived subjective control over sexual intrusions with only feeling less responsibility was the predictor of better perceived control. The findings indicated that a greater sense of responsibility for gaining better control is predictive of less subjective control over sexual intrusions.

3.5.3.3.4. Group Differences in Control Strategies

In the final analysis of possible cross-cultural differences the investigation focused on whether there are differences in how the groups responded to their sexual intrusions. Students were again presented 9 control strategies and asked to rate them on

a 0 to 5 scale of how often they would use a mental control strategy in response to unwanted intrusive thoughts of sex. Because they were moderately intercorrelated, six of the control strategies were entered in a 2 x 2 MANOVA whereas the "ask reassurance", "reasoning" and "do nothing" strategies were analyzed in separate ANOVAs because they had weak correlations with the other response strategies.

The MANOVA revealed that the main effects of religiosity (Wilk's $\lambda = .68$, F (6, 56) = 4.40, $p < .01$, $\eta^2 = .32$) and group (Wilk's $\lambda = .80$, F (6, 56) = 2.53, $p < .05$, $\eta^2 = .19$) were significant for the six control strategies. Follow-up univariate F tests were performed to examine significant main effect of religiosity. As depicted in Figure 10, the main effect of religiosity was significant for "neutralization", "repeated checking", "thought stopping", "and "distraction". As can be seen from Table 58, highly religious students reported they used four control strategies significantly more compared to low religious participants. Furthermore, the main effect of group was only significant for "engage in compulsive rituals", (F (1, 61) = 5.84, ή =.08, p < .05). Turkish students used repeated checking (M = 1.63) much more in response to their sexual intrusions than the Canadian sample (M = .84).

Finally, 2 by 2 ANOVAs on "ask reassurance", "reasoning" and "do nothing" were performed. Analyses revealed that degree of religiosity and nationality was not significant for these control strategies.

Figure 10. *The Main Effect of Religiosity on Control Strategies of Sexual Intrusions*

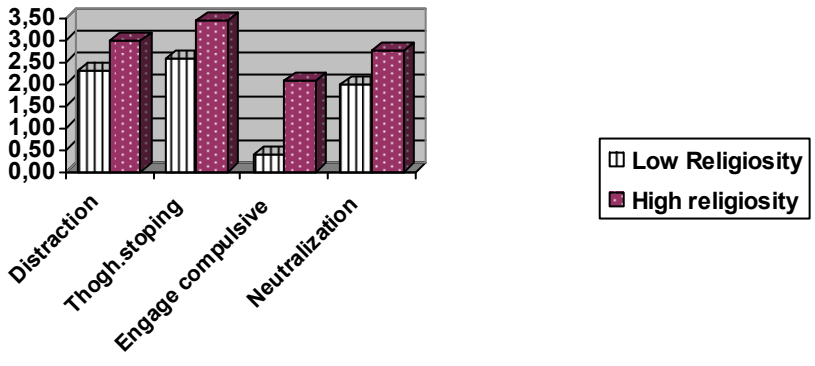


Table 58. *Group Differences in Actual Control Strategies Used to Control Sexual Intrusions*

	Degree of Religiosity				
Dependent Variables	Low		High		Significance Test
Primary Appraisals	*M*	Sd	*M*	Sd	
Distraction	**2.28**	**.22**	**2.98**	**.24**	***F* (1. 61) = 4.60***
Replacement	3.03	.22	3.56	.25	*F* (1. 61) = 2.55
Thought Stopping	**2.55**	**.26**	**3.45**	**.29**	***F* (1. 61) = 5.20***
Reassurance Self	1.98	.25	2.56	.28	*F* (1. 61) = 2.39
Repeated Checking	**.39**	**.22**	**2.09**	**.24**	***F* (1. 61) = 27.38****
Neutralization	**1.99**	**.24**	**2.73**	**.27**	***F* (1. 61) = 4.23***
Seeking Reassurance from others	.74	.18	.91	.20	*F* (1. 61) = .38
Reasoning	1.87	.24	1.86	.26	*F* (1. 61) =.00
Doing Nothing	1.43	.21	1.45	.24	F (1, 61) = .00
	Nationality				
Dependent Variables	Canadian		Turkish		Significance Test
Primary Appraisals	*M*	Sd	*M*	Sd	
Repeated Checking	**.84**	**.19**	**1.63**	**.26**	***F* (1. 61) = 5.89***

Summary: These findings indicated that degree of religiosity may be more important factor in defining how individuals try to control intrusive sexual thoughts than cultural differences. Highly religious individuals differed on four out of the 9 control strategies as summarized below:

(a) Highly religious individuals used significantly more distraction, thought stopping, compulsive rituals, and neutralization than low religious individuals. As stated before, highly religious individuals found their sexual intrusions more distressing. Consistent with this result, examination of group differences in control strategies suggests that the occurrence and content of sexual intrusions increases anxiety in highly religious

individuals, which in turn motivates them to engage in some active coping strategies to dismiss these thoughts.

(b) Cultural differences were appearent in compulsive rituals. Turkish students reported they used significantly more in response to their sexual intrusions than Canadian students.

All findings related to unwanted intrusions are summarized in Table 59

Table 59. *Summary of Group Differences in Three Types of Intrusions in terms of Religiosity and Cultural Differences*

Doubting Intrusions		
	Nationality	**Degree of Religiosity**
Frequency and Distress of Doubting Intrusions	There was no significant group difference	There was no group difference
Primary Appraisals of Doubt	Turkish students reported higher degree of intolerance of anxiety and distress than Canadians.	Degree of religiosity revealed significant difference only on responsibility. High religious students found these appraisals related more to the significance of doubting intrusion.
Primary Appraisals predict Distress of Doubting Intrusions	For Turkish sample, appraisals of need to control and ego dystonicity were significant predictors of distress, whereas for Canadian students, appraisals of intolerance of anxiety and importance of thought were significantly associated with distress of doubting intrusions.	
Perceived Success of Control Doubting Intrusions	There was no significant group difference	There was no significant group difference
	All participants reported that they were moderately successful in controlling doubts	
Importance of controlling doubting intrusions	There was no significant group difference	There was no significant group difference
	All participants reported that controlling their doubting intrusion was slightly important.	

Table 59 (continued)

Doubting Intrusions		
	Nationality	**Degree of Religiosity**
Group Differences in Control Appraisals	There was no significant group difference	There was no significant group difference
	These results suggest that person's appraisal of failing to control doubting intrusions may not be affected by degree of religiosity and culture. Individuals' secondary appraisals of control are generalizable.	
Secondary Appraisals Predict Perceived Better Control of Doubting Intrusions	The beliefs about possibility of control and TAF significantly predicted perceived success over intrusions. The greater belief that one can actually exercise control over his/her doubts and less belief that failure to control doubt might increase chance of a negative consequence or outcome were predictive of better subjective control over doubting intrusions.	
Actual Control Strategies	The Turkish students employed reassuring yourself significantly less than Canadianstudents, while the latter used do nothing less frequently than Turkish students	Highly religious students employed reassuring yourself, ask reassurance from others and neutralization significantly more often than did low religious participant
Religious Intrusions		
	Nationality	**Degree of Religiosity**
Experience of Religious Intruaions	There was no significant group difference	More high religious individuals reported to experience religious intrusion in the last three months as compared to low religious individuals
***Because only 9 low religious participants reported to experience religious intrusions, group comparisons were conducted by using only high religious Canadian Christian and high religious Turkish Muslim data		
Frequency and Distress of Religious Intrusions	There was no significant group difference in terms of frequency of religious intrusions. However, there were significant group differences in rated level of distress. High religious Muslim students rated the religious intrusions as significantly more distressing	

Table 59 (continued)

	Religious Intrusions
Primary Appraisals of Religious Intrusion	There were significant differences in responsibility and TAF appraisals. Muslim students found their religious intrusions significant because they feel a higher level of responsibility related to religious intrusions whereas highly religious Christian students showed higher tendency to believe that their unwanted religious intrusions are significant and important for them because they may actually make them sinful or unfaithful.
Primary Appraisals predict Distress of Religious Intrusions	Appraisals perfectionism and intolerance of anxiety were significantly related to severity of distress of religious intrusions in the Turkish Muslim students, whereas need to control was a unique significant appraisal that predicted degree of distress in the Canadian Christians
Perceived Success of Control Religious Intrusions	There was no significant group difference. Christian and Muslim students was somewhat to moderately successful at controlling their intrusions
Importance of controlling Religious intrusions	There was no significant group difference. All participants reported that controlling their religious intrusions were moderately important.
Group Differences in Control Appraisals	There was only a hint of differences on TAF/threat appraisal scores. Highly religious Christian students rated this appraisal as more relevant for their failure of control than highly religious Muslims. Results suggest that except for TAF/threat appraisal, appraisals of difficulty in controlling intrusions had broad generalizability.
Actual Control Strategies	Significant group differences emerged only on repeated checking ("Engage in a compulsive ritual like repeatedly crossing yourself, washing, bathing, or repeatedly reciting a comforting phrase or prayer of forgiveness). Results revealed that highly religious Turkish Muslim students used significantly more repeated checking to control their religious intrusions than highly religious Canadian Christians
Secondary Appraisals Predict Perceived Better Control of Religious Intrusions	Individuals' evaluations or appraisals of their control efforts were not associated with overall perceived success at control over religious intrusions.

Table 59 (continued)

Sexual Intrusions		
	Nationality	**Degree of Religiosity**
Experience of Sexual Intrusion	There was no significant group difference	There was no significant group difference
Frequency and Distress of Sexual Intrusions	There was no significant group difference	There was a significant group difference in perceived distress. High religious students rated their intrusions significantly more distressing than did low religious students.
Primary Appraisals of Sexual	There was no significant group difference	There was no significant group difference Based on these results it can be suggested that appraisal of sexual intrusions may have broad generalizability.
Perceived Success of Control Sexual Intrusions	There was no significant group difference	There was no significant group difference The Turkish and Canadian students were moderately successful in controlling sexual intrusions.
Group Differences in Control Appraisals	There was no significant group difference	High religious students rated responsibility appraisal more relevant for their sexual intrusions than low religious participants students
Actual Control Strategies	Culture only resulted in significant differences in compulsive rituals. Turkish students reported they used significantly more compulsive rituals as a response to their intrusions.	Highly religious individuals used significantly more distraction, thought stopping, compulsive rituals, and neutralization than low religious individuals.

Table 59 (continued)

Sexual Intrusions	
Nationality	**Degree of Religiosity**
Secondary Appraisals Predict Perceived Better Control of Sexual Intrusions	Higher degree of religiosity was associated with poor perceived control over sexual intrusions. In terms of appraisals, only appraisal of failure of control in terms of responsibility emerged as a significant unique predictor of control. A reduced sense of responsibility for gaining better control over the thoughts was predictive of better subjective control over sexual intrusions.

CHAPTER

DISCUSSION

4.1. Overview

The aims of the present study were to examine the effect of nationality s as a cultural factor and degree of religious devotion on OCD symptoms, specifically scrupulosity, and obsessive beliefs and appraisals using Muslim and Christian students who show different degrees of religiosity. Furthermore, the present study also aimed to examine cultural differences in unwanted mental intrusions using a structured interview schedule. For this aim, the current study firstly adapted and examined initial psychometric properties of four instruments to evaluate the interrelationships among religiosity, OCD symptoms, OCD-relevant appraisal, and unwanted mental intrusions. First, the results of the analyses that were performed to examine psychometric properties of the newly adapted Turkish versions of the scales will be discussed. Then, the findings of the main study about the present research hypotheses will be discussed. Finally, the limitations of the study, clinical implications and directions for future studies will be provided.

4.2. Psychometric Properties of the Turkish Versions of the Guilt Inventory Penn Inventory of Scrupulosity, Religious Fundamentalism, and International Intrusive Thoughts Interview Schedule.

In line with the aims of the current study, Guilt Inventory (GI, Kugler & Jones, 1992), Penn Inventory of Scrupulosity (PIOS, Abramowitz et. al., 2002), Religious

Fundamentalism Scale (RFS; Altemeyer & Hunsberger, 2004), and International Intrusive Thoughts Interview Schedule (IITIS, OCCW cross-cultural studies subgroups, 2005) were adapted into Turkish in order to evaluate the religious fundamentalism, guilt, scrupulosity and intrusive thoughts in OCD symptoms with the final aim of making cross-cultural comparison.

Psychometric properties of the Guilt Inventory. Although the role of guilt in OCD has been frequently noted, relatively few studies have specifically studied guilt as a significant factor in this disorder. Mental health is referred to as "a state of balance that allows one to grow while maintaining contact with consensual reality (Wilber, 1997; cited in Faiver, O'Brien, and Ingersoll, 2000), and intense sense of guilt is assumed to be source of various forms of psychopathology (Gilbert & Miles, 2000). Furthermore, several authors have described guilt as the place where psychology and religion meet (Narramore, 1974). Therefore, assessing this construct, and examining its relationship with psychopathology is very important to develop an efficient treatment model.

Kugler and Jones (1992) developed the Guilt Inventory which assesses three domains of guilt, including trait guilt, state guilt and moral standards. Previous research has shown that guilt shows strong relationship with both religiosity and OCD (e.g., Shafran et al., 1996; Skeketee et al., 1987). In light with the previous research, the present study aimed to understand the role of guilt and its relationship with religiosity in the persistence and maintenance of OCD and scrupulosity symptoms. For this aim, this scale was adapted into Turkish, and the psychometric properties of the scale were assessed by checking its reliability and validity in Turkish university students. The results indicated good reliability and validity information for the Turkish version of the GI, supporting the cross-cultural validity of the scale. Internal consistency coefficients for the scale and its subscales were highly acceptable. Similarly, test-retest reliability, assessed after 4-week interval, demonstrated a good correlation coefficient, implying that the scale is reliable overtime. To evaluate the validity of the Turkish version of the GI, construct, concurrent, and criterion validity information were examined. In terms of construct validity, cross-cultural similarity of

the factor structure of the scale was examined by the factor structure of the scales (i.e., GI and PIOS) via Target Rotation (Vijver & Leung, 1997). When proportionality agreement coefficient or Tucker phi was considered with the criterion of 0.85, as a sign of high factor congruency (Lorenzo-Seva & Ten Berge 2006), results revealed that the item distributions under three factor of GI (i.e., trait and state guilt, and moral standards) showed a high degree of similarity in the item distributions under factors of the original scale, supporting construct validity of the scales. In relation to the criterion validity, the GI was studied in terms of its effectiveness in differentiating individuals with high OCD symptom severity from those with low symptom severity on the basis of the measures of CBOCI. Results indicated that high and low obsessive symptoms groups were successfully differentiated on the basis of the scores of GI. That is the GI scores successfully discriminated people with higher OCD symptoms from those with lower OCD symptoms. Furthermore, the scale scores successfully discriminated low religious individuals from high religious ones, supporting satisfactory discriminant power. These results supported the proposed relationships among OCD, guilt, and religiosity (Greenberg, 1984; Greenberg & Witztum, 1994; Rassin & Koster, 2003) Steketee et al. (1991) noted that greater religious devotion was correlated with greater inappropriate guilt in clients suffering from OCD, but not clients with other anxiety disorders. They reported that in religious people not suffering from OCD, confession usually relieved guilt, whereas in clients suffering from OCD, confession is not effective in relieving guilt. Lastly, significant positive relationships of GI with depression, anxiety, OCD symptoms, and scrupulosity, provided further support for the validity of the sale.

In the light of all these findings, this study presents acceptable test-retest and internal consistency coefficients, and also good construct, concurrent, and criterion validity information for the Turkish version of the GI, which can be utilized in the Turkish culture in order to evaluate individual differences in terms of experiencing guilt.

Psychometric properties of the Religious Fundamentalism Scale. Religious fundamentalism has been cited as a potential risk factor for the development of OCD

and/or scrupulosity (Steketee et al., 1991). However, to date, only one study has attempted to measure the relationship between religious fundamentalism, cognitive belief domains, and scrupulosity in a fundamentalist protestant sample (Witzig, 2005). Furthermore, the interrelationships among these construct have not been investigated in a Muslim sample yet. Therefore, the main aim of the present study was to examine the interrelationships among religious fundamentalism, OCD, scrupulosity, and obsessive related appraisals in the Canadian Christian and the Turkish Muslim students. Religious fundamentalism was defined as "the belief that there is one set of religious teachings that clearly contains the fundamental, basic, intrinsic, essential, inerrant truth about humanity and deity; that this essential truth is fundamentally opposed by forces of evil which must be vigorously fought; that this truth must be followed today according to fundamental, unchangeable practices of the past; and that those who believe and follow these fundamental teachings have a special relationship with the deity" (Altemeyer & Hunsberger, 1992; p. 118). Altemeyer and Hunsberger (1992) developed the Religious Fundamentalism scale to a "fundamentalist" mindset in terms of how an individual views his or her religious beliefs. In Turkey, however, there are only a limited number of religiosity scales which usually assess mainly religious practices (e.g., Yaparel, 1987). In line with the aims of the current study, this scale is decided to be adapted into Turkish to assess fundamentalist tendency in religious beliefs in Turkish sample. Examining the psychometric properties of the scale revealed satisfactory reliability and validity information for the Turkish version of the RFS. Internal consistency coefficients for the scale were highly acceptable. Similarly, test-retest reliability revealed that the scale produced reliable scores overtime. In terms of validity of the scale, a one factor solution which is consistent with the findings of the original study (Altemeyer & Hunsberger, 2004) supported the construct validity of the Turksh version. Considering the concurrent validity, RFS scores were found to be significantly and positively correlated with various religious practices (i.e., frequency of praying, reading religious book, visiting place of worships), and scrupulosity symptoms. The scale also showed significant negative correlation with depression and anxiety scores. Discriminative power of the scale to distinguish low religious

individuals from high religious ones provided further evidence for the validity of the sale.

In conclusion, the results of the present study indicated a satisfactory reliability and validity information for the Turkish version of the RFS-R, supporting the cross-cultural utility of the scale.

Psychometric properties of the Guilt Inventory. Scrupulosity is a feature of obsessive-compulsive disorder which is characterized by obsessions and compulsions containing religious themes, hypermorality, pathological doubt/worry about sin, and excessive religious behavior (Abramowitz et al., 2002; Greenberg & Witztum, 2001). Epidemiologic studies reported that obsessions with religious themes were the fifth common type of obsessions identified in the DSM-IV field trials for OCD (Foa et al., 1995). Abramowitz et al. (2002) developed the Penn Inventory of Scrupulosity to assess the severity religious obsessions. Based on their findings, they suggested that religion and OCD may each contribute to scrupulosity independently. Thus, subsequent research may need to consider models that include the roles of multiple independent factors on the development of scrupulosity, including guilt, obsessive beliefs, and family background. During the present study, we aimed to understand the differences between Christian and Muslim samples in terms of predictors of scrupulosity symptoms. For this aim the Penn Inventory of scrupulosity was adapted into Turkish.

The results of the present study revealed a good reliability and validity information for the Turkish version of the PIOS. Internal consistency coefficients for the scale and its subscales were highly acceptable. Similarly, test-retest reliability, assessed after 4-week interval, demonstrated a good correlation coefficient, implying that the scale is reliable overtime. To evaluate the validity of the Turkish version of the PIOS, construct, concurrent, and criterion validity information were examined. In terms of the construct validity, cross-cultural similarity of the factor structure of the scale was examined. Results of the Target rotation analysis revealed a high degree of consistency in the factor structure between Canadian and Turkish samples supporting the construct validity of the Turkish version of the scale. In relation to the criterion

validity, the PIOS was studied in terms of its effectiveness in differentiating individuals with high symptom severity from those with low symptom severity on the basis of the measures of CBOCI. Results indicated that PIOS score successfully discriminated people with higher OCD symptoms from those with lower OCD symptoms. Furthermore, low religious participants were different from low religious ones on the basis of the scores of PIOS total and subscale scores. Recently, Abramowitz and his colleagues (2002) noted that individuals with higher level of scrupulosity reported higher level of OCD symptoms than did those with low scrupulosity symptoms. Furthermore, highly scrupulous individuals also reported greater religious devotion than low scrupulous ones. Consistent with these findings, the effectiveness of the scrupulosity scales in differentiating individuals with high OCD symptom severity from those with low symptom severity on the basis of the measures of Clark Beck Obsessive-Compulsive Inventory (CBOCI) supported the discriminative power of the scales. Furthermore, significant positive relationships of PIOS with OCD symptoms, guilt, worry and religious fundamentalism scales provided further support for the validity of the sale. In the light of all these findings, this study presents supporting evidence of the cross-cultural nature of the scale which can be utilized in the Turkish culture in order to evaluate individual differences in terms of presenting scrupulosity symptoms.

Psychometric Properties of the International Intrusive Thought Interview Schedule (IITIS). Unwanted mental intrusions are one of the core features of OCD. They usually suddenly appear into person's mind and interfere what he/she does. To understand how normal intrusive thoughts turn into clinical obsessions has been the main interest of the recent research and models of OCD. Accurate measurement of key theoretical constructs is a critical process in the elaboration and refinement of current theories of psychopathology (Clare, 2003). Contemporary psychological theories of OCD emphasize a crucial role for cognitive variables in the etiology and maintenance of the disorder (e.g., D.A. Clark, 2004; Rachman, 1993, 1997, 1998; Salkovskis, 1985, 1989). Therefore, precise measurement of intrusions, appraisals of their meaning or

significance, and dysfunctional beliefs and assumptions is important for understanding the psychological basis of OCD.

One group of researchers developed International Intrusive Thoughts Interview (IITIS). Overall, there appear to be several advantages to the IITIS. First, the interview allows us to capture a very diverse intrusive thought content which provides a better basis for understanding the nature of intrusive thoughts and appraisals. The ITIIS includes several sets of questions that assess (a) the frequency and distress associated with unwanted thoughts, images and impulses; (b) appraisals of the significance or meaning of the intrusions; (c) the need to control unwanted intrusions and appraisals of ineffective attempts to control the unwanted thoughts; and (d) the various control strategies that individuals use in response to unwanted intrusions. Data are collected on six different types of intrusive thoughts (e.g. contamination/illnesses, harm/aggression/injury, doubts, sex, religion and threats of violence intrusive thoughts).

Second, the IITIS allows researcher to collect both qualitative and quantitative data that provides in-depth information on the nature and frequency of this thinking, how people respond to the thoughts, and how they try to control their unwanted mental intrusions. Both quantitative and qualitative analyses are possible. Third, the IITIS is a highly structured interview schedule. This feature makes it more amenable to reliable administration across multiple interviewers. Interviewers are given training and instruction on the interview methodology and procedures. All interview instructions are read verbatim to participants in order to improve inter-rater reliability. In addition a "Participant Rating Scale Sheet" is given to students so they can visually process the various questions and rating scales that comprise the IITIS. This interview schedule was translated and adapted into Turkish.

In order to assess the reliability of the IITIS, firstly inter-rated reliability was assessed to determine whether interviewer classified correctly intrusive thoughts which were reported by participants. For this aim, two researchers independently classified reported intrusions into doubting, religious and sexual intrusions, for which inter-rater reliability was high. Two researchers showed inconsistency only on three intrusions.

The reliability of the interview schedule was assessed by examining the internal consistency coefficients of the primary and secondary appraisal items. Results revealed that internal consistency coefficients were satisfactory (i.e., alpha coefficients > 0.70) for primary and secondary appraisal items. However, Cronbach's alpha coefficients for some secondary appraisal items were less satisfactory (i.e. sexual intrusions). Some intrusions were reported less frequently by the participants and it was thought that low sample sizes may have influenced this result. In order to obtain information about the validity of the IITIS, convergent validity of the interview schedule was assessed by examining the relationship between primary appraisal ratings and three subscales of the Obsessive Beliefs Questionnaire (i.e., Responsibility/Threat Estimation, Importance/Control Thoughts, and Perfectionism/Certainty). Results revealed that IITIS-primary appraisal items showed moderate relationship with three belief subscale of the Obsessive Beliefs Questionnaire. Consistent with Kyrios et al' study (2005), the Turkish version of the IITIS appraisals did not show specificity with respect to OBQ scales. For example, for sexual and religious intrusions, IITIS perfectionism/Certainty appraisal dimension showed significant correlations with the three subscales of OBQ, The authors suggested that this may be a reflection of the considerable overlap or high intercorrelations of the OBQ domains as noted in contemporary research (OCCWG, 2003, 2005).

Overall, the results of the present study suggested that the Turkish version of the IITIS can be used as an interview tool that can distinguish between the intrusive subtypes, and is applicable to general research on intrusions. However, the IITIS still requires further development in order to overcome some of its inherent limitations (e.g., internal reliability, non-specificity, lack of inter-rater data). Future revisions may improve its psychometric properties and practical utility

In consequence, the findings about reliability, and construct, criterion and concurrent validity showed that the Turkish versions of the GI, RFS, PIOS and IITIS were all psychometrically reliable and valid instruments for Turkish university students. This information provided additional support for the cross-cultural utility of these measures.

4.3. Nationality, Religiosity, OCD Symptoms, Scrupulosity and Obsessive Beliefs

Research on cross-cultural variability of OCD symptomatology has mainly focused on examining religious shaping in obsessions and compulsions. Although religion represents, and determines person' beliefs, concerns and behaviors, and it is expected that OCD can be influenced by one's belief system, the psychological literature on the relationship between OCD and religion is relatively scarce and incomplete. The theoretical rationale for expecting such a positive relationship between religion and OCD is derived from Freud's writings about similarity between religious practices and obsessive actions (1912/1953). However, understanding the intricated role of religious and cultural factors in the etiology of OCD is a quite difficult process than it is assumed, because it is still not clear, neither, to what degree of religious factors influence OCD, nor is it certain whether they play a causal role or are only part of the symptomatology. Furthermore, if religious factors play significant role in the development and persistence of OCD, it remains unclear position whether their effects are limited to deteriorating existing dysfunctional family characteristics or can also result in unique forms of the disorder. Fitz (1990) reviewed the studies that have examined this relationship and defined three specific questions that studies have aimed to understand: "(a) Does religion predispose to the development of OCD? (b) What are the familial factors involved in OCD and how do they interact with religious factors to influence the onset and course of this disorder? (c) What kinds of studies need to be done to present us with a clearer picture of the relationship between religion and OCD?" (p. 141).

Therefore, the present study mainly aimed to understand the influence of nationality and religiosity on OCD symptoms, scrupulosity, and obsessive related beliefs using the Canadian Christian and Turkish Muslim students who have different degree of religiosity. In this section, firstly, the main findings of the present study about the effect of religiosity and nationality on the OCD and scrupulosity symptoms severity, and obsessive beliefs are summarized and discussed by comparing the Turkish Muslim and the Canadian Christian data. Secondly, the detailed discussion of

the findings is provided. Then, the findings of the interview data are discussed in terms of the different roles of primary and secondary appraisals, and dysfunctional control strategies in defining frequency and distress of intrusions by comparing the Turkish Muslim and the Canadian Christian samples. Finally, limitations of the study, clinical implications and directions for future studies are provided.

4.3.1. Summary of the Hypotheses of the Present Study

Before the examination of the specific relationship between religion, religiosity and OCD, the present study firstly focused on the examination of the influence of the degree of religious devoutness and nationality on general distress scales in order to understand whether the effect of religion and religiosity is specific to OCD symptomatology, or whether religiosity and nationality are also related to other general psychopathology symptoms. The results indicated that the nationality resulted in significant differences in all general distress measures, including depression, anxiety, and guilt. The findings suggested that Turkish students reported they experienced higher levels of depression and anxiety symptoms than Canadian whereas Canadian ones experienced higher degrees of guilt as compared with the Muslims. More importantly, the interaction of religiosity and nationality was significant only for anxiety symptoms; with Muslim religious school students experiencing higher degrees of anxiety as compared with Christian religious school students. The degree of religiosity only significantly affected feeling of guilt. That is, irrespective of nationality, the higher a person holds religious beliefs the higher he/she experiences guilt. However, there were no significant differences between the high religious sample and religious school participants.

This study is consistent with previous research reporting that individuals higher on trait-guilt are more likely to have higher score on measures of religious orthodoxy and religious values (Demaria & Kassinove, 1988; Fehr & Stamps, 1979). Likewise, Quiles and Bybee (1997) found that predispositional compared to chronic guilt was

more strongly associated with lowered hostility and increased volunteerism as well as participation in religious activities and religiosity. Consistent with the present study, Demaria and Kassinova (1988) examined the relationship of the core irrational beliefs, nationality and religiosity to guilt in Catholics, Protestants, Jews, and persons of no nationality and found that guilt was not different among the religions; however, religiosity was found to be a significant guilt predictor. However, inconsistently, the present study found significant differences between Muslim and Christian students in the level of guilt. To explain this significant difference is quite difficult because guilt scale consists of three different dimensions (trait, state, and moral standards), and one of the three dimensions could be increase the guilt scores in the Christian sample. Therefore, this result should be replicated by subsequent studies. In conclusion, the results revealed some minor differences in general distress symptoms between the Muslim and Christian students. While Turkish students reported higher degree of depression and anxiety, the Canadian students experienced higher level of guilt. Furthermore, degree of religiosity only affected severity of guilt. These results suggest that except for guilt, other general distress variables may not be affected by person's degree of religiosity, and the relationship between religiosity and psychopathology may be specific to certain types of psychopathology measures (i.e., guilt, OCD).

After the examination of the religiosity-general distress measures relationship, the present study focused on the examination of religiosity, nationality and OCD relationship. Hypothesis 1 suggested that participants high in religiosity would score significantly higher than participants low in religiosity on the total OCD symptoms as measured by the total score on the Clark Beck Obsessive-Compulsive Inventory. Results revealed that regardless of nationality, higher degree of religiosity was related to higher degree of OCD symptoms. That is, religious school students received the highest OCD symptoms in both Muslim and Christian samples. The low religious participants had the lowest and high religious ones reported moderate level of OCD symptoms. These results supported the first hypothesis of the present study, as well as previous research findings that indicated exaggerated role of religiosity in OCD

symptoms (Rasmussen & Tsuang, 1986; Salkovskis et al., 1999; Steketee et al., 1991; Sica et al., 2002).

The present study also aimed to understand whether belonging to specific nationality would make the individual more vulnerable to develop OCD symptoms than belonging to another one by comparing the Turkish Muslim students with Christian ones. In terms of the effect of nationality, because of high emphasis on religiosity in Muslim sample, Hypothesis 2 suggested that high religious Muslim students would suffer from higher degree of OCD symptoms than did the high religious Canadian Christian students. Results indicated that there was no significant difference between the Turkish and Canadian groups in total OCD symptoms. Therefore, the second hypothesis was rejected. These results suggested that degree of religious devoutness may be more important factor to exacerbate OCD symptom severity than belonging to a specific nationality because regardless of nationality, increase in religiosity resulted in more severe OCD symptom presentation.

In terms of the OCD symptom type, Hypothesis 3 suggested that because of higher emphasis on thinking and beliefs in Christianity, and higher emphasis on rituals in Islam, while highly religious Christian students would report higher degree of obsessionality as compared to highly religious Muslims, highly religious Muslim students would suffer from higher degree of compulsive symptoms than highly religious Christian students. Analyses of OCD symptoms revealed that, again regardless of nationality, increase in religiosity resulted in more severe obsession and compulsion symptoms in both the Canadian Christian and the Turkish Muslim samples. Religious school students reported the highest level of obsessive and compulsive symptoms; that is they scored higher than both high religious and low religious students. Moreover, the degree of religiosity affected Canadian and Turkish participants differently in terms of the presentation of OCD symptoms. To put it differently, religious school Turkish Muslim students presented higher degrees of compulsions than religious school Canadian Christian students. Furthermore, in the Canadian students, there were no significant differences among the three different religiosity groups, whilst religiosity resulted in significant differences in the severity of

compulsive symptoms in the Turkish students. As expected, religious school Turkish students suffered from higher degree of compulsive symptoms than low religious Turkish. Therefore, the hypothesis claiming Turkish students would suffer from higher degree of compulsive symptoms than Canadian students was supported. Nevertheless, religiosity has not created a significant difference for Turkish or Canadian students on the obsessive symptom level. This proves that the hypothesis claiming that Canadian students would perform more obsessive symptoms is not supported.

Fourth hypothesis stated that high religious participants would score significantly higher than low religious participants in scrupulosity symptoms, as measured by the total score on the Penn Inventory of Scrupulosity. Furthermore, because of differences in the tenets of Christianity and Islam, it was also expected that high religious Muslim students would report higher level of scrupulosity symptoms than high religious Christian students. To test these hypotheses, firstly group differences in total scrupulosity symptoms, assessed by PIOS, were examined via analysis of variance. The results indicated that nationality and religiosity had significant effects on the experience of scrupulosity symptoms. As expected, high degree of religiosity was associated with higher degree of scrupulosity symptoms. That is, regardless of nationality, religious school students and highly religious students experienced higher degree of scrupulosity than low religious participant. Therefore, the fourth hypothesis was supported. This finding is consistent with previous findings. For example, Greenberg and Shepler (2002) conducted a research in 28 ultra-orthodox Jewish psychiatric patients with OCD in order to examine the relationship between religiosity and religious symptoms of OCD. They compared patients' experience of their religious and non-religious symptoms of OCD. The most striking finding was that when all the sample of OCD patients are from one very religious group, 93% of the sample reported they experience religious symptoms. Consistent with this result, authors (Rasmussen & Tsuang, 1986; Steketee et al., 1991) suggested that individuals from conservative religious groups, such as fundamental Christians, may be more inclined to develop scrupulosity than low religious individuals.

The present study also aimed to examine whether scrupulosity is disproportionately represented within some religious groups. Because of differences in the tenets of Christianity and Islam, it was also expected that high religious Muslim students would report higher level of scrupulosity symptoms than high religious Christian students. The results of the present study also revealed that Turkish students reported higher scrupulosity symptoms than Canadian students; therefore the fifth hypothesis of the present study was supported. Therefore, significant differences between the Christians and Muslims in the severity of scrupulosity symptoms suggests that because of the content of the obsessions and compulsions, scrupulosity may be more sensitive to the influence of religious doctrine, different from other OCD symptom subtypes. This finding seems to be consistent with the previous findings from other Muslim countries (Mahgoub & Abdel-Hafeiz, 1991, Okasha et al., 1994).

Because Islamic doctrine, which stresses fear of God as an important attitude, alongside with hope and trust in God, and fear is a cherished attitude in Muslim worship, sixth hypothesis proposed that high religious Muslim students will score significantly higher than high religious Christians on fear of God symptoms as measured by the Fear of God subscale scores on the Penn Inventory of Scrupulosity. Results revealed that religious school and high religious the Turkish Muslim groups reported higher fear of God than religious school and high religious Christian groups. These findings suggested that the cognitive basis of scrupulosity may differ between Christians and Muslims, with the latter more concerned about fear of God than the former. Overall the findings indicated that cultural values may influence which beliefs and attitudes might characterize the cognitive basis of religious obsessions. Therefore, the sixth hypothesis was supported.

The cognitive theories of OCD (e.g., Purdon & Clark, 1993; Rachman, 1997; Salkovskis, 1985) propose that misinterpretations of the content and occurrence of intrusive thoughts play a significant role in the transformation of these intrusions into abnormal clinical obsessions. Furthermore, previous studies indicated that cultural factors, such as religious doctrines, rituals or customs may influence how person appraise and response to his/her intrusive thoughts. Therefore, hypothesis 7 stated that

high religious participants will receive significantly higher score than low religious participants on obsessional beliefs, as measured by the total score on the Obsessive Beliefs Questionnaire - 44. Furthermore, because of different values in two nationality s, we expected to find significant differences between high religious Muslims and Christians in scores on the three subscales of OBQ: Responsibility/threat Estimation (RT), Perfectionism/Certainty (PC), and Importance/Control of Thought (ICT).

In terms of the total OBQ score, results showed that after holding constant the significant main effect of depression, the experience of obsessive related beliefs was affected only by degree of religiosity. Religious school students obtained the highest scores on obsessive beliefs questionnaire. The low religious participants had the lowest and the high religious ones reported moderate level of OCD relevant beliefs. That is, high degree of religious devoutness was found to be associated with higher degree of dysfunctional beliefs; therefore, sixth hypothesis was supported. However, consistent with OCD symptoms, nationality did not have a significant effect on the severity of obsessive beliefs. Based on these results, it can be concluded that type of nationality may not have an increasing effect on the severity of the obsessive like beliefs, that is holding specific religious beliefs seems not to render a person more vulnerable to develop more severe dysfunctional beliefs and appraisals that may play important roles in the maintenance and persistence of OCD. However, results showed that the content of the appraisal may be influenced by the nationality and degree of religiosity. When the three subscales of OBQ were examined separately, religiosity has had an increasing effect on the three dimensions of obsessive beliefs questionnaire (OBQ). Religious school students scored higher on the three subscales of the OBQ (i.e., appraisals of RT, PC, and ICT) as compared to low religious students. Three religious groups only differed from each other in terms of the scores on the Importance/Control of Thoughts (ICT) subscale. Because this appraisal was more sensitive to differences in religious devoutness, it can be suggested that degree of religiosity may play a more significant role in the exacerbation of the beliefs about importance and need to gain complete control over unwanted mental intrusions, as compared to Responsibility/Threat Estimation (RT) and Perfectionism/ Certainty (PC) appraisals.

Furthermore, cultural differences affected obsessive beliefs differently. Turkish students reported higher levels of perfectionism and intolerance for uncertainty in comparison with Canadian students. Rather than emphasis on religious beliefs, this result may be explained, in the best way, by referring to Hofstede' study (2001) that defined countries using four national dimensions. According to this study, Turkey seems to be a more collectivist, relatively masculine, uncertainty avoidant (low tolerance for ambiguity) with inequalities of power. Canada, on the other hand, is a more individualistic country that also has higher tolerance for uncertainty with low power distance. Thus, the differences between the Canadian and the Turkish students may be also related to cultural characteristics of the two countries, rather than purely religious differences. In order to explore these difference further, future studies need to examine differences between different religion groups from the same country.

The following section presents the discussions of these findings in light with the specific facets of Islam and Christianity, as well as previous literature findings.

4.3. 2. General Discussion: Nationality, Religiousness, OCD and Scrupulosity Symptoms, and OCD-Relevant Beliefs

Over the last two decades, understanding the complicated interrelationship between culture, and human behavior and experience has received great interest in contemporary psychology. Some research has focused on psychopathologic manifestations of a specific disorder across cultures (Draguns & Matsumi, 2003), while other studies have aimed to specify the differences and similarities in disorders and typical symptoms across cultures (e.g., Kleinknecht, Dinnel, Kleinknecht, Hiruma, & Harada, 1997). The cross-cultural studies on OCD revealed that OCD and other anxiety disorders may vary across cultures in terms of prevalence and form of expression but not in their essential structures (e.g., Good& Kleinman, 1985). Cross-cultural epidemiological studies have shown that OCD is found in all cultures that have been the subject of epidemiological studies, and its clinical picture is relatively

uniform, with similar annual prevalence rates, age of onset, symptom subtypes and comorbidity with major depression and other anxiety disorders (Greenberg & Witzum, 1994; Weissman et al., 1994). However, based on differences in the frequency of subtypes and predominance of obsessive over compulsive symptoms across countries, or vice versa, researcher concluded that in spite of its valid diagnostic category across cultures, the variability in symptom presentations suggests that cultural factors may affect the frequency and symptom presentation of OCD (Sasson et al., 1997; Weissman et al., 1994).

De Silva (2006) proposed that cultural factors can influence obsessions and compulsions in four ways: (a) content of obsessions/compulsions may reflect common concerns within a culture; (b) obsessions/compulsions may be linked to religious beliefs and/or practices (c) those with strict religious beliefs may be more prone to developing clinical obsessions, as a result of attaching high significance to unwanted intrusive thoughts and (d) superstitions prevalent in a culture may be reflected in the OCD symptoms of members of that culture (e.g., measures of superstition were correlated with overall compulsiveness, compulsive checking, perfectionism and responsibility) (Frost et.al., 1993).

Researchers suggested that OCD symptoms can act like a lens that magnifies certain aspects of the culture that have salience for individual experience (Lemelson, 2003). For example, OCD sufferers from Saudi Arabia exhibit a high frequency of obsessions and compulsions about the performing ritualistic prayers and washings in a predetermined strict order that has not been found in epidemiological studies of non-Muslim countries (Mahgoub & Abdel-Hafeiz, 1991). In a transcultural study Okasha et al. (1994) found that clinical samples of OCD patients from India and England very rarely reported religious content in OCD symptoms, whilst culturally bound religious content in OCD symptoms was observed very frequently in Egyptian (e.g., 60%) and in Jewish OCD samples (e.g. 50%). Different from religious content in OCD symptoms in the Muslim countries, studies in Western and Eastern countries indicated that, dirt and contamination obsessions are the most common obsessions in these countries and contamination obsessions is followed by harm or aggression, somatic

issues, religious issues, and finally sexual issues (Mataix-Cols et al., 1999, 2002; Sasson et al., 1997). These findings suggest OCD symptoms can act like a lens that magnifies certain aspects of culture that have salience for individual experience (Lemelson, 2003).

Religion is an important cultural factor that may play a role in the maintenance, development and course of OCD. On the other hand, the association between religiosity and mental health remains complex and an ambiguous area for psychological research. Despite some inconsistent findings which raise some questions about the impact of religiosity on OCD and OC cognitions (Lewis, 1998, Rapheal et al., 1996; Steketee et al., 1991; Rapheal et al., 1996), recent research has indicated that degree of religiosity and nationality can influence the severity and the content of OCD symptoms, as well as OCD relevant beliefs and appraisal (e.g., Abramowitz et al., 2004; Cohen, 2003, Greenberg & Shefler, 2002; Rassin & Koster, 2003). Furthermore, another shortcoming in the relevant literature is that the samples of the majority of the studies examined relationship between religiosity and OCD were mostly drawn from mainly Christian or Jewish cultures. To date, there is no study directly examined the influence of nationality and religiosity on the OCD symptomatology, scrupulosity symptoms and OCD related beliefs by comparing high religious Muslim samples with high religious Christian samples. Therefore, the present study mainly aimed to understand the influence of nationality as a cultural diversity and religiosity on OCD symptoms, scrupulosity, and obsessive related beliefs using the Canadian Christian and Turkish Muslim students who have different degree of religiosity.

As discussed before, the cognitive models of OCD underlie the three tenets of the etiology of OCD: (a) clinical obsessions drawn from normal, unwanted intrusive thoughts, (2) dysfunctional assumptions and appraisals (e.g., responsibility, overimportance/control of thoughts, overestimation of threat) play and important role in the transformation of normal intrusions into clinical obsessions and compulsive behaviors to reduce anxiety caused by obsessions, and (c) compulsions as neutralizing acts provide only temporary relief, however, in the long term, they increase the frequency and intensity of the intrusions. In his cognitive theory of OCD Rachman

(1997) proposed that the catastrophic misinterpretation of the occurrence and content of intrusions plays a significant role in OCD, and high religiosity may serve a function in appraising the intrusive thoughts as personally significant and important. Regarding the relationship between religiosity and OCD, Rachman (1997, p. 798) hypothesized that "people who are taught, or learn, that all their value-laden thoughts are of significance will be more prone to obsessions — as in particular types of religious beliefs and instructions". He emphasized that the content of obsessions can reflect religious themes.

The results of the present study greatly supported the role of increased religiosity in obsessions, compulsions, scrupulosity, and OCD relevant appraisals and beliefs. Results revealed that regardless of nationality, higher degree of religiosity was related to higher degree of OCD symptoms. That is, religious school students received the highest OCD symptoms in both Muslim and Christian samples. The low religious participants had the lowest and high religious ones reported moderate level of OCD symptoms. These results supported to the previous research findings that indicated exaggerated role of religiosity in OCD symptoms (Rasmussen & Tsuang, 1986; Salkovskis et al., 1999; Steketee et al., 1991; Sica et al., 2002). However, contrary to expectation, there was no significant difference between the Turkish and Canadian groups in total OCD symptoms. These results suggested that degree of religious devoutness may be more important factor to exacerbate OCD symptom severity than belonging to a specific religious affiliaiton because regardless of nationality, increase in religiosity resulted in more severe OCD symptom presentation. This non significant difference between the Canadian and the Turkish university students can be explained by different characteristics of Turkey as a Muslim country. Different from other Muslim samples, Turkey has removed Islamic practices from public life throughout the last century, and many Turkish Muslims are very secular in their lifestyle. Because of this secular state structure, Turkey has different realities of political and religious life, which may render the characteristics of Turkey similar to Western countries, rather that other Muslim samples. The secular characteristics of Turkey, as different from other Islamic countries have been supported by a series of studies. For example,

among the Muslim samples, Saudi Arabian and Egyptian patients with OCD had religious symptoms in 60%of the cases. In contrast, Egrilmez et al. (1997) found religious symptoms in only 11% of their Muslim sample in Turkey. Similarly, Teket, Uluşahin and Orhon (1998) found that the Turkish sample resembled the western and Indian samples in the order of the frequency of symptoms (i.e. obsessions of contamination, aggressive, symmetry/exactness and religious vs. compulsions of cleaning/washing, checking and ordering).Thus, the lack of differences between Turkish Muslims and the Canadian Christians may not generalize to other Muslim groups from other cultures.

Analyses of OCD symptom subtypes (i.e., obsessions and compulsions) revealed that, again regardless of nationality, increase in religiosity resulted in more severe obsession and compulsion symptoms in Canadian and Turkish sample. Religious school students reported the highest level of obsessive and compulsive symptoms; and they scored higher than both high religious and low religious students. Moreover, the degree of religiosity affected Christian and Muslim participants differently in terms of the presentation of OCD symptoms. To put it differently, religious school Muslim students presented higher degrees of compulsions than religious school Christian students. Furthermore, in Canadian Christian students, there were no significant differences among the three different religiosity groups, whilst religiosity resulted in significant differences in the severity of compulsive symptoms in the Turkish Muslim students. As expected, religious school Muslim students suffered from higher degree of compulsive symptoms than low religious Muslims. These results suggest that regardless of nationality, religiousness has a detrimental effect on the severity of the OC symptoms in both Christian and Muslim students. However, elevated OC symptoms in religious students were due to compulsions in the Muslim religious school students. The reason of this difference may be explained by the difference of emphasis in these two. While Islam is a religion with rituals which are expected to be performed in a specific order, Christianity is a religion which emphasizes liturgy, intentions and strives for excellence and there are relatively few behavioral rituals that should be followed strictly during the religious worships (Favier

et al., 2000; Sica, Novara & Sanavio, 2002; Siev & Cohen, in press). For Christians, faith is proven by belief in Jesus. However, in Islam, in addition to the emphasis on beliefs, Muslims should follow very strict rituals to prove one's faithfulness to "Allah".

Different from the Canadian Christian students, the significant positive relationship between religiosity and compulsive rituals in the Turkish Muslim sample was further supported by the findings of the subsequent regression analyses. To better understand the common and distinct nature of the factors that may increase the severity of compulsive symptoms in the Canadian and the Turkish students, two separate hierarchical regression analyses were performed on the compulsive subscale of the CBOCI in the Canadian and the Turkish. In these regression analyses, depression and anxiety symptoms were used as control factors and were entered in the first block. Then, guilt and religious fundamentalism scores were included in the second block. Three subscales of OBQ as obsession related beliefs were entered in the third step. Finally, scrupulosity scores were entered into the analyses as OCD subtypes. Results indicated that after controlling for the effects of depression and anxiety, the severity of guilt was significantly and positively related to compulsive symptoms for both the Turkish and the Canadian samples. However, person' strength of religious devotion and severity of scrupulosity symptoms were only related to compulsive symptoms in the Turkish students. The significant association with religiosity, scrupulosity and compulsive symptoms in the Turkish Muslim students further supported the influence of Islamic laws on the symptom presentation. For example, in Islamic law, menstrual impurity is very significant; women are forbidden to fast or pray during menstruation, and their underwear should be washed separately. The importance of menstrual purity may compel high religious individuals to check themselves repeatedly during the days before prayer. To start praying again after the end of menstruation, she should clean herself in a ritual bath, and after the taking bath, even in the presence of a drop of blood, she must stop prayer and restart bathing rituals. Furthermore, while performing an ablution before five time salaat in a day, it is essential that certain parts of body should be washed in a specific order and in specific number of times. Otherwise, it is

obligatory that the rituals should be repeated since the breaking of the order would destroy the value of the worship. Even contaminating very small drop of urine can break the ablution, and before praying each Muslim should check everything that can violate the purity. Similarly, Okasha (1970) noted that because of high emphasis on cleanliness of the anal region, Muslim patients with OCD spent hour's cleaning themselves before prayer. These concerns are consistent with the high frequency of compulsive symptoms in the high religious Muslim students. Furthermore, in Islam, doubts and/or religious intrusions about religious practices are accepted as "vesvese/waswas", which refers to the temptation by the Devil forces as a test for faithfulness, or excessive doubts about proper and orderly completion of any religious practice (Al Issa & Qudji, 1998). According to Islam, by means of "waswas", Devil continuously tries to flummox the person's mind during performing his/her daily worships to weaken the person's faith during religious worships. The occurrence of waswas may increase doubts about the correctives of religious rituals, which in turn may increases the frequency of compulsive symptoms in Muslim religious school students.

In terms of the predictive values of OCD related beliefs for compulsive symptoms, results indicated that different appraisals played significant roles in the severity of compulsive symptoms for the Christian and Muslim students. Beliefs about importance and need to control thoughts were related to severity of compulsive symptoms in the Canadian sample whereas beliefs about responsibility and increased threat estimation were significantly related to severity of compulsive symptom in the Turkish sample. These results suggest that for Turkish and Canadian samples, different appraisal factors play a significant role in the severity of compulsive symptoms. For the Canadian students, the occurrence of a high level of guilt and the higher tendency to believe the importance of thought (i.e., believing that having a thought about an immoral act is morally equivalent of committing the act and thinking about an event can make it happen) and to believe the necessity of complete control (i.e., one can and should control unwanted thoughts) increase distress and motivate the person to perform overt or covert compulsive behaviors to decrease feeling of distress. However,

non significant relationship between religiosity and compulsive symptoms suggests that compulsive rituals may not be influenced religious issues in the Canadian students. For the Turkish students, religiosity and guilt seem to increase the frequency of intrusions related to religious issues which may increase anticipated threat, and sense of responsibility to prevent feared outcome, and the person performs compulsions to prevent harm and decrease sense of responsibility. It can be suggested that in Islam, person has complete responsibility for his/her behaviors. Salkovskis (1985, 1999) placed inflated responsibility at the core of his cognitive model of OCD. The model is based on the assumption that individuals feel distressed because they feel responsible for some potential harm to others or themselves. Compulsions are a result of the person's "perception" of responsibility and are a way of either "preventing harm or preventing responsibility for harm" (Salkovskis, Forrester, Richards et al., 1998). However, the authors noted that performing compulsions actually serves to reinforce the strength of the belief that the person is really responsible and must do something to prevent harm.

Nevertheless, different from compulsions, religiosity has not created a significant difference for Turkish or Canadian on the obsessive symptom level. That is, being Muslim or Christian did not create any significant differences in obsessive symptom severity. Because Christianity emphasizes liturgy, intentions and derives for excellence (Favier et al., 2000; Sica, Novara & Sanavio, 2002; Siev & Cohen, in press), it was expected that Christians would suffer from higher levels of obsessions than would Muslims. However, the results prove that the hypothesis claiming that Christian students would perform more obsessive symptoms is not supported. The fact that Islam emphasizes the rituals does not minimize the significance and the meaning that the religion gives to the thinking and faith. In other words, Islam is a religion that also emphasizes the purity of thinking and faith in addition to the rituals. In Islam, as stated above, highly religious individuals believe that involuntary negative thoughts are created deliberately by the Devil in order to undermine one’s faith. During and/or before prayer, the person can experience various doubts about his religious practices and can not easily get rid of these doubts; thus, this condition causes distress. Koran

states that these doubts are a kind of temptation from the devil that distracts the faithful person from carrying out daily religious duties and aims to undermine one's faith (Al Issa & Qudji, 1998). High religious Muslims may try to dismiss "waswas" from their minds to prove the strength of their faith to Allah by praying more than usual, or thought suppression efforts which increase the obsessive qualities of normal intrusions. Therefore, the level of religiousness in Muslims seems to be important both in obsessive and also in compulsive symptoms.

The universality of the etiological factors that may increase the severity of obsessions in the Canadian Christians and the Turkish Muslims was further supported by regression analysis. After controlling the significant effect of depression and anxiety, for both Canadian and Turkish samples, obsessions was best accounted for by the occurrence of four factors: (a) religiosity, (b) feeling of guilt, (c) beliefs about the importance and the necessity of controlling unwanted intrusive thoughts, and (d) scrupulosity symptoms. Results also revealed some hint of cultural differences; that is, the OBQ-RT appraisal appeared as a significant belief only in the Canadian sample. Accordingly, when the findings of analyses of variance and regression analyses are assessed together, even though mediational anaysis was not performed, it can be suggested that high degree of religiosity and experience of high degree of guilt may increase the possibility of experiencing unwanted mental intrusions, which may arise from the fear of negative religious consequences (e.g., punishment from God, eternal damnation, committing a sin) which may in turn result in distress and anxiety, and motivate the person to attempt control of intrusive thoughts (e.g., sexual, sacrilegious) that are perceived as sinful and morally unacceptable. However, these purposeful control efforts usually provide transient relief, and paradoxically increase the frequency and severity of obsessions. The role of beliefs about the importance of thoughts and the necessity of exerting complete control over them in OCD has already been described in the cognitive theory of OCD by Rachman (1993, 1989) and D. A. Clark (2004).

Responsibility and threat estimation beliefs was only significantly associated with obsessive symptom severity in the Canadian students. This finding can be

explained by specific tenets of Christianity. Muslims tended to place higher priority on religious practice than on religious belief, whereas Christians placed higher priority on religious belief over religious practice (Cohen, Seigel, and Rozin, 2000). Over emphasis on thoughts and belief in the Christianity may increase the perceived threats as a result of experienced thought which may in turn increase sense of responsibility to do something to prevent feared outcome by controlling unwanted intrusive thoughts. Furthermore, in Christianity a person is also responsible for his/her thoughts. For example, using a sample of Catholic and Protestant college students, Rassin and Koster (2003) found that high religious individuals reported higher degrees of thought-action fusion (TAF) (i.e., a cognitive bias that thoughts are morally equivalent to actions). Furthermore, the results showed that the religiosity-TAF relationship was different for Catholics and Protestants. Protestants believed that thoughts were significantly more likely to lead to actions, and that some thoughts were equivalent to actions. Consistently, the previous studies indicated that TAF, thought suppression, and inflated sense of responsibility are closely connected concepts in relation to OCD symptoms. It is suggested that people experiencing TAF tend to either feel inflated responsibility over causing and preventing some negative consequences, or in order to relieve the distress they try to suppress these fusion-like thoughts, which in turn seem to aggravate the OC symptoms (OCCWG, 2001, 2003; Rachman et al., 1996). In contrast, according to basic tenets of Islam, Muslims are responsible for only their behaviors, but not their thoughts. Therefore, inflated sense of responsibility and threat estimation might not be directly related to severity of obsessions in Muslims. In other words, for Muslims, it can be suggested that if one does not appraise his/her intrusive thoughts in terms of responsibility and threat estimation appraisal, and he/she just believes importance of thoughts, and wants to gain complete control, he may experience higher level of obsessions, however, if he/she feels responsible himself/herself for negative outcome he/she may probably suffer from higher level compulsive symptoms, because responsibility/threat estimation subscale of OBQ was the unique obsessive belief that predicted compulsive severity in the Turkish Muslim students. These results suggest that different from universal feature of obsessionality,

compulsive symptoms may be more open to the influence of cultural factors, such as religious doctrines, rituals and customs.

Because scrupulosity is a subtype of OCD, it should be related to several factors that are associated with the etiology of OCD. Greenberg (1984) suggested that the phenomenology of scrupulosity closely mirrors that of other subtypes of OCD in that sufferers experience obsessions that create distress, and then perform compulsions in order to decrease the distress. Abramowitz et al. (2002) developed a scrupulosity scale to assess the severity of the religious obsessions. The findings of this study indicated that religious obsessions could be classified into two main symptom clusters, namely Fear of God and Fear of Sin. They found that regardless of religious affiliation, highly religious participants reported higher fear of sin and fear of God symptoms as compared to less religious participants. Consistent with the specific tenets of their religious theologies and practices, protestant participants reported higher degree of scrupulosity symptoms than both Catholics and Jews. Based on these results, researchers concluded that these findings are evidence that the scrupulosity symptoms are sensitive to differences between religious doctrines, and subsequent epidemiological studies are needed to see if scrupulosity is seen more frequently within some religious groups (Abramowitz, Huppert, Cohen, Tolin, & Cahill, 2002). Therefore, the present study aimed to examine the effect of nationality and degree of religiosity on the experience of scrupulosity symptoms in the Canadian Christian and the Turkish Muslim students. It was aimed to investigate whether belonging to specific culture makes the individual more vulnerable to develop scrupulosity symptoms than belonging to another one by comparing Turkish students with Canadian ones.

Results indicated that nationality and religiosity had significant effects on the experience of scrupulosity symptoms. As expected, high degree of religiosity was associated with higher degree of scrupulosity symptoms. That is, regardless of nationality, religious school students and highly religious students experienced higher degree of scrupulosity than low religious participant. This finding is consistent with previous findings (Greenberg & Shepler, 2002; Abramowitz et al., 2002). The results of the present study also revealed that Turkish reported higher scrupulosity symptoms

than the Christians. This difference can best be explained by the basic tenets of Islam. The Quran delineates five pillars of Islam (i.e., Shahadah, Salat, Zakat, Sawm, and Hajj). Carrying out these obligations provides the framework of a Muslim's life. No matter how sincerely a person may believe, Islam regards it as pointless to live life without putting that faith into action and practice. Carrying out the Five Pillars demonstrates that the Muslim is putting their faith first, and not just trying to fit it in around their secular lives. Therefore, persistent doubting about whether the individual puts these obligations into action and practice perfectly, or denying Allah's Decree and doubts about existence and uniqueness of God are big sins in Islam, and some unwanted intrusive thoughts, consisting of these big sins, may generate remarkable distress, and motivate the person to get these thoughts out of his/her mind or suppress them. However, according to the cognitive models of OCD, these efforts usually have a paradoxical effect on the frequency and severity of these thoughts. Therefore, significant differences between the Christians and Muslims in the severity of scrupulosity symptoms suggests that because of the content of the obsessions and compulsions, scrupulosity may be more sensitive to the influence of religious doctrine, different from other OCD symptom subtypes. This finding seems to be consistent with the previous findings from other Muslim countries (Mahgoub & Abdel-Hafeiz, 1991, Okasha et al., 1994). For example, OCD sufferers from Saudi Arabia exhibit a high frequency of obsessions and compulsions about ritualistic prayers and washings that has not been found in epidemiological studies of non-Muslim countries (Mahgoub & Abdel-Hafeiz, 1991). In a transcultural study Okasha et al. (1994) found that culturally bound religious content was observed in OCD symptoms 60% of the time in Egyptian OCD samples and 50% of the time in Jewish OCD samples. They found that clinical samples of OCD patients from India and England very rarely reported religious content in OCD symptoms.

Furthermore, in the present study there were significant differences between Canadian and Turkish students in terms of Fear of sin and Fear of God. Religious school and high religious Muslim groups reported higher fear of God than religious school and high religious Christian groups. These findings suggested

that the cognitive basis of scrupulosity may differ between Christians and Muslims, with the latter more concerned about fear of God than the former. Overall the findings indicated that cultural values may influence which beliefs and attitudes might characterize the cognitive basis of religious obsessions. This finding is understandable based on the Islamic doctrine, which stresses fear of God as an important attitude, alongside with hope and trust in God. Fear is a cherished attitude in Muslim worship. For example, the Qur'an states: "it is only the Devil who would make (men) fear his partisans. Fear them not; fear Me, if you are true believers' (Qur'an 3: 175). So if you desire good and not evil, fear God in whatever you do". Similarly, in other Sura, Qur'an states that: "then your hearts hardened after that, so that they were like rocks, rather worse in hardness; and surely there are some rocks from which streams burst forth, and surely there are some of them which split asunder so water issues out of them, and surely there are some of them which fall down for fear of Allah, and Allah is not at all heedless of what you do. (Qur'an 2:74). In spite of strong emphasis on God's mercifulness and benevolence, for example the first verse of the Qur'an begins "In the name of Allah, the Beneficent, and the Merciful" (Qur'an 1:1), Islam is mainly based on fear of God which may increase the fear of God scores in the Muslim students as compared with the Christian ones. In contrary, Christianity emphases love of God more strongly than Islam. For example, Benson and Spilka (1973) examined people's perception of God and found that participants' individual items can be classified into Stern Father, Allness, Distant, Supreme Ruler, and Kindly Father factors. Consistently, Kunkel et al (1999) found that Patterns of salience ratings suggest that participants tended to view God as masculine, powerful, nurturant, and comforting rather than punitive (Kunkel, Cook, Meshel, Daughtry, Hauenstein, 1999)

To better understand the factors that play an important role in the maintenance and persistence of scrupulosity in Canadian and Turkish students, a series of regression analyses performed. The predictors of the two dimensions of scrupulosity symptoms were examined separately for the Canadian and Muslim samples. Firstly, predictors of

Fear of Sin scores were examined. Results revealed that except Responsibility/Threat appraisals, same factors were significantly associated with the severity of fear of sin symptoms. After controlling the significant effect for depression and anxiety, guilt and religious fundamentalism were significantly and positively associated with fear of sin scores. In terms of OCD related beliefs, beliefs about the importance and necessity of control the thoughts showed significant positive relationship with fear of sin in the Canadian and Turkish students. However, different from the Turkish students, inflated responsibility and threat estimation were significantly related to fear of sin in Christian students. These differences can be explained by the basic principles of Islam. As stated before, according to Islam, Muslims are not responsible for their thoughts unless they put into action their thoughts. For example, Quran states that "Allah does not call you to account for what is vain in your oaths, but He will call you to account for what your hearts have earned and insist to do them, and Allah is Forgiving, Forbearing". Related to this verse, Al-Bukhari who was a famous Sunni Islamic scholar of Persian ancestry stated that "you are not responsible for your thoughts unless you put them into action" Therefore, different from the Canadian Christians, the Turkish Muslim students may not feel responsibility for their involuntary unwanted intrusive thoughts, which may in turn decrease the perception of threat. However, similar to the Canadian Christians, they still show a tendency to believe their thoughts are important and one can and should control his/her unwanted thoughts. This result still seems to be consistent with tenets of the Islamic doctrines. For example, Koran states that "Whatever is in the heavens and whatever is in the earth is Allah's; and whether you manifest what is in your minds or hide it, Allah will call you to account according to it; then He will forgive whom He pleases and chastise whom He pleases, and Allah has power over all things (Al-Baqarah, 2:284). Also, the other verse states that "And pursues not that of which thou hast no knowledge; for surely the hearing, the sight, the heart, all of those shall be questioned of (on the Day of Reckoning)" (Qur'an 17:36), Therefore, Muslims are not completely free from their thoughts, and because they believe the God knows what he/she thinks, they may try to dismiss their sinful thoughts.

Secondly, the predictors of Fear of God subscale of scrupulosity inventory were examined. Again as expected, after controlling for the significant effect of anxiety, religious fundamentalism and guilt showed significant relationship with Fear of God for both the Canadian and Turkish students. However for both samples, interestingly, none of the obsessive belief dimensions was significantly predicted fear of God scores. Furthermore, for both samples, depression and obsessive scores were not related to severity of fear of God. Based on these results it can be suggested that fear of God may be quite an acceptable general attitude for both religions, and that this may weaken the relations of such kind of thoughts with OCD by reducing the probability of people's feeling a need to control their thoughts about fear of God. In contrary, fear of sin may be quite an ominous experience for members of both religions, and thus they may increase the probability of performing their neutralization efforts in order to achieve purity of thought by removing these thoughts from their minds. As it has already been mentioned, strong motivation to control thoughts increases the transformation of normal intrusive thoughts into clinical abnormal obsessions. In brief, these findings suggest that transformation of fear of sin into scrupulosity is more probable than the thoughts about fear of God. In other words, fear of sin may be a more pathological component of scrupulosity. However, for higly religious Turkish students, compulsive symptoms severity showed significant positive relationship with Fear of God. These findings suggest that, different from highly religious Canadian Christian students, fear of God may increase their level of compulsive symptom by motivating highly religious Muslim students to pray more than usual to prove their devotion to Allah, to perform religious rituals more strictly, and to be more careful while performing religious rituals.

As stated above, Importance/Control of' Thoughts was the unique cognitive bias that significantly related to fear of sin and obsessional in both the Canadian and Turkish students. Furthermore, the predictors of obsessions and fear of sin symptoms were compared; results indicated that the vulnerability factors of obsessions and fear of sin are remarkably similar in Canadian and Turkish samples. Obsessions and fear of sin were explained by the occurrence of four factors for both the Canadian Christian

and the Turkish Muslim samples: (a) depression and anxiety, (c) elevated guilt, (c) religious fundamentalism, and (d) elevated beliefs about the overimportance of thoughts and need to control thoughts. These findings support Rachman's (1997, 1998, and 2003) and Clark's cognitive theory of obsessions (2004) which posits that the catastrophic interpretation of intrusive thoughts and the importance given controlling thoughts leads to obsessive-compulsive phenomena. Indeed, the results confirm Rachman's hypothesis noting the significant role of Thought-Action Fusion (TAF; Rachman, 1993; Rachman & Shafran, 1999) for religious individual with obsessive thoughts. Thought-Action Fusion is one of the main components of the Importance/Control of Thoughts subscale of the OBQ-44.

The findings of the present study highlight the universal role of beliefs about Importance/Control of Thoughts in OCD, and fear of sin dimension of scrupulosity. The results of the present study revealed that importance/control of thoughts appraisal dimension of Obsessive Beliefs Questionnaire was the unique subscale that significantly differentiated the three groups differing on level of religiosity. Consistent with this finding, Sica, Novara, and Sanavio (2002) have shown that the effects of overimportance of thoughts and need to control thoughts (the two components of Importance/Control of Thoughts) were found to be related to obsessive-compulsive phenomena only for highly religious individuals. One explanation is that if the content of intrusions is interpreted as slightly important or relevant to the person, he or she will not intentionally try to dismiss these thoughts out of his/her minds, and is able to dismiss them easily and move forward. However, when the content of the intrusions is highly salient for the individual, beliefs about importance/control of thoughts may become extremely pathological.

Rachman (1997) proposes that highly religious individuals may be more prone to appraise their blasphemous thoughts as being more important, personalized, ego-alien, and have potential and serious consequences. Consistent with this argument, based on his research, Witzing (2005) has exampled Rachman' arguments as following: the presence of thoughts of blasphemy of having sex with a religious icon can be interpreted as an indicator of loss of salvation, judgment by God, and eternal

punishment, and then, for a Christian or Muslim who is highly fundamental and highly religiously committed would appraise the mere presence of these thoughts as a flaw in their complete faith, and then would experience remarkable distress and anxiety. Thus, the person will engage in attempts to control the thoughts through thought suppression and/or neutralization of some kind. However, regardless of an individual's ability to suppress or rid himself of an obsessional thought, the most damaging aspect of trying to control intrusive thoughts is that perfect control usually impossible and transient and quick reductions in anxiety as a result of control efforts in turn reinforces and strengthens the "validity" of the obsession (Purdon, 1999; Purdon & Clark, 2000, 2001).

Clark (2004) suggested that individuals who are vulnerable to obsessional thinking might misinterpret their unsuccessful thought control efforts as highly significant and threatening. The interpretation of failure to achieve complete control over the unwanted intrusive thoughts as highly significant and threatening could eventually lead to predictions of dire negative consequences for the self and others. Vulnerable individuals may also believe that perfect suppression or prevention of the occurrence of an unwanted intrusion is not only possible but also highly desirable and may be even necessary. As well, the obsession-prone individuals may feel an inflated sense of responsibility to gain complete control over his or her mental activities and may develop a number of faulty inferences about the consequences of failed control over the intrusive thoughts. This faulty secondary appraisal process might lead a vicious cycle between control and return of the unwanted thought into conscious awareness because if a thought is so "dangerous" that one needs to suppress it, the interpretation and resulting neutralization serves to reinforce the obsessive-compulsive cycle and leads the person to be even more vigilant for the next intrusion (Purdon & Clark, 2002). Consistently, Tolin at el. (2002) found that patients with OCD showed a higher tendency to interpret their failure to completely suppress thoughts as a characterological flaw significantly more often than do either normal or anxious controls.

Witzig (2005) adapted Rachman's (1997, 1998, 2003) and Clark's cognitive theories of obsessions to scrupulosity. According to him, the major themes of obsessions (aggression, sex, and blasphemy) are all about issues of morality (Rachman & Hodgson, 1980). Thus, highly devout Christian or Muslim individuals who experience sexual thoughts or blasphemous images of sex with a sacred person are likely to interpret the content of intrusions in a catastrophic manner due to moral objections about having such thoughts. Consequently, religious individual who have obsessions of blasphemy during prayer, easily meets all the five criteria for defining personal significance of obsessions, as defined by Rachman (1997): (a) the person perceives the content of religious intrusions as important, (b) he/she has personalized meaning of obsessions as revealing their "true" or "hidden" selves, (c) the individual experiences the religious obsessions as ego-dystonic, (d) the individual perceives that the obsession has potential consequences, such as committing a serious sin and displeasing God, and (e) the individual perceives that the consequences are serious, such as condemnation from God. Meeting these five criteria results in feelings of guilt and distress which then usually leads the individual to try to neutralize (e.g., suppress, undo, etc.) the thoughts in order to regain a feeling of purity and right standing with God; therefore, scrupulous individuals are often consumed by their quest for "purity in thought. The items on the Penn Inventory of Scrupulosity (Abramowitz et al., 2002) have mainly content related to distress about immoral/unwanted thoughts. Therefore, the finding of the present study supported the important role of importance and control of thoughts in scrupulosity and obsessions by obtaining consistent findings from the Canadian and the Turkish students.

The findings regarding significant relationship between fear of sin, obsessionality, guilt, and religious fundamentalism supported the previous research findings, which have shown that guilt, which is often intensely felt by highly religious individuals with scrupulosity, increases the distress and intrusiveness of obsessions (Niler & Beck, 1989). These findings were supported in a phenomenological study by Savoie (1996) who found that feelings of guilt may precede, motivate, and be a consequence of symptoms of OCD. Research has shown that people with anxiety

disorders, and OCD in particular, tend to use emotional reasoning to come to a conclusion about their obsessions ("I feel guilty and anxious; I must have done something wrong;"Amtz, Rauner, & van den Hout, 1995; Shafran, Thordarson, et al., 1996). Unfortunately, guilt experienced by an individual with scrupulosity is likely to be both a result of the obsessions and a source of additional obsessions and compulsions (Savoie, 1996; Shafran, Watkins et al., 1996). Their compulsions serve a function as a “quick" ways of temporarily relieving their guilty feelings. However, quick relief in anxiety as a result of compulsions increases the beliefs about usefulness of these behaviors, and then these compulsions become more and more intense; however, at the same time they provide lesser short-term relief and become more of a guilt-provoking stimulus. As people begin to feel guilty about feeling guilty, the intensity of their compulsions increase dramatically, and their feelings intensify even more. They become extremely preoccupied with their disorder. Consequently, they have difficulty in connecting with others in intimate ways, unable to form genuine, caring relationships because they are so caught up in their own and others' standards. Furthermore, elevated guilt may increase the catastrophic misinterpretations of intrusions, which intensifies the obsessive qualities of intrusions. In line with the previous findings, the present study showed that irrespective of religious affiliation, guilt is an important vulnerability factor.

Therefore, findings of the present study showed full support for Rachman's (1997, 2003) proposal of four vulnerability factors for developing OCD: (a) elevated moral standards (e.g., religious fundamentalism), and guilt, (b) particular cognitive biases (c) depression, and (d) anxiety proneness. The results of this study show that in this sample of the Canadian and the Turkish students, elevated moral standards (i.e., religious fundamentalism and guilt for both sample), cognitive biases (i.e., obsessional beliefs: importance/control of thoughts for Canadian and the Turkish students, perfectionism/need certainty for only Canadian sample), depression and anxiety proneness are the main sources of obsessions. Consistently, it has been pointed out that depressive schemas may make individuals more vulnerable to interpret obsessions more negatively and/or catastrophically (Shafran, Thordarson et al, 1996). So the only

effect of religious affiliation seems to be in the type cognitive biases. Since religious affiliation and culture are taken together in the present study, it is not possible to rule out general cultural factors in the formation of the cognitive biases. Future studies with different religious affiliation from the same culture will help to address this issue more clearly.

Overall, the present study suggests that religiosity and cultural diffferences can influence the symptom presentation and severity of OCD and scrupulosity. However, in spite of some differences, common etiological factors may play significant role in the maintenance and persistence of the OCD and scrupulosity symptoms. Furthermore, the significant role of dysfunctional obsessive beliefs in OCD symptoms and scrupulosity seen-only in the fear of sin dimension- provides further supporting evidence for the universality of cognitive models of OCD (Rachman, 1997, Clark, 2004). Based on the results, it can be suggested that religiosity is more salient than culture. Cultural differences seem to have an effect on shaping dysfunctional beliefs, and as stated before, this can be a cultural effect which needs to be explored further.

It is important to note that parallel to the aims of the present study, the differences between the Canadian and the Turkish students are explained in terms of differences in the basic tenets of the Islam and Christianity. However, these differences may be also related to cultural characteristics of the two countries, rather than purely on religious differences. In order to explore these difference further, future studies need to examine differences between different religion groups from the same country.

4. 4. Nationality and Religious Devoutness Effects on the Intrusive Thoughts: Discussion of the Interview Findings

Unwanted mental intrusions are the main feature of OCD. These thoughts, images or impulses are recurrent and cause significant distress for the afflicted individual. Subsequent research offers support for Salkovskis' hypotheses that intrusive thoughts are a common experience in nonclinical populations and provides evidence that the occurrence and frequency of intrusions is linked to their appraisal (e.g., Purdon & Clark,

1993; Niler & Beck, 1989; Rachman & de Silva, 1978; Rachman & Hodgson, 1980). Many authors have speculated that those from strict religious backgrounds may be particularly prone to misinterpret the content of intrusive thoughts, which may increase the obsessive qualities of the intrusions. Furthermore, basic tenets of the religious doctrines may influence person' response to unwanted mental intrusions. As stated previous sections, Islam and Christianity have different facets that the individuals must meet. Therefore, the second main aim of this study was to test the hypothesis that the occurrence, frequency and appraisal of unwanted mental intrusions is determined by individuals' nationalityand degree of religiosity. It was aimed to explore whether perceived success of controlling intrusions and individuals' appraisals regarding failure in control of intrusions would be affected by nationality and the strength of devoutness. Lastly, the present study examined if highly religious individuals are more obsessional, how they deal with their troubling unwanted intrusive thoughts. In other words, we aimed to understand whether there are differences in control strategies between the Turkish and Canadian students.

Very few studies have used an interview methodology to assess unwanted intrusions (e.g., Ladouceur et.al., 2000; Parkinson & Rachman, 1981). There are a number of advantages of interviews including the ability to use probes to follow-up on individuals' responses. Furthermore, the interviewer can ensure that the participant is correctly targeting intrusive thoughts and not confusing them with other types of cognitions. It also allows the participant to obtain further explanation and clarification, which may be particularly important when assessing the complex constructs found in CBT theories of OCD.

Clark (unpublished manuscript) developed a structured interview for the assessment of contamination/illness, harm/injury/aggression, doubt, religion, sex, and victim of violence, named as International Intrusive Thoughts Interview Schedule (IITIS). Frequency, distress, and perceived control ratings were obtained on individual' reported intrusion in each of these six domains. The interview schedule also assesses the ratings on overestimated threat, importance, control, responsibility, and intolerance of anxiety/distress, perfectionism, intolerance of uncertainty, thought-

action fusion and ego-dystonicity, which are important appraisals for determining obsessive qualities of intrusions. It lastly examines individuals' appraisals of their lack of control over intrusions across 6 dimensions, and frequency of using different thought control strategies.

Because of the expected relationship with religiosity, the present study focused on three types of intrusive thoughts, including doubting, religious and sexual intrusions. The findings regarding effect of religiosity and nationalityon intrusions are discussed with relevant literature findings in the following sections in this order: group differences in (a) frequency and distress caused by the three types of intrusions, (b) primary appraisals of intrusion, (c) given importance and perceived success in control intrusions, (d) differences in secondary appraisals, and (e) actual control strategies.

4. 4. 1. Effect of Nationality and Religiosity on the Experience, Frequency and Distress of Intrusive Thoughts

Firstly, the group differences in the experience of doubting intrusions were examined. Results revealed that significantly more the Canadian students reported to experience doubting intrusions as compared to the Turkish students. While 86.84 % of the Canadian sample reported to experience at least one doubting intrusions in last three months, the rate was 59.76% in the Turkish sample. However, there was no significant difference between them in experiencing sexual and religious intrusions.

The significant differences between the Canadian and Turkish students in experiencing doubting intrusions may be explained by Hoffstade' dimensions. According to Hofstede' study (2001), Canada is a society with a more individualistic attitude and relatively loose bonds with others, while Turkey seems to be a more collectivist (e.g., interpersonal relationships) country. Therefore, Turkish students may spread personal responsibility to others and experience less doubting intrusions, while Canadian students may feel more responsible for the result of their behaviors. This finding is consistent with previous studies. For example, Kyrios et al (2007) compared Canadian and Australian students in order to investigate cultural differences in

frequency and nature of intrusive thoughts using the same structural interview methodology (i.e. IITIS), and they found that the percent of Canadians reporting doubting intrusions were significantly higher than the Australian students. However, Clark et al. (2005) used the same interview schedule and compared Canadian, Greek and Italian students to examine cross cultural differences in intrusive thoughts. They found that the majority of Canadian, Greek and Italian students indicated that in the last 3 months they had at least one intrusions of doubt with no significant group differences.

When high and low religious Muslim and Christian students were compared, results revealed only significant group differences in the experience of religious intrusions. As expected, significantly more high religious individuals indicated that they experienced religious intrusive thoughts than the low religious ones. However, degree of religiosity did not affect the experience of sexual and doubting intrusions. These results are parallel to previous research findings that point out that the essential distinction exists between viewing religion as the "cause" of the obsessions and compulsions, versus religion being the "context" in which individuals may develop propensities toward certain interpretations of intrusions. The results of the present study suggest that religiosity may provide only the context for intrusive thoughts.

To decide whether individuals understood the definition of intrusive thoughts which were under investigation, each participant was asked for 2-3 examples of doubts, religious and sexual intrusions. Interestingly, the examination of the content of the reported intrusions by Canadian and Turkish students revealed that the content of intrusions were almost universal. Doubts about locking the door was the most frequently reported intrusions in the Canadian (34%) and the Turkish students (44%), and doubts about letting appliances or lights on was the second one (33% for Canadians and 14% for the Turkish). Similarly, thoughts against God or doing immoral things were the most frequent religious intrusion in the Canadian Christian (31%) and the Turkish Muslim students (32 %). Doubts about having complete faith in God and performing enough religious duties was the second most reported intrusion in he Turkish Muslims (25%), while doubts about the existence of God and principle of

person' religious beliefs were the second one (24%). When the content of sexual intrusions was examined results revealed some cultural differences in the frequency of reported intrusions between Canadian and Turkish students. Sexual thoughts about having sex with unattractive and repulsive person was the most frequently reported intrusion in the Canadian sample, whereas for Turkish students, the most common one was about having sex with best friends. These results indicated that except for sexual intrusions, the frequency and the content of the intrusions are almost universal. Conservative attitudes and repression of sexuality may change the content of the intrusions.

Results also showed that there were no any significant differences between Canadian and Turkish students in terms of the frequency of doubting, sexual and religious intrusions. Consistent with these results, Ladouceur et al. (2000) conducted structured interviews with 38 people with obsessive-compulsive disorder, 38 people with another anxiety disorder, and 19 healthy volunteers. They identified that the clinical groups reported significantly greater intensity of the thought and their emotional response and lower efficacy for the strategies used for coping with distress. These results suggest that the frequency of experiencing intrusions may almost be universal, and the frequency of intrusions may be more sensitive to the existence of an anxiety disorder, including OCD, rather than to degree of religiosity or other cultural factors.

When the degree of distress caused by intrusive thoughts was examined, the Turkish and the Canadian students found their doubting and sexual mental intrusions slightly to somewhat distressing. They did not report to experience high levels of distress as response to their intrusions. These findings are consistent with previous findings which have shown that non-clinical participants frequently endorse the experience of OCD-like symptoms (MacDonald & DeSilva, 1999; Stemberger & Bums, 1990) and that the content in clinical and non-clinical groups tend to be structurally similar (MacDonald & DeSilva, 1999; Stemberger & Bums, 1990), while clinical and non-clinical groups differ from each other in the severity level and distress resulting from intrusions. Rachman (1998) pointed out that the fact that everyone can

experience unwanted intrusive thoughts in daily life may, at times, be hard for clinical patients with OCD to believe, due to the significance and negativity they attach to the content of their symptoms (Rachman, 1998).

However, the results revealed some cultural differences between Turkish and the Canadian students in experienced distress as a response to religious and sexual intrusions. While nationality only influenced the degree of distress associated with the religious thoughts, degree of religiosity caused a significant difference in the distress level of sexual intrusions. High religious Muslim students experienced higher degrees of distress associated with their religious intrusions than the high religious Christian students. Regardless of nationality; high religious individuals perceived their sexual intrusions more distressing than low religious participants. This is an expected finding because high religious participants may have a higher tendency to interpret their sexual intrusions as immoral, or content of sexual intrusions may easily violate their moral values and thus evoke higher distress as compared to low religious participants.

4. 4. 2. Primary Appraisals of Doubting, Religious and Sexual Intrusions

As stated in several places, appraisal of intrusions plays a significant role in the transformation of normal intrusions into clinical distressing obsessions. Therefore, during the interview we also examined what makes intrusions significant or remarkable for them. Specifically, it was aimed to examine how degree or religiosity and nationality influences primary appraisal of intrusions. When group differences in primary appraisals of doubting intrusions was examined, it was found that while nationality was related to intolerance of anxiety and distress, degree of religiosity resulted in significant differences in responsibility appraisals. That is the Turkish students reported that their doubting intrusions is significant or remarkable for them because these intrusions made them more upset than the Canadian students. In other words, Turkish students showed lower degree of tolerance of anxiety and distress than Canadian students. This finding is quite consistent with Hofstede' (2001) national dimensions. As stated before, he found that Turkey is a more collectivist (e.g.,

interpersonal relationships), relatively masculine (e.g., high degree of gender differentiation), uncertainty avoidant (low tolerance for ambiguity) country. Subsequent studies showed that uncertainty oriented countries were more likely to have a collectivist tendency which is characterized by willingness to maintain clarity and dislike for ambiguity (Shupper et al., 2004). It is also asserted that high uncertainty avoidant people experience more anxiety, distress and aggression (Hofstede, 2001). Results also showed that religiosity may increase dysfunctional beliefs regarding personal responsibility as a result of doubting intrusions.

When group differences in primary appraisal were examined for religious intrusions, results revealed that there were significant differences in responsibility and TAF appraisals. While Muslim students found their religious intrusions significant and remarkable because they feel higher levels of responsibility related for the religious intrusions, highly religious Christian students showed higher tendency to believe that their unwanted religious intrusions are significant and important for them because they may actually make them sinful or unfaithful.

In sexual intrusions, there was no significant group difference between Canadian and Turkish, and high and low religious groups. These results suggest that appraisal of sexual intrusions may be almost universal.

When the findings of questionnaire and interview data are assessed together, these results seem to be quite consistent. As discussed in the previous sections, when group differences in Obsessive Beliefs Questionnaire subscale scores, the Turkish students scored significantly higher on the perfectionism and intolerance of uncertainty subscale of obsessive Beliefs Questionnaire than the Canadian students. Consistently, they rated intolerance of uncertainty appraisal as somewhat to moderately relevant for their doubting intrusions. Consistent with this result, recently, Yorulmaz (2008) compared Canadian students with the Turkish students to examine cross-cultural differences in appraisals and thought control strategies. He found that Turkish subjects reported more distress owing to the intrusions, more immediate problematic appraisals, more emphasis on the importance and control of thoughts, and more fusions of thoughts and actions in general. Moreover, there was a more salient

interaction effect in the morality fusion. Again, highly religious Canadian subjects expressed more morality fusion than those Canadians who had low level of religiousness; but, there were no differences in the level of religiousness among Turkish sample. So, the results of the present study underlined the important role of intolerance of uncertainty and distress appraisals in the Turkish students, whilst thought action fusion may play a more salient role in the Canadian students.

Parallel to the findings of the present study, Cohen and Rozin' study (2001) confirmed the significant role of TAF in Christian individuals. They found that relative to Jews, Protestants held significantly stronger beliefs that mental states were controllable and reflected the individual's true moral state. In addition, Protestants believed that thoughts were significantly more likely to lead to actions, and that some thoughts were equivalent to actions. The authors explained this difference by referring to main characteristics of two religions. Judaism teaches that people were created with an inclination to do good and an inclination to do evil. Consequently, inclinations to perform immoral acts are inherent in humans, and the requirement of being a moral person is to overcome the temptation. For example, The Talmud (*Kiddushin* 40a) explained that "A good thought is regarded as a good deed…but that the Holy One, blessed be He, does not regard a bad thought…as an actual deed". Therefore, there is no sense, in Judaism, to believe that thoughts about immoral actions are equivalent to actually performing out action in such thoughts. In contrast, Protestantism indicates that membership in Protestantism is determined by one's belief structure. It is a Christian religious notion that looking at a woman lustfully is the same as having an affair with her (Matthew 5: 27–28, cited in Cohen & Rankin, 2004). Cohen, Seigel, and Rozin (2000) found that similar to Muslims, Jews tended to place higher priority on religious practice than on religious belief, whereas Protestants placed higher priority on religious belief over religious practice.

For CBT theory, a more important question is how these appraisals relate to the frequency and subjective distress of doubting intrusions. Given that frequency of intrusions tends to be somewhat low in nonclinical samples, we felt that prediction of distress was a more relevant variable to examine in these samples. A series standard

multiple regression analyses were conducted with the 9 primary appraisals entered simultaneously as independent variables (IVs) regressed onto subjective rating of distress for doubting, religious and sexual intrusions (DV). Results revealed some significant differences between Canadian and Turkish students in primary appraisal predicting the distress of intrusions. Furthermore, results indicated that different primary appraisals were associated with different types of intrusions. To illustrate, for doubting intrusions intolerance of anxiety and TAF were significantly associated with doubting intrusions in Canadian sample, while for the Turkish students, need to control thoughts and ego-dystonicity were significant factors for defining distress level of doubting intrusions. When we examined the differences in religious intrusions, results again revealed different appraisal factors for Canadian and Turkish university students, with need to control being significant for Canadians while perfectionism was significant predictor for Turks. Lastly, in terms of sexual intrusions, intolerance of anxiety ("did the sexual thoughts make you feel uncertain about an action or decision?") was common primary appraisal dimension defining the distress of sexual intrusions. Furthermore, while appraisals of importance of thought ("did the sexual thoughts seem important because it kept coming back into your mind?") was particularly important variables for Canadians, appraisals of need to control ("was the thought more noticeable because you were having difficulty controlling it") was important for the Turkish students.

The findings of the present study highlight the importance of examining response patterns of participants from different religious groups to understand which appraisals are salient. Significant role of appraisals in defining the distress level of intrusions in the both samples suggests that the cognitive model of OCD may be universal; however, the salience and types of appraisals may vary across different cultures. In overall, in tolerance of anxiety seems to be salient in the Turkish students, whereas thought-action fusion may play more important role in the Canadian students.

4. 4. 3. Secondary Appraisals of Doubting, Religious and Sexual Intrusions

In their elaboration on previous meta-cognitive models, D.A.Clark (2004) propose that ego-dystonicity of intrusions and excessive thought-control are important in the etiology of obsessional problems. In their 2002 review, Purdon and Clark outline the four central features accompanied with the need to control one's thoughts: (1) tracking of mental events and hypervigilence; (2) moral consequences of failing to control intrusive thoughts (control as a virtue); (3) psychological and behavioral consequences of failing to control intrusive thoughts; and (4) efficiency of thought control (i.e., efforts should result in immediate and prolonged control). Therefore, the interview schedule also assessed the given importance of controlling thoughts, perceived control, and person' appraisals of failing to control intrusive thoughts.

Results revealed that there were no significant group differences in perceived success of controling doubting, religious and sexual intrusions. All participants reported that they were moderately successful at controlling their intrusions. Group differences in the given importance of controlling one's thoughts were examined, the unique difference was found in sexual intrusions, with high religious individuals rating dismissing their intrusions out of mind as more important that low religious participants. This finding was consistent with the perceived distress associated with sexual intrusions. It can be suggested that high religious participants perceive higher level of distress associated with their sexual intrusions because they have greater tendency to attach overimportance to control their sexual intrusions.

Clark and Purdon (1993) proposed that OCD patients have unrealistic beliefs about personal capacity to control unwanted mental intrusion and failed thought control efforts. They proposed that obsession-prone individuals have a greater tendency to make catastrophic misinterpretations of occurrences and consequences of unwanted mental intrusions, which in turn results in a remarkable distress and an active resistance to think about them. Furthermore, they noted that obsession-prone individuals hold unrealistic beliefs about failed thought control efforts, and have a great tendency to appraise their lack of control as a catastrophic experience. Therefore,

person' appraisals of failing control of intrusive thoughts plays a significant role in the defining significance and the persistence of this kind of intrusions.

The results revealed that for doubting intrusions there was no significant difference between the Canadian and the Turkish students. These results suggest that person's appraisal of failing control of doubting intrusions may not be influenced by the degree of religiosity and religious affiliation. Individuals' secondary appraisals of failing in control doubting intrusions seem to be universal. However, the results indicated a hint of cultural differences in secondary appraisals of intrusions. For religious intrusions, high religious Christian students rated TAF/threat appraisals as more relevant for their failure of control than high religious Muslims. That is, they reported that when they have difficulty controlling their religious intrusions they are more concerned that failed thought control efforts might increase the chance that you might actually be sinful or unfaithful. For sexual intrusion, there were only significant differences between high and low religious participants, but not between Turkish and Canadian students. High religious individuals rated responsibility appraisals were more associated with their control attempts. That is, when they had difficulty controlling the unwanted sexual intrusions they experienced high level of personal responsibility for gaining better control over the thoughts. Consistent with the significant role of TAF as a primary appraisal in Canadian students, these results suggest that TAF also plays a significant role as a secondary appraisal (i.e. believing that difficulty controlling the unwanted religious intrusions might increase the chance that you might actually be sinful or unfaithful) in Canadians. These results provide some evidence about the influence of cultural diversity. Furthermore, based on these results, it can be suggested that except for TAF and responsibility person's appraisal of failing control doubting intrusion seem to be almost universal.

The present study also examined whether individual's evaluations or appraisals of their control efforts are associated with overall perceived success at the control over intrusions. Results showed that all appraisals did not play the same the role in the perceived success of control over intrusions; some lead to better perceived control whereas others are associated with poorer control. Furthermore, results revealed that

different appraisals were associated with poor or better perceived control for different intrusions. For doubting intrusions, the beliefs about possibility of control and TAF significantly predicted perceived success over intrusions. The greater belief that one can actually exercise control over his/her doubts and less belief that failure to control doubt might increase the chances of a negative consequence or outcome were predictive of better subjective control over doubting intrusions. This results are consistent with Spinhoven and van der Does' study (1999). Based on the findings of their study, the authors suggested that thought suppression is commonly used by patients with a wide range of psychological disorders. However, clinical obsessions and intrusive thoughts likely are the product of failed attempts at thought suppression (Wegner, 1989). These failed attempts may decrease the patient's confidence that they can master such thoughts, setting the stage for future failure (Wegner & Pennebaker, 1993). Therefore, the degree of belief about actual control over thoughts is more probably related to the degree of person' confidence in his/her ability to control intrusions, and therefore, it seems to be logical to expect the positive relationship between perceived control and perceived success at controlling doubting intrusions. Similarly, the negative relationship between the degree of belief that failure to control doubt might increase the chances of a negative consequence or outcome and better subjective control over doubting intrusions is consistent with CBT model of OCD. Clark (2004) noted that obsessions result from patients' beliefs that they must or should be able to control intrusive thoughts. An inability to do so induces anxiety, making thought suppression more difficult. According to Clark, OCD patients' beliefs about self-blame and personal responsibility stem from their burden to control their thoughts. If a person believes that failure in control doubt might increase the probability of the feared negative consequences, he/she will try harder to dismiss these intrusions out of mind, as defined by cognitive theory; however, these control efforts will increase the persistence and maintenance of intrusions, and obsessive qualities. Therefore, the current study's findings offer insight into appraisals of control efforts in OCD by showing the significant role of the secondary appraisals in predicting perceived success at the control over intrusions, and by showing some hint of cultural differences.

The perceived success in controlling religious intrusions was related to faulty inference of control (i.e., believing that poor control over the thoughts reflected a weakness or something negative about person' character). The less the person believed that failing in control is not a sign of any weakness about the person's character, the less he/she experienced difficulty in getting rid of unwanted religious intrusive thoughts out of mind. Consistent with this finding, Purdon and Clark (2002) noted that "individuals who believe that mental control is an important part of self-control will have a high stake in being able to control thoughts. Individuals who believe that unwanted thoughts represent a lapse in mental control and who strive for perfect control will be invested in regaining mental control after such a thought occurs, (p. 31). Patients with OCD also tend to interpret their failure to completely suppress thoughts as an evidence of personal weakness rather than effort or situational factors significantly more often than do either normal or anxious controls (Tolin, Abramowitz, Hamlin, Foa, & Synodi, 2002). The cognitive–behavioral theory (e.g., Salkovskis, 1996) suggests that such interpretations will lead to an increased perceived importance of the thought and a decreased perceived ability to cope with the thought. This, in turn, might be expected to increase OCs' perceived need to intensify their suppression efforts, thus creating a self-maintaining cycle of suppression, intrusion, and attribution.

Lastly, the predictors of perceived success to gain control over sexual intrusions was examined, and results indicated that only appraisal of failure of control in terms of responsibility emerged as a significant unique predictor of control. Less sense of responsibility for gaining better control over the thoughts was predictive of better subjective control over sexual intrusions. This result suggests that lower degree of personal responsibility for gaining better control over the sexual thought probably decreases anxiety, which in turn decreases the difficulty in dismissing the intrusions out of the person's mind.

Overall, these results suggest that in spite of some hint of differences, the person's appraisal of failing in control of intrusions seems to be almost universal. Furthermore, consistent with cognitive model of OCD, individual's evaluations or appraisals of their control efforts is associated with overall perceived success at control

over doubting intrusions. Results also revealed that all appraisals are not associated equally with perceived success at control over intrusive thoughts; some lead to better perceived control (i.e., believing you can control your thoughts) whereas others are associated with poorer control (i.e., believing that failed control reflects a character flaw).

As explained before, primary appraisal of the content of intrusive thoughts starts a faulty appraisal process which evokes distress and leads to some effort to control the unwanted mental intrusion and its associated distress. Unfortunately, even under the best of circumstances, intentional suppression or control efforts do not provide perfect control over unwanted thoughts. Paradoxically, they may lead to more frequent and persistent, even distressing intrusions. Therefore, regardless of an individual's ability to suppress or rid himself of an obsessional thought, the most damaging aspect of trying to control intrusive thoughts is that, efforts will most likely fail with the eventual return of the unwanted though into conscious awareness. The reexperiencing of the unwanted intrusive thought will then trigger a secondary appraisal process in which the individual evaluates the consequences of his/her failure in perform complete control over intrusions. Recently, Clark (2004) suggested a number of secondary appraisals which may involve in a person's evaluation of his/her failure to control an unwanted intrusive thought or obsession. The results of the present study supported the role of person's dysfunctional appraisal in perceived success at control over intrusive thoughts.

4. 4. 4. Group Differences in Control Strategies

The dysfunctional appraisals of the unwanted mental intrusions evoke remarkable distress and anxiety which motivates the person to perform control efforts to dismiss their intrusions out of their minds. In order to examine the use of thought control strategies in OCD, Amir, Cashman and Foa (1997) compared OCD patients with non-anxious controls and reported that OCD patients used distraction less frequently, and the other four strategies (i.e. worry, punishment, reappraisal, and social control) more frequently, than non-patients. Punishment and worry most clearly

differentiated OCD patients from non-patients, mostly because non-patients used these methods very little. The high frequency of the maladaptive control strategies in OCD is replicated by Abramowitz et al. (2003). They found that even when controlling for depression and trait anxiety, OCD patients more frequently employed dysfunctional (i.e. worry and punishment), and less frequently employed functional thought control strategies, (i.e. distraction), than did patients with panic disorder and non-anxious volunteers, when attempting to control unwanted unpleasant intrusive thoughts. Therefore, the last section of the interview schedule examines the control strategies that may be used to control one's unwanted mental intrusions.

The results of the present study showed that nationality and degree of religiosity cause some differences in how people try to control intrusive thoughts. For doubting intrusions, differences emerged on 5 out of the 9 control strategies. The Canadian students employed reassuring themselves significantly more often than the Turkish, while the Turkish used do nothing more frequently than the Canadian. Furthermore, results revealed significant main effect of religiosity on control strategies. High religious students employed reassuring themselves, asking reassurance from others and neutralization significantly more often than did the low religious participant.

When group differences in religious intrusions were examined, a significant group difference only emerged on repeated checking ("Engage in a compulsive ritual like repeatedly crossing yourself, washing, bathing, or repeatedly reciting a comforting phrase or prayer of forgiveness"). Results revealed that High religious Turkish Muslim students used significantly more repeated checking to control their religious intrusions than did High religious Canadian Christians.

In terms of sexual intrusions, while religiosity caused differences in four out of the 9 control strategy, nationality revealed only significant differences in repeated checking strategy. Results indicated that high religious individuals used significantly more frequently distraction, thought stopping, engage in compulsive rituals, and neutralization than low religious individuals. As stated before, high religious individuals found their sexual intrusions more distressing. Consistent with this result, examination of group differences in control strategies suggests that the occurrence and

content of sexual intrusions increase anxiety in high religious individuals, which in turn motivates them to engage in some active coping strategies to dismiss these thoughts out of their minds. Nationalityonly resulted in a significant difference in compulsive rituals. Turkish students reported to use significantly more compulsive rituals as a response to their intrusions. These results suggest that the degree of religiosity may be a more important factor to define how a person tries to control intrusive sexual thoughts than having certain religion. This result confirmed the findings of the questionnaire data indicating high religious Muslim students reporting higher compulsive rituals than the Canadian Muslim Students.

These results suggest that individuals' nationalityand degree of religiosity may cause some significant differences in how they respond or try to control their intrusions. While the Turkish Muslim students used repeated checking, compulsive rituals, and do nothing strategies more frequently, the Canadian Christian students reported to use reassurance yourself

Consistent with the present study, Yorulmaz (2008) compared Canadian students with Turkish students, and found that as for control factors, Turkish participants seemed to spend more control efforts and to utilize more distraction, social control, self-punishment and reappraisal than Canadian subjects. However, Canadian participants seemed to utilize thought suppression more as a strategy to control their thoughts. Furthermore, results revealed some significant differences between high and low religious individuals in the frequency of control strategies. To illustrate, high religious individuals employed reassuring themselves, ask for reassurance from others, neutralization, distraction, thought stopping, and engage in compulsive rituals more frequently than low religious individuals. These results suggest that high religiosity may increase the frequency of dysfunctional control strategies for controlling mental intrusions which may increase the distress as a response to intrusions.

In conclusion, the results of the present study suggest that:

(a) except for the frequency of the intrusions, the content of the intrusions is almost universal

(b) frequency and distress as a response to intrusions is very low in the normal population

(c) The nationalityand degree of religiosity may provide content for intrusions, rather being a causal factor. These factors may specifically influence religious and sexual intrusions

(d) The results support the cognitive model of OCD, indicating a significant role of faulty primary and secondary appraisals and in dysfunctional control strategies in defining degree of distress associated with intrusions. However, religious doctrines may influence the types of the appraisals.

The integrated model of intrusions (Clark, 2004), based on the results of the present study, can be depicted as seen in following figures.

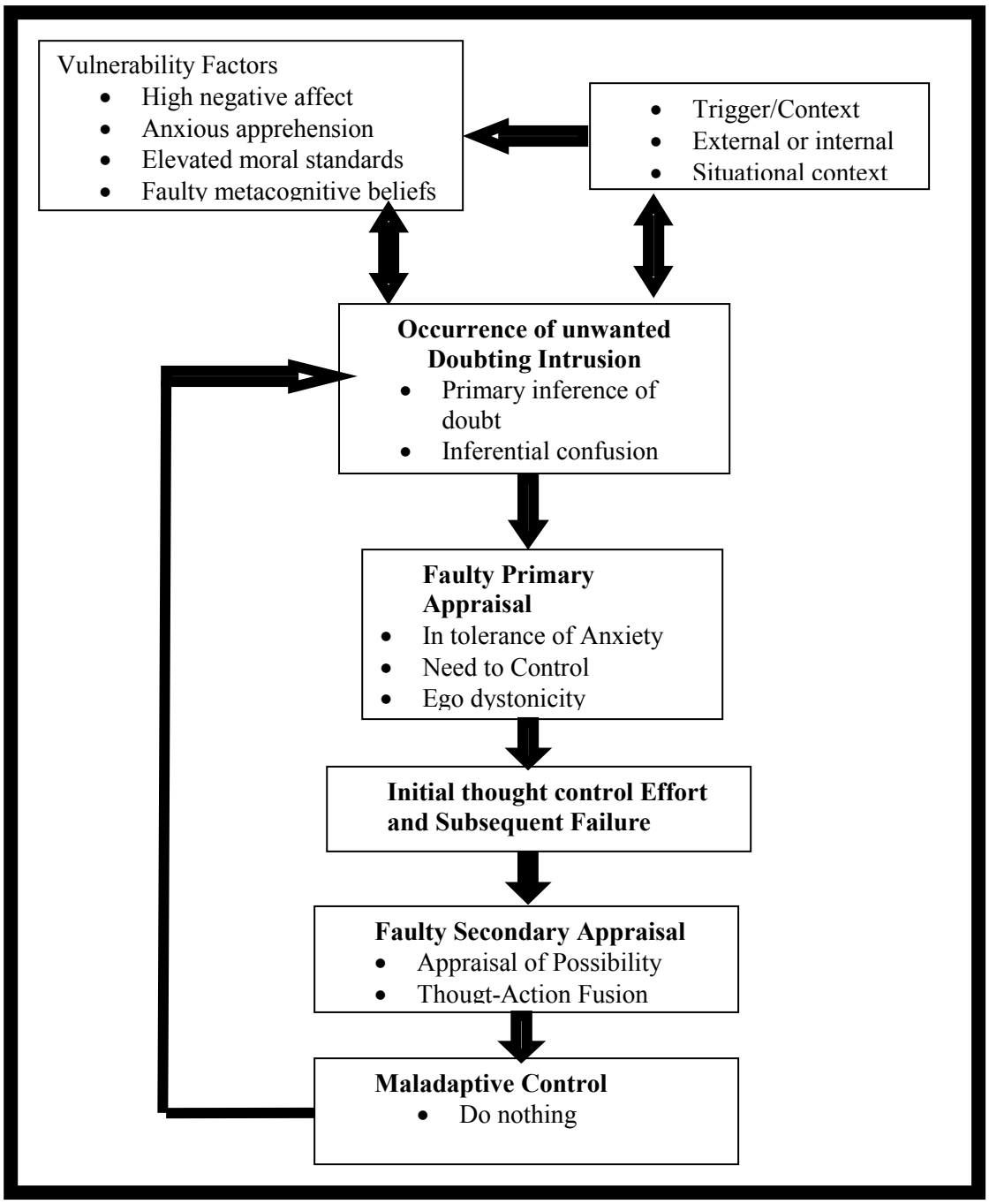


Figure 11. Integrated Inferential and Appraisal Model of Doubting Intrusions of the Turkish Muslims

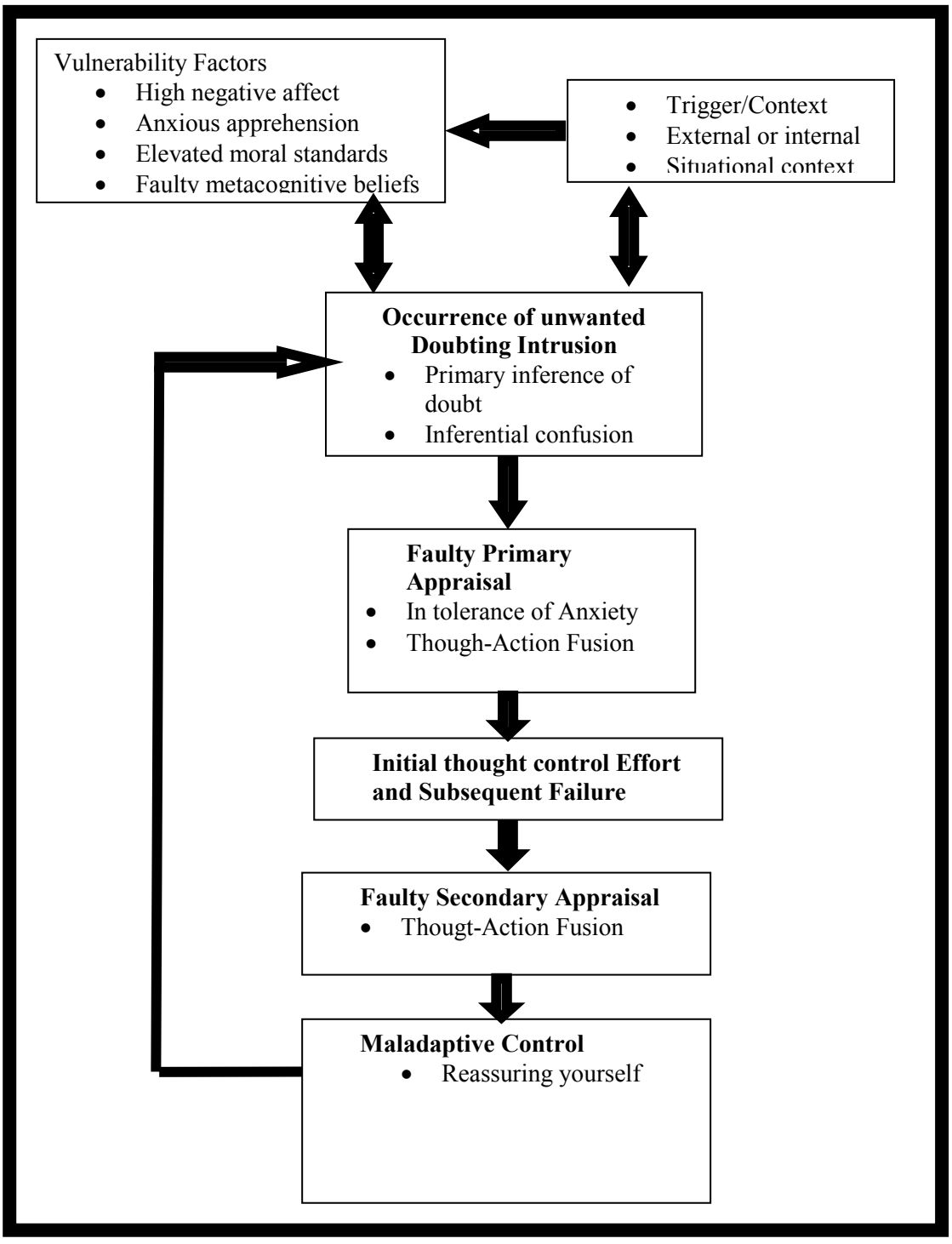


Figure 12. Integrated Inferential and Appraisal Model of Doubting Intrusions of the Canadian Christians

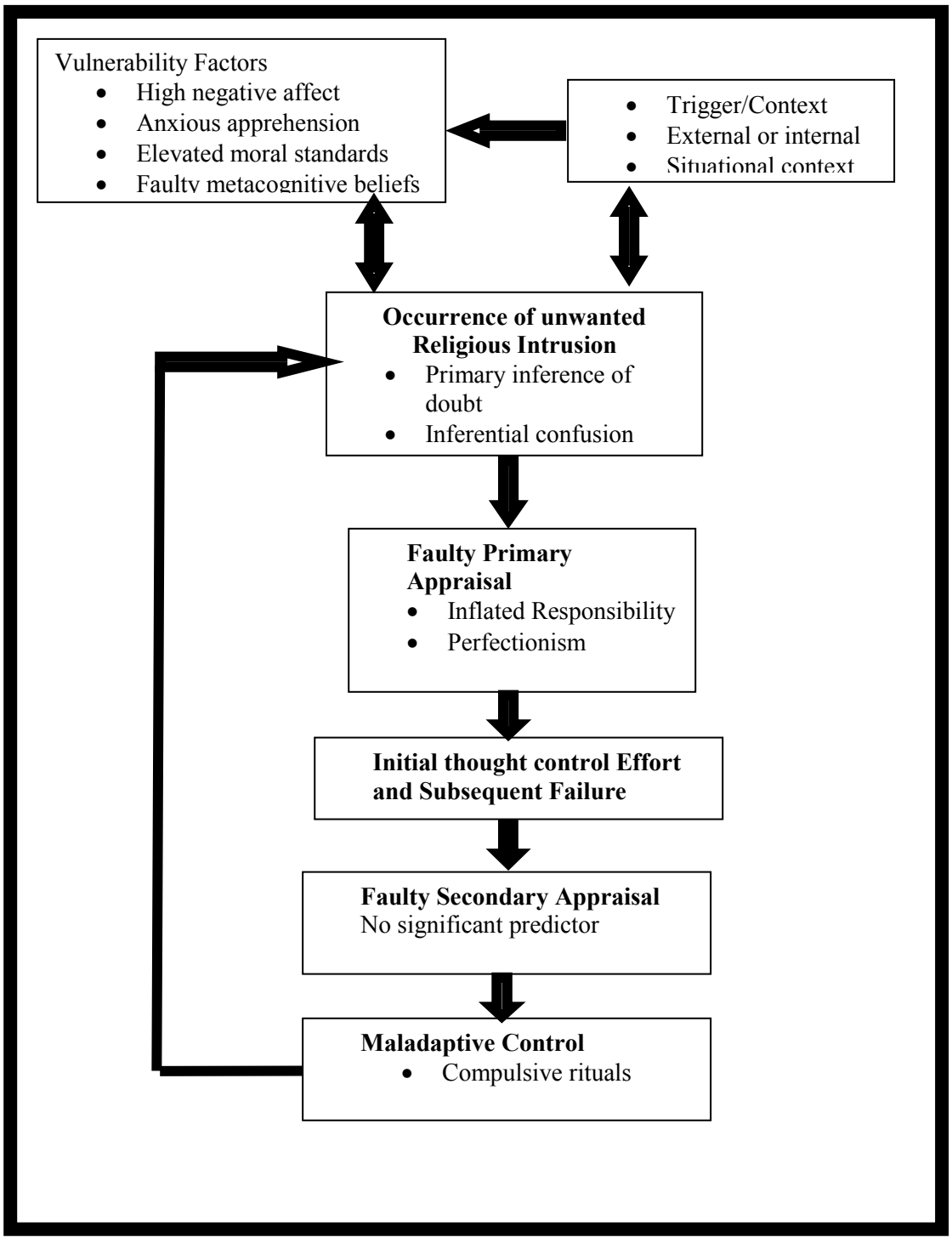


Figure 13. Integrated Inferential and Appraisal Model of Religious Intrusions of the Turkish Muslims

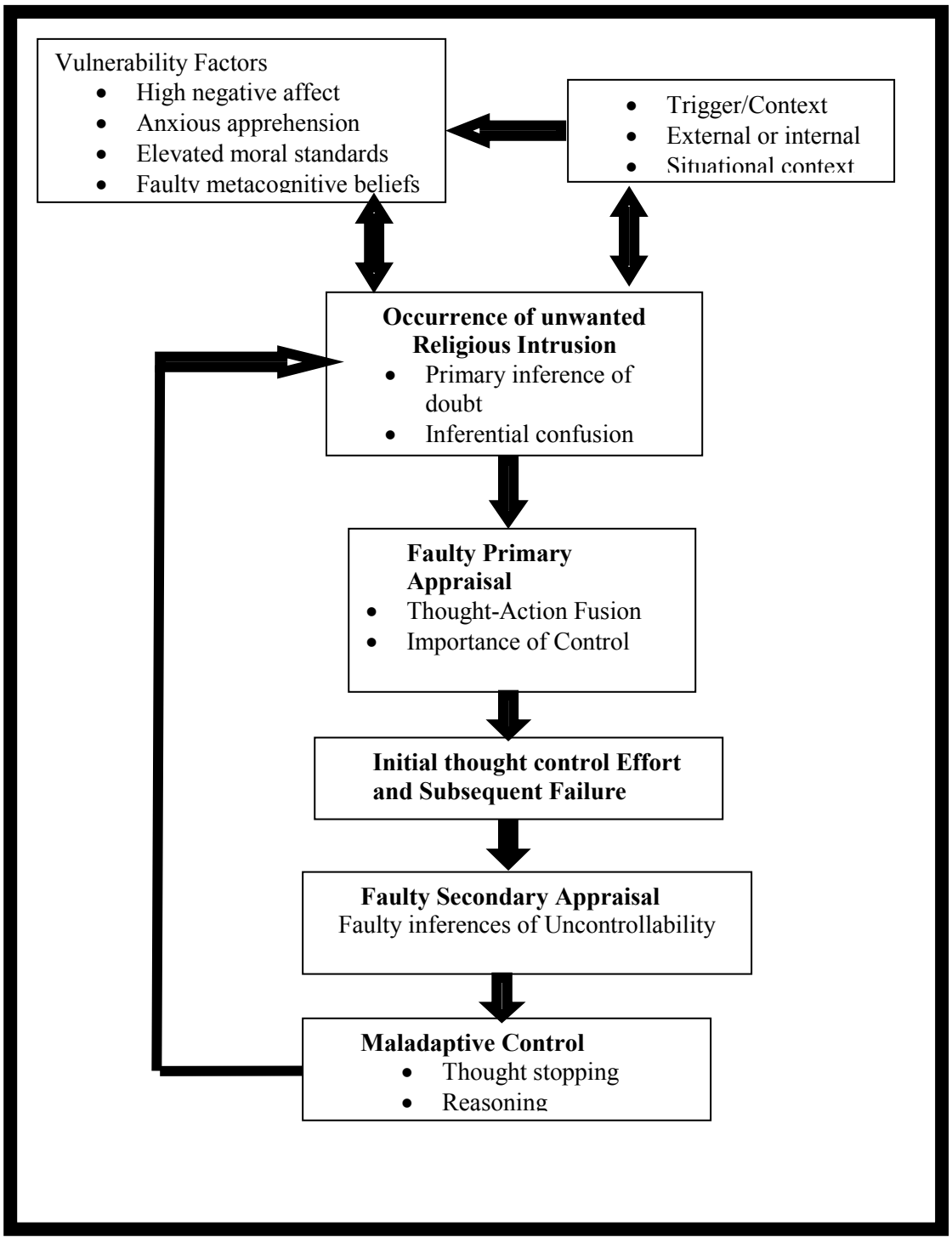


Figure 14. Integrated Inferential and Appraisal Model of Religious Intrusions of the Canadian Christians

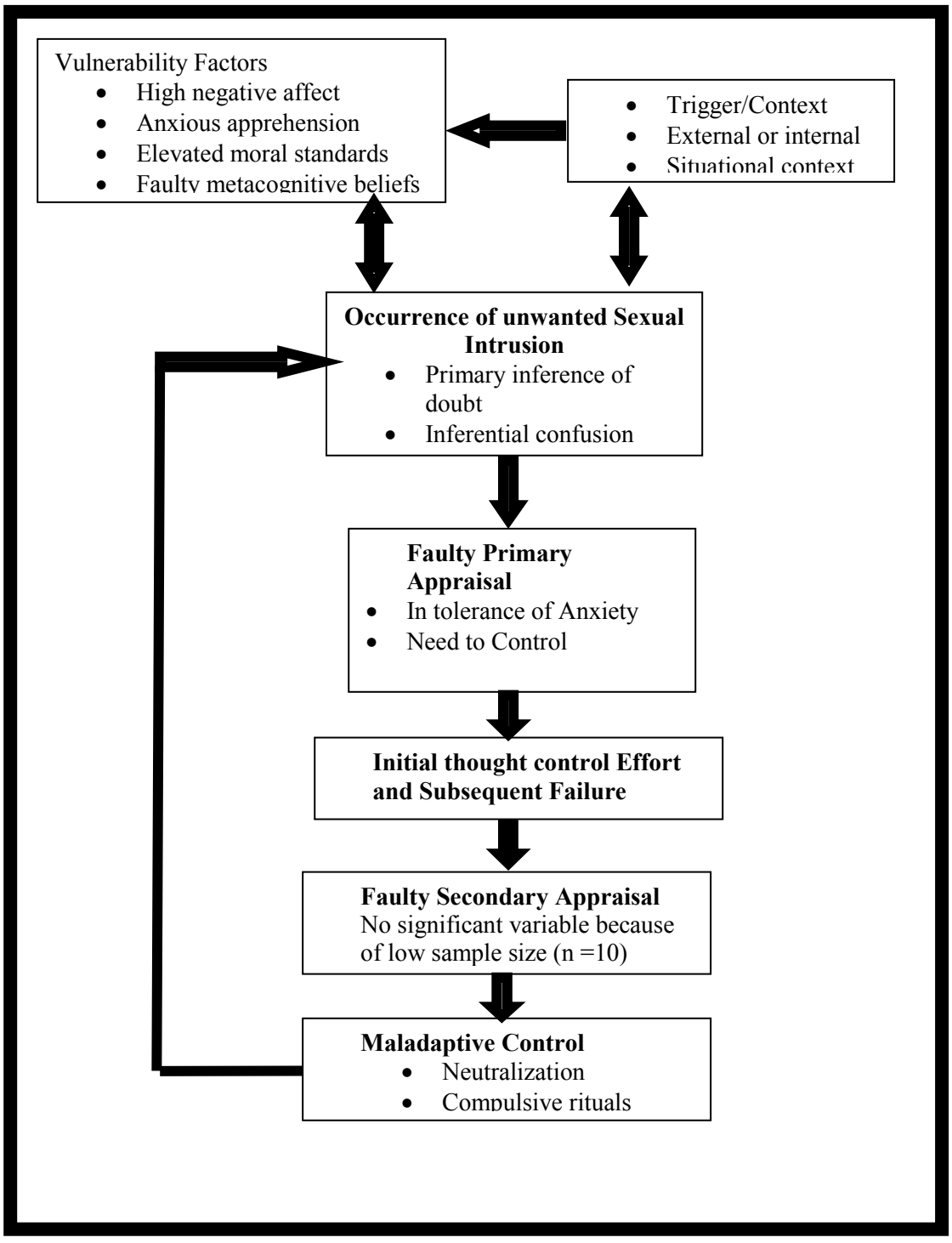


Figure 15. Integrated Inferential and Appraisal Model of Sexual Intrusions of the Turkish Muslims

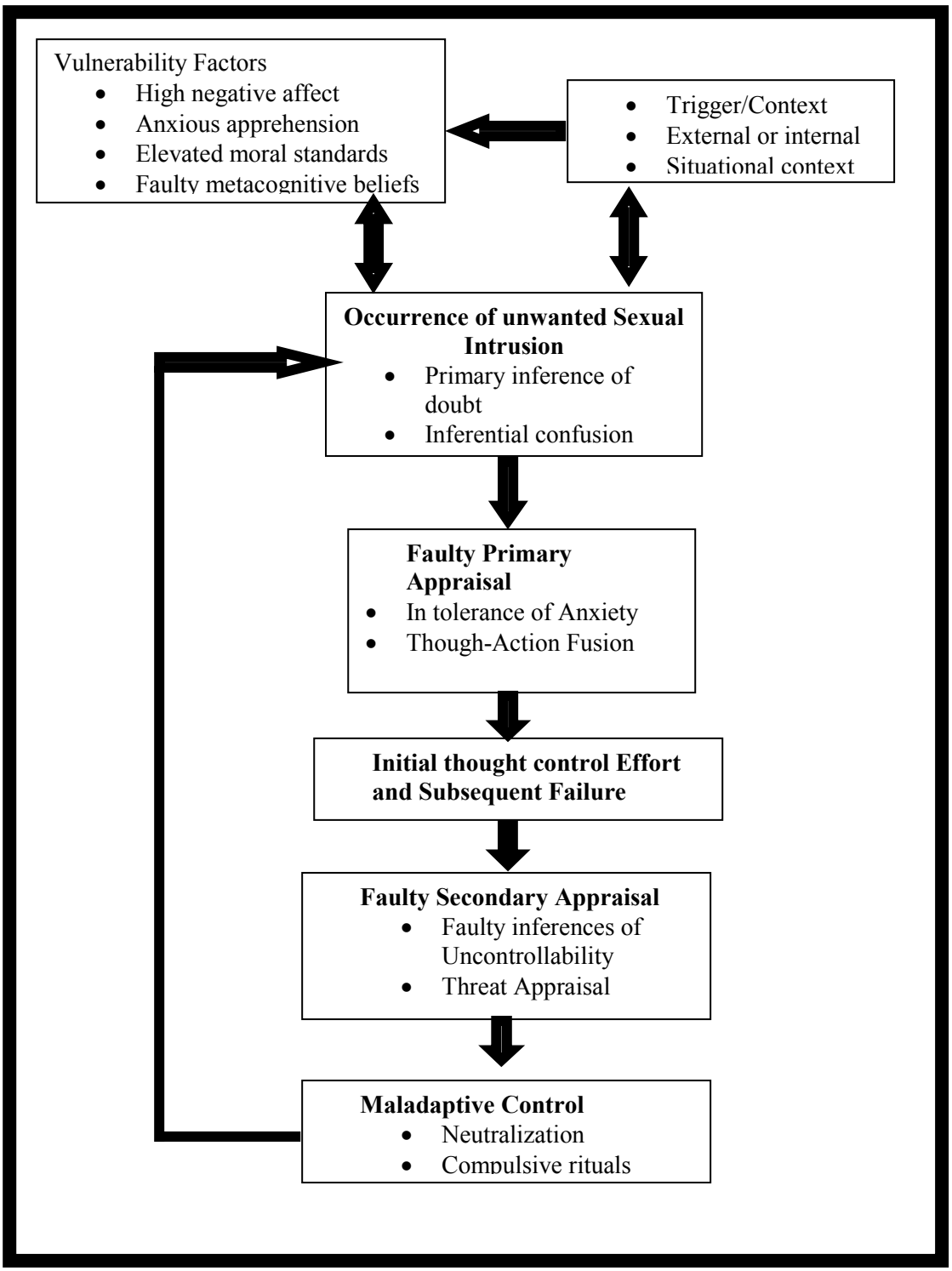


Figure 16. Integrated Inferential and Appraisal Model of Sexual Intrusions of the Canadian Christians

4.5. Limitations of the Present Study and Directions for Future Research

The present study revealed some significant differences and similarities between the Canadian and the Turkish students in the experience of the general distress variables (i.e., depression, anxiety, worry, and guilt), OCD symptoms, scrupulosity and obsessive related beliefs, as well as intrusive thoughts. The present study is the first study to examine the effect of religiosity and nationality on OCD symptoms, appraisals, and scrupulosity beliefs by comparing the Muslims in Turkey, as a non-Western, predominantly Muslim-secular country, and Christian in Canada, as a Western country, predominantly Christian-secular country. Furthermore, the inclusion of the Bible school and the Divinity School students as a extreme religious group helped the clarify the effect of religiosity and religion on the OCD symptomatology. The present study provided some insights into understanding the detrimental effect of religiosity on the experience of OCD symptoms, specifically scrupulosity symptoms. Lastly, International Intrusive Thought Interview Schedule provided an in depth information source to test the integrated inferential and appraisal models of obsessions.

Nevertheless, there are some limitations that require attention and should be taken into consideration during the interpretation of these findings. Firstly, the external validity of the findings of this study is limited to this group of university students from the Middle East Technical University, Turkey, and University of New Brunswick, Canada. Even though the inclusion of Bible school and Divinity school students in the sample of the present study as extreme religious groups might have increased the external validity of the findings of the present study, these students are in a very limited age range, which prevents the generalization of the results to other samples. Thus, the study needs to be replicated in adult samples with a wider age range. Particularly, the effects of religiosity and religious affiliation on OCD symptomatology in the different age and education groups needs to be examined, because the literature indicates that the relationship between religiosity and psychopathology may vary according to demographic variables such as age, sex, and education, family

background, parent' child rearing styles. Considering the issue of generalization, it is important to examine the relationship between religiosity and OCD in different age groups, education levels and in clinical OCD groups.

Furthermore, while consistent with the findings of the presents study, Abramowitz et al. (2002) found that religion and OCD may each contribute to scrupulosity independently; the present study only included limited factors that are assumed to play a significant role in the maintenance and persistence of the OCD, scrupulosity and dysfunctional beliefs. For example, the present study did not examine the family background, and the parents' degree of religious devoutness, and this factors may have important influence on the etiology of OCD, especially scrupulosity. For example, Rasmussen and Tsuang (1986) studied the family history and characteristics of patients with OCD and found that OCD appeared to be more prevalent in individuals from rigid and strict religious backgrounds. This observation was echoed by Steketee, Quay, and White (1991) who noted " Particularly susceptible to the development of OCD symptoms may be those who are raised by parents and religious teachers to believe that "thinking is the same as doing," that sexual and aggressive ideas and urges are bad (sinful), and that such thoughts can and should be controlled. Such teachers may be especially problematic for those raised in perfectionistic, as well as strictly religions, homes. (p. 366). Therefore, research may need to consider models that include the roles of multiple independent factors on the development of OCD and scrupulosity.

Furthermore, the present study only compared Christian and Muslim students to understand the effect of religious doctrines on the OCD symptomatology, however, the possible differences in OCD and scrupulosity between the denominations of Christianity and Islam were not examined. The previous research has indicated that there are significant differences between different denomination of Christianity in OCD symptoms, scrupulosity and obsessive related beliefs. For example, Rassin and Koster (2003) found that the religiosity-TAF relationship was different for Catholics and Protestants and that differences in theological beliefs appeared to moderate how TAF was expressed. Similarly, Abramowitz et al. (2002) compared three different

religious affiliations, including Protestants, Catholics, and Jews, and found that highly religious Protestants in a non-clinical sample scored significantly higher on the Fear of Sin subscale than Jews and Catholics. Furthermore, there are a number of Islamic religious denominations, each of which has significant theological and procedural differences from each other. The major branches are Sunni, Shi'a and Sufi Islam. Therefore, the findings of the present study should be interpreted very cautiously. Sunni Islam comprises the majority of all Muslims (about 90%). It is broken into four schools of thought (madhhabs) which interprets specific pieces of Islam, such as which foods are halal (permissible) differently. They are named after their founders Maliki, Shafi'I, Hanafi, and Hanbali. Different from Sunni and Shi'a, Sufism is not a strict denomination; Sufism is a mystical-ascetic form of Islam. By focusing on the more spiritual aspects of religion, Sufis strive to obtain direct experience of God by making use of "intuitive and emotional faculties" that one must be trained to use. Sufism and Islamic law are usually considered to be complementary, although Sufism has been criticized by some Muslims for being an unjustified religious innovation. Most Sufi orders, or *tariqas*, can be classified as either Sunni or Shi'a. The present study did not examined differences in these Islamic religious denominations. Therefore, the findings of the present study can not be generalized to all sects in Islam and Christianity, and the results should be interpreted very cautiously. Future studies should include participants with different religious affiliations and denominations, such as Judaism, Protestantism, Catholicism, Sufism, Sunni and Shi'a. Furthermore, as stated in the previous sections, since religious affiliation and culture are taken together in the present study, it is not possible to rule out general cultural factors in the formation of cognitive biases and presentation of the OCD symptoms, specifically scrupulosity. It is difficult to answer whether these differences are purely due to differences in religious affiliations, or other cultural factory may influence OCD relevant factors. Therefore, future studies with different religious affiliations from the same culture will help to address this issue more clearly.

To overcome the restriction of self report measurement tools used in previous research, the present study also used the interview method to assess the occurrence,

frequency, appraisal, and secondary appraisal and control strategies. Self-report assessment is based on the person's own report, and it requires awareness to some extent. For the present study, The International Intrusive Thought Interview Schedule (IITIS) was adapted into Turkish. Before the present study, this interview schedule was used only in two studies, and the reliability and validity coefficients were examined by Kyrios (2005). He suggested some improvements for the interview and the authors are still working on it to improve its psychometric properties. Therefore, the findings of the present study should be replicated by subsequent studies.

Finally, whatever alterations are made, this study should be replicated using a sample of patients who have been diagnosed with OCD. Though interesting results were obtained concerning a particular undergraduate population (and these results warrant a somewhat unique form of further investigation and clarification), the goal of better understanding the disorder can best be accomplished by studying those who suffer with it on a daily basis. The greater overall focus on the disorder's emotional components, and the consequent increased emotional understanding of OCD, could lead to more integrative, holistic, beneficial treatment approaches and directions.

4.6. Clinical Implications

The present study indicated that regardless of nationality, religiousness showed a detrimental effect on the severity of the OC symptoms in both the Canadian Christian and the Turkish Muslim students. Consistently, culture and strength of religious devoutness influenced the symptom presentation and severity of scrupulosity symptoms. In other words, the results suggest that scrupulosity symptoms are sensitive to differences between culture/religious doctrines, as well as strength of religious devoutness. Furthermore, the results of the present study revealed that the degree of religiosity was significantly associated with the severity of OCD related beliefs and appraisals. These findings have a significant implication for therapy protocol.

First, as stated before, Rachman's (1997, 1998, 2003) cognitive theory of obsessions underlines four vulnerability factors for the development and maintenance

of OCD and scrupulosity, including: (a) elevated moral standards, (b) particular cognitive biases, (c) depression, and (d) anxiety. Consistent with this model, the present study found that OCD and scrupulosity was related to (a) elevated moral standards (i.e. religious devoutness), (b) particular cognitive biases, especially, overimportance/control of thoughts, and (c) negative affects, including depression, anxiety, and guilt.

These results can be assessed as guidelines in the prevention programs designed for preventing the development of vulnerability factors which are related to OCD , as well as both assessment and treatment of the OCD symptoms. Rasmussen and Tsuang (1986) studied the family history and characteristics of patients with OCD and found that OCD appeared to be more prevalent in individuals from rigid and strict religious backgrounds. This observation was supported by Steketee, Quay, and White (1991) who noted that "such problems may be prevalent in any group with strict religious or moral codes, including fundamentalist Protestant sects and some eastern religious movements" (p. 364). The authors noted “Particularly susceptible to the development of OCD symptoms may be those who are raised by parents and religious teachers to believe that "thinking is the same as doing," that sexual and aggressive ideas and urges are bad (sinful), and that such thoughts can and should be controlled. Such teachers may be especially problematic for those raised in perfectionist, as well as strictly religions, homes.” (p. 366). Therefore, preventive mental health programs should be include some training packages that aim to alert parents about the detrimental effect of strict religious conducts, behaviors and beliefs on the mental health, as well as change their child raising styles.

The present study also provided some supporting evidence about the role of dysfunctional beliefs and appraisals in OCD and scrupulosity. Furthermore, using interview method enabled the deep investigation of the role of appraisals, individual’ response to failure in control and control strategies in perceived distress associated with unwanted intrusive thoughts. The results suggest that different OCD relevant beliefs may play different roles in the different types of intrusions. These findings argue for a focus on responses in intrusive thoughts and dysfunctional beliefs in the

development of comprehensive assessment and treatment of OCD. Narrowly focusing assessment on symptom severity and its impact on functioning can no longer be considered adequate. The same is true of treatment. Pre-treatment assessment should address beliefs, thought control and affect. In this way, the mechanisms of change in therapy may be more clearly understood, and secondary appraisals and control strategies need to be taken as targets in the treatment.

According to Salkovskis (1985, 1989) and Rachman (1997, 1988) treatment of OCD should focus on changing the misinterpretations of the significance of the intrusive thoughts. According to them, treatment techniques derived from the behavioural analysis of OCD (exposure, response prevention, thought- stopping, habituation training) with some exceptions are unsuccessful techniques, because the main aim of these techniques is to block or reduce only the manifestation of the problems neglecting the underlying problems. Therefore, the catastrophic misinterpretations of the significance of the intrusive thought are left unchanged. They have suggested that these attempts failed because they did nothing to change the distressing misinterpretations of the intrusive thoughts and they merely focused on the effects of the catastrophic misinterpretations. As the misinterpretations presumably persisted, the stressing obsessions soon re-appeared. They concluded that without denial of the success of behavioral techniques, attempts at cognitive modification of obsessions should concentrate not only on modification of intrusions, which might have only transient effects on the belief system of the individual, but also on the automatic thoughts which are the consequences of the intrusions, and beliefs.

As discussed earlier, an important proportion of patients experience a considerably inflated sense of responsibility, particularly for potentially negative events, and inflated responsibility can influence their interpretation of the obsessions. In these cases cognitive therapy of OCD should aim to deflate the responsibility to more realistic and rational levels. The findings of the present study supports these suggestions related to treatment procedure. For example, during assessment sessions, simply probing client' frequency of washing his/her hands too much or checking (e.g., door, stove) may cause missing case conceptualization and treatment protocol. While

individuals with scrupulosity may also exhibit these symptoms of OCD, many will not. If practitioners who have not been trained in the latest developments of cognitive-behavioral theory and treatment of OCD, he/she may focus on behavioral rituals too much and exclude questions on repetitive, intrusive, and distressing thoughts and mental rituals. Therefore, clinicians should understand the role of obsessional beliefs, control perception and dysfunctional strategies and should consult a manual such as Clark (2004) or Rachman (2003).

Results also supported the hypothesis that individuals with high religiosity strongly endorse certain dysfunctional beliefs. In every domain of belief assessed using the OBQ (tolerance for uncertainty, threat estimation, control of thoughts, importance of thoughts, responsibility and perfectionism), individuals with high religiosity scored significantly higher than the individuals in the low religious group. The greatest differences between the three religious groups were observed on the subscales assessing beliefs related to importance of thoughts and the necessity of controlling one's thoughts. These results suggest that increase in religiosity may increase the belief that one's thoughts have significant implications about real life and therefore, one should exercise complete control over them Therefore, it should be noted that changing individual' beliefs about the importance of thoughts and the necessity of controlling one's thoughts should be a also primary treatment target in the cognitive therapy protocols for highly religious participants with OCD.

Although the majority of the quantitative research that has explored the role of guilt in OCD has found a positive correlation between questionnaire measures of guilt and self-reported symptoms of the disorder (Shafran et al., 1996; Steketee, Grayson, & Foa, 1987; Steketee, Quay, & White, 1991), it has been relatively infrequently studied as a significant factor in its own right. Guilt results from the violation of one's internal rules and, similar to other emotions, it serves as a positive social and interpersonal function by inhibiting potentially unlawful or amoral behavior However, inappropriately high guilt levels can be dysfunctional, and cause behaving according to strict and rigid rules that consists of how they believe they "should" or "ought to" act rather than acting how they want to act (Kugler & Jones, 1992). In other words, high

guilt levels result in seemingly unavoidable internal standards that are strictly followed as a way of avoiding addition guilt feelings. Savoie (1996) notes that:

> "Sufferers experience guilt as an additional horror accompanying their disorder...An intense anticipatory fear of guilt motivates the initiation, as well as the continuation of, their rituals. However, prolonged rituals in and of themselves are sources of guilt, as sufferers helplessly witness their loss of control and reflect on the excessive time and energy dedicated to completing a ritual...Sufferers also feel guilt and disappointment about having "let themselves down," as well as about the excessive waste the disorder has caused...They tend to want to hide away and isolate themselves, to reject offers of help from others, feeling they are undeserving of sympathy and support. These acts of rejection create yet more guilt, which further fuels the desire to be alone and to exclude others from the pain. (p. 211)

The present study indicated that regardless of nationality, guilt is a very important factor that plays a significant role in the exacerbation of OCD symptoms, and scrupulosity. As expected, this construct showed a ery strong relationship with religiosity. Therefore, treatment protocols should take into consideration of intense feeling of guilt in OCD patients, especially if they also hold strong religious beliefs.

The present study suggests that mental health practitioners working with clients dealing with scrupulosity must be careful about clients' religious beliefs and values, and he/she should avoid pathologizing the clients' religious and spiritual beliefs (Greenberg & Witztum, 2001; Richards & Bergin, 1998). The need for caution is especially important when a practitioner's worldview and values differ widely from those of the client' (Redding, 2001). Bergin and Jensen (1990) have shown that, as a group, mental health practitioners are significantly less religious than individuals in the general public and may tend to neglect involving clergy as part of the treatment team (Meylink & Gorsuch, 1988). Some authors suggested that when necessary, mental health professionals should receive additional training, supervision, and/or consultations in order to increase their understandings the spiritual and religious needs of their clients (Richards & Bergin, 1998a; Weaver, 1998). This may increase mental health professionals' ability to understand the source of patient' distress and anxiety. Furthermore, practitioners must familiarize themselves with their clients' religious beliefs because the religious worries and behavioral rituals involved in scrupulosity

will often be the regular practices of a religious group that are taken to the extreme (Ciarrocchi, 1995,1998; Greenberg & Witztum, 2001). Throughout the therapy process clinicians should communicate with the client and his or her clergy in order to distinguish obsessional beliefs and scrupulous symptoms from the beliefs and practices of those in the client's faith tradition. The respect and desire to learn more about the patient' religious beliefs and values may increase the clients' collaboration in the therapy process.

Scrupulosity presents a unique challenge to pastors, pastoral counselors, and lay counselors because of its religious and spiritual content. In addition, the findings of this study show that the mental health of individuals decreases as the presence of obsessional beliefs increases. As research has shown that individuals with OCD often first present their symptoms to clergy (Greenberg & Shefler, 2002; Pollard et al., 1989), churches and mosques may be a good place to provide early intervention (Weaver, 1998; Weaver, Samford, & Koenig, 1997). Pollard et al. (1989) found that approximately 28% of people in the general population with OCD seek help for their symptoms and almost of them half turn to clergy or a non-psychiatric medical profession. However, clergy need to be educated about the symptoms of OCD and scrupulosity (Collie, 1997). If the religious workers mistakenly assess a scrupulous individual's symptoms as an indication of strong and complete faith, they may inadvertently accelerate a scrupulous individual's problem (e.g., by encouraging repetitive confessions, or repent). When working with struggling congregation members, religious workers should take into account the level of distress, presence of chronic doubt/guilt, and repetitive/excessive religious rituals, and in the case of the existence of these conditions, clergy should also have access to mental health professionals in order to consult and collaborate. Therefore, instead of excluding the presence of each other, both professional groups should work together in a mutual collaboration.

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APPENDICES

QUESTIONNAIRES

BACKGROUND INFORMATION FORM

Bu çalışma, inanç, duygu, düşünce ve davranışlarla ilgili olası kültürel farklılıkları incelemek amacıyla yürütülen kültürler arası bir çalışmanın ikinci kısmını oluşturmaktadır. Araştırmanın sonuçları açısından, sağlıklı bilgiler elde edilmesi için yönergelerin dikkatlice okunması, verilen cevaplarda samimi olunması ve cevaplandırılmamış soru bırakılmaması son derece önemlidir. Sorular için doğru yada yanlış cevap yoktur. Cevaplar grup halinde değerlendirileceği için isim belirtilmesine gerek yoktur.

Bu çalışma iki aşamadan oluşmaktadır. Araştırmanın ilk kısmını, sizden şimdi doldurmanız istenen ölçek setinin cevaplandırılması; ikinci kısmını ise şimdi cevaplayacağınız sorulara benzer sorulardan oluşan, dünyanın çeşitli ülkelerinde kullanılmakta olan, yapılandırılmış bir görüşme formunun uygulanması oluşturmaktadır. Araştırmanın ikinci kısmına katılmayı kabul etmeniz durumunda, *eğer Psikoloji Bölümü'nden herhangi bir ders alıyorsanız katılım puanı, almıyorsanız katılımınız için küçük hediyeler(sinema bileti gibi) verilecektir.* Bu nedenle eğer çalışmanın ikinci kısmına da katılmak isterseniz sizinle iletişim kurabilmemize olanak verecek e-mail yada telefon numaranızı aşağıda belirtilen yerlere yazmanızı rica ediyoruz. Bize vermiş olduğunuz iletişim bilgileri sadece bu araştırma için size ulaşılmak için kullanılacak ve kesinlikle araştırmanın yürütücüleri olan Prof. Dr. Nuray Karancı ve Uzm. Psk Müjgan Altın tarafından gizli tutulacaktır.

Araştırmaya katılmak tamamen isteğe bağlıdır. İstediğiniz her noktada araştırmadan çekilebilir ve istemediğiniz sorulara cevap vermeyebilirsiniz. Bu sayfa

sizin teslim etmenizin hemen ardından diğer ölçek setlerinden ayrılacak ve ayrı bir yerde saklanacaktır. Sorulara vermiş olduğunuz cevaplar size bir katılımcı numarası verilerek girilecek ve hiçbir yerde isminiz geçmeyecektir. Yardımlarınızdan dolayı şimdiden teşekkür ederiz. Eğer araştırmaya katılmaya kabul ediyorsunuz, lütfen aşağıdaki bölümü doldurunuz.

Uzm. Psk. Mujgan Altın
Prof. Dr. Nuray Karancı
Orta Doğu Teknik Üniversitesi
Psikoloji Bölümü

Prof. Dr. Nuray Karancı ve Uzm. Psk Müjgan Altın tarafından yürütülen bu araştırma ile ilgili bilgileri okudum ve katılmayı kabul ediyorum.

İmza: _____
E-mail Adresiniz (*eğer ikinci kısmı için iletişim kurulmasını kabul ediyorsanız):* _____
Telefon: _____
Tarih: _____

Katılımcı Kodu: _____

Lütfen kendinize araştırmada kullanılmak üzere bir nickname seçiniz yada daha sonra da hatırlayabileceğiniz bir numara yazınız:_____

DEMOGRAFİK BİLGİLER:

Tarih:_____

Yönerge: Sizden, diğer ölçekleri cevaplandırmadan önce öncelikle aşağıda kişisel bilgilerinizle ilgili olan soruları cevaplandırmanızı rica ediyoruz. Kişisel bilgilerinizin ardından ayrıca sizin dini inancınız, tutumlarınız ve davranışlarınız hakkında da bazı sorular yer almaktadır. Lütfen bu soruları sizi en iyi ifade eden sayıyı yuvarlak içine alarak cevaplayınız.

Cinsiyetiniz: Erkek Kadın

Yaşınız: _____(Yıl olarak)

Üniversitede Okuduğunuz Alan: _____

Mesleğiniz: _____

Medeni Durumuz:

(1) Bekar (2) Evli/Birlikte Yaşıyor (3) Ayrılmış/ Boşanmış (4) Dul

Annenizin en son bitirdiği okul:

(1) Okuma-yazma bilmiyor (2) Okur-yazar (3) İlkokul (4) Ortaokul

(5)Lise (6)Üniversite (7)Üniversite Üzeri

Babanızın en son bitirdiği okul:

(1) Okuma-yazma bilmiyor (2) Okur-yazar (3) İlkokul (4) Ortaokul

(5)Lise (6)Üniversite (7)Üniversite Üzeri

Ailenizin gelir düzeyi:

(1)Düşük (2)Orta (3)Yüksek

Kardeş sayısı:_____

Siz Kaçıncı Çocuksunuz? _____

Etnik kimliğiniz nedir? _____

Hiç uzun süreli yurtdışında yaşadınız mı?

EVET (lütfen süresini belirtiniz)_____ HAYIR

1- Şu anda sizi profesyonel bir yardım almaya yönlendiren ruh sağlığınızla ilgili bir probleminiz var mı? EVET HAYIR

Eğer cevabınız “evet” ise lütfen ruh sağlığınızla ilgili şu anki problemi/ problemleri yazınız:

_____

_____

_____

2-Dini inancınız nedir?

(1) Hiç bir dine inanmıyorum (2) İslam (3) Protestan (4) Ortodoks (5) Yahudi

(6) Katolik

(7) Ateist (8) Diğer (Lütfen Belirtiniz):_____

Kendinizi ne kadar dindar biri olarak tanımlarsınız?

1	2	3	4	5
Hiç				Oldukça Fazla

Annenizi ne kadar dindar biri olarak tanımlarsınız?

1	2	3	4	5
Hiç				Oldukça Fazla

Babanızı ne kadar dindar biri olarak tanımlarsınız?

1	2	3	4	5
Hiç				Oldukça Fazla

Anne-babanızın çocuk yetiştirme tarzını nasıl tanımlarsınız?

1	2	3	4	5
Aşırı Hoşgörülü Serbest				Aşırı Sert- Tutucu Muhafazakar

3-Son bir yılda, dini ibadetinizin yapıldığı yerlere ne sıklıkla gittiniz? (Cami, Kilise, Sinagog vb.) (Genelde yaptıklarınıza en yakın cevabı işaretleyin)

(1) Hiç	(2) Ara sıra (Ayda bir defadan az)	(3) Çoğu kez (Ayda en az bir)	(4) Sıklıkla (Haftada en az bir)	(5) Oldukça sık (Günde en az bir)

4- Son bir yılda, ne sıklıkla dua ettiniz? (Genelde yaptıklarınıza en yakın cevabı işaretleyin)

(1) Hiç	(2) Ara sıra (Ayda bir defadan az)	(3) Çoğu kez (Ayda en az bir)	(4) Sıklıkla (Haftada en az bir)	(5) Oldukça sık (Günde en az bir)

5- Son bir yılda, dininize gönderilmiş olan kutsal kitabı ne sıklıkla okudunuz? (Kuran, İncil, Tevrat vb.) (Genelde yaptıklarınıza en yakın cevabı işaretleyin)

(1)	(2)	(3)	(4)	(5)
Hiç	Ara sıra (Ayda bir defadan az)	Çoğu kez (Ayda en az bir)	Sıklıkla (Haftada en az bir)	Oldukça sık (Günde en az bir)

6- Dini dernek, vakıf, yada organizasyonlara ne sıklıkla maddi bağış yaparsınız yada etkinliklerine katılmak için gönüllü olarak zaman ayırırsınız? (Genelde yaptıklarınıza en yakın cevabı işaretleyin)

(1)	(2)	(3)	(4)	(5)
Hiç	Ara sıra (Ayda bir defadan az)	Çoğu kez (Ayda en az bir)	Sıklıkla (Haftada en az bir)	Oldukça sık (Günde en az bir)

7- Dini inancınızın davranış ve kararlarınızı belirlemede ne kadar önemli bir rolü vardır? (Genelde yaptıklarınıza en yakın cevabı işaretleyin)

(1)	(2)	(3)	(4)	(5)
Hiç önemli değil	Biraz Önemli	Önemli	Çok önemli	Son derece önemli

BECK ANXIETY INVENTORY (BAI)

Aşağıda insanların kaygılı ya da endişeli oldukları zamanlarda yaşadıkları bazı belirtiler verilmiştir. Lütfen her maddeyi dikkatle okuyunuz. Daha sonra, her maddedeki belirtinin bugün dahil son iki haftadır sizi ne kadar rahatsız ettiğini aşağıdaki ölçekten yararlanarak maddelerin yanındaki uygun yere (x) işareti koyarak belirleyiniz.

0. Hiç 1. Hafif derecede 2. Orta derecede 3. Ciddi derecede

	Sizi ne kadar rahatsız etti? Hiç			Ciddi
1. Bedeninizin herhangi bir yerinde uyuşma veya karıncalanma	0	1	2	3
2. Sıcak / ateş basmaları	0	1	2	3
3. Bacaklarda halsizlik, titreme	0	1	2	3
4. Gevşeyememe	0	1	2	3
5. Çok kötü şeyler olacak korkusu	0	1	2	3
6. Baş dönmesi veya sersemlik	0	1	2	3
7. Kalp çarpıntısı	0	1	2	3
8. Dengeyi kaybetme duygusu	0	1	2	3
9. Dehşete kapılma	0	1	2	3
10. Sinirlilik	0	1	2	3
11. Boğuluyormuş gibi olma duygusu	0	1	2	3
12. Ellerde titreme	0	1	2	3
13. Titreklik	0	1	2	3
14. Kontrolü kaybetme korkusu	0	1	2	3
15. Nefes almada güçlük	0	1	2	3
16. Ölüm korkusu	0	1	2	3
17. Korkuya kapılma	0	1	2	3
18. Midede hazımsızlık ya da rahatsızlık hissi	0	1	2	3
19. Baygınlık	0	1	2	3
20. Yüzün kızarması	0	1	2	3
21. Terleme (sıcağa bağlı olmayan)	0	1	2	3

BECK DEPRESSION INVENTORY (BDI)

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

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

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

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

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

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

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

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

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

9- a- Kendimi öldürmek gibi düşüncelerim yok
b- Bazen kendimi öldürmeyi düşünüyorum, fakat yapmadım.
c- Kendimi öldürebilmeyi isterdim.
d- Bir fırsatını bulursam kendimi öldürürüm.

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

11- a- Her zamankinden daha sinirli değilim.
b- Her zamankinden daha kolayca sinirleniyor ve kızıyorum.
c- Çoğu zaman sinirliyim.
d- Eskiden sinirlendiğim şeylere bile artık sinirlenemiyorum.

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

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

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

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

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

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

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

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

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

21- a- Son zamanlarda cinsel yaşamımda dikkatimi çeken bir şey yok.
b- Eskisine oranla cinsel konularla daha az ilgileniyorum.
c- Şu sıralarda cinsellikle ilgili konularla daha az ilgileniyorum.
d- Artık cinsellikle hiçbir ilgim kalmadı.

CLARK-BECK OBSESSIVE COMPULSIVE INVENTORY (CBOCI)

Yönerge: Bu anket formu 25 grup ifadeyi içermektedir. Lütfen her grupta yer alan ifadeleri dikkatlice okuyunuz ve sonrasında bu ifadelerin içinden **bugün de dahil olmak üzere son iki hafta içindeki** düşünce, duygu ve davranışlarınızı en iyi tanımlayan **yalnızca bir** ifadeyi seçerek, seçtiğiniz ifadenin başındaki rakamı yuvarlak içine alınız. Eğer aynı grup içinde birkaç ifadenin sizin için eşit şekilde uygun olduğunu düşünüyorsanız, o grup için en yüksek rakamı taşıyan ifadeyi yuvarlak içine alınız. Eğer seçenekler arasında karar vermekte zorlanırsanız, o zaman size en uygun olduğunu tahmin ettiğiniz ifadeyi işaretleyiniz. Doğru veya yanlış cevap yoktur, sadece hangi durumun sizi en iyi tanımladığını düşündüğünüz önemlidir. Hızlı bir şekilde formu doldurmanız ve ifadelerin tam anlamıyla ne demek istediği üzerinde düşünerek fazla zaman harcamamanız gerekmektedir. Geçen iki hafta boyunca hangi ifadenin sizi en iyi tanımladığı hakkındaki ilk izleniminiz en doğru yanıt olacaktır.

OBSESYONLAR ALT ÖLÇEĞİ

Tanım: Aşağıdaki ifade grupları, obsesyon olarak adlandırılan *günlük yaşamda **saplantı ya da takıntı** olarak da tanımladığımız* zihinde istem dışı olarak beliren, bir dizi özel (spesifik) düşünce, fikir, zihinsel zihinsel görüntü yada dürtülerden bahsetmektedir. Hemen hemen herkes günlük yaşamında az ya da çok bu tür düşüncelere sahip olabilir.

Obsesyonlar (saplantılar ya da takıntılar):

- *İstenmeyen, kabul edilemez, sıkıntı veren, hatta tiksinti uyandıran düşünce zihinsel görüntü veya dürtülerdir,*
- *İstememenize rağmen tekrar tekrar aklınıza gelirler .*
- *Gerçekte sahip olduğunuz kişiliğinize özgü olmayabilirler ya da ona uygun değillerdir; diğer bir deyişle, zihninizde isteğiniz dışında beliren bu düşünceler, sahip olmayı istediğiniz yada beklediğiniz türden düşünceler değildir.*
- *Size saçma veya mantıksız gelse de genellikle kontrol edilmeleri güçtür.*

Obsesyonlara (saplantılar yada takıntılar), kazara veya kasten birine zarar vermek, hata yapmak, pislenmek veya kirlenmek, yaptığınız şeyler hakkında kesin veya emin olmamak, ahlakdışı davranmak, kabul edilemez cinsel aktivitelerde bulunmak, kontrolü kaybetmek ve utanç verici bir şeyler yapmak, kapıyı kilitlemeyi veya cihazları kapatmayı unutmak gibi düşünce, zihinde beliren görüntü veya dürtüler örnek olarak verilebilir.

1. **0 HİÇBİR ZAMAN** kirlenme veya pis bir şeyin bulaşması ile ilgili isteğim dışında tekrarlanan takıntılı düşünce, zihinsel görüntü veya dürtülerim olmaz, ya da **NADİREN** olur

1 BAZEN (yani haftada bir defadan daha az) kirlenme veya pis bir şeyin bulaşması ilgili isteğim dışında tekrarlanan takıntılı düşünce, zihinsel görüntü veya dürtülerim olur

2 SIK SIK (yani haftada birkaç defa) kirlenme veya pis bir şeyin bulaşması ilgili isteğim dışında tekrarlanan takıntılı düşünce, zihinsel zihinsel görüntü veya dürtülerim olur

3 OLDUKÇA SIKLIKLA (yani her gün) kirlenme veya pis bir şeyin bulaşması ilgili isteğim dışında tekrarlanan, düşünce zihinsel görüntü veya dürtülerim olur

2. **0 HİÇBİR ZAMAN** kendimin veya başkalarının zarar görmesine veya yaralanmasına neden olacağıma ilişkin isteğim dışında tekrarlanan takıntılı düşünce, zihinsel görüntü veya dürtülerim olmaz ya da **NADİREN** olur.
1 BAZEN (yani haftada bir defadan daha az) kendimin veya başkalarının zarar görmesine veya yaralanmasına neden olacağıma ilişkin takıntılı düşünce, zihinsel görüntü veya dürtülerim **olur**
2 SIKLIKLA (yani haftada birkaç defa) kendimin veya başkalarının zarar görmesine veya yaralanmasına neden olacağıma ilişkin takıntılı düşünce, zihinsel görüntü veya dürtülerim **olur**
3 OLDUKÇA SIKILIKLA (yani her gün) kendimin veya başkalarının zarar görmesine veya yaralanmasına neden olacağıma ilişkin takıntılı düşünce, zihinsel görüntü veya dürtülerim **olur**

3. **0 HİÇBİR ZAMAN** cinsel veya dini (yani dini değerlerinize aykırı) konularla ilgili isteğim dışında tekrarlanan rahatsız edici takıntılı düşünce, zihinsel görüntü veya dürtülerim olmaz ya da **NADİREN** olur.
1 BAZEN (yani haftada bir defadan daha az) cinsel veya dini (yani dini değerlerinize aykırı) konularla ilgili rahatsız edici takıntılı düşünce, zihinsel görüntü veya dürtülerim olur
2 SIKLIKLA (yani haftada birkaç defa) cinsel veya dini (yani dini değerlerinize aykırı) konularla ilgili rahatsız edici takıntılı düşünce, zihinsel görüntü veya dürtülerim olur
3 OLDUKÇA SIKILIKLA (yani her gün) cinsel veya dini (yani dini değerlerinize aykırı) konularla ilgili rahatsız edici takıntılı düşünce, zihinsel görüntü veya dürtülerim olur

4. **0.** Eğer isteğim dışında tekrarlanan takıntılı düşünce, zihinsel görüntü veya dürtülerim olursa bu durumdan rahatsız **OLMAM** veya kendimi suçlu **HİSSETMEM**.
1. Takıntılı düşünce, zihinsel görüntü veya dürtülerim olduğunda, olsa olsa **BİRAZ** rahatsız olurum veya suçluluk hissederim.
2. Takıntılı düşünce, zihinsel görüntü veya dürtülerim olduğunda **OLDUKÇA** rahatsız olurum veya suçluluk hissederim.
3. Takıntılı düşünce, zihinsel görüntü veya dürtülerim olduğunda **ÇOK FAZLA** rahatsız olurum veya suçluluk hissederim.

5. **0.** Genellikle isteğim dışında tekrarlanan takıntılı düşünce, zihinsel görüntü veya dürtüleri zihnimden **BAŞARIYLA uzaklaştırabilirim.**
1. Takıntılı düşünce, zihinsel görüntü veya dürtüleri zihnimden uzaklaştırmakta **SIKLIKLA zorlanırım.**
2. Takıntılı düşünce, zihinsel görüntü veya dürtüleri zihnimden uzaklaştırmakta **ÇOĞU ZAMAN zorlanırım.**
3. Takıntılı düşünce, zihinsel görüntü veya dürtüleri zihnimden **ÇOK NADİREN** başarıyla **uzaklaştırabilirim**

6. **0.** İsteğim dışında tekrarlanan takıntılı düşünce, zihinsel görüntü veya dürtülerim olursa **KOLAYCA** başka şeyle düşünebilirim.
1. Takıntılı düşünce, zihinsel görüntü veya dürtülerim olduğunda başka şeyler düşünmekte **ÇOK AZ ZORLANIRIM.**
2. Takıntılı düşünce, zihinsel görüntü veya dürtülerim olduğunda başka şeyler düşünmekte **OLDUKÇA ZORLANIRIM.**
3. Takıntılı düşünce, zihinsel görüntü veya dürtüleri olduğunda başka şeyler düşünmekte **ÇOK FAZLA ZORLANIRIM.**

7. **0 HİÇBİR ZAMAN** diğer insanların talihsizliklerine veya zarar görmelerine neden olduğum veya buna engel olamadığım için kişisel olarak sorumlu olduğum düşüncesi beni rahatsız etmez ya da **NADİREN** eder.

1 BAZEN (yani haftada bir defadan az) başka insanların talihsizliklerine veya zarar görmesine neden olduğum veya buna engel olamadığım için kişisel olarak sorumlu olduğum düşüncesi beni rahatsız eder.

2 SIKLIKLA (yani haftada birkaç defa) başka insanların talihsizliklerine veya zarar görmesine neden olduğum veya buna engel olamadığım için kişisel olarak sorumlu olduğum düşüncesi beni rahatsız eder.

3 OLDUKÇA SIKLIKLA (yani her gün)Başka insanların talihsizliklerine veya zarar görmesine neden olduğum veya buna engel olamadığım için kişisel olarak sorumlu olduğum düşüncesi beni rahatsız eder.

8. **0 HİÇBİR ZAMAN** evdeki veya iş yerindeki günlük işlerimi tamamen veya doğru bir şekilde yerine getirip getirmediğim hakkında şüphe duymam ya da **NADİREN** duyarım**.**

1 BAZEN evdeki veya iş yerindeki günlük işlerimi tamamen veya doğru bir şekilde yerine getirip getirmediğim hakkında şüphe duyarım.

2 SIK SIK evdeki veya iş yerindeki günlük işlerimi tamamen veya doğru bir şekilde yerine getirip getirmediğim hakkında şüphe duyarım.

3 NEREDEYSE SÜREKLİ bir şekilde evdeki veya iş yerindeki günlük işlerimi tamamen veya doğru bir şekilde yerine getirip getirmediğim hakkında şüphe duyarım.

9. **0. Eğer** isteğim dışında tekrarlanan takıntılı düşünce, zihinsel görüntü veya dürtüleri aklımdan uzaklaştırmaya çalışsaydım, **ÇOK AZ** dikkat ve çaba harcamam gerekirdi.

1. Takıntılı düşünce, zihinsel görüntü veya dürtüleri aklımdan uzaklaştırmaya çalışsaydım, **BİRAZ** dikkat ve çaba harcamam gerekirdi.

2. Takıntılı düşünce, zihinsel görüntü veya dürtüleri aklımdan uzaklaştırmaya çalışsaydım, **OLDUKÇA** dikkat ve çaba harcamam gerekirdi.

3. Takıntılı düşünce, zihinsel görüntü veya dürtüleri aklımdan uzaklaştırmaya çalışsaydım **ÇOK FAZLA** dikkat ve çaba harcamam gerekirdi**.**

10. **0. HİÇBİR ZAMAN** söylediğim veya yaptığım şeylerde hatalı olduğum hakkında endişelenmem ya da **NADİREN** endişelenirim.

1. ARA SIRA söylediğim veya yaptığım şeylerde hatalı olduğum hakkında endişelenirim.

2. SIKLIKLA söylediğim veya yaptığım şeylerde hatalı olduğum hakkında endişelenirim.

3. HEMEN HEMEN HER ŞEYDE söylediğim veya yaptığım hatalı olduğum hakkında endişelenirim.

11. **0** Evdeki veya iş yerindeki günlük işlerim hakkında karar vermekte **HİÇ ZORLANMAM**.

1 ZAMAN ZAMAN bazı günlük işlerim hakkında kararsız kalabilirim

2 SIKLIKLA basit günlük işlerim hakkında karar vermekte zorlanırım.

3 ÇOĞU ZAMAN rutin, günlük işlerimi yapmaya çalışırken karar vermekte zorlanırım.

12. **0.** İsteğim dışında tekrarlanan takıntılı düşünce, zihinsel görüntü veya dürtüler, çalışabilmemi veya sosyal ilişkilerimi **ENGELLEMİYOR**.

1. Takıntılı düşünce, zihinsel görüntü veya dürtüler çalışmamı veya sosyal aktivitelerimi **BİRAZ ENGELLİYOR**.
2. Takıntılı düşünce, zihinsel görüntü veya dürtülerin, çalışmamı veya sosyal ilişkilerimi **ÖNEMLİ DERECEDE ENGELLEMESİNE** rağmen çaba sarf ederek idare edebilirim.

3. Çaba sarf ettiğim halde, istem dışı takıntılı düşünce, zihinsel görüntü veya dürtüler nedeniyle çalışma yaşantımı ve sosyal ilişkilerimi sürdürmekte **ÇOK ZORLANIYORUM.**

13. **0** İsteğim dışında tekrarlanan takıntılı düşünce, zihinsel görüntü veya dürtülerin, **ZARARSIZ** olduklarına inanırım.

1. Takıntılı düşünce, zihinsel görüntü veya dürtülerimin, gerçeğe dönüşüp, olumsuz veya zarar verebilecek sonuçlar doğurup doğurmayacağına dair, **ARASIRA** endişelenirim

2. Takıntılı düşünce, zihinsel görüntü veya dürtülerimin gerçeğe dönüşmesi halinde olumsuz veya fena sonuçlar doğabileceğinden **OLDUKCA ENDİŞELENİRİM**.

3. Takıntılı düşünce, zihinsel görüntü veya dürtülerin gerçeğe dönüşmesi halinde olumsuz veya fena sonuçlar doğabileceğinden **ÇOK FAZLA ENDİŞELENİRİM**

14. **0**. İsteğim dışında tekrarlanan takıntılı düşünce, zihinsel görüntü veya dürtülerin aklıma gelmesini engellemeye **ÇALIŞMAM**.

1. Takıntılı düşünce, zihinsel görüntü veya dürtülerin aklıma gelmesini **ARA SIRA** engellemeye çalışırım.

2. Takıntılı düşünce, zihinsel görüntü veya dürtülerin aklıma gelmesini engellemek için **BİRAZ ÇABA SARFEDERİM.**

3. Takıntılı düşünce, zihinsel görüntü veya dürtülerin aklıma gelmesini engellemek için **OLDUKÇA ÇOK ÇABA SARFEDERİM.**

KOMPULSİYONLAR ALT ÖLÇEĞİ

Tanım: Aşağıda yer alan ifadeler "kompulsiyon" olarak adlandırdığımız düşünce veya davranışlardan bahsetmektedir

Kompulsiyonlar :

- *Tekrar tekrar yinelemek zorunda hissettiğiniz düşünce veya davranışlardır,*
- *Bu düşünce veya davranışlar oldukça anlamsız veya abartılı olabilir,*
- *Birçok insan zaman zaman kompulsif tarzda düşünce veya davranışlar sergileyebilir.*

Kompulsif davranışlara, kendinizi rahat hissedene kadar ellerinizi tekrar tekrar yıkamak, evden ayrılmak için kendinizi rahat hissedinceye kadar ocağı tekrar tekrar kontrol etmek, doğru bir şekilde hatırladığınızdan emin oluncaya kadar kelimeleri veya cümleleri tekrar etmek, ihtiyaç duymadığınız şeyleri atmanın kendinizi kötü hissettirmesi nedeniyle (örneğin, eski telefon faturaları, gazeteler v.b.) abartılı bir şekilde biriktirmek , rahat hissettirene kadar belli bir sayıya kadar tekrar tekrar saymak, eşyalara belli bir sayıda hafifçe vurma ve benzeri davranışlar örnek olarak verilebilir.

Eğer kompulsif düşüncelerden sıklıkla bahsedeceksek (yani kompulsif davranış ve düşünce şeklinde) kısa bir parantezle kompulsif düşünce ve obsesif düşüncenin farkını yazabiliriz

15. **0.** **HİÇBİR ZAMAN** kirlenme, pis olduğunu düşündüğüm bir şeyin bulaşması veya diğer nedenlerden ötürü kendimi, giysilerimi veya evimi temizleme (yıkama) zorunluluğu hissetmem ya da **NADİREN** hissederim.

1. **BAZEN** (yani haftada bir defadan daha seyrek) kirlenme, pis olduğunu düşündüğüm bir şeyin bulaşması veya diğer nedenlerden ötürü kendimi, giysilerimi veya evimi temizleme (yıkama) zorunluluğu hissederim.

2. **SIKLIKLA** (yani haftada birkaç defa) kirlenme, pis olduğunu düşündüğüm bir şeyin bulaşması veya diğer nedenlerden ötürü, kendimi, giysilerimi veya evimi temizleme (yıkama) zorunluluğu hissederim.
3. **OLDUKÇA SIKLIKLA** (yani her gün) kirlenme, pis olduğunu düşündüğüm bir şeyin bulaşması veya diğer nedenlerden ötürü, kendimi, giysilerimi veya evimi temizleme (yıkama) zorunluluğu hissederim.

16. 0. **HİÇBİR ZAMAN,** yapmış olduğum sıradan günlük işleri (örn, kapı kilitleme, ışıkları, muslukları veya cihazları kapatma, formları doldurma, postalamadan önce mektupları gözden geçirme) tekrar tekrar kontrol etme zorunluluğu hissetmem ya da **NADİREN** hissederim.
1. **BAZEN** (yani haftada bir defadan seyrek), doğru yaptığımdan emin olmak için sıradan günlük işlerimi tekrar tekrar kontrol etme zorunluluğu hissederim.
2. **SIKLIKLA** (yani haftada birkaç defa) doğru yaptığımdan emin olmak için sıradan günlük işlerimi tekrar tekrar kontrol etmek zorunluluğunu hissederim.
3. **OLDUKÇA SIKLIKLA** (yani her gün) doğru yaptığımdan emin olmak için sıradan günlük işlerimi tekrar tekrar kontrol etmek zorunluluğu hissederim.

17. 0. HİÇBİR ZAMAN söylediklerimin veya yaptıklarımın doğruluğundan emin olamadığım için tekrar okuma, tekrar yazma veya söylediklerimi tekrar ifade etme zorunluluğu hissetmem **veya NADİREN** hissederim.
1. **BAZEN** (yani haftada bir defadan daha seyrek) söylediklerimin veya yaptıklarımın doğruluğundan emin olamadığım için tekrar okuma, tekrar yazma veya söylediklerimi tekrar ifade etme zorunluluğu hissederim
2. **SIKLIKLA** (yani haftada birkaç defa)söylediklerimin veya yaptıklarımın doğruluğundan emin olamadığım için tekrar okuma, tekrar yazma veya söylediklerimi tekrar ifade etme zorunluluğu hissederim
3. **OLDUKÇA SIKLIKLA** (yani her gün) söylediklerimin veya yaptıklarımın doğruluğundan emin olamadığım için **OLDUKÇA SIK** (yani her gün) tekrar okuma, tekrar yazma veya söylediklerimi tekrar ifade etme zorunluluğu hissederim

18. 0. HİÇBİR ZAMAN günlük işlerimde kalıplaşmış belirli bir sırayı (örn, belirli bir sıra ile giyinmek veya yıkanmak) izlemem veya eşyaların belirli bir düzen içinde kalmasına (örn, evde veya iş yerinde eşyaların her zaman belirli bir yerinin olması) özen göstermem ya da **NADİREN** gösteririm.
1. **BAZEN** (yani haftada bir defadan daha seyrek) günlük işlerimi yaparken kalıplaşmış belirli bir sırayı takip ederim veya eşyaların belirli bir düzen içinde kalmasına özen gösteririm.
2. **SIKLIKLA** (yani haftada birkaç defa) günlük işlerimi yaparken kalıplaşmış belirli bir sırayı takip ederim veya eşyaların belirli bir düzen içinde kalmasına özen gösteririm.
3. **OLDUKÇA SIKLIKLA** (yani her gün) günlük işlerimi yaparken kalıplaşmış belirli bir sırayı takip ederim veya eşyaların belirli bir düzen içinde kalmasına özen gösteririm.

19. 0. HİÇBİR ZAMAN rahatsızlık hissinden korunabilmek veya olumsuz bir şeyin olmasını engelleyebilmek için sayı saymak, belirli ifadeleri kendi kendime tekrarlamak, önemsiz şeyleri akılda tutmak yada diğer zihinsel aktiviteler ile meşgul olmak zorunda hissetmem **veya NADİREN hissederim.**
1. **BAZEN** (yani haftada bir defadan daha seyrek) rahatsızlık hissinden korunabilmek veya olumsuz bir şeyin olmasını engelleyebilmek için sayı sayar, belirli ifadeleri kendi

kendime tekrarlar, önemsiz şeyleri akılda tutmaya çalışır veya bunlara benzer başka zihinsel aktivitelerle meşgul olurum.

2. **SIKLIKLA** (yani haftada birkaç defa) rahatsızlık hissinden korunabilmek veya olumsuz bir şeyin olmasını engelleyebilmek için sayı sayar, belirli ifadeleri kendi kendime tekrarlar, önemsiz şeyleri akılda tutmaya çalışır veya bunlara benzer başka zihinsel aktivitelerle meşgul olurum
3. **OLDUKÇA SIKLIKLA** (yani her gün) rahatsızlık hissinden korunabilmek veya olumsuz bir şeyin olmasını engelleyebilmek için sayı sayar, belirli ifadeleri kendi kendime tekrarlar, önemsiz şeyleri akılda tutmaya çalışır veya bunlara benzer başka zihinsel aktivitelerle meşgul olurum

20. 0. **HİÇBİR ZAMAN** yapmakta olduğum şeylerin detaylarına takılıp kalmaktan dolayı, sıradan günlük işlerimi (örn, giyinmek, evden veya iş yerinden ayrılmak, yemekleri hazırlamak, iş veya okul ile ilgili şeyler) bitirebilmek için uzun zaman harcamam **veya NADİREN uzun zaman harcarım.**

1. **BAZEN** (yani haftada bir defadan daha seyrek) yapmakta olduğum şeylerin ayrıntısıyla fazlaca uğraştığımdan dolayı günlük sıradan işlerimi bitirebilmek için gerekenden fazla zaman harcarım.
2. **SIKLIKLA** (yani haftada birkaç defa) yapmakta olduğum şeylerin ayrıntısıyla fazlaca uğraştığımdan dolayı, günlük sıradan işlerimi bitirebilmek için gerekenden fazla zaman harcarım.
3. **HER ZAMAN** (yani her gün) yapmakta olduğum şeylerin ayrıntısıyla fazlaca uğraştığımdan dolayı, günlük sıradan işlerimi bitirebilmek için gerekenden fazla zaman harcarım.

21. 0. Tekrar tekrar yineleme zorunluluğu hissettiğim bir davranışı yada düşünceyi (yani **kompulsiyonlar)** yapmam engellense bile bu durumdan dolayı herhangi bir sıkıntı **HİSSETMEM**.

1. Tekrar tekrar yineleme zorunluluğu hissettiğim bir davranışı yada düşünceyi (yani **kompulsiyonlar**) yapmam engellenirse bundan dolayı **ÇOK AZ SIKINTI** hissederim..
2. Tekrar tekrar yineleme zorunluluğu hissettiğim bir davranışı yada düşünceyi (yani **kompulsiyonlar**) yapmam engellenirse bundan dolayı **EPEYCE SIKINTI** hissederim.
3. Tekrar tekrar yineleme zorunluluğu hissettiğim bir davranışı yada düşünceyi (yani **kompulsiyonlar**) yapmam engellenirse bundan dolayı **ÇOK FAZLA SIKINTI** hissederim.

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22. 0. Tekrar tekrar yineleme zorunluluğu hissettiğim davranış yada düşünceler (yani **kompulsiyonlar**) çalışabilmemi veya sosyal ilişkilerimi **ENGELLEMEZ.**

1. Tekrar tekrar yineleme zorunluluğu hissettiğim davranış yada düşünceler (yani **kompulsiyonlar**) yüzünden çalışma yaşamım veya sosyal faaliyetlerim **BİRAZ ENGELLENİR**.
2. Tekrar tekrar yineleme zorunluluğu hissettiğim davranış yada düşünceler (yani **kompulsiyonlar**) yüzünden çalışma yaşamım veya sosyal faaliyetlerim **Önemli derecede ENGELLENDİĞİ** halde çaba sarf ederek idare edebilirim.
3. Tekrar tekrar yineleme zorunluluğu hissettiğim davranış yada düşünceler (yani **kompulsiyonlar**) yüzünden çalışmayı yada diğer insanlarla olan sosyal ilişkilerimi sürdürmeyi **ÇOK GÜÇ** bulurum.

23. 0. Takıntılı düşünce, zihinsel görüntü veya dürtülerimi (**yani obsesyonlar**) ya da tekrarlamak zorunda hissettiğim davranışlarımı/düşüncelerimi **(yani kompulsiyonlar)** başlatacağı korkusuyla belirli yerlerden, kişilerden, faaliyetlerden veya nesnelerden **uzak durmam.**

1. Takıntılı düşünce, zihinsel görüntü veya dürtülerimi (**yani obsesyonlar**) ya da tekrarlamak zorunda hissettiğim davranışlarımı/düşüncelerimi **(yani kompulsiyonlar)** başlatacağı korkusuyla belirli yerlerden, kişilerden, faaliyetlerden veya eşyalardan **ARA SIRA** (yani haftada bir defadan daha seyrek) uzak dururum/kaçınırım.

2. Takıntılı düşünce, zihinsel görüntü veya dürtülerimi (**yani obsesyonlar**) ya da tekrarlamak zorunda hissettiğim davranışlarımı/düşüncelerimi **(yani kompulsiyonlar)** başlatacağı korkusuyla belirli yerlerden, kişilerden, faaliyetlerden veya eşyalardan **SIKLIKLA** (yani, haftada birkaç defa) uzak dururum/kaçınırım.

3. Takıntılı düşünce, zihinsel görüntü veya dürtülerimi (**yani obsesyonlar**) ya da tekrarlamak zorunda hissettiğim davranışlarımı/düşüncelerimi **(yani kompulsiyonlar)** başlatacağı korkusuyla belirli yerlerden, kişilerden, faaliyetlerden veya eşyalardan **OLDUKÇA SIK** (yani her gün) uzak dururum/kaçınırım.

24. 0. **T**ekrar tekrar yineleme mecburiyeti hissettiğim davranış yada düşünceler ile (**yani kompulsiyonlar)** meşgul olma zorunluluğu hissetsem bile onları **YAPMAMAYA** karar verebilirim.

1. **T**ekrar tekrar yineleme mecburiyeti hissettiğim davranış yada düşünceler ile (**yani kompulsiyonlar)** meşgul olma zorunluluğu hissettiğim zaman **ÇOK ZOR** da olsa, kendi isteğimle bu davranışlarımı kontrol edebilirim
2. **T**ekrar tekrar yineleme mecburiyeti hissettiğim davranış yada düşünceler ile (**yani kompulsiyonlar)** meşgul olma zorunluluğu hissettiğim zaman kendi isteğimle bu davranışlarımı ancak **BİRAZ** kontrol edebilirim
3. **T**ekrar tekrar yineleme mecburiyeti hissettiğim davranış yada düşünceler ile (**yani kompulsiyonlar)** meşgul olma zorunluluğu hissettiğim halde kendi isteğimle bu davranışlarımı ancak **ÇOK AZ** kontrol edebilirim

25. 0. **T**ekrar tekrar yineleme zorunluluğu hissettiğim davranış yada düşünceler ile (**yani kompulsiyonlar)** meşgul olsam bile kaygı veya sıkıntı **hissetmem**

1. **T**ekrar tekrar yineleme zorunluluğu hissettiğim davranış yada düşünceler ile (**yani kompulsiyonlar)** meşgul olsam bile bu durumdan dolayı, **ÇOK AZ KAYGI** veya **SIKINTI** hissederim.
2. **T**ekrar tekrar yineleme zorunluluğu hissettiğim davranış yada düşünceler ile (**yani kompulsiyonlar)** meşgul olduğum zaman, bu durumdan dolayı **KAYGI** veya **SIKINTI** hissederim.
3. **T**ekrar tekrar yineleme zorunluluğu hissettiğim davranış yada düşünceler ile (**yani kompulsiyonlar)** meşgul olduğum zaman, bu durumdan dolayı **oldukça FAZLA KAYGI** veya **SIKINTI** hissederim

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Bu anketi doldurmak için zaman ayırdığınız için size teşekkür ederiz.

GUILT INVENTORY (GI)

Yönerge: Anketin bu bölümünde, lütfen aşağıdaki cevap formatını kullanarak soruları cevaplayınız

1 = Hiç Katılmıyorum
2 = Katılmıyorum
3 = Kararsızım
4 = Katılıyorum
5 = Tamamen Katılıyorum

_____ **1.** Nelerin doğru, nelerin yanlış olduğunun kesin ve net olarak tanımlanması gerektiğine inanıyorum.

_____ **2.** Hayatımda birçok hata yaptım.

_____ **3.** Her zaman, bir dizi kesin ahlaki-etik ilkelere, kuvvetle inanmışımdır.

_____ **4.** Son zamanlarda, kendimle ve yaptıklarımla ilgili olarak kendimi iyi hissediyorum.

_____ **5.** Eğer bazı şeyleri yeniden yapabilseydim, omuzlarımdan büyük bir yük kalkardı.

_____ **6.** Hiçbir zaman çok büyük bir vicdan azabı ya da suçluluk hissetmedim.

_____ **7.** Hayattaki amacım, soyut birtakım ahlaki kurallara ulaşmaya çalışmak yerine, hayattan zevk almaktır.

_____ **8.** Geçmişimde derinden pişmanlık duyduğum bir şey var

_____ **9.** Sıklıkla, yaptığım bir şeyden dolayı kendimden nefret ederim.

_____ **10.** Ebeveynlerim bana karşı çok katıydılar.

_____ **11.** Asla yapmayacağım sadece birkaç şey vardır.

_____ **12.** Yaptığım bir şeyden dolayı sıklıkla kendimle ilgili hoşnutsuzluk yaşarım.

_____ **13.** Doğru ve yanlışa ilişkin fikirlerim oldukça esnektir

_____ **14.** Eğer hayatımı yeni baştan yaşayabilseydim, birçok şeyi farklı şekilde yapardım.

_____ **15.** Yanlış olduklarına inandığım için hayatta asla yapmayacağım birçok şey vardır.

_____ **16.** Son zamanlarda, çok pişman olduğum bir şey yaptım.

_____ **17.** Son günlerde, benim yerimde olmak hiç de kolay değildi.

_____ **18.** Ahlak, birçok insanın ileri sürdüğü gibi siyah-beyaz değildir.

_____ **19.** Son zamanlarda sakin ve endişesizim.

_____ **20.** Hatırlayabildiğim kadarıyla suçluluk ve pişmanlık, hayatımın bir parçası olmuştur.

_____ **21.** Bazen, geçmişte yaptığım bazı şeyleri düşündüğümde çok rahatsız oluyorum

_____ **22.** Belirli durumlarda, neredeyse, yapmayacağım hiçbir şey yoktur.

_____ **23.** Hayatım boyunca çok fazla hata yaptığımı düşünmüyorum.

_____ **24.** Ciddi bir ahlaksızlık yapmaktansa ölmeyi tercih ederim.

_____ **25.** Ahlaki değerlerime uygun yaşamak için güçlü bir istek duyuyorum.

_____ **26.** Sık sık derin bir pişmanlık duyarım.

_____ **27.** Geçmişte yaptığım şeylere dair çok endişelenirim.

_____ **28.** İnsanların içinde bulundukları durumu ve onları davranışa yönlendiren itici gücü bilmeden, bir şeyin doğru ya da yanlış olup olmadığı hakkında bir yargıya varılamayacağına inanıyorum.

_____ **29.** Hayatımda, yapmış olmaktan ötürü pişmanlık duyduğum çok az şey var.

_____ **30.** Eğer son birkaç haftayı ya da ayı yeniden yaşayabilseydim, değiştirmek isteyeceğim kesinlikle hiçbir şey olmazdı

_____ **31.** Bazen, geçmişte yaptığım şeylerden dolayı yemek yemekte zorlanıyorum.

_____ **32.** Yaptığım şeylerle ilgili asla endişelenmem; çünkü hayat zaten bir şekilde devam eder.

_____ **33.** Şu anda kendimi, yaptığım hiçbir şeyden ötürü, özellikle suçlu hissetmiyorum

_____ **34.** Bazen, yanlış yaptığıma inandığım şeyler hakkında düşünmekten kendimi alıkoyamıyorum

_____ **35.** Hiçbir zaman uyumakta zorlanmam.

_____ **36.** Bir şekilde geriye dönüp, son zamanlarda yanlış yaptığım bazı şeyleri düzeltebilmek için, her şeyimi verirdim.

_____ **37.** Yakın geçmişimde, değiştirmek isteyeceğim en azından bir şey var.

_____ **38.** Ahlaki olarak yanlış bir şey yaptığımda, bunu anında fark ederim.

_____ **39.** Neyin doğru ya da yanlış olduğu, duruma bağlıdır.

_____ **40.** Suçluluk, benim için özel bir problem değildir.

_____ **41.** Geçmişimde çok pişmanlık duyduğum hiçbir şey yok.

_____ **42.** Ahlaki değerlerin kesin olduğuna inanıyorum..

_____ **43.** Eğer yaptığım şeyleri yapmasaydım, son zamanlarda hayatım çok daha iyi olabilirdi

_____ **44.** Eğer hayatıma yeniden başlayabilseydim, ya hiç yada çok az şeyi değiştirirdim.

_____ **45.** Son zamanlarda endişeli ve sıkıntılıydım.

INTERNATIONAL INTRUSIVE THOUGHT INTERVIEW SCHEDULE (IITIS)

Görüşmeciler için Yönergeler: Bu görüşmenin amacı, obsesif-kompulsif bozukluğun [obsesif-kompulsif Bozukluk (OKB)] kökeni ile ilgili olduğu düşünülen, bireylerin zihinlerinde istemdışı beliren düşünceleri, görüntüleri ve dürtüleriyle ilgili deneyimleri hakkında bilgi edinmektir. Her yeni katılımcı için ayrı bir görüşme formu uygulanmalı ve görüşme, katılımcı diğer ölçekleri doldurmadan önce uygulanmalıdır. Bu, yarı yapılandırılmış bir görüşme olduğundan, araştırmacılar doğru bir derecelendirme yapmak için cevaplarda netlik sağlayana kadar katılımcılara ek sorular sormakta serbesttirler. Ayrıca araştırmacıların, katılımcıların yanıtlarını kaydetmeleri ve katılımcıların verdiği yanıtlara dayanarak istenilen derecelendirmeyi yapmaları gerekmektedir. Katılımcılara, görüşmeciyi takip edebilmeleri ve görüşmecinin kaydetmesi gereken gerekli derecelendirmeyi önerebilmeleri için "Katılımcı Değerlendirme Ölçeği" verilmelidir.

Görüşmenin özellikle son 3 ay içinde gerçekleşmiş zihinde istemdışı beliren düşüncelere odaklandığını lütfen göz önünde bulundurunuz. Bu yüzden katılımcılar son zamanlarda, özellikle son 3 ay içinde zihinlerinde istemdışı beliren düşünceleri söylemeleri yönünde teşvik edilmelidir. Görüşmeyi yaptığınız tarihten üç ay öncesinde olan bir tarih belirleyin ve bunu, görüşme boyunca sizin için geçerli olan zaman aralığı olarak kullanın (örnek: "…1 Ekim'den şu ana kadar, hiç ..... ilgili zihninizde istemdışı beliren düşünceleriniz oldu mu?"). LÜTFEN BÖLÜMLERİ A'DAN C'YE DOĞRU GÖRÜŞME PROGRAMINDA VERİLDİĞİ SIRADA TAMAMLAYIN.

Görüşmeci katılımcılara okur: Bu araştırma projesi, dünyanın çeşitli ülkelerindeki üniversite öğrencilerinde, zihinde istemdışı beliren düşünceler üzerine yürütülen uluslararası bir çalışmanın parçasıdır. Önümüzdeki yaklaşık 45 dakika boyunca size, son üç ay içerisinde, fazla bir çaba harcamaksızın zihninizde beliren şüphe, cinsellik ya da din olmak üzere üç tür istemdışı düşünce, görüntü (imge) ya da dürtülerinizin olup olmadığı hakkında sorular soracağım. Klinik ve kişisel deneyimlerin yanı sıra yapılan araştırmalardan, insanların büyük çoğunluğunun (% 80'den fazlası) bu tür düşünceleri olduğunu ve bu düşüncelerin zaman zaman oldukça rahatsız edici olabildiğini biliyoruz. Zihinde istemdışı beliren düşüncelerin oldukça yaygın olması nedeniyle, bu şekilde düşünmenin içeriği, niteliği, insanların bu düşüncelere nasıl karşılık verdikleri ve bu tür düşünceleri nasıl kontrol etmeye çalıştıkları hakkında daha fazla bilgi sahibi olmak istiyoruz. Bu yüzden size, bu düşüncelerin sıklığı, ne tür düşüncelerinizin olduğu, bu düşüncelerin sizin için anlamlı ya da önemli olup olmadığı ve bunları nasıl kontrol etmeye çalıştığınızla ilgili sorular soracağız. Size kendinizle ilgili genel sorular sorarak başlayacağım. Zihinde istemdışı beliren düşüncelerle ilgili görüşmemizi tamamladıktan sonra, sizden bazı ölçeklerden

oluşan bir ölçek setini doldurmanızı isteyeceğim. Uygulamanın tümü, yaklaşık 30-45 dakika arası sürecektir.

Sormak istediğiniz bir şey var mı? Görüşmeye başlamak ister misiniz? Unutmayınız ki istemediğiniz soruya cevap vermeyebilirsiniz ya da görüşmeye istediğiniz zaman son verebilirsiniz.

A. GÖRÜŞME BİLGİLERİ

1. Görüşmecinin Adı: _____
2. Görüşme Tarihi: _____
3. Görüşmenin yapıldığı yer (şehir & ülke):
   _____

B. KATILIMCIYA AİT DEMOGRAFİK BİLGİLER

4. Katılımcı Kodu (araştırmacı tarafından belirlenen):
   _____
5. Cinsiyet: ERKEK KADIN (birini yuvarlak içine alın)
6. Yaş: _____(yıl olarak)
7. Etnik kimliğiniz nedir? (Görüşmeci, katılımcının kendisinin tanımladığı etnik kimliği kaydeder): _____
8. Kaç yıldır Türkiye'de yaşıyorsunuz? _____
9. Kaç yıl eğitim gördünüz? _____
10. Medeni hali(hiç evlenmemiş, evli, dul veya boşanmış, birlikte yaşıyor):
    _____

C. KATILIMCININ TIBBİ & PSİKİYATRİK GEÇMİŞİ

11. Kendinizi sağlıklı hissediyor musunuz? **EVET** **HAYIR**

    Eğer cevap "Hayır" ise lütfen sağlık problemine işaret eden rahatsızlıkları veya hastalıkları yazınız:

    _____

12. 11. soruda belirttiğiniz rahatsızlıklar veya hastalıkların her birini ne kadar süredir yaşamaktasınız?

    _____

13. 11. soruda belirttiğiniz rahatsızlıklar veya hastalıklar için hiç ilaç kullanıyor musunuz? (Şu an kullandığı ilaçları yazınız):

    _____

14. Şu anda sizi profesyonel bir yardım almaya yönlendiren, ruh sağlığınızla ilgili bir
    sorununuz var mı? **EVET** **HAYIR**

Eğer cevap "evet" ise ruh sağlığıyla ilgili şu anki problemleri yazınız:

_____

15. Belirttiğiniz ruh sağlığı sorunlarının her birine ne zaman ve hangi profesyonel tarafından teşhis konuldu? (örn: psikiyatrist, psikolog, aile doktoru, hemşire)?

_____

16. Bu ruhsal problem için hangi tedavileri (örn: ilaç, psikolojik tedavi, danışma) aldınız?

_____

17. Söz konusu ruhsal problemin şu anki durumunu nasıl değerlendirirsiniz?

(0) ARTIK MEVCUT DEĞİL
(1) OLDUKÇA İYİLEŞTİ
(2) DEĞİŞİKLİK YOK
(3) DAHA KÖTÜLEŞTİ
(4) ŞİMDİYE KADAR OLDUĞUNUN EN KÖTÜSÜ.

18. Geçtiğimiz 12 ay içerisinde hayatınızı tehdit eden herhangi bir terör olayı, şiddet ya da saldırı yaşadınız mı, ya da yakınlarınızın bu tür bir olay yaşadığını gördünüz veya duydunuz mu?

EVET HAYIR

Eğer cevabınız "EVET" ise lütfen olay(lar)ı anlatınız:

_____

_____

_____

D. ZİHİNDE İSTEM DIŞI BELİREN DÜŞÜNCELERİN TANIMI VE ÖRNEKLERİ *(ZİBD'ler)*

Görüşmeci, katılımcıya okur: Son üç ay içerisinde, zihninizde birdenbire beliren ve hemen dikkatinizi çeken belirli düşünce, imge ya da duygularınız oldu mu? O sırada başka bir şey yapıyor ya da düşünüyor olabilirsiniz; ancak dikkatiniz birdenbire bu istem dışı zihninizde beliren düşünceye kayar. Bu düşünceyi gerçekten istemiyor ve onu görmezden gelmek için yoğun bir çaba harcıyor da olabilirsiniz, ancak o zihninize geri gelmeye devam eder. Bu düşünceler küçük veya önemsiz şeyler hakkında olabilir (örn: düşünmeye engel olamadığınız bir şarkı gibi) ya da rahatsız edici hatta duygusal anlamda gerçekten üzücü şeyler hakkında da olabilir (örn: kötü ya da ahlak dışı olduğunu düşündüğünüz bir düşünce ya da imge gibi). Zihinde istemdışı beliren

düşünceler sıklıkla, kontrol kaybıyla ve asla yapmayı istemediğiniz bir şeyle (örn: iğrenç olduğunu düşündüğünüz bir cinsel eylemde bulunmak) ilgilidir**.** Daha önce de belirtildiği gibi, bu tür zihninizde istem dışı beliren düşünceler son derece yaygındır; insanların büyük bir çoğunluğu, oldukça sık, olumsuz, korkutucu, hatta bazen tuhaf ya da iğrenç olabilen düşüncelerin zihinlerinde belirdiğini belirtmektedirler. Şimdi size bu tür düşüncelere birkaç örnek vereceğim:

- evden çıktıktan sonra kapıyı kilitleyip kilitlemediğinizle ilgili şüpheler
- birden bire dikkatleri üzerinize çekecek, kaba ya da utandırıcı bir şeyi söyleme dürtüsü
- sizin ya da diğer insanların başına korkunç şeyler gelmesine neden olabilecek bir hata yapmış ya da dikkatsizce davranmış olabileceğinize dair bir düşünce
- ahlaki değerlerinize aykırı olan ve hatta sizi iğrendiren bir cinsel davranışta bulunmayla ilgili düşünceler

Şimdi de size son üç ayda yaşadığınız zihinde istemdışı beliren düşüncelerle ilgili sorular soracağım. Şüpheyle/emin olamamayla ilgili düşüncelerle başlayalım.

A. ŞÜPHEYE BAĞLI ZİHİNDE İSTEMDIŞI BELİREN DÜŞÜNCELER

19. **<u>Görüşmeci, katılımcıya okur:</u>** Geçtiğimiz son üç ay içerisinde, BİR DAVRANIŞ/ EYLEM, KONUŞMA YA DA KARAR HAKKINDA ANSIZIN VE BEKLENMEDİK BİR ŞEKİLDE ZİHNİNİZDE ŞÜPHE YARATAN istem dışı düşünce, görüntü ya da dürtüleriniz oldu mu? Örneğin kilitlemiş olduğunuzdan oldukça emin olmanıza rağmen, odanızın ya da evinizin kapısını kilitleyip kilitlemediğinizle ilgili şüphe duymuş olabilirsiniz.

<u>Görüşmeciye yönelik yönerge</u>*: Bir düşüncenin gerçekten zihinde istemdışı beliren bir düşünce (ZİBD) olup olmadığına karar verebilmeniz için, şüpheye bağlı istenmeyen düşünce ve dürtülerle ilgili yeterli bilgi edinmeniz önemlidir. Bir düşüncenin ZİBD olarak değerlendirilebilmesi için, "şüphe"nin içinde bulunulan duruma göre belirgin bir şekilde mantıksız ve aşırı olması gerekir. Çok önemli olaylar hakkındaki şüpheler ZİBD olarak değil, endişe olarak kabul edilir (örn: "bu benim için doğru üniversite mi", ya da "bu ev arkadaşıyla yaşayıp yaşayamayacağımdan emin değilim", "acaba doğru bir çalışma alanında(bölümde) mıyım") Bunların yerine, istemdışı şüpheler önemi abartılan, ancak aslında küçük ve önemsiz konularla ilgilidir (örn: "Kapıyı gerçekten kilitledim mi?" ya da" O olayı tamamen ve doğru olarak hatırlıyor muyum?") .*

Yeterince sorgulanmasına rağmen, katılımcını, zihinde istem dışı beliren şüphe ile ilgili herhangi bir düşünce belirtmemesi oldukça mümkündür. Bu kişiler için "Hayır"ı yuvarlak içine alın ve 20 ile 43 arasındaki soruları atlayarak "dini" istemdışı düşünceler hakkındaki bir sonraki bölüm ile devam edin.

EVET	**HAYIR**

Katılımcıdan, şüpheye bağlı zihinde istemdışı beliren bir düşünce ya da dürtü ile ilgili bir örnek vermesini isteyiniz. Verilen örneğin ZİBD tanımıyla örtüştüğünden emin olun. Örneği buraya yazın:

_____

_____

20. Katılımcıya "Şüpheye bağlı olarak zihninizde istemdışı beliren düşünce ya da dürtüleri ne sıklıkla yaşarsınız ?" diye sorun.

0	**1**	**2**	**3**	**4**	**5**
Hiçbir Zaman	**Ara sıra (yılda 1-2 defa)**	**Bazen (yılda 5-6 defa)**	**Sık Sık (ayda bir)**	**Oldukça Sık (haftada bir)**	**Çok Sıklıkla (her gün)**

21. Katılımcıya sorun: "Genel olarak, zihinde istemdışı beliren şüpheye bağlı düşünce ya da dürtüler size ne derece sıkıntı verir ve günlük hayatınızı ne ölçüde engeller?" Örneğin: bu şüphelerden dolayı bazı şeyleri yapmaktan kaçınıyor musunuz? Şüphelerinizi gidermek için bazı şeyleri kontrol ederek ya da tekrar ederek fazla zaman harcıyor musunuz ya da bir şeyi doğru söylediğiniz veya doğru yaptığınızla ilgili başkalarından onay alıyor musunuz? [Görüşmeci*: şüpheye bağlı zihinde istemdışı beliren düşüncelerden ne derece rahatsızlık duyduğuyla ilgili yeterince fikir sahibi olabilmek için katılımcıya ek sorular sorun.*]

0	1	2	3	4	5
Hiç	Çok az	Biraz	Orta derecede	Çok fazla	Aşırı

22. Şüpheyi tetikleyen (başlatan) nedir (yani, dışsal ya da içsel uyaranlar)? Bu düşünceler nerede, ne zaman ve kiminleyken daha çok aklınıza gelir?

_____

_____

_____

[Görüşmeci: Katılımcının şüpheyi ortaya çıkaran dışsal bir tetikleyiciyi fark edememesi son derece olasıdır. Böyle durumlarda, şüpheyi tetikleyen başka bir düşünce, duygu ya da duyum olup olmadığını belirleyin. Belli bir ortam veya durum da şüpheyi tetiklemiş olabilir.

Birincil Değerlendirme Ölçümleri

[***Görüşmeciler için Yönergeler:*** *Kişi için anlamlı olan, şüpheye bağlı istemdışı bir düşünce ile ilgili detaylı bilgi edindikten sonra, katılımcı açısından bu düşünceyi kendisi için önemli kılan şeyin ne olduğunu anlamak için belirtilen temalardaki değerlendirmeleri ilgili sorular sorun. Araştırılan her boyutta derecelendirme yapabilmeleri için, katılımcılara "Katılımcı Derecelendirme Ölçeği" vermelidir.]*

Görüşmeci katılımcıya okur: Size şüpheye bağlı istemdışı düşüncelere karşı verdiğiniz tepkilerle ilgili bazı sorular soracağım. Bu tip istemdışı düşüncelerinizi hatırlıyor olmanız, bu düşüncelerin sizin için dikkatinizi çekecek kadar önemli ya da anlamlı olduğunu göstermektedir. Başka bir deyişle, bu şüphe sizin için yeterince önemli ki onu fark ettiniz. Aşağıdaki sorular, bu şüphenin sizin için önemli ya da fark edilebilir olmasına ilişkin çeşitli nedenlere işaret etmektedir.

Araştırma Soruları	**Hiç**	**Çok az**	**Biraz**	**Orta derecede**	**Çok fazla**	**Tamamen**
23. Bu şüphe, başkaları ya da sizin için olumsuz birtakım sonuçlar doğurabilecek bir şey ile ilgili olduğu için mi dikkatinizi çekti?*(abartılı tehdit algısı)*	0	1	2	3	4	5
24. Bu şüphe, devamlı zihninize geri geldiği için mi dikkatinizi çekti? *(düşüncenin önemi)*	0	1	2	3	4	5
25. Bu şüphe sizi rahatsız ettiği için mi dikkatinizi çekti? *(kaygının ve sıkıntının tolere edilememesi)*	0	1	2	3	4	5
26. Bu şüpheyi kontrol etmekte zorlandığınız için mi dikkatinizi çekti?(*kontrol etme ihtiyacı*)	0	1	2	3	4	5
27. Bu şüphe size büyük bir sorumluluk duygusu hissettirdiği için mi önemli göründü? *(sorumluluk)*	0	1	2	3	4	5
28. Bu şüphe aklınıza geldiğinde, yapmış olduğunuz bir hareket ya da almış olduğunuz bir kararla ilgili emin olamamaktan dolayı ne kadar sıkıntı duydunuz? (*belirsizliğin tolere edilememesi)*	0	1	2	3	4	5
29. Bu şüphe, davranışlarınızda ya da kararlarınızda eksiksiz/ kusursuz bir biçimde kesin veya doğru olmanız gerektiğini düşündürdüğü için mi dikkatinizi çekti? (*mükemmeliyetçilik)*	0	1	2	3	4	5
30. Bu şüpheyi duymanın, sizin gerçekten de bir hata yapma ya da bir şeyi yapmayı unutma olasılığınızı arttırabileceğinden dolayı kaygılandınız mı? *(düşünce-davranış karmaşası)*	0	1	2	3	4	5

Araştırma Soruları	Hiç	Çok az	Biraz	Orta derecede	Çok fazla	Tamamen
31. Bu şüphe, sizin kendinizi gördüğünüzden daha farklı ya da onunla tutarsız olduğu için mi dikkatinizi çekti? (*kabul edilemezlik; ego-distonik)*	0	1	2	3	4	5

Kontrolün İkincil Değerlendirmeleri:

32. Şüpheye bağlı istemdışı düşünceleriniz olduğunda, bu düşünceyi ya da dürtüyü zihninizden uzaklaştırmak sizin için ne kadar ***önemlidir*?**

0	1	2	3	4	5
Hiç önemli Değil	Çok az Önemli	Biraz Önemli	Orta Derecede Önemli	Çok Önemli	Son derece Önemli

33. Bu şüpheyi zihninizden uzaklaştırmak sizin için ne kadar ***zor* ?**

0	1	2	3	4	5
Zor Değil	Çok az Zor	Biraz Zor	Orta Derecede Zor	Çok Zor	Son derece Zor

34. İstemdışı bir şüpheyi zihninizden uzaklaştırmakta güçlük çektiğiniz bir durum hatırlıyor musunuz?

EVET HAYIR

Eğer cevabınız "Evet" ise lütfen kısaca, bunun nasıl olduğunu, nerede ve ne zaman yaşadığınızı anlatınız:

_____

_____

Görüşmeciler için Yönergeler: *Eğer katılımcı bir önceki soruya "EVET" yanıtını verdiyse aşağıdaki sorular (a'dan e'ye kadar) yöneltilmelidir. Katılımcı, "Katılımcı Derecelendirme Ölçeği"ni kullanarak sorulara cevap vermelidir. Katılımcı bir önceki soruya "HAYIR" cevabını verdiyse 35. soruya geçilmelidir.*

Görüşmeci katılımcıya okur: Size şimdi, az önce bahsettiğiniz durumda, şüpheye bağlı istemdışı düşüncelerinizi kontrol altına almakta yaşadığınız güçlük karşısındaki tepkinizle ilgili 6 soru sormak istiyorum. Düşüncenin belli bir özelliğinin onu kontrol etmek için gösterdiğiniz çabayla ne kadar ilişkili olduğunu anlatmak için yine "0" dan "5" e kadar olan derecelendirme ölçeğini kullanınız.

Araştırma soruları	**Hiç**	**Çok az**	**Biraz**	**Orta Derecede**	**Çok fazla**	**Tamamen**
a. Şüpheye bağlı istemdışı düşüncenizi kontrol etmekte zorlandığınızda, bunun sizin için önemli bir başarısızlık olduğunu düşündünüz mü? *(kontrolün öneminin yanlış yorumlanması)*	0	1	2	3	4	5
b. Şüpheye bağlı düşüncenizi kontrol etmekte zorlandığınızda, bunun, davranışınız ya da kararınıza etkisiyle olumsuz bir sonucun ortaya çıkma olasılığını artırabileceğinden dolayı kaygılandınız mı? (*DDK/Tehdit değerlendirmeleri)*	0	1	2	3	4	5
c. Şüpheye bağlı istemdışı düşünceyi kontrol etmenin mümkün olabileceğine ne kadar inandınız? (*olasılık değerlendirmeleri)*	0	1	2	3	4	5
d. Şüpheye bağlı istemdışı düşüncenizi daha iyi kontrol edebilmek sizin için ne kadar önemliydi? (*gerçekçi olmayan kontrol beklentileri)*	0	1	2	3	4	5
e. İstemdışı şüphenizi kontrol etmekte zorlandığınızda, düşüncelerinizi daha fazla kontrol etmeniz gerektiği ile ilgili büyük bir sorumluluk duygusu hissettiniz mi? (*abartılmış sorumluluk)*	0	1	2	3	4	5
f. İstemdışı şüphenizi kontrol etmekte zorlandığınızda, kontrol edememenizin kişiliğinizle ilgili bir zayıflığı ya da olumsuzluğu yansıttığını düşündünüz mü (*kontrol hakkında yanlış çıkarsama)*	0	1	2	3	4	5

Asıl Kontrol Stratejileri

Görüşmeci: Katılımcıya, şüpheye bağlı istemdışı düşünceler aklına geldiğinde, aşağıdaki zihinsel kontrol stratejilerini ne sıklıkla kullandığını sorunuz.

Kontrol Stratejisi	**Hiçbir zaman**	**Nadiren**	**Bazen**	**Sık Sık**	**Çok sık**	**Çoğu zaman**
35. Bir şey yaparak, dikkatimi dağıtmaya çalışmak	0	1	2	3	4	5
36. Şüpheye bağlı düşüncenin yerine daha hoş başka bir düşünceyi koymaya çalışmak.	0	1	2	3	4	5
37. Kendime "dur" demek	0	1	2	3	4	5
38. Her şeyin iyi olacağına dair kendi kendimi ikna etmeye çalışmak	0	1	2	3	4	5

Kontrol Stratejisi	Hiçbir zaman	Nadiren	Bazen	Sık Sık	Çok sık	Çoğu zaman
39. Başkalarına her şeyin iyi olacağını düşünüp düşünmediklerini sormak	0	1	2	3	4	5
40. Tekrar tekrar kontrol etmeye devam etmek	0	1	2	3	4	5
41. Şüpheyi etkisiz hale getirmek (silmek) için belli bazı düşünceler ya da cümleler düşünmek	0	1	2	3	4	5
42. Bir hata yaptığıma ya da bir şey yapmayı unuttuğuma dair bir kanıtın olup olmadığına dair kendimi ikna etmeye çalışmak	0	1	2	3	4	5
43. Şüpheye bağlı istemdışı bir düşünce aklıma ne zaman gelirse gelsin hiç bir şey yapmamak	0	1	2	3	4	5

B. DİNE BAĞLI İSTEMDIŞI ZİHİNDE BELİREN DÜŞÜNCELER

44. **Görüşmeci katılımcılara okur:** Geçtiğimiz son üç ay içerisinde, ÇOK YANLIŞ YA DA GÜNAH olduğunu hissettiğiniz, zihninizde istemdışı ansızın beliren düşünce, imge ya da dürtüleriniz oldu mu? Bu düşünce, imge ya da dürtü, SİZİN AHLAKİ YA DA DİNİ İNANIŞLARINIZIN İHLALİ biçimindedir. Örneğin, bu düşünce, imge ya da dürtü günah olduğunu düşündüğünüz bir şeyi yapmak olabilir ya da bu, günahlarınız için tövbe edip etmediğiniz, kendinizi tümüyle günahlarınızdan arındırıp arındırmadığınız, doğru duayı okuyup okumadığınız, Tanrı'ya bütünüyle inanıp inanmadığınız gibi, sizin inancınız için önemli olan konulardaki şüpheler de olabilir. Ayrıca günahkar düşüncelerin ya da Allah'a karşı küfürlü sözcüklerin birdenbire istemdışı olarak zihninizde belirmesi de olabilir. Dindar, manevi yönü ya da ahlaki değerleri güçlü olan insanların bu tür, zihinde istemdışı beliren düşüncelerinin olması sıkça yaşanılan bir durumdur.
Görüşmeci Talimatı: Bir düşüncenin gerçekten zihinde istemdışı beliren bir düşünce (ZİBD) olup olmadığına karar verebilmeniz için dine bağlı düşünceler ve şüpheler ile ilgili yeterli bilgi edinmeniz önemlidir. Bir düşüncenin ZİBD olarak değerlendirilebilmesi için dinsel düşünce, imge ya da dürtünün belirgin bir şekilde aşırı, mantıksız ya da kişinin dini ve/veya ahlaki değerlerine aykırı olması gerekir. Dinsel, zihinde istemdışı beliren düşünceler sıklıkla insanların günah işleyip işlemediklerini, Tanrı'ya bağlı kalıp kalmadıklarını, tüm günahlarını itiraf edip etmediklerini, dua etmeden önce tamamen temizlenip temizlenmediklerini sorgulatan ısrarcı şüpheler halini alır. Dinsel, zihinde istemdışı beliren düşünceler, aniden beliriveren ve ahlak dışı düşünceler olarak görülebilir. Zihinde istemdışı beliren dinsel düşünceler sıklıkla cinsellik ya da zarar verme ve saldırganlık konularıyla ilgilidir. Zihinde istemdışı beliren düşünce cinsellik ya da zarar verme/saldırganlık ile örtüştüğünde, sadece, kişi bu düşüncenin en rahatsız edici yönünün dini inançlarına aykırı olması şeklinde değerlendiriyorsa bunu

dinsel zihinde istemdışı beliren düşünce olarak kaydedin. Eğer dinsel inançlara aykırılık, ikincil bir konu gibi görünüyorsa, o zaman zihinde istemdışı beliren düşünce cinsellik ya da zarar verme/saldırganlık kategorisi altında sınıflandırılmalıdır.
Yeterince sorgulanmasına rağmen, katılımcının, zihinde istem dışı beliren dinsel herhangi bir düşünce belirtmemesi oldukça mümkündür. Bu kişiler için "Hayır"ı yuvarlak içine alın ve 45 ile 68 arasındaki soruları atlayarak "cinsel istemdışı düşünceler" hakkındaki bir sonraki bölüm ile devam edin.

EVET	**HAYIR**

Katılımcıdan zihinde istemdışı beliren, sıkıntı veren dini bir düşünce ya da dürtü ile ilgili bir örnek vermesini isteyiniz. Verilen örneğin ZİBD tanımıyla örtüştüğünden emin olun. Örneği buraya yazın:

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_____

_____

45. Katılımcıya "Ne sıklıkla dini içerikli, zihinde istemdışı beliren olumsuz düşünceleriniz, imgeleriniz ya da dürtüleriniz oluyor? " diye sorun.

0	1	2	3	4	5
Hiçbir Zaman	Ara sıra (yılda 1-2 defa)	Bazen (yılda 5-6 defa)	Sık Sık (ayda bir)	Oldukça Sık (haftada bir)	Çok Sıklıkla

46. Katılımcıya sorun: "Genel olarak, zihinde istemdışı beliren, sıkıntı veren, dini düşünce, görüntü ya da dürtüler size ne derece sıkıntı veriyor ya da günlük hayatınızı ne derece engelliyor? Örneğin, bu düşünceler aklınıza gelir korkusuyla belli şeyleri yapmaktan ya da belirli yerlere gitmekten kaçınıyor musunuz? Bu istenmeyen, rahatsızlık verici dini düşünceleri ya da şüpheleri zihninizden uzaklaştırmak için fazla zaman harcıyor musunuz? [*Görüşmeci: zihinde istemdışı beliren istenmeyen, olumsuz dinsel düşüncelerden ve şüphelerden ne derece rahatsızlık duyduğuyla ilgili yeterince fikir sahibi olabilmek için katılımcıya ek sorular sorun.*]

0	1	2	3	4	5
Hiç	Çok az	Biraz	Orta derecede	Çok fazla	Aşırı

47. Zihinde istemdışı beliren dinsel düşünceleri ne tetiklemektedir (başlatmaktadır) (yani içsel ya da dışsal uyaranlar)? Bu düşünceler nerede, ne zaman ve kiminleyken daha çok aklınıza gelir?

_____

_____

[Görüşmeci: Katılımcının zihinde istem dışı beliren dini düşünceyi ortaya çıkaran dışsal bir tetikleyiciyi fark edememesi son derece olasıdır. Böyle durumlarda, şüpheyi tetikleyen başka bir düşünce, duygu ya da duyum olup olmadığını belirleyin. Belli bir ortam veya durum da düşünceyi tetiklemiş olabilir.

Birincil Değerlendirme Ölçümleri

Görüşmeciler için Yönergeler: *Kişi için anlamlı olan, dinsel istemdışı bir düşünce ile ilgili detaylı bilgi edindikten sonra, katılımcı için bu düşünceyi önemli kılan şeyin ne olduğunu anlamak amacıyla, katılımcını, belirtilen temalardaki değerlendirmeleri ilgili sorular sorun. Araştırılan her boyutta derecelendirme yapabilmeleri için, katılımcılara "Katılımcı Derecelendirme Ölçeği" vermelidir.]*

Görüşmeci katılımcıya okur: Size zihinde istemdışı beliren dini düşüncelere karşı verdiğiniz tepkilerle ilgili bazı sorular soracağım. Bu tür istemdışı düşüncelerinizi hatırlıyor olmanız, bu düşüncelerin sizin için dikkatinizi çekecek kadar önemli ya da anlamlı olduğunu göstermektedir. Başka bir deyişle, zihinde istem dışı beliren bu dini düşünce sizin için, farkına varmanıza yol açacak kadar önemli. Aşağıdaki sorular, bu düşüncenin niçin az da olsa sizin için önemli ya da fark edilebilir olduğuna ilişkin çeşitli nedenlere işaret etmektedir.

Araştırma Soruları	**Hiç**	**Çok az**	**Biraz**	**Orta Derecede**	**Çok fazla**	**Tamamen**
48. Bu dini düşünce, kişisel ya da manevi anlamda bazı olası olumsuz sonuçlar içerdiği için mi dikkatinizi çekti?*(abartılmış tehdit)*	0	1	2	3	4	5
49. Bu dini düşünce, devamlı zihninize geri geldiği için mi dikkatinizi çekti? (*düşüncenin önemi)*	0	1	2	3	4	5
50. Bu dini düşünce sizi rahatsız ettiği için mi dikkatinizi çekti? *(kaygının ve sıkıntının tolere edilememesi)*	0	1	2	3	4	5
51. Bu dini düşünceyi kontrol etmekte zorlandığınız için mi dikkatinizi çekti? (*kontrol etme ihtiyacı*)	0	1	2	3	4	5
52. Bu düşünce size büyük bir sorumluluk duygusu hissettirdiği için mi önemli göründü? *(sorumluluk)*	0	1	2	3	4	5
53. Zihinde istemdışı beliren bu dini düşünce aklınıza geldiğinde, gerçekten günah işleyip işlemediğiniz, inancınıza sadık kalıp kalmadığınız ya da ahlaksız olup olmadığınızla ilgili emin olamamaktan dolayı ne kadar sıkıntı duydunuz?	0	1	2	3	4	5
54. Bu düşünce, size inancınızda daha mükemmel veya eksiksiz olmanız gerektiğini düşündürdüğü için mi dikkatinizi çekti? (*mükemmeliyetçilik)*	0	1	2	3	4	5

Araştırma Soruları	Hiç	Çok az	Biraz	Orta Derecede	Çok fazla	Tamamen
55. Zihinde istem dışı beliren bu dini düşünce, görüntü ya da şüpheye sahip olmanın sizin gerçekten günahkar ya da inançsız olmanıza neden olabileceğinden dolayı kaygılandınız mı? (düşünce-davranış karmaşası)	0	1	2	3	4	5
56. Bu dini düşünce ya da şüphe, sizin kendinizi gördüğünüzden daha farklı ya da onunla tutarsız olduğu için mi dikkatinizi çekti? (*kabul edilemezlik; ego-distonik)*	0	1	2	3	4	5

Kontrolün İkincil Değerlendirmeleri: (Secondary Appraisals of control)

57. Zihinde istemdışı beliren olumsuz dini bir düşünce, imge ya da şüphe yaşadığınızda bunu zihninizden uzaklaştırmak sizin için ne kadar ***önemlidir*?**

0	1	2	3	4	5
Hiç önemli derece	Çok az	Biraz	Orta Derecede	Çok	Son

58. Bunları zihninizden uzaklaştırmak sizin için ne kadar ***zor*?**

0	1	2	3	4	5
Zor Değil	Çok az Zor	Biraz Zor	Orta Derecede Zor	Çok Zor	Son derece Zor

59. İstemdışı zihninizde beliren dini düşüncelerinizi zihninizden uzaklaştırmakta güçlük çektiğiniz bir durum hatırlıyor musunuz?

EVET HAYIR

Eğer cevabınız "Evet" ise lütfen, kısaca bunun nasıl olduğunu, nerede ve ne zaman yaşadığınızı anlatınız:

_____

_____

Görüşmeciler için Yönergeler: *Eğer katılımcı bir önceki soruya "EVET" yanıtını verdiyse aşağıdaki sorular (a'dan f'ye kadar) yöneltilmelidir. Katılımcı, "Katılımcı Derecelendirme Ölçeği"ni kullanarak sorulara cevap vermelidir. Katılımcı bir önceki soruya "HAYIR" cevabını verdiyse 60. soruya geçilmelidir.*

<u>Görüşmeci katılımcıya okur:</u> Size şimdi, az önce bahsettiğiniz durumda, şüpheye bağlı istemdışı düşüncelerinizi kontrol altına almakta yaşadığınız güçlük karşısındaki tepkinizle ilgili 6 soru sormak istiyorum. Düşüncenin belli bir özelliğinin onu kontrol etmek için gösterdiğiniz çabayla ne kadar ilişkili olduğunu anlatmak için yine "0" dan "5" e kadar olan derecelendirme ölçeğini kullanınız.

Araştırma Soruları	**Hiç**	**Çok az**	**Biraz**	**Orta Derecede**	**Çok fazla**	**Tamamen**
a. Zihninizde istemdışı beliren bu olumsuz dini düşünceyi/imgeyi kontrol etmekte zorlandığınızda, bunun sizin için önemli bir başarısızlık olduğunu düşündünüz mü? *(kontrolün öneminin yanlış yorumlanması))*	0	1	2	3	4	5
b. Zihninizde istemdışı beliren dini bu düşünceyi kontrol etmekte zorlandığınızda, bunun gerçekten günahkar ya da inançsız biri olma olasılığını artırabileceğinden dolayı kaygılandınız mı? (*DDK/Tehdit değerlendirmeleri)*	0	1	2	3	4	5
c. Bu istemdışı dini düşünceleri ya da şüpheleri kontrol etmenin mümkün olabileceğine ne kadar inandınız? (*olasılık değerlendirmeleri)*	0	1	2	3	4	5
d. Bu istemdışı dini düşünceleri, imgeleri ya da şüpheleri daha iyi kontrol edebilmek sizin için ne kadar önemliydi? (*gerçekçi olmayan kontrol beklentileri)*	0	1	2	3	4	5
e. Bu istenmeyen dinsel düşünceleri kontrol etmekte zorlandığınızda, düşüncelerinizi daha fazla kontrol etmeniz gerektiği ile ilgili olarak kendinizi her bakımdan sorumlu hissettiniz mi? (*abartılmış sorumluluk)*	0	1	2	3	4	5
f. Zihninizde istemdışı beliren bu istenmeyen dinsel düşünce, görüntü ya da dürtüleri kontrol etmekte zorlandığınızda, kontrol edememenizin kişiliğinizle ilgili bir zayıflığı ya da olumsuzluğu yansıttığını düşündünüz mü? (*kontrol hakkında yanlış çıkarsama)*	0	1	2	3	4	5

<u>Asıl Kontrol Stratejileri</u>

Görüşmeci:Katılımcıya dinse,l istemdışı olumsuz düşünce, imge(görüntü) ya da şüphe aklına geldiğinde, aşağıdaki zihinsel kontrol stratejilerini ne sıklıkla kullandığını sorunuz.

Kontrol Stratejisi	Hiçbir zaman	Nadiren	Bazen	Sık Sık	Çok sık	Çoğu zaman
60. Bir şey yaparak, dikkatimi dağıtmaya çalışmak	0	1	2	3	4	5
61. Zihninde istemdışı beliren dinsel düşünce ya da şüphenin yerine dini inancımı güçlendirecek başka bir düşünceyi koymaya çalışmak.	0	1	2	3	4	5
62. Kendime "dur" demek	0	1	2	3	4	5
63. Her şeyin iyi olacağına dair kendi kendimi ikna etmeye çalışmak	0	1	2	3	4	5
64. Başkalarına her şeyin iyi olacağını düşünüp düşünmediklerini sormak	0	1	2	3	4	5
65. Sürekli besmele çekmek, temizlenmek, banyo yapmak, ya da sürekli rahatlatıcı bir cümleyi veya bağışlatıcı bir duayı yinelemek gibi defalarca tekrarlamak zorunda olduğumu hissettiğim törensel bazı davranışlar yapmak	0	1	2	3	4	5
66. Dinsel bu istenmeyen düşünce ya da şüpheyi etkisiz hale getirmek (silmek) için belli bazı düşünceler ya da cümleler düşünmek	0	1	2	3	4	5
67. Bu şekilde düşünmenin yanlış ya da ahlaksızca olup olmadığına dair kendimi ikna etmeye çalışmak	0	1	2	3	4	5
68. Zihninde istemdışı beliren bu dinsel düşünceler ne zaman aklıma gelirse gelsin hiçbir şey yapmamak	0	1	2	3	4	5

C. CİNSELLİĞE BAĞLI İSTEMDIŞI DÜŞÜNCELER

69. **Görüşmeci katılımcılara okur:** Son üç ay içerisinde, istenmeden, ansızın zihninizde beliren HOŞ OLMAYAN, HATTA SİZE İĞRENÇ GELEBİLEN CİNSEL İÇERİKLİ düşünce, imge ya da dürtüleriniz oldu mu? Örneğin, bu düşünce biriyle samimi olma (öpmek) ya da fiziksel olarak size iğrenç gelen biriyle cinselliği yaşamak olabilir veya bu, iğrenç ve ahlaksız bulduğunuz bir cinsel davranışta bulunma düşüncesi, imgesi de olabilir. Unutmayınız ki bunlar, isteğiniz dışında birdenbire aklınıza geliveren cinsel düşüncelerdir; hoş (zevk veren) ya da istenen cinsel düşünceler veya fanteziler değildir. Cinsel konular hakkında kuvvetli ahlaki değerleri olan insanlarda bu tip düşüncelerin olması sıkça yaşanılan bir durumdur.

Görüşmeci Talimatı: Bir düşüncenin gerçekten zihinde istemdışı beliren bir düşünce (ZİBD) olup olmadığına karar verebilmeniz için cinsellik içeren, istenmeyen dürtü ve düşünceler ile ilgili yeterli bilgi edinmeniz önemlidir. Bir düşüncenin ZİBD olarak değerlendirilebilmesi için cinsellik içeren düşünce, görüntü ya da dürtünün belirgin bir şekilde kişinin değerlerine, kişiliğine ve yaşam koşullarına göre aşırı, mantıksız ya

da sıradışı olması gerekir. Cinsel fantezilerle, cinselliğe bağlı istemdışı düşünceleri birbirine karıştırmamak son derece önemlidir. Cinsel fanteziler kişinin hoşuna giden, arzu edilir düşünceler ya da görüntülerdir (örn: fiziksel olarak çekici olan biriyle cinselliği yaşamak, ani bir erotik fantezi düşlemek). Cinselliğe bağlı istemdışı düşünceler daha çok, olumsuzdur ve kişi tarafından kabul edilemez; hatta iğrenç bulunur (örn: "iğrenç bulduğunuz bir insanla cinsel ilişkide bulunmak", çirkin bulduğunuz ya da hayvanlarla veya çocuklarla olduğu gibi yasa dışı olan bir cinsel eylemde bulunmak", ya da "iğrenç bulduğunuz ve sizin cinsel yöneliminize ters olan bir düşünceye sahip olma").

Yeterince sorgulanmasına rağmen, katılımcının cinsel istemdışı olumsuz herhangi bir düşünce belirtmemesi oldukça mümkündür. Bu kişiler için "Hayır" ı yuvarlak içine alın ve 70-93 arasındaki soruları atlayın ve görüşmenin son bölümüne devam edin (bölüm D)

EVET	**HAYIR**

Katılımcıdan, zihinde istemdışı beliren, olumsuz cinsel bir düşünce ya da dürtüsü ile ilgili bir örnek vermesini isteyiniz. Verilen örneğin ZİBD tanımıyla örtüştüğünden emin olun. Örneği buraya yazın:

_____

_____

_____

70. Katılımcıya : "Zihinde istemdışı beliren cinsel içerikli olumsuz düşünce, imge ya da dürtüleri ne sıklıkla yaşarsınız? "

0	**1**	**2**	**3**	**4**	**5**
Asla	**Ara sıra** (yılda 1-2 defa)	**Bazen** (yılda 5-6 defa)	**Sık Sık** (aylık)	**Oldukça Sık** (haftalık)	**Sürekli** (günlük)

71. Katılımcıya sorun: "Genel olarak, zihinde istem dışı beliren, olumsuz cinsel düşünce, görüntü ya da dürtüler size ne derece sıkıntı verir veya günlük hayatınızı ne ölçüde engeller? Örneğin, bu düşünceleri yaşama korkusuyla belli şeyleri yapmaktan ya da belirli yerlere gitmekten kaçınıyor musunuz? Bu istenmeyen, rahatsız eden cinsel düşünceleri zihninizden uzaklaştırmak için fazla zaman harcıyor musunuz? [Görüşmeci*: zihinde istemdışı beliren, istenmeyen, olumsuz dinsel düşüncelerden ve şüphelerden ne derece rahatsızlık duyduğuyla ilgili yeterince fikir sahibi olabilmek için katılımcıya ek sorular sorun.*]

0	1	2	3	4	5
Hiç	Çok az	Biraz	Orta derecede	Çok fazla	Aşırı

72. Zihinde istemdışı beliren bu cinsel düşünceleri tetikleyen (başlatan) nedir (yani, dışsal ya da içsel uyaranlar)? Bu düşünceler en çok nerede, ne zaman ve kiminleyken ortaya çıkıyor?

_____

_____

[Görüşmeci: Katılımcının cinsel düşünceyi ortaya çıkaran dışsal bir tetikleyiciyi fark edememesi son derece muhtemeldir. Böyle durumlarda, düşünceyi tetikleyen başka bir düşünce, duygu ya da duyum olup olmadığını belirleyin. Belli bir ortam veya durum da şüpheyi tetiklemiş olabilir.

Birincil Değerlendirme Ölçümleri

Görüşmeciler için Yönergeler: *Kişi için anlamlı olan, istenmeyen olumsuz cinsel düşünce ile ilgili detaylı bilgi edindikten sonra, katılımcı için bu düşünceyi önemli kılan şeyin ne olduğunu anlamak amacıyla, katılımcının, belirtilen temalardaki değerlendirmeleriyle ilgili sorular sorun. Araştırılan her boyutta derecelendirme yapabilmeleri için, katılımcılara "Katılımcı Derecelendirme Ölçeği" vermelidir.]*

Görüşmeci katılımcıya okur: Size zihinde istemdışı beliren cinsel düşüncelere karşı verdiğiniz tepkilerle ilgili bazı sorular soracağım. Bu tip istemdışı düşüncelerinizi hatırlıyor olmanız, bu düşüncelerin sizin için dikkatinizi çekecek kadar önemli ya da anlamlı olduğunu göstermektedir. Başka bir deyişle, zihinde istem dışı beliren bu cinsel düşünce sizin için farkına varmanıza yol açacak kadar önemli. Aşağıdaki sorular, bu düşüncenin niçin az da olsa sizin için önemli ya da fark edilebilir olduğuna ilişkin çeşitli nedenlere işaret etmektedir.

Araştırma Soruları	**Hiç**	**Çok az**	**Biraz**	**Orta Derecede**	**Çok fazla**	**Tamamen**
73. Bu düşünce başkaları ya da sizin için olumsuz birtakım sonuçlar doğurabilecek bir şey ile ilgili olduğu için mi dikkatinizi çekti?*(abartılı tehdit algısı)*	0	1	2	3	4	5
74. Bu cinsel düşünce ya da imge, devamlı zihninize geri geldiği için mi dikkatinizi çekti? *(düşüncenin önemi)*	0	1	2	3	4	5
75. Bu istenmeyen cinsel düşünce ya da imge sizi rahatsız ettiği için mi dikkatinizi çekti? *(kaygının ve sıkıntının tolere edilememesi)*	0	1	2	3	4	5
76. Bu düşünce, kontrol etmekte zorlandığınız için mi dikkatinizi çekti?(*kontrol etme ihtiyacı*)	0	1	2	3	4	5
77. Bu düşünce, size büyük bir sorumluluk duygusu hissettirdiği için mi önemli göründü? *(sorumluluk)*	0	1	2	3	4	5

Araştırma Soruları	**Hiç**	**Çok az**	**Biraz**	**Orta Derecede**	**Çok fazla**	**Tamamen**
78. Zihinde istemdışı beliren bu cinsel düşünce aklınıza geldiğinde, cinsel dürtüleriniz ya da isteklerinizin kontrolünü kaybedip kaybetmeyeceğinizle ilgili emin olamamaktan dolayı ne kadar sıkıntı duydunuz? (*belirsizliğin tolere edilememesi)*	0	1	2	3	4	5
79. Bu düşünce, cinsel dürtüleriniz ve istekleriniz üzerinde tam ve mutlak kontrol sahibi olmanız gerektiğini düşündürdüğü için mi dikkatinizi çekti? (*mükemmeliyetçilik)*	0	1	2	3	4	5
80. İstem dışı zihinde beliren bu cinsel düşünce, görüntü ya da dürtülere sahip olmanın sizin gerçekten uygunsuz bir cinsel davranışta bulunma olasılığınızı arttırabileceğinden dolayı kaygılandınız mı? *(düşünce-davranış karmaşası)*	0	1	2	3	4	5
81. Zihinde istem dışı beliren bu cinsel düşünce sizin kendinizi gördüğünüzden daha farklı ya da onunla tutarsız olduğu için mi dikkatinizi çekti? (*kabul edilemezlik; ego-distonik)*	0	1	2	3	4	5

<u>Kontrolün İkincil Tahminleri:</u>

82. Zihinde istem dışı beliren olumsuz cinsel bir düşünce, imge ya da şüphe yaşadığınızda bunu zihninizden uzaklaştırmak sizin için ne kadar *önemli*?

0	1	2	3	4	5
Hiç önemli Değil	Çok az Önemli	Biraz Önemli	Orta Derecede Önemli	Çok Önemli	Son derece Önemli

83. Bunları zihninizden uzaklaştırmak sizin için ne kadar *zor*?

0	1	2	3	4	5
Zor Değil	Çok az Zor	Biraz Zor	Orta Derecede Zor	Çok Zor	Son derece Zor

84. Zihninizde istemdışı beliren cinsel düşüncelerinizi zihninizden uzaklaştırmakta güçlük çektiğiniz bir durum hatırlıyor musunuz?

EVET HAYIR

Eğer cevabınız "Evet" ise lütfen kısaca bunun nasıl olduğunu, nerede ve ne zaman yaşadığınızı anlatınız:

_____

_____

Görüşmeciler için Yönergeler: *Eğer katılımcı bir önceki soruya "EVET" yanıtını verdiyse aşağıdaki sorular (a'dan f'ye kadar) yöneltilmelidir. Katılımcı, "Katılımcı Derecelendirme Ölçeği"ni kullanarak sorulara cevap vermelidir. Katılımcı bir önceki soruya "HAYIR" cevabını verdiyse 85 numaralı soruya geçilmelidir.*

Görüşmeci katılımcıya okur: Şimdi size az önce sözünü ettiğiniz olayda, kontrol altına almakta güçlük çektiğiniz zihninizde istemdışı beliren cinsel düşüncelerinizi kontrol altına almakta yaşadığınız güçlük karşısındaki tepkinizle ilgili 6 soru sormak istiyorum. Düşüncenin belli bir özelliğinin onu kontrol etmek için gösterdiğiniz çabayla ne kadar ilişkili olduğunu anlatmak için yine "0" dan "5" e kadar olan derecelendirme ölçeğini kullanınız.

Araştırma Soruları	**Hiç**	**Çok az**	**Biraz**	**Orta Derecede**	**Çok fazla**	**Tamamen**
a. Zihninizde istemdışı beliren bu olumsuz cinsel düşünceyi, görüntüyü, dürtüyü düşüncenizi kontrol etmekte zorlandığınızda, bunun sizin için önemli bir başarısızlık olduğunu düşündünüz mü? *(kontrolün öneminin yanlış yorumlanması)*	0	1	2	3	4	5
b. Zihninizde istemdışı beliren bu cinsel düşünceyi kontrol etmekte zorlandığınızda, bunun sizin gerçekten de uygunsuz bir cinsel davranışta bulunma olasılığınızı arttırabileceğinden dolayı kaygılandınız mı? (düşünce-davranış karmaşası)	0	1	2	3	4	5
c. Bu istenmeyen cinsel düşünceleri, görüntüleri ya da dürtüleri kontrol etmenin mümkün olabileceğine ne kadar inandınız? (*olasılık değerlendirmeleri)*	0	1	2	3	4	5
d. Bu istenmeyen, olumsuz cinsel düşünce, görüntü ya da dürtüleri daha iyi kontrol edebilmek sizin için ne kadar önemliydi? (*gerçekçi olmayan kontrol beklentileri)*	0	1	2	3	4	5
e. Bu istenmeyen cinsel düşünceleri kontrol etmekte zorlandığınızda, düşüncelerinizi daha fazla kontrol etmeniz gerektiği ile ilgili büyük bir sorumluluk duygusu hissettiniz mi? (*abartılmış sorumluluk)*	0	1	2	3	4	5
f. Zihninizde istemdışı beliren bu düşünce, görüntü ya da dürtüleri kontrol etmekte zorlandığınızda, kontrol edememenizin kişiliğinizle ilgili bir zayıflığı ya da olumsuzluğu yansıttığını düşündünüz mü? (*kontrol hakkında yanlış çıkarsama)*	0	1	2	3	4	5

Asıl Kontrol Stratejileri

Görüşmeci:Katılımcıya, zihinde istemdışı beliren olumsuz cinsel düşünce, imge(görüntü) ya da dürtü yaşadığınızda, aşağıdaki zihinsel kontrol stratejilerini ne sıklıkla kullandığını sorunuz.

Kontrol stratejisi	**Hiçbir zaman**	**Nadiren**	**Bazen**	**Sık Sık**	**Çok sık**	**Çoğu zaman**
85. Bir şey yaparak, dikkatimi dağıtmaya çalışmak	0	1	2	3	4	5
86. Zihninde istemdışı beliren bu cinsel düşünce yerine daha hoş, cinsel olmayan başka bir düşünceyi koymaya çalışmak.	0	1	2	3	4	5
87. Kendime "dur" demek	0	1	2	3	4	5
88 Her şeyin iyi olacağına dair kendi kendimi ikna etmeye çalışmak	0	1	2	3	4	5
89 Başkalarına her şeyin iyi olacağını düşünüp düşünmediklerini sormak	0	1	2	3	4	5
90. Yıkanmak, kontrol etmek ya da bir duayı sürekli okumak gibi belirli bazı davranışları tekrar tekrar yapmak	0	1	2	3	4	5
91. Bu istenmeyen cinsel düşünce, görüntü veya dürtüyü etkisiz hale getirmek (silmek) için belli bazı düşünceler ya da cümleler düşünmek	0	1	2	3	4	5
92. Bu şekilde düşünmenin yanlış ya da ahlaksızca olup olmadığına dair kendi kendimi ikna etmeye çalışmak	0	1	2	3	4	5
93. Zihninde istem dışı beliren bu olumsuz cinsel düşünce, görüntü ya da dürtüler aklıma ne zaman gelirse gelsin hiç bir şey yapmamak	0	1	2	3	4	5

D. GÖRÜŞMECİ YORUMLARI

94. *Buraya görüşmeyle ilgili, bu katılımcıdan toplanan bilgileri anlamada önemli olacağını düşündüğünüz yorumlarınızı ya da gözlemlerinizi yazın.*

_____
_____
_____
_____
_____
_____
_____

GÖRÜŞMENİN SONU

OBSESSIVE BELIEFS QUESTIONNAIRE (OBQ-44)

Bu envanterde, insanların zaman zaman takındıkları bir dizi tutum ve inanış sıralanmıştır. Her bir ifadeyi dikkatlice okuyunuz ve ifadeye ne kadar katılıp katılmadığınızı belirtiniz.

Her bir ifade için, *nasıl düşündüğünüzü en iyi tanımlayan* cevaba karşılık gelen rakamı seçiniz. İnsanlar birbirinden farklı olduğu için envanterde doğru veya yanlış cevap yoktur.

Sunulan ifadenin, tipik olarak yaşama bakış açınızı yansıtıp yansıtmadığına karar vermek için sadece *çoğu zaman* nasıl olduğunuzu göz önünde bulundurunuz.

Derecelendirme için aşağıdaki ölçeği kullanınız:

1	2	3	4	5	6	7
Kesinlikle Katılmıyorum	Katılmıyorum	Biraz Katılmıyorum	Ne katılıyorum Ne katılmıyorum	Biraz Katılıyorum	Katılıyorum	Tamamen Katılıyorum

Derecelendirme yaparken, ölçekteki orta değeri işaretlemekten (4) kaçınmaya çalışınız; bunun yerine, inanış ve tutumlarınızla ilgili ifadeye genellikle katılıp katılmadığınızı belirtiniz.

1. Sıklıkla çevremdeki şeylerin tehlikeli olduğunu düşünürüm	1	2	3	4	5	6	7
2. Birşeyden tamamıyla emin değilsem, kesin hata yaparım?	1	2	3	4	5	6	7
3. Benim standartlarıma göre, herşey mükemmel olmalıdır	1	2	3	4	5	6	7
4. Değerli biri olmam için yaptığım herşeyde mükemmel olmalıyım	1	2	3	4	5	6	7
5. Herhangi bir fırsat bulduğumda, olumsuz şeylerin gerçekleşmesini önlemek için harekete geçmeliyim	1	2	3	4	5	6	7
6. Zarar verme/görme olasılığı çok az olsa bile, bedeli ne olursa olsun onu engellemeliyim	1	2	3	4	5	6	7
7. Bana göre, kötü/uygunsuz dürtülere sahip olmak aslında onları gerçekleştirmek kadar kötüdür	1	2	3	4	5	6	7
8. Bir tehlikeyi önceden görmeme karşın bir harekette bulunmazsam, herhangi bir sonuç için suçlanacak kişi konumuna ben düşerim	1	2	3	4	5	6	7
9. Birşeyi mükemmel biçimde yapamayacaksam hiç yapmamalıyım	1	2	3	4	5	6	7
10. Her zaman sahip olduğum tüm potansiyelimi kullanmalıyım	1	2	3	4	5	6	7

11. Benim için, bir durumla ilgili tüm olası sonuçları düşünmek çok önemlidir	1	2	3	4	5	6	7
12. En ufak hatalar bile, bir işin tamamlanmadığı anlamına gelir	1	2	3	4	5	6	7
13. Sevdiğim insanlarla ilgili saldırgan düşüncelerim veya dürtülerim varsa, bu gizlice onları incitmeyi istediğim anlamına gelir	1	2	3	4	5	6	7
14. Kararlarımdan emin olmalıyım	1	2	3	4	5	6	7
15. Her türlü günlük aktivitede, zarar vermeyi engellemede başarısız olmak kasten zarar vermek kadar kötüdür	1	2	3	4	5	6	7
16. Ciddi problemlerden (örneğin, hastalık veya kazalar) kaçınmak, benim açımdan sürekli bir çaba gerektirir	1	2	3	4	5	6	7
17. Benim için, zararı önlememek zarar vermek kadar kötüdür	1	2	3	4	5	6	7
18. Bir hata yaparsam üzüntülü olmalıyım	1	2	3	4	5	6	7
19. Diğerlerinin, kararlarım veya davranışlarımdan doğan herhangi bir olumsuz sonuçtan korunduğundan emin olmalıyım	1	2	3	4	5	6	7
20. Benim için, herşey mükemmel olmazsa işler yolunda sayılmaz	1	2	3	4	5	6	7
21. Müstehcen düşüncelerin aklımdan geçmesi çok kötü bir insan olduğum anlamına gelir	1	2	3	4	5	6	7
22. İlave önlemler almazsam, ciddi bir felaket yaşama veya felakete neden olma ihtimalim, diğer insanlara kıyasla daha fazladır	1	2	3	4	5	6	7
23. Kendimi güvende hissetmek için, yanlış gidebilecek herhangi bir şeye karşı olabildiğince hazırlıklı olmalıyım	1	2	3	4	5	6	7
24. Tuhaf veya iğrenç düşüncelerim olmamalı	1	2	3	4	5	6	7
25. Benim için, bir hata yapmak tamamen başarısız olmak kadar kötüdür	1	2	3	4	5	6	7
26. En önemsiz konularda bile herşey açık ve net olmalıdır	1	2	3	4	5	6	7
27. Din karşıtı bir düşünceye sahip olmak, kutsal şeylere karşı saygısız davranmak kadar kötüdür	1	2	3	4	5	6	7
28. Zihnimdeki tüm istenmeyen düşüncelerden kurtulabilmeliyim	1	2	3	4	5	6	7
29. Diğer insanlara kıyasla, kendime veya başkalarına kazara zarar vermem daha muhtemeldir	1	2	3	4	5	6	7
30. Kötü düşüncelere sahip olmak tuhaf veya anormal biri olduğum anlamına gelir	1	2	3	4	5	6	7
31. Benim için önemli olan şeylerde en iyi olmalıyım	1	2	3	4	5	6	7
32. İstenmeyen bir cinsel düşünce veya görüntünün aklıma gelmesi onu gerçekten yapmak istediğim anlamına gelir	1	2	3	4	5	6	7
33. Davranışlarımın olası bir aksilik üzerinde en küçük bir etkisi varsa sonuçtan ben sorumluyum demektir	1	2	3	4	5	6	7

34. Dikkatli olsam da kötü şeylerin olabileceğini sıklıkla düşünürüm	1	2	3	4	5	6	7
35. İstenmeyen biçimde zihnimde beliren düşünceler, kontrolü kaybettiğim anlamına gelir	1	2	3	4	5	6	7
36. Dikkatli olmadığım takdirde zarar verici hadiseler yaşanabilir	1	2	3	4	5	6	7
37. Birşey tam anlamıyla doğru yapılıncaya kadar üzerinde çalışmaya devam etmeliyim	1	2	3	4	5	6	7
38. Şiddet içerikli düşüncelere sahip olmak, kontrolü kaybedeceğim ve şiddet göstereceğim anlamına gelir	1	2	3	4	5	6	7
39. Benim için bir felaketi önlemekte başarısız olmak ona sebep olmak kadar kötüdür	1	2	3	4	5	6	7
40. Bir işi mükemmel biçimde yapmazsam insanlar bana saygı duymaz	1	2	3	4	5	6	7
41. Yaşamımdaki sıradan deneyimler bile tehlike doludur	1	2	3	4	5	6	7
42. Kötü bir düşünceye sahip olmak, ahlaki açıdan kötü bir şekilde davranmaktan çok da farklı değildir	1	2	3	4	5	6	7
43. Ne yaparsam yapayım, yaptığım iş yeterince iyi olmayacaktır	1	2	3	4	5	6	7
44. Düşüncelerimi kontrol edemezsem cezalandırılırım	1	2	3	4	5	6	7

PENN INVENTORY OF SCRUPULOSITY (PIOS)

Aşağıdaki ifadeler, insanların zaman zaman aklından geçen bazı düşünceleri içermektedir. Lütfen aşağıdaki derecelendirmeyi kullanarak bu durumları ne sıklıkla yaşadığınızı işaretleyiniz.

0= Hiç bir zaman
1= Neredeyse hiçbir zaman
2= Bazen
3= Sıklıkla
4= Her zaman

_____ 1. Dürüst olmayan art niyetli düşüncelerim olabileceğinden ötürü endişeleniyorum.
_____ 2. Günahkar bir insan olabileceğimden korkuyorum.
_____ 3. Ahlaksızca davranacağımdan korkuyorum.
_____ 4. Günahlarım için, tekrar tekrar tövbe etmek zorunda hissediyorum.
_____ 5. Cennet ve cehennem beni endişelendiriyor
_____ 6. Her zaman ahlaklı davranmalıyım, aksi takdirde cezalandırılırım diye endişeleniyorum.
_____ 7. Zevk almak istediğim bir şeyi yaparken, kendimi suçlu hissettiğim için o şeyden zevk alamıyorum.
_____ 8. Aklıma ahlaksız düşünceler geliyor ve onlardan kurtulamıyorum.
_____ 9. Davranışlarımın Allah tarafından kabul edilemeyecek olmasından korkuyorum.
_____ 10. Farkında olmadan, uygun olmayan bir şekilde davranmış olmaktan korkuyorum.
_____ 11. Bazı ahlaksız düşüncelerden kaçınmak için çok uğraşmalıyım.
_____ 12. Dürüst olmayan şeyler yapmış olabileceğimden çok endişeleniyorum.
_____ 13. Allah'ın emirlerine karşı çıkmaktan korkuyorum.
_____ 14. Cinsel içerikli düşüncelere sahip olmaktan korkuyorum.
_____ 15. Allah ile asla iyi bir bağım olmayacağından ötürü endişeleniyorum.
_____ 16. Ahlaksız düşüncelerimden dolayı kendimi suçlu hissediyorum.
_____ 17. Allah'ın benden hoşnut olmamasından endişeleniyorum.
_____ 18. Ahlaksız düşüncelere sahip olmaktan korkuyorum.
_____ 19. Düşüncelerimin Allah tarafından kabul edilemez olmasından korkuyorum.

PENN STATE WORRY QUESTIONNAIRE (PSWQ)

Her bir ifadenin sizi ne ölçüde tanımladığını, aşağıda verilen ölçekten yaralanarak değerlendiriniz ve uygun olan numarayı ilgili maddenin yanındaki boşluğa yazınız.

1	2	3	4	5
Beni hiç tanımlamıyor		Beni biraz tanımlıyor		Beni çok iyi tanımlıyor

___ 1. Herşeyi yapmaya yeterli zamanım yoksa, bunun için endişelenmem.

___ 2. Endişelerim beni bunaltır.

___ 3. Yaşamakta olduğum şeyler hakkında endişelenme eğiliminde değilimdir.

___ 4. Bir çok durum beni endişelendirir.

___ 5. Yaşamakta olduğum şeyler hakkında endişelenmemem gerektiğini biliyorum ama kendime engel olamıyorum.

___ 6. Baskı altında olduğumda çok endişelenirim.

___ 7. Her zaman birşeyler hakkında endişeleniyorum.

___ 8. Endişe verici düşünceleri aklımdan kolaylıkla atarım.

___ 9. Bir işi bitirir bitirmez, yapmak zorunda olduğum tüm diğer şeyler hakkında endişelenmeye başlarım.

___ 10. Asla herhangi bir şey için endişelenmem.

___ 11. Bir konu ile ilgili olarak yapabileceğim daha fazla bir şey olmadığında, artık o konu hakkında endişelenmem.

___ 12. Tüm yaşamım boyunca endişeli biri olmuşumdur.

__ 13. Yaşamakta olduğum şeyler hakkında endişeleniyor olduğumu farkederim.

___ 14. Bir kez endişelenmeye başladığımda, bunu durduramam.

___ 15. Sürekli olarak endişeliyimdir.

___ 16. Tamamen yapıp bitirene kadar tasarladığım işler hakkında endişelenirim.

RELIGIOUS FUNDAMENTALISM SCALE (RFS)

Bu anket, çeşitli sosyal konularla ilgili insanların genel görüşünü ele almaktadır. Aşağıdaki ifadeleri okuduğunuzda, muhtemelen, bazı ifadelere katıldığınızı, bazılarına ise katılmadığınızı göreceksiniz. Lütfen her bir ifadeyi okuyarak, aşağıda verilmiş olan derecelendirmeye göre, bu ifadenin sizin için ne kadar geçerli olduğunu ifadenin yanındaki sayıyı yuvarlak içine alarak belirtiniz.

İşaretleyin: -4 eğer ifadeye kesinlikle karşıysanız
-3 eğer ifadeye çok karşıysanız
-2 eğer ifadeye karşıysanız
-1 eğer ifadeye biraz karşıysanız
İşaretleyin: +1 eğer ifadeye biraz katılıyorsanız
+2 eğer ifadeye katılıyorsanız
+3 eğer ifadeye çok katılıyorsanız
+4 eğer ifadeye tamamen katılıyorsanız

Eğer bir madde hakkında kesinlikle ve tamamen tarafsız iseniz "0" ı yuvarlak içine alınız.

Bazen bir ifadenin çeşitli bölümlerine farklı tepkilerde bulunabilirsiniz. Örneğin; bir ifadeye bir kısmına kesinlikle katılmıyor olabilirsiniz ("-4"), ama aynı ifadenin başka bir kısmına katılabilirsiniz ("+1"). Böyle bir durum olduğunda, lütfen tepkilerinizi birleştirin ve her iki tavrınızı dengeleyen bir seçeneği işaretleyin (bu durumda "-3").

-4 eğer ifadeye kesinlikle karşıysanız -3 eğer ifadeye çok karşıysanız -2 eğer ifadeye karşıysanız -1 eğer ifadeye biraz karşıysanız **kesinlikle ve tamamen tarafsız iseniz "0"** +1 eğer ifadeye biraz katılıyorsanız +2 eğer ifadeye katılıyorsanız +3 eğer ifadeye çok katılıyorsanız +4 eğer ifadeye tamamen katılıyorsanız	Eğer ifadeye **kesinlikle karşıysanız**	Eğer ifadeye **çok karşıysanız**	Eğer ifadeye **karşıysanız**	Eğer ifadeye **biraz karşıysanız**	**Kesinlikle ve tamamen tarafsız iseniz**	Eğer ifadeye **biraz katılıyorsanız**	Eğer ifadeye **katılıyorsanız**	Eğer ifadeye **çok katılıyorsanız**	Eğer ifadeye **tamamen katılıyorsanız**
1. Allah insanlığa, eksiksiz takip edilmesi gereken, takip edilirse onları mutluluğa ve kurtuluşa götürebilecek, tam ve hatasız bir yol göstermiştir.	-4	-3	-2	-1	0	+1	+2	+3	+4
2. Hiçbir kutsal kitap hayatın özünün ve temel doğrularının hepsini içermez.	-4	-3	-2	-1	0	+1	+2	+3	+4
3. Dünya üzerindeki kötülüklerin temel nedeni, halen sürekli ve vahşice, Allah'a karşı mücadele eden Şeytan'dır.	-4	-3	-2	-1	0	+1	+2	+3	+4

-4 eğer ifadeye kesinlikle karşıysanız -3 eğer ifadeye çok karşıysanız -2 eğer ifadeye karşıysanız -1 eğer ifadeye biraz karşıysanız **kesinlikle ve tamamen tarafsız iseniz "0"** +1 eğer ifadeye biraz katılıyorsanız +2 eğer ifadeye katılıyorsanız +3 eğer ifadeye çok katılıyorsanız +4 eğer ifadeye tamamen katılıyorsanız	Eğer ifadeye **kesinlikle karşıysanız**	Eğer ifadeye **çok karşıysanız**	Eğer ifadeye **karşıysanız**	Eğer ifadeye **biraz karşıysanız**	**Kesinlikle ve tamamen tarafsız**	Eğer ifadeye **biraz katılıyorsanız**	Eğer ifadeye **katılıyorsanız**	Eğer ifadeye **çok katılıyorsanız**	Eğer ifadeye **tamamen katılıyorsanız**
4. İyi bir insan olmak, Allah'a ve doğru dine inanmaktan çok daha önemlidir.	-4	-3	-2	-1	0	+1	+2	+3	+4
5. Dünyada, son derece doğru olan birtakım belirli dini öğretiler vardır; bunların daha derinine inilemez, çünkü bunlar Allah'ın insanlığa verdiği temel mesajlardır.	-4	-3	-2	-1	0	+1	+2	+3	+4
6. Aslında özüne bakıldığında, dünyada yalnızca iki tür insan vardır: Allah tarafından ödüllendirilecek olan erdemliler ve ödüllendirilmeyecek olan diğerleri.	-4	-3	-2	-1	0	+1	+2	+3	+4
7. Kutsal kitaplar genel doğruları içerebilir, ancak baştan sona tamamıyla kelimesi kelimesine doğru olarak kabul edilmemelidir.	-4	-3	-2	-1	0	+1	+2	+3	+4
8. En iyi ve en anlamlı hayatı sürdürmek için kişi, temelde doğru olan tek dine bağlı olmalıdır..	-4	-3	-2	-1	0	+1	+2	+3	+4
9. "Şeytan" sadece insanların kendi kötü dürtülerine verdikleri bir isimdir. Gerçekte, "Karanlıklar Prensi/Kötülüklerin Anası" gibi bizi baştan çıkaran şeytani bir şey yoktur.	-4	-3	-2	-1	0	+1	+2	+3	+4
10. Ne zaman, bilim ve kutsal kitap birbiri ile çelişirse, bilimin dedikleri muhtemelen doğrudur.	-4	-3	-2	-1	0	+1	+2	+3	+4
11. Allah'ın insanlara gönderdiği dinin temelleri asla kurcalanmamalı veya fedakarlık edilerek başkalarının inançları ile uzlaştırılmamalıdır.	-4	-3	-2	-1	0	+1	+2	+3	+4
12. Dünya üzerindeki bütün dinlerin kusurları ve yanlış öğretileri vardır. Mükemmel olan, hakiki ve doğru bir din yoktur.	-4	-3	-2	-1	0	+1	+2	+3	+4

APPENDIX

TURKISH SUMMARY

1. GİRİŞ

Obsesif -Kompulsif Bozukluk (OKB), zihinde istem-dışı olarak beliren ve kişide rahatsızlık ve sıkıntı uyandıran obsesyonlar ile bu obsesyonların ortaya çıkardığı kaygıyı azaltmak için istemli olarak belirli ritüeller şeklinde sergilenen zihinsel yada davranışsal tepkiler olan kompulsiyonların eşlik ettiği kaygı bozukluğudur. OKB semptomları kişinin gündelik yaşamda aksamalara neden olacak kadar zaman alır (günde 1 saatten fazla) ve kişide belirgin bir kaygı ve sıkıntıya yol açar. Obsesyon ve kompulsüyonlar genellikle birlikte gözlenmesine rağmen klinik gözlemler obsesyonlar yada kompulsiyonların tek başına görülebileceğini de belirtmektedir (Rachman, 1993).OKB bir çok semptom alt grubundan oluşan bir kaygı bozukluğudur. En yaygın ikililer arasında bulaşma/kirlenme obsesyonu ve temizlik kompulsüyonları, patolojik şüphecilik ve kontrol etme, sayı sayma, düzenleme ve simetri, biriktirme ve dinsel obsesyon ve kompulsiyonlar rapor edilmiştir (Rasmussen & Eisen, 1991, 1992). Son dönemki epidemiolojik çalışmalar, bir zamanlar nadir bir bozukluk olarak kabul edilen OKB'nin sanılanın aksine yaşam boyu görülme sıklığının ortalama % 2.5 olduğunu ve bu sıklığın farklı birçok ülkede de benzer oranda olduğunu göstermiştir (Weissmann ve ark., 1994). Bozukluğun görülme sıklığında cinsiyetler arasındaki farklılık incelendiğinde, epidemiolojik çalışmalar genel olarak kadın ve erkeklerde aynı orana işaret ederken alt tiplerde bazı cinsiyet farklılıkları bulunduğunu göstermiştir. Kadınların temizlik, erkeklerin ise kontrol alt tipinde çoğunlukta olduğu bilinmektedir (Rasmussen & Eisen, 1991; Weissmann ve ark., 1994). Ayrıca, erkeklerin kadınlara göre daha erken başlangıç yaşına sahip olduğu belirtilmiştir. Bozukluğun tipik başlangıç döneminin, geç ergenlik ya da erken yetişkinlik dönemi olduğu bildirilse de,

çocuklukta da tanı almak mümkündür (Rasmussen & Tsuang, 1986). Hastalığın ortaya çıkmasında ve şiddetlenmesinde stresli yaşam olaylarının rolüne ilişkin yürütülen çalışmalar bir dizi çelişkili bulgu ortaya koymasına rağmen çocuk sahibi olma, işte yükselme ve travmatik yaşam olayları gibi stres yaratan yaşam olaylarının hastalığı tetikleyebileceği bildirilmiştir (Rasmussen & Tsuang, 1986). Ülkemizde yapılan birçok araştırma OKB'nin görülme sıklığının, semptom özelliklerinin ve eşit cinsiyet dağılımının diğer ülkeler ile benzer özellikler rapor etmiştir (Çilli ve ark., 2004; Karadağ ve ark., 2006, Eğrilmez ve ark., 1997; Tükel ve ark., 2004, 2006).

OKB üzerine son yıllarda yürütülmüş olan araştırmalar, normal popülasyonda insanların büyük çoğunluğu zaman zaman istem dışı olumsuz içerikli düşünce, imge ve dürtüler yaşayabilirken (yaklaşık %80; Salkovskis & Harrison, 1984), neden sadece %2 gibi çok küçük bir oranının klinik anlamda obsesyon ve kompulsiyon geliştirdiğini açıklamaya odaklanmıştır. Bunu açıklamaya yönelik olarak geliştirilmiş olan bilişsel modeller, tıpkı diğer kaygı bozukluklarında olduğu gibi OKB için de olayın kendisinden daha çok yorumlanış biçiminin önemli olduğuna ilişkin temel bilişsel varsayım üzerine temellendirilmiştir (Beck ve ark., 1985).

OKB'nin ilk geniş kapsamlı bilişsel modeli Salkovskis (1985, 1989) tarafından geliştirilmiştir. Salkovskis'e olası bir tehlikeyi önlemeye ilişkin hissedilen abartılmış sorumluluk algısı hem hastalığın oluşmasında hem de sürdürülmesinde önemli bir rol oynamaktadır. Ona göre OKB hastaları hem bir tehlikeye yol açma hem de olası bir tehlikeyi önlemeye ilişkin büyük bir potansiyellerinin olduğuna yönelik güçlü bir inanca sahiptirler. Bu fonksiyonel olmayan abartılmış sorumluluk şemaları, olumsuz düşünceler ve bunların olası sonuçlarına ilişkin abartılmış tehdit beklentisi bireyin bu düşünceler nedeniyle sıkıntı duymasına yol açar. Birey, hissettiği sorumluluk algısını azaltarak kaygısını düşürmeye yönelik düşünceyi bastırma ve kaçınma gibi zihinsel veya davranışsal nötrleme davranışları yani kompulsüyonlar sergilemeye başlar. Ancak, bu nötrleme davranışları bireyin kaygı ve sıkıntısını kısa süreliğine ortadan kaldırsa da bireyin düşüncesinin geçerli olmadığı ile yüzleşmesini engelleyerek uzun vadede düşüncelerin ortaya çıkma sıklığını ve şiddetini artır. OKB' de abartılmış sorumluluk algısının geçerliği, çeşitli anket çalışmaları (Freeston ve ark., 1992; Foa ve

ark., 2001), klinik gözlemler (Rachman, 1993), deneysel manipülasyonlar (Arntz ve ark., 2007) ve tedavi etkinlik çalışmaları (Freeston ve ark., 1996) ile desteklenmiştir.

Rachman (1997, 1998), Salkovskis'in bilişsel modelini biraz daha genişleterek, hastalığın gelişiminde rol oynayan diğer bir fonksiyonel olmayan inanca dikkat çekmiştir. Rachman'a göre bireyin yaşadığı düşüncelerin içeriğini ahlak dışı, günah, delilik, iğrenç ve tehdit edici bulması; kişiliğinin kontrol edemediği ya da bilmediği bir parçasının ürünü olarak yorumlaması, düşünceye ve olası sonuçlarına ilişkin hissedilen tehdit algısını ve buna eşlik eden kaygıyı artırır. Artan bu kaygı düzeyi düşüncenin önemine ilişkin inancı daha da güçlendirir ve bireyin kaygısını azaltmaya yönelik çeşitli kontrol davranışları sergilemesine yol açar. Ancak daha önce belirtildiği gibi bu kontrol davranışları kısa bir süre rahatlama sağlasa bile uzun vadede düşüncelerin sıklığını ve şiddetini artırarak, normal olan bu düşüncelerin klinik obsesyonlara dönüşme olasılığını artırır. Rachman (1997), düşüncenin kişi için önemli olmasını "düşünce-davranış karmaşası" adı verilen fonksiyonel olmayan bir inanç ile açıklamaktadır. Düşünce-davranış karmaşası "olasılık" ve "ahlak" olmak üzere iki boyuttan oluşmaktadır. Olasılık boyutu, kişinin olumsuz, tehlikeli bir şey düşünmesinin bu olayın gerçekleşme olasılığını artırdığına ilişkin inancı, ahlak boyutu ise ahlak dışı bir şey düşünmenin bu şeyi yapmak ile aynı şey olduğuna dair inancı ifade etmektedir. Örneğin, çocuğuna zarar verme ihtimali aklına gelen bir anne, bu düşünceyi çocuğuna zarar verme olasılığını artırabileceği, diğer bir değişle bunu düşünmesinin bunu gerçekten yapabileceğine işaret ettiği şeklinde yorumlayabilir. Bir süre sonra bıçağın yanı sıra çevredeki birçok uyaran da bu düşünceyi tetikleyen birer uyarana dönüşür ve birey bu düşünceden uzaklaşmak için bir süre sonra bir çok uyarandan kaçınma başlar. Kaçınma ise hatalı yorumları doğrulayan bir mekanizmaya dönüşür, çünkü bireyin bu düşüncenin geçersizliğini görme olasılığını engeller. Sonuçta, düşüncelerin duyduğu rahatsızlıkla birey, olası olumsuz sonuçları önlemek üzere kompulsüyonlar sergilemeye başlar. Obsesyonlar, kişisel olarak anlamlı ve önemli değerlendirildiği sürece devam edecektir.

Clark (2004) ise, abartılmış sorumluluk algısı ve düşünceye aşırı önem atfedilmesinin OKB'de ki geçerliliğini kabul ederken, bireyin düşünce kontrolüne ve

bunu kontrol etmede yaşadığı başarısızlığa atfettiği anlamın çok daha önemli olduğuna dikkat çekmektedir. Wegner'in (1994) çalışmaları ile ilk olarak ortaya konulan düşünceyi bastırmaya çalışmanın paradoksal etkisi, Clark'ın modelinde özellikle vurgu yapılan bir olgudur. Ona göre bireyin düşüncelerinden rahatsızlık duyması bireyde bu düşünceleri kontrol etmeye yönelik güçlü bir motivasyon oluşturmakta ancak en elverişli koşulda bile mükemmel kontrol mümkün olmamakta ve kontrol çabalarının başarısızlıkla sonuçlanması kaçınılmaz olmaktadır. Ayrıca, bireyin bu başarısızlığı kişiliği ile ilgili herhangi bir zayıflığa, mükemmel kontrolün ise güçlü ve başarılı olmak gibi daha olumlu özelliklere işaret ettiğine ilişkin hatalı yorumlama eğilimi düşüncenin etkinliğini ve hatalı yorumun doğruluğunu ve olumsuzluğunu pekiştirirerek daha fazla kontrol çabasına yol açmakta ve istem dışı düşüncenin şiddetini artırarak düşüncenin klinik obsesyonlara dönüşme olasılığını artırmaktadır.

Uluslararası bir araştırma grubu olan Obsesif -Kompulsif Bilişsel Çalışma Grubu, OKB ilgili literatürü gözden geçirerek OKB'de etkili altı temel hatalı inanç alanı belirlemiştir: abartılı sorumluluk algısı, abartılı tehdit öngörüsü, düşüncelerin ve kontrolünün aşırı derecede önemsenmesi, mükemmeliyetçilik, belirsizliğe tahammülsüzlük. OKB ile ilişkili bu fonksiyonel olayan inanç ve yorumlamaları değerlendirmek için İstem Dışı Düşünce Yorumları Envanteri'ni (OKBÇG, 2001) hazırlamışlardır. Ölçeğin psikometrik özelliklerini değerlendirmek üzere yapılan çalışmalar ölçeğin 3 temel alt boyurttan oluştuğunu (sorumluluk/tehdit öngörüsü, mükemmeliyetçilik/belirsizlik & düşüncelerin önemi/ kontrolü) ortaya koymuş ve bu ölçüm aracının psikometrik özellikleri farklı batılı ülkelerde klinik olan ve olmayan örneklemlerde desteklenmiştir (Faul ve ark., 2004;Julien ve ark., 2006; OKBÇ, 2003, 2005; Sica ve ark., 2004; Tolin ve ark., 2003).

Hastalığa temel oluşturan fonksiyonel inançların yanı sıra, son dönemde OKB üzerinde yürütülmekte olan çalışmalar OKB'deki yatkınlık faktörlerini araştırmaya odaklanmıştır. Yürütülmekte olan çalışmalar temel olarak bozukluğun etiolojisinin kültüre özgü bir farklılık gösterip göstermediğini anlamaya çalışmaktadır. Kişinin taşıdığı kültürel değerlerin onun duygu, düşünce ve davranışlarını etkileyebileceği

yadsınamaz bir gerçektir. Örneğin, ejekülasyonun kısırlaşmaya yol açacağına ilişkin korkunun sadece Mısırlı erkeklerde görülmesi gibi bazı patolojilerin sadece belirli bir kültüre özgü olması kültürün pataloji üzerindeki etkisini destekler niteliktedir. de Silva (2006) kültürel değerlerin OKB'yi etkilemesi olası olan dört teme süreç tanımlamaktadır: (a) obsesyon ve kompulsiyonların içeriği kültüre özgü ortak kaygıları içerebilir. Örneğin, 30 yıl önce İngiltere'de en yaygın obsesyon asbest denilen bir maddenden zehirlenme iken son yıllarda AIDS'e yakalanma olarak değişmesi, (b) dinsel inanç ve uygulamalar öbsesyonların içeriğini etkileyebilir. Örneğin, Yahudi OKB hastalarının daha çok "kosher" denilen belirli yiyecekleri birbiri ile karıştırmamak gibi bir obsesyon ve kompulsiyon sergilerken Müslüman OKB hastalarının daha çok ibadet öncesi temiz olup olmamaya ilişkin obsesyon ve sürekli temizlenme kompulsiyonları sergilemeleri, (c) katı ve sert dinsel, ahlaki inançlar, bireylerni klinik obsesyonlar segileme yakınlıklarını artırabilir. Yüksek dindar bireylerin daha yüksek sorumluluk/tehdit öngörüsü, mükemmeliyetçilik/belirsizlik ve düşüncelerin önemi/ kontrolü gibi fonksiyonel olmayan düşünce, ve OKB semptomu sergilemelerinde olduğu gibi (Sica ve ark., 2002). Diğer patolojiler gibi OKB'deki yatkınlık faktörlerini de uzak/özgül olmayan ve yakın/özgül değişkenler olarak gruplamak mümkündür (Riskind & Alloy, 2006). Özgül olmayan faktörler arasında ebeveyn tutumları ve yaklaşımları (Ayçiçeği ve ark., 2002; Doron & Kyrios, 2005), öz-güven (Fennel, 1997), nörotisizm (Bienvenu ve ark., 2000; Clark, 2004; Fullana ve ark., 2004), psikotisizm (Fullana ve ark., 2004; Mataix-Coles ve ark., 2000) ve dindarlık (Steketee ve ark., 1991; Sica ve ark., 2002) yer almaktadır. Bu değişkenler özgül olmasa da, diğer spesifik bilişsel yatkınlık faktörlerine katkıda bulunabilmektedir.

Kültür, belirli bir toplumda yada toplulukta yetişen insanların ortak düşünme, hissetme ve davranış örüntüleri ya da bir arada yaşayan bireyler için zihinsel yazılım olarak tanımlanabilir (Hofstede, 2001). Diğer bir değişle kültür, bireylerde ortak bir beklenti ve standart oluşturarak onların olaylara nasıl tepki vereceklerini ve neler hissedeceklerini etkileyen önemli bir olgudur (Draguns & Matsumi, 2003; Sica ve ark., 2002). Bu anlamda, psikopatoloji ile kültür arasındaki ilişkiyi anlamak araştırmacıların

ilgi duydukları temel araştırma alanlarından birini oluşturmaktadır. Kültür ve OKB arasındaki ilişki incelendiğinde, epidemiolojik ve olgusal özellikler açısından ülkemizin de dahil olduğu kültürler arası bir tutarlığın yanı sıra semptomların içeriğinin ve şiddetinin kültürel değer ve alışkanlıklardan etkilendiğinden söz etmek mümkündür (Çilli ve ark., 2004; Tükel ve ark., 2004; Howarth & Weissmann, 2000) Örneğin, , Meksika'da cinsel obsesyonlar (Nicolini, 2002) daha çok rapor edilmesine karşın, Mısır, İsrail, Suudi Arabistan ve Türkiye'de (Greenberg, 1984; Mahgoup & Abdel-Hafciz, 1991; Millet & Tezcan, 1997; Okasha ve ark., 1994; Zohar ve ark., 2005) dini obsesyonlarda artış gözlenmektedir. Benzer şekilde, İslamiyet'te ibadet öncesinde temizlik ritüellerinin eksiksiz olarak uygulanmasının önemli olması nedeniyle Mısırlı OKB hastalarının namaz öncesinde tam olarak temizlenip temizlenmediklerinden emin olamadıkları için sürekli yıkanma davranışı sergiledikleri gözlenmiştir (Okasha ve ark., 1994).

Bireyin hem düşünce hem de davranış stilleri üzerinde önemli bir belirleyiciliğe yol açabilen din önemli kültürel faktörlerden biridir. Din, dindarlık ve OKB arasındaki olası ilişkiye duyulan ilgi Freud'un (1912/1953) dinsel ritüeller ile obsesif davranışlar arasındaki benzerliğe dikkat çekmesine dayandırılabilecek kadar eskilere dayanmaktadır. Rachman (1997) katı bir ahlaki inanç ve dinsel öğretilerin bireyleri istemdışı düşüncelerden rahatsız olma ve tekrarlayan ritüel nitelikteki uygulamalar sergileme olasılığını artırarak onları OKB geliştirmeye daha yatkın bir hale getirdiğini belirtmektedir. Bu temel varsayım bir çok çalışma tarafından desteklenmiştir (Greenberg & Wtiztum, 1991; Greenberg & Shefler, 2002; Schultz & Searlman, 2002; Shafran ve ark., 1996). Ayrıca dindarlığın OKB semptom düzeyini ve ilgili inançları etkilediğine işaret eden araştırma bulguları da bulunmaktadır (Abramowitz ve ark., 2004; Hutchinson ve ark., 1998). Abramowitz ve ark.(2004) yapmış oldukları bir çalışmada yüksek dindarlık düzeyine sahip olan bireylerin düşük dindar bireylerle karşılaştırıldığında, sorumluluk algısı, düşünce ve kontrolüne aşırı önem verilmesi ve mükemmeliyetçilik başta olmak üzere OKB ile ilgili fonksiyonel olmayan inanç ve OKB semptomu sergilediğini ortaya koymuştur.

Dindarlık düzeyinin semptomlarının şiddetini artırarak OKB'ye bir yatkınlık faktörü oluşturabileceğine işaret eden araştırma bulgularına ek olarak dinlerin niteliksel farklılıklarının da hastalığın etiolojisinde bazı kültürler arası farklılıklar ortaya çıkarabileceği düşünülmektedir. İslamiyet, tıpkı Yahudilik gibi ibadetlerin önceden belirlenmiş bir formda ve şekilde, belirli zaman dilimleri içinde belirli bir sıra ile yerine getirilmesinin önemli olduğu ritüellere dayalı bir din iken Hıristiyanlık, inançları ön plana çıkaran bir dindir. Diğer iki dinde inancın yanı sıra davranışsal gereklilikler de bulunmaktadır (Greenberg & Witztum, 2001; Karadağ ve ark., 2006). İslam dininde ayrıca, Şeytan tarafından test edilme, kişinin Allah'a bağlılığını ve imanının zayıflatma girişimleri olarak da değerlendirilen vesvese denilen dini şüpheler varken (Al Issa & Qudji, 1998; Okasha, 2002); Hıristiyanlıkta, kişinin düşünce ve niyetlerinden dahi sorumlu olduğu inancı ve günahlarından kurtulmak için yapılan günah çıkarma seremonisi vardır (Greenberg & Witztum, 1991). Örneğin, DDK-Ahlak alt boyutunun Hıristiyanlarda Yahudilere oranla daha belirgin olması, bu inanç vurgusu ile açıklanmıştır (Rozin ve Cohen, 1998).

Dinsel obsesyon ve kompulsiyonlar (scrupulosity) OKB hastalarının yaklaşık %5'in de görülen OKB alt tiplerinden biridir(Tolin, Abramowitz, Kozak, & Foa, 2001). Dinsel obsesyonlar yoğun şekilde günah işleyip işemediğine ilişkin şüphe, bireyin dini ve ahlaki değerlerini tehdit eden düşünce, imge ve dürtülerden oluşurken, kompulsiyonlar sürekli dua etmek, tövbe etmek, günah çıkarmak gibi tekrarlayan aşırı davranışlardan oluşmaktadır. Semptomlarının içeriğinden dolayı dinsel obsesyonlar ile dindarlık ve din arasındaki ilişkiyi anlamaya yönelik yürütülmüş olan çalışmalar dindarlık düzeyi ile dinsel obsesyon şiddeti arasında anlamlı pozitif bir ilişkinin olduğunu bildirmiştir. Ayrıca bu ilişkinin farlıklı dine mensup bireyler arasında farklılık gösterdiği vurgulanmıştır (Abromowitz ve ark., 2002). Kültürler arası bulunan bu farklılıklar dinsel obsesyonların şiddetinin ve semptom içeriğinin dinin yarattığı beklenti ve standartlardan etkilenebileceğini düşündürmüştür. Bütün bunların yanı sıra dinler arasındaki niteliksel farklılıkların dinsel obsesyonların içeriğini etkileyebildiğini düşündüren araştırma bulguları elde edilmiştir. Din ve ahlak arasındaki yakın ilişkiden dolayı, farklı din ve mezheplerde bu ilişkinin içeriği değişmektedir. Örneğin,

Müslüman OKB hastaları daha çok temizlenme seremonilerinden, Yahudiler yeme sınırlamalarından, Hıristiyanlar ise tekrarlayan günah çıkarmadan şikayetçi olduğu (Greenberg & Witztum, 2001) vurgulanmıştır. Ancak literatürdeki çok az çalışma bu kavramların Müslümanlardaki durumunu karşılaştırmalı ele almıştır.

İlgili literatürde bilişsel alanda ise yine kültürler arası farklar bulunmuştur. Örneğin, Kyrios ve ark. (2001), Avusturyalı örneklemde İtalyanlarla karşılaştırıldığında sorumluluk, mükemmeliyetçilik ve OKB semptomları arasında benzer yönde ilişki bulunsa da ilk grupta ilişkinin daha güçlü olduğu bildirilmiştir. Kyrios ve ark. (2001), Anglo-Sakson kültürün kişisel kontrol konularına daha çok vurgu yaptığını belirtmiştir. Sica ve ark. (2001) yapmış olduğu kültürlerarası çalışmada, bilişsel değişkenler ve OKB semptomları arasında ilişki en çok Amerikalı örneklemde ve ardından İtalyanlarda ve en az Yunanlılarda gözlemiştir. Ülkemizde ise ahlak boyutunda Düşünce-Davranış Karmaşası'nın (DDK) OKB ile daha kuvvetli bir ilişkisi olduğunu bulunmuştur (Yorulmaz ve ark., 2006).

Sonuç olarak, OKB ile din ve dindarlık arasındaki ilişki ağırlıklı olarak batı ülkelerinden seçilmiş Hıristiyan yada Yahudi katılımcılar ile gerçekleştirilmiştir ve Müslüman katılımcılar ile gerçekleşen karşılaştırmalı çok az çalışma bulunmaktadır. Bu çalışmada, öncelikle dindarlık düzeyi ile OKB semptomları, özellikle dinsel obsesyon ve kompulsiyonlar ve istemdışı düşüncelerin içeriği, değerlendirilmesi, kontrolü arasındaki ilişki Kanadalı ve Türk öğrenciler karşılaştırılarak anlaşılması amaçlanmıştır.

2. YÖNTEM

Araştırma iki ana aşamadan oluşmuştur. Araştırmanın birinci kısmı Kanada'da University of New Brunswick' te çeşitli bölümlerde okuyan Kanadalı üniversite öğrencileri ile tamamlanırken, ikinci kısmı Ortadoğu Teknik Üniversitesi'nde, Turkiye, çeşitli bölümlerde okuyan Türk üniversite öğrencilerinden oluşmuştur. Her iki ülkede de yüksek ve düşük dindarlık gruplarını oluşturmak üzere bir ön çalışma, sadece yüksek ve düşün dindar üniversite öğrencilerinin bire bir görüşme yapılmasının

oluşturduğu ana çalışma ve her iki ülke de doğal olarak ayrışmış daha yüksek bir dindarlık düzeyini temsil etmek amacıyla ilahiyat Fakültesi ve Teoloji okulunda (Bible School) okuyan öğrencilerin katıldığı dini okul verisinin toplandığı son aşama olmak üzere üç aşamada gerçekleştirilmiştir. Her üç aşamanın da katılımcıları ve işlemi şu şekilde özetlenebilir:

Ön çalışma:

Katılımcı: Ön çalışman ilk kısmı 107 erkek (32.6 %) and 219 kadın (66.8%) Kanadalı üniversite öğrencisinden olmuştur (yaş ortalaması: 19.56, Sd = 3.24) Kanadalı öğrencilerin %76'sı dinsel inancını Hıristiyanlık olarak tanımlamıştır ve dinin etkisini kontrol etmek amacıyla sadece Hıristiyan öğrenciler araştırmaya dahil olmuştur. İkinci ön çalışma orta Doğu Teknik üniversitesi'nde çeşitli bölümlerde okuyan 420 Türk katılımcıdan oluşmuştur (%57.8 kadın ve %42.2 erkek; yaş ortalaması 21.73 (Sd = 1.87), %77'si dinini İslamiyet olarak belirtmiştir)

İşlem: Kanada' da, öğrencileri araştırmanın yer ve saati ile bilgilendirmek amacıyla standart bir e-mail duyurusu kullanılmıştır. Gönüllü olan katılımcılar, araştırmaya katılacaklarını interaktif katılım sistemi ile internet aracılığı ile belirtmişler ve belirtilen gün ve saatte araştırmanın yapılacağı yere gelerek ilgili araştırma ölçeklerini doldurmuşlardır. Türkiye'de ise çalışma öğrencilerin normal sınıf oturumları sırasında gerçekleştirilmiştir**.** Ancak her iki ülkede de sadece gönüllü katılımcılar araştırmaya dahil edilmiştir.

Ölçüm Araçları: Katılımcılara demografik bilgi formu dahil Beck Depresyon Envanteri(BDE), Clark-Beck Obsesif-Kompulsif Envanteri (CBOKE), Aşırı Dindarlık Ölçeği (ADÖ), Suçluluk Envanteri (SE) olmak üzere 4 ölçek set halinde uygulanmıştır. Türk katılımcılar ayrıca Penn Dinsel Obsesyonlar Ölçeği (PDOÖ), Obsesif Inanışlar Ölçeğini de (OIÖ) doldurmuşlardır.

2. Çalışma: Bireysel Görüşme

Araştırmanın ikinci aşamasına dindarlık düzeyinin OKB semptomları, dinsel obsesyonlar, OKB ile ilgili fonksiyonel olmayan inançlar ve intrusif düşüncelerin ortaya çıkması, yorumlanması ve kontrol edilmesi üzerindeki etkisinin incelenmesi

amacıyla ön çalışmadan sonra belirlenen sadece yüksek ve düşük dindarlık düzeyine sahip üniversite öğrencileri dahil edilmiştir.

Katılımcılar: Kanadalı yüksek ve düşük dindarlık grupları 59 yüksek ve 55 düşük olmak üzere toplam 114 katılımcıdan oluşmuştur (76 kadın (67%) ve 38 erkek (33%), yaş ortalamaları: 20.20 (Sd = 3.22), yüksek dindarlık düzeyine sahip katılımcıların hepsi dinini Hıristiyan olarak belirtmiş, düşük dindarlık grubunun %28'si herhangi bir dine ait olmadıklarını belirtmişlerdir). Türk yüksek ve düşük dindarlık grupları ise 45 düşük 37 yüksek dindarlık düzeyine sahip toplam 82 Türk katılımcıdan oluşmuştur (47 erkek (%57) ve 35 kadın (%43) yaş ortalamaları: 22.23 (Sd = 2.14), %62' dinini İslamiyet olarak belirmiş, %32'si bir dine ait olmadıklarını belirtmiştir).

İşlem: Düşük ve yüksek dindarlık grupları ön çalışmaya katılan katılımcıların demografik bilgi formunda bulunan dindarlık ile ilgili beş sorudan biri olan " dini inancınız günlük yaşamda kararlarınızı ve davranışlarınızı belirlemede ne kadar önemlidir" sorusuna vermiş oldukları cevap doğrultusunda belirlenmiştir. Eğer birey dini inancının davranış ve kararlarını belirlemede hiç önemli olmadığını (0 = hiç önemli değil) belirtmişse düşük dindarlık grubuna, çok önemli yada aşırı önemli (4 = çok önemli, 5 = aşırı önemli) olduğunu belirtmişse yüksek dindarlık grubuna dahil edilmiştir. Ön çalışma sırasında eğer katılımcı araştırmacı ikinci kısmına katılmak istediğini belirtmişse, gönüllü katılımcı formuna doldurmuş olduğu iletişim bilgileri doğrultusunda kendisi ile elektronik posta yoluyla iletişime geçilmiş ve araştırmanın ikinci kısmına davet edilmiştir. Gönüllü her katılımcıya bireysel bir görüşme saati düzenlenmiş ve çalışma sırasında önce Uluslararası İstem Dışı Zihinde Beliren Düşünceler Görüşme Formu kullanılarak görüşme yapılmış ve ardından ölçek setini doldurması istenmiştir.

Ölçüm Araçları: Araştırmanın ikinci kısmının veri seti Uluslararası İstem Dışı Zihinde Beliren Düşünceler Görüşme Formu, Beck Depresyon Envanteri(BDE), Clark-Beck Obsesif-Kompulsif Envanteri (CBOKE), Aşırı Dindarlık Ölçeği (ADÖ), Suçluluk Envanteri (SE), Penn Dinsel Obsesyonlar Ölçeği (PDOÖ), Obsesif Inanışlar

Ölçeğini (OIÖ) ve Penn Kaygı Envanteri (PKE) olmak üzere 8 ölçek seti uygulanmıştır.

3. Çalışma: Din Okulu Öğrencilerinden Veri Toplanması

Din ve Dindarlık düzeyinin OKB semptomları, inançları, dinsel obsesyonlar ve intrusif düşünceler üzerindeki etkisinin daha iyi anlaşılabilmesi için dindarlık düzeyi açısından doğal olarak ayrışmış daha uç bir dindarlık grubu oluşturmak amacı ile Kanada'da Teoloji Okulu öğrencilerinden (Bible School), Türkiye'de ise İlahiyat Fakültesi öğrencilerinden veri toplanmıştır.

Katılmcılar: Araştırmanın bu aşaması, 66 Hristiyan Ruhban Okulu öğrencisi (25 kadın (%62) ve 41 erkek (%38), yaş ortalaması: 20.98 (SD = 1.38) ve Ankara Üniversitesi İlahiyat Fakültesi'nde okuyan 59 Müslüman üniversite öğrencisinden oluşmuştur (23 erkek (%39) ve 36 kadın (%61), yaş ortalaması: 21.8 (SD = 1.61).

Ölçüm Araçları: Araştırmanın ikinci kısmı ile tutarlı olarak Beck Depresyon Envanteri(BDE), Clark-Beck Obsesif-Kompulsif Envanteri (CBOKE), Aşırı Dindarlık Ölçeği (ADÖ), Suçluluk Envanteri (SE), Penn Dinsel Obsesyonlar Ölçeği (PDOÖ), Obsesif Inanışlar Ölçeğini (OIÖ) ve Penn Kaygı Envanteri (PKE) olmak üzere 7 ölçekten oluşan set halinde uygulanmıştır.

Araştırmada Kullanılan Ölçekler:

Araştırmanın bütün aşamalarına Demografik bilgi formu, Beck Depresyon Envanteri(BDE), Beck Kaygı Envanteri, Clark-Beck Obsesif-Kompulsif Envanteri (CBOKE), Aşırı Dindarlık Ölçeği (ADÖ), Suçluluk Envanteri (SE), Penn Dinsel Obsesyonlar Ölçeği (PDOÖ), Obsesif Inanışlar Ölçeği (OIÖ), Penn Kaygı Envanteri (PKE) ve Uluslararası İstem Dışı Zihinde Beliren Düşünceler Görüşme Formu olmak üzere toplam 10 ölçek uygulanmıştır. Veri toplama araçlarının özellikleri kısaca aşağıdaki gibi özetlenebilir:

Demografik Bilgi Formu (DBF): Araştırmanın yürütücüleri tarafından cinsiyet, yaş, medeni durum, geçmiş psikiyatrik öykü gibi demografik bilgileri toplamak amacıyla geliştirilmiştir. Ayrıca form katılımcıların, ibadet etme, dinlerine gönderilmiş olan kutsal kitabı okuma, ibadet yerlerine gitme, dini organizasyonlara bağış yapma

sıklığı ve dinin günlük yaşam karar ve davranışlarını belirlemedeki etkisini değerlendirmek amacıyla 5 dereceli beş maddelik soru setini de içermektedir.

Beck Depresyon Envanteri (BDE). 21 maddelik deprefif semptom şiddetini değerlendirmek amacıyla kullanılan bir ölçektir (Beck, Ward, Mendelsohn, Mock, ve Erlbaugh, 1961). Ölçeğin dilimize uyarlanmış iki formu bulunmaktadır (Tegin, 1980; Hisli, 1988. 1989). Hem orijinal form hem de Türkçe formu psikometrik açıdan geçerli ve güvenilir özelliklere sahiptir.

Beck Kaygı Envanteri (BKE). 21 Maddelik olan ölçek bireylerin kaygı düzeylerini değerlendirmek amacıyla geliştirilmiştir (Beck, Epstein, Brown, & Steer, 1988). Dilimize Ulusoy, Şahin ve Erkmen (1998) tarafından adapte edilmiş olan ölçeğin geçerlilik ve güvenirlik değerleri orijinal ölçekle tutarlı bulunmuştur.

Clark-Beck Obsesif-Kompulsif Envanteri (CBOKE). Clark ve ark. (2005) tarafından obsesif ve kompulsif semptom şiddetini değerlendirmek üzere geliştirilmiş 25 maddelik bir ölçektir. Ölçek14 maddelik obsesyon ve 11 maddelik kompulsiyon olmak üzere iki alt boyuttan oluşmaktadır. Ülkemizde Türkçe versiyonunun psikometrik özellikleri hem klinik gruplarda hem de klinik olmayan örneklemde desteklenmiştir (Besiroglu, Yucel, Boysan & Gulec, 2007).

Aşırı Dindarlık Ölçeği (ADÖ). Orijinali 20 maddeden oluşan ölçek daha sonra revize edilerek 12 maddeye düşürülmüştür. Bireyin sahip olduğu dinin temel prensiplerine ilişkin tutum ve inançlarını değerlendirmektedir. Ölçek spesifik bir dine ait maddelerden oluşmamaktadır. Bu ölçek bu araştırma için dilimize çevrilmiştir. Psikometrik özellikleri orijinal ölçekle oldukça tutarlı bulunmuştur.

Suçluluk Envanteri (SE). Ölçek bireylerdeki durumluk ve sürekli suçluluk ve ahlaki değerleri değerlendirmek üzere 45 maddeden oluşmaktadır (Kugler, & Jones, 1992). Ölçek bu çalışma için dilimize çevrilmiş, iç güvenirlik katsayısı, geçerlilik değerleri ve faktörleri oluşturan madde dağılımı orijinal form ile oldukça tutarlı bulunmuştur.

Penn Dinsel Obsesyonlar Ölçeği (PDOÖ). Ölçek Günah İşleme ve Allah Korkusu ile ilgili 19 maddeden oluşmaktadır. Bu araştırma için dilimize çevrilen ölçeğin bütün psikometrik özellikleri tatmin edici bulunmuştur.

Obsesif Inanışlar Ölçeği (OIÖ). Orijinali 7'li Likert tipe sahip 87 madde olan bu anket (OKBÇG, 2001) daha sonra araştırmacılar tarafından yeniden gözden geçirerek 44 maddelik versiyonunu hazırlamıştır (OKBÇG, 2005). Ölçeğin OKB semptomlarının başlangıcında ve sürdürülmesinde etkin olan işlevsel olmayan inanışları değerlendirmek üzere oluşturulmuş olan maddeleri 3 alt boyutu oluşturmuştur: sorumluluk/tehdit öngörüsü, mükemmeliyetçilik/belirsizlik & düşüncelerin önemi/ kontrolü. Ölçek dilimize de çevrilmiştir (Yorulmaz ve ark., 2008).

Penn Kaygı Envanteri (PKE): Meyer ve ark. (1990) tarafından geliştirilen likert tipi ölçek, endişe eğilimini ölçen 16 sorudan oluşmaktadır. Ölçeğin Türkçe'ye uyarlaması Yilmaz ve ark. (2008) tarafından test edilmiştir.

Uluslararası İstem Dışı Zihinde Beliren Düşünceler Görüşme Formu (UİDZBDGF). Görüşme formu zihinde istem dışı beliren düşüncelerin sıklığını, düşünceler sonucunda hissedilen stres düzeyini, fonksiyonel olmayan birincil değerlendirme stillerini, kontrol etme ihtiyacını, kontrol etmeye verilen önemi, ve fonksiyonel olmayan başa çıkma stratejilerini değerlendiren yarı yapılandırılmış bir görüşme formudur. Görüşme formu orijinalde 6 farklı istem dışı düşünceyi değerlendiren 6 alt forma sahiptir. Ancak bu araştırmada, şüpheye bağlı istem dışı düşünceler, dinsel istem dışı düşünceler ve cinsellik içerikli istem dışı düşünceler olmak üzere görüşme formunun üç alt ölçeği kullanılmıştır. Görüşme formu bu araştırma için dilimize çevrilmiştir.

2. TEMEL BULGULAR VE TARTIŞMA

Ölçeklerin psikometrik özelliklerini değerlendirmek üzere yapılan analizlerde, Türkçe versiyonu bulunan tüm ölçeklerin güvenilirliğinin bu araştırma da kullanılan Türk örnekleminde de kabul edilebilir değerlere sahip olduğu bulunmuştur. Bu çalışma kapsamında çevrilen SE, ADÖ, PDOE'nin, içsel tutarlılık ve madde-toplam korelasyon ranjlarının hem Türk hem de Kanadalı öğrencilerde istatiksel olarak tatmin edilebilir olduğu gözlenmiştir. Bu çalışmanın temel amacı psikometrik çalışma olmadığından ve faktörler arası ilişkilerin incelenmesi hedeflendiğinden, SE ve DOE

için ayrı faktör analizi yapılmamış ve ölçeklerin faktör yapısının orijinal ölçekle ne derece örtüştüğünü değerlendirmek amacıyla Hedef Dönüştürme Analizi (Vijver & Leung, 1997) kullanılmıştır. Orantısal uzlaşma katsayı kriteri 0.85 alındığında (Lorenzo-Seva & Ten Berge 2006), SE'nin Durumluk Suçluluk, Sürekli Suçluluk ve ahlaki değerler alt ölçekleri ile PDOE'nin Günah İşleme Korkusu ve Allah Korkusu faktörlerindeki madde dağılımlarının büyük oranda örtüştüğü gözlenmiştir. Bu sonuçlar iki ölçeğin kavramsal geçerlilik gösterdiğini destekler nitelikte olduğunu göstermiştir. ADÖ tek boyutlu bir ölçek olması nedeniyle faktör analizi kullanılmış ve ölçeğin tek boyutlu yapısı Türk örnekleminde de desteklenmiştir.

ADÖ, SE ve PDOE'nin kriter geçerliliği, CBOKE'nin OKB semptom düzeyi yüksek ve düşük olan grup karşılaştırmalarıyla test edilmiştir. Analiz sonuçları, yüksek düzey semptom gösterenlerin düşüklere oranla daha fazla suçluluk, dinsel obsesyon ve daha yüksek dindarlık düzeyine sahip oldukları bulunmuştur. Ayrıca ölçeklerin OKB semptom, Obsesif inançlar, endişe ile anlamlı pozitif ilişki gösterdiği bulunmuştur. Bütün bunlara ek olarak, çevrilen ölçeklerin iç güvenilirlik ve test-tekrar test güvenirlik katsayıları tatmin edilebilir düzeyde bulunmuştur. ZİDBDUGF'nin psikometrik özellikleri değerlendirildiğinde, birincil değerlendirme, ikincil değerlendirme ve kontrol stratejileri iç geçerlilik katsayıları orta derecede tatmin edilebilir bulunmuştur. Ayrıca görüşme formunun birincil değerlendirme maddelerinin kendisi ile tutarlı aynı alt ölçeklerle değil, Obsesif İnanışlar Ölçeği'nin alt ölçeklerinin hepsiyle anlamlı pozitif korelasyon göstermesi, görüşme formunun psikometrik özelliklerinin geliştirilebilmesi için görüşme formu üzerinde bazı çalışmalar yapılmasının faydalı olabileceğini düşündürmüştür.

Ana çalışma bulgularına bakıldığında, Kanadalı ve Türk grupları karşılaştırıldığında (total ya da tekil skorlarda ANOVA, alt boyutlarda MANOVA), Kanadalı ve Türk öğrenciler arasında toplam OKB semptom ve obsesif inanışlar düzeyleri arasında anlamlı bir fark bulunmadığı gözlenmiştir. Ancak, Türk öğrencilerin Kanadalı öğrencilerle karşılaştırıldığında daha fazla dinsel obsesyon sergilediği bulunmuştur. Alt boyutlar arasındaki grup farkları incelendiğinde, obsesyon ve kompulsiyon semptom düzeyleri arasında Türk ve Kanadalı öğrenciler arasında bir

fark bulunmazken, obsesif inanışlar ve dinsel obsesyonlar ölçeği alt boyutları arasında kültürler arası anlamlı farklar olduğu bulunmuştur. Analiz sonuçları Türk öğrencilerin Kanadalı öğrencilerden daha fazla mükemmeliyetçilik ve belirsizliğe tahammülsüzlük eğilimi gösterdiklerini ortaya koymuştur. Ayrıca dinsel obsesyonlar ile ilgili olarak Türk öğrencilerin daha fazla Allah Korkusu içerikli dinsel obsesyon yaşama eğiliminde olduğu bulunmuştur. Dindarlık düzeyinin ilgili değişkenler üzerindeki etkisi incelendiğinde analiz sonuçları, beklentilerle tutarlı olarak, yüksek dindarlık düzeyine sahip bireylerin, düşük dindarlık grubundakilerle karşılaştırıldığında daha fazla obsesyon, kompulsiyon, dinsel obsesyon (Allah Korkusu ve Günah İşleme Korkusu) ve obsesif inanış (sorumluluk/tehdit öngörüsü, mükemmeliyetçilik/belirsizlik & düşüncelerin önemi/ kontrolü) sergilediğine işaret etmiştir. Bu analiz sonuçları, OKB semptomatolojisi dikkate alındığında, bireylerin dindarlık düzeyinin hangi dine yada kültüre ait olduklarından çok daha önemli bir unsur olduğunu düşündürmüştür. Araştırma bulguları, dindarlık düzeyi ile OKB semptom ve inanışlar, ve dinsel obsesyon şiddeti arasında anlamlı pozitif bir ilişki olduğuna işaret eden daha önceki araştırma bulgularını destekler niteliktedir (örn., Abramowitz ve ark., 2002, 2004; Rasmussen & Tsuang, 1986; Shafran ve ark., 1996; Steketee ve ark., 1991). Bu araştırma bulguları ile tutarlı olarak, Rachman (1997) Katı dinsel ve ahlaki değerler ile büyütülmüş bireylerin yetişkinlikte daha fazla OKB ile ilgili fonksiyonel olmayan inanç ve OKB semptomu gösterebileceğini belirtmiştir. Aynı şekilde, Sica ve ark. (2002) yürütmüş olduğu çalışmada yüksek dindar bireylerin düşük dindar bireylerden daha fazla sorumluluk/tehdit öngörüsü, mükemmeliyetçilik/belirsizlik & düşüncelerin önemi/ kontrolü sergileme eğiliminde olduğunu ve daha yüksek OKB semptomu sergilediğini bulmuşlardır.

Bu araştırma bulguları dindarlığın OKB semptomatolojisi üzerindeki etkisinin yanı sıra din ve dindarlık düzeyinin ortak etkileşiminin kompulsif semptom ve dinsel obsesyonlar semptom şiddeti üzerindeki etkisinin anlamlı olduğuna işaret etmiştir. İlahiyat Fakültesinde okuyan Müslüman öğrenciler, Teoloji Okulu'nda okuyan Hıristiyan öğrencilerden daha fazla kompulsif semptom sergilemiştir. Benzer şekilde kompulsif semptom düzeyi Hıristiyan öğrencilerde farklı dindarlık düzeyleri arasında

bir farklılık göstermezken, İlahiyat Fakültesi'nde okuyan Müslüman öğrenciler, yüksek dindar Müslüman üniversite öğrencilerinden daha fazla kompulsif semptom sergilediği gözlenmiştir. Bu araştırma bulguları bireylerin ait olduğu dinin temel prensiplerinin genel semptom şiddeti açısından bir farklılık yaratmamasına karşılık semptomların içeriği üzerinde etkili olabileceğini düşündürmüştür. İslamiyet, Hıristiyanlık ile karşılaştırıldığında inanç ve düşüncenin yanı sıra ritüellerin ağırlıklı olduğu bir dindir. Bireyin Allah'a olan inancını ve bağlılığını önceden belirlenmiş ritüeller doğrultusunda yapması son derece önemlidir. İbadet öncesinde ve sırasında gerekli ritüellerin eksik yapılması yada sırasının değiştirilmesi yapılan ibadeti topyekün geçersiz kılabilir. Ayrıca ibadet öncesi temizlik İslamiyet'te son derece önemlidir, kişinin çamaşırlarına ya da vücudunun her hangi bir yerine idrar bulaşması abdesti bozar ve kişinin yeniden ibadete başlayabilmesi için temiz olması gerekir. Temizliğe ve belirli ritüellere yapılan vurgu Müslüman öğrenciler arasında kompulsif semptom şiddetini artırmış olabileceği düşünülmüştür. Bu araştırma bulguları ile tutarlı olarak, Okasha (1970) Mısırlı Müslüman OKB hastalarının İslam'daki özellikle anal bölgenin temizliğine yüklenen önem nedeniyle, namaz öncesinde kendilerini temizlemek için saatlerce sürebilen temizlik ritüelleri sergilediğini belirtmiştir. Bu araştırma bulguları OKB semptomlarının içeriğinin dine özgü değer, alışkanlık ve ritüellerden etkilenebileceğini belirten araştırma bulguları ile tutarlı görünmektedir (Greenberg & Shefler, 2002; Lemelson, 2003).

Kompulsif semptom düzeyindeki iki din arasındaki farklılığın yanı sıra, yüksek dindar Müslüman üniversite öğrencileri ve İlahiyat Fakülteli Müslüman üniversite öğrencileri aynı gruplardaki Hıristiyan öğrencilerden daha fazla dinsel obsesyon ve özellikle Allah korkusu içerikli dinsel obsesyon sergilediği bulunmuştur. Bu bulgular da yine İslamiyet'in dayandığı temel prensiplerle tutarlı görülmektedir. İslamiyet Allah'ın bağışlatıcılığı ve onun merhametinin sıklıkla vurgulandığı bir din olmasının yanı sıra Allah korkusunun Kuran'daki bir çok ayette sıklıkla vurgulandığı ve gerçek inananların Allah'ın gazabından mutlaka korkması gerektiğinin sıklıkla altının çizildiği bir dindir. Örneğin, Kuran'da yer alan Haşr suresi "Eğer biz, bu Kuran'ı bir dağa indirseydik, elbette sen onu Allah Korkusundan başını eğerek parça parça olmuş

görürdün. İşte misaller! Biz onları insanlara düşünsünler diye veriyoruz (Haşr: 21)" Allah korkusunun büyüklüğünü vurgulayan yüzlerce ayetten sadece biridir. Islamiyet'te ki bu vurgudan farklı olarak, Hıristiyanlar arasında Allah'ın nasıl algılandığına ilişkin çalışmalardan birinde Kunkel ve ark.(1999), katılımcıların Tanrı'yı cezalandırıcı olmaktan daha çok erkeksi, güçlü, rahatlatıcı ve koruyucu olarak algıladığını bulmuşlardır. Bu bulgular, dinin dayandığı temel prensiplerin dinsel obsesyonların bilişsel boyutunu ve içeriğini hangi inanç ve değerlerin oluşturacağını etkileyebileceğini düşündürmektedir.

Kültür düzeyinde yapılan regresyon analizlerinde Obsesyon semptom şiddetinin yordayıcıları incelendiğinde her iki katılımcı grubu için, depresyon ve kaygının anlamlı etkisi kontrol edildikten sonra dindarlığın, suçluluğun, obsesif inanış envanteri düşüncelerin önemi ve kontrolü alt ölçek skorlarının ve dinsel obsesyon şiddetinin anlamlı ve pozitif olarak obsesif semptom düzeyi ile ilişkili olduğu bulunmuştur. Ayrıca Türk katılımcılardan farklı olarak Kanadalı öğrenciler için sorumluluk ve tehdit öngörüsünün de obsesif semptom şiddeti ile anlamı ilişkisi olduğu bulunmuştur. Obsesif semptom düzeyinde görülen kültürler arası bu tutarlılığa rağmen kompulsif semptom şiddetinin yordayıcılarının Türk Müslüman ve Kanadalı Hıristiyan öğrenciler arasında farlılık gösterdiği bulunmuştur. Depresyon ve kaygı kontrol edildikten sonra suçluluk şiddetinin her iki katılımcı grubu için ortak yordayıcı olduğu bulunurken, Kanadalı öğrencilerde sadece düşüncenin önemi ve kontrolünün, Türk katılımcılar için ise dindarlık düzeyi, dinsel obsesyon şiddeti ve sorumluluk/tehdit öngörüsü inançlarının kompulsif semptom şiddeti ile anlamlı ilişki gösterdiği bulunmuştur. Bu bulgular kompulsif semptom şiddetinde yüksek dindarlık düzeyine sahip Müslüman ve Hıristiyan öğrenciler arasındaki anlamlı farklılığı destekler niteliktedir.

Bu araştırma bulguları her iki kültürde de düşüncenin önemi ve kontrolüne ilişkin fonksiyonel olmayan inançların obsesif semptom şiddeti üzerinde etkili bir rol oynadığını göstererek, Clark (2004) ve Rachman (1997) tarafından geliştirilmiş olan OKB'nin Bilişsel-Davranışçı teorisinin kültürler arası geçerliliğini desteklemiştir. Ancak, dinin niteliğinin obsesif semptomlar ile ilişkili obsesif inançların niteliğini

değiştirebileceğini düşündürmüştür. Türk katılımcılardan farklı olarak Kanadalı katılımcılar için sorumluk algısı obsesif semptom şiddeti ile ilişkili bulunmuştur. Bu farklılık, Siev ve Cohen'in (yayında) belirttiği gibi, Hıristiyanlıktaki inanç düzeyine ve zihinsel olguları kontrol etme olasılığına yapılan vurgudan kaynaklanabilir. Hıristiyanlığın temel prensiplerine göre, Hıristiyanlar sadece davranışlarından değil aynı zaman da düşüncelerinden de sorumludurlar ve bu sorumluluk algısı belki istenmeyen içerikli obsesyonların sonucunda hissedilen tehdit algısını yükselterek bireyi bu düşüncelerini kontrol etmek için çeşitli kontrol stratejileri sergilemeye daha fazla motive etmekte ve düşüncelerin Obsesif niteliğini artırmaktadır.

Penn Dinsel Obsesyonlar Ölçeğinin iki alt ölçeği olan Allah Korkusu ve Günah İşleme Korkusu boyutlarının yordayıcıları her iki kültür için incelendiğinde sonuçlar obsesyon ve kompulsiyonların yordayıcıları ile oldukça yüksek tutarlılık göstermiştir. Günah İşleme Korkusunun suçluluk, dindarlık, düşüncenin kendisinin tek başına çok önemli olduğuna ve istenmeyen düşünceler üzerinde tam bir kontrolün sağlanmasına atfedilen öneme ilişkin değerlendirmeler hem Müslüman hem de Hıristiyan katılımcılarda "günah işleme korkusuna" dayalı obsesyonların şiddetini artırıcı yönde rol oynamıştır. Müslüman öğrencilerden farklı olarak, sorumluluk ve abartılmış tehdit algısı sadece Hıristiyan öğrencilerde "günah işleme korkusuna" ilişkin semptom şiddeti ile ilişkili bulunmuştur. Bu farklılık iki din arasındaki niteliksel fark ile tutarlı görünmektedir. Obsesif inançlar hem türk hem Kanadalı katılımcılar için Tanrı Korkusu ile ilişkili bulunmazken, kompulsif semptom şiddeti sadece Türk katılımcılar için Tanrı korkusu ile ilişkili bulunmuştur. OKB'nin bilişsel modeli ile tutarlı olarak Obsesif inanış ve değerlendirmeler dinsel obsesyon şiddeti ile anlamlı bir ilişki göstermiştir (Rachman, 1993, 1989; Clark, 2004). Ancak, araştırma bulguları obsesif inanışların iki temel alt semptom gurubunda farklı bir rol oynadığına işaret etmektedir. Her iki örneklem gurubu içinde, obsesif inanışlar "Tanrı korkusu" ile bir ilişki göstermezken "Günah İşleme Korkusu" ile anlamlı bir ilişki göstermiştir.

Sonuç olarak, Rachman' ın önermiş olduğu dört temel yatkınlık faktörü ile tutarlı olarak (1997) Dinsel obsesyonlardan günah işeleme korkusu ve obsesif semptom şiddeti en iyi dört temel faktörün varlığı ile açıklanmıştır: (a) katı ahlaki

standartlar (örn., aşırı dindarlık), (b) abartılmış suçluluk; (c) fonksiyonel olmayan inanç ve değerlendirmeler, (d) depresyon ve kaygı. Sonuç olarak, gruplar arasında kültürler arası tutarlılıklar ilgili literatür bulguları ve bilişsel modeller ile paralellik gösterirken, kültürler arası farkın gözlendiği durumlar da mevcuttur.

Kültür ve dindarlık düzeyinin şüphe, dinsel ve cinsel içerikli intrusif düşünceler, bu düşünceler sonucunda hissedilen stres düzeyi, bu düşüncelerin içeriğinin yorumlanış tarzı, bu düşünceleri kontrol etmeye verilen önem, başarısız kontrol girişimlerine yüklenen anlam ve bu düşünceleri kontrol etmede kullanılan başa çıkma stratejileri üzerindeki etkisi anlamak amacıyla yapılan görüşme tekniği sonuçları bir arada değerlendirildiğinde üç tür intrusif düşüncenin de yaşanma sıklığı ve bu düşüncelerin ortaya çıkardığı stres düzeyi arasında Tük ve Kanadalı öğrenciler arasında anlamlı bir fark bulunmamıştır. Beklentilerle tutarlı olarak, dindarlı düzeyi sadece dinsel intrusif düşüncelerin frekans düzeyi üzerinde anlamlı bir etki yaratmıştır. Dinden bağımsız olarak, dindar bireyler dindar olmayan bireylerle karşılaştırıldığında daha fazla dinsel içerikli intrusif düşünce yaşadıklarını belirtmişlerdir. OKB'nin bilişsel teorisi ile tutarlı olarak bireylerin intrusif düşüncelerin içerik ve ortaya çıkısını yorumlayış tarzı intrusif düşünceler ile ilişkili hissedilen stres düzeyini anlamlı olarak yordadığı bulunmuştur. Farklı birincil değerlendirme ölçütlerinin farklı intrusif düşüncelerle ilişkili olmasının yanı sıra ayrıca birincil değerlendirme ölçütlerinin içeriğinin kültürel değerlerden etkilenebileceği bulunmuştur. Düşünce–davranış karmaşası Kanadalı öğrencilerde daha yaygın olarak kullanılan birincil değerlendirme ölçütü iken kaygı ve strese düşük tolerans gösterme Türk öğrenciler arasında daha yaygın olarak kullanılan birincil değerlendirme ölçütü olduğu bulunmuştur. Bu bulgular daha önceki araştırma bulguları ile tutarlı görülmektedir. Düşünce davranış karmaşasının Hıristiyan toplumlarda daha baskın olarak gözlenen bir olgu olduğu daha önceki araştırma bulguları ile gösterilmiştir. Örneğin, Cohen ve Rozin (2003) Yahudi katılımcılarla karşılaştırıldığında, Hıristiyan bireylerin ahlaksız bir şey düşünmenin bu şeyi yapmak ile aynı şey olduğuna daha fazla inanma eğilimi gösterdiklerini bildirmiştir. Türk öğrenciler de belirsizliğe ve kaygıya tahammülsüzlük eğilimi ile tutarlı olarak, Hofstede'in (2001) kültür tanımlarına ilişkin yürütülmüş olan bazı

çalışmalar, belirsizlikten kaçınmanın yoğun olduğu toplumların daha fazla sıkıntı, kaygı ve öfke yaşadığını bulmuştur. Bu toplumlarda insanların belirsizlikten hoşlanmadığı ve daha çok kollektif/toplumcu eğilimler gösterdiği gözlenmiştir (Shupper ve ark., 2004). Hofstede'in (2001) ülke değerleri listesine göre, Türkiye kişiler arası ilişkilerin önemsendiği daha toplumcu, daha erkeksi, belirsizlikten daha fazla rahatsız olan ve bir an önce belirsizliği ortadan kaldırmaya çalışan ve güç eşitsizliğinin daha çok olduğu kültürel özelliklere sahipken Kanada bireyin bağımsızlığına vurgu yapan daha bireyci bir ülkedir. Dolayısıyla bu bulgular, kültürel özellikler ve OKB inançları arasındaki ilişkiyi destekler niteliktedir.

Zihinde İstem Dışı beliren Düşünceler Uluslararası Görüşme formundan elde edilen bulgular ayrıca Clark'ın (2004) bilişsel davranışçı modeli ile tutarlı olarak bireylerin intrusif düşünceleri kontrol etmede yaşadıkları başarısızlığa atfettikleri olumsuz değerlerin bireylerin hissettikleri kaygı düzeyini artırarak normal intrusif düşüncelerin frekans ve şiddetini artırıcı yönde rol oynayabileceğini düşündürmüştür. Ayrıca ikincil değerlendirme ölçütlerinin bazı ufak farklılıklara rağmen Türk ve Kanadalı öğrenciler arasında ortak özellikler gösterdiği bulunmuştur.
Son olarak intrusif düşünceleri kontrol etmede kullanılan stratejiler arasındaki kültürler arası farklılıklar incelendiğinde, bazı farklılıklara rağmen kontrol stratejilerinin kültürler arası ortak özellikler gösterdiği bulunmuştur. Türk öğrencilerin daha çok kontrol etme ve kompulsif ritüeller kullanırken Kanadalı öğrencilerin daha çok emin olmak için çevreden onay arama ya da kendini ikna etmeye çalışma stratejilerini daha çok kullandıklarını ortaya koymuştur

Sonuç olarak, gruplar arasında kültürler arası tutarlılıklar ilgili literatür bulguları ve bilişsel modeller ile paralellik gösterirken, kültürler arası farkın gözlendiği durumlar da mevcuttur.

4. KATKILAR, SINIRLILIKLAR VE ÖNERİLER

Bu çalışma ilk defa, farklı dindarlık düzeyine sahip Müslüman ve Hıristiyan öğrencilerin aynı çalışmada karşılaştırarak kültür, dindarlık düzeyi ve OKB

semptomatolojisi arasındaki ilşkiyi inceleyen ilk çalışmadır. Ayrıca İlahiyat F,akültesi ve Teoloji Okulu öğrencilerin araştırma desenine dahil edilmesinin dindarlık düzeyinin OKB üzerindeki etkisinin daha iyi anlaşılmasına önemli katkılar sağladığı düşünülmektedir. Ayrıca, araştırmada görüşme tekniğinin kullanılması self-değerlendirme ölçeklerine verilen yanlı cevap verme olasılığını en aza indirerek daha sağlıklı veriler elde edilmesine yardımcı olduğu düşünülmektedir. Uyarlanan dört yeni ölçüm aracı uluslararası literatüre ülkemizden yapılabilecek katkılara ve ilgili literatürü takip etmeye olanak sağlanmıştır. Daha da önemlisi, yatkınlık faktörlerindeki kültürler arası benzerlik ve farklılıklar, OKB'ye yönelik hazırlanacak psiko-eğitim ve müdahale programlarında ve OKB semptomlarının değerlendirilmesi ve terapisinde kullanılmak üzere önemli ipuçları sunmuştur. Dindarlık düzeyinin OKB semptomatolojisi, istem dışı düşünceleri olumsuz yorumlama ve dolayısıyla kontrol eğilimi üzerindeki olumsuz etkisi önleyici ruh sağlığı programlarında aileleri çocuk yetiştirme sürecinde kullanılan katı dinsel ve ahlaki tutumların ruh sağlığı üzerindeki olumsuz etkilerine ilişkin bilgilendirilmesinin önemli olduğu izlenimi vermektedir. Ayrıca, özellikle dindarlık düzeyi ile düşüncenin önemli olması/kontrol değerlendirmeleri ve OKB arasındaki anlamlı ilişki özellikle yüksek dindar hastalarla çalışırken uygulanacak terapi programlarda hastanın kontrol eğilimi mutlaka göz önüne alınması gerektiğini düşündürmektedir.

Öte yandan, bu çalışmanın da bazı sınırlılıkları mevcuttur. Yönteme dair sınırlılıkların başında, çalışmada sınırlı bir yaş ranjında bulunan üniversite öğrencilerinin kullanılması, yetişkin örneklem kullanılmaması, araştırılan olgu klinik bir olgu olmasına rağmen sağlıklı normal popülaston kullanılması sayılabilir. Ayrıca, iki farklı ülkeden iki farklı din grubunun seçilmiş olması, din ile diğer kültürel faktörlerin etkisinin birbirinden ayrıştırılmasını imkansız hale getirmiştir. Bu nedenle gelecekteki araştırmanın aynı ülkede yaşayan farklı din gruplarından bireylerin seçilmesinin dinin OKB üzerindeki etkisinin daha iyi anlaşılmasına yardımcı olabileceği düşünülmektedir.

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