

INTOLERANCE OF UNCERTAINTY FOR IDIOSYNCRATIC CONCERNS IN  
ANALOGUE GENERALIZED ANXIETY DISORDER, OBSESSIVE COMPULSIVE  
DISORDER, AND NORMAL CONTROLS

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the Temple University Graduate Board

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DOCTOR OF PHILOSOPHY

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by  
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## ABSTRACT

Title: Intolerance of Uncertainty for Idiosyncratic Concerns in Analogue Generalized Anxiety Disorder and Obsessive Compulsive Disorder, and Normal Controls

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The overall goal of the present study was to demonstrate that intolerance of uncertainty (IU) is a key feature in both generalized anxiety disorder (GAD) and obsessive-compulsive disorder (OCD). More specifically, I wanted to test certain portions of the conceptual models proposed for the study suggesting that when participants with GAD or OCD are faced with situations that tap into their idiographic concerns, they experience an increase in IU and subsequently either worry or obsessing/ritualizing. College students who met predetermined cutoff scores on study measures were assigned to analogue GAD, OCD, or control groups. The stimuli consisted of scripts that were generated to induce a sense of uncertainty in participants. It was anticipated that, when faced with material related to their idiographic concerns, the experience of uncertainty would lead them to become intolerant of the uncertain thoughts and feelings, thereby leading to increased worry, obsessing and/or ritualizing, and/or negative affect. Each script was 349 words in length and described one of 20 GAD and OCD themes commonly occurring in the literature. Participants' levels of worry, obsessing and/or ritualizing, negative affect, and IU were assessed before and after the scripts were administered. The study design included three levels of group (GAD, OCD, Control) and two levels of script (matched vs. mismatched). Half the participants in analogue GAD and OCD groups were administered scripts associated with their specific concerns (i.e., matched), and the other half were administered scripts that were mismatched. Half of the

Control group was administered scripts that were assigned to the GAD matched group and the other half received scripts assigned to the OCD matched group.

The study examined several different hypotheses. IU and negative affect increased from pretest to posttest assessment. However, worry and obsessing and/or ritualizing did not. Posttest IU significantly predicted worry and obsessing and/or ritualizing. However, there were no significant differences between the three groups, nor were there any significant differences as a function of matching vs. mismatching of idiographic concerns. The present study did not find any support for a hypothesized mediational role of IU in the relationship between type of script and worry, obsessing and/or ritualizing, or negative affect. Moreover, there were no significant differences between the GAD, OCD, and Control groups in worry, obsessing and/or ritualizing, negative affect, or IU. These findings did not provide support for the proposed mixed moderation-mediation model. IU was associated with worry, OC, and negative affect, but it may not be the motivational mechanism behind changes in those constructs.

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## CHAPTER 1 INTRODUCTION

Researchers have been interested in the similarities among different anxiety disorders for some time (Brown, Chorpita, & Barlow, 1998; Zinbarg & Barlow, 1996). Much of this research has focused on generalized anxiety disorder (GAD) and obsessive compulsive disorder (OCD), given the apparent similarities between worries in GAD and obsessions in OCD. However, the literature suggests that worries and obsessions can be distinguished based on their content; for example, worries are more likely to concern real life problems, such as the health of a significant other, whereas obsessions may be more extreme, such as repeated thoughts about accidentally killing a loved one (Freeston et al., 1994a). Nevertheless, recent research suggests that the two disorders may be more similar than different in certain respects (reviewed by Comer, Kendall, Franklin, Hudson, & Pimentel, 2004). The similarities between the two disorders may be based on a common underlying factor, intolerance of uncertainty (IU), which may be critical in the development and maintenance of both GAD and OCD. Several studies have supported the importance of IU in either/both disorders (Buhr & Dugas, 2002; Dugas, Gagnon, Ladouceur, & Freeston, 1998; Holaway, Heimberg, & Coles, 2006; Obsessive Compulsive Cognitions Working Group, OCCWG, 1997; Tolin, Abramowitz, Brigidi, & Foa, 2003). We will now discuss the conceptualization of IU in GAD and OCD, respectively, and then bridge the gap between the two.

### *IU in GAD*

GAD has been characterized by excessive and uncontrollable worry (DSM-IV; American Psychiatric Association, 1994). MacLeod, Williams, and Bekerian (1991) have defined worry as a cognitive phenomenon that is focused on the uncertainty of the

outcome of future events, in which the event or the consequences are expected to be negative, and these cognitions are accompanied by feelings of anxiety. Worry is experienced by both clinical and nonclinical populations, and about 38% of individuals worry at least once a day (Tallis, Davey, & Capuzzo, 1994b). The relationship between IU and worry has been implicated in the development and maintenance of GAD (Dugas et al., 1998).

The definition and conceptualization of IU has gone through several iterations. As an example, several definitions of IU that have been provided by the same research group (devoted to the study of GAD) are provided here: Freeston, Rhéaume, Letarte, Dugas, and Ladouceur, (1994b) defined IU as the way an individual perceives information in ambiguous or uncertain situations and responds to it with a set of cognitive, behavioral, and emotional reactions. According to these authors, the definition of IU encompasses the emotional and behavioral consequences of being uncertain, how uncertainty reflects on a person, expectations that the future will be predictable and frustration when it is not, attempts to control the future, and all-or-nothing responses to uncertain situations. Ladouceur, Gosselin, and Dugas (2000) argued that IU reflects a predisposition to react negatively to an uncertain event irrespective of the probability of the event or its consequences taking place. Dugas, Gosselin, and Ladouceur (2001) have also defined IU as the excessive tendency of a person to find the possibility of negative events unacceptable irrespective of a low probability of their occurrence. Most recently, Dugas and colleagues (2005a) modified the definition to reflect the tendency to view the occurrence of unexpected events as negative, unacceptable, upsetting, and unfair. This

definition of IU reflects an emotional state that is geared towards the future occurrence of the consequences of these unexpected events (Dugas et al., 2005a).

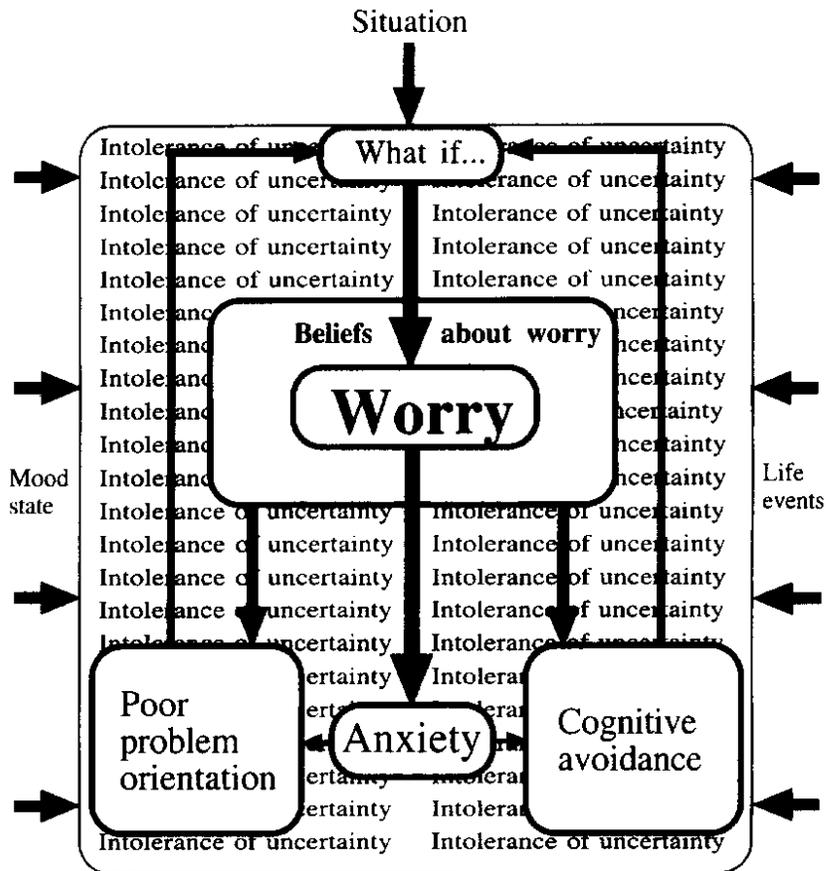


Figure 1. Conceptual Model of GAD (1998)

Reprinted from *Behaviour Research and Therapy*, 36, M. J. Dugas, F. Gagnon, R. Ladouceur, & M. H. Freeston. Generalized anxiety disorder: A preliminary test of a conceptual model, page 215, copyright 1998, with kind permission from Elsevier.

Dugas et al. (1998) proposed a model of GAD that puts IU and worry at the very center. According to their model, when an individual is faced with a problematic situation, he or she may start to think about many alternative outcomes, in “what if...?” fashion. The individual concocts scenarios and dwells on them. IU, which is the first component of the model, exacerbates this tendency, especially when certain elements of the situation are ambiguous. IU is the filter through which the individual views the

environment, and it may be seen as a predisposition to view uncertain situations as unacceptable. Positive beliefs about worry, the second component of the model, and high IU exacerbate “what if...” thinking and set the stage for worrying to occur. Some of these beliefs may include “worrying protects loved ones” and “worrying helps avoid disappointment” (Dugas et al., 1998, p. 216). The other two components of the model are poor problem orientation and cognitive avoidance. *Poor problem orientation* is defined as a set of metacognitive processes including awareness and appraisal of everyday problems and one's own problem-solving ability (Maydeu-Olivares & D'Zurilla, 1996). The final feature of the model is *cognitive avoidance*. Worry is mainly expressed in the form of thoughts that are verbal in nature, which are related to reduced somatic activity compared to imagery of the same content (Borkovec & Lyonfields, 1993). As a result, worry may be negatively reinforced by a decrease in aversive somatic activation. This suggests that cognitive avoidance of threatening mental images is a key component of GAD (see Figure 1).

The Dugas-Ladouceur group has carried out several studies to test their conceptual model of GAD. Dugas et al. (1998) found that IU successfully discriminated patients with GAD from non-clinical controls and from persons with other anxiety disorders (OCD, social anxiety disorder, panic disorder with or without agoraphobia, and post-traumatic stress disorder patients; Ladouceur et al. 1999). IU was also the most effective discriminatory component of the model in these analyses. IU has been shown to be more strongly related to GAD than to panic disorder with agoraphobia (Dugas, Marchand, & Ladouceur, 2005b). Moreover, IU was as effective in discriminating patients with GAD from non-clinical controls as symptom measures of GAD.

To establish the non-clinical specificity of IU, Dugas et al. (2001) conducted a study with college students. IU was highly correlated with worry, moderately correlated with obsessions/compulsions, and weakly correlated with anxiety sensitivity. IU accounted for a significant amount of variance in worry, above and beyond that accounted for by obsessions/compulsions or panic symptoms. Worry also accounted for variance in IU above and beyond that explained by obsessions/compulsions or panic sensations.

Ladouceur et al. (2000) conducted an experimental manipulation of IU. Adding onto their previous definition of IU, they suggested that it is “a predisposition to react negatively to an uncertain event or situation, independent of its probability of occurrence and of its associated consequences” (p. 934). Ladouceur et al. (2000) used a computerized roulette game to manipulate IU. They did not manipulate the objective probability of winning or the consequences associated with the outcome, only the potential acceptability of the outcome. Their hypothesis was that participants in the high intolerance of uncertainty group would report greater worry following the manipulation than those in the low intolerance of uncertainty group.

Responses showed that the level of IU was successfully manipulated since participants in the high IU group became more intolerant of chances of winning compared to the low IU group. Furthermore, participants in the high IU group experienced greater worry about the fictitious foundation than participants in the other group (to make the stakes more real, participants were told that if they won \$20 or more, the money would be donated to a children’s foundation). Based on these results, the

authors concluded that IU may precede worry, thereby drawing a potential causal link between the two constructs.

IU may be important in understanding the nature of GAD. However, there are several weaknesses in this literature, and questionable conclusions that the authors (the Dugas-Ladouceur group) have drawn from existing data that prevent us from making definitive statements about the specificity of IU to GAD. Furthermore, they often draw univariate causal conclusions when a moderational relationship may best account for the data. In their model of GAD, IU is a platform on which several connections among external triggers, “what if...” questioning, and worry are made. However, there is no direct causal link between IU and worry in their model (refer to Figure 1).

Despite these fundamental problems, most of the research conducted by this group is based on the premise that a causal relationship between IU and worry exists. In most of their studies, the Dugas-Ladouceur group has used cross-sectional data to draw longitudinal conclusions. Moreover, in the only study in which the authors claimed to have manipulated IU (Ladouceur et al., 2000), they appear to have manipulated the acceptability of the outcome rather than its uncertainty or the participants’ intolerance of uncertainty. Nevertheless, they drew causal conclusions about the relationship between IU and worry. Finally, there is growing evidence that is highlighted in the subsequent sections of this paper that suggests that IU as defined by the Dugas-Ladouceur group may, in fact, be related to OCD. However, they have failed to acknowledge these findings and to subsequently alter their model of GAD. Along those lines, I next review IU in OCD.

### *IU and OCD*

OCD is characterized by intrusive and distressing thoughts, images, and/or impulses (obsessions) and/or repetitive physical or mental behaviors (rituals or compulsions; American Psychiatric Association, 1994). There is much heterogeneity in the manifestations of OCD, including checking, repeating, washing, symmetry; concerns about saying inappropriate things, or acting out of control; concerns about sex, harm, or religion; and hoarding.

Tolin, Abramowitz, Przeworski, and Foa (2002) have added to the cognitive model originally proposed by Salkovskis (1985). Senseless intrusive thoughts are experienced by all human beings (Rachman, 1998; Salkovskis, 1985). However, when one appraises such thoughts to be threatening or dangerous, they cross over into the realm of OCD. The appraisals give rise to negative affect, and one feels the urge to neutralize the intrusive thought or take action to prevent the negative consequence from happening. This is usually done by avoidance or some form of compulsive behavior. Compulsive rituals and avoidance behaviors prevent the individual from gaining threat-incompatible information, thereby negatively reinforcing the rituals and/or avoidance because they temporarily help reduce the distress. As a result, the rituals are likely to be repeated when the intrusive thoughts occur. According to Tolin et al. (2002), individuals' attempts to suppress or neutralize the intrusive thoughts usually result in a paradoxical increase in the frequency of the occurrence of the thoughts.

IU has been proposed as a dysfunctional belief in OCD. The OCCWG (1997) defined IU as a set of beliefs that uncertainty, newness, and change are intolerable because they may be dangerous. Additionally, Tolin et al. (2003) have pointed out that people with OCD report difficulty tolerating uncertainty or ambiguity. IU has been

associated with symptoms of OCD and with beliefs regarding the likelihood of threat and the need for control (Makhlouf-Norris & Norris, 1972). According to Makhlouf-Norris and Norris (1972), patients with OCD have an excessive need for certainty that makes them want to control and predict the future. In a study conducted by Hamilton (1957), obsessional neurotics were more likely to give “can’t decide” responses to ambiguous line drawings than patients from other diagnostic groups, indicating avoidance of ambiguity.

According to Grayson (1999), IU is at the heart of OC behaviors. He suggested that if someone suffers from OCD, he/she must be attempting to gain 100% certainty about something. When one fails to accomplish that goal, he/she experiences anxiety. This anxiety then drives the individual to perform rituals. Grayson (2003) refers to intellectual uncertainty (“what if...” questions), which is the tendency to question certain aspect of our lives, and emotional uncertainty, which represents feelings about unpredictable events, mainly things and events that threaten us or our loved ones. According to Grayson (1999; 2003), the goal of OCD treatment is to accept the notion of living with uncertainty.

Tolin et al. (2003) assessed IU in OCD checkers (individuals who engage in checking rituals) versus non-checkers and nonanxious controls. OCD checkers showed greater IU than non-checkers and controls. Patients with repeating rituals also demonstrated elevated IU scores. Rector, Cassin, Richter, and Burroughs (in press) showed that relatives of probands with early-onset OCD scored significantly higher on IU than controls. These findings indicate that IU is an important area of belief in OCD and that it is also observed in non-symptomatic first degree relatives of OCD probands.

Mancini, D'Olimpio, Del Ginio, Didonna, and Prunetti (2002) conceptualized IU as a need for cognitive closure (defined as the need for closure as a desire/preference for an answer, any answer, on a topic as compared to ambiguity and confusion). Contrary to their expectations, Mancini et al. (2002) found a lack of relationship between need for closure and OC symptoms.

Most of the research conducted on IU in OCD with samples of patients with OCD or non-clinical samples with OC characteristics has been non-specialized, i.e., very few studies have proposed and assessed the construct of IU as the motivational factor for driving and maintaining OCD. Thus, our understanding of IU in this population is limited, although it does appear that IU is an important belief in clinical and nonclinical populations with OC beliefs and symptoms. Moreover, operational definitions of IU have been insufficiently detailed and/or inconsistent across studies. Some of the different conceptualizations have been as follows: that certainty is a necessity; that ambiguity is intolerable; that people may have difficulty with novel situations; and as an epistemological need for cognitive closure. In conclusion, there is a need for a clearer and a more consistent conceptualization of IU in OCD.

#### *IU in GAD and OCD*

As suggested earlier, there are similarities between the symptoms of OCD and GAD and the beliefs associated with these disorders. Much research has focused on establishing the specificity of IU in GAD but not in OCD. There is very little research that bridges the gap between the two. In this section we look at the literature that has attempted to compare GAD and OCD with respect to IU.

Holaway et al. (2006) conducted a study to better understand the role of IU in GAD and OCD in an analogue college sample. The group with both OCD and GAD scored significantly higher on IU than those in the OCD and nonanxious control groups but not higher than the group with only GAD. IU was significantly associated with measures of GAD, OCD, worry, and various compulsive behaviors. Sica et al. (2004) assessed IU and its relationship to GAD and OC symptoms in an Italian sample. IU was one of the three best predictors of group differences. IU was related to both GAD and OCD; however, it showed a stronger relationship with OCD.

In conclusion, specific studies of GAD suggest the centrality of IU to GAD (e.g., Dugas et al., 2001; Freeston et al., 1994b; Ladouceur et al., 2000). Specific studies related to OCD have demonstrated the importance of IU in OCD (OCCWG, 1997, 2001; Tolin et al., 2003). Two studies that assessed both GAD and OCD, have suggested that IU is related to both disorders (Holaway et al., 2006; Sica et al., 2004). So, is there a common thread that ties IU to GAD and OCD? Or is IU in the two disorders distinct in all respects? To address these questions, I proposed models of IU in GAD and OCD. Based on the literature reviewed, and my conceptualization, Table 1 presents a summary of IU in each of the two disorders as well as a summary of its correlates. As seen from Table 1, there are some similarities and some differences between IU and its correlates in GAD and OCD.

#### *New Conceptualizations of IU in GAD and OCD*

Here I have proposed new models of IU in GAD and OCD. This discussion encompasses the relevant points listed in Table 1.

Table 1. Relevant Characteristics of IU in GAD and OCD

<b>Relevant Characteristics of IU</b>	<b>GAD</b>	<b>OCD</b>
Process variable that exacerbates an individual's tendency to worry	Yes	No
Process variable that exacerbates an individual's tendency to engage in obsessive compulsive behaviors	No	Yes
Moderator of the relationship between the ambiguity of a situation and worry	Yes	No
Moderator of the relationship between the ambiguity of a situation and neutralizing behaviors	No	Yes
Emotional and cognitive state geared towards action	Yes	Yes
Beliefs about the need to be certain	Yes	Yes
Beliefs about a poor capacity to solve problems	Yes	Yes
Beliefs that there is always a "right answer"	No	Yes
Difficulty functioning in ambiguous situations	No	Yes
Intolerance for newness and change	No	Yes
Related to poor problem orientation	Yes	Yes
Related to cognitive closure	No	Yes
Related to doubt	No	Yes
Related to perfectionism	Yes	Yes
Related to slower decision making	Yes	Yes
Related to decreased confidence in one's memory	No	Yes
Related to thought-action fusion	No	Yes
Related to inflated responsibility	No	Yes
Related to the need to control thoughts	No	Yes
Related to over importance of thoughts	No	Yes
Related to over estimation of threat	Yes	Yes
May lead to frustration	Yes	Yes
May lead to inaction or a sense of paralysis	Yes	No

*Note:* IU – intolerance of uncertainty; GAD – generalized anxiety disorder; OCD – obsessive-compulsive disorder

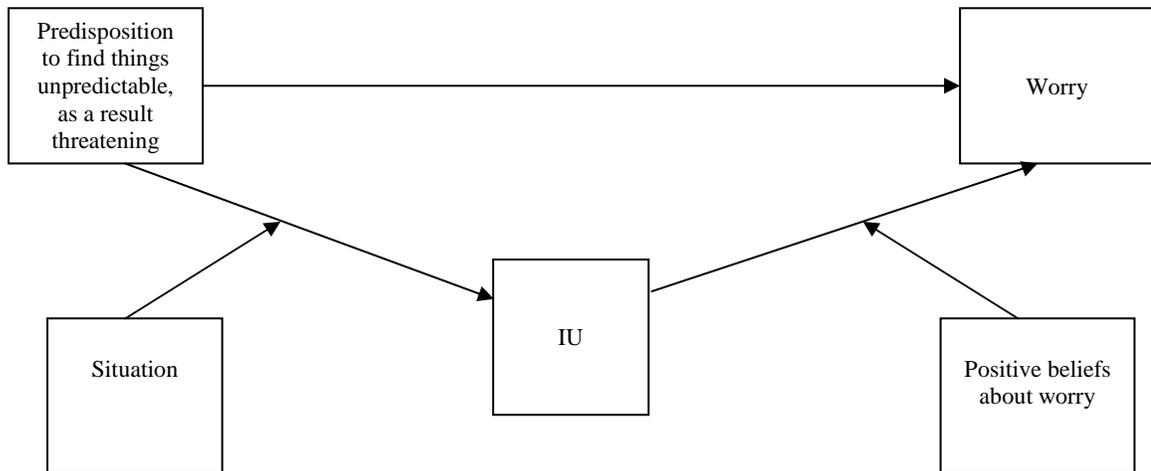


Fig. 2. Conceptual Model of IU in GAD

(Refer to Figure 2) In my model of IU in GAD, IU is triggered when faced with situations in which an individual is unsure of his/her capacity to deal with the potential unpredictability of a situation as subjectively appraised. This subjective belief about uncertainty and unpredictability of events and appraisal of danger is considered to be a trait-like predisposition. Most situations are seen as potentially dangerous and threatening, and the objective probability of harm and negative consequences is exaggerated. IU is seen as a process that encompasses a cognitive (belief) component and an emotional (distress) component. In my understanding, IU is the emotional, cognitive, and motivational state that propels an individual to take action to reduce uncertainty.

I proposed a mixed moderation/mediation model of IU in GAD. The predisposition to find things as threatening and unpredictable interacts with situational factors (moderation). If the resultant threat surpasses the individual's threshold, it elicits IU. IU, in turn, interacts with positive beliefs about worry to motivate worry (moderation). Finally, IU mediates the relationship between the predisposition, the

situation, and worry to maintain the worry process.

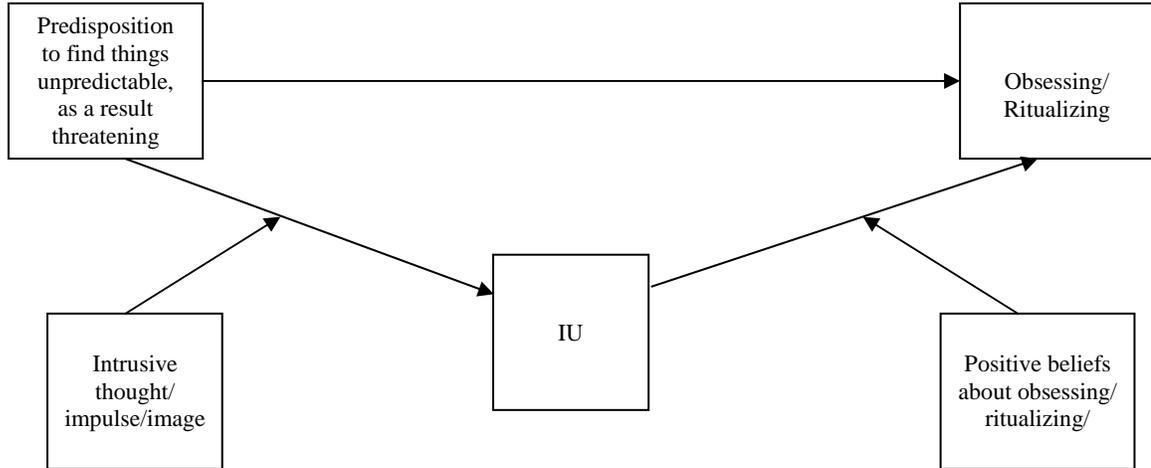


Fig. 3. Conceptual Model of IU in OCD

(Refer to Figure 3) IU in OCD elicits distress towards thoughts, images, and/or impulses which are intrusive and which are appraised as threatening. IU is triggered when images, impulses, or thoughts that are perceived as idiosyncratically threatening for that individual occur. It is an aversive state with emotional and cognitive components that propels the individual to take action to reduce uncertainty. IU is the product of a psychological predisposition to find intrusive thoughts, images, and impulses threatening and unpredictable and an appraisal that the intrusions are, in fact, dangerous and unpredictable.

Whether a person experiences IU and the need/desire to ritualize/neutralize depends on whether the intrusion falls in the category of the class of situations, objects, thoughts, and behaviors that are idiosyncratic problem areas for that specific individual. Thus, this model addresses the heterogeneity of symptom manifestations in OCD.

Again, here I proposed a mixed moderation/mediation model. The relationship between the predisposition to find things uncertain or unpredictable and IU is moderated

by the intrusive thought, impulse, or image. If the resultant threat surpasses the individual's threshold, it leads to IU. IU in turn interacts with the beliefs about how ritualizing or neutralizing can help reduce the IU and the threat related to the intrusion thereby motivating the ritualizing/neutralizing (moderation). Finally, IU mediates the relationship between the predisposition, the intrusion, and the ritualizing/neutralizing to maintain it.

### *Current Study*

From the review presented here, it is clear that no study of GAD or OCD has assessed IU with respect to the idiosyncratic concerns that individuals endorse as being important to them. One of the main goals of this study was to establish that IU is central to both disorders and that when presented with concerns that are most important to the participants, they would experience IU and utilize the subsequent strategies (worry and obsessing/ritualizing) to rid themselves of uncertainty and the negative affect that accompanies it. To the best of my knowledge, there are no studies that have manipulated uncertainty through the content of concerns in GAD, OCD, and control groups in the same study. I measured affect preceding and following the manipulation because I believed that IU would be accompanied by an increase in negative affect. Accordingly, I proposed a study design that allowed us to assess IU, negative affect, and the need/desire to worry or to obsess/ritualize over time preceding and following the manipulation of uncertainty-inducing content.

Based on the conceptualizations I proposed for the centrality of IU in GAD and OCD, I empirically tested certain portions of both models (testing both models in their entirety was beyond the scope of this study). I assessed the interaction of the

predisposition to find things uncertain and as a result threatening and the situation/intrusive thought/impulse/image. Here the predisposition was defined by group membership (GAD, OCD, or Control), and the analogue for the situation that triggered state IU was scripts created for this study to induce uncertainty. Akin to the descriptions in the models, I proposed that when uncertainty reaches an individual's idiosyncratic threshold, the person experiences IU. Here I assessed how the script moderates the relationship between the predisposition (group membership) and IU. However, instead of examining the mediational relationship of IU between the interaction of script and group membership and worry or obsessing/ritualizing, on the advice of the doctoral advisory committee, I examined the potential mediational role of IU in the relationship between type of script and worry or obsessing/ritualizing and negative affect.

There were several specific goals of the current study. I wanted to establish that manipulation of the content of uncertainty-inducing scripts leads to changes in levels of IU as well as negative affect. I hypothesized that the urge to worry and to obsess/ritualize would also increase following the manipulation of uncertainty. Furthermore, this study attempted to establish that IU is an important construct in the understanding of both GAD and OCD. Since this study featured a manipulation of the content of the uncertainty-inducing stimuli, and I assessed pretest and posttest levels of IU, negative affect, worry, and obsessing and/or ritualizing in GAD, OCD, and Control groups, I wanted to ascertain whether IU plays a role in the tendency to worry and to engage in obsessing and/or ritualizing, thereby suggesting a pathway by which these disorders may be maintained. In addition, I attempted to establish that there are idiosyncratic triggers for IU for participants in the GAD and OCD groups.

This study included six groups of undergraduate participants based on their self-report responses on measures of GAD and OCD as well as the type of uncertainty manipulation script they received. I tapped into ten worry domains that have historically been seen as important for individuals with GAD (minor matters, work, school, family, social/interpersonal, personal health, health of others, community and world affairs, finances, and self-confidence). I generated scripts that reflected each of the areas of worry. For OCD scripts, I tapped into ten areas of OC behaviors (washing/contamination, checking, doubting, cleaning, ordering, mental neutralizing, dressing/grooming, obsessional thoughts/impulses of harm to self/others, obsessional thoughts/impulses that are sexual in nature/concerns with morality, and hoarding). Again, I generated scripts reflecting ten areas of OC behaviors. The scripts were utilized to induce uncertainty related to the specific concerns of the individuals in the GAD and OCD groups. Written scripts have long been used in psychological research to induce affective states (see, e.g., Kuo & Linehan, 2009; Pitman, Orr, Foa, de Jong, & Claiborn, 1987).

The six groups were as follows: 1) GAD with uncertainty script matched to personal GAD-related concerns (GAD matched), 2) GAD with yoked OCD script (GAD mismatched), 3) OCD with uncertainty script matched to their personal OCD-related concerns (OCD matched), 4) OCD with yoked GAD script (OCD mismatched), 5) Control group with yoked GAD script (individuals who did not meet the diagnostic cut-off scores on the designated measures, see below, for either GAD or OCD) who received the GAD script that was the same as that of a specific participant in the GAD matched script group, 6) Control group with yoked OCD script.

### *Hypotheses*

I hypothesized the following:

1. The sample as a whole would experience an increase in IU, negative affect, worry and/or obsessing and/or ritualizing from pretest to posttest.
2. Participants in the GAD matched group would experience more IU, negative affect and need to worry upon the administration of the uncertainty-inducing script than the GAD mismatched group (I believed that when matched with their own idiosyncratic concerns, participants in the GAD group would respond to the dependent measures more strongly than to mismatched OCD concerns).
3. Participants in the OCD matched group would experience greater IU, negative affect, and need to obsess/ritualize following the administration of the uncertainty-inducing scripts than the OCD mismatched group (the same logic as stated for hypothesis 2 holds true here).
4. Participants in the OCD mismatched group would experience more IU, negative affect, and tendency to obsess/ritualize than participants in the GAD mismatched group (I believed that GAD concerns tend to be more real-life, “normal” concerns compared to more bizarre concerns of OCD individuals; as a result, therefore, mismatched participants exposed to GAD scripts would respond more strongly to the dependent measures than participants exposed to OCD scripts).
5. Participants in the Control groups with yoked GAD and OCD scripts would experience significantly smaller increases in IU, negative affect, and need to worry and/or obsess/ritualize following the administration of the scripts than any of the GAD or OCD groups.

6. In the control groups, I predicted some increases in levels of IU, negative affect, need to worry and/or obsess/ritualize from pre- to post-assessment (I expected that after reading potentially distressing material, participants in the control groups would respond to the dependent measures in the expected direction).
7. Control participants who receive GAD scripts would experience greater increases in IU, negative affect, and need to worry than participants who receive OCD scripts (as above, the GAD scripts would resonate more than the OCD scripts for the participants in the control groups).
8. IU would mediate the relationship between script and negative affect, the need to worry, and the need to obsess/ritualize.

## CHAPTER 2 METHOD

### *Participants*

Participants ( $N = 138$ ) were recruited from the undergraduate pool at Temple University. The mean age of participants was 19.80, and the standard deviation was 3.35. The sample comprised 42 males (30.7%) and 95 females (69.3%); 1 participant did not report gender. Participants were of varying ethnicities – 25 Black (18.9%), 11 Hispanic/Latino (8.3%), 16 Asian American (9%), 76 Caucasian (57.5%), 3 Mixed ethnic background (2.3%), 1 Other (0.8%); 8 participants did not report their ethnicity. They were administered GAD and OCD measures to determine whether they met cut-off scores which were used to place them into GAD, OCD, or control groups. Forty six participants (33.3%) met criteria for classification into the GAD group, 47 (34.1%) for classification into the OCD group, and 45 (32.6%) for classification into the control group. Furthermore, 26 participants (18.8%) were in the GAD matched group, 21 (15.2%) in the GAD mismatched group, 25 (18.1%) in the OCD matched group, 21 (15.2%) in the OCD mismatched group, 23 (16.7%) to the controls matched to the GAD scripts group, and 22 (15.9%) to controls matched to the OCD scripts group.

*Measures* (see appendix A for copies of all study measures)

### *GAD Questionnaires*

The *Generalized Anxiety Disorder Questionnaire for DSM-IV (GADQ-IV*; Newman et al., 2002) is a 9-item self-report measure that assesses the DSM-IV (American Psychiatric Association [APA], 1994) criteria for GAD. The measure consists of five *yes-no* questions evaluating the occurrence of excessive and uncontrollable worry (e.g., “Do you find it difficult to control the worry once it starts?”), a listing of the most

frequent topics of worry (e.g., minor matters, family, etc.), a checklist of six somatic symptoms related to GAD (e.g., restlessness, muscle tension, etc.), and two questions assessing the interference and distress caused by the worry and physical symptoms. The interference and distress questions are scored on 0-8 scales (*none* to *very severe*). The GADQ-IV's dimensional scoring system provides an overall index of the severity of GAD, ranging from 0-12. For each of the first four questions, a participant can receive a score of one for a "yes" response and a zero for a "no" response. For item five, participants can list up to six areas of worry and the total score is divided by three. Similarly, for item seven, each physical symptom endorsed earns one point, and the total score is divided by three. Finally, for items eight and nine, the number circled (ranging from 0-8) is divided by four. All the numbers are added together for a score ranging from 0-12. A total score of 5.7 or above suggests a diagnosis of GAD with the best balance of sensitivity and specificity and was used in the present study to determine membership in the two GAD groups (Luterek, Turk, Heimberg, Fresco, & Mennin, 2002; Newman et al., 2002).

The GADQ-IV has demonstrated good internal consistency ( $\alpha = .84$ ) and good 2-week test-retest reliability ( $r = .81$ ) in a college sample (Newman et al., 2002). The measure correlates well with measures of worry ( $r = 0.63$ ) and trait anxiety ( $r = .58$ ). It also shows a modest correlation with depression ( $r = .23$ ). Finally, validity of the GADQ-IV is supported by agreement with diagnoses derived on the basis of the clinician-administered Anxiety Disorder Interview Schedule-IV (Brown, DiNardo, & Barlow, 2004) ( $k = .70$ ; Newman et al., 2002).  $\alpha$  for this measure was .79 in this sample.

The *Worry Domains Questionnaire (WDQ)* (Tallis, Eysenck, & Mathews, 1992) is a 25-item questionnaire that measures the tendency to worry and the specific areas in which one is most prone to worry. The measure includes five subscales – relationships (“I worry that my family will be angry with me or disapprove of something that I do”), lack of confidence (“I worry that I lack confidence”), aimless future (“I worry that life may have no purpose”), work incompetence (“I worry that I will not keep my workload up to date”), and finances (“I worry that I can’t afford to pay bills”). The scale ranges from 1 (*not at all*) to 5 (extremely). The questionnaire has shown excellent internal consistency ranging from  $\alpha = .91$  to  $.92$  for the total score and adequate to good internal consistency for the subscales with alphas ranging from  $\alpha = .72$  to  $.88$  in nonclinical samples (Stöber, 1998). Tallis, Davey, and Bond (1994a) reported good test-retest reliability overall and for the subscales over a 2-4 week period. The WDQ correlates well with other measures of worry like the Penn State Worry Questionnaire (Meyer, Miller, Metzger, & Borkovec, 1990) in several studies with  $r$ s ranging from  $.62$  to  $.68$  (Davey, 1993; Stöber, 1998).  $\alpha$  for this measure was  $.93$  in this sample.

The *Penn State Worry Questionnaire (PSWQ)* (Meyer, et al., 1990) was designed to assess the generality, excessiveness, and uncontrollability dimensions of pathological worry. It consists of 16 items ranging from 1 (*not at all typical of me*) to 5 (*very typical of me*) Likert-type scale (e.g., “I am always worrying about something”) The PSWQ has good internal consistency in both undergraduate and clinical samples with alphas ranging  $.86$  to  $.93$  (Molina & Borkovec, 1994). Additionally, the PSWQ has demonstrated good test-retest reliability over periods up to 10 weeks ( $r$ s ranging from  $.74$  to  $.93$ ) in college samples (Molina & Borkovec, 1994) and is moderately to strongly correlated with

measures of anxiety ( $r = .40$  to  $.74$ ) and depression ( $r = .36$ ; Moilna & Borkovec, 1990).  $\alpha$  for this measure was  $.72$  in this sample.

The *Top Three Worry Areas Questionnaire* (Three Worry), constructed for this study, instructed participants to pick and rank order the top 3 concerns from the list presented to them. This list corresponded with the 10 worry areas included in the scripts. Subsequently, they were asked specific questions about each of the topics of worry and were instructed to write at least two sentences for each question (“Describe the situation or concern that was troubling to you”; “What kinds of consequences were you worried about? What were you worried might happen?”; “Were you able to control the worrying once it started?” “Did it continue to pop into your head?”, “If you were able to stop worrying, how did you do it?”). This measure was used to determine which of the 10 uncertainty scripts related to worry would be administered. The script that had the closest proximity with one of the top three worries endorsed by the participant was administered. Additional criteria for selecting the scripts included whether the participant was able to control the worry and if it continued to pop into his/her mind.

#### *OCD Questionnaires*

*The Obsessive-Compulsive Inventory - Revised (OCI-R; Foa et al., 2002)* is an 18-item measure evaluating the distress and frequency of obsessions and compulsions across a broad range of symptoms. The OCI-R provides a total score as well as scores for each of the six subscales - washing, obsessing, hoarding, ordering, checking, and mental neutralizing. Internal consistency for the total scale score was excellent ( $\alpha = .81$  for OCD patients; Foa et al., 2002). Internal consistency for the different subscales ranged from  $\alpha$ 's of  $.82$  to  $.90$ . Test-retest reliability for the total scale and for the subscales for OC

participants over a period of two weeks ranged from  $r = .74$  to  $.91$  (Foa et al., 2002). The measure correlated well with the original OCI (Foa, Kozak, Salkovskis, Coles, & Amir, 1998); the range of correlations for the total score and the subscales was  $.74$  to  $.90$ . The OCI-R also correlated with other measures of OCD, with correlation coefficients ranging from  $.49$  to  $.85$ . A cut-off score of 18 on the OCI-R Total Scale correctly classified 74% patients with OCD (Foa et al., 2002). The same cut-off score was used in the current study to ascertain membership in the analogue OCD groups.  $\alpha$  for this measure was  $.83$  in this sample.

The *Padua Inventory-Washington State University Revision (PI-WSUR)*; Burns, Keortge, Formea, & Sternberger, 1996) is a 39-item measure that assesses a broad range of obsessions and compulsions. The scale ranges from 0 (*not at all*) to 4 (*very much*) and contains five subscales – contamination obsessions and washing compulsions; dressing/grooming compulsions; checking compulsions; obsessional thoughts of harm to self/others; obsessional impulses of harm to self/others. The internal consistency of the measure was excellent ( $\alpha = .92$  and  $.77$  to  $.88$  for the subscales). Test-retest reliability for a 6 to 7 month interval was  $r = .76$  for the total score and ranged from  $.61$  to  $.84$  for the subscales. The PI-WSUR differentiates between worry and OCD symptoms, and the subscales of the measure correlated more highly with each other than with a measure of worry (Burns et al., 1996).  $\alpha$  for this measure was  $.93$  in this sample.

The *Top Three Obsessive Compulsive (Three OC) Areas Questionnaire*, constructed for this study, instructed participants to pick and rank order the top 3 concerns from the list presented to them. This list corresponded with the 10 OC areas included in the scripts. Subsequently, they were asked specific questions about each of

the topics of OC concerns and were instructed to write at least two sentences for each question (“Describe what was troubling about the concern”; “What kinds of consequences were you concerned about?”; “Were you able to get rid of the thoughts/impulses/images once they started?”; “Did they continue to pop into your head?”; “If you were you able to get rid of the thoughts/impulses/images or the distress and anxiety they caused, how did you do it?”) This measure was used to determine which of the ten uncertainty scripts related to OC concerns would be administered. The script that has the closest proximity with one of the top three OC concerns endorsed by the participant was administered. Additional criteria for selecting the scripts included whether the participant was able to get rid of the OC thought/impulse/image and if it continued to pop into his/her mind.

#### *IU Questionnaires*

The *Intolerance of Uncertainty Scale (IUS)*; Buhr & Dugas, 2002; Freeston, et al., 1994b) is a 27-item measure designed to assess several aspects of IU, including emotional and behavioral consequences of being uncertain, how uncertainty reflects on a person’s character, the expectation that the future will be predictable, frustration when it is not, attempts to control the future, and all-or-nothing responses to uncertain situations. The scale ranges from 1 (*not at all characteristic of me*) to (*entirely characteristic of me*). The English version of the scale has demonstrated excellent internal consistency ( $\alpha = .94$ ) and good test-retest reliability over a 5-week period ( $r = .74$ ). For convergent and criterion-related validity, the IUS correlated highly with worry ( $r = .60$ ) and was able to discriminate between who met self-reported criteria for GAD from those who met only

the somatic criteria or who did not meet criteria.  $\alpha$  for this measure was .94 in this sample.

The *Intolerance of Uncertainty Inventory (IUI)*; Gosselin et al., 2008) is a 45-item measure that assesses IU as a tendency to consider uncertainties as unacceptable and also assesses its cognitive and behavioral manifestations. The measure is divided into two parts - Part A evaluates the tendency to think of uncertainty as unacceptable. Part B includes six manifestations of IU – avoidance, doubt, overestimation, worry, control, and reassurance. Each of these dimensions is measured by five items. Internal consistency for Part A was .92 and that for Part B was .96. Internal consistency for the subscales in Part B ranged from .86 to .94. Test-retest reliability was calculated with an adult sample over a 5-week period. Test-retest coefficients were  $r$ 's = .76 and .75 for Part A and Part B, respectively. As for the subscales in Part B, the test-retest coefficients ranged from  $r$ s = .66 to .76. Both Part A and Part B correlated with the IUS ( $r$  = .68 and .72 respectively). Moreover, both Parts A and B showed good correlations with worry ( $r$  = .58 and .67 respectively). All the psychometric data presented for the IUI were based on the French version of the measure. The English version that has yet to be validated was used in this study.  $\alpha$  for this measure was .98 in this sample.

#### *Pretest and Posttest Questionnaires*

*The Need or Desire to Worry Questionnaire (WQ)*, a state measure assessing the need/desire to worry, was designed for this study. The measure consists of 10 items generated from the literature on worry and the elements that have been historically considered as important when assessing worry. The scale ranges from 1 (*completely disagree*) to 5 (*completely agree*). Participants are instructed to answer questions based

on how much they agree with each item *at the present moment*. Examples of the items include: "I am worried that I won't be able to avert the danger" and "My worries are overwhelming me." Higher scores indicate a higher need or desire to worry. Mean item scores were submitted for statistical analysis.

$\alpha$  for this measure was .93 when administered at pretest and .94 at posttest in this sample. The correlation between the WQ and the GADQ-IV was .73 at pretest and .64 at posttest.

The *Need or Desire to Obsess or Neutralize Questionnaire* (ONQ), designed for this study, assesses the need/desire to neutralize thoughts, impulses, or images and the generation of related obsessive thoughts, images, or impulses that the IU scripts were intended to elicit. This is a state measure of the need/desire to neutralize the thoughts, impulses, or images and the generation of related obsessive thoughts, images, or impulses. The measure consists of 10 items generated from the literature on OCD and the elements that have been historically considered as important when assessing OC thoughts and behaviors. The scale ranges from 1 (*completely disagree*) to 5 (*completely agree*). Participants are instructed to answer questions based on how much they agree with each item *at the present moment*. Examples of the items include: "If I don't say or think something over and over again, I will be responsible for bringing harm to myself or to my loved ones" and "I am having trouble dismissing this troubling thought/impulse/image that keeps popping in my head." Higher scores indicate a higher need or obsess/neutralize/ritualize. Mean item scores were submitted for statistical analysis.

$\alpha$  for this measure was .82 when administered at pretest and .86 at posttest in this sample. The correlation between the ONQ and the OCI-R was .53 at pretest and .52 at posttest.

The *Positive and Negative Affect Schedule* (PANAS; Watson, Clark, & Tellegen, 1988) is a 20-item measure that was designed to assess the distinct dimensions of positive and negative affect. The positive affect (PA) subscale includes items that range from a state of enthusiasm to a state of sluggishness and lethargy. The negative affect (NA) subscale items range from subjective distress and aversive arousal to calmness and serenity. Items are scored on a 5-point Likert-type scale ranging from 1 (*very slightly or not at all*) to 5 (*extremely*). Both subscales have shown excellent internal consistency ( $\alpha = .88$  to  $.90$  for PA and  $.84$  to  $.87$  for NA). Test-retest reliability increases with greater time between the two administrations ( $r = .47$  to  $.68$  for PA and  $.39$  to  $.71$  for NA). The NA subscale correlated with measures of general psychiatric distress ( $r = .74$ ), depression ( $r = .58$ ), and state anxiety ( $r = .51$ ; Sandin et al., 1999). In the present study, I administered the entire scale, but I had hypotheses only for NA, and no analyses of PA are reported. Moreover, the PANAS can be administered with several different sets of instructions; in the present study, participants were instructed to report how they felt *at the present moment*.  $\alpha$  for the NA subscale was .83 when administered at pretest and .85 at posttest in this sample.

An *Intolerance of Uncertainty Questionnaire* (IUQ), developed for this study, was intended to assess the degree of IU experienced in response to the scripts. This is a state measure developed to assess pre-posttest change. The IUS and IUI both assess the predisposition to react to uncertainty in typical fashion and are not appropriate for the

assessment of short-term change in IU. The items for this measure were developed by the researcher based on the broader literature on IU and the different elements that have been seen as important. The IUQ consists of 10 items ranging from 1 (*completely disagree*) to 5 (*completely agree*). Participants were instructed to answer questions based on how much they agreed with each item *at the present moment*. Examples of the items include: "My uncertainty is difficult to tolerate." and "I want reassurance that things will be okay." Higher scores indicate higher IU. Mean item scores were submitted for statistical analysis.

$\alpha$  for this measure was .92 when administered at pretest and .95 at posttest in this sample. The correlation between the IUQ and the IUS was .72 at pretest and .55 at posttest.

The *Distraction and Engagement Questionnaire* was developed for this study. The questionnaire consisted of three questions. The first question asked participants to rate their level of emotional engagement using a scale from 1 (*not at all involved*) to 5 (*completely involved*). The second question asked participants to rate in percentage form (0-100%) how distracted they were when reading the passage. The third question was a free response question that asked participants to write a few sentences about their experience reading the passage.

*Scripts* (see appendix B for copies of scripts)

### *GAD*

I tapped into ten worry domains that have historically been seen as important for individuals with GAD, specifically, minor matters, work, school, family, social/interpersonal, personal health, health of others, community and world affairs,

finances, and self-confidence. I generated scripts that reflected each of the areas of worry. Participants were instructed to visualize the scenario presented to them in the script as though it were actually happening to them to encourage attentive and deeper processing of the scripts.

### *OCD*

I tapped into ten areas of OC behavior and cognition, specifically, washing/contamination, checking, doubting, cleaning, ordering, mental neutralizing, dressing/grooming, obsessional thoughts/impulses of harm to self/others, obsessional thoughts/impulses that are sexual in nature/concerns with morality, and hoarding. I generated scripts reflecting the ten areas of OC behaviors. Participants were instructed to visualize the scenario presented to them in the script as though it were actually happening to them to encourage attentive and deeper processing of the scripts.

### *Script Development*

The scripts were utilized to induce uncertainty related to the specific concerns of the individuals in the GAD and OCD groups. To develop the final group of scripts that were employed in the study, scripts in each of the areas specified above for GAD and OCD were written and examined in an informal pilot study. These pilot scripts were presented to graduate students in clinical psychology who were affiliated with the Adult Anxiety Clinic of Temple University as well as clinical psychology interns at the Anxiety and Agoraphobia Treatment Center in Bala Cynwyd, PA. Students at both clinics were well-versed in the clinical presentations of GAD and OCD. The purpose of the pilot study was to evaluate the quality of the scripts in terms of how well they induce uncertainty. Each script was evaluated on three dimensions, rated on 0-10 scales: relevance to GAD,

relevance to OCD, and intensity of the sense of uncertainty generated. Other than what was surmised by the raters from the nature of these ratings, they were given no further instruction or explanation of the study and its hypotheses. Scripts were selected that achieved mean uncertainty ratings above 7. Scripts for GAD required a mean score above 7 on relevance to GAD and below 4 on relevance to OCD. Scripts for OCD required a mean score above 7 on relevance to OCD and below 4 on relevance to GAD. Scripts that did not meet criteria were revised and then presented again to a second group of raters. Thereafter, scripts met the specified criteria. Six raters reviewed the first set of scripts; five raters reviewed the second set.

### *Procedure*

Participants were recruited from the undergraduate research participant pool at Temple University via SONA systems and in-class and on-campus fliers. Participants were instructed to visit <http://temple.sona-systems.com/> and access the two questionnaires for this study (GADQ-IV and OCI-R). Participants filled out the questionnaires and were instructed that if they met criteria for the study, they would be contacted for continuing participation. Those participants who met the cut-off scores for either GAD or OCD (but not both) and those who did not meet criteria for either disorder were subsequently contacted to sign-up for a study slot on SONA systems. The maximum number of participants who were allowed to sign up for any given study slot was five.

The screening questionnaires included the GADQ-IV and the OCI-R. Participants who met the GADQ-IV cut-off for GAD but who did not meet the OCI-R cut-off score for OCD were assigned to the GAD group. The GAD group was further broken down into two groups: GAD matched and GAD mismatched. Similarly, participants who met

the OCI-R criteria for OCD but who did not meet the GADQ-IV cut-off score for GAD were assigned to the OCD group, which was further broken down into two groups: OCD matched and OCD mismatched. Participants who did not meet criteria for either disorder were assigned to one of the two control groups: Control group with yoked GAD script and Control group with yoked OCD script.

During the experiment, the experimenter or trained research assistants administered the Three Worry or the Three OC questionnaires to determine which script to administer to participants from the GAD and OCD groups. The control groups also received either of the questionnaires depending on whether they were being matched to a GAD or OCD script. Following these measures, participants received a packet of several questionnaires including the GADQ-IV, OCI-R, PI-WSUR, PSWQ, IUS, and IUI. Additionally, participants received the pretest packet of questionnaires consisting of the WQ, the ONQ, the PANAS, and the IUQ. When the participants were engaged in filling out the packet, the experimenter read the responses to the Three Worry or Three OC questionnaires to determine the scripts to be administered. Subsequently, each participant was given the uncertainty script. Half of the GAD participants (GAD matched) were given a GAD script that matched their top-ranked concern as indicated by their responses to the Three Worry. Half of the OCD participants (OCD matched) received an OCD script that matched their top-ranked concern as indicated by their responses to the Three OC). Although only one area of GAD or OCD concern was selected for any one participant, he or she was asked to provide three to guard against the possibility that he or she would list a worry or OCD-relevant concern which was highly idiosyncratic and for which no script had been prepared. It happened on occasion that, for example, the OCD

mismatched participant listed a GAD worry that was part of the script he/she was assigned on his/her own worry list even though he/she did not meet the GAD group's cut-off. In such cases, I conducted my analyses with and without such cases and evaluated whether such cases were associated with significant differences in the pattern of findings.

Each GAD matched participant had a counterpart in the OCD mismatched group such that the pair received the same GAD script. For example, when a script related to family concerns was given to a participant in the GAD matched group, the same script was assigned to an OCD participant in the OCD mismatched group. Similarly, each OCD matched participant had a counterpart in the GAD mismatched group such that the pair received the same script. These two groups, GAD mismatched and OCD mismatched made up the other two halves of the GAD and OCD groups. Finally, each GAD matched participant had a counterpart in the Control group with the yoked GAD script such that the pair received the same GAD script. Similarly, each participant in the OCD matched group had a counterpart in the Control group with the yoked OCD script such that the pair received the same OCD script.

Although the goal was to have equal number of participants in each group, I were unable to accomplish the goal. I started recruiting for the GAD and OCD matched groups so that I would be able to assign scripts to the mismatched and control groups as that was required by my study design. This system rendered random assignment impossible and also led to unequal participants in each group.

Scripts were designed to induce uncertainty related to each of the 20 specific domains of GAD/OCD concerns as described earlier. Uncertainty was induced by a description that suggested that the participants' feared consequence may or may not occur

and their subsequent questioning of whether they will/will not be able to deal with this uncertain state of affairs. Participants were given 8 minutes to read the script. The time frame was determined based on the length of the scripts and on pilot runs of the study in which participants indicated how much time was required to read the script once and then a couple more times. [Two pilots were conducted to work out various details of the study procedure. Each included four undergraduate students who were research assistants in the Adult Anxiety Clinic of Temple. These participants were not screened for diagnostic criteria.] To ensure that they were engaged in reading the scripts, participants were instructed to imagine that they were the narrator of the passage and to visualize the scenario as if it were happening to them. They were requested to get in touch with their emotional reactions when reading the content of the passage and also to bring their thoughts back to the passage if their mind were to wander. Following the reading of the scripts, participants were administered the posttest packet of questionnaires (the packet consisted of the same measures as the pretest packet). Once the experimenter/research assistants ascertained that the participants finished all portions of the experiment, they received the debriefing forms that explained the study. Finally, they received two research credits via SONA after they completed their participation in the study.

*Study Design*

Table 2 provides a summary of the different conditions in the study.

Table 2. Study Design with the Different Groups

<b>Type of Script</b>	<b>Type of Group</b>	<b>Pretest</b>	<b>Posttest</b>
GAD Scripts	GAD matched	IUQ, NA, WQ, ONQ	IUQ, NA, WQ, ONQ
	OCD mismatched	IUQ, NA, WQ, ONQ	IUQ, NA, WQ, ONQ
	Control yoked GAD	IUQ, NA, WQ, ONQ	IUQ, NA, WQ, ONQ
OCD Scripts	OCD matched	IUQ, NA, WQ, ONQ	IUQ, NA, WQ, ONQ
	GAD mismatched	IUQ, NA, WQ, ONQ	IUQ, NA, WQ, ONQ
	Control yoked OCD	IUQ, NA, WQ, ONQ	IUQ, NA, WQ, ONQ

*Note:* GAD – Generalized anxiety disorder; OCD – Obsessive compulsive disorder; IUQ – Intolerance of Uncertainty; NA – Negative affect; WQ – Need to worry; ONQ - Need to obsess/ritualize/neutralize.

## CHAPTER 3 RESULTS

### *Sample Size Considerations*

The statistical power calculating software, GPower 3 (Faul, Erdfelder, Lang, & Buchner, 2007) was used to determine the required power and sample size. Based on a 2 by 3 analyses of covariance (ANCOVAs with six groups (two levels of script and three levels of type of group)) and two repetitions, I determined that a sample size of 120 participants would be sufficient to detect a medium effect size (Cohen's  $f$ ) of .25 (Cohen, 1992) at power of .82. My goal was to recruit equal numbers of participants in each group.

### *Preliminary Analyses*

All the data were examined to ascertain that all the assumptions for the two-way ANCOVA and multiple regressions were adequately met. I checked for issues of unequal sample sizes, missing data, absence of outliers, absence of multicollinearity and singularity, normality of sampling distributions, homogeneity of variance, linearity, homogeneity of regression, and reliability of covariates. None of the assumptions were violated. Means and standard deviations (see Table 3) as well as a matrix of correlations of all pretest and posttest measures were examined (see Table 4). Several of the questionnaire measures (GADQ-IV, OCI-R, IUS, IUI, PSWQ, WDQ, PI-WSUR) were used primarily for sample description and were not examined in the 3 (group) x 2 (script) ANCOVAs, described below.

### *Exploratory Analyses*

Given that engagement and distractibility questions were significantly correlated with the dependent variables in the study, I conducted two one-way ANOVAs to assess

Table 3. Means, Standard Deviations, and Internal Consistency

Measures	<i>M</i>	<i>SD</i>	Cronbach's Alpha
GADQ-IV	5.82	3.14	0.79
WDQ	60.87	19.86	0.93
PSWQ	47.32	14.10	0.72
OCI-R	16.13	9.40	0.83
PI-WSUR	23.10	18.80	0.93
IUS	55.51	19.15	0.94
EN	3.21	1.15	-
DIS	26.44	23.17	-
IUI	95.62	36.71	0.98
WQ Pretest	2.50	1.01	0.93
WQ Posttest	2.53	1.13	0.94
ONQ Pretest	2.11	0.74	0.82
ONQ Posttest	2.16	0.84	0.86
PANAS-NA Pretest	1.50	0.58	0.83
PANAS-NA Posttest	1.66	0.76	0.85
IUQ Pretest	2.50	0.96	0.92
IUQ Posttest	2.62	1.08	0.95

*Note:* GADQ-IV - Generalized Anxiety Disorder Questionnaire for DSM-IV; WDQ - Worry Domains Questionnaire; PSWQ - The Penn State Worry Questionnaire; OCI-R - The Obsessive-Compulsive Inventory; PI-WSUR - Padua Inventory-Washington State University Revision; IUS - Intolerance of Uncertainty Scale; IUI - Intolerance of Uncertainty Inventory; EN - Level of Engagement; DIS - Level of Distraction; WQ Pretest/Posttest - The Need or Desire to Worry Questionnaire; ONQ Pretest/Posttest - Need or Desire to Obsess or Neutralize Questionnaire; PANAS-NA Pretest/Posttest -

Positive and Negative Affect Schedule – Negative Affect; IUQ Pretest/Posttest - Intolerance of Uncertainty Questionnaire.

whether there were any differences as a function of group, type of script, and group-by-script interaction in the level of emotional engagement and distractibility experienced by the participants when they read the scripts. For the first ANOVA, emotional engagement was the dependent variable. Neither main effects for group,  $F(2, 130) = 1.32, ns; partial \eta^2 = .02$ , nor script,  $F(1, 130) = 3.85, ns; partial \eta^2 = .03$ , were significant. The interaction effect for group-by-script was significant,  $F(1, 130) = 11.10, p < .01; partial \eta^2 = .08$ . Contrast results [ $F(2, 130) = 3.09, p < .05$ ] suggest that participants in the GAD group with matched scripts ( $M = 4.04, SD = 0.72$ ) showed greater emotional engagement in the scripts than participants in GAD mismatched ( $M = 2.84, SD = 1.12$ ), OCD matched ( $M = 3.17, SD = 3.17$ ), and OCD mismatched ( $M = 3.48, SD = 0.98$ ) groups. In addition, participants in the OCD mismatched group ( $M = 3.48, SD = 0.98$ ) showed higher emotional engagement than participants in the OCD matched ( $M = 3.17, SD = 3.17$ ) and GAD mismatched groups ( $M = 2.84, SD = 1.12$ ). For the second ANOVA, the dependent variable was level distractibility. The main effect of group was not significant,  $F(2, 129) = 2.83, ns; partial \eta^2 = .04$ , but the main effect for script was  $F(1, 132) = 3.97, p < .05; partial \eta^2 = .03$ . Participants who received mismatched scripts ( $M = 29.96, SD = 2.67$ ) showed more distractibility when reading the scripts than participants who received matched scripts ( $M = 23.54, SD = .08$ ).

I conducted another set of exploratory ANOVAs to assess group differences on state measures of GAD, OCD, and IU. The three groups differed significantly from each other on GAD symptoms and severity as assessed by the GADQ-IV,  $F(2, 135) = 55.27, p < .001; partial \eta^2 = .45$ . *Post hoc* comparisons showed that each of the groups was

significantly different from the other; GAD group ( $M = 8.39, SD = 2.13$ ) > OCD group ( $M = 5.79, SD = 2.46$ ) > Control group ( $M = 3.21, SD = 2.40$ ). Similarly, for OCD symptoms, the groups were significantly different,  $F(2, 135) = 49.80, p < .001$ ; *partial*  $\eta^2 = .42$ . Again each group was significantly different from the other; OCD group ( $M = 23.44, SD = 8.39$ ) > GAD group ( $M = 16.13, SD = 7.15$ ) > Control group ( $M = 8.49, SD = 5.70$ ). Finally, the effect of group was scored for IU,  $F(2, 135) = 22.50, p < .001$ ; *partial*  $\eta^2 = .25$ . *Post hoc* comparisons showed that the GAD and OCD groups were not significantly different from one another, but they were different from the Control group (GAD group  $M = 64.78, SD = 17.28$ ; OCD group  $M = 59.17, SD = 19.10$ ; Control group  $M = 42.20, SD = 19.15$ ).

### *Primary Analyses*

#### *Paired-Sample t-Tests*

The first hypothesis, which states that the sample as a whole would show an increase in scores on the dependent variables (IU, negative affect, need to worry and/or need to obsess and/or ritualize) from pretest to posttest was assessed with a series of four paired-sample *t*-tests. It was determined that paired-sample *t*-tests would be the best medium to assess whether participants showed an increase in the dependent variables from pretest to posttest assessment across the entire sample. In keeping with this hypothesis, negative affect increased from pretest ( $M = 1.50, SD = 0.58$ ) to posttest ( $M = 1.66, SD = 0.76$ )

Table 4. Correlations for the Pretest and Posttest Assessment Measures

	WQ Pretest	PANAS- NA Pretest	IUQ Pretest	ONQ Pretest	WQ Posttest	PANAS- NA Posttest	IUQ Posttest	ONQ Posttest	GADQ- IV	WDQ	PSWQ	OCI-R	PI- WSUR	IUS	IUI	DIS
PANAS- NA Pretest	.58**															
IUQ Pretest	.83**	.59**														
ONQ Pretest	.61**	.50**	.61**													
WQ Posttest	.82**	.51**	.76**	.56**												
PANAS- NA Posttest	.42**	.58**	.40**	.39**	.62**											
IUQ Posttest	.68**	.43**	.79**	.53**	.84**	.62**										
ONQ Posttest	.54**	.40**	.56**	.70**	.72**	.62**	.73**									
GADQ- IV	.73**	.40**	.68**	.50**	.64**	.64**	.52**	.41**								
WDQ	.60**	.47**	.70**	.50**	.51**	.22*	.54**	.39**	.51**							
PSWQ	.78**	.44**	.70**	.51**	.66**	.40**	.57**	.39**	.77**	.57**						

Table 4 Continued: Correlations for the Pretest and Posttest Assessment Measures

	WQ Pretest	PANAS- NA Pretest	IUQ Pretest	ONQ Pretest	WQ Posttest	PANAS- NA Posttest	IUQ Posttest	ONQ Posttest	GADQ- IV	WDQ	PSWQ	OCI-R	PI- WSUR	IUS	IUI	EN
OCI-R	.44**	.42**	.45**	.53**	.45**	.32**	.44**	.52**	.38**	.47**	.37**					
PI- WSUR	.31**	.37**	.37**	.52**	.34**	.27**	.34**	.45**	.22**	.47**	.24**	.76**				
IUS	.65**	.53**	.72**	.55**	.54**	.29**	.55**	.40**	.60**	.78**	.68**	.54**	.54**			
IUI	.64**	.55**	.76**	.51**	.53**	.23**	.58**	.39**	.54**	.72**	.70**	.49**	.47**	.86**		
EN	.25**	.08	.19*	.06	.39**	.29**	.32**	.18*	.20*	.14	.22**	.19*	.10	.19*	.08	
DIS	.12	.16	.19*	.17	.06	.09	.11	.06	.08	.22*	.04	.16	.27**	.17	.21*	-.27**

*Note:* \*\* $p < 0.01$ ; \* $p < 0.05$  WQ Pretest/Posttest - The Need or Desire to Worry Questionnaire; ONQ Pretest/Posttest - Need or Desire to Obsess or Neutralize Questionnaire; PANAS-NA Pretest/Posttest - Positive and Negative Affect Schedule - Negative Affect; IUQ Pretest/Posttest - Intolerance of Uncertainty Questionnaire; GADQ-IV - Generalized Anxiety Disorder Questionnaire for DSM-IV; WDQ - Worry Domains Questionnaire; PSWQ - The Penn State Worry Questionnaire; OCI-R - The Obsessive-Compulsive Inventory; PI-WSUR - Padua Inventory-Washington State University Revision; IUS - Intolerance of Uncertainty Scale; IUI - Intolerance of Uncertainty Inventory; EN - Level of Engagement; DIS - Level of Distraction.

[ $t(137) = -2.97, p < .01; r = .25$ ]. Similarly, IU increased from pretest ( $M = 2.50, SD = 0.96$ ) to posttest ( $M = 2.62, SD = 1.08$ ) [ $t(137) = -2.14, p < .05; r = .18$ ]. In contrast, participants did not worry more [ $t(137) = -0.51, ns; r = .04$ ], nor did they experience an increased desire to obsess and/or ritualize from pretest to posttest [ $t(137) = -1.11, ns; r = .09$ ]. One of the main goals of the study was to establish that when IU increases, people engage in worrying or obsessing and/or ritualizing, and there is an accompanied increase in negative affect. To assess this notion, it was important to take a look at the subset of the sample that showed an increase in IU from pretest to posttest assessment and then to subsequently assess whether those participants showed an increase in worry, obsessing and/or ritualizing, and negative affect. When the analyses were conducted for participants who showed an increase in IU scores from pretest to posttest, the following patterns emerged. Given that this subset was chosen based on increased changed scores from pretest to posttest, participants had higher scores on IU [ $t(66) = -8.63, p < .001$ ] at posttest ( $M = 3.11, SD = 1.03$ ) than pretest ( $M = 2.51, SD = 0.92$ ). Participants worried more [ $t(66) = -2.88, p < .01; r = .73$ ] from pretest ( $M = 2.55, SD = 0.99$ ) to posttest ( $M = 2.81, SD = 1.11$ ). Similarly, participants experienced increased negative affect [ $t(66) = -3.89, p < .001; r = .43$ ] from pretest ( $M = 1.46, SD = 0.57$ ) to posttest ( $M = 1.84, SD = 0.87$ ). Finally, participants scored higher on desire to obsess and/or ritualize [ $t(66) = -2.83, p < .01; r = .33$ ] from pretest ( $M = 2.15, SD = 0.75$ ) to posttest ( $M = 2.38, SD = 0.91$ ).

#### *ANCOVAs*

Hypotheses 2-7 were assessed with four two-way ANCOVAs. For each of the ANCOVAs, script (matched versus mismatched) and group (GAD, OCD, or Control)

were the independent variables (IVs). The covariates were the pretest scores for each of my pretest-posttest dependent variables (DVs; IUQ, NA, WQ, and ONQ) and engagement and distractibility scores. For the ANCOVAs, because I used the pretest scores as covariates, each DV was a measure of the residual change from pretest to posttest. These analyses were conducted to evaluate the moderational hypotheses in my models – the effect of the interaction of group (analogous to the predisposition) and script (analogous to the situation) on IU, or in other words, that the script would moderate the relationship between the predisposition and IU. The same logic holds true for the other DVs (NA, WQ, and ONQ).

For any significant group-by-script interactions, I had proposed to conduct follow-up analyses. For example, if the group-by-script interaction were to have been significant, I had proposed to first hold group constant and examine the DV as a function of script. Since there were only two levels of script, I had decided to conduct a one-way ANCOVA at each level of group. However, given that I did not have significant interaction effects, I did not conduct the proposed *post hoc* analyses.

The first two-way ANCOVA examined worry (WQ). Contrary to the hypotheses, there were no significant main effects of group or script. In other words, it did not matter whether participants belonged to the GAD, OCD, or Control groups,  $F(2, 132) = 0.03, ns$ ; partial  $\eta^2 = .00$ , nor did it matter whether participants were presented with matched vs. mismatched scripts,  $F(1, 132) = 0.78, ns$ ; partial  $\eta^2 = .01$ , when assessing posttest worry. In addition, the interaction effect was not significant,  $F(2, 132) = 0.57, ns$ ; partial  $\eta^2 = .01$ . The covariate, pretest score for worry, was significantly related to the posttest score for worry,  $F(1, 132) = 150.85, p < .001$ ; partial  $\eta^2 = .55$ . Also, the covariate, emotional

engagement was significantly related to the posttest score for worry,  $F(1, 132) = 9.49, p < .01$ ; partial  $\eta^2 = .07$ , but distractibility was not  $F(1, 132) = 0.20, ns$ ; partial  $\eta^2 = .00$ .

The next ANCOVA examined posttest negative affect. Contrary to the hypotheses, I did not find significant main effects for group,  $F(2, 133) = .15, ns$ ; partial  $\eta^2 = .00$ , or script,  $F(1, 133) = 0.61, ns$ ; partial  $\eta^2 = .01$ . Additionally, the interaction effect was not significant,  $F(2, 133) = 0.38, ns$ ; partial  $\eta^2 = .00$ . The covariate, pretest score for negative affect, was significantly related to the posttest score for negative affect,  $F(1, 132) = 46.94, p < .001$ ; partial  $\eta^2 = .27$ . Similarly, the covariate, emotional engagement, was significantly related to posttest negative affect score  $F(1, 133) = 8.75, p < .01$ ; partial  $\eta^2 = .07$ . However, the covariate, distractibility was not significant  $F(1, 133) = 1.15, ns$ ; partial  $\eta^2 = .01$ .

The next ANCOVA examined posttest IU. Contrary to the hypothesis, I found a nonsignificant main effect for script,  $F(1, 133) = 1.87, ns$ ; partial  $\eta^2 = .02$ . Similarly, I did not find a significant effect for group,  $F(2, 133) = 1.54, ns$ ; partial  $\eta^2 = .02$ , or for the interaction of group-by-script,  $F(2, 133) = 0.07, ns$ ; partial  $\eta^2 = .00$ . The covariates, pretest score for IU and emotional engagement, were significantly related to the posttest score for IU,  $F(1, 133) = 152.53, p < .001$ ; partial  $\eta^2 = .55$ , and  $F(1, 133) = 7.56, p < .01$ ; partial  $\eta^2 = .06$ , respectively. The covariate, distractibility was not significant  $F(1, 133) = 0.04, ns$ ; partial  $\eta^2 = .00$ .

The final ANCOVA examined differences in desire to obsess and/or ritualize. There were nonsignificant effects for script,  $F(1, 133) = 0.22, ns$ ; partial  $\eta^2 = .00$  group  $F(2, 133) = 0.08, ns$ ; partial  $\eta^2 = .00$ , and the interaction effect,  $F(2, 13) = 0.19, ns$ ; partial  $\eta^2 = .00$ . The covariate, pretest score for IU, was significantly related to the

posttest score for IU  $F(1, 133) = 103.27, p < .01$ ; partial  $\eta^2 = .45$ , and so was the covariate, emotional engagement,  $F(1, 133) = 4.14, p < .05$ ; partial  $\eta^2 = .03$ . The covariate, distractibility was nonsignificant  $F(1, 133) = 0.14, ns$ ; partial  $\eta^2 = .00$ .

### *Mediational Analyses*

I proposed to follow Baron and Kenny's (1986) steps to conduct mediational analyses using standard multiple regressions to evaluate hypothesis 8 (IU mediates the relationship between type of script and negative affect, the need to worry, and the need to obsess and/or ritualize). Following that, I proposed to use Sobel's test to demonstrate the significance of the indirect effect. I proposed to conduct 3 regression analyses for each for the three criterion variables (worry, OC, negative affect):

Equation 1: script (dummy coded – matched vs. mismatched), pretest score for the criterion variable (posttest score on worry, OC, or negative affect), emotional engagement, and distractibility as the predictor variables;

Equation 2: script, pretest score for the mediator (IU), emotional engagement, and distractibility as the predictor variables and posttest score for the mediator (IU) as the criterion variable;

Equation 3: script, pretest scores for the criterion variable and the mediator (IU), posttest score for IU, emotional engagement, and distractibility as the predictor variables and posttest score on worry, OC, or negative affect as the criterion variable.

In the first set of regression analyses, I tested whether IU mediated the relationship between script and posttest worry (see Table 5). The first equation was significant,  $F(4,128) = 70.04, p < .001$ . Pretest worry and emotional engagement significantly predicted posttest worry, but script did not significantly predict posttest

worry. The second equation was also significant,  $F(4,128) = 56.51, p < .001$ ; pretest IU and emotional engagement significantly predicted posttest IU. However, script and distractibility were not significant predictors of posttest IU. Finally, the third equation examined whether script, pretest worry, pretest and posttest IU, emotional engagement, and distractibility predicted posttest worry. The overall equation was significant,  $F(6,126) = 94.69, p < .001$ . Pretest worry, posttest IU, and emotional engagement were significant predictors of posttest worry, but script, pretest IU, and distractibility were not.

The second set of regression analyses was conducted to examine whether IU mediated the relationship between type of script and posttest negative affect (see Table 6). The first equation was significant,  $F(4,128) = 19.34, p < .001$ . Pretest negative affect and emotional engagement were significant predictors of posttest negative affect, but type of script and distractibility were not. In the second equation, pretest IU and emotional engagement significantly predicted posttest IU, but script and distractibility were not significant predictors. The overall model was significant,  $F(4,128) = 56.51, p < .001$ . The third equation was also significant,  $F(6,126) = 33.63, p < .001$ . Pretest negative affect and IU as well as posttest IU were significant predictors of posttest negative affect; however, script, emotional engagement, and distractibility were not.

The third and final set of regression analyses examined whether IU mediated the relationship between type of script and posttest desire to obsess and/or ritualize (see Table 7). In the first equation, pretest obsessing/ritualizing and emotional engagement significantly predicted posttest obsessing/ritualizing, but type of script did not,  $F(4,128) = 38.34, p < .001$ . In the second equation, pretest IU and emotional engagement explained significant variance in posttest IU, but type of script and distractibility failed to

do so ( $F(4,128) = 56.51, p < .001$ ). Finally, pretest need to obsess/ritualize and IU along with posttest IU explained significant variance in posttest obsessing/ritualizing but yet again, type of script, emotional engagement, and distractibility did not ( $F(6,126) = 61.14, p < .001$ ).

Given that type of script did not predict significant variance for any of the criterion variables, I did not conduct further mediational analyses or Sobel's test for indirect effects.

Table 5. Regressions for testing the model that the relationship between script (matched to concerns or mismatched) and posttest worry is mediated by posttest uncertainty

Predictors	Criterion	<i>B</i> ( <i>SE</i> )	<i>B</i>	<i>t</i> value
<b>Equation 1</b>				
Script (matched vs. mismatched)	Posttest WQ	0.06 (0.22)	0.06	1.09
Pretest WQ		0.83 (0.06)	0.75	14.35***
EN		0.19 (0.05)	0.19	3.43**
DIS		0.00 (0.00)	0.03	.49
<b>Equation 2</b>				
Script (matched vs. mismatched)	Posttest IUQ	0.06 (0.06)	0.05	0.93
Pretest IUQ		0.84 (0.06)	0.74	13.14***
EN		0.15 (0.05)	0.16	2.82**
DIS		0.00 (0.00)	0.02	0.27
<b>Equation 3</b>				

Table 5 Continued: Regressions for testing the model that the relationship between script (matched to concerns or mismatched) and posttest worry is mediated by posttest uncertainty

Predictors	Criterion	<i>B</i> ( <i>SE</i> )	<i>B</i>	<i>t</i> value
Script (matched vs. mismatched)	Posttest WQ	0.02 (0.05)	0.02	0.47
Pretest WQ		0.54 (0.08)	0.49	7.21***
Pretest IUQ		-0.10 (0.10)	-0.08	-1.02
Posttest IUQ		0.55 (0.07)	0.54	8.51***
EN		0.09 (0.04)	0.10	2.27*
DIS		0.00 (0.00)	-0.01	-0.28

Note. \*\*\* $p < .001$ ; \*\* $p < .01$ ; \* $p < .05$ . Equation 1 -  $R = .83$  and Adj.  $R^2 = .68$ ,  $p < .001$ . Equation 2 -  $R = .80$  and Adj.  $R^2 = .63$ ,  $p < .001$ . Equation 3 -  $R = .91$  and Adj.  $R^2 = .81$ ,  $p < .001$ . The Need or Desire to Worry Questionnaire; ONQ Pretest/Posttest - Need or Desire to Obsess or Neutralize Questionnaire; PANAS-NA Pretest/Posttest - Positive and Negative Affect Schedule - Negative Affect; IUQ Pretest/Posttest - Intolerance of Uncertainty Questionnaire; EN - Level of Engagement; DIS - Level of Distraction.

Table 6. Regressions for testing the model that the relationship between script (matched to concerns or mismatched) and posttest negative affect is mediated by posttest uncertainty

Predictors	Criterion	<i>B</i> ( <i>SE</i> )	<i>B</i>	<i>t</i> value
<b>Equation 1</b>				
Script (matched vs. mismatched)	Posttest NA	0.04 (0.06)	0.05	0.67
Pretest NA		0.69 (0.10)	0.52	7.15***

Table 6 Continued: Regressions for testing the model that the relationship between script (matched to concerns or mismatched) and posttest negative affect is mediated by posttest uncertainty

Predictors	Criterion	<i>B</i> ( <i>SE</i> )	<i>B</i>	<i>t</i> value
EN		0.16 (0.05)	0.50	3.29**
DIS		0.00 (0.00)	0.08	1.02
<b>Equation 2</b>				
Script (matched vs. mismatched)	Posttest IUQ	0.06 (0.06)	0.05	0.93
Pretest IUQ		0.84 (0.06)	0.74	13.14***
EN		0.15 (0.05)	0.16	2.82**
DIS		0.00 (0.00)	0.02	0.27
<b>Equation 3</b>				
Script (matched vs. mismatched)	Posttest NA	-0.00 (0.05)	-0.00	-0.03
Pretest NA		-0.49 (0.08)	-0.62	-6.12***
Pretest IUQ		-0.50 (0.08)	-0.63	-6.36***
Posttest IUQ		0.58 (0.07)	0.82	8.84***
EN		0.07 (0.04)	0.11	1.78
DIS		0.00 (0.00)	0.06	0.94

*Note.* \*\*\* $p < .001$ ; \*\* $p < .01$ ; \* $p < .05$ . Equation 1 -  $R = .61$  and Adj.  $R^2 = .36$ ,  $p < .001$ . Equation 2 -  $R = .80$  and Adj.  $R^2 = 0.63$ ,  $p < .001$ . Equation 3 -  $R = .79$  and Adj.  $R^2 = .60$ ,  $p < .001$ . The Need or Desire to Worry Questionnaire; ONQ Pretest/Posttest - Need or Desire to Obsess or Neutralize Questionnaire; PANAS-NA Pretest/Posttest - Positive and Negative Affect Schedule - Negative Affect; IUQ Pretest/Posttest - Intolerance of Uncertainty Questionnaire; EN - Level of Engagement; DIS - Level of Distraction.

Table 7. Regressions for testing the model that the relationship between script (matched to concerns or mismatched) and posttest desire to obsess/ritualize is mediated by posttest uncertainty

Predictors	Criterion	<i>B</i> ( <i>SE</i> )	<i>B</i>	<i>t</i> value
<b>Equation 1</b>				
Script (matched vs. mismatched)	Posttest ONQ	0.03 (0.06)	0.03	0.47
Pretest ONQ		0.80 (0.07)	0.71	11.39***
EN		0.09 (0.05)	0.13	2.00*
DIS		0.00 (0.00)	-0.02	-0.38
<b>Equation 2</b>				
Script (matched vs. mismatched)	Posttest IUQ	0.06 (0.06)	0.05	0.93
Pretest IUQ		0.84 (0.06)	0.74	13.14***
EN		0.15 (0.05)	0.16	2.82**
DIS		0.00 (0.00)	0.02	0.27
<b>Equation 3</b>				
Script (matched vs. mismatched)	Posttest ONQ	0.00 (0.04)	0.00	0.04
Pretest ONQ		0.69 (0.07)	0.62	9.96***
Pretest IUQ		-0.38 (0.07)	-0.43	-5.33***
Posttest IUQ		0.58 (0.07)	0.62	9.96***

Table 7 Continued: Regressions for testing the model that the relationship between script (matched to concerns or mismatched) and posttest desire to obsess/ritualize is mediated by posttest uncertainty

Predictors	Criterion	<i>B</i> ( <i>SE</i> )	<i>B</i>	<i>t</i> value
EN		-0.01 (0.04)	-0.04	-0.25
DIS		-0.00 (0.00)	-0.05	-0.92

*Note.* \*\*\* $p < .001$ ; \*\* $p < .01$ ; \* $p < .05$ . Equation 1 -  $R = .74$  and Adj.  $R^2 = .53$ ,  $p < .001$ . Equation 2 -  $R = .80$  and Adj.  $R^2 = .63$ ,  $p < .001$ . Equation 3 -  $R = .86$  and Adj.  $R^2 = .73$ ,  $p < .001$ . The Need or Desire to Worry Questionnaire; ONQ Pretest/Posttest - Need or Desire to Obsess or Neutralize Questionnaire; PANAS-NA Pretest/Posttest - Positive and Negative Affect Schedule - Negative Affect; IUQ Pretest/Posttest - Intolerance of Uncertainty Questionnaire; EN - Level of Engagement; DIS - Level of Distraction.

## CHAPTER 4 DISCUSSION

In keeping with the literature about IU in GAD (e.g., Dugas et al., 1998) and IU in OCD (e.g., Tolin et al. 2003), I proposed two models illustrating the importance of IU in the understanding of each of these disorders. The overall goal of this study was to test parts of both models. I proposed that when faced with a situation that is ideographically appraised as uncertain and threatening, individuals with GAD will start to feel uncertain about the situation, will further develop a sense of IU, and then will start worrying to resolve IU. Similarly, for an individual with OCD, when the person encounters an intrusive thought/image/impulse that falls in his/her areas of concern, the person develops a sense of IU about the outcome and subsequently engages in ritualizing to rid himself/herself of it.

This study was designed to demonstrate the importance of the construct of IU as the motivational mechanism that leads to and maintains worrying in individuals with GAD and obsessing and/or ritualizing in individuals with OCD. On several occasions, Dugas and colleagues (1998, 2001, 2005b) have demonstrated the relationship of IU to GAD. However, they have claimed that IU is specific to GAD. In contrast, research suggests that IU is also important in OCD (Grayson, 1999; Holaway et al., 2006; Tolin et al., 2003). However, no previous study has assessed IU in analogue GAD and OCD participants and Controls in reaction to ideographic concerns. In the present study, I assessed participants' responses to worry, obsessing and/or ritualizing, IU, and negative affect before and after manipulating the content of the stimuli, the scripts, that were created to induce uncertainty for 20 areas of concern related to GAD and OCD.

The main goal of the study was to establish that manipulation of the content of the scripts induced uncertainty and that these changes were associated with increases in IU. Following the increase in IU, the analogue GAD group who received scripts matched to their own specific concerns were expected to experience an increase in worry and negative affect. Similarly, the analogue OCD group that received scripts matched to their concerns were expected to experience an increase in IU followed by increase in obsessing and/or ritualizing and negative affect. The analogue groups that received scripts that were mismatched to their concerns were also expected to experience increases in IU, worry, obsessing and/or ritualizing, or negative affect, but not to the extent experienced by the matched groups. Half of the Control group received the same scripts that the matched GAD group received, whereas the other half received the same scripts that the matched OCD group received. In the case of the Control group, I expected a minimal increase in IU, worry, obsessing and/or ritualizing, and negative affect following the administration of the uncertainty-inducing scripts.

Although there were some full sample changes from pretest to posttest assessment, overall, I found little support for the hypotheses of this study. My main manipulation, matching vs mismatching scripts to ideographic concerns, did not work as proposed. There were no differences in the dependent variables between the levels of the scripts – matched vs. mismatched. There were no significant differences among the GAD, OCD, and Control groups on any of the dependent variables, namely, IU, worry, obsessing and/or ritualizing, or negative affect from pretest to posttest assessment subsequent to receiving the uncertainty-inducing scripts. Finally, I did not find support for the

mediational role of IU when assessing the relationship between script, and worry, obsessing and/or ritualizing, or negative affect.

My first hypothesis stated that the full sample would experience an increase in IU, negative affect, worry and/or a need to obsess and/or ritualize from pretest to posttest (before the administration of the uncertainty scripts to after). Negative affect and IU did increase for the full sample following the administration of the scripts. However, participants did not experience increased worry or obsessing and/or ritualizing as hypothesized. In the last portion of the study, participants were requested to write a few lines about their experience reading the scripts. Certain participants reported that they felt better after reading the scripts because they believed that their problems with worry or obsessing and/or ritualizing were not as distressing as the scenarios described in the scripts. Although they experienced a general sense of IU and negative affect, this did not translate to worrying more or to experiencing more obsessing and/or ritualizing.

Since I were interested in assessing changes in worry and obsessing and/or ritualizing secondary to changes in IU, I conducted similar *post hoc* analyses for participants who experienced increased IU from pretest to posttest (regardless of the type of script they received or the group into which they were classified). This subset of participants showed increased negative affect (as in the full sample analyses) but also demonstrated increased worry and obsessing and/or ritualizing. These *post hoc* analyses lend some support for the notion that increased IU is, in fact, related to increased worry, obsessing and/or ritualizing, and negative affect. However, I make this statement with caution given the *post hoc* nature of the analyses and the potential shared method variance due to the

artifactual overlap between the measures created and formatted identically by the author for the study.

Hypothesis 2 stated that participants in the GAD matched group would experience more IU, negative affect, and need to worry upon the administration of the uncertainty-inducing script than the GAD mismatched group (I believed that when matched with their own idiosyncratic concerns, participants in the GAD group would respond to the dependent measures more strongly than they would respond to mismatched OCD concerns). I found no support for this hypothesis. The interaction of group-by-script was not significant, suggesting that participants in the GAD group responded with similar amounts of IU, worry, and negative affect, irrespective of whether they were matched with scripts reflecting idiosyncratic concerns or not.

I found no support for my third hypothesis – participants in the OCD matched group would experience greater IU, negative affect, and need to obsess and/or ritualize following the administration of the uncertainty-inducing scripts than the OCD mismatched group. Again, I did not find a significant interaction effect for group-by-script, suggesting that participants in the OCD group responded with similar amounts of IU, obsessing and/or ritualizing, and negative affect, irrespective of whether they were matched with scripts reflecting idiosyncratic concerns or not. My fourth hypothesis was that participants in the OCD mismatched group would experience more IU, negative affect, and tendency to obsess and/or ritualize than participants in the GAD mismatched group (I believed that GAD concerns tend to be more real-life, “normal” concerns compared to more bizarre concerns of OCD individuals; as a result, mismatched participants exposed to GAD scripts would respond more strongly to the dependent

measures than participants exposed to OCD scripts). There were no significant differences between participants in the OCD mismatched group and the GAD mismatched group with respect to any of the dependent measures following the administration of the scripts, and thus no support for this hypothesis.

My fifth hypothesis stated that participants in the Control groups with yoked GAD and OCD scripts would experience significantly smaller increases in IU, negative affect, and need to worry and/or obsess and/or ritualize following the administration of the scripts than any of the GAD or OCD groups. Again, I found no support for this hypothesis, suggesting that all participants responded to scripts similarly on measures of IU, worry, obsessing and/or ritualizing, and negative affect.

In the Control groups, I predicted some increases in levels of IU, negative affect, need to worry and/or obsess and/or ritualize from pre- to post-assessment (I expected that after reading potentially distressing material, participants in the control groups would respond to the dependent measures in the expected direction). My results did not support my sixth hypothesis.

The seventh hypothesis that stated that Control participants who received GAD scripts would experience greater increases in IU, negative affect, and need to worry than participants who received OCD scripts (as above, the GAD scripts would resonate more than the OCD scripts for the participants in the control groups) was not supported by my results.

In short, I did not find any significant main effects for group or script, and no interaction effects for group-by-script for any of the dependent variables for changes from pretest to posttest assessment following the induction of uncertainty. In other words,

GAD, OCD, and Control groups responded with similar amounts of IU, worry, obsessing and/or ritualizing, and negative affect before and after reading the uncertainty-inducing scripts. Moreover, there were no significant differences between participants who received matched vs mismatched scripts in worry, obsessing and/or ritualizing, or negative affect.

It seems apparent that the manipulation of the type of script failed on several levels. It is possible that my main manipulation, the type of script, may not have worked out as hypothesized for most of the variables because sometimes I was unable to match the concerns and/or the feared consequences for participants in the matched GAD and OCD conditions. With methodology that could tap into the concerns and feared consequences more accurately, I may have seen results that would have been more consistent with the expectations of the study. Another possibility may be that the scripts induced a fair sense of uncertainty that overshadowed any effects caused by differences in groups (GAD, OCD, Control), type of script (matched vs mismatched), or their interaction. However, this explanation is tenuous given the modest changes in IU from pretest to posttest assessment.

Participants were required to emotionally engage with the scripts and to minimize distraction in order for them to experience IU such that that might have an effect on worry, obsessing and/or ritualizing, or negative affect. I controlled for emotional engagement and distractibility in all my group difference analyses. Results showed that emotional engagement was significantly related to the dependent variables on all occasions but distractibility was not. However, it is possible that participants in the GAD and OCD groups could have been emotionally or cognitively avoidant of the material

(Borkovec & Lyonfields, 1993) and, as a result, did not demonstrate differential increases in worry, obsessing and/or ritualizing, and negative affect from the Control group or from each other when administered matched scripts. Given that I did not include a validated measure of emotional involvement/engagement or distractibility, it is difficult to demonstrate whether participants' perceived emotional engagement as per their report on the one item is in fact reflective of such engagement. It is possible that, in fact, participants were cognitively/emotionally avoidant when they were processing the information and a response bias in keeping with experimenters' expectations stating that they were engaged may have played a role in their reporting. It appeared from the results that participants did not report significant distractibility. However, there are similar limitations in interpreting these results and participants may, in fact, have been more distracted than indicated by their self report on a single-item measure.

My eighth and final hypothesis stated that IU would mediate the relationship between script and negative affect, the need to worry, and the need to obsess and/or ritualize. A similar pattern emerged when the analyses were conducted for the different dependent variables. Script did not significantly predict posttest worry, obsessing and/or ritualizing, negative affect, or IU. Pretest IU significantly predicted posttest obsessing and/or ritualizing and posttest negative affect but not posttest worry. Posttest IU significantly predicted posttest worry, obsessing and/or ritualizing, and negative affect. Emotional engagement significantly predicted posttest worry, negative affect, and obsessing/ritualizing on all occasions except in the final equation when assessing the relationship of IU between script and posttest obsessing/ritualizing. These findings suggest that posttest IU is important when assessing posttest worry, obsessing and/or

ritualizing, and negative affect, but it does not mediate the relationship between script and any of these dependent variables. The findings also suggest that emotional engagement is an important construct when examining these relationships.

The method for manipulating uncertainty was using scripts that tapped into ten worry and ten OCD themes. It is possible that the time given to participants to read the scripts (eight minutes) was too long or not long enough. The amount of time allotted was based on a pilot run of the study in which participants suggested that they would require about that much time to immerse themselves in the content and for a sense of IU to develop. Another possibility is that participants experienced IU but not to the point that they started worrying or experienced a desire for obsessing and/or ritualizing about the situation. Alternatively, the uncertainty induced by the scripts did not translate into IU, thereby failing to lead to worry, obsessing and/or ritualizing, and negative affect. Since, we was unable to manipulate IU, there is no way of knowing whether the manipulation of uncertainty, in fact, led to changes in IU or not. Participants showed increases from pretest to posttest assessment on the measure designed to assess IU but I made a theoretical leap that manipulating the content of the scripts would lead to increases in uncertainty and subsequent increases in IU. Whether I succeeded in my goal is open to question.

Even though the variables in the model did not perform as expected in this study, I could speculate about the remaining variables in the model. The models proposed in the study included other components, such as appraisal of the situation or the stimulus as threatening and positive beliefs associated with worry or obsessing and/or ritualizing. I was not able to assess those factors in this study. I did not collect information in the study

about whether participants held positive beliefs associated with worry or obsessing and/or ritualizing. Perhaps, with this information, I would have been able to understand why the mixed moderation-mediation model did not work as proposed. It is also possible that there may be another mechanism that mediates the relationship between type of script and worry, obsessing and/or ritualizing, or negative affect other than IU. Positive beliefs about worry could, in fact, mediate the relationship between type of script and worry. This is not consistent with the model proposed in this study but may be a reasonable alternative explanation. Similarly, the tendency to engage in magical thinking, as manifested in other variables like thought-action-fusion or perfectionism, may also mediate the relationship between type of script and obsessing and/or ritualizing.

There are several limitations of this study that should be noted. I was unable to obtain clinical samples of GAD and OCD participants to compare to a control group. The scripts could have a stronger impact on clinical populations, thereby making a stronger bridge from uncertainty to IU and better demonstrating the mediational effect of IU between matched concerns and worry, OC, and negative affect. The scripts that were generated were specific to different themes in GAD and OCD; however, it is possible that they did not tap into the exact consequences that each participant may have worried about or obsessed/ritualized about. This may have been particularly true for participants in the OCD group who received matched scripts. The scripts may have generated uncertainty but not obsessing and/or ritualizing. It is also possible that the manipulation of the content of the scripts may have led to changes in uncertainty but not IU. As a result, I may not have assessed IU but just uncertainty, which in itself was not proposed to increase or maintain worry or obsessing and/or ritualizing. The entire study, starting with

the screening of participants to the pretest-posttest assessment was based on self-report measures, and, as such, accuracy of responses could be questioned.

Researchers could design future studies to include all parts of the proposed models to test them in the same study to better understand the relationships among the variables in the model. Future research might attempt to better define IU and utilize different and possibly more accurate methods of assessing this construct. It would be useful to design studies that manipulate IU and not uncertainty to assess changes more accurately. Participants could be asked to generate ideographic concerns instead of generating stimuli to make them fit to participants' issues. Future studies can test other potential mechanisms for the development and maintenance of worry and obsessing and/or ritualizing. Another possibility could be to design a study that looks at the predisposition to feel uncertain and to respond accordingly as a more generic predisposition in contrast to an individual's responses to ideographic concerns. Finally, the same study or studies with suggested changes can be developed for clinical samples instead of analogue samples.

Despite not having found support for the model that IU is a mechanism by which GAD and OCD symptoms are maintained, I did find that IU is related to GAD and OCD. I saw this with the regression analyses for the tests of mediation as well as in the exploratory analyses for group differences in state IU. This lends support to the notion that understanding and addressing the subjective sense of IU in treatment for GAD and OCD is important. It is clear that the literature on this construct continues to be murky, but there is much evidence to suggest that IU is important in both disorders. As such, it would fall on the clinician to assess it, understand it, and then design treatment

interventions such that one becomes more willing to live with uncertainty. This could be accomplished via a philosophical acceptance of uncertainty along with behavioral and imaginal exposure work. Such a change in thinking and behaviors may lead to decreased symptoms and better quality of life.

In conclusion, I was able to establish that IU is positively correlated with worry, obsessing and/or ritualizing, and negative affect. IU significantly predicted worry, obsessing and/or ritualizing, and negative affect but was not a significant mediator between type of script and these variables. Participants in the GAD, OCD, and Control groups experienced increases in IU and negative affect but not in worry or obsessing and/or ritualizing. However, participants who experienced increased IU also experienced increased worry, obsessing and/or ritualizing, and negative affect. There were no group differences in IU, worry, obsessing and/or ritualizing, or negative affect. There was no significant interaction effect for script-by-group for worry, obsessing and/or ritualizing, IU, or negative affect. In short, I did not find support for a mixed moderation-mediation model in this study. IU may not be the core mechanism driving and maintaining worry in GAD and obsessing and/or ritualizing in OCD. Alternatively, I may not have manipulated uncertainty successfully to have resulted in accompanied increases in IU that would have led to increases in worry, obsessing and/or ritualizing, and negative affect. Finally, it will be important to continue to address IU in clinical treatment interventions.

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APPENDIX A: Questionnaires

**Generalized Anxiety Disorder-Questionnaire-IV (GAD-Q-IV)**

1) Do you experience excessive worry?      Yes\_\_\_\_\_      No\_\_\_\_\_

2) Is your worry excessive in intensity, frequency, or amount of distress it causes?

Yes\_\_\_\_\_      No\_\_\_\_\_

3) Do you find it difficult to control your worry (or stop worrying) once it starts?

Yes\_\_\_\_\_      No\_\_\_\_\_

4) Do you worry excessively and uncontrollably about minor things such as being late for an appointment, minor repairs, homework, etc.?      Yes\_\_\_\_\_

No\_\_\_\_\_

5) Please list the most frequent topics about which you worry excessively and uncontrollably:

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

d. \_\_\_\_\_

e. \_\_\_\_\_

f. \_\_\_\_\_

6) During the last six months, have you been bothered by excessive and uncontrollable worries more days than not?      Yes\_\_\_\_\_      No\_\_\_\_\_

7) During the past six months, have you often been bothered by any of the following symptoms? Place a check next to each symptom that you have had more days than not:

- \_\_\_\_\_ Restlessness or feeling keyed up or on edge
- \_\_\_\_\_ Difficulty falling/staying asleep or restless/unsatisfying sleep
- \_\_\_\_\_ Difficulty concentrating or mind going blank
- \_\_\_\_\_ Irritability
- \_\_\_\_\_ Being easily fatigued
- \_\_\_\_\_ Muscle tension

8) How much do worry and physical symptoms interfere with your life, work, social activities, family, etc.? Circle one number:

- |          |          |          |          |          |          |          |          |             |
|----------|----------|----------|----------|----------|----------|----------|----------|-------------|
| <b>0</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>8</b>    |
| None     |          | Mild     |          | Moderate |          | Severe   |          | Very Severe |

9) How much are you bothered by worry and physical symptoms (how much distress does it cause you)? Circle one number:

- |             |          |               |          |                   |          |                 |          |                      |
|-------------|----------|---------------|----------|-------------------|----------|-----------------|----------|----------------------|
| <b>0</b>    | <b>1</b> | <b>2</b>      | <b>3</b> | <b>4</b>          | <b>5</b> | <b>6</b>        | <b>7</b> | <b>8</b>             |
| No Distress |          | Mild Distress |          | Moderate Distress |          | Severe Distress |          | Very Severe Distress |

## Worry Domains Questionnaire (WDQ)

Please write the appropriate number in the space provided that corresponds to how much you WORRY about the following:

1 Not at all	2 A little	3 Moderately	4 Quite a bit	5 Extremely
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*I worry...*

- \_\_\_\_\_1) That my money will run out.
- \_\_\_\_\_2) That I cannot be assertive or express my opinions.
- \_\_\_\_\_3) That my future job prospects are not good.
- \_\_\_\_\_4) That my family will be angry with me or disapprove of something that I do.
- \_\_\_\_\_5) That I'll never achieve my ambitions.
- \_\_\_\_\_6) That I will not keep my workload up to date.
- \_\_\_\_\_7) That financial problems will restrict holidays and travel.
- \_\_\_\_\_8) That I have no concentration.
- \_\_\_\_\_9) That I am not able to afford things.
- \_\_\_\_\_10) That I feel insecure.
- \_\_\_\_\_11) That I can't afford to pay bills.
- \_\_\_\_\_12) That my living conditions are inadequate.
- \_\_\_\_\_13) That life may have no purpose.
- \_\_\_\_\_14) That I don't work hard enough.
- \_\_\_\_\_15) That others will not approve of me.

- \_\_\_\_\_16) That I find it difficult to maintain a stable relationship.
- \_\_\_\_\_17) That I leave work unfinished.
- \_\_\_\_\_18) That I lack confidence.
- \_\_\_\_\_19) That I am unattractive.
- \_\_\_\_\_20) That I might make myself look stupid.
- \_\_\_\_\_21) That I will lose close friends.
- \_\_\_\_\_22) That I haven't achieved much.
- \_\_\_\_\_23) That I am not loved.
- \_\_\_\_\_24) That I will be late for an appointment.
- \_\_\_\_\_25) That I make mistakes at work

### **Penn State Worry Questionnaire (PSWQ)**

Enter the number that best describes how typical or characteristic each item is of you, putting the number next to the item:

1	2	3	4	5
Not at all typical		Somewhat typical		Very typical

- \_\_\_\_\_1) If I do not have enough time to do everything, I do not worry about it.
- \_\_\_\_\_2) My worries overwhelm me.
- \_\_\_\_\_3) I do not tend to worry about things.
- \_\_\_\_\_4) Many situations make me worry.
- \_\_\_\_\_5) I know I should not worry about things, but I just cannot help it.
- \_\_\_\_\_6) When I am under pressure I worry a lot.
- \_\_\_\_\_7) I am always worrying about something.
- \_\_\_\_\_8) I find it easy to dismiss worrisome thoughts.'
- \_\_\_\_\_9) As soon as I finish one task, I start to worry about everything else I have to do.
- \_\_\_\_\_10) I never worry about anything.
- \_\_\_\_\_11) When there is nothing more I can do about a concern, I do not worry about it any more.
- \_\_\_\_\_12) I have been a worrier all my life.
- \_\_\_\_\_13) I notice that I have been worrying about things.
- \_\_\_\_\_14) Once I start worrying, I cannot stop.

- \_\_\_\_\_15) I worry all the time.
- \_\_\_\_\_16) I worry about projects until they are all done.

### Three Worry

Over the past week, what topics have you been frequently or persistently worried about?

There can be a variety of topics that you could be worrying about. Following is a list of topics. Please read through it carefully and rank order **at least 3 worry topics** that you were concerned about starting with the most persistent or frequent worry topic #1 through #3. If you don't see a topic that was worrisome to you, please write it down.

**Please rank order in the space provided the top 3 worry topics from the examples given below –**

\_\_\_\_\_ Worries about minor matters and staying on top of day to day things

\_\_\_\_\_ Worries about finances

\_\_\_\_\_ Worries about your health

\_\_\_\_\_ Worries about loved ones' health

\_\_\_\_\_ Worries about self confidence or the ability to do things on your own

\_\_\_\_\_ Worries about community and world affairs

\_\_\_\_\_ Worries about work

\_\_\_\_\_ Worries about school

\_\_\_\_\_ Worries about relationships with family members

\_\_\_\_\_ Worries about social relationships with friends and what they think about you

If you didn't see the topics you were worried about, please list them below and continue rank ordering them -

\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ Other \_\_\_\_\_

Other

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**From the rank order on the previous page, please answer the following –**

1<sup>st</sup> most frequent/persistent worry topic as listed on the first page

a) Describe the situation or concern that was troubling to you

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b) What kinds of consequences were you worried about? What were you worried might happen?

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c) Were you able to stop the worrying once it started?

Yes\_\_\_\_\_ No\_\_\_\_\_

d) Did the worry continue to pop into your head frequently?

Yes\_\_\_\_\_ No\_\_\_\_\_

i) If you were able to stop worrying, how did you do it?

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2) 2<sup>nd</sup> most frequent/persistent worry topic as listed on the first page

a) Describe the situation or concern that was troubling to you

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b) What kinds of consequences were you worried about? What were you worried might happen?

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c) Were you able to stop the worrying once it started?

Yes \_\_\_\_\_ No \_\_\_\_\_

d) Did the worry continue to pop into your head frequently?

Yes \_\_\_\_\_ No \_\_\_\_\_

i) If you were able to stop worrying, how did you do it?

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3) 3<sup>rd</sup> most frequent/persistent worry topic as listed on the first page

a) Describe the situation or concern that was troubling to you

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b) What kinds of consequences were you worried about? What were you worried might happen?

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c) Were you able to stop the worrying once it started?

Yes \_\_\_\_\_ No \_\_\_\_\_

d) Did the worry continue to pop into your head frequently?

Yes \_\_\_\_\_ No \_\_\_\_\_

i) If you were able to stop worrying, how did you do it?

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### Obsessive–Compulsive Inventory—Revised (OCI-R)

The following statements refer to experiences that many people have in their everyday lives. Circle the number that best describes **HOW MUCH** that experience has **DISTRESSED or BOTHERED** you during the **PAST MONTH**. The numbers refer to the following verbal labels:

0	1	3	4	5
Not at all	A little	Moderately	A lot	Extremely

- \_\_\_\_\_ 1) I have saved up so many things that they get in the way.
- \_\_\_\_\_ 2) I check things more often than necessary.
- \_\_\_\_\_ 3) I get upset if objects are not arranged properly.
- \_\_\_\_\_ 4) I feel compelled to count while I am doing things.
- \_\_\_\_\_ 5) I find it difficult to touch an object when I know it has been touched by strangers or certain people.
- \_\_\_\_\_ 6) I find it difficult to control my own thoughts.
- \_\_\_\_\_ 7) I collect things I don't need.
- \_\_\_\_\_ 8) I repeatedly check doors, windows, drawers, etc.
- \_\_\_\_\_ 9) I get upset if others change the way I have arranged things.
- \_\_\_\_\_ 10) I feel I have to repeat certain numbers.
- \_\_\_\_\_ 11) I sometimes have to wash or clean myself simply because I feel contaminated.
- \_\_\_\_\_ 12) I am upset by unpleasant thoughts that come into my mind against my will.

- \_\_\_\_\_13) I avoid throwing things away because I am afraid I might need them later.
- \_\_\_\_\_14) I repeatedly check gas and water taps and light switches after turning them off.
- \_\_\_\_\_15) I need things to be arranged in a particular order.
- \_\_\_\_\_16) I feel that there are good and bad numbers.
- \_\_\_\_\_17) I wash my hands more often and longer than necessary.
- \_\_\_\_\_18) I frequently get nasty thoughts and have difficulty in getting rid of them.

**Padua Inventory-Washington State University Revision (PI-WSUR)**

The following statements refer to thoughts and behaviors which may occur to everyone in everyday life. For each statement, choose the reply which best seems to fit you and the degree of disturbance which such thoughts or behaviors may create. Rate your replies as follows:

0 Not at all	1 A little	2 Quite a lot	3 A lot	4 Very much
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- \_\_\_\_\_1) I feel my hands are dirty when I touch money.
- \_\_\_\_\_2) I think even the slightest contact with bodily secretions (perspiration, saliva, urine, etc.) may contaminate my clothes or somehow harm me.
- \_\_\_\_\_3) I find it difficult to touch an object when I know it has been touched by strangers or by certain people.
- \_\_\_\_\_4) I find it difficult to touch garbage or dirty things.
- \_\_\_\_\_5) I avoid using public toilets because I am afraid of disease and contamination.
- \_\_\_\_\_6) I avoid using public telephones because I am afraid of contagion and disease.
- \_\_\_\_\_7) I wash my hands more often and longer than necessary.
- \_\_\_\_\_8) I sometimes have to wash or clean myself simply because I think I may be dirty or 'contaminated'.

- \_\_\_\_\_9) If I touch something I think is 'contaminated', I immediately have to wash or clean myself.
- \_\_\_\_\_10) If an animal touches me, I feel dirty and immediately have to wash myself or change my clothing.
- \_\_\_\_\_11) I feel obliged to follow a particular order in dressing, undressing, and washing myself.
- \_\_\_\_\_12) Before going to sleep, I have to do certain things in a certain order.
- \_\_\_\_\_13) Before going to bed, I have to hang up or fold my clothes in a special way.
- \_\_\_\_\_14) I have to do things several times before I think they are properly done.
- \_\_\_\_\_15) I tend to keep on checking things more often than necessary.
- \_\_\_\_\_16) I check and recheck gas and water taps and light switches after turning them off.
- \_\_\_\_\_17) I return home to check doors, windows, drawers, etc. to make sure they are properly shut.
- \_\_\_\_\_18) I keep on checking forms, documents, cheques, etc. in detail to make sure I have filled them in correctly.
- \_\_\_\_\_19) I keep on going back to see that matches, cigarettes, etc. are properly extinguished.
- \_\_\_\_\_20) When I handle money, I count and recount it several times.
- \_\_\_\_\_21) I check letters carefully many times before posting them.

- \_\_\_\_\_22) Sometimes I am not sure I have done things which in fact I know I have done.
- \_\_\_\_\_23) When I read, I have the impression I have missed something important and must go back and reread the passage at least two or three times.
- \_\_\_\_\_24) I imagine catastrophic consequences as a result of absent-mindedness or minor errors which I make.
- \_\_\_\_\_25) I think or worry at length about having hurt someone without knowing it.
- \_\_\_\_\_26) When I hear about a disaster, I think it is somehow my fault.
- \_\_\_\_\_27) I sometimes worry at length for no reason that I have hurt myself or have some disease.
- \_\_\_\_\_28) I get upset and worried at the sight of knives, daggers, and other pointed objects.
- \_\_\_\_\_29) When I hear about a suicide or a crime, I am upset for a long time and find it difficult to stop thinking about it.
- \_\_\_\_\_30) I invent useless worries about germs and diseases.
- \_\_\_\_\_31) When I look down from a bridge or a very high window, I feel an impulse to throw myself into space.
- \_\_\_\_\_32) When I see a train approaching, I sometimes think I could throw myself under its wheels.
- \_\_\_\_\_33) At certain moments, I am tempted to tear off my clothes in public.

- \_\_\_\_\_34) While driving, I sometimes feel an impulse to drive the car into someone or something.
- \_\_\_\_\_35) Seeing weapons excites me and makes me think violent thoughts.
- \_\_\_\_\_36) I sometimes feel the need to break or damage things for no reason.
- \_\_\_\_\_37) I sometimes have an impulse to steal other people's belongings, even if they are of no use to me.
- \_\_\_\_\_38) I am sometimes almost irresistibly tempted to steal something from the supermarket.
- \_\_\_\_\_39) I sometimes have an impulse to hurt defenseless children or animals.

### Three OC

Over the past week, have you been frequently or persistently having thoughts/images/impulses that repeat continuously, don't seem to make sense, and/or seem intrusive? Do these intrusions cause anxiety and distress? Do you feel the need to do or say something to get rid of the intrusions and reduce the distress they cause? Have you found it difficult to do so? There can be a variety of topics that you could be concerned about. Following is a list of topics. Please read through it carefully and rank order **at least 3 intrusive topics** that you were concerned about starting with the most persistent or frequent intrusive topic #1 through #3. If you don't see a topic that was intrusive to you, please write it down.

**Please rank order in the space provided, the top 3 intrusive topics from the examples given below –**

\_\_\_\_\_ Thoughts/images/impulses about germs, catching diseases, hand washing, etc.

\_\_\_\_\_ Thoughts/images/impulses about collecting things, throwing things out, or clutter

\_\_\_\_\_ Thoughts/images/impulses about checking different things like locks, appliances, maps, email, etc., or repeating things

\_\_\_\_\_ Thoughts/images/impulses about how certain thoughts can cause those things to actually happen

\_\_\_\_\_ Thoughts/images/impulses about putting things in order, organizing things, wanting things symmetrical

\_\_\_\_\_ Thoughts/images/impulses about harming or hurting other people or yourself

\_\_\_\_\_ Thoughts/images/impulses about dressing a certain way and grooming

\_\_\_\_\_ Thoughts/images/impulses about cleaning things

\_\_\_\_\_ Thoughts/images/impulses about sexual content, religious or moral concerns

\_\_\_\_\_ Thoughts/images/impulses about wanting to know things for certain, difficulty trusting others, needing reassurance

If you didn't see the topics you found intrusive, please list them below and continue rank ordering them -

\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ Other \_\_\_\_\_

**From the rank order on the previous pages, please answer the following –**

1<sup>st</sup> most frequent/persistent intrusion topic as listed on the first two pages

a) Describe the situation or intrusion (thought/image/impulse) that was troubling to you

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b) What kinds of consequences were you afraid about? What were you afraid might happen?

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c) Were you able to get rid of the thoughts/impulses/images once they started?

Yes \_\_\_\_\_ No \_\_\_\_\_

d) Did they continue to pop into your head?

Yes \_\_\_\_\_ No \_\_\_\_\_

i) If you were you able to get rid of the thoughts/impulses/images or the distress and anxiety they caused, how did you do it?

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2) 2<sup>nd</sup> most frequent/persistent intrusion topic as listed on the first two pages

a) Describe the situation or intrusion (thought/image/impulse) that was troubling to you

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b) What kinds of consequences were you afraid about? What were you afraid might happen?

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c) Were you able to get rid of the thoughts/impulses/images once they started?

Yes\_\_\_\_\_ No\_\_\_\_\_

d) Did they continue to pop into your head?

Yes\_\_\_\_\_ No\_\_\_\_\_

i) If you were you able to get rid of the thoughts/impulses/images or the distress and anxiety they caused, how did you do it?

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3) 3<sup>rd</sup> most frequent/persistent intrusion topic as listed on the first two pages

a) Describe the situation or intrusion (thought/image/impulse) that was troubling to you

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What kinds of consequences were you afraid about? What were you afraid might happen?

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Were you able to get rid of the thoughts/impulses/images once they started?

Yes\_\_\_\_\_ No\_\_\_\_\_

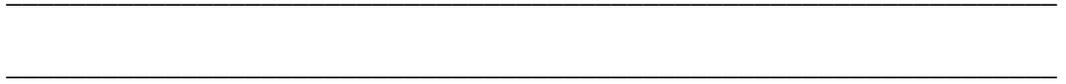
b) Did they continue to pop into your head?

Yes\_\_\_\_\_ No\_\_\_\_\_

i) If you were you able to get rid of the thoughts/impulses/images or the distress and anxiety they caused, how did you do it?

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### **Intolerance of Uncertainty Scale (IUS)**

You will find below a series of statements which describe how people may react to the uncertainties of life. Please use the scale below to describe to what extent each item is characteristic of you (please write the number that describes you best in the space before each item).

1	2	3	4	5
Not at all characteristic of me	A little characteristic of me	Somewhat characteristic of me	Very characteristic of me	Entirely characteristic of me

- \_\_\_\_\_1)      Uncertainty stops me from having a strong opinion.
- \_\_\_\_\_2)      Being uncertain means that a person is disorganized.
- \_\_\_\_\_3)      Uncertainty makes life intolerable.
- \_\_\_\_\_4)      It's unfair having no guarantees in life.
- \_\_\_\_\_5)      My mind can't be relaxed if I don't know what will happen  
tomorrow.
- \_\_\_\_\_6)      Uncertainty makes me uneasy, anxious, or stressed.
- \_\_\_\_\_7)      Unforeseen events upset me greatly.
- \_\_\_\_\_8)      It frustrates me not having all the information I need.
- \_\_\_\_\_9)      Uncertainty keeps me from living a full life.
- \_\_\_\_\_10)     One should always look ahead so as to avoid surprises.
- \_\_\_\_\_11)     A small unforeseen event can spoil everything, even with the best  
planning.
- \_\_\_\_\_12)     When it's time to act, uncertainty paralyses me.

- \_\_\_\_\_13) Being uncertain means that I am not first rate.
- \_\_\_\_\_14) When I am uncertain, I can't go forward.
- \_\_\_\_\_15) When I am uncertain, I can't function very well.
- \_\_\_\_\_16) Unlike me, others seem to know where they are going with their lives.
- \_\_\_\_\_17) Uncertainty makes me vulnerable, unhappy, or sad.
- \_\_\_\_\_18) I always want to know what the future has in store for me.
- \_\_\_\_\_19) I can't stand being taken by surprise.
- \_\_\_\_\_20) The smallest doubt can stop me from acting.
- \_\_\_\_\_21) I should be able to organize everything in advance.
- \_\_\_\_\_22) Being uncertain means that I lack confidence.
- \_\_\_\_\_23) I think it's unfair that other people seem to be sure about their future.
- \_\_\_\_\_24) Uncertainty keeps me from sleeping soundly.
- \_\_\_\_\_25) I must get away from all uncertain situations.
- \_\_\_\_\_26) The ambiguities in life stress me.
- \_\_\_\_\_27) I can't stand being undecided about my future.

### **Intolerance of Uncertainty Inventory (IUI)**

Below is a series of statements that describes how people may react. Please use the scale below to indicate how characteristic each statement is of you (Please write the number that best describes you in the space before each line).

1	2	3	4	5
Not at all characteristic of me	A little characteristic of me	Somewhat characteristic of me	Very characteristic of me	Entirely characteristic of me

- \_\_\_\_\_1) I have difficulty accepting that the future is uncertain.
- \_\_\_\_\_2) I find it unbearable to not have guarantees in life.
- \_\_\_\_\_3) Others seem to better tolerate uncertainty than me.
- \_\_\_\_\_4) I find it intolerable that certain aspects of life are not determined in advance.
- \_\_\_\_\_5) I have difficulty tolerating the possibility that a negative event may happen to me.
- \_\_\_\_\_6) When I am waiting for important news, I find it hard to remain in the dark.
- \_\_\_\_\_7) I find it intolerable to have to deal with unpredictable situations.
- \_\_\_\_\_8) I do not really tolerate situations in which I do not know what is going to happen.
- \_\_\_\_\_9) Not knowing what will happen in advance is often unacceptable for me.

- \_\_\_\_\_10) Waiting periods are unbearable for me when I do not know what is going to happen.
- \_\_\_\_\_11) I have difficulty tolerating life's uncertainties.
- \_\_\_\_\_12) When I think that something negative might happen, I have difficulty remaining in uncertainty.
- \_\_\_\_\_13) I would rather know everything right away rather than remain uncertain.
- \_\_\_\_\_14) I have difficulty dealing with the possibility that something unexpected may occur.
- \_\_\_\_\_15) I need to be sure of what I take on.
- \_\_\_\_\_16) I prefer to avoid uncertain situations.
- \_\_\_\_\_17) When I find myself in an uncertain situation, I tend to have doubts about what I am doing.
- \_\_\_\_\_18) I often exaggerate the odds that the worst will happen when something unexpected occurs.
- \_\_\_\_\_19) I tend to want to boss others around so that nothing unexpected will happen to them.
- \_\_\_\_\_20) I often rely on others to reassure me when I do not know what will happen.
- \_\_\_\_\_21) I worry a lot about life's uncertainties.
- \_\_\_\_\_22) I often have doubts about myself when a situation is uncertain.
- \_\_\_\_\_23) The possibility that a negative event may occur leads me to avoid certain activities.

- \_\_\_\_\_24) When I am uncertain, I need to be reassured by others.
- \_\_\_\_\_25) I must control everything in order to prevent negative consequences from happening.
- \_\_\_\_\_26) I tend to ask for the opinion of others when I am unsure about what will happen.
- \_\_\_\_\_27) I avoid situations that in which something unanticipated is likely to occur.
- \_\_\_\_\_28) When the outcome of an event is uncertain, I often doubt having done all that was necessary.
- \_\_\_\_\_29) When a negative event might happen, I often overestimate the likelihood that it will take place.
- \_\_\_\_\_30) I tend to worry when I am uncertain about what will happen.
- \_\_\_\_\_31) I often ask for the same information from several people to reassure myself about what will happen.
- \_\_\_\_\_32) Uncertain situations worry me.
- \_\_\_\_\_33) When I am uncertain about what will happen, I try to control everything.
- \_\_\_\_\_34) I tend to overestimate the probability that something bad will occur when I do not know what will happen.
- \_\_\_\_\_35) Thinking that something unexpected might happen worries me.
- \_\_\_\_\_36) When I am uncertain, I tend to doubt my capabilities.
- \_\_\_\_\_37) I tend not to engage in activities involving some uncertainty.

- \_\_\_\_\_38) When I am uncertain, I tend to overestimate the odds that the events will turn out badly.
- \_\_\_\_\_39) I tend to want to control my loved one's activities in order to decrease the chances that something will happen to them.
- \_\_\_\_\_40) Even if it is unlikely that a negative event may occur, I need to be told repeatedly that everything will go well.
- \_\_\_\_\_41) I prefer to drop a project rather than have to live with uncertainty.
- \_\_\_\_\_42) I prefer to control everything in order to decrease uncertainties.
- \_\_\_\_\_43) Not knowing what the future holds for me worries me.
- \_\_\_\_\_44) In an uncertain situation, I tend to exaggerate the chances that things may go badly.
- \_\_\_\_\_45) I often tend to question my choices when I am uncertain about what will happen.

### The Need or Desire to Worry Questionnaire (WQ)

Please read each statement carefully. Using the scale provided below, please chose the best description of your thoughts and feelings and how much you agree or disagree AT THE PRESENT MOMENT:

1	2	3	4	5
Completely disagree	Slightly Disagree	Neither agree nor disagree	Slightly agree	Completely agree

- \_\_\_\_\_1) I am worried about my future.
- \_\_\_\_\_2) I am worried that I won't be able to avert the danger.
- \_\_\_\_\_3) I feel incapable of controlling my worrying.
- \_\_\_\_\_4) I tend to worry a lot and right now especially, I'm even more worried.
- \_\_\_\_\_5) My worries are overwhelming me.
- \_\_\_\_\_6) I am having trouble dismissing worrisome thoughts.
- \_\_\_\_\_7) I wish I could stop worrying at this time.
- \_\_\_\_\_8) My situation is making me worry.
- \_\_\_\_\_9) I am worried that my worst fears will come true.
- \_\_\_\_\_10) I am worried that I have too much on my plate right now.

**The Need or Desire to Obsess or Neutralize Questionnaire (ONQ)**

Please read each statement carefully. Using the scale provided below, please chose the best description of your thoughts and feelings and how much you agree or disagree AT THE PRESENT MOMENT:

1	2	3	4	5
Completely disagree	Slightly Disagree	Neither agree nor disagree	Slightly agree	Completely agree

- \_\_\_\_\_1) I want to check to make sure everything is okay.
- \_\_\_\_\_2) If I don't say or think something over and over again, I will be responsible for bringing harm to myself or to my loved ones.
- \_\_\_\_\_3) I am having trouble making decisions.
- \_\_\_\_\_4) I want to repeat an action several times until I feel its "just right" to stop.
- \_\_\_\_\_5) I want to put things in order to feel better.
- \_\_\_\_\_6) I am afraid right now that my thoughts will cause damage.
- \_\_\_\_\_7) I am having trouble dismissing this troubling thought/impulse/image that keeps popping in my head.
- \_\_\_\_\_8) I want things to be perfect.
- \_\_\_\_\_9) I am thinking about embarrassing or harmful thoughts that won't go away.
- \_\_\_\_\_10) If I do certain things a certain way, I will be able to stay safe and keep others safe.

### The Positive and Negative Affect Scales (PANAS)

This scale consists of a number of words that describe different feelings and emotions.

Read each item and then mark the appropriate answer in the space next to that word.

Indicate to what extent YOU FEEL THIS WAY RIGHT NOW, THAT IS, AT THE PRESENT MOMENT. Use the following scale to record your answers:

1	2	3	4	5
Very slightly or not at all	A little	Moderately	Quite a bit	Extremely

\_\_\_\_\_ Interested

\_\_\_\_\_ Irritable

\_\_\_\_\_ Distressed

\_\_\_\_\_ Alert

\_\_\_\_\_ Excited

\_\_\_\_\_ Ashamed

\_\_\_\_\_ Upset

\_\_\_\_\_ Inspired

\_\_\_\_\_ Strong

\_\_\_\_\_ Nervous

\_\_\_\_\_ Guilty

\_\_\_\_\_ Determined

\_\_\_\_\_ Scared

\_\_\_\_\_ Attentive

\_\_\_\_\_ Hostile

\_\_\_\_\_ Jittery

\_\_\_\_\_ Enthusiastic

\_\_\_\_\_ Active

\_\_\_\_\_ Proud

\_\_\_\_\_ Afraid

## The Intolerance of Uncertainty Questionnaire (IUQ)

Please read each statement carefully. Using the scale provided below, please chose the best description of your thoughts and feelings and how much you agree or disagree AT THE PRESENT MOMENT:

1	2	3	4	5
Completely disagree	Slightly Disagree	Neither agree nor disagree	Slightly agree	Completely agree

- \_\_\_\_\_1) I am feeling very uncertain about the outcome of my problems.
- \_\_\_\_\_2) My uncertainty is difficult to tolerate.
- \_\_\_\_\_3) I am not sure how things will pan out and I am very distressed by it.
- \_\_\_\_\_4) Not knowing the potentially bad outcome is as bad as my fears coming true.
- \_\_\_\_\_5) I want to do something to be certain that everything will be okay.
- \_\_\_\_\_6) Being undecided is making me feel frustrated.
- \_\_\_\_\_7) Not having guarantees about the future is troubling me.
- \_\_\_\_\_8) My doubts are getting in the way.
- \_\_\_\_\_9) I want reassurance that things will be okay.
- \_\_\_\_\_10) I am not certain that I will be effective in averting the danger and it is driving me crazy.

## Distraction and Engagement Questionnaire

Please answer the following questions about your emotional involvement about the passage you read earlier.

1 Not at all involved	2 Slightly involved	3 Moderately involved	4 Mostly involved	5 Completely involved
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\_\_\_\_\_1) Using the scale above, please rate your level of emotional involvement in the passage you read earlier.

\_\_\_\_\_2) Please indicate the percentage of how distracted you were when you were reading the passage.

\_\_\_\_\_3) In a few sentences please describe your experience reading the passage –

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## APPENDIX B: Scripts

### **Script Instructions**

Please read the following passage carefully. Imagine that you are the narrator of the passage. Please visualize every little detail as if there was a movie playing and you were the main character in the passage and all of it was happening to you. Get in touch with your emotional reactions to the passage. How does it make you feel? What if this was actually happening to you? You have 8 minutes to read the passage. If you are done before the 8 minutes are up, please continue to read the passage and visualize the details in the passage until I tell you to stop. It is natural for your mind to wander but it is imperative that you continue to bring your thoughts and feelings back to the passage and continue to visualize yourself as if you were in that situation right now until I ask you to stop. You will be asked questions about your emotional involvement in the passage at a later time. Do you have any questions at this time?

## **GAD Scripts**

### *Minor Matters*

For the past month, I have had trouble getting to things the way I'm used to. There have been several occasions when I've been late for classes, times when I've turned in my assignments late, and times when I've been late for work. It doesn't end there; I have been constantly wondering whether I'll get things done on time or not! What if people think I am slacking off? But I've been trying so hard to stay on top of things! I'm not sure why I constantly feel like there is no time to relax or just to sit back and watch some TV or read a good book. I'm constantly wondering whether I'm going to meet deadlines or be on time for appointments or classes. In fact I'm having trouble sleeping because I may wake up late and be late for my morning classes. It has been very difficult to deal with this constant doubt about little things that get blown up into uncertainties about bigger things, like my future. Take for instance, the exam I have tomorrow. I'm not sure if I'm prepared for it. But instead of studying for it, I'm thinking about how I may not be capable of staying on top of everything that's going on in my life! If I don't do well on the exam, I'm worried I may get bad grades on everything, I may not be able to find a good job, and that basically my life would suck! What if I'm late for the exam tomorrow? What if my car that has been giving me trouble just dies on me on my way to school? What if my mind goes blank? Of course, everything could go okay. I could be on time and I could be prepared. But what happens if I'm not? What if my alarm doesn't go off on time? But isn't studying for the exam, the most important thing right now?? I could do well and my life could go okay, but then again, what if I don't do well and what if my future sucks??

## *Finances*

For several years now I have been worried about my finances. I'm never sure whether I will be able to make ends meet - whether I'll be able to pay off my college loans, or have enough to pay for necessities like gas, food, clothes... And frequently, I'm not sure if I'll have enough money to go out and have fun with my friends! Allocating money for different things has been a constant problem. Just yesterday I found out that I need a couple hundred dollars to pay for books that I absolutely need for class. How am I going to be able to afford it?? Just last month my bank account was overdrawn and I got hit with a huge fee. I really can't afford any more of these late fees. And I got a parking ticket last month that threw me off even more. What's going to happen this month? So far things seem to be going okay but what if something unexpected comes up and I don't have enough money to deal with it? I can't ask my parents for money because they're in a bad state themselves; they have unpaid medical bills and no savings. What if I have to lend them money because they lost their house last year? Everything could be okay...but what if I'm not able to afford my apartment and then I have no place to live? Would I be living in a shelter or on the streets? What about my financial future?? What if I can't save up enough to provide for my family? These doubts about finances have been really weighing on me!! The realization that most likely everything will be okay sometimes just doesn't seem enough! But then my friends tell me that I have too many doubts and concerns about my finances. May be they're right, who knows? But I'm never sure that things will go okay, that I will be able to make ends meet, that somehow, it will work out. Everything could go okay...But then again, what if something hits me out of the blue?

### *Personal Health*

Having doubts about my health has been a habit. I worry about getting sick and not being able to go to school or to work. What if I contract some disease or illness that is untreatable? Who would want to be with somebody who is sick and isn't able to do the things that normal people can do? I can't imagine how this would affect my future. I think it would be very difficult to live like that. I mean, if I think about it, there are so many illnesses that one can die of. I feel my heart beating faster and I wonder – am I having a heart attack? What if I have a heart disease that I don't know about? If I get sick, I wonder – do I have a horrible stomach illness? Or worse, what if I have a disease I don't even know about like cancer? What if it's growing inside me and I just don't know it yet? After all, there are so many types of cancers that people can die of! I'm terrified of having some kind of brain tumor; anything related to my brain is scary. What if I get an STD? Could I survive that? They are so wide spread that I'm always on the lookout that I might get HIV or AIDS. What if I become paralyzed and have to live my cooped up in my house? I'm not sure I could live with that. Is it possible that I have some serious mental illness that makes me do crazy things? I do believe that I'm doomed to having doubts about being sick. I often go to doctors but when they can't find anything wrong, I just don't know if I should trust them! It's not their life on the line, its mine! I know that I could be completely fine and could live my life to the fullest but then again, I could be sick and could die of something horrible any day! What if I'm sick right now? How would it affect my life? Or maybe I'm okay...?

## *Health of Others*

I have always worried about the health of my loved ones. Anytime they say to me that they have some kind of pain or that they're not feeling well, I think of all the horrible things that they could be suffering from. Then my doubts about what could be wrong start snowballing and I start thinking about how their lives and my life will be affected by their illness! Just yesterday, my sister went to the doctor. She wouldn't tell me what it was for. I kept asking her because I started feeling insecure about what may be wrong with her. But she refused to tell me! She had been complaining about stomach aches a few days ago but she wouldn't say the visit was related to it. What if it was for a tumor? Or does she have cancer? What if she's dying and she's not telling me about it? She seemed upset when she got back so it must be serious...right? But what could be wrong? If she is very sick, what will I do? Can I cope with her loss? I have to remember though that she may have been upset for another reason and it may not have anything to do with the doctor's visit. Is it possible that she's okay? How can I know for sure? Should I call the doctor and ask him? But I don't think he would tell me. Should I call our parents and ask them? What if she hasn't told them and I get them all concerned about her health? What if she's pregnant? What will happen to her career? What if she's okay and she had a fight with somebody and is not talking to me because she's upset? Not knowing is really getting to me! Doesn't she understand that her health is important to me? That I need to know how she's doing? How can I get her to tell me what's wrong? If she did tell me something was wrong, would I be able to be supportive of her? But, she could also be okay...is she?

### *Self-confidence*

I have a lot of self-doubt. Just yesterday, I started working on a project and I'm not sure about any aspect of it. I don't know if I picked the right topic and I'm not sure if what I'm thinking about doing with it makes any sense! This is not the first time I've felt this way. No matter what decision I have to make, I have a very difficult time with it. I make lists of the pros and cons about every choice. Then I sit down and stare at the list for several hours. I pace the room and I find other things to do before committing to any choice. I ask people what they think I should do. Then of course, every person I approach has a different opinion and I start feeling more confused and I'm more uncertain than before! And nobody seems to realize that every choice I make has consequences.

Sometimes the consequences can be small, like picking the wrong snack to eat (I may end up not liking it and wasting my money) or they can be big, like dating the wrong person and then having to go through a lot of heartache. No matter what I'm thinking about, I feel inadequate to make the right decisions. With my project I mentioned earlier, I don't know what will happen if I don't pick the right topic – will I end up failing the course? Will people make fun of me and say that I'm completely worthless and stupid? But then again, I know that in the past I've never had such a bad experience and everybody always says to me that I'm smart and that I make good decisions. But why do I always second-guess my decisions?? Am I really capable of doing well in school? Will I be able to make a decent living? Will I ever make myself and my family proud? Will I ever find the “right” person to spend my life with? The doubts are everywhere. Not knowing is horrible - I feel like crawling out of my skin...!

*Community and World Affairs*

I can't believe the state of world affairs right now! I'm worried sick about the economy! What if I get laid off from my current job? After I graduate what if I'm unable to find meaningful work because the economy is still bad? What will I do if things don't get better? My parents invested in the stock market and now they're pretty much broke! Will the situation get better for them? What if the recession never ends?? Maybe, we're all doomed?! And just yesterday, my neighbor got robbed. What is the world coming to? When will people stop stealing from and killing each other?? The world is infested with illegal guns. Crime rates have climbed steadily in the city. What if I get mugged? That thought stops me from walking by myself. What if we have another terrorist attack? Whenever I'm traveling, I am terrified because I don't know if I'm going to be safe from terrorists. Whenever I listen to the news or read the newspaper, I can't help but wonder if our government is doing everything to keep us safe from terrorists. They talk about national security and keeping us safe, but can I really trust them? Do politicians care about gun control, healthcare, and social security? What if they don't find solutions to these problems? What about global warming? I often worry about how it is affecting us – what if our generation dies of lung cancer because of the pollution and the green house gas emissions? What if we all die of some natural disaster like the tsunami? Are people taking these issues seriously? When can I stop worrying about how these things will affect me and everybody I care about? I suspect that things may work out and that the world will become a safer place. But I don't know that for sure, do I? How can I be sure that these problems will be resolved? Everybody tells me that I worry too much but I

don't understand how they don't when everything is so uncertain! How will I know what the future holds?

## *Work*

I often feel uncertain about my work – typically, I ask myself and others if I’m doing a good job or not. I wonder - does my boss think I’m incompetent and lazy? I need to be frequently reassured. I’ve always worried about failing at my job and the project I’ve been assigned is making things worse. I’ve never done something like this before. What if I don’t even understand some of the basic concepts? I could ask someone for help, but then I’ll look like an idiot. And then what if I still don’t understand after I get help? Maybe I’m just not smart enough to figure this out. What if I’m not the person for this job?? If I were to fail, how would I feel? Will my family think I’m worthless? What is worse is that I don’t know if I’m going to have a successful future after I graduate! So many things could go wrong with this project! I may not get all the tasks down on paper; I could have arguments with my colleagues about how best to go about things; I may not complete my tasks on time; I may get sick and become unable to work on it...there are endless possibilities for how I could screw this up! What if I didn’t understand the project correctly when my boss assigned it to me? Did I take good notes when she was talking about it? I can’t possibly go to her and say that I didn’t understand her correctly. Should I ask my colleagues for help? Maybe, I’m making too big a deal out of nothing! After all, it is possible that I may be able to pull this off! But what if I don’t?? What if I get fired and have to face the world as a failure? And in this economy, I may not get another job! How will I survive? I feel very stuck right now! I can’t quite figure out how to move forward with this project. I’m really struggling with not knowing how this is going to turn out...

## *School*

I'm very stressed out about school. It's one exam after the next! And one assignment after the next! Everything about school is making me anxious...I don't know if I've picked the right major or the right minor. And this will basically dictate what I'll be doing for the rest of my life! What if it is the wrong choice?! I may hate my line of work and I may end up miserable! Will I then be doomed for life? Lately, because of all these worries, I'm not getting to classes on time and I'm not completing my work on time and my grades are slipping. To add to that some of our assignments have to be emailed to the professor. I often feel uncertain about whether she received my email or not. What if I make a zero on the assignment and can't prove that I did the work? The class is so big that the professor doesn't send confirmations. And I don't want to bug her all the time because what if she doesn't write me a good recommendation letter? Every time I click "send" on the email, I can't stand not knowing whether it's received or not! I've been talking to my friends about school and they just don't understand why I'm so stressed out about it. Sometimes I feel like they just don't get it!! They're so certain about themselves and about all the choices they make. It seems like they have a crystal ball about how school will turn out. I wish somebody would be able to say with some certainty that everything will be okay! I'm afraid of what my future will hold. What if I fail? How will I feel? I've been known to expect the worst and I think that's what I'm doing right now. After all, I may be able to do okay in school and my future may turn out okay. But I have a nagging feeling every time I think about this – I may do well but then again, I may not do well...not knowing is driving me crazy!

## *Family*

Why is it that nobody in my family seems to get along? Every family member has their own opinions and thinks that they know better than everybody else and that everybody should listen to them. I feel uncertain about the relationships in my family all the time. I'm never sure whether the fighting will get so bad that people will just stop talking to each other. What if that happens? Since I was little, I have wondered whether my parents would separate and get a divorce. It was always back and forth – one day they were fine, the next day they would have a big blowout. I just want to know what is going to happen! Are they going to stay together? Split apart? If I could just know one way or the other I could prepare for it. It's the not knowing that drives me crazy. I'm always worried that people I care about will leave me and I will end up all alone. I have always wished that relationships came with guarantees that things would either work out or not. I wish that there was a rule-book for relationships and that everybody in my family stuck to the rules. Then I wouldn't feel so uncertain about family relationships! I'm afraid of dating for the same reasons – what if my partner cheats on me or doesn't love me enough? What would happen if we didn't see eye-to-eye on important things in life? What kind of a relationship would that be?? And what if my family doesn't like the person I'm dating? Would they get upset with me? Would our relationship be strained forever? What if my significant other were to die suddenly? I've always been scared that loved ones would just die one day and then what would I do? How would I cope with that? Death reeks of uncertainty. I wonder how my friends cope with these doubts about how things will turn out. I wish that I could be more like them - be okay with not having guarantees about my family and my romantic life!

### *Social Interpersonal Concerns*

I'm never certain of how I'll be perceived by my family and friends. I feel very uncomfortable when I don't know if people like me or not. I often feel suffocated in relationships because I have trouble articulating my thoughts and feelings. I especially have trouble when I have to be assertive and speaking up may lead to a conflict. Just yesterday, I was hanging out with some friends and they picked a movie to watch. I had already seen that movie and I wasn't really interested in watching it again. I was afraid to say something because I didn't want to ruin it for everybody. And I was very concerned about what they would think of me. If I suggested another movie, would they think I was weird? That my choice was weird? Despite my fears, I spoke up and suggested another movie to the group. They didn't seem too happy with my idea. Now I don't know if my friends hate me for forcing my ideas on them! I'm always afraid that people are going to dislike me and that I would end up alone! That's a really scary thought for me. People have told me that I can come across as intense. I don't know what that means exactly, so I try to be light-hearted and stay away from conflicts or disagreements. If I disagree with somebody, I tend not to say anything. I'll be upset but I won't show it to them. I just choose to bottle it up. But yesterday, I didn't bottle it up and now I don't know if they think I'm selfish and self-centered! What if they don't like me anymore? What if they're making fun of me for my suggestion? I haven't talked to anybody since yesterday so I don't know what they're thinking about me....Is it possible that they're gossiping about me and don't want to hang out with me anymore? That would be horrible! How can I find out what they're thinking?? Do they still like me? How do people deal with not knowing?? I wish I knew...

## **OCD Scripts**

### *Washing/contamination*

I am in a gross public restroom. I decided to go inside only because I absolutely had to go but I probably would have avoided going if I could. Am I surrounded by germs and contaminants everywhere? I'm thinking about the doorknob, the door to the stall, the latch on the door, the toilet, the handle to flush, the toilet paper, the faucet on the sink, the paper towel dispenser; is every single thing in the restroom contaminated? There are filthy paper towels thrown all over the place, spilling out of trash cans. I'm horrified that I chose to walk into this disgusting place! I feel like all the people around me are just waiting to get their contaminated hands on me. They're touching what seems like every surface in the restroom with their hands and bodies. I can smell the awful stench of bodily fluids. I pull out some paper towels but to do that, I have to touch the dispenser. I can't afford to touch any surfaces or any knobs to walk into the stall. What if I catch some horrible untreatable disease? So I scrub my hands for about 5 minutes, over and over, using as much soap as I can get out of the soap dispenser. But the more soap I get, the more I feel the need to wash...to wash away the germs and bacteria swirling all over me! I don't know if I scrubbed my hands long enough. The water didn't seem hot enough to kill all the contaminants. But I finally decide to stop, not because I'm satisfied that I'm disinfected, but because people behind me are getting impatient. Unfortunately, on my way out, I think I may have touched the doorknob, but I'm not sure. I took every precaution to avoid doing that. Did I touch the doorknob? Was it covered with filthy germs? Am I going to contaminate myself and give my loved ones and my friends some

untreatable disease? Would I be able to forgive myself? What if I'm contaminated right now?? Can I live with that nagging uncertainty?

## *Hoarding*

I'm in my room surrounded by piles of paper, knickknacks, dirty clothes, jewelry, receipts, empty food cartons, and who knows what else...! I didn't want to be in here looking through the mess I have been creating for the past decade. But I'm here looking for an important folder of papers that I need to find right away. I can't believe I have to dig through crates of paper and piles of clothes to find this folder!! As I have often felt, I feel disgusted that I have created this mess! And since I've been looking for the past couple of hours now, I'm not sure whether I accidentally threw it out at some point. Last month I had tried to get rid of some of the junk so maybe I threw it out without knowing it? See, that's why I usually just let these piles and crates stay where they are. The thought of losing something important that I may need later is just too much to bear! And the thought of throwing something out that's really important scares me even more. So what do I do? I'm still frantically searching for the folder. I realize that while I'm at it, I might as well try to get rid of some more papers...maybe that will actually make this easier? So, I start throwing things out even though it is agonizingly difficult to do. I throw out piece of paper after paper all the time thinking about my folder that I'm looking for. I feel the need to read everything before discarding it. I'm terrified that I'll throw out something that I'll need in the future. And all the while I'm dealing with the nagging question – did I throw out the folder? I'm having so much trouble focusing and organizing the piles of things – can I really do this? Will I ever be able to organize? What if I can't ever find it? And will I potentially throw out something else that's important without realizing its important? What if I throw out the folder right now without realizing it??

### *Checking*

Last night, before I went to bed I checked about 8-10 times that every door and window was locked. What if somebody were to climb in and rob me or kill me? And I also wanted to make sure that everything would be secure because the apartment would be empty for at least 5 days. But what if when I went to check the latch I accidentally unlocked it? I've flipped them so many times, I'm just not sure anymore. I only stopped checking because I fell asleep from exhaustion. I also checked all the appliances several times to make sure that they were turned off. I still don't feel sure that everything is off. What if my house burns down while I'm away? It would be all my fault. Last night I checked all 3 alarm clocks several times to make sure that I had set the alarms correctly. Unfortunately, I kept thinking that I may have messed it up and woke up a few times during the night to check on them. What if I missed my flight? After I woke up exhausted this morning, I checked my "to do" list a few times and rewrote it a couple times to make sure I didn't forget anything. I had already packed my luggage and checked everything several times yesterday. But this morning I had the nagging feeling that I was forgetting something. So, I spent a good 2 hours checking on things before I left. In the cab, I kept checking to make sure that I had my plane ticket and my passport since I am traveling overseas. Finally, I got on the plane and mentally started going through everything I had packed. Suddenly I couldn't remember if I brought my prescription medications with me! I couldn't get off the plane to look in my checked luggage. This nagging thought led to more distressing thoughts...did I really lock the front door and windows? Did I really turn off the stove after I heated the water for tea? What about the iron? What if I screwed up somehow??!

### *Mental Neutralizing*

I've always had intrusive thoughts running through my mind. They seem to repeat like a broken tape. And oftentimes, they morph into other thoughts that tend to repeat over and over again. Lately, things have gotten pretty bad. I can hardly seem to sit still or concentrate on anything without being bombarded by intrusive thoughts! What if they never go away? What if I'm stuck with them forever? I perform mental acts to get rid of the thoughts. For example, I've been obsessing that my friend will never speak to me again. I had a fight with him a few days ago and I've been worried that I may have lost him forever! There are several mental acts that I perform when I'm distressed about something. One of them is to add or subtract certain numbers. So, I've been trying to get rid of the thought that I may have lost my friend by adding and subtracting all the odd numbers through 19. Usually, when I follow this particular ritual, I can get rid of the distressing and intrusive thoughts and I also believe that whatever I'm obsessing about will not happen. However, I've been at it for a while and I'm not getting the sense that my friendship with this friend is still intact. I'm feeling particularly upset that my ritual may not be working! What if my friend doesn't forgive me? Since the adding and subtracting wasn't working, I started playing the argument that I had with my friend over and over in my head, except, I changed the ending of the argument so that in the end we would make up. When the adding or subtracting doesn't work, I will play the situation in my head with the desired end result. But this time, I don't know if changing the ending is going to help me get rid of the thought and if my friend will still want to be friends with me. So far it's not working! What if none of my mental tricks work with this situation and I can't reconcile with my friend?

### *Ordering*

I have to have everything in order. If something is out of place, I feel very uncomfortable because I'm afraid something bad may happen to me or to my loved ones. When I get up in the morning, I have to make my bed meticulously until I feel "just right" about it. It takes me a good 30 minutes to do it right. Each time I undo and redo the bed, I wonder whether I've gotten it right this time. I have a set routine for getting ready in the morning and it has to be done in the right order. If I do my tasks out of order, I feel like something bad will happen! Everything in my house has a place and when people don't respect it I think something bad may happen to them. This morning I overslept and it was especially bad because I had an exam. This morning, I could only spend about 10 minutes making my bed. I really didn't like the end result and kept thinking, will I fail the exam? I contemplated sticking to my routine because it was making me nauseous not to, but I had to make it to the exam. I didn't have time to take a shower and I knew that most likely, I would feel like a slob all day! I didn't have time to fold my clothes and put them in the right order; I like to make sure that my clothes are arranged by color, the texture and material, and formal vs. casual. I couldn't reorder my toiletries and I couldn't straighten my sofa and the cushions. I left the house feeling really uncomfortable and agitated. I kept going through everything I wasn't able to do and the nagging question wouldn't go away - will something bad happen to me? And to add to that, the calendar on the wall in this classroom is crooked and I'm itching to straighten it!! Should I straighten it?? What if something bad happens because I wasn't able to follow the routine? Will I stop feeling this way?

*Obsessive-compulsive Thoughts and Images of Harm to Self and Others*

I'm usually terrified that I'm going to harm myself or somebody I care about and at times I think that I might harm unknown people. There are so many ways of harming others and being harmed – people can die of food poisoning, bombs, heart attacks, serious medical complications, knife stabs, gun shots, slitting the wrist, running somebody over with a car, dropping a baby on the floor...the list could go on and on!! I live in constant dread! Just this morning I cooked for some friends. Halfway through the meal, all of a sudden I had the thought that I may have added ant poison to our food! I found swarms of ants in our apartment a few days ago and bought powder ant repellent. I put some of the powder in a bowl to use later but I could have used that in the food instead of salt! The repellent and the salt look the same! For the life of me, I couldn't get rid of the thought! I completely lost my appetite and stopped eating. But how was I to tell my friends that if they continued to eat, they may die of food poisoning?? And we had already consumed a large portion of the meal! I remembered a show I had watched on TV where they showed how animals reacted to different types of poisons. I couldn't stop thinking about how the poison would act on our bodies...! Would we start feeling nauseous? Would we start throwing up? What if somebody went into anaphylactic shock and stopped breathing?? Could our organs shrivel and could we suffocate or die of a heart attack? What if these things were true? If I survived, would I be charged with murder? Would I even survive such poisoning? And if I did, would I be able to get over the guilt of having killed my friends? What kind of a life would I live? Should I call 911? Would my friends think I'm crazy? I thought it would be better if they thought I was crazy than being killed by me..!

### *Dressing and Grooming*

I always walk around with the nagging feeling that I didn't dress right. I often agonize about it and wonder, are people staring at me? Are they thinking I look hideous? If people don't act according to my ideas about how they should dress, I feel very agitated and I have trouble looking at them. Every night, before I go to bed, I arrange every single thing that I will use the next morning. If I don't follow the order, I become anxious and restless and I feel like something bad will happen to me or to people who see me. Last night I picked out every piece of my outfit, washed it, dried it, and then ironed it.

However, I kept thinking that I hadn't done it correctly so I repeated the procedure several times. Every time I repeated it, I kept thinking, do people think I look awful?

Finally, since I couldn't get the "just right" feeling, I let it go. I moved on to picking out my shoes. I wiped them and polished them until I felt okay to move on. I started working on arranging all the toiletries and articles that I would need to use in the shower. I only use special brands that I think are "appropriate" for me. Unfortunately, this morning, I spent about 2-3 hours redoing what I had done last night because I didn't think that the outfit I had picked out matched my mood and the weather outside. I spent a couple of hours in front of the mirror on skin care but just couldn't feel okay about how I looked!

Would people think that my hair looks horrible? I didn't know if I could fix it. I kept thinking, am I doing this right? Unfortunately, it was getting closer to the time I had to leave the house but I didn't feel ready to go out in public. But I had to leave...I felt pretty strongly that something horrible was going to happen since I didn't feel good about how I looked! What if something bad did happen?

## *Cleaning*

I spend hours cleaning my place every day. Everybody thinks that I'm crazy and that I'm overdoing it. I use bleach to clean all the countertops in my kitchen, and my bathtub, sink, and toilet in my bathroom. I usually wash my washing machine with soap before using it to wash my clothes. Usually, I'll do at least 2 cycles before I put my clothes in the drier. And I clean the drier with disinfectant before I use it. I clean my laundry basket with soap and bleach. I also throw away my soap at the end of the day. Usually, it's pretty much gone anyway. But what if that's not enough? I'm really scared that if I don't follow strict procedures to clean, I'll end up harming myself or others. And I'm also scared that people will think I'm a slob. After all, the saying is, "cleanliness is next to Godliness"! How else can I get closer to God and also protect everybody?? That's why this morning, when I wasn't able to engage in my daily cleaning rituals, I started feeling nauseous and very upset! I wasn't sure what was going to happen! There was every possibility that somebody would come to my place and see that it was such a mess and think very badly of me! Wouldn't that reflect badly on my own personal hygiene? Would they still continue to associate with me? What if I ended up in hell because I let go of one of my cleaning rituals? These thoughts were driving me crazy! I wish that I hadn't fractured my arm yesterday! If that hadn't happened, I would have been able to continue doing everything I normally do. How long would I have to let go of my cleaning duties? Will I ever be forgiven for this transgression? My place may turn into an unclean and disgusting shack and I may feel so grossed out to be living here! And my clothes won't be clean! I'm feeling so uncomfortable and agitated right now because I don't know what this means for my future!!

*Obsessive-compulsive Thoughts and Impulses about Sexual Nature and Morality*

I keep having disturbing intrusive thoughts about sexual content and my sexual orientation. It is incredibly embarrassing for me to admit that I think about these things incessantly. And it's not like I want to think about them but they just pop into my head without any warning! I feel like a horrible and immoral person! I often think that I may be interested in individuals of the same sex. What if I'm homosexual? What will my family think of me? What will my friends think of me? What if I end up in hell? Isn't it very immoral and wrong to have these thoughts? I'm distressed that I have these thoughts and also because I believe they may be true. There are times when I think over and over again that I'm going to start undressing in public! How humiliating would that be? When I'm in close physical proximity of others, I start thinking – am I going to touch them in a sexually inappropriate way? And I worry that I'll verbalize my sexual fantasies to people when I don't intend to! Very frequently, I believe that I'm going to say sexually inappropriate things and that I have no control over myself! What if I were to make a complete fool of myself in front of others? When I'm watching TV and something sexual comes up, I shut my eyes and put my hands over my ears so that I don't hear it or see it because I know that if I do, then I would have recurring images and thoughts popping into my head for a very long time! I'm always terrified that anybody I date may be homosexual! I'm living in fear that I'll cheat on my significant other! All of this worries me immensely because I try to live a good life and try to follow all the moral teachings. But despite my efforts, am I doomed to end up in hell? At the very least, I may be doomed to hurt other people and humiliate myself!! Am I a horribly immoral person doomed for life?

### *Doubting*

I'm not a very trusting person. I doubt myself and I doubt others at all times about pretty much everything! It's an exhausting way to live!! What if my significant other is cheating on me? What if I die of cancer? What if my house burns down tomorrow? What if I am a failure? What if my best friend decides to stop being friends with me? What if my teachers hate me? What if I contract AIDS? What if I run out of money? What if I didn't clean things properly? What if I left the stove on? I could go on and on about all the thoughts that pop into my head! It's most disturbing for me when I start doubting and second-guessing every decision I make and everything that comes out of my mouth. It happens with such frequency that I feel completely scared all the time! How can a person live like this? Is it a problem with self-confidence or is it a problem with memory, or am I jealous person? I'm not sure what's really going on but every time some doubt pops into my head I feel like running to somebody to ask for reassurance and to feel safe! I have an obsession with knowing everything just the way I want to know it. I'm terrified that if I don't know everything there is to know, I'll never feel secure and be able to move on. But sometimes, even when people give me reassurance, the doubt pops into my head again and again! It feels like nothing will ever be a satisfactory answer! I really wonder how other people live with not knowing! How do they deal with the uncertainty? Why don't they want answers? For example, I'm sitting here reading this and thinking about the purpose of the study. What is the study really about? What if I never find out? Will I feel okay after I leave here? Will I know how to deal with not knowing? Here I go again with all my doubts sneaking in!! I just want to know...