# An Exploration of Personality Styles and Obsessive-Compulsive Phenomena in The Community

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Psych-4900 Honours Thesis

University of Prince Edward Island

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## Abstract

Tender conscience (TC) is conceptualised as a personality style or constellation of personally traits which has been theorized to be a vulnerability factor to the development of obsessive-compulsive disorder (OCD). The traits associated with a tender conscience include elevated feelings or moral obligation, heightened feelings of responsibility, increased cautiousness, and predisposition to feel guilt. This study sought to examine the relationship between tender conscience and obsessive-compulsive symptoms. Furthermore, to research if the presence of tender conscience predicted obsessive-compulsive outcomes. Additionally, other variables known to be related to OCD such as attachment style, and personality traits were examined. The sample used for this study consisted of 66 students from the University of Prince Edward Island. The data was collected through the survey platform Lime Survey where participants were asked to complete a series of self-reported questionnaires: the Attachment Styles Questionnaire (ASQ), the Dimensional Obsessive-Compulsive Scale (DOCS), the International Personality Item Pool – Neuroticism, Extroversion, Openness – 120 item (IPIP-NEO-120), the Obsessive Beliefs questionnaire (OBQ), and the Tender Conscience Questionnaire (TCQ). Correlation and regression analyses were conducted to explore the association between tender conscience and obsessive-compulsive symptoms and beliefs. Results showed that there was a relationship between tender conscience and obsessive-compulsive symptoms and beliefs. Furthermore, tender conscience seems to be a predictor of certain obsessive-compulsive symptoms. However, future research is needed using a larger sample size.

**Acknowledgments**

I would like to extend sincere thanks and appreciation to Dr. Martha Giraldo O'Meara for her professional supervision and guidance throughout the entirety of this process. As well, a thank you to all who participated in this research as it could not be possible without them. Furthermore, I would like to thank Dr. Phillip Smith and Dr. Jason Doiron for serving as members of my defense committee. Finally, I would like to thank my family, and Jason, for their unwavering support throughout this journey.

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# Introduction

## Obsessive-Compulsive Disorder

Obsessive-compulsive disorder (OCD) is characterized by the presence of persistent and unwanted intrusive thoughts, mental images, or impulses known as obsessions. Obsessions tend to be followed by mental or physical acts that the individual carries out in an attempt to neutralize feelings of anxiety caused by obsessions. These acts are known as compulsions. The compulsions commonly manifest as repetitive and often ritualistic behaviors and/or mental acts (e.g., washing, checking, counting, word repetition) that the individual feels an obligation to carry out in an effort to reduce emotional discomfort, prevent a feared event from happening, or "set things right." Individuals may also try to reduce anxiety through attempts at thought suppression or avoidance of known triggers (APA, 2013).

Obsessions and compulsions are often very time-consuming and may occupy a significant portion of the individual's day. The most commonly occurring obsessive-compulsive symptoms are contamination obsessions with washing and cleaning compulsions; Obsessions regarding responsibility of an action followed by a checking compulsion; Symmetry or order obsessions followed by a compulsion of ordering or arrangement; and unacceptable thoughts regarding violence or sex followed by mental compulsions avoidance or thought replacement. Harm is also a common theme within obsessions as individuals may fear becoming dangerous and hurting people or being responsible for a dangerous accident or event that causes harm to others (Abramowitz et al., 2010; Purdon & Clark, 1999).

***Prevalence and Course***

Approximately 1.9%-3% of the population is affected by OCD, with females being slightly more affected than males (Brock & Hany, 2023). An estimated 50% of individuals with OCD experience onset of symptoms during early to mid-adolescence, however, onset of OCD symptoms can also occur as early as age six, or during any stage of adulthood; although possible, it is uncommon to have onset occur over the age of 40. Furthermore, during adolescence, males typically present symptoms of OCD earlier than females. However, females are typically more affected by OCD in adulthood (Brock & Hany, 2023; Goodman et al., 2014).

Regarding the course of the disorder, two courses have been commonly observed: chronic and episodic (Sharma & Math, 2019). A chronic course is the persistent presence of obsessive-compulsive symptoms; within a chronic course, symptoms can fluctuate from severe to periods of incomplete remission, although there is never complete relief from symptoms. In an episodic course, obsessive-compulsive symptoms occur in episodes, with intervals of complete symptom remission in between. Evidence suggests that a chronic course is the most commonly occurring course individuals with OCD experience (Perugi, 1998; Sharma & Math, 2019; Visser et al., 2013).

OCD is often comorbid with a number of other psychological disorders. It is estimated that as many as 69% of individuals with a primary diagnosis of OCD suffer from comorbid disorders (Sharma et al., 2021). Some studies (e.g., Angst et al. 2005; De Prisco et al., 2023; Pallanti et al., 2011; Sharma et al., 2021) have reported that up to 66% of individuals with OCD also live with Major Depressive Disorder (MDD) and that 76% of individuals have a lifetime diagnosis of an anxiety disorder. The relationship between OCD and anxiety disorders has been strongly emphasized and demonstrated with OCD being previously listed as an anxiety disorder

in the DSM-IV (Sharma et al., 2021). The most common anxiety disorders that appear alongside OCD are generalized anxiety disorder (GAD), social anxiety disorder (SAD), and panic disorder (Fenske & Petersen, 2015). Other commonly occurring comorbidities of OCD include neuro-developmental disorders such as attention deficit hyperactivity disorder, and autism spectrum disorder; obsessive-compulsive related disorders (OCRDs) such as body dysmorphic disorder (BDD), hoarding disorder, as well as tic disorders (Sharma, 2021).

### *Treatment*

The most common treatments for OCD include medication, and cognitive behavioral therapy (CBT). The medications most commonly used are selective serotonin reuptake inhibitors (SSRIs) which are generally prescribed to treat anxiety and depression, however, in higher doses have been found to effectively lower obsessive-compulsive symptoms (Brock & Hany, 2023). In terms of psychotherapy, it has been shown that the most effective treatment is exposure and response prevention (ERP). ERP is a type of cognitive behavioral therapy in which an individual confronts their obsessions and practices resisting the urge to respond with the compulsions (Sassano-Higgins & Pato, 2015). Those with OCD who undergo ERP have been shown to have anywhere from a 25% to 60% recovery rate (Fisher et al., 2005). It is worth noting that although ERP has been shown to be an effective treatment, it has received some resistance and refusal from those being treated for OCD due to the distress and emotional discomfort that may arise during the treatment (Öst et al., 2015).

### *Cognitive theory of OCD*

The cognitive models of OCD (Rachman, 1997; Salkovskis, 1985) emphasize the roles that cognitions, beliefs, and appraisals have in the development and maintenance of OCD; furthermore, how intrusive thoughts develop into obsessions and lead to compulsions. Within the

cognitive model of OCD, obsessions are the cause for both compensatory neutralization tactics (compulsions) and emotional distress, but where do the obsessions originate? It is believed obsessions originate from intrusive thoughts. Intrusive thoughts are involuntary and unwanted thoughts or mental images that are often inappropriate or disturbing. Intrusive thoughts differentiate from obsessions in the way that normally occurring intrusive thoughts are not followed by repetitive behaviours, occur less frequently, and do not provoke the same level of anxiety that obsessions do (Belloch et al., 2004; Rachman & de Silva, 1978). There is evidence showing that the majority of the population regularly experiences intrusive thoughts (Rachman & de Silva, 1978), and that normally occurring intrusions develop into obsessions through negative thought appraisals and misinterpretation of the thoughts meaning.

In Rachman and de Silva's (1978) study comparing intrusive thoughts amongst clinical and non-clinical populations, authors found that both groups reported experiencing intrusive thoughts that were unacceptable and ego-dystonic, or in violation of an individual's feelings, moral code, and personal ethics (Purdon & Clark, 1999). The intrusions among the clinical and non-clinical samples were experienced as both thoughts (e.g., inappropriate thoughts regarding sexual acts or violence, reading about a crime and questioning if they were involved and do not remember) and as impulses (e.g., urges to uttering swear words at inappropriate time or crash car while driving). The content of the thoughts between the two groups also shared many themes and similarities revolving around subjects such as violence, sex, blasphemy, and personal responsibility. However, the thoughts were dismissed more quickly and occurred less frequently among the non-clinical population despite their thoughts being similar in nature to the clinical population. Additionally, the clinical population reported feeling more anxiety as a result of the thought than the non-clinical population did. These findings provided evidence that intrusive

thoughts are at the origin of obsessions. Furthermore, since the content of the intrusions amongst both the clinical and non-clinical were very similar, the determining factor as to whether intrusions develop into obsessions was proposed to be the appraisal of the intrusive thoughts and the meaning ascribed to them.

***Salkovskis Cognitive Model***

Paul Salkovskis was one of the first researchers to propose a cognitive explanation for OCD. Salkovskis's theory (1985) recognized that intrusions are commonly occurring phenomena amongst all people. Furthermore, Salkovskis believed that the cognitive processes responsible for involuntary and intrusive thoughts are the same processes used in having voluntary and conscious thoughts. Salkovskis was also of the first to theorize that intrusions develop into obsessions as a result of thought appraisal. If an intrusion occurs and the individual dismisses it as odd and unlikely to occur, then no sequence is started, and the thought is less likely to persist. However, if a person appraises an intrusion as meaningful (e.g., "I had a violent thought, maybe I am violent and don't know it"), it will make the intrusions more anxiety-inducing and persistent (Salkovskis et al., 1998).

Salkovskis uses a three-system model to conceptualize the development of OCD (Salkovskis, 1985). The three-system model first identifies a normally occurring intrusive thought triggered by environmental stimuli. The ego-dystonic thought is negatively appraised or misinterpreted causing emotional discomfort to the individual. As a result of the negative appraisal and misinterpretation, the intrusion develops into an obsession. In response to obsessions, consequential actions are taken in an attempt to neutralize feelings of anxiety (compulsions). The consequential actions taken can be overt, or covert and can include avoidance of potential triggers, thought control, and rituals (Salkovskis, 1985). The neutralizing

act of the compulsion delivers temporary relief from the anxiety provoked by the obsession. However, the neutralizing strategies are counterproductive as they have shown to increase the frequency of occurrence and salience of the obsession. The decrease in anxiety from the neutralization can also solidify a person's belief that there is danger they can prevent, further sensitizing the individual to the obsession (Purdon & Clark, 1999; Salkovskis, 1985, 1998; Steketee et al., 1998).

Central to Salkovskis's theory (Salkovskis, 1985, 1998, 2000) is the role that beliefs have in relation to intrusions. He states that those with OCD may have a predisposition to make catastrophic negative appraisals as a result of personal beliefs acquired from formative experiences in childhood, along with exaggerated beliefs of responsibility. Salkovskis refers to these beliefs as "thinking errors." These beliefs, or "thinking errors" as outlined by Salkovskis are (a) the belief that thinking about an action is the same as carrying out that action; (b) the belief that not preventing harm is the same as directly causing harm; c) a belief of personal responsibility to prevent harm outlined in an intrusion despite the low probability of the event occurring; (d) the belief that failing to neutralize intrusions is the same as wishing harm upon others; (e) the belief that one should maintain control over their thoughts at all times (Salkovskis et al, 2000).

The primary tenant of Salkovskis' cognitive theory is the role beliefs of exaggerated responsibility have in relation to the development and maintenance of obsessions. The heightened feelings of responsibility can manifest in several ways. First, the individual may feel responsible for having the thought (e.g., “I had this thought therefore it reveals something negative about me that I was unaware of”). Feeling responsible if an event outlined in an intrusion occurred (e.g., “an accident could happen, and I would be the one responsible for it”).

Finally, feeling responsible to prevent intrusions from actually occurring (e.g., “I need to ensure there are no germs on my hands, so I do not make people sick”) (OCCWG, 1997).

In addition to beliefs, the concept of selective attention contributes to the maintenance of obsessions. Selective attention is a hyper-awareness of fear-inducing stimuli. If a person is experiencing an obsession involving contamination, that person is more prone to notice people who are sick. Although the average number of sick people the person encounters daily is relatively unchanged, the person will take more notice and believe that the level of danger has increased (Salkovskis, 1985, 1998).

***Rachman's cognitive model***

Stanley Rachman was a significant contributor to cognitive literature on OCD. His aforementioned 1978 study with de Silva regarding the normality of intrusions partly inspired Salkovskis' cognitive theory. Expanding largely off Salkovskis' work, Rachman developed his own cognitive theory. Rachman maintains the same theoretical foundation as Salkovskis; intrusive thoughts are universal and develop into obsessions as a result of the meaning assigned to them. Furthermore, the neutralization tactics are used to reduce emotional discomfort caused by the obsession. However, Rachman's theory differs from that from Salkovskis in the way that Rachman places much more emphasis on the interpretation and meaning applied to intrusions and less on beliefs of personal responsibility surrounding the intrusions.

Rachman states that the majority of intrusions deal with themes centered around personal morals such as blasphemy, sex, or violence. As a result of the themes being somewhat taboo it is easier for an individual to inflate their meaning. He believed that those who hold themselves to higher moral or religious standards are more likely to apply inflated meaning to thoughts. It is

also worth noting that Rachman stated people are more prone to develop obsessions when they are under stress or suffering from negative mood states (Rachman, 1997, 1998).

Rachman theorizes that intrusions develop into obsessions when catastrophic misinterpretations are made about the thought and the individual believes it reveals something unknown about themselves. Furthermore, great emphasis is placed on how internal and external cues can provoke obsessions. Regarding internal cues, he theorizes that bodily sensations can provide the individual with a false sense of evidence that there is danger. For example, if a person has an intrusion involving a loss of self-control resulting in violence, they may become quite anxious when in the presence of a vulnerable person. The bodily sensation of anxiety can be misinterpreted as an indicator that they are about to become violent. This is contrasted by external cues which involve obsessions cued from environmental stimuli. For example, if a person believed they were going to become violent, obsessions may be triggered by objects that could be used as weapons (Rachman, 1998).

Similar to Salkovskis' "thinking errors", Rachman proposes that cognitive biases increase the likelihood of obsession development. The main cognitive bias Rachman credits is the process of thought-action fusion (TAF). TAF can occur in two ways: (a) it can be the belief that having an unacceptable thought will increase the likelihood of the thoughts subject matter actually occurring and (b) the belief that having an immoral thought is the same as carrying out an immoral action. Furthermore, Rachman states that many of the beliefs surrounding responsibility outlined by Salkovskis are forms of thought-action fusion (Rachman, 1997). Nonetheless, Rachman also emphasizes the role beliefs of exaggerated responsibility have in the process of negative appraisals and states that it poses as not only a vulnerability factor to catastrophic misinterpretations but also a role in the prominence of intrusions (Rachman, 1998, 2000).

### *Alternate Theories of OCD*

Alternate theories have been proposed to explain the development of OCD, one is the behavioural theory of OCD (Mowrer, 1960). This theory shares many similarities with the cognitive models however, the behavioral model integrates learning theory and classical conditioning in its explanation. This behavioral model posits that obsessions are the result of internal fear stimuli acquired from a neutral stimuli, that is simultaneously paired with an anxiety inducing event or perceived danger. In this model it is believed that if the individual was repeatedly exposed to the stress stimuli it would eventually diminish anxiety. However, if the individual employs a neutralization or avoidance strategy to reduce feelings of anxiety, the avoidance strategy would pose as a negative reinforcer and inhibit habituation. The avoidance strategy creates a negative feedback loop and develops into compulsions, in turn maintaining the obsession as the individual is never fully exposed and desensitized to it. Therefore, the most effective method of desensitization according to this theory is to be directly exposed to the stress stimuli while avoiding acting upon avoidance strategies (Mowrer, 1960; Salkovskis et al., 1998).

Another alternative explanation is the biological theory of OCD (Nestadt et al., 2010) that focuses on neuroanatomic and neurophysiological factors for the development of obsessions and compulsions. Biological explanations emphasize alteration in brain structures and an imbalance of the neurotransmitters dopamine and serotonin which are proposed as the cause of obsessions. Genetics are also thought to play a factor in OCD development. However, neurological explanations of obsessive-compulsive etiology remain largely inconclusive (Fava et al., 2014; Pittenger & Bloch, 2014).

**Personality Theory**

Personality theory is an area that has been studied within psychology since the early 20th century (Allport, 1921) and seeks to explain differences in thoughts, feelings, and behaviours amongst individuals (Kernberg, 2016). Freud was one of the first theorists to offer insight on human personality with his concept of the id, ego, and superego. Personality is thought to be shaped by individual traits. Personality traits are conceptualized as patterns of thoughts, behaviours, and expressions that differ between people, but within an individual, are stable over time. Personality traits have also been shown to be accurate predictors of behaviour (Novikova, 2013.)

There are differing theories of personality, and one of these theories is the biological theory of personality which was first theorized by Hans Eysenck (Eysenck, 1963). Eysenck's theory credits genetics, physiology, and neurochemistry to be the main contributors of personality. Within this theory, there are three super-order traits recognized being extroversion, neuroticism, and psychoticism. The level in which each trait is present is explained within this theory brain activation levels as well as androgen levels (Eysenck, 1991). However, one of the most recognized personality theories is the Five Factor Personality Model (Matz et al., 2016), also referred to as "the big five" (McCrae & Costa, 1992, 1999). This theory proposes five main traits that configurate different personality styles. The traits operate on a scale in which the measurement provides insight to aspects of an individual's personality (Rector et al., 2005). The five traits this model proposes are: openness, conscientiousness, extroversion, agreeableness, and neuroticism. Openness is used to describe a person's willingness for new experiences and their ability to adapt to change; a high score in openness would be indicative of an adventurous person while a low score would mean a person prefers familiarity. Conscientiousness describes how

goal orientated a person is and provides insight to their organizational skills and work ethic; a low score in consciousness may show a lack of long-term plans or leadership skills. Extroversion is used to describe how sociable and outgoing a person is, scoring low on extroversion would indicate introversion and a preference for solitude. Agreeableness is used to measure how compassionate, cooperative, and forgiving someone is; a low score on agreeableness may indicate competitive or argumentative tendencies. The fifth and final trait is neuroticism which describes a person's emotional stability and proneness to experience negative emotions, along with attitude. A low score in neuroticism would indicate a positive attitude and low likelihood to experience anxiety.

There is evidence to suggest that certain personality traits can pose as vulnerability factor to the development of OCD (Rector et al., 2005; Rosen & Tallis, 1995). Furthermore, specific traits within the FFPM have been found to be associated with an increased risk of developing obsessions. Low scores of openness and extraversion, and high scores of neuroticism (Rector et al., 2002) have been found to be particularly associated with OCD symptoms. There have been mixed findings regarding consciousness as it has been found that individuals prone to obsessions have scored both very high, and very low in this facet (Rosen & Tallis, 1995). This is surprising as individuals with OCD often hold themselves to a very high standard and prefer order and structure. A possible explanation for this phenomenon is that although order and thoroughness is preferred, those with OCD may not be able to meet their own expectations and complete tasks to their satisfaction. It is also worth noting that agreeableness has been found to not be a significant factor in the development of obsessions (Rector et al., 2002).

**Tender Conscience**

As previously mentioned, unwanted intrusive thoughts are a normally occurring phenomena, however the appraisal and interpretation of the thoughts, along with the level of emotional discomfort is what differentiates an intrusion from an obsession (Rachman & de Silva, 1978). As discussed above, the contents of intrusions tend to revolve around themes surrounding morals, blasphemy, sex, and violence (Rachman, 1997, 1998). Since these topics are seen as taboo, it is easier for some individual to inflate their meaning. Rachman stated that those who attach especially strong value to their thoughts or hold themselves to high moral standards, are more likely to be disturbed by intrusive thoughts; Rachman stated that these people were of a tender conscience and prone to obsessional experiences (Rachman, 1998). Tender conscience is conceptualized as a personality style or constellation of personality traits, which is theorized to be a vulnerability factor to the development of OCD (Harrington, 2007; Rachman, 1998).

Prior to 2007 no working definition of a tender conscience was ever stated until a study, conducted by Harrington (2007) who sought out to operationalize the concept of tender conscience, as described by Rachman (1998), and create both a framework, and a measure for it. Tender conscience was conceptualized as consistent and exaggerated levels of empathy, responsibility, a proneness to experience guilt, heightened moral obligation, sentimentality, and increased levels of caution. Along with a working definition, a measure of tender consciousness was also developed. The new measure, the Tender Conscience Questionnaire (TCQ), is a self-report questionnaire composed of 49 items grouped in four factors that measure empathy, selflessness, sensation seeking, and cautiousness.

Despite the important role that TC may have as a specific vulnerability factor in the development of OCD, to the best of our knowledge, there is no research examining this

personality style. It has been stated by multiple researchers that personality style and traits are contributing factors to the development of obsessions (Rector et al., 2002, 2005; Rosen & Tallis, 1995) however the literature has remained quite limited.

**Attachment**

Attachment style has been shown to have a significant contribution to the development of personality styles and traits (Cervera-Solís et al., 2022). More specifically, Cervera-Solís and colleagues (2022) found secure attachment to be a protective factor against maladaptive personality traits whereas insecure attachment posed as a risk factor. Furthermore, other research (e.g., Shaver & Brenna,1992; Noftle & Shaver, 2006) demonstrates a relationship between attachment and personality traits within the FFPM. Research shows a negative correlation between attachment security and high levels of neuroticism which is contrasted by attachment securities positive correlation with high levels of extraversion, agreeableness, and consciousness (Shaver & Brenna,1992; Noftle & Shaver, 2006). However, what is attachment? Attachment is a developmental life-span theory which states that people have a need to form strong and stable emotional bonds early in life to aid in social and emotional development (Bowlby, 1969). Attachment theory was pioneered by John Bowlby (1940) in the 1940's. Within his theory, he proposed that infants have an innate need to form attachments, usually to the maternal figure. Additionally, it is believed in attachment theory that childhood, from ages two to five, is a very important period to form attachments (Mcleod, 2024). As a result, the relationship between children and their caregivers are highlighted most. Furthermore, if the connection between child and caregiver is insecure, it could result in lasting social and emotional difficulties throughout life (Mcleod, 2024). The analysis of how children and caregivers interact within attachment theory has stemmed the concept, and theory, of attachment styles (Ainsworth, 1970).

Attachment style refers to the specific way that an individual relates to others. The concept of attachment styles is widely credited to be the work of Mary Ainsworth (1970) who expanded from Bowlby's work. Ainsworth first proposed three styles of attachment being: insecure avoidant (type a), secure (type b), and insecure ambivalent/resistant (type c). However, the most commonly used model is the four-style theory (Ainsworth & Bowlby, 1991) which recognizes four main attachment styles being secure, anxious, avoidant, and disorganized. A secure attachment is characterized by trust and an ability to adapt to change in relationship dynamics, it is believed this form of attachment is shaped by an infant having an attentive caregiver. An anxious attachment is characterized by the concern of others not reciprocating intimacy or emotional attachment, this style is thought to be shaped by a caregiver being unreliable or inconsistent. An avoidant attachment style is characterized by an avoidance or difficulty in forming intimate relationships, it is believed this attachment style is the result of the individual experiencing repeated rejection. A disorganized attachment style is characterized by inconsistencies and unpredictable behaviors when forming relationships. This attachment style is thought to be developed as a result of trauma or relying on a caregiver who is abusive. Anxious, avoidant and insecure attachment styles are all considered to be forms of insecure attachment (Mcleod, 2024). Feeney and colleagues (1994) found that multiple forms of attachment insecurity could be present at once and that individuals can have both a combination of both anxious, and avoidant attachment styles, referred to as fearful-avoidant. Additionally, Feeney and colleagues (1994) found that there were five factors involved in measuring and determining attachment styles; the five factors being: discomfort with closeness, relationships as secondary to achievement, need for approval, preoccupation with relationships, and confidence in self and others.

Furthermore, research conducted by Hodny (2021) demonstrated that insecure attachment styles often lead individuals to develop dysfunctional beliefs regarding oneself and the world around them. Some of the dysfunctional beliefs associated with insecure attachment include elevated moral standards, inflated feelings of responsibility, and perfectionism; many of the dysfunctional beliefs associated with insecure attachment are also characteristic of OCD.

As mentioned above, evidence has shown a negative correlation between secure attachment and high levels of neuroticism. Furthermore, neuroticism shares a positive correlation with anxious and avoidant attachment styles and secure attachments have been shown to be a protective factor against OCD (Shaver & Brenna,1992; Noftle & Shaver, 2006). This is relevant as evidence demonstrates that insecure attachment styles are commonly occurring in individuals living with OCD (Schetsche & Mustaca, 2021; Hodny, 2021).

To further establish a relationship between attachment styles and OCD, Van Leeuwen and colleagues (2020) conducted a meta-analysis including sixteen studies which explored OCD symptomatology along with anxious and avoidant attachment types. Within the study there was found to be a medium effect size (Hedges $g = 0.47$) between OCD and attachment avoidance, and a medium to large effect size (Hedges $g = 0.69$) between attachment anxiety, once again demonstrating a relationship between attachment style and OCD.

***Present study***

Within the literature of OCD there is evidence to suggest that personality traits and styles are predictors of obsessive-compulsive development (Rector et al., 2005; Rosen & Tallis, 1995). Additionally, Rachman stated that individuals who are prone to obsessions are of a tender conscience. Despite the mention of a tender conscience, the literature has remained quite limited on the concept until 2007 when Harrington operationalized the term and developed a

questionnaire to study it. The aim of this study was to explore the relationship between obsessive compulsive symptoms and tender conscience in adults to determine if tender conscience is a vulnerability factor to obsessive compulsive symptoms. The relationship between tender conscience and obsessive-compulsive beliefs, attachment styles, and personality traits were also studied as they have been previously shown to be contributors to obsessive-compulsive symptoms and have been included as control variables. The hypothesis for this research is that there will be a positive correlation between tender conscience and obsessive-compulsive symptoms. Additionally, tender conscience will predict obsessive-compulsive symptoms.

## Methods

### Participants

This study received a total number of 124 responses however 58 responses have been omitted due to responses being incomplete. The final sample size of this study consists of 66 participants. The mean age of the sample was 22.9 (*SD* = 6.67) with ages ranging from a minimum of 18 years of age to a maximum of 52 years of age. Of the participants, 45 were women, 7 were men, 2 were non-binary, and 12 chose not to answer.

Participants were asked to provide their ethnicity (see Figure 1) and it was observed that 39 (59.1%) participants were of European decent, 5 (7.6%) were South Asian, 5 (7.6%) were African American, 1 (1.5%) was Chinese or East Asian, 2 (3%) were Arab or West Asian, 1 (1.5%) was South East Asian, 1 (1.5%) was Indigenous, 4 (6.1%) were Hispanic, 3 (4.5%) selected other, and 5 (7.6%) chose not to answer.

Participants were then asked to provide their level of education which can be observed in Figure 2 that 2 (3%) respondents completed some high school studies, 24 (36.4%) had a high

school diploma, 1 (1.5%) had completed some college, 3 (4.5%) had a college diploma, 26 (39.4%) had completed some undergraduate studies, 9 (13.6%) had an undergraduate degree, and 1 (1.5%) had a graduate degree.

Participants were then asked about their employment status. In Figure 3 it can be observed that ten (15.2%) participants were employed full time, 33 (50%) responded they were students, 1 (1.5%) were unemployed, and 22 (33.3%) were employed part time.

Finally, participants were asked about their annual income. It can be observed in Figure 4 that 21 (31.8%) participants made between 10,000 and 30,000 dollars annually, 3 (4.5%) participants made 30,000 to 50,000 dollars, 5 (7.6%) participants made 50,000 to 70,000 dollars, 30 (45.5%) participants made less than 10,000 dollars, 5 (7.6%) participants preferred not to share, and 2 (3%) participants did not answer.

**Procedure**

Participants were recruited using poster advertisements placed at approved locations on the university campus in which students were asked to scan a QR code that would direct them to the survey, using the Lime survey platform. In addition, an advertisement was placed on UPEI's participation pool SONA where participants were provided with a link to the survey. Furthermore, participants were provided with contact information for the research lab if they had any questions. Once re-directed to the Lime survey site, participants were asked to provide their age, then read and acknowledge a consent form. Participants were also informed they would remain completely anonymous. They were then instructed to fill out a series of questionnaires. The questionnaires were administered in a randomized order. Following the completion of the questionnaires, participants were shown a debriefing form thanking them for their time. Included in the debriefing form was a link to a separate survey where participants had the option to

provide contact information and be entered into a draw for a chance to win a $50 dollar gift card. Alternatively, participants who accessed the survey through the research participation pool SONA could receive one bonus credit in eligible courses.

## Measures

### *Attachment*

To measure attachment, the Attachment Style Questionnaire (ASQ; Feeney, 1994) was administered. The ASQ is a 40-item measure that assesses different characteristics of attachment styles (Mcleod, 2024). Participants are asked to rate on a scale of one (totally disagree) to six (totally agree) how much they agree that the statement applies to them (e.g. I feel comfortable depending on other people). The ASQ contains five subscales: confidence, discomfort with closeness, need for approval, preoccupation with relationships, and relationships as secondary. When the ASQ was administered to a large sample of university students it was found to have good retest reliability of .78 and an overall alpha value of .84 (Feeney, 1994).

### *Demographic Information*

Participants were first asked to provide some general demographic information. The requested demographic information consisted of age, gender, and ethnicity, highest level of education, employment status, and income.

### *Obsessive-compulsive beliefs*

To measure obsessive-compulsive beliefs, the Obsessional Beliefs Questionnaire (OBQ; Obsessive Compulsive Cognitions Working Group, 2001) was administered. The OBQ is a 44-

item measure that asks participants to rank how true statements regarding different attitudes and beliefs are to them (e.g. I should be able to rid my mind of unwanted thoughts). The scale used is a Likert scale ranging from one (disagree very much) to seven (agree very much). The measure contains 6 subscales that assess general characteristics of OCD: control of thoughts, importance of thoughts, responsibility, intolerance of uncertainty, overestimation of threat, and perfectionism. The OBQ, was found to have an alpha value of .95 (OCCWG, 2001, 2003).

***Obsessive-compulsive symptoms***

To measure obsessive-compulsive symptoms the Dimensional Obsessive-Compulsive Scale (DOCS; Abramowitz et al., 2010) was administered. The DOCS contains four categories asking about general obsessive-compulsive symptoms with each category consisting of five questions, with 20 questions total. Participants are asked to rate how true the statement is for them on a scale of zero to five. The four categories within the DOCS are: concerns about germs and contamination, concerns about responsibility, harm, injury, or bad luck, unacceptable thoughts, and concerns about symmetry, completeness, and the need for things to be "just right". The subscales consist of five items looking at time spent, avoidance, distress, interference, and control. To assess validity, the DOCS was administered to a sample of 1557 adults, 315 participants had a diagnosis of OCD, 198 had a diagnosis of some form of anxiety disorder, and 1044 were undergraduate students. The DOCS was found to have an alpha value of .93 (Abramowitz et al., 2010).

### *Personality*

To measure personality traits the International Personality Item Pool-Neuroticism, Extroversion, Openness-120 (IPIP-NEO-120; Johnson, 2014) was administered. The IPIP-NEO-120 is a 120-item measure that assesses the five factors of personality recognized by the five-factor personality model (McCrae & Costa, 1992, 1999). Participants are asked to rate how true statements (e.g. prefer variety to routine) are for them on a scale from one (inaccurate) to five (accurate). The five factors assessed are openness, conscientiousness, extroversion, agreeableness, and neuroticism.

The IPIP-NEO-120 was developed by Johnson in 2014. Johnson was seeking to condense Goldberg's (Goldberg, 1999) IPIP-NEO-300, which was a similar measure with more items. The measure was administered to 21588 participants who were recruited online and anonymously completed the measure. The sample consisted of 7859 males and 13729 females. Cronbach's alpha was found to be .80 (Johnson et al., 2014).

### *Tender Conscience*

To measure tender conscience, the Tender Conscience Questionnaire (TCQ; Harrington, 2007) was used. The questionnaire consists of 49 items regarding the characteristics of tender conscience (e.g. when throwing things away I feel sad because they are rejected). Participants are asked to rate how true each item is for them on a scale of one (not at all true for me) to seven (very true for me). The reliability of the measure is excellent. The TCQ was found to have an alpha value of .86 in the general population (Harrington, 2007).

**Data analysis**

All data analysis was conducted within the statistical software Jamovi. First, descriptive statistics were conducted for the TCQ, OBQ, ASQ, and DOCS total and subscales scores (see Tables 2 through 5). Additionally, the individual subscales from the IPIP-NEO-120 were analyzed instead of the total scale score (see Table 1); this was done for reasons of interpretation. To address missing values, the mean imputation method was conducted in which the variable mean was used in place of missing values. Data was then checked for outliers using the box plot method. The TCQ contained three outliers, the first outlier was winsorized from the original value of 172 to the 25$^{th}$ percentile value of 214, the second and third outliers of 291 and 322 were winsorized to the 75$^{th}$ percentile value of 239. The ASQ contained one outlier which was winsorized from the original value of 217 to the 75$^{th}$ percentile value of 166. The neuroticism subscale contained one outlier which was winsorized from the original score of 52 to the 25$^{th}$ percentile value of 77. The agreeableness subscale contained three outliers with original values being two scores of 80 and one score of 83, all three outliers were winsorized to the 25$^{th}$ percentile value of 103. Finally, the DOCS contained one outlier which was winsorized from the original value of 69 to the 75$^{th}$ percentile value of 33. The questionnaire total scores and subscales were first analyzed using the Pearson correlation method to assess the relationships between the variables. Following this, regression analysis was used to determine if tender conscience scores and other associated factors predict obsessive-compulsive symptoms and beliefs.

# Results

## Descriptive statistics

Descriptive statistics were run for all questionnaire total scores (see Table 1) except for the IPIP-NEO in which only the subscales were used. The number of responses is reported along the number of missing values; missing values were accounted for using the mean imputation method. The mean score of each questionnaire was reported along. Minimum values, and maximum values were provided for each questionnaire. Skewness and kurtosis are reported to indicate the distribution and symmetry of the data. When examining the values of skewness and kurtosis for the questionnaires it can be observed that all the values, except for kurtosis of the TCQ, fall in the acceptable range of -2 to +2 which indicates the data is evenly distributed. The kurtosis value of the TCQ indicates a slightly higher than average peak on a normal distribution curve. Finally, the Shapiro-Wilk statistic and P values are reported to show normality of the data. When examining the P values of the questionnaires they all indicate the data to be normally distributed.

**Table 1.** Descriptive data for questionnaires

| **Measures** | **TCQ** | **OBQ** | **ASQ** | **DOCS** | **Neuro** | **Agree** | **Consc** | **Extro** | **Open** |
|---|---|---|---|---|---|---|---|---|---|
| N | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |
| Missing | 8 | 24 | 40 | 10 | 4 | 5 | 3 | 6 | 7 |
| Mean (SD) | 226 (23.6) | 191 (45.1) | 152 (18.9) | 23.6 (15.4) | 83.7 (11.8) | 108 (9.43) | 79.4 (7.24) | 82.8 (11.8) | 93.6 (9.09) |
| Minimum | 172 | 94 | 118 | 0 | 52 | 80 | 64 | 57 | 74 |
| Maximum | 322 | 290 | 217 | 69 | 104 | 124 | 93 | 105 | 114 |
| Skewness (Std. error) | 1.02 (0.295) | -0.0777 (0.295) | 0.584 (0.295) | 0.811 (0.295) | -0.536 (0.295) | -0.878 (0.295) | -0.297 (0.295) | -0.235 (0.295) | -0.161 (0.295) |
| Kurtosis (Std. error) | 3.75 (0.582) | -0.443 (0.582) | 0.744 (0.582) | 0.233 (0.582) | -0.0680 (0.582) | 1.15 (0.582) | -0.746 (0.582) | -0.632 (0.582) | -0.155 (0.582) |
| Shapiro- | 0.937 | 0.990 | 0.962 | 0.940 | 0.971 | 0.939 | 0.967 | 0.981 | 0.972 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Wilk W Shapiro-Wilk P | 0.002 | 0.868 | 0.0039 | 0.003 | 0.119 | 0.003 | 0.076 | 0.410 | 0.143 |

*Note*. TCQ = Tender Conscience Questionnaire, OBQ = Obsessive Beliefs Questionnaire, ASQ = Attachment Style Questionnaire, DOCS = Dimensional Obsessive-Compulsive Scale, Neuro = neuroticism, Agree = agreeableness, Consc = conscientiousness, Extro = extroversion, Open = openness.

Descriptive statistics for the TCQ subscales (see Table 2) were conducted using 66 responses. Mean values ranged from 29.2 to 76.7 with standard deviation ranging from 8.01 to 13.4. Skewness is individually reported for each subscale indicating symmetry in the distribution of scores on normal distribution model. Skewness values ranged from the lowest value of -0.400, to the highest value 1.82. Kurtosis was also reported which indicates peak height of a normal distribution model. Kurtosis values ranged from the lowest value of -0.315, to the highest value being 6.33, which indicates a higher peak than normal. Although the kurtosis value of selflessness was observed to be slightly high, the values for skewness and kurtosis indicate a normal distribution of data. Finally, the Shapiro-Wilk W value, and Shapiro-Wilk P value were provided to indicate normality of the data. Shapiro-Wilk Shapiro-Wilk P values indicated that the data for the TCQ subscales were normally distributed, except for the selflessness subscale.

**Table 2.** Descriptive data of Tender Conscience Questionnaire subscales

| **Subscales** | **Empathy** | **Selflessness** | **Sensation seeking** | **Caution** |
|---|---|---|---|---|
| N | 66 | 66 | 66 | 66 |
| Mean (SD) | 76.7 (13.4) | 29.2 (8.01) | 40.2 (8.21) | 73.8 (8.57) |
| Minimum | 46 | 16 | 24 | 50 |
| Maximum | 103 | 66 | 62 | 91 |
| Skewness (std. error) | -0.225 (0.295) | 1.82 (0.295) | 0.167 (0.295) | -0.400 (0.295) |

| | | | | |
|---|---|---|---|---|
| Kurtosis (std. error) | -0.315 (0.582) | 6.33 (0.582) | -0.231 (0.582) | 0.0870 (0.582) |
| Shapiro-Wilk W | 0.980 | 0.878 | 0.982 | 0.982 |
| Shapiro-Wilk P | 0.377 | < .001 | 0.438 | 0.444 |

*Note*. SD = standard deviation.

Descriptive statistics were then run for the DOCS subscales (see Table 3). Mean values ranged from 5.50 to 6.45 with standard deviation ranging from 4.29 to 4.96. Skewness ranged from 0.652 to 0.897, and kurtosis ranged from -0.307 to 0.416 indicating normal distribution of the data sets. Finally, the Shapiro-Wilk W value, and Shapiro-Wilk P value were provided to indicate normality of the data. The Shapiro-Wilk P values for the harm and unacceptable thoughts subscales indicated that the data for these subscales is normally distributed; however, the P values for contamination and symmetry concerns indicated the data was not normally distributed.

**Table 3.** Descriptive data of the Dimensional Obsessive-Compulsive Scale subscales

| **Subscales** | **Contamination** | **Harm** | **Unacceptable thoughts** | **Symmetry concerns** |
|---|---|---|---|---|
| N | 66 | 66 | 66 | 66 |
| Mean (SD) | 6.11 (4.29) | 5.50 (4.42) | 6.45 (4.96) | 5.56 (4.47) |
| Minimum | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum | 18.0 | 19.0 | 20.0 | 18.0 |
| Skewness (std. error) | 0.897 (0.295) | 0.714 (0.295) | 0.652 (0.295) | 0.779 (0.295) |
| Kurtosis (std. error | -0.181 (0.582) | 0.416 (0.582) | -0.307 (0.582) | 0.400 (0.582) |
| Shapiro-Wilk W | 0.932 | 0.936 | 0.940 | 0.927 |

| | | | | |
|---|---|---|---|---|
| Shapiro-Wilk P | < .001 | 0.002 | 0.003 | < .001 |

*Note*. SD = standard deviation.

Next, descriptive statistics were conducted for the OBQ subscales (see Table 4). Mean values ranged from 9.24 to 38.6 with standard deviation ranging from 2.78 to 9.45. The minimum and maximum values were provided for each subscale as well. Skewness ranged from -0.698 to 0.208 with Kurtosis ranging from -0.640 to -0.325 which also indicates the data to be normally distributed. Finally, the Shapiro-Wilk W value, and Shapiro-Wilk P value were provided to indicate normality of the data. The Shapiro-Wilk P value ranged indicated that the data for the subscales was normally distributed except for the importance of thoughts/controlling thoughts subscale.

**Table 4.** Descriptive data of Obsessional Beliefs Questionnaire subscales

| **Subscales** | **Responsibility/ Threat estimation** | **Perfectionism/ Intolerance of uncertainty** | **Importance of thoughts/ controlling thoughts** |
|---|---|---|---|
| N | 66 | 66 | 66 |
| Mean (SD) | 34.2 (9.45) | 38.6 (9.00) | 9.24 (2.78) |
| Minimum | 13 | 19 | 3 |
| Maximum | 53 | 60 | 13 |
| Skewness (std. error) | -0.225 (0.295) | 0.208 (0.295) | -0.698 (0.295) |
| Kurtosis (std. error) | -0.640 (0.582) | -0.466 (0.582) | -0.325 (0.582) |
| Shapiro-Wilk W | 0.981 | 0.989 | 0.920 |
| Shapiro-Wilk P | 0.419 | 0.807 | < .001 |

*Note*. SD = standard deviation.

Finally, descriptive statistics were conducted for the ASQ (see Table 5). The mean values ranged from 20 to 41.8. Minimum and maximum values were provided for each subscale as well. Skewness ranged from -0.532 to 0.712 with kurtosis raning from -0.572 to 0.543 indicating a normal distribution of the data set. Finally, the Shapiro-Wilk P value was reported which indicates that all the data is normally distributed.

**Table 5.** Descriptive data of Attachment Style Questionnaire subscales

| **Subscales** | **Confidence** | **Relationships as secondary** | **Need for approval** | **Discomfort with closeness** |
|---|---|---|---|---|
| N | 66 | 66 | 66 | 66 |
| Mean (SD) | 25.7 (5.33) | 20 (6.83) | 29.2 (6.85) | 41.8 (5.98) |
| Minimum | 9.00 | 7.00 | 11.00 | 27.0 |
| Maximum | 36.0 | 40.0 | 41.0 | 54.0 |
| Skewness (std. error) | -0532 (0.295) | 0.712 (0.295) | -0.335 (0.295) | 0.0389 (0.295) |
| Kurtosis (std. error) | 0.543 (0.582) | 0.208 (0.582) | -0.433 (0.582) | -0.572 (0.582) |
| Shapiro-Wilk W | 0.978 | 0.959 | 0.976 | 0.982 |
| Shapiro-Wilk P | 0.292 | 0.027 | 0.220 | 0.455 |

*Note*. SD = standard deviation.

**Correlation analyses**

The total sums of the TCQ, OBQ, ASQ, DOCS, along with the subscales from the IPIP-NEO-120 including neuroticism, agreeableness consciousness, extroversion, and openness were examined using the Pearson's correlation method to examine the relationships between the variables. As seen in Table 6, the TCQ was observed to have a small correlation with the OBQ (*r*

= .276), a large correlation with the ASQ (*r* =.353), and a large correlation with extroversion (*r* = .398). The OBQ was observed to have a large correlation with the ASQ (*r* = .636), the DOCS (*r* = .560), and the neuroticism subscale (*r* =.591). The ASQ was observed to have a large correlation with the DOCS (*r* = .372) as well as the neuroticism subscale (*r* = .425). The ASQ was also observed to have a small negative correlation with the openness subscale (*r* = -.282). Finally, the DOCS was observed to have a large correlation with the neuroticism subscale (*r* = .426) as well as a medium negative correlation with the openness subscale (*r* =.-340).

**Table 6.** Correlational analyses of questionnaires total scores

| **Measures** | **TCQ** | **OBQ** | **ASQ** | **DOCS** |
|---|---|---|---|---|
| **OBQ** | 0.276* | — | | |
| **ASQ** | 0.353*** | 0.636*** | — | |
| **DOCS** | 0.213 | 0.560*** | 0.372*** | — |
| **Neuroticism** | 0.226 | 0.591*** | 0.425*** | 0.426*** |
| **Agreeableness** | 0.089 | -0.208 | -0.198 | -0.134 |
| **Consciousness** | -0.204 | -0.172 | -0.123 | -0.049 |
| **Extroversion** | 0.398*** | -0.153 | 0.068 | -0.115 |
| **Openness** | 0.091 | -0.216 | -0.282* | -0.340** |

*Note*. * p < .05, ** p < .01, *** p < .001; TCQ = Tender Conscience Questionnaire, OBQ = Obsessive Beliefs Questionnaire, ASQ = Attachment Style Questionnaire, DOCS = Dimensional Obsessive-Compulsive Scale.

A correlation analysis was then conducted between TCQ and DOCS subscale scores. As seen below in Table 7, the only significant correlation was between empathy and unacceptable thoughts (*r* = .252), where a small positive correlation was found. To examine further, single

items from the DOCS unacceptable thoughts subscale were analyzed. Results show that DOCS item 13, related to distress, had a small correlation with TCQ empathy ($r$ = .311) as well as a small correlation with TCQ caution ($r$ = .229). Furthermore, it was observed that DOCS item 15, related to control, had a medium correlation with TCQ empathy ($r$ = .362).

**Table 7.** Correlation matrix of DOCS and TCQ subscales

| Subscales | TCQ-Empathy | TCQ-Selflessness | TCQ-Sensation Seeking | TCQ-Caution |
|---|---|---|---|---|
| **DOCS-Contamination** | 0.021 | 0.091 | 0.032 | 0.177 |
| **DOCS-Harm** | 0.142 | 0.164 | -0.022 | 0.132 |
| **DOCS-Symmetry** | 0.199 | -0.016 | -0.055 | 0.215 |
| **DOCS-Unacceptable thoughts** | 0.252* | -0.051 | -0.031 | 0.242 |
| **DOCS item Time- UT** | 0.159 | -0.026 | -0.077 | 0.178 |
| **DOCS item Avoidance- UT** | 0.130 | 0.003 | -0.039 | 0.165 |
| **DOCS item Distress- UT** | 0.311* | -0.077 | -0.051 | 0.277* |
| **DOCS item Interference-UT** | 0.102 | -0.027 | 0.000 | 0.197 |
| **DOCS item Control- UT** | 0.362** | -0.085 | 0.023 | 0.229 |

*Note*. * p < .05, ** p < .01, *** p < .001; DOCS = Dimensional Obsessive-Compulsive Scale, TCQ = Tender Conscience Questionnaire, UT = unacceptable thoughts subscale.

When analyzing the association between the DOCS and IPIP-NEO-120 subscales (see Table 8), it was found that there was a large correlation between harm and neuroticism ($r$ = .400) as well as between unacceptable thoughts and neuroticism ($r$ = .474). Furthermore, there was a small correlation found between symmetry and neuroticism ($r$ = .306) along with a small negative correlation between symmetry and openness ($r$ = -.309).

**Table 8.** Correlation matrix of DOCS and IPIP-NEO-120 subscales

| Subscales | Neuro | Agree | Consc | Extro | Open |
|---|---|---|---|---|---|
| **DOCS-Contamination** | 0.227 | -0.135 | -0.025 | -0.074 | -0.387*** |
| **DOCS-Harm** | 0.400*** | -0.157 | -0.056 | -0.148 | -0.348 |
| **DOCS-Unacceptable thoughts** | 0.474*** | -0.133 | -0.068 | -0.124 | -0.148 |
| **DOCS-Symmetry** | 0.306* | -0.072 | 0.031 | -0.080 | -0.309* |

*Note*. * p < .05, ** p < .01, *** p < .001; DOCS = dimensional obsessive-compulsive scale, IPIP-NEO-120 = international personality item pool- neuroticism, extroversion, openness- 120, Neuro = neuroticism, Agree = agreeableness, Consc = conscientiousness, Extro = extroversion, Open = openness.

When examining the correlations between the DOCS and OBQ subscales (see Table 9) a large correlation was found between responsibility/threat estimation and contamination ($r$ = .432), harm ($r$ = .522), unacceptable thoughts ($r$ = .534), and symmetry ($r$ = .447). Perfectionism and intolerance to uncertainty was found to have large correlation with both harm (r = .416), and unacceptable thoughts ($r$ = .444), along with a medium positive correlation with contamination ($r$ = .353), and symmetry ($r$ = .321). Importance of thoughts/controlling thoughts was found to have

a small correlation with contamination ($r$ = .288), and a medium correlation with harm ($r$ = .356), unacceptable thoughts ($r$ = .395), and symmetry ($r$ =.345).

**Table 9.** Correlation matrix of DOCS and OBQ subscales

| Subscales | OBQ-Responsibility/ Threat estimation | OBQ-Perfection/ Intolerance of uncertainty | OBQ-Importance of thoughts/ controlling thoughts |
|---|---|---|---|
| **DOCS-Contamination** | 0.432*** | 0.353** | 0.288* |
| **DOCS-Harm** | 0.522*** | 0.416*** | 0.356** |
| **DOCS-Unacceptable thoughts** | 0.534*** | 0.444*** | 0.395** |
| **DOCS-Symmetry** | 0.447*** | 0.321** | 0.345** |

*Note*. * p < .05, ** p < .01, *** p < .001; DOCS = Dimensional Obsessive-Compulsive Scale, OBQ = Obsessive Beliefs Questionnaire.

Regarding obsessive compulsive symptoms and attachment styles, it can be seen below in Table 10 that contamination was found to have a medium correlation with discomfort with closeness ($r$ = .299) and a small correlation with preoccupation ($r$ = .251). Harm was found to have a large correlation with need for approval ($r$ = .318) and preoccupation ($r$ = .334). Unacceptable thoughts was found to have a medium negative correlation with confidence ($r$ = -.330), a small correlation with relationships as secondary ($r$ = .251), a large correlation with need for approval ($r$ = .437), as well as a large correlation with preoccupation ($r$ = .509). Symmetry was found to have a small correlation only with preoccupation ($r$ = .309).

**Table 10.** Correlation matrix of DOCS and ASQ subscales

| Subscales | ASQ-Confidence | ASQ-R as S | ASQ-Need for approval | ASQ-Discomfort With closeness | ASQ-Preocc |
|---|---|---|---|---|---|
| **DOCS-Contamination** | -0.206 | 0.212 | 0.161 | 0.299** | 0.251* |
| **DOCS-Harm** | -0.240 | 0.178 | 0.318*** | 0.288 | 0.334*** |
| **DOCS-Unacceptable thoughts** | -0.330** | 0.251* | 0.437*** | 0.223 | 0.509*** |
| **DOCS-Symmetry** | -0.118 | 0.288 | 0.231 | 0.197 | 0.309* |

*Note.* * p < .05, ** p < .01, *** p < .001; DOCS = Dimensional Obsessive-Compulsive Scale, ASQ = attachment style questionnaire, R as S = relationships as secondary, Preocc = Preoccupation.

Analyses between tender conscience and OCD-related beliefs were also conducted. As shown below in Table 11, small correlations between empathy and responsibility/threat estimation ($r$ = .254), perfection/intolerance of uncertainty ($r$ = .294), and importance of thoughts/controlling thoughts ($r$ = .329) were observed.

**Table 11.** Correlation matrix of OBQ and TCQ subscales

| Subscales | TCQ-Empathy | TCQ-Selflessness | TCQ-Sensation Seeking | TCQ-Caution |
|---|---|---|---|---|
| **OBQ-Responsibility/ Threat estimation** | 0.254* | 0.167 | -0.069 | 0.203 |

| | | | | |
|---|---|---|---|---|
| **OBQ-Perfection/ intolerance of uncertainty** | 0.294* | 0.170 | 0.004 | 0.192 |
| **OBQ-Importance of thoughts/ controlling thoughts** | 0.329* | -0.007 | -0.061 | 0.203 |

*Note*. * p < .05, ** p < .01, *** p < .001; OBQ = obsessive beliefs questionnaire, TCQ = tender conscience questionnaire.

Finally, the relationship between the OBQ and ASQ were also analyzed (see Table 12). There was a medium negative correlation between responsibility/threat estimation and confidence (*r* = -.321), along with a small negative correlation between importance of thoughts/thought control (*r* = -.250). Relationships as secondary was found to have a large correlation with all three OBQ subscales responsibility/threat estimation (*r* = .519), perfection/intolerance to uncertainty (*r* = .432), and importance of thoughts/thought control (*r* = .264). Discomfort with closeness was also found to have a large correlation with both responsibility/threat estimation (*r* = .463), and perfection/intolerance to uncertainty (*r* = .425). Furthermore, there was also small correlation between discomfort with closeness and importance of thoughts/thought control (*r* = .346). Preoccupation was found to have a large correlation with all three subscales from the OBQ responsibility/threat estimation, perfection/intolerance to uncertainty, and importance of thoughts/thought control (*r* = .620, .449 and .493, respectively).

**Table 12.** Correlation matrix of OBQ and ASQ subscales

| **Subscales** | **ASQ-Confidence** | **ASQ-R as S** | **ASQ-Need for approval** | **ASQ-Discomfort With closeness** | **ASQ-Preocc** |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| **OBQ-Responsibility/ threat estimation** | -0.321** | 0.519*** | 0.589*** | 0.463*** | 0.620*** |
| **OBQ-perfection/ Intolerance of uncertainty** | -0.192 | 0.432*** | 0.483*** | 0.425*** | 0.449*** |
| **OBQ-Importance of thoughts/ thought control** | -0.250* | 0.264*** | 0.555*** | 0.346* | 0.493*** |

*Note*. * p < .05, ** p < .01, *** p < .001; OBQ = obsessive belief questionnaire, ASQ = attachment style questionnaire, R as S = relationships as secondary, Preocc = Preoccupation

**Regression analyses**

Given the previous correlations analysis results, multiple hierarchical regression analyses were conducted with single items from the DOCS. The individual items used from the DOCS were distress caused by unacceptable thoughts, and efforts to control unacceptable thoughts. Before conducting regression analysis, assumptions were checked to ensure validity. First, the Durbin-Watson test for autocorrelation was conducted which was found to have a value of 2.00 showing no autocorrelation. Next, collinearity statistics were checked, where the highest observed value had VIF of 1.64 which falls within the acceptable range. The Shapiro-Wilk test for normality was then checked where a statistic of 0.978 was observed and a p-value of 0.298 showing the data to be normal.

In the first step of the hierarchical regression analysis, predicting DOCS-distress from the unacceptable thoughts subscale, neuroticism, conscientiousness, and openness subscales from the

IPIP-NEO were entered as predictors. In the second step, TCQ subscales empathy and caution were also entered as predictors. As seen in Table 13, model 1, containing personality traits, was found to be significant ($R^2$ = .20, $F$ (3, 62) = 5.18, $p$ = .003) with the model explaining 20% of the variance. In model 1 the only significant predictor (see Table 15) was observed to be neuroticism ($t = 3.165$ , $p = 0.002$). Model 2, containing TCQ empathy and caution, was also found to be significant ($R^2$ = .260, $F$ (5, 60) = 4.22, $p$ = .002) with the model explaining 26% of the variance. When observing Table 14, a $\Delta R^2$ value of .0599 was observed indicating the value difference in $R^2$ between model 1 and model 2.

**Table 13.** Multiple Regression of DOCS Unacceptable Thoughts - Distress

| | | | | Overall Model Test | | | |
|---|---|---|---|---|---|---|---|
| Model | R | $R^2$ | Adjusted $R^2$ | F | df1 | df2 | p |
| 1 | 0.448 | 0.200 | 0.162 | 5.18 | 3 | 62 | 0.003 |
| 2 | 0.510 | 0.260 | 0.199 | 4.22 | 5 | 60 | 0.002 |

*Note.* DOCS = dimensional obsessive-compulsive scale.

**Table 14.** DOCS Unacceptable Thoughts – Distress Model Comparisons

| Comparison | | | | | | |
|---|---|---|---|---|---|---|
| Model | Model | $\Delta R^2$ | F | df1 | df2 | p |
| 1 | - 2 | 0.0599 | 2.43 | 2 | 60 | 0.097 |

**Table. 15** Model coefficients - DOCS unacceptable thoughts - distress

| Predictor | Estimate | SE | t | p |
|---|---|---|---|---|
| Intercept | -3.41177 | 2.5676 | -1.329 | 0.189 |
| Neuroticism | 0.04013 | 0.0127 | 3.165 | 0.002 |
| Conscientiousness | 0.00448 | 0.0198 | 0.277 | 0.822 |
| Openness | -0.01359 | 0.0151 | -0.902 | 0.370 |
| Empathy | 0.016447 | 0.0126 | 1.305 | 0.197 |
| Caution | 0.01547 | 0.0210 | 0.736 | 0.464 |

*Note.* Docs = Dimensional Obsessive-Compulsive Scale.

Hierarchical regression analysis was then conducted again using DOCS- perceived control from unacceptable thought as the outcome variable. In the first step of analysis neuroticism, conscientiousness, and openness subscales from the IPIP-NEO were entered as predictors. In the second step TCQ subscale empathy was entered as a predictor. As seen in table 16, regression model 1, consisting of personality traits, was observed to be significant ($R^2$ = .167, $F$ (3, 62) = 4.13, $p$ = .010) with the model explaining16.7% of the variance. In model 1, neuroticism ($t = 2.727$ , $p = 0.008$) was observed (see Table 18) to be a significant predictor. Model 2, containing empathy, was also found to be significant ($R^2$ = .250, $F$ (4, 61) = 5.09, $p$ = .001) explaining 25% of the variance with empathy being a significant predictor ($t = 2.606$ , $p = 0.011$). As seen in table 17, there is an $\Delta R^2$ value of 0.0835, indicating the value difference between the $R^2$ value of model 1 and model 2.

**Table. 16** Multiple regressions of DOCS unacceptable thoughts - control

| | | | | Overall Model Test | | | |
|---|---|---|---|---|---|---|---|
| Model | R | $R^2$ | Adjusted $R^2$ | F | df1 | df2 | p |
| 1 | 0.408 | 0.167 | 0.126 | 4.13 | 3 | 62 | 0.010 |
| 2 | 0.500 | 0.250 | 0.201 | 5.09 | 4 | 61 | 0.001 |

*Note.* Docs = dimensional obsessive-compulsive scale.

**Table. 17** Model Comparisons

| Comparison | | | | | | |
|---|---|---|---|---|---|---|
| Model | Model | $\Delta R^2$ | F | df1 | df2 | p |
| 1 | - 2 | 0.0835 | 6.79 | 1 | 61 | 0.011 |

**Table. 18** Model coefficients - DOCS unacceptable thoughts - control

| Predictor | Estimate | SE | t | p |
|---|---|---|---|---|
| Intercept | -2.15521 | 2.6530 | -0.812 | 0.420 |
| Neuroticism | 0.03650 | 0.0134 | 2.727 | 0.008 |
| Consciousness | -0.00618 | 0.0200 | -0.309 | 0.758 |
| Openness | -0.01249 | 0.0159 | -0.787 | 0.434 |
| Empathy | 0.02890 | 0.0111 | 2.606 | 0.011 |

*Note.* Docs = dimensional obsessive-compulsive scale.

Hierarchical regression was conducted again to examine obsessive beliefs. The IPIP-NEO subscales neuroticism, consciousness, and openness subscales were entered in the first step. Then the TCQ subscale empathy was entered in the second step. Assumptions were checked and met with a Durbin-Watson statistic of 1.70. A Shapiro-Wilk statistic of 0.968 with a p-value of 0.091, and the highest VIF observed being 1.14 belonging to neuroticism with all other VIF values falling below the aforementioned value. As observed in Table 19, model 1, consisting of

personality traits, was found to be significant ($R^2$ = .382, $F$ (3, 62) = 12.8, $p$ = <.001) explaining 38.2% of the variance with neuroticism ($t = 4.951, p =< .001$) and low openness ($t = -2.223, p = 0.030$) observed to be significant predictors (see Table 21). Model 2, containing empathy, was also found to be significant ($R^2$ = .421 $F$ (4, 61) = 11.1, $p$ = <.001) explaining 42.1% of the variance with empathy being a significant predictor ($t = 2.038, p = .030$) When observing the model comparisons (see Table 20) the $\Delta R^2$ value was observed to be 0.039 indicating the value difference of $R^2$ between model 1 and model 2.

**Table 19.** Multiple Regression of Obsessive Beliefs

| | | | | Overall Model Test | | | |
|---|---|---|---|---|---|---|---|
| Model | R | $R^2$ | Adjusted $R^2$ | F | df1 | df2 | p |
| 1 | 0.618 | 0.382 | 0.352 | 12.8 | 3 | 62 | <.001 |
| 2 | 0.649 | 0.421 | 0.383 | 11.1 | 4 | 61 | <.001 |

**Table. 20** Obsessive Beliefs Model Comparisons

| Comparison | | | | | | |
|---|---|---|---|---|---|---|
| Model | Model | $\Delta R^2$ | F | df1 | df2 | p |
| 1 | - 2 | 0.0394 | 4.15 | 1 | 61 | 0.046 |

**Table. 21** Model coefficients – Obsessive Beliefs

| Predictor | Estimate | SE | t | p |
|---|---|---|---|---|
| Intercept | 94.119 | 82.882 | 1.136 | 0261 |
| Neuroticism | 2.070 | 0.418 | 4.951 | <.001 |
| Conscientiousness | -0.352 | 0.625 | -0.564 | 0.575 |
| Openness | -1.102 | 0.496 | -2.223 | 0.030 |
| Empathy | 0.706 | 0.346 | 2.038 | 0.030 |

## Discussion

Upon examining tender conscience and obsessive-compulsive symptoms, a relationship between the two were found. Observed was an association between unacceptable thoughts related to OCD, and Empathy and caution related to tender conscience. An association between empathy and caution were observed with distress related to unacceptable thoughts. This observation is consistent with pre-existing literature (Harrington, 2007; Rachman, 1997, 1998) as those who are empathetic and hold themselves to high moral standards would be more likely to feel distress as a result from having a thought deemed inappropriate; as well, those with a tender conscience may exercise a high degree of caution as to avoid possible harm from happening to themselves or others. Additionally, a relationship was observed between empathy and control. This finding is also supported by theory (Harrington, 2007; Rachman, 1997, 1998) as feeling the need to control one's thoughts was thought to be characteristic of a tender conscience.

The lack of association between tender conscience and other obsessive-compulsive symptoms observed in this study could be due to multiple factors. First, this study was conducted using a non-clinical population which makes it more difficult to assess vulnerability factors to a clinical condition. Secondly, the target sample size for this study was 92 participants, however only 66 total responses were used in this research resulting in decreased statistical power and generalizability to larger populations. Furthermore, the sample lacked diversity as it consisted primarily of women from European descent.

In terms of tender conscience being a predictor of OCD, results from the regression models show that empathy along with personality traits, were predictors of Obsessive-

compulsive symptoms. When examining distress caused by unacceptable thoughts, neuroticism was found to be the only predictor of OCD related distress which is supportive of existing literature (Rector et al., 2002). Moreover, when examining the perceived control of unacceptable thoughts, empathy was observed to be a predictor of obsessive-compulsive symptoms along with neuroticism. The findings from the regression results are promising as they support the hypothesis of this research that tender conscience is a predictor of Obsessive-compulsive symptoms.

Upon inspection of the relationship between tender conscience and obsessive-compulsive beliefs, an association was observed between empathy and responsibility/threat estimation, perfectionism/intolerance to uncertainty, and importance of thoughts/controlling thoughts. These findings are consistent with the pre-existing literature (Harrington, 2007; Rachman, 1997, 1998), as elevated moral standards and increased feelings of responsibility are suggested to be characteristic of tender conscience. When assessing personality traits and empathy as predictors of obsessive beliefs, neuroticism and empathy were found to considerably strong predictors. Openness was also found to be an inverse predictor of obsessive beliefs which also supports previous literature (Rector et al., 2002) as those who score low in openness are more likely to be closed minded and distressed by intrusions or thoughts they deem as unacceptable. These findings are consistent with Salkovskis' aforementioned cognitive model of OCD (Salkovskis, 1985, 1998, 2000) in which beliefs or "thinking errors" are proposed to be a relevant factor in the development and maintenance of OCD, in the way that individuals who experience said beliefs are more likely to negatively appraise or misinterpret intrusions, resulting in the development of obsessions. Furthermore, in this study, a strong relationship between obsessive-compulsive beliefs and obsessive-compulsive symptoms was observed which also supports Salkovskis'

cognitive theory of OCD. Therefore, these findings suggest a link between tender conscience, obsessive-compulsive beliefs, and obsessive-compulsive disorder.

Regarding attachment, an association between tender conscience and insecure attachment style was observed, which might suggest that those with insecure attachment styles are prone to tender conscience. Additionally, a relationship between attachment with both obsessive-compulsive symptoms and beliefs was observed, which is also supported by previous literature mentioned above (Hodny, 2021), which found that insecure attachment styles often facilitate individuals developing distressing beliefs about themselves, and their surroundings, that are often characteristic of OCD,.

When examining relationships between attachment styles and OCD symptoms, a relationship between unacceptable thoughts and low confidence was observed which is expected as those who are struggling with thoughts they deem as unacceptable may be struggling with self-image or outward confidence as a result. Relationships as secondary to achievement was also associated with experiencing unacceptable thoughts. Relationships as secondary to achievement is described by Feeney (1994) as a dimension of avoidant attachment in which individuals are more goal oriented and not concerned with personal relationships. It is believed that avoidant attachment styles result from repeated rejection or neglect in formative years (Mcleod, 2024). As such, repeated rejection could cause individuals to have unacceptable thoughts regarding others in fear of being rejected. Upon inspection, an association was observed between a need for approval and unacceptable thoughts relating to harm. Some insight to this relationship could be that those who have a high need for approval or hold themselves to high moral standards would want to maintain conventionally acceptable thoughts and may be overly fearful of causing harm to others. Additionally, a relationship was observed between

contamination symptoms and discomfort with closeness which is quite explanatory as individuals with contamination concerns would be fearful of others and anxious about encountering perceived contaminants. Finally, preoccupation with relationships was found to be associated with feelings of responsibility, an intolerance for uncertainty, as well as feeling the need to control one's thoughts. Feeney (1994) describes preoccupation with relationships as a dimension of anxious attachment orientation in which individuals are overly concerned with personal relationships and pleasing people. As a result, individuals with an anxious an attachment style are more likely to experience inflated feelings of responsibility, especially related to maintaining relationships. Due to increased feelings of responsibility, an individual with insecure attachment would be wary of causing harm to other people and may be more likely to be distressed by thoughts they deem as unacceptable. Additionally, the current study found a relationship between insecure attachment and neuroticism which is consistent with pre-existing literature (Shaver & Brenna,1992; Noftle & Shaver, 2006), as attachment has been shown to contribute to the of development of personality., As such, an individual with an insecure attachment style would be more likely to develop distorted beliefs about oneself and experience low emotional regulation which is characteristic of neuroticism.

When looking at the relationships between obsessive-compulsive symptoms and personality traits, contamination was observed to be negatively related with openness which makes sense as those with contamination concerns would be less likely to seek new experiences in fear of coming in contact with perceived contaminants. Neuroticism was found to have a relationship with harm, unacceptable, and symmetry-related thoughts, which is consistent with existing literature (Rector et al., 2002) as individuals high in neuroticism are more likely to perceive thoughts or situations as threatening. It was also observed a negative relationship

between symmetry and openness which could be due to the fact that individuals low in openness prefer routine and predictability therefore may have concerns of symmetry to ensure their environment is predictable. These findings are consistent with the pre-existing literature that insecure attachment as well as neuroticism are characteristic of OCD (Hodny, 2021; Rector et al., 2002; Schetsche & Mustaca, 2021). Unexpectedly, a relationship between tender conscience and extroversion was observed. As previously stated (Harrington, 2007), associations between tender conscience and agreeableness, conscientiousness, and neuroticism have been reported, however, no associations with extroversion were found in Harrington's study.

**Limitations and Future Direction**

One of the major limitations of this study was the limited sample size which makes it difficult to generalize the findings on a larger scale. Along with the limited number of responses, the sample was quite homogeneous and lacked diversity which also restricts generalizability. The use of a larger sample size would allow for more powerful prediction and analysis. It is also worth noting that there is a limited amount of literature available on the topic of tender conscience which made researching the topic difficult. Recommendations for future research would be to recruit a larger, and more diverse sample to increase power of findings. Given that this study was cross sectional, it may be worthwhile to conduct longitudinal research assessing the personality style of tender conscience over a longer period of time. Furthermore, future studies should explore the relationship between tender conscience and OCD using a clinical population as it may yield more powerful and concrete results.

## Conclusion

In conclusion, this study expanded upon Rachman's conceptualization of tender conscience (Rachman, 1997, 1998) and supported previous research conducted on the topic by

Harrington (2007). Additionally, this research provides further evidence of the positive relationship that personality traits and insecure attachment styles have on OCD. Findings from this study do support the hypothesis that there is a correlation between tender conscience and obsessive-compulsive symptoms and beliefs; furthermore, that tender conscience seems to be a predictor, and a vulnerability factor to the development of obsessive-compulsive disorder. Research on this topic should continue to evolve as to further understand the relationship that this personality style has on the development and maintenance of OCD.

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## List of Appendices

# Appendix A

## ASQ

Show how much you agree with each of the following items by rating them on this scale:1 = totally disagree; 2 = strongly disagree; 3 = slightly disagree

4 = slightly agree; 5 = strongly agree; 6 = totally agree

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1. Overall, I am a worthwhile person. Confidence

2. I am easier to get to know than most people.

3. I feel confident that people will be there for me when I need them.

4. I prefer to depend on myself rather than other people.

5. I prefer to keep to myself.

6. To ask for help is to admit that you're a failure.

7. People's worth should be judged by what they achieve.

8. Achieving things is more important than building relationships.

9. Doing your best is more important than getting on with others.

10. If you've got a job to do, you should do it no matter who gets hurt.

11. It's important to me that others like me.

12. It's important to me to avoid doing things that others won't like.

13. I find it hard to make a decision unless I know what other peoplethink.

14. My relationships with others are generally superficial.

15. Sometimes I think I am no good at all.

16. I find it hard to trust other people.

17. I find it difficult to depend on others.

18. I find that others are reluctant to get as close as I would like

19. I find it relatively easy to get close to other people.

20. I find it easy to trust others.

21. I feel comfortable depending on other people.

22. I worry that others won't care about me as much as I care about them.

23. I worry about people getting too close.

24. I worry that I won't measure up to other people.

25. I have mixed feelings about being close to others.

26. While I want to get close to others, I feel uneasy about it.

27. I wonder why people would want to be involved with me.

28. It's very important to me to have a close relationship.

29. I worry a lot about my relationships.

30. I wonder how I would cope without someone to love me.

31. I feel confident about relating to others.

32. I often feel left out or alone.

33. I often worry that I do not really fit in with other people.

34. Other people have their own problems so I don't bother them withmine.

35. When I talk over my problems with others, I generally feelashamed or foolish.

36. I am too busy with other activities to put much time intorelationships.

37. If something is bothering me, others are generally aware andconcerned.

38. I am confident that other people will like and respect me.

39. I get frustrated when others are not available when I need them.

40. Other people often disappoint me.

# Appendix B

## DOCS

This questionnaire asks you about 4 different types of concerns that you might or might not experience. For each type there is a description of the kinds of thoughts (sometimes called *obsessions*) and behaviors (sometimes called *rituals* or *compulsions*) that are typical of that particular concern, followed by 5 questions about your experiences with these thoughts and behaviors. Please read each description carefully and answer the questions for each category based on your experiences in the last month.

**Category 1: Concerns about Germs and Contamination**

*Examples…*

-Thoughts or feelings that you are contaminated because you came into contact with (or were nearby) a certain object or person.
-The feeling of being contaminated because you were in a certain place (such as a bathroom).
-Thoughts about germs, sickness, or the possibility of spreading contamination.
-Washing your hands, using hand sanitizer gels, showering, changing your clothes, or cleaning objects because of concerns about contamination.
-Following a certain routine (e.g., in the bathroom, getting dressed) because of contamination
-Avoiding certain people, objects, or places because of contamination.

The next questions ask about your experiences with thoughts and behaviors related to contamination <u>over the last month</u>. Keep in mind that your experiences might be different than the examples listed above. Please circle the number next to your answer:

1. About how much time have you spent each day thinking about contamination and engaging in washing or cleaning behaviors because of contamination?

   0 None at all
   1 Less than 1 hour each day
   2 Between 1 and 3 hours each day
   3 Between 3 and 8 hours each day
   4 8 hours or more each day

2. To what extent have you avoided situations in order to prevent concerns with contamination or having to spend time washing, cleaning, or showering?

   0 None at all
   1 A little avoidance
   2 A moderate amount of avoidance
   3 A great deal of avoidance
   4 Extreme avoidance of nearly all things

3. If you had thoughts about contamination but could not wash, clean, or shower (or otherwise remove the contamination), how distressed or anxious did you become?

   0 Not at all distressed/anxious
   1 Mildly distressed/anxious
   2 Moderately distressed/anxious
   3 Severely distressed/anxious
   4 Extremely distressed/anxious

4. To what extent has your daily routine (work, school, self-care, social life) been disrupted by contamination concerns and excessive washing, showering, cleaning, or avoidance behaviors?

0 No disruption at all.
1 A little disruption, but I mostly function well.
2 Many things are disrupted, but I can still manage.
3 My life is disrupted in many ways and I have trouble managing.
4 My life is completely disrupted and I cannot function at all.

5. How difficult is it for you to disregard thoughts about contamination and refrain from behaviors such as washing, showering, cleaning, and other decontamination routines when you try to do so?

0 Not at all difficult
1 A little difficult
2 Moderately difficult
3 Very difficult
4 Extremely difficult

**Category 2: Concerns about being Responsible for Harm, Injury, or Bad Luck**

*Examples…*

-A doubt that you might have made a mistake that could cause something awful or harmful to happen.
-The thought that a terrible accident, disaster, injury, or other bad luck might have occurred and you weren't careful enough to prevent it.
-The thought that you could prevent harm or bad luck by doing things in a certain way, counting to certain numbers, or byavoiding certain "bad" numbers or words.
-Thought of losing something important that you are unlikely to lose (e.g., wallet, identify theft, papers).
-Checking things such as locks, switches, your wallet, etc. more often than is necessary.
-Repeatedly asking or checking for reassurance that something bad did not (or will not) happen.
-Mentally reviewing past events to make sure you didn't do anything wrong.
-The need to follow a special routine because it will prevent harm or disasters from occurring.
-The need to count to certain numbers, or avoid certain bad numbers, due to the fear of harm.

The next questions ask about your experiences with thoughts and behaviors related to harm and disasters over the last month.Keep in mind that your experiences might be slightly different than the examples listed above. Please circle the number next toyour answer:

1. About how much time have you spent each day thinking about the possibility of harm or disasters and engaging inchecking or efforts to get reassurance that such things do not (or did not) occur?

0 None at all
1 Less than 1 hour each day
2 Between 1 and 3 hours each day
3 Between 3 and 8 hours each day
4 8 hours or more each day

2. To what extent have you avoided situations so that you did not have to check for danger or worry about possible harmor disasters?

0 None at all
1 A little avoidance
2 A moderate amount of avoidance
3 A great deal of avoidance
4 Extreme avoidance of nearly all things

3. When you think about the possibility of harm or disasters, or if you cannot check or get reassurance about these things,how distressed or anxious did you become?

0 Not at all distressed/anxious
1 Mildly distressed/anxious
2 Moderately distressed/anxious
3 Severely distressed/anxious
4 Extremely distressed/anxious

4. To what extent has your daily routine (work, school, self-care, social life) been disrupted by thoughts about harm ordisasters and excessive checking or asking for reassurance?

0 No disruption at all.
1 A little disruption, but I mostly function well.
2 Many things are disrupted, but I can still manage.
3 My life is disrupted in many ways and I have trouble managing.
4 My life is completely disrupted and I cannot function at all.

5. How difficult is it for you to disregard thoughts about possible harm or disasters and refrain from checking orreassurance-seeking behaviors when you try to do so?

0 Not at all difficult
1 A little difficult
2 Moderately difficult
3 Very difficult
4 Extremely difficult

**Category 3: Unacceptable Thoughts**

*Examples…*

-Unpleasant thoughts about sex, immorality, or violence that come to mind against your will.
-Thoughts about doing awful, improper, or embarrassing things that you don't really want to do.
-Repeating an action or following a special routine because of a bad thought.
-Mentally performing an action or saying prayers to get rid of an unwanted or unpleasant thought.
-Avoidance of certain people, places, situations or other triggers of unwanted or unpleasant thoughts

The next questions ask about your experiences with unwanted thoughts that come to mind against your will and behaviors designed to deal with these kinds of thoughts over the last month. Keep in mind that your experiences might be slightly differentthan the examples listed above. Please circle the number next to your answer:

1. About how much time have you spent each day with unwanted unpleasant thoughts and with behavioral or mental actions to deal with them?

0 None at all
1 Less than 1 hour each day
2 Between 1 and 3 hours each day
3 Between 3 and 8 hours each day
4 8 hours or more each day

2. To what extent have you been avoiding situations, places, objects and other reminders (e.g., numbers, people) thattrigger unwanted or unpleasant thoughts?

0 None at all
1 A little avoidance
2 A moderate amount of avoidance
3 A great deal of avoidance
4 Extreme avoidance of nearly all things

3. When unwanted or unpleasant thoughts come to mind against your will how distressed or anxious did you become?

0 Not at all distressed/anxious
1 Mildly distressed/anxious
2 Moderately distressed/anxious
3 Severely distressed/anxious
4 Extremely distressed/anxious

4. To what extent has your daily routine (work, school, self-care, social life) been disrupted by unwanted and unpleasantthoughts and efforts to avoid or deal with such thoughts?

0 No disruption at all.
1 A little disruption, but I mostly function well.
2 Many things are disrupted, but I can still manage.
3 My life is disrupted in many ways and I have trouble managing.
4 My life is completely disrupted and I cannot function at all.

5. How difficult is it for you to disregard unwanted or unpleasant thoughts and refrain from using behavioral or mental acts to deal with them when you try to do so?

0 Not at all difficult
1 A little difficult
2 Moderately difficult
3 Very difficult
4 Extremely difficult

**Category 4: Concerns about Symmetry, Completeness, and the Need for Things to be "Just Right"**

*Examples…*

-The need for symmetry, evenness, balance, or exactness.
-Feelings that something isn't "just right."
-Repeating a routine action until it feels "just right" or "balanced."
-Counting senseless things (e.g., ceiling tiles, words in a sentence).
-Unnecessarily arranging things in "order."
-Having to say something over and over in the same way until it feels "just right."

The next questions ask about your experiences with feelings that something is not "just right" and behaviors designed to achieveorder, symmetry, or balance over the last month. Keep in mind that your experiences might be slightly different than the examples listed above. Please circle the number next to your answer:

1. About how much time have you spent each day with unwanted thoughts about symmetry, order, or balance and with behaviors intended to achieve symmetry, order or balance?

0 None at all
1 Less than 1 hour each day
2 Between 1 and 3 hours each day
3 Between 3 and 8 hours each day
4 8 hours or more each day

2. To what extent have you been avoiding situations, places or objects associated with feelings that something is notsymmetrical or "just right?"

0 None at all
1 A little avoidance

2 A moderate amount of avoidance
3 A great deal of avoidance
4 Extreme avoidance of nearly all things

3. When you have the feeling of something being “not just right,” how distressed or anxious did you become?

0 Not at all distressed/anxious
1 Mildly distressed/anxious
2 Moderately distressed/anxious
3 Severely distressed/anxious
4 Extremely distressed/anxious

4. To what extent has your daily routine (work, school, self-care, social life) been disrupted by the feeling of things being“not just right,” and efforts to put things in order or make them feel right?

0 No disruption at all.
1 A little disruption, but I mostly function well.
2 Many things are disrupted, but I can still manage.
3 My life is disrupted in many ways and I have trouble managing.
4 My life is completely disrupted and I cannot function at all.

5. How difficult is it for you to disregard thoughts about the lack of symmetry and order, and refrain from urges to arrange things in order or repeat certain behaviors when you try to do so?

0 Not at all difficult
1 A little difficult
2 Moderately difficult
3 Very difficult
4 Extremely difficult

## Appendix C

## OBQ

This inventory lists different attitudes or beliefs that people sometimes hold. Read each statementcarefully and decide how much you agree or disagree with it. For each of the statements, choose the number matching the answer that *best describes how youthink.* Because people are different, there are no right or wrong answers. To decide whether a given statement is typical of your way of looking at things, simply keep inmind what you are like *most of the time.*

Use the following scale:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| disagree very much | disagree moderately | disagree a little | neither agree nor disagree | agree a little | agree moderately | agree very much |

In making your ratings, try to avoid using the middle point of the scale (4), but rather indicatewhether you usually disagree or agree with the statements about your own beliefs and attitudes.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. I often think things around me are unsafe. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. If I am not absolutely sure of something, I am bound to make a mistake | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. Things should be perfect according to my own standards. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. In order to be a worthwhile person, I must be perfect at everything I do. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. When I see any opportunity to do so, I must act to prevent bad things from happening. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. Even if harm is very unlikely, I should try to prevent it at any cost. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. For me, having bad urges is as bad as actually carrying them out. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. If I don't act when I foresee danger, then I am to blame for any consequences. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. If I can't do something perfectly, I shouldn't do it at all. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. I must work to my full potential at all times. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. It is essential for me to consider all possible outcomes of a situation. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. Even minor mistakes mean a job is not complete. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 13. If I have aggressive thoughts or impulses about my loved ones, this means I may secretly want to hurt them. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. I must be certain of my decisions. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. In all kinds of daily situations, failing to prevent harm is just as bad as deliberately causing harm. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. Avoiding serious problems (for example, illness or accidents) requires constant effort on my part. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. For me, not preventing harm is as bad as causing harm. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18. I should be upset if I make a mistake. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19. I should make sure others are protected from any negative consequences of my decisions or actions | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. For me, things are not right if they are not perfect. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21. Having nasty thoughts means I am a terrible person. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22. If I do not take extra precautions, I am more likely than others to have or cause a serious disaster. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. In order to feel safe, I have to be as prepared as possible for anything that could go wrong. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. I should not have bizarre or disgusting thoughts. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 25. For me, making a mistake is as bad as failing completely. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 26. It is essential for everything to be clear cut, even in minor matters. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 27. Having a blasphemous thought is as sinful as committing a sacrilegious act. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 28. I should be able to rid my mind of unwanted thoughts. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 29. I am more likely than other people to accidentally cause harm to myself or to others. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 30. Having bad thoughts means I am weird or abnormal. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 31. I must be the best at things that are important to me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 32. Having an unwanted sexual thought or image means I really want to do it. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 33. If my actions could have even a small effect on a potential misfortune, I am responsible for the outcome. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 34. Even when I am careful, I often think that bad things will happen. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 35. Having intrusive thoughts means I'm out of control. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 36. Harmful events will happen unless I am very careful. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 37. I must keep working at something until it's done exactly right. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 38. Having violent thoughts means I will lose control and become violent. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 39. To me, failing to prevent a disaster is as bad as causing it. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 40. If I don’t do a job perfectly, people won’t respect me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 41. Even ordinary experiences in my life are full of risk. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 42. Having a bad thought is morally no different than doing a bad deed. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 43. No matter what I do, it won’t be good enough. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 44. If I don't control my thoughts, I'll be punished. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

## Appendix D

## The IPIP-NEO-120

The following pages contain phrases describing people's behaviors. Please use the rating scale next to each phrase to describe how accurately each statement describes you. Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence. Please read each statement carefully, and then click the circle that corresponds to the accuracy of the statement.

Please read each item carefully and circle the one answer that best corresponds to your agreement or disagreement. If you the statement is **very inaccurate** circle **1**, if it is **moderately inaccurate** circle **2**, if it is **neither accurate nor inaccurate** circle **3**, if it is **moderately accurate** circle **4**, and if it is **very accurate** circle **5**.

| Disagree Strongly | Disagree a little | Neither agree nor disagree | Agree a little | Strongly agree |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. | Worry about things. | 1 | 2 | 3 | 4 | 5 |
| 2. | Make friends easily. | 1 | 2 | 3 | 4 | 5 |
| 3. | Have a vivid imagination. | 1 | 2 | 3 | 4 | 5 |
| 4. | Trust others. | 1 | 2 | 3 | 4 | 5 |
| 5. | Complete tasks successfully | 1 | 2 | 3 | 4 | 5 |
| 6. | Get angry easily | 1 | 2 | 3 | 4 | 5 |
| 7. | Love large parties. | 1 | 2 | 3 | 4 | 5 |
| 8. | See beauty in things that others might not notice | 1 | 2 | 3 | 4 | 5 |
| 9. | Use flattery to get ahead. | 1 | 2 | 3 | 4 | 5 |
| 10. | Like order. | 1 | 2 | 3 | 4 | 5 |
| 11. | Often feel blue. | 1 | 2 | 3 | 4 | 5 |
| 12. | Take charge. | 1 | 2 | 3 | 4 | 5 |
| 13. | Experience my emotions intensely. | 1 | 2 | 3 | 4 | 5 |
| 14. | Make people feel welcome. | 1 | 2 | 3 | 4 | 5 |
| 15. | Keep my promises. | 1 | 2 | 3 | 4 | 5 |
| 16. | Find it difficult to approach others. | 1 | 2 | 3 | 4 | 5 |
| 17. | Am always busy. | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|---|---|---|---|---|---|
| 18. Prefer to stick with things that I know. | 1 | 2 | 3 | 4 | 5 |
| 19. Love a good fight. | 1 | 2 | 3 | 4 | 5 |
| 20. Work hard. | 1 | 2 | 3 | 4 | 5 |
| 21. Often eat too much. | 1 | 2 | 3 | 4 | 5 |
| 22. Love excitement. | 1 | 2 | 3 | 4 | 5 |
| 23. Am not interested in abstract ideas. | 1 | 2 | 3 | 4 | 5 |
| 24. Believe that I am better than others. | 1 | 2 | 3 | 4 | 5 |
| 25. Start tasks right away. | 1 | 2 | 3 | 4 | 5 |
| 26. Feel that I'm unable to deal with things. | 1 | 2 | 3 | 4 | 5 |
| 27. Radiate joy. | 1 | 2 | 3 | 4 | 5 |
| 28. Tend to vote for liberal political candidates. | 1 | 2 | 3 | 4 | 5 |
| 29. Sympathize with the homeless. | 1 | 2 | 3 | 4 | 5 |
| 30. Jump into things without thinking. | 1 | 2 | 3 | 4 | 5 |
| 31. Fear for the worst. | 1 | 2 | 3 | 4 | 5 |
| 32. Warm up quickly to others. | 1 | 2 | 3 | 4 | 5 |
| 33. Enjoy wild flights of fantasy. | 1 | 2 | 3 | 4 | 5 |
| 34. Believe that others have good intentions. | 1 | 2 | 3 | 4 | 5 |
| 35. Excel in what I do. | 1 | 2 | 3 | 4 | 5 |
| 36. Get irritated easily. | 1 | 2 | 3 | 4 | 5 |
| 37. Talk to a lot of different people at parties. | 1 | 2 | 3 | 4 | 5 |
| 38. Do not like art. | 1 | 2 | 3 | 4 | 5 |
| 39. Know how to get around the rules. | 1 | 2 | 3 | 4 | 5 |
| 40. Like to tidy up. | 1 | 2 | 3 | 4 | 5 |
| 41. Dislike myself. | 1 | 2 | 3 | 4 | 5 |
| 42. Try to lead others. | 1 | 2 | 3 | 4 | 5 |
| 43. Seldom get emotional. | 1 | 2 | 3 | 4 | 5 |
| 44. Love to help others. | 1 | 2 | 3 | 4 | 5 |
| 45. Tell the truth. | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|---|---|---|---|---|---|
| 46. Am easily intimidated. | 1 | 2 | 3 | 4 | 5 |
| 47. Am always on the go. | 1 | 2 | 3 | 4 | 5 |
| 48. Dislike changes. | 1 | 2 | 3 | 4 | 5 |
| 49. Yell at people. | 1 | 2 | 3 | 4 | 5 |
| 50. Do more than what's expected of me. | 1 | 2 | 3 | 4 | 5 |
| 51. Go on binges. | 1 | 2 | 3 | 4 | 5 |
| 52. Seek adventure. | 1 | 2 | 3 | 4 | 5 |
| 53. Avoid philosophical discussions. | 1 | 2 | 3 | 4 | 5 |
| 54. Think highly of myself. | 1 | 2 | 3 | 4 | 5 |
| 55. Find it difficult to get down to work. | 1 | 2 | 3 | 4 | 5 |
| 56. Remain calm under pressure. | 1 | 2 | 3 | 4 | 5 |
| 57. Have a lot of fun. | 1 | 2 | 3 | 4 | 5 |
| 58. Believe in one true religion. | 1 | 2 | 3 | 4 | 5 |
| 59. Feel sympathy for those who are worse off than myself. | 1 | 2 | 3 | 4 | 5 |
| 60. Make rash decisions. | 1 | 2 | 3 | 4 | 5 |
| 61. Am afraid of many things. | 1 | 2 | 3 | 4 | 5 |
| 62. Feel comfortable around people. | 1 | 2 | 3 | 4 | 5 |
| 63. Love to daydream. | 1 | 2 | 3 | 4 | 5 |
| 64. Trust what people say. | 1 | 2 | 3 | 4 | 5 |
| 65. Handle tasks smoothly. | 1 | 2 | 3 | 4 | 5 |
| 66. Lose my temper. | 1 | 2 | 3 | 4 | 5 |
| 67. Don't like crowded events. | 1 | 2 | 3 | 4 | 5 |
| 68. Do not like poetry. | 1 | 2 | 3 | 4 | 5 |
| 69. Cheat to get ahead. | 1 | 2 | 3 | 4 | 5 |
| 70. Leave a mess in my room. | 1 | 2 | 3 | 4 | 5 |
| 71. Am often down in the dumps. | 1 | 2 | 3 | 4 | 5 |
| 72. Take control of things. | 1 | 2 | 3 | 4 | 5 |
| 73. Am not easily affected by my emotions. | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|---|---|---|---|---|---|
| 74. Am concerned about others. | 1 | 2 | 3 | 4 | 5 |
| 75. Break my promises. | 1 | 2 | 3 | 4 | 5 |
| 76. Am not embarrassed easily. | 1 | 2 | 3 | 4 | 5 |
| 77. Do a lot in my spare time. | 1 | 2 | 3 | 4 | 5 |
| 78. Don't like the idea of change. | 1 | 2 | 3 | 4 | 5 |
| 79. Insult people. | 1 | 2 | 3 | 4 | 5 |
| 80. Set high standards for myself and others. | 1 | 2 | 3 | 4 | 5 |
| 81. Rarely overindulge. | 1 | 2 | 3 | 4 | 5 |
| 82. Love action. | 1 | 2 | 3 | 4 | 5 |
| 83. Have difficulty understanding abstract ideas. | 1 | 2 | 3 | 4 | 5 |
| 84. Have a high opinion of myself. | 1 | 2 | 3 | 4 | 5 |
| 85. Need a push to get started. | 1 | 2 | 3 | 4 | 5 |
| 86. Know how to cope. | 1 | 2 | 3 | 4 | 5 |
| 87. Love life. | 1 | 2 | 3 | 4 | 5 |
| 88. Tend to vote for conservative political candidates. | 1 | 2 | 3 | 4 | 5 |
| 89. Suffer from others' sorrows. | 1 | 2 | 3 | 4 | 5 |
| 90. Rush into things. | 1 | 2 | 3 | 4 | 5 |
| 91. Get stressed out easily. | 1 | 2 | 3 | 4 | 5 |
| 92. Act comfortably with others. | 1 | 2 | 3 | 4 | 5 |
| 93. Like to get lost in thought. | 1 | 2 | 3 | 4 | 5 |
| 94. Distrust people. | 1 | 2 | 3 | 4 | 5 |
| 95. Know how to get things done. | 1 | 2 | 3 | 4 | 5 |
| 96. Rarely get irritated. | 1 | 2 | 3 | 4 | 5 |
| 97. Avoid crowds. | 1 | 2 | 3 | 4 | 5 |
| 98. Do not enjoy going to art museums. | 1 | 2 | 3 | 4 | 5 |
| 99. Take advantage of others. | 1 | 2 | 3 | 4 | 5 |
| 100. Leave my belongings around. | 1 | 2 | 3 | 4 | 5 |
| 101. Have a low opinion of myself. | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|---|---|---|---|---|---|
| 102. Wait for others to lead the way. | 1 | 2 | 3 | 4 | 5 |
| 103. Experience very few emotional highs and lows. | 1 | 2 | 3 | 4 | 5 |
| 104. Turn my back on others. | 1 | 2 | 3 | 4 | 5 |
| 105. Get others to do my duties. | 1 | 2 | 3 | 4 | 5 |
| 106. Am able to stand up for myself. | 1 | 2 | 3 | 4 | 5 |
| 107. Can manage many things at the same time. | 1 | 2 | 3 | 4 | 5 |
| 108. Am attached to conventional ways. | 1 | 2 | 3 | 4 | 5 |
| 109. Get back at others. | 1 | 2 | 3 | 4 | 5 |
| 110. Am not highly motivated to succeed. | 1 | 2 | 3 | 4 | 5 |
| 111. Am able to control my cravings. | 1 | 2 | 3 | 4 | 5 |
| 112. Enjoy being reckless. | 1 | 2 | 3 | 4 | 5 |
| 113. Am not interested in theoretical discussions. | 1 | 2 | 3 | 4 | 5 |
| 114. Make myself the center of attention. | 1 | 2 | 3 | 4 | 5 |
| 115. Have difficulty starting tasks. | 1 | 2 | 3 | 4 | 5 |
| 116. Am calm even in tense situations. | 1 | 2 | 3 | 4 | 5 |
| 117. Laugh aloud. | 1 | 2 | 3 | 4 | 5 |
| 118. Like to stand during the national anthem. | 1 | 2 | 3 | 4 | 5 |
| 119. Am not interested in other people's problems. | 1 | 2 | 3 | 4 | 5 |
| 120. Act without thinking. | 1 | 2 | 3 | 4 | 5 |

## Appendix E

## TCQ

Please read each statement and decide how accurate it is of you. There are no right or wrong answers, just give your own opinion of yourself. Please indicate your response using the scales below.

1. I don't think one can be too cautious.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

2. When something bad happens to another person, I feel their pain almost as if it were my own.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

3. I live in the moment rather than worrying about what could happen in the future.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

4. I like to think of the consequences of an action before I proceed.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

5. If someone does or says something foolish or embarrassing, I can't wait to tell others about it.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

6. If I think I might have offended someone, it will bother me until I have put matters right.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

7. When I receive constructive criticism, I find it difficult to focus on the more positive aspects of the review.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

8. I am aware of the many different ways a negative event could affect someone.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

9. When someone tells me their problems, I empathize with them to the point that it is almost like their problems are my own.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

10. I remember the times I have hurt someone.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

11. It doesn't bother me to hear about others being wronged.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

12. I am bored by the routine and predictable.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

13. I don't feel especially attached to my belongings.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

14. In my personal relationships, I feel like I need to take on a care giving role.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

15. It is annoying when people expect you to thank them for their efforts.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

16. Before helping someone else out, I make sure my own needs have been met.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

17. I am able to stand up for myself, even if it means offending or upsetting someone else.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

18. Once I have heard about something bad that has happened to another person, I cannot continue my day as normal.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

19. I like to be spontaneous.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

20. I would not be able to continue with my day as normal if I heard about something unfortunate that had happened to a pet or animal.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

21. I have no problem expressing and discussing potentially controversial topics.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

22. I have limited patience for people with "special needs" (e.g., hearing impaired, physically handicapped, mentally handicapped, physically unwell).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

23. It doesn't really bother me when others tease me.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

24. I find it hard to decline the requests of significant people in my life, even if it requires making a personal sacrifice.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

25. I don't really understand why people get so upset about events that have nothing to do with them (e.g., disasters and wars in other countries).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

26. If someone else is being careless, I will act to protect others from the harm that the carelessness could cause.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

27. When throwing things away, I feel sad because it is like they are being rejected.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

28. I will pursue my goals, even if it means that others get hurt on occasion.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

29. I would be upset if my negligence led to someone else's misfortune.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

30. Everyone deserves a second chance.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

31. I live for thrills.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

32. I wish others would be more careful.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

33. I believe in being honest in my dealings with others.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

34. When I hear that something bad has happened to someone else, I don't really react.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

35. When someone I am with is distressed, I become distressed too.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

36. It really bothers me to hear about awful things happening to people or animals.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

37. I am uncomfortable taking risks with deadlines for important matters (e.g., income tax filing, paying bills, submitting assignments).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

38. When people tell me about something bad that has happened to them, I have a hard time understanding what they are distressed about.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

39. If I do something wrong, I do what I can to make up for it.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

40. I try my best to not to say or do anything that might upset or offend someone.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

41. Pets/animals are like children to me.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** Very true for me |

42. I would sooner have harm come to myself rather than to someone else.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

43. Each person is valuable and special in their own way; no one is "better" than anyone else.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

44. I accept the fact that, like everyone else, at some point in my life I am going to hurt someone else emotionally or physically.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

45. I find it hard to rest if someone I know is in distress.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

46. I would sooner harm come to myself rather than another living thing such as a plant/animal.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

47. It upsets me when people disrespect other life forms (e.g., animals, plants, the environment).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

48. I often feel guilty.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

49. I am careful when I undertake activities that could potentially be dangerous.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Not at all true for me | **1** | **2** | **3** | **4** | **5** | **6** | **7** | Very true for me |

# Appendix F

## Demographic information

1. What is your age? _____.
2. What gender do you identify as? _____.
3. What is your ethnicity?

- African, African Canadian, Afro-Caribbean descent
- Chinese, Japanese, Korean, Taiwanese descent
- First Nations, Inuk/Inuit, Métis descent
- Hispanic or Latin American descent
- Arab, Persian, West Asian descent (e.g., Afghan, Egyptian, Iranian, Kurdish, Lebanese, Turkish)
- South Asian descent (e.g., Bangladeshi, Indian, Indo-Caribbean, Pakistani, Sri Lankan)
- Cambodian, Filipino, Indonesian, Thai, Vietnamese, or other Southeast Asian descent
- European descent
- Other:_____
- No answer

4. What is the highest degree level or level of school you have completed?

- Some high school
- High school diploma
- Some college/CEGEP
- College/CEGEP diploma

- Some undergraduate
- Undergraduate degree
- Some graduate school
- Graduate-level degree
- Other:
- No answer

**5.** What is your current employment status?

- Full-time
- part-time
- Unemployed
- Student
- Home maker
- Other:
- No answer

**6.** what is your current income?

- Less than $10,000
- $10,000 to $30,000
- $30,000 to $50,000
- $50,000 to $70,000
- $70,000 to $90,000
- More than $90,000
- I do not wish to say
- Other:
- No answer

**Appendix G**

# Consent Form:

## An Exploration of Personality Styles and Obsessive-Compulsive Phenomena in The Community

---

You are asked to take part in a study called: An Exploration of Personality Styles and Obsessive-Compulsive Phenomena in The Community. This study is being conducted by undergraduate student Morgan MacLean under the supervision of Dr. Martha Giraldo O'Meara. This research is part of the Psychology Honours Program at the University of Prince Edward Island. The goal of this research study is to explore the link between personality styles and obsessive-compulsive symptoms. The results obtained from this research are intended to help improve our understanding of how different factors affect the expression of symptomatology in obsessive-compulsive disorder.

About 92 people are required for this study, participants must be 18 years of age or older. If you choose to partake in this study, you will be asked to fill out a set of questionnaires that will take about 60 minutes to complete. You will be asked to provide information about your personal experiences with obsessive compulsive symptoms, personality, and attachment styles.

You can decide to skip any questions while you are filling out the survey. You can also decide to stop answering questions. If you decide to stop answering questions, simply close the survey window. No data will be collected until you have clicked on the "Finish" button at the end. You will not be able to take out your responses from the study after you submit the online survey.

As a compensation for participating in this research, you will receive an entry ballot into our draw for a $50 gift card. Odds of winning are approximately one in held annually between August and September, following your participation. To ensure anonymity, you will be provided a link to a separate survey upon completion of the questionnaires where you will be asked to provide your name and contact information to be entered into draw.

Your responses to the online survey will be completely anonymous. Only people directly involved in conducting the research will have access to the data. All the information we collect will be kept in a password protected file, on a password protected computer in a locked office. Responses will be kept for five years and then erased.

The only risk to participating in this study is the possibility of feeling uncomfortable when answering the questionnaires. In the event of emotional distress you can seek support at wellnesstogether.ca or from student services if you are a student at UPEI: https://www.upei.ca/student-affairs/counselling.

Please check the box below if you consent to take part in this research project exploring Personality Styles and Obsessive-Compulsive Phenomena in The Community. Checking the box indicates that you understand…

- Participation in this research study is entirely voluntary.
- You are providing consent to use and publish collected data.
- That all your information will be kept confidential, and survey responses will be anonymous.
- You can withdraw from this study with zero repercussions prior to submitting the questionnaires.
- At no point will there be a waiver of rights asked or expected.
- Once submitted you will be unable to withdraw from study.
- The estimated time to complete this survey is 60 minutes.
- You can contact the researcher by email at omeararesearchlab@gmail.com with any further questions or for follow up of study results.
- If you are concerned about the ethical conduct of this research study, you can contact the UPEI Research Ethics Board at (902)-620-5104 or researchcompliance@upei.ca.

This project has been reviewed by the UPEI Research Ethics Board and it complies with Tri-Council guidelines for research involving human participants.

_____ I consent to the information above and would like to participate.

**Appendix H**

# Consent Form:

## An Exploration of Personality Styles and Obsessive-Compulsive Phenomena in The Community

---

You are asked to take part in a study called: An Exploration of Personality Styles and Obsessive-Compulsive Phenomena in The Community. This study is being conducted by undergraduate student Morgan MacLean under the supervision of Dr. Martha Giraldo O'Meara. This research is part of the Psychology Honours Program at the University of Prince Edward Island. The goal of this research study is to explore the link between personality styles and obsessive-compulsive symptoms. The results obtained from this research are intended to help improve our understanding of how different factors affect the expression of symptomatology in obsessive-compulsive disorder.

About 92 people are required for this study, participants must be 18 years of age or older. If you choose to partake in this study, you will be asked to fill out a set of questionnaires that will take about 60 minutes to complete. You will be asked to provide information about your personal experiences with obsessive compulsive symptoms, personality, and attachment styles.

You can decide to skip any questions while you are filling out the survey. You can also decide to stop answering questions. If you decide to stop answering questions, simply close the survey window. No data will be collected until you have pushed the "Finish" button at the end. You will not be able to take out your responses from the study after you submit the online survey.

As a compensation for participating in this research, you will receive one bonus credit in eligible courses OR an entry ballot into our draw for a $50 gift card. Odds of winning are approximately one in 90 (held annually between August and September, following your participation. To ensure anonymity, you will be provided a link to a separate survey upon completion of the questionnaires where you will be asked to provide your name and contact information to be entered into draw.

Your responses to the online survey are will be completely anonymous. Only people directly involved in conducting the research will have access to the data. All the information we collect will be kept in a password protected file, on a password protected computer in a locked office. Responses will be kept for five years and then erased.

The only risk to participating in this study is the possibility of feeling uncomfortable when answering the questionnaires. In the event of emotional distress you can seek support at wellnesstogether.ca or from student services if you are a student at UPEI: https://www.upei.ca/student-affairs/counselling.

Please check the box below if you consent to take part in this research project exploring Personality Styles and Obsessive-Compulsive Phenomena in The Community. Checking the box indicates that you understand…

- Participation in this research study is entirely voluntary.
- Are providing consent to use and publish collected data.
- That all your information will be kept confidential and survey responses will be anonymous.
- You can withdraw from this study with zero repercussions prior to submitting the questionnaires.
- Only those in eligible courses will receive a bonus credit, eligibility depends on course instructor.
- To receive bonus credit, you must be registered with SONA and access the study through the link in their SONA account.
- At no point will there be a waiver of rights asked or expected.
- Once submitted you will be unable to withdraw from study.
- The estimated time to complete this survey is 60 minutes.
- You can contact the researcher by email at omeararesearchlab@gmail.com
- If you are concerned about the ethical conduct of this research study you can contact the UPEI Research Ethics Board at (902)-620-5104 or researchcompliance@upei.ca.

This project has been reviewed by the UPEI Research Ethics Board and it complies with Tri-Council guidelines for research involving human participants.

_____ I consent to the information above and would like to participate.

## Appendix I

## Basic Study Information

Study Name:

An exploration of personality styles and obsessive-compulsive phenomena in the community

Brief Abstract:

The study aims to understand the relationship between personality styles and obsessive-Compulsive phenomena in undergraduate students. Participation in this study will require the completion of a set of questionnaires. The study is ~1 hour in length.

Detailed Description

The purpose of this study is to investigate predictors of obsessive-compulsive phenomena and other mental health variables. The results obtained from this research are intended to help improve our understanding of how different factors affect the expression of symptomatology in obsessive-compulsive disorder.

If you agree to participate in this study, you will be asked to complete six online surveys. The online surveys can be completed remotely. This should take approximately 60 minutes to complete. The responses to the online surveys will be completely anonymous.

Participants will be compensated with 1 bonus course credit in eligible courses or a chance to win a $50 gift card.

Eligibility Requirements:

Participants must be 18 years of age or older.

Duration (Minutes):

The estimated time to complete this study is 60 minutes.

Credits:

Depending on eligibility, participants will receive one bonus credit or an entry ballot into our draw for a $50 gift card. Odds of winning are approximately one in 90 held annually between August and September, following your participation.

Preparation

This study is completed entirely online, participants can prepare for this research study by ensuring a stable internet connection and allotting one uninterrupted hour to complete the series of questionnaires.

**Appendix J**

# Debriefing Form

I would like to thank you for your participation and taking the time to complete this study. The aim of this study was to explore the relationship between personality styles and Obsessive Compulsive Disorder symptoms. The results obtained from this research are intended to help improve our understanding of how different factors affect the expression of symptomatology in obsessive-compulsive disorder.

If you have any questions or comments about this study, please contact omeararesearchlab@gmail.com. If you are interested in the results of this study, you may contact Dr. Martha Giraldo O'Meara (mgomeara@upei.ca) at the completion of the study in the Summer of 2024. Note that only global results, not individual results, will be released.

Some of the questions we ask about in our research are related to feelings associated with anxiety. If at any point, those feelings are distressing, and you wish to seek help, free support and resources are also available online through wellnesstogether.ca or through https://www.upei.ca/student-affairs/counselling for UPEI students. Please do not hesitate to contact us about any questions or concerns you may have.

Please follow the link below to provide contact details to be entered for a chance to win a $50 gift card.

# Appendix K

## Contact information request

1. Please provide your first and last name _____.
2. Please provide your e-mail address_____.

## Appendix L

# Wanted:

## Research Participants!

In search of participants to volunteer in psychological research study.

Participants will be **ENTERED FOR A CHANCE TO WIN A $50 GIFT CARD!**

Get involved by scanning the QR code!

QR code here

Contact information
omeararesearchlab@gmail.com

UNIVERSITY of Prince Edward ISLAND

## Details:

Researchers from the psychology department are exploring the relationship between Obsessive Compulsive Disorder and personality styles. Odds of winning are approximately one in 90 (odds of winning vary by year, based on number of participants who enter)

**Who is eligible?**

Anybody **18** years of age or older.

**What will you be asked to do?**

Participants will be asked to complete a series of online questions totaling an estimated time of 60 minutes. All questionnaire responses will completely anonymous.