

**T.C. DOĞUS UNIVERSITY  
INSTITUTE OF SOCIAL SCIENCES  
MASTER OF ARTS IN PSYCHOLOGY (CLINICAL)**

**AN ANALYSIS OF THE ROLE OF DISGUST IN FIVE MORAL DOMAINS WITH  
RELATION TO GENDER, RELIGIOSITY, RIGHT-LEFT POLITICS, OBSESSIVE  
BELIEFS, AND CLEANING COMPULSIONS**

**Graduation thesis**

**Dilara Fatma Alcan 201280010**

**Supervisor:**

**Assist. Prof. Dr. C. Ekin Eremsoy**

**İstanbul, January 2015**

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## PREFACE

This thesis is written for clinical psychology master programme in Doğuş University, Istanbul. It is about the relationship between moral foundations and disgust which are discussed in the context of religion, rightist and leftist politics, gender and obsessive compulsive tendencies. Below, subjects which were mentioned in current study were explained briefly.

Morality sets rules in which norms are based on explanations for how the world is should be (Prinz, 2007). Moral behaviors and thoughts, attitudes, beliefs, all of these are formed by communities and change from culture to culture, from one belief system to another. There are various conceptions of morality which gives diverse meanings to justice, welfare, fairness and equality. In addition, those issues are discussed in psychology by various domains, echoless and schools. In this paper, it is argued that morality is induced or influenced by emotions according to social intuitionist approach (Prinz, 2007; Rozin et al., 1994; Haidt, 2001). That approach states that a variety of emotions is elicited when people transgress morality of others. Disgust, the main emotion of this study is elicited when a person's action contaminates the situation. The person who is the main actor in that situation is also contaminated by the action itself. In current study, it is studied through that feeling 'disgusted' changes preferences of moral foundations. Inbar and Avramova (2013) indicated that moral judgments are affected by disgust which increases sensitivity to moral issues. In current study, disgust and moral foundations were examined to find out which moral foundations are related to the emotion of disgust. Some moral foundations are found to be more related to disgust. For instance, disgust is found to be more related to purity, loyalty and authority foundations. (Haidt & Herch, 2001). In this research, it is aimed to find out how moral foundations that generated by purity, authority and loyalty are connected to disgust.

Moreover, cultural institutions such as religion, rightist and leftist politics, social rules established on religion and norms shape morality. These kinds of structures have different explanations, viewpoints, beliefs, attitudes and practices over morality. While some parties are supporters of equalities for every man, some of them support the importance of authority. Besides, Helzer and Pizarro (2012) assert that conservatives are more disgusted toward moral domains than liberals. In current study, it is also investigated whether rightist - leftist politics influence moral decisions regarding the emotions. Furthermore, just because religion is inclined to emphasize purity, loyalty and authority more, so it is believed that religious people who considers purity as an important issue have more inclinations toward disgust sensitivity (Fincher & Thornhill, 2012). In this study, I tried to study the influence of religion on moral foundations which determine moral preferences and tendency to react toward the preferences of others.

Lastly, it is aimed to find information about obsessive and compulsive tendencies related to emotion of disgust. Disgust is assumed to have role over obsessive and compulsive tendencies (Berle & Phillips, 2006; Mancini et al., 2001; Olatunji et al., 2004; 2008; 2014). If a connection will be found in this study between disgust and obsessive- compulsive tendencies, there can be a chance to improve symptoms of obsessive compulsive disorder.

This study will be a contribution to literature which supports to find origin of morality and its influence on culture. I hope that this study puts emotions as the basis of morality which explains how polarization in culture, conflicts and anomalies are emerged. This study can enlarge the scope of understanding of moral beliefs, attitudes, and behaviors culturally and individually.

Istanbul, January 2015

Dilara Fatma Alcan

## ABSTRACT

### AN ANALYSIS OF THE ROLE OF DISGUST IN FIVE MORAL DOMAINS WITH RELATION TO GENDER, RELIGIOSITY, RIGHT-LEFT POLITICS, OBSESSIVE BELIEFS, AND CLEANING COMPULSIONS

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January, 2015

One purpose of this study is to investigate the differences between reactions of disgusted and non-disgusted groups with respect to moral foundations (authority, sanctity, loyalty, fairness, and care). The second purpose is to indicate the gender differences among groups and moral foundations. 255 university students, 83 males and 172 females participated in this study. A series of questionnaires that differed in manipulation tactics were given to two participant groups (Looming of Disgust Questionnaire Form A to disgusted group & Form B to non-disgusted group, Moral Foundations Questionnaire, Padua Inventory, Disgust Scale, Contamination and Cognitions Scale, Obsessive Beliefs Scale, and Demographic Information Form). According to the Turkish version of Moral Foundations Questionnaire, merging foundations into two factors gave high alpha values for internal consistencies. Thus, the analysis was conducted in two moral foundations groups: binding foundations (authority, purity, and loyalty) and individualizing foundations (fairness and care). In variance analysis, participants in disgusted groups preferred the binding foundations. Gender informed the differences interacted with groups (disgusted and non-disgusted) and

moral foundations. In general, females were more inclined toward individualizing foundations than were males. Males were more inclined to binding foundations than were females. One significant finding was that males were more affected by disgust manipulation, which made them sensitive to the binding foundations. Furthermore, regression analyses were conducted that found relationship between moral foundations and religion, rightist-leftist politics, disgust sensitivity, obsessive beliefs, contamination cognitions, and cleaning compulsions. Religion, disgust sensitivity, obsessive beliefs, and contamination cognitions significantly predicted binding foundations. Disgust sensitivity and gender also predicted individualizing foundations significantly. This study supports the claim that group differences, gender, contamination cognitions, and cleaning compulsions are predictors of disgust sensitivity. Lastly, disgust influenced moral foundations that contain gender factors. Religion, contamination cognitions, disgust sensitivity, and obsessive beliefs were predictors of binding foundations. Disgust sensitivity was also related to contamination cognitions, gender, group differences (disgusted and non-disgusted), and cleaning compulsions. These results are discussed as the main portion of this study.

Keywords: disgust, disgust sensitivity, moral foundations, gender differences, individualizing moral foundations, binding moral foundations, obsessive beliefs, religiosity and right left politics.

## ÖZ

### TİKSİNME DUYGUSUNUN BEŞ AHLAKİ BOYUT ÜZERİNDEKİ ROLÜ VE KİŞİLERİN CİNSİYET, DİNDARLIK, SAĞ SOL SİYASİ YÖNELİM, OBSESİF İNANÇ VE TEMİZLENME KOMPULSİF EĞİLİMLERİ DEĞİŞKENLERİ İLE ANALİZİ

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Danışman: Yrd. Doç. Dr. C. Ekin Eremsoy

Ocak, 2015

Bu çalışmanın amacı tiksınme duygusunun manipüle edildiđi ve manipüle edilmediđi gruplar arasındaki ahlaki temellerin farkını arařtırmaktır (Otorite, bađlılık, saflık, dürüstlük ve itina temelleri). Aynı zamanda, bu çalışmada cinsiyet farklarının tiksınmeye bađlı olarak ahlaki karar verme üzerindeki etkisinin arařtırılması amaçlanmıřtır. Arařtırmadaki örneklem 255 üniversite öğrencisinden oluřmaktadır. Bu örneklemin 83'ü erkek, 172'si kadından oluřmaktadır. Örneklemin manipüle edildiđi ve edilmediđi gruplara bađlı olarak bir grup envanter seti katılımcılara verilmiřtir (Abartılmıř Tiksınme Algısı Ölçeđi Form A- iđrendirme & Form B-nötr, Ahlaki Temeller Ölçeđi, Padua Envanteri, Tiksınme Duyarlılıđı Ölçeđi-Revize Edilmiř Form, Bulařma / Kirlenme Biliřleri Ölçeđi, Obsesif İnanıřlar Ölçeđi ve Demografik Bilgi Formu). Ahlaki Temeller Ölçeđinin Türkçe versiyonu üzerinde yapılan güvenirlilik ve faktör analizi çalışmalarına göre, bu temelleri iki grupta toplamak yüksek alfa deđerleri sađladıđından dolayı regresyon ve varyans analizleri ikili ahlak temelleri üzerinden yapılmıřtır: bireyselleřtirici ahlaki temeller (dürüstlük ve itina)

ve bağlayıcı ahlaki temeller (otorite, bağlılık ve saflık). Yapılan varyans analizinde cinsiyet değişkeninin analize katılmasıyla birlikte tiksinden ve tiksilmeyen gruplar arasında ahlaki temeller açısından anlamlı farklılıklar bulunmuştur. Tiksinden gruptaki katılımcıların bağlayıcı ahlaki temelleri daha çok tercih ettiği görülmüştür. Ayrıca manipülasyonun katılmadığı durumlarda, kadınların bireyselleştirici ahlaki temelleri, erkeklerin ise bağlayıcı ahlaki temelleri daha çok tercih ettiği görülmüştür. Bunun yanında, erkek katılımcıların deneysel tikslenme senaryoları sonucunda kadın katılımcılara göre bağlayıcı ahlaksal temellere daha çok eğilim gösterdiği bulunmuştur. Ek olarak, dindarlık, sağ sol politik yönelimi, grup farklılıkları, cinsiyet, tikslenme hassasiyeti, obsesif inançlar, kirlenme bilişi ve temizlenme kompulsiyonlarının ahlakın iki ayrı temel boyutunu yordayıp yordamadığını ölçmek için regresyon analizi uygulanmıştır. Dindarlık, tikslenme hassasiyeti, obsesif inançlar ve kirlenme bilişinin bağlayıcı ahlaki temelleri anlamlı bir şekilde yordadığı bulunmuştur. Tikslenme hassasiyeti ve cinsiyet değişkenlerinin bireyselleştirici ahlaki temelleri anlamlı bir şekilde yordadığı da görülmüştür. Bu bulgulara ek olarak, dindarlığın, sağ sol politik farkların, obsesif inançların, kirlenme bilişlerinin ve temizlenme kompulsiyonlarının tikslenme hassasiyetini anlamlı bir şekilde yordayıp yordamadığına bakılmıştır. Deneysel tikslenmenin, cinsiyetin, kirlenme bilişinin ve temizlenme kompulsiyonlarının tikslenme hassasiyetini anlamlı bir şekilde yordadığı bulunmuştur. Bu sonuçlar araştırmanın amacına göre tartışılmıştır.

**Anahtar Kelimeler:** tikslenme, tikslenme hassasiyeti, ahlaki temeller, cinsiyet farklılıkları, bireyselleştirici ahlaki temeller, bağlayıcı ahlaki temeller, obsesyonlar, dindarlık ve muhafazakar-liberal politik yönelimi.



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## **LIST OF ABBREVIATIONS**

**OCD:** Obsessive Compulsive Disorder

**CAD:** Contempt Anger Disgust

**SES:** Socioeconomic Status

**fMRI:** Functional Magnetic Resonance Imaging

**BII:** Blood Injury Injection Phobia

**PI- WSUR:** Padua Inventory- Washington State University Revision

**CCS:** Contamination Cognitions Scale

**OCCWG:** Obsessive Compulsive Cognition Working Group

**OBQ:** Obsessive Beliefs Questionnaire

**DS-R:** Disgust Scale- revised

**LODQ:** Looming of Disgust Questionnaire

**MFQ:** Moral Foundations Questionnaire

**ANOVA:** Analysis of Variance

## LIST OF SYMBOLS

**SD:** Standard Deviation

**M:** Mean

**F:** F statistics

**df:** Degree of freedom

**t:** t value

**r:** Pearson correlation

**p:** p value

**$\beta$ :** Beta for regression coefficient

**$\alpha$ :** Cronbach alpha

## **CHAPTER**

### **1. INTRODUCTION**

Moral psychology deals with the moral judgments on issues such as justice, rights, and welfare (Turiel, 1983 as cited in Graham, Haidt & Nosek, 2009). According to Prinz (2007), morality sets rules that are enforced through norms. Haidt assumes (2001) that moral judgment is based on virtues in a society where “good” morals are praised and “bad” ones are criticized. Those judgments form grounds from which the culture judges a person's actions or personality. In relation to those definitions and explanations, moral judgments are analyzed from different perspectives with different methods. Some perspectives include rational reasoning and some include moral intuitions that contain emotional entities (Prinz, 2007). Hume, in his book *Treatise of Human Nature* (1738), argued that humans’ moral judgments have an emotional essence (as cited in Prinz, 2007). This is based on the perspective that emotions determine the moral domains. An intuition model, a social functionalist model, and other views about the role of emotion among moral domains are discussed. Those models are the basis of this research, which aims to look into the scope of the morality. Disgust is identified as the main motivational moral emotion and its origins, types, and development (“from oral to moral”) are summarized (Rozin, Haidt, & Fincher, 2009). The core of this paper, the idea that disgust is a moral emotion, is studied in the context of moral transgressions. In addition, disgust is examined as a part of both culture and gender. The effects of disgust on the political and moral domains, as well as religion and ingroup-outgroup dynamics will be discussed as well. Lastly, I explore the glimpses of neuroticism in relation to disgust which can be explained as an entity of obsessions and compulsions.

#### **1.1. Emotion-Based Morals and Moral Intuitions**

Prinz (2007) explained that reactive moral emotions are emotions that are stimulated when a person or group either violates moral rules or conforms to them. Reactive moral emotions

emerge as a result of different kinds of moral violations. Moral indignation is a reactive moral emotion that is triggered by anger (Prinz, 2007). It is a reaction to the violation of care and justice. Indignation and anger are substantially similar emotions and are aroused by immoral acts. However, moral anger is aroused by harm-activated actions. In other words, moral transgressions that pose a threat to and/or harm someone's rights evoke anger (Prinz, 2007). The other stimulating moral emotion is disgust, aroused by objects contaminated by germs and other microorganisms. Contaminated objects that elicit disgust can be bodily fluids, non-human creatures, dead things, or refuse (Prinz, 2007). In addition, sexual violations evoke moral disgust, often because they transfer one organism's bodily fluids to another organism, which may lead to the transmission of a disease. Furthermore, moral disgust originates from physical disgust, which incites similar bodily reactions and reacts against similar way of appraisals like being contaminated

Prinz also discusses emotions and categorizes them according to the CAD (contempt, anger, and disgust) model (Rozin, Lowery, & Ebert, 1994; Rozin, Lowery, Imada, & Haidt 1999; Prinz, 2007). CAD is an emotion-based model that categorizes emotions according to moral judgments. According to the CAD model, morality is a sum of emotions. Rozin et al. (1999) divide emotions into groups described by emotions of morality. The first group of emotions is guilt, embarrassment, and shame, which are related to moral judgments. Those emotions are associated with self-motivation and consciousness. The second group of emotions is contempt, anger, and disgust and they are associated with others who do not belong to an ingroup (Rozin et al., 1994; 1999). Anger appears when a person is frustrated and blocked. This leads to aggressive behaviours. It is also a moral emotion and is stimulated when a transgression of rights occurs. In addition, core disgust as a moral emotion is generated when a violation of sanctity occurs. Core disgust reminds people that they share the same origins as animals. In addition to core disgust, another type of disgust, called sociomoral disgust, is aroused when a violation of dignity occurs. Violations of dignity include hypocrisy, cruelty, frowning, and betrayal violations related to the others. Moreover, contempt as a moral emotion is elicited when individuals are considered to be negative components by ingroup members. According to Rozin et al. (1994; 1999),

contempt is associated with a hierarchy in which superiority relations are determined. Three different ethics (autonomy, community, and divinity) are associated with those moral emotions. The ethic of autonomy is related to actions against the individual's freedom and rights. The ethic of community is related to actions against community and hierarchy, whereas the ethic of divinity is related to actions against divinity and purity. Rozin et al. (1999) discusses which of these three moral emotions are associated with violations of those three groups of ethics. It is assumed that contempt results from a violation of community while disgust is related to violation of divinity. Anger comes from the violation of autonomy. In addition, Rozin et al. (1999) aimed to prove that there are similarities between cultures that evoke similar emotions when similar ethical violations occur.

Rozin et al. (1999) conducted a study to verify the CAD model. They established their experiment conditions by considering the correlation between moral violations and facial expression of moral emotions. They aimed to find a relationship between moral emotions and the specific ethics of moral violations connected to those emotions. Rozin et al. (1999) found that ethics and moral emotions were related to each other. Of those relationships, the connection between contempt and community happens to be more visible when the face selections are examined. In another study, Rozin et al. (1999) examined this relationship, again but this time ethics were explained to participants before the study. As a result of this explanation, all participants gave answers compatible with categories of moral emotions and ethics. In addition, there were similar results across both cultures, (Japanese and American) which provide support for the CAD hypothesis.

Rozin et al. (1999) evaluated a study to support the CAD model. They designed their experimental conditions according to the correlation between moral violations and facial expression of moral emotions. They aimed to express the relationship between moral emotions and the specific ethics of moral violations connected to those emotions. Rozin et al. (1999) found that ethics and moral emotions were related to each other. The connection between contempt and community was more visible in examination of face selection. In another study, Rozin et al. (1999) examined the same relationship, but this time, ethics

were explained before the study. As a result of this, all participants gave answers compatible with categories of moral emotions and ethics. In addition, there were similar results between the two cultures (Japanese and American), which supports the CAD hypothesis.

In addition to the CAD model, the social functionalist model (Hutcherson & Gross, 2011) explains emotion-based morality by assuming that emotional entities are important for moral judgments. It explains the roles of emotions from a functional perspective. The social functionalist model asserts that contempt, disgust, and anger are adaptive and include appraisals, gestures, physiological responses, and action tendencies. Moreover, they are specific to the context of the violations (Hutcherson & Gross, 2011).

According to this model, anger is a defensive emotion that leads to attack/approach behaviour when the self is endangered (Hutcherson & Gross, 2011). Threats are resolved by either active or passive behaviours (e.g. conservative tactics or attacks). Hutcherson and Gross (2011) assumed that anger is a moral emotion, whereas it is much more related to the behaviour than the threat. Moreover, when danger is not present, avoidance behaviour emerges as a result of the experience of danger in the past. The aim is not to take risks, but rather to minimize them. In addition, disgust and contempt are motivator emotions that evoke those kinds of avoidance behaviours (Hutcherson & Gross, 2011). Disgust is aroused when a person faces a malicious behaviour, even if s/he faced good-willed actions in the past. Contempt is cognitively related to the appraisal of incompetence. The urge to help an incompetent person is a waste of time and it elicits contempt (Hutcherson & Gross, 2011). Once the interaction with people who cannot give support to a group has ended, contempt abates. Anger is an immediate threat signal, whereas contempt and disgust are structured by long-lasting attributions. Thus, anger, disgust and contempt are categorized according to their specific appraisals in relation to the nature of their triggers.

Hutcherson and Gross (2011) aimed to differentiate anger, disgust, and contempt from each other using the social functionalist approach. Participants read vignettes that included



autonomy, community, and divinity violations. Hutcherson and Gross (2011) found that moral disgust is visible on all violations. These findings contradict the CAD theory.

Hutcherson and Gross (2011) repeated their experiments in order to verify the social functionalists approach. They aimed to differentiate contempt and disgust from each other. They assumed that disgust is associated with appraisals of benevolence or malicious intentions, whereas contempt is associated with the incompetence. While rating competent and benevolent behaviours, Hutcherson and Gross (2011) found that violations of community aroused contempt in study participants. Otherwise, they verified that violations related to community are strongly connected to moral disgust (Hutcherson & Gross, 2011). Contempt was often found to be related to incompetence at a task. Moreover, Hutcherson and Gross (2011) examined the consequences of three moral emotions. They considered disgust to be a motivator in order to construct a judgment about the worth of an agent. Contempt was considered a motivator of the judgments about a person's characteristics and incompetence. Anger was considered a motivator that does not trigger long-lasting behaviour; rather it's a result of the detection of a threat signal. They proved the social functionalist approach with the results they found in their research (Hutcherson & Gross, 2011). Disgust was found to be the most damaging emotion to feel towards a person because it triggers judgments about a person's character that are hard to forget. Anger is the least dangerous because it is temporary and can happen easily as a result of misperceiving. Contempt is in the middle of the spectrum because it leads to a harmful impression of a person.

In the same way, Haidt (2001) assumes that emotions are important contributions to moral judgments. He mentions the concept of intuitions, which are based on emotion-related explanations for moral judgments. According to Haidt, moral intuition determines moral judgments, which is a kind of cognition but is not a reason-based mechanism. David Hume (1738) says, "Reason is like a slave that obeys passions of the body" (as cited in Haidt, 2001). Reasoning about a moral issue depends on a process that involves finding evidence, verifying its accuracy, comparing it with other views, and making a judgment (Haidt,

2001). Those processes can happen consciously and unconsciously at the same time. However, intuitions are processed unconsciously in a quick and effortless way. Intuition is a method of reasoning that triggers emotions.

The social intuitionist model assumes that moral intuitions have a direct impact on moral judgments (Haidt, 2001). In a moral intuitive process, moral outcome is not processed reasonably and consciously. Emotions that take part in the moral decision-making process give way to conflicts. According to Haidt (2001) there are some links that construct the basis of moral intuitions. The first link is the intuitive judgment link in which moral judgments are processed swiftly, mechanically, and unconsciously. The second link is the post hoc reasoning link in which moral judgment is processed after the moral decision is made. In other words, the conscious process follows the intuitive judgment. The social persuasion link is the third link mentioned by Haidt. According to this link, there is no need for reasoning, because it is not important which group is empowering the judgments to conform the rules, norms, and beliefs without conscious reasoning. Another link, the reasoned judgment link, follows decisions made to persuade others. Lastly, in the private reflection link, a person may commence a reaction that conflicts with the first judgment.

According to this model, intuitions are similar to persuasion, which allows an easy way of reaching conclusion about events or people (Haidt, 2001). According to Haidt (2001), reasoning is caused by relatedness that is connected to impression management and interaction. The other motive that directs reasoning is a coherence motive that is related to the resonance of cultural views and self-view. Being persuaded and having the same opinions as a friend are fallacies for judgments. In other words, people are eager to be manipulated in order to fulfill their goals (Haidt, 2001). According to Haidt (2001), people change their beliefs to avoid feeling threatened and isolated from relationships. People use self-defense motivations to live in a safe and fair world. According to the social intuitionist model, people have nearly no proof to prove their theories about their moral judgments. That is why they use evidence to defend their rights just like lawyers. In addition, people need to have an explanation about their moral judgments to support their theories (Haidt,

2001). In the social intuitionist model, the reasoning process is applied unconsciously so that the interpreter module of mental construction is able to fill the gaps and interpret the reasoning while providing evidence for it. Those interpretations are based on the first moral constructions, which are cultivated by the culture itself. Thus, people have an illusion that their moral judgments depend on their moral reasoning processes (Haidt, 2001). People also try to change other people's moral judgments if they don't like them. This happens because of subjective reasoning though people have illusions that they are objective decision-makers. Thus, the one who disagrees with the established reasoning is considered immoral (Haidt, 2001).

In this model, the moral action comes from willpower (Haidt, 2001). Those who have the best self-regulatory systems are the best at moral reasoning. In addition, morality evolution is part of the basis for cooperation and commitment. In human development, language makes those processes viable and creates an avenue for communication (Haidt, 2001). Some intuitions are lost when a child develops a more complex sense of morality, for example, losing loyalty in a fairness-based culture. This process occurs to prevent people from forming ambivalent moral intuitions. According to this model, immersion in complex customs, which include norms, values, and beliefs, has elements of affective, cognitive, motoric, and propositional knowledge. Peer socialization shapes the judgments that are culturally intuitive. They are imitated and practiced according to cultural norms, values, and beliefs. This period of development appears between ages 9 and 15.

## **1.2. Moral Foundations, Gender Differences and Their Influences Over Political Domain From A Moral Intuitionist Perspective**

According to the social intuitionist model, morality is divided into categories called foundations (Graham, Nosek, & Haidt, 2012; Graham-Haidt et al., in press; Graham-Nosek et al., 2010). Those foundations are associated with the differences between political orientations, religions, and ideologies (Haidt, Graham, & Joseph, 2009). In addition, moral foundations are related to emotions, which evoke moral judgments.

Graham et al. (2012; 2010; in press) argue that moral foundation theory is based on the idea of pluralistic moral values. According to Graham et al. (2012; 2010; in press), morality consists of different foundations, which cannot be limited to care and justice. Their foundations rely on the theories that feed evolutionary psychology. The first of the requirements is based on the nativistic view in which the mind is a first draft that is shaped by experience. The second one is the culture, which is shaped by the first moral draft of the mind in order to adapt different cultural values. The third claim they express is that moral evaluations are rapid and constructed mechanically. The last claim of this theory is pluralism.

The foundations are care/harm, fairness/cheating, loyalty/betrayal, authority/subversion and sanctity/degradation (Graham et al., 2012). The care/harm foundation includes care, nurturing, and protection, which can be seen in mother-child relationship. It meets the survival needs of the weak infant. This basic moral foundation is motivated by suffering, distress, and need and is expressed by children, animals, and suffering people. The care/harm foundation may evoke compassion for the victims and anger towards the offenders. This foundation can also change from society to society. Nazi culture, or reversely, Buddhist culture, can be good examples for this. The fairness/cheating foundation is an emotional exchange in relationships. It is associated with the virtues of justice and fairness. The loyalty/betrayal foundation deals with competition between different groups to gain rank and power. Graham et al. (2012) describe it as forming groups that provide avenues through which to gain power and status. In consumer cultures, brand loyalty and sports teams are one of the main motivators of this foundation. The authority/subversion foundation deals with firm relationships with chiefs and good relationships with subordinates to benefit the ingroup (Graham et al., 2012). In modern cultures, law courts and police departments are places where people obey the rules and decisions made by those authorities. The sanctity/degradation foundation includes the emotion of disgust, which is related to the behavioral immune system that determines mate selection, friend selection, and food selection (Graham et al., 2012). In some cultures this manifests itself as people believing their body is pure or a temple.

Furthermore, moral foundations influence political affiliations and moral goals in different political groups. Political preferences, especially right-left differences, determine voting behaviour (Graham et al., 2009). Liberal views advocate individual freedom. Liberals also consider people to be free agents who are open to development (Graham et al., 2009). However, conservative views are authoritative and institution-based. People are considered to be selfish and imperfect creatures. Conservatives also defend the view that people must be constrained in order to live together. According to those views, liberals are more open to new experiences and change, while conservatives keep what's familiar around them (Graham et al., 2009).

Graham et al. examined (2009; 2012) people's moral concerns and how to make a bridge between their political ideologies and moral foundations. They found that liberals are more prone to giving importance to care and fairness foundations while conservatives are more prone to emphasize divinity, sanctity, authority, and loyalty foundations in their ideologies. According to these data, conservatives emphasize authority, order, loyalty to country, hard work, and purity. On the other hand, liberals choose care, fairness, justice, and equality. This difference is not absolute in political spectrum, but extremists polarized those factors on their giving moral judgments (Graham et al., 2009). In another study, Graham et al. evaluated (2009) answers toward different moral virtues and reactions toward moral violations associated with different foundations. They had feedback from participants like "even if a soldier does not agree with his officer, he has to obey those rules," or "chastity is important for teenagers." They also proved that conservatives are more inclined to defend binding moral judgments. Graham et al. (2009) also tested sacred values and how people react once they are violated. The aim was to change participants' values with money, which can cause strong reactions in conservative and liberal participants considering their moral concerns. Questions like "How much money would someone have to pay you to kick a dog in the head? To renounce your citizenship? To get a blood transfusion from a child molester?" were asked to participants. Liberals refused to exchange values with money, whereas they were more willing to exchange binding factors separate from their values. Similarly, conservatives refused to exchange particular values for money: purity, authority,

and ingroup moral values. Lastly, Graham et al. (2009) tried to prove the relation between foundations and political studies. They evaluated moral foundations among sermons written by liberals and conservatives. Those sermons were taken from the speeches among Unitarian Universalists (a mostly liberal church) and from speeches from Southern Baptists, which is a mostly conservative church. Unitarian leaders used words mostly related to harm and fairness while Baptist leaders used words mostly related to loyalty and sanctity in their sermons.

Leeuwen and Park (2009) examined emotions and political orientations in their studies. They argue that political conservatism is an orientation that is constructed by the need to be certain and avoid threats. This structure is related to the moral foundations of loyalty, respect for authority, and spiritual-body purity. In their research, Leeuwen and Park (2009) assume that anxiety and fear are motivator emotions that lead to moral intuitions of purity, authority, and loyalty. Those moral intuitions are the background for conservatism. Leeuwen and Park (2009) examined moral foundations, political orientations and perception of social dangers. The results showed that political conservatism is related to the perception of social danger, which is influenced by the moral intuition of purity, authority, and loyalty.

Garvey and Ford (2014) studied differences between binding and individualizing factors in relation to intuition. They conducted a research on whether rationality or intuition constructs moral decisions. They assumed that binding factors are related to authority, loyalty, and purity, which are also related to intuitions and intuition-based judgments, while individualizing factors such as harm and justice are related to rationality. Moral foundations, disgust sensitivity, rationality, and political orientation were used as factors in the study. The results supported the claim that binding factors are all related to moral intuitions, whereas individualizing factors are all related to a rational way of thinking.

Religions and foundations are related to each other. Gladden, Welch, Figueredo and Jacobs (2009) assumed that religious concerns include moral judgments, which are constructed by

moral intuitions and harm-based moral emotions. Those moral intuitions are the outcome of disgust sensitivity, which feeds religious conservatism. Conservatives' religious moralizations, as opposed to liberals' are constructed against homosexual relations, masturbation, and incest without harm. The idea of divinity is what is behind these moralizations. Moralizations against purity violations mechanically evoke disgust in religious moral issues (Gladden et al., 2009). In other words, people who have higher disgust sensitivity are more inclined to moralize those domains of ethics with regard to religious rules (Gladden et al., 2009). Gladden et al. (2009) show that religion is related to moral intuitions, moral disgust, and the ethics of community and divinity. Those intuitions evoke anger, contempt, and disgust.

Although a few research studies have been done about the relation between gender differences and moral foundations, Iyer (2010) studied sample size of political attitudes in relation to moral foundations and gender differences. He found little difference between females and males. He detected small effect for sample sizes in which gender differences were not attainable for whole population. He claimed that empathy and universalist constructs are indicative of female characteristics, which are detected more among liberals. According to his assumption, it follows that females, compared to males, prefer individual foundations, which include harm/care and justice/fairness. Males, especially conservative males, think in a utilitarian way, which may explain their inclination for authority, loyalty, and sanctity (Iyer, 2010). He found that females are more emotionally reactive than males. In addition, Eagly, Schmidt and Koenig (2005) found that females are more compassionate to inequality against women, gays, and lesbians.

### **1.3. Emotions As Part of Moralization Process**

Moral foundations, political ideologies, and religions are all explained in a moral intuitionist perspective in which emotions have important roles. In this paper, it will be explained that emotions have an effect on moral judgments, political attitudes, and religions. Emotions have a major role in moral judgments that are directly connected to

political ideologies (Mechler, 2010; Avromova & Inbar, 2013; Haidt, Koller, & Dias, 1993). Haidt et al. (2009) assumed that emotions are motivations that trigger morality-based judgments. Haidt asserted that emotions are basic motivational forces that affect moral judgment processes. Greene-Cushman et al. (2009) conducted a trolley experiment by simulating a train accident. In it, they describe one person tied to a railway and a group of people in another railway. Participants have to choose to save one or the other. According to fMRI results, brain activations show that emotion-related regions of the brain are activated when making decisions about moral dilemmas (Greene-Cushman et al., 2009).

The role of emotion in the political spectrum is obvious in literature. Conservatism as a political ideology carries the meanings of “resistance to change,” feeling strong bounds for conventions, and social norms such as authoritarian parenting, patriarchal gender norms, and orthodoxy (Mechler, 2010). In addition, fear reduction and a need for certainty lead to conservative assumptions. This view is based on the evidence that conservatives are intolerant of new experiences, unfamiliar views, and anomalies. These abstractions are also determined by right and left sides’ severity. Mechler (2010) examined relations between emotions and political issues. She manipulated participants with political ideas and pictures of the politicians in affective poses (positive, negative, and neutral). Participants were asked a bunch of questions that revealed their voting choices. She asked their political views and rated their level of being a liberal, moderate, or conservative. Their emotions and their political choices were also evaluated. At the end of her study, she found that emotion is related to political decisions and moral judgment. Negative effects made severe political ideation that may divide groups into two partisan sides. Moreover, more complex reasoning of political choices included less effective intensity and less effective conflicts. In Mechler’s study, conservatives show higher negative affect than liberals. Mechler (2010) found that people who process less complex moral reasoning are influenced by negative emotion and burdened stimuli. They are more influenced by conditional factors than people who use more complex reasoning. She induced that if a person processes less complex reasoning about a moral issue, he/she might be more affected by negative



affective or situational factors. She found that people who defend purity, loyalty, and authority could more easily accept affectively driven norms and values. Therefore, conservatives defending those kinds of values tend to be influenced by negative affects more than liberals.

Haidt, Koller and Dias (1993) conducted a study to explore the relationship between cultures and affect. They investigated two cultures with regard to non-harmful moral violations. The main concerns of their research were socio-economic status and Western culture moralizations. The study included harmless moral violations and harm-based moral violations. The harmful violation was taking a boy from stage while he dances. The non-harmful violation dealt with a boy wearing regular clothes in a school where there is a dress code. And the third violation deals with a man who eats food with his hands. The other stories are about a housekeeper cleaning toilet with flag and a boy who promises to visit his mother every week but does not keep his promise. There are other stories about different violations. The first is about a dog eaten by the family that owned it once it is dead, a brother and sister kissing each other, and a man who has intercourse with a chicken he bought to eat. After giving all stories, participants were asked to evaluate the acts as moral or immoral. They were also asked if they were bothered, if these examples are universal, if the guilty one in those stories should be punished, and if these acts are harmful. People from high SES and from Philadelphia (individualistic culture) used moral judgements to rate these behaviours when the action harmed someone. They did not evaluate the disgusting or disrespectful situations as immoral. People from Brazil and from low SES saw both as immoral according to harming, disgusting, and disrespectful moral judgments.

According to Avromava and Inbar (2013) morality is attuned to the principle of reward and punishment. They examined role of emotions on morality. They claimed that emotions come after moral judgments. This suggests that negative emotions, such as disgust, anger, and contempt are generated by immoral scenes. This applies to positive emotions like awe, gratitude, and elation, which follow moral actions. Another claim made by the duo is that

those emotions are inclined to increase in intensity of moral or immoral actions. Immoral actions may seem worse than they really are because of negative emotions. It is like how being angry with someone may turn moral judgments into harsher judgments toward a badly dressed person (Avromova & Inbar, 2013). This negatively burdened action is only viable for moral transgressions. They lastly propose that emotions can make an action seem moral even if it is not. For instance, feeling disgust before a moral action may create a negative effect about a moral issue like homosexuality or smoking (Avromova & Inbar, 2013).

The first claim is evaluated according to effects of emotions over moral judgments (Avromova & Inbar, 2013). In other words, Avromova and Inbar assumed (2013) that it is not an inevitable explanation that emotions are the motivators or causes of moral judgments. They presented this idea in an ultimatum game. Participants' fMRI results show brain activation in areas that are also related to emotions when participants judge moral issues or they think they are being cheated in the game. In Royzman's et al. (2001) hypothesis, moral dyspepsia, immoral behaviours may activate the physiology that may cause an oral inhibition like nausea, or diminished appetite (as cited in Inbar & Amranova, 2003). In addition, disgust is the most obvious indicator of moral transgressions. Royzman et al. (2001) concluded that disgust directly triggers oral inhibition in the same place in the brain where moral transgression is placed. Chapman and Anderson (2012) showed that being exposed to bad tasting drinks and contaminated views made people more disgusted in the ultimatum game compared with non-exposed conditions. Furthermore, Chapman and Anderson (2012) assume that different moral transgressions can cause various emotional responses. For instance, immoral acts toward purity and fairness evoke disgust, but harming someone triggers anger. In addition, Russell and Sorolla (2011) proposed that moral anger includes more complex moral reasoning than disgust. Anger may disappear when a violation is processed without any intention. Hutcherson and Gross (2011) assume that threats may be followed by anger and approach behaviour, but violations of purity and incompetence may be followed by disgust and avoidance behaviour. In the light of this evidence, Avromova and Inbar (2012) induce that moral violations can co-exist with

emotions, but they are not necessarily the cause or motivation for moral judgments. Instead, they are inclined to explain the relationship between emotion and moral judgment as one of sources or predictors of morality.

Furthermore, Chapman and Anderson (2012) assume that emotions change and create moral judgments. This claim is mostly viable for moral dilemmas such as helping a group of people in danger instead of helping one person or violating moral norms at the same time (Greene-Cushman et al., 2009). The trolley problem is about sacrificing a person on the railway in the name of saving five people (Greene-Cushman et al., 2009). In this problem, anger changes the course of moral judgments. It is a dilemma that leads to judgment of individuals' moral actions, which can cause the death of a person. In this dilemma, the medial frontal gyrus and posterior cingulate gyrus are activated when the answer to this dilemma is sacrificing one person (Greene-Cushman et al., 2009). In addition, the brain scans of people who have decided to save five people instead of one show physiological stress. Conditions that include moral transgressions force people to make decisions about moral issues and evoke disgust as a result of the decision (Chapman & Anderson, 2012). On the other hand, in the trolley problem, people who watch amusing film clips perceive one person's death as a reasonable trade for the sake of five people's safety (Greene-Cushman et al., 2009). In addition, emotions influence moral transgressions positively (Chapman & Anderson, 2012). Disgusting stimuli, all of which evoke disgust, induce tough moral judgments when the violations occur (Avromava & Inbar, 2013).

Moreover, Inbar, Pizarro and Bloom (2009) assumed that conservatives are more inclined to disgust, which affects their moral judgment harshly. In addition, Inbar, Pizarro, Konobe and Bloom (2009) showed that both liberals and conservatives show disgust against homosexuals. This evidence proves that disgust increases the strength of moral judgments.

Another claim made is that emotions moralize issues that may not belong to the moral domain (Avramova & Inbar, 2013). Wheatley and Haidt (2005) conducted a study that was supposed to give an illusion of disgust. They exposed participants to words to make them

feel disgusted. Then, they gave some vignettes. There were stories about moral issues inside them. Those vignettes included words that were associated with disgust. Disgust-inducing words affected participants' judgments about moral violations. Participants in the hypnotized group made harsher moral judgments about moral violations (Wheatley & Haidt, 2005). Words that elicit disgust are also effective even when the vignettes are not about moral violations. According to the social intuitionist model, Wheatley and Haidt (2005) proposed that people's decisions on moral issues are influenced by the disgusting stimuli. In regard to emotions, Nichols (2002) assumed that moral judgments depend on two connected systems. One of them is "a system of rules (norms) prohibiting certain actions" and the other is an "independent affective mechanism that is activated by witnessing suffering in others" (as cited in Amrova & Invar, 2013). In general, emotions change a person's opinion about an issue and direct him/her to decide wrongness or rightness of a moral issue.

### **1.3.1. Disgust As a Moral Emotion and Its Origin**

Disgust is a basic evolutionary adapted emotion that is triggered by feces, dead bodies, and sexual fluids (as they may carry disease-induced pathogens) (Rozin & Fallen, 1987; Tybur, Lieberman, & Griskevicius, 2009; Tybur, Lieberman, Kurzban, & DeScioli, 2013). Prototypical disgust is an affect against bitter foods that include toxic ingredients (Chapman & Anderson, 2012). When an organism feels disgust a spitter follows, which helps to remove toxins from the body. This is a defense system that prevents organisms from ingesting poisonous food. According to Chapman and Anderson (2012), disgust is a defense that protects plants from predators. This protection is a means of survival for both plants and predators. It is difficult to detect diseases and avoid being infected by bacteria and viruses. That's why eleven forms of disgust prevent species from getting infected (Chapman & Anderson, 2012). Thus, diseases are easily detectable from their odours, and from tactile and visual cues. Disgust is also similar to distaste, which is aroused when intoxicated foods are available. Compared to distaste, disgust is a more developed mechanism that easily detects diseases. Although distaste is similar to disgust in terms of

oral rejection, disgust is explained as a defense to avoid being contaminated. Furthermore, there are multiple disgusting objects, behaviours, beliefs, and attitudes that people developed.

Haidt, McCauley and Rozin (1994) evaluated a model that explains other types of disgust behaviours in addition to pathogen disgust. They named pathogen-based disgust as a core disgust against poisonous foods and helps people to differentiate themselves from animals. In animal reminder disgust, human beings are denying their animal characteristics, which are sex, death, body envelope, and bodily violations (Haidt et al., 1994). Furthermore, interpersonal disgust and moral disgust are other types of disgust. Interpersonal disgust is incited by others or enemies, while moral disgust is aroused by the breaking of social rules. Chapman and Anderson (2012) proposed that interpersonal disgust can also prevent from diseased surface or organisms. In addition, interpersonal disgust is connected to mate selection and helps show whether mate fits to the subject. Body envelope violations are also similar to sexual disgust because they spread diseases by blood and injury contact (Chapman & Anderson, 2012). However, Haidt et al. (1994) termed sexual disgust “animal reminder disgust” which reminds humans of their connection to animals. Tybur et al. (2013) evaluated different types of disgust that evolved into new evolutionary functions. They purported three domains for disgust: pathogen disgust, sexual disgust, and moral disgust.

First of all, pathogen disgust is the main defense mechanism for humans, which protects them from fatal illnesses (Tybur et al., 2013). It was also named core disgust by Rozin, Lowery, & Ebert (1994). However, Tybur et al. (2013) named this kind of disgust pathogen disgust. Pathogen disgust can be evoked by disgust-inducing materials such as feces, corpses, rotten food, and blood. Touching, seeing, or sensing those kinds of objects causes disgust sensitivity, which leads to avoidant behaviours to prevent getting infected.

Secondly, Tybur et al. (2009; 2013) proposed that sexual disgust is provoked when human beings select inappropriate sexual partners for themselves. Pathogen disgust also includes

sexual disgust, which adds the damage of social threats during and after sexual activities. It is also important for mating selection, which means reproduction. Thus, the selection of a weak sexual partner for reproduction evokes disgust that causes avoidance behaviour.

Lastly, either pathogen disgust or sexual disgust can be adapted toward moral disgust (Tybur et al., 2013). In some cultures, incest, masturbation, pedophilia, and homosexuality may be seen as morally wrong. This incites moral disgust. Moral disgust is related to the dimension of purity/sanctity (Haidt, 2001). Moral rules have to be adaptive to the society. When rules are broken, punishment is inevitable (Tybur et al., 2013). However, human beings are also inclined to develop disgust when resisting a rule that may cause more costs than benefit. As such, human beings feel disgust when they are faced with prohibition, which is what keeps the society together, as a natural course of rules. Possessing pathogen and sexual disgust affects moral decision-making which gives way to secondary processes called moral disgust (Tybur et al., 2013).

Moral disgust is a signal that moral rules are broken (Tybur et al., 2013). It gives a chance to compromise between two opposite sides when those two groups are in conflict. Moral disgust is also detectable for all cultures that give a sign of caution (Haidt, Rozin, McCauley, & Imada, 1997; Tybur et al., 2013). Those signals can easily be detected from the facial expressions so that the opposite side can understand the cost of the immoral action. Furthermore, moral disgust gives an opportunity to choose one's side. In addition, it is an alarm for the requirement of punishment (Tybur et al., 2013). In case of punishment, disgust is not only a source for the avoidance behaviour, it also gives a licence to punish morally wrong behaviour (Tybur et al., 2013). When deciding to punish someone, it is helpful to decide whether his or her action was morally wrong. Furthermore, disgust stimulates behaviours that are caused by sexual disgust induced and pathogen disgust induced organisms without blocking their survival (Tybur et al., 2013). Authorities can use moral disgust to ensure punishment and consensus across groups that an action is morally wrong (Haidt, 2001). Anderson and Chapman (2012) mentioned that moral disgust develops only in human species because of social norm violations. It is a benefit provided

strategy that leads to withdrawal and avoidance.

There are differences between types of disgust for reactions and neural circuits (Chapman & Anderson, 2012). While core disgust happens after nausea and stomach contractions, blood and injury disgust is associated with light-headedness and fainting. Furthermore, those two kinds of disgust are related to different psychological disorders. While core disgust is related to obsessive and compulsive disorder, blood and injury disgust is brought by blood and injection injury phobia (Chapman & Anderson, 2012). In addition to those features, some specific disgust behaviours and types are not as various as they are in other species. Eating habits are the reason for different reactions. In addition, species that have a rich social life are more prone to diseases. That way, different types of disgust and behaviours are developed in those species (Chapman & Anderson, 2012).

Facial expressions of disgust are as follows: wrinkling nose, raising upper lip, lowering brows, and gaping mouth (Rozin, Lowery, & Ebert 1994; Chapman & Anderson, 2012; Tybur et al., 2013). The function of wrinkling the nose and raising the upper lip is to decrease air exposure. Lowering brows is a protection for eyes against contaminated agents. Gaping mouth means that an agent who has been exposed to contaminated organisms is ready to vomit or spit. Those expressions are basic ones that are intrinsically available for human species. According to Anderson and Chapman (2012), facial disgust expressions are related to the anterior insula in the brain. In their study, they argue that the very same area in the brain is activated whether a person sees a facial disgust expression or they actually experienced disgust. This was supported by more research that Anderson and Chapman (2012) conducted. Participants smelled disgusting odours and watched videos of people tasting disgusting meals. Anderson and Chapman (2012) found that the anterior insula was activated when disgust occurs. Rozin et al. (1994) predicted that different disgust elicitors like oral, olfactory, and visual elicitors, would cause different facial expressions. They also predicted that upper lip retraction is induced by moral disgust in relation to anger, which is one of the central moral emotions. In another experiment, participants completed questionnaires according to pictures of faces (Rozin et al., 1994).

When different elicitors are exposed to participants, disgust faces change in relationship to the disgust elicitors. The bitter taste gape is related to distasteful, disgusting stimuli. The same face with nose wrinkled shows the ingestion of undesirable stimuli. In nature, the nose wrinkle is evidence for contaminated olfactory stimuli. In the next study, Rozin et al. (1994) used nose wrinkle, mouth gaping with tongue extension, and upper lip rise separately. The result is the same as before: the nose wrinkle is connected to bad smell, the mouth gape is connected to an irritating taste, and the upper lip retraction is connected to moral disgust.

Disgust requires a very complex way of understanding the nature of object and self (Rozin & Fallen, 1987). According to Rozin and Fallen (1987), first-born children cannot have the emotion of disgust. They proved that infants are amused by playing with their feces if they are not prevented from doing so. In the research children who were younger than two years old took all objects into their mouths even if the objects were disgusting. The development of disgust in children begins from the age of four until they reach twelve. Rozin and Fallen (1987) evaluated that children who drank their favourite drinks with contaminants included gave disgusted responses. On the other hand, children under the age of seven drank the drinks after the contaminants were removed with a spoon. Distaste is a reason for infants to reject food, which determines the level of disgust.

For children primary disgust learning begins between the ages of three to six with toilet training. They have to learn that feces are disgusting despite often finding them adorable (Rozin & Fallen, 1987). Thus, parents' disgust sensitivity affects toilet training, so does disgust training. In addition, it changes from culture to culture. Secondary disgust learning in reverse is related to generalization. Similar objects cause similar reactions. It is learned through Pavlovian conditioning in which disgusted stimuli are learned and transmitted to neutral stimuli (Rozin & Fallen, 1987). Danovitch and Bloom (2009) also includes the idea of disgust as a developmental stage and learned emotion against disgusting stimuli. According to Danovitch and Bloom (2009) infants can recognize disgust from the facial expressions of adults. In addition, children around the age of two or three show disgust



toward feces, foods, and contaminated objects.

Disgust also appears when food or an object is in contact with a contaminated object or resembles one in some way (Rozin & Fallen, 1987). This contamination works with laws of sympathetic magic, which include contagion and similarity. Once the object comes into contact with a disgusting one, it is perceived that contamination spreads all over the object. The other law is similarity. Neutral objects similar to contaminated ones are considered contaminated. Some contaminated objects or neutral objects resembling contaminated ones cannot be seen in a negative manner. For instance, wearing a loved one's clothes (Rozin & Fallen, 1987). Another example is the idea that meals taste better if the cook is one's grandma.

### **1.3.2. Disgust as A Moral Emotion**

When disgust has moral functions, it is processed differently than physical functions of disgust. Violations and unfairness are directed to the disgust system that causes signals in the body system (Rozin, Haidt, & Fincher, 2009). According to Rozin et al. (2009), core disgust and moral disgust, which are related to oral rejection, share similar mechanisms in the body. According to Olatunji and Sawchuk (2005), disgust is aroused when socio-moral situations are violated. Disgust polarizes moral context even if it was once neutral. It is a moralization process that projects its effects over political and social attitudes, rules, and behaviours. For instance, while cigarette smoking is seen as a personal choice, today it is considered to be an immoral behaviour that contaminates one's purity (Olatunji & Sawchuk, 2005). This moralization process made cigarette smoking into a prohibited act in some places. Another example of moralization is vegans (Olatunji & Sawchuk, 2005). Vegans consider consuming meat and any sort of animal products disgusting immoral behaviour that causes harm to animals. The relation between disgust and homophobia is another way of moralization (Haidt & Hersh, 2006). It triggers violation of sexuality, sacredness, and purity among social and religious beliefs. Horberg, Oveis, Keltner and Cohen (2009) assumed that disgust is also associated with religious activities. According to

this view, being pure and clean is important to deserve God's mercy. In some cultures, nicknaming someone with animal names to humiliate and describe their low natures is a common example (Haidt et al., 1997). Those moralizations constitute some rules to protect human purity and are called taboos. In some cultures polygamous sexual interaction, unrestricted animal meats, and gender reassignment are considered disgusting and taboo-breaking (Haidt et al., 1997). The body is seen as the temple of soul that cannot be contaminated. In that sense, disgust is a defense mechanism that protects body and soul. Human beings also do not want to see themselves as animals because they are mortal like animals (Haidt et al., 1997).

### **1.3.3. Disgust, Disgust Sensitivity, Moral Transgressions and Purity**

Last research developments show the influence of emotions over moral judgments (Greene & Haidt, 2002; Haidt, 2001; Haidt et al., 1997). Haidt et al. (1997) argue that moral emotions increase the intensity of moral judgments. According to Horberg, Oveis, Keltner and Cohen (2009), emotions transform moral decisions and increase the level of rightness or wrongness of judgments in relation to moral appraisals. For instance, disgust makes a judgment more moral when an action is judged as pure or not. Horberg et al. (2009) assume that disgust becomes moral if the judgment is pure. This is how moral judgement of meat consumption, smoking, and sexually deviant acts occurs.

In their research, Horberg et al. (2009) assigned two vignettes to participants one of which was about purity violation, the other one was about justice violation. Then, they asked participants to decide which violation evoked disgust and which evoked anger. The results showed that disgust intensifies moral judgments, especially the ones on purity violations. However, morally intense judgments on justice violations evoke anger. Horberg et al. (2009) also found that people who have low SES show more intensive disgust reactions against purity violations. In addition, they found that disgust can moralize positive moral judgments related to purity. Furthermore, they used a disgusting video clip and sad video clip that manipulated participants into feeling disgusted. Horberg et al. (2009) found that

disgust moralizes positive judgments on purity issues compared to sadness.

Furthermore, Schnall, Haidt, Clore and Jordan (2008) examined whether eliciting disgust from participants affects moral judgments. They used a bad smell to make participants feel disgusted, and then they showed seven vignettes that included first cousin marriage, approval of sex between cousins, driving to work, and film clips. According to the results, extraneous influences of disgust influence moral judgments and make the judgements more severe.

Wheatley and Haidt (2005) examined disgust's role in evaluating moral transgressions in a hypnotic condition. Participants were hypnotized to feel disgusted. At the same time, neutral words were read to them so that they would feel disgusted when they heard the words. After waking up, participants were given vignettes which consisted of moral transgressions and hypnotizing words. Then, participants were offered cookies at dinner. Wheatley and Haidt (2005) expected that participants would lose their appetite. They found that participants who were hypnotized with disgusting words showed more disgust toward transgressions. Participants also found moral transgressions worse compared to control groups. This experiment was repeated with a new vignette that did not include moral transgressions. Wheatley and Haidt (2005) found that even if the story was not about moral transgression, participants gave biased judgements.

Moreover, Cannon, Schnall and White assert that (2011) disgust induced by moral violations provokes facial expressions, which are considered muscle activities. Physical and moral contamination elicits disgust, which is recognized in levator muscles in the face (Cannon et al., 2011). In addition, violations of purity and fairness elicit disgust, which triggers the same muscle activities. However, violations of care elicit anger (Cannon et al., 2011). In addition, Cannon et al. (2011) assumed that violations against authority and loyalty evoke disgust and anger at the same time. According to their studies, both intentional and unintentional responses are affective in nature. At the end, findings supported the roles of emotions and reason over morality (Cannon et al., 2011).

Furthermore, Cannon et al. (2011) showed that facial expressions are signals to understand intuitive characteristics of moral judgments.

### **1.3.3.1. Disgust Sensitivity and Influences On The Moral Domain**

People who are highly sensitive feel more disgusted by moral violations (Schnall, Haidt, Clore, & Jordan, 2008). David and Olatunji (2011) assumed that those who have higher disgust sensitivity make harsher judgments against moral transgressions. Furthermore, Schnall et al. (2008) assumed that people who have higher disgust sensitivity are more easily affected by disgust. Having higher disgust sensitivity is the bridge that connects the disgust and moral judgments. Schnall et al. (2008) designed an experiment in which people were assigned to two separate settings. One of settings included disgusting materials and the other one included neutral materials. Schnall et al. (2008) assumed that disgusting settings would be more effective on participants who have high disgust sensitivity. At the end of the experiment, they found that participants who were more sensitive to bodily sensations were more affected by disgust and made harsher moral judgments. In addition, they found that participants gave harsher decisions no matter how disgusting the moral violations were. In another experiment, Schnall et al. (2008) examined whether harsh moral judgments are related to negative emotions in general. In other words, they wanted to prove that moral decisions are not specific to disgust. They used two film clips, one of which elicited sadness, the other disgust. They found that disgust is more effective than sadness when moral decisions are made.

Furthermore, Jones and Fitness (2008) asserted that individuals who are more sensitive to disgust show more vigilance toward situations regardless of their being morally threatening. In addition, Jones and Fitness assumed (2008) that individuals who have disgust sensitivity have strict moral attitudes, obey law and order more, and want to sterilize their communities from immoral things. Supporters of right wing authoritarianism show great disgust sensitivity against moral violations (Jones & Fitness, 2008). They are bounded to authority and tradition. They feel anger towards people who try to change law

and order. In other words, people who have higher disgust sensitivity showed some emotional, cognitive, and behavioural inclinations called disgust hypervigilance.

Jones and Fitness (2008) tried to prove their assumptions about the correlation between disgust and moral transgressions. They examined moral hypervigilance through a fake court trial. People read a vignette about a trial that involved murder. After reading the vignette, they were asked to give ultimate decisions about the trial and the suspect. Participants who had high disgust sensitivity found the suspect guilty. They also proved that participants who had higher trait anger were inclined to blame the offender and were aggressive against the offender. They voted for the suspect to be convicted to punishment. In addition, right wing authoritarianism was found to be correlated with disgust sensitivity (Jones & Fitness, 2008). Furthermore, Jones and Fitness (2008) aimed to find the relationship between the strict moral attitudes of hypervigilant people and disgust sensitivity. To detect this, they gave participants the Reasonable Doubt Scale to complete, which examines decisions' certainty about biased judgments. Evidence showed that participants who had tendency to experience disgust sensitivity gave biased convictions. On the other hand, anger was not associated with the decisions that people made in court. In other words, disgust sensitivity is a more effective negative emotion that influences moral judgments. They also found that participants who had high disgust sensitivity are more eager to find evidence for the crime. In other words, people who have higher disgust sensitivity show less doubt reasonability to find evidence for the crime. Besides, participants who had higher disgust sensitivity tend to be right wing authoritarians.

In another study, Jones and Fitness (2008) expected to find that disgust sensitivity is an effective trait that makes an offender into a criminal by manipulating the participants' thoughts. They assumed that people who have higher disgust sensitivity must also show threat sensitivity (which means they are much more sensitive to threats). Those people are expected to perceive criminals as an evil in the society. They are in favour of long term and harsh punishments to criminals because of the probability of danger. Crime-related vignettes about burglary, fraud, hypocrites, and sexual abuse (except death reminder

crimes) were shown to participants to examine disgust sensitivity (without animal reminder disgust) (Jones & Fitness, 2008). In the study, they concluded that participants who had higher disgust sensitivity gave harsher convictions whether the case was about murder or not. In addition, they found that participants who showed high disgust sensitivity described the criminals with negative attributions and voted for longer punishments. Lastly, there was no correlation found between disgust sensitivity and political ideology. The reason for that is either the Australian community's secular attitudes or ineffective disgust stimuli.

#### **1.3.4. Disgust in The Political Domain, Religiosity and Outgroup Prejudice as Part of Purity**

Disgust leads individuals to make harsher judgments when moral transgressions occur (Inbar, Pizarro, Iyer, & Haidt, 2012; Inbar & Pizarro, 2014). Disgust also motivates individuals to give biased decisions about some groups of people. In addition, it motivates people to support political groups that defend purity-related morals (Inbar et al., 2012; Inbar & Pizarro, 2014). According to the conservative view, disgust prevents people from contamination (Inbar et al., 2012; Inbar & Pizarro, 2014). Disgust is also a moral signal when cooperation between people is broken. Therefore, it is motivated by avoidance and rejection. According to Inbar et al. (2012), disgust works as a behavioural immune system that allows a person to prevent interaction with others who may be contaminated or carry diseases. In other words, a person who is different in appearance can be detected as a threat signal that might deploy a disease. In addition, people who have some abnormal food habits and sex habits might be perceived as disgusting and contaminated (Navarrete & Fessler, 2006). Navarrete and Fessler (2006) asserted that a person who gives off disgusting signals is avoided because they are perceived as threatening. It is especially viable for disabled and obese people, traits that are associated with disease. Even if they do not have any pathogen-related diseases, threatening signals might elicit disgust and refusal. This intuitive way of thinking is also similar to avoidance of foreigners and gay men (Navarrete & Fessler, 2006). According to Navarrete and Fessler (2006), unknown and threatening situations are inclined to cause disgust and rejection.

In addition, Helzer and Pizarro (2011) aimed to prove a relationship between political conservatism and purity in disgusting scenarios. In the first situation, they used a hand sanitizer dispenser, whereas in the second situation they did not use a hand sanitizer dispenser. People were asked to fill out questionnaires in the hand sanitizer room and an empty room separated from each other. At the end of the experiment, Helzer and Pizarro (2011) found that participants who were in the hand sanitizer room were affected by this purity reminder. Their moral judgments were harsher than participants in the empty room as well. In another experiment, they proposed to predict relationship between purity and participants' political orientations in scenarios that included sexual violations. In this experiment, participants were required to use hand wipes before filling out questionnaires. Then they were asked to rate moral behaviours. Some of the moral domains in this experiment were related to sexuality, whereas some of them are not. They found that in the hand cleaning condition, participants made tougher judgments toward sexual acts compared to the non-cleaning condition. Furthermore, people in the hand-cleaning condition leaned more toward conservative political orientation. So, it affected their judgments harshly. Otherwise, those harsh moral judgments were detected only in sexual violations.

Moreover, Inbar, Pizarro, Iyer, and Haidt (2012) examined the relationship between voting behaviours and disgust sensitivity. They gave a set of measures to participants, which included political self-identification and a disgust scale. In addition, Inbar et al. (2012) asked which president they wanted to vote for in the next election. In the result, they detected that disgust sensitivity is an indicator for conservative political choices. Contamination disgust most often affected conservative attitudes. The vote preferences were McCain over Obama for participants who had higher disgust sensitivity. This study was repeated with participants who were not from US. The same relation between disgust sensitivity and conservatism was found cross-culturally.

Same-sex marriage, sex education, and abortion in the political domain are discussed among studies (Feinberg, Antonenko, Willer, Horberg, & John, 2014; Olatunji, 2008). It is

assumed that conservatives are more inclined to reject those issues than liberals (Feinberg et al., 2014; Olatunji, 2008). Feinberg et al. (2014) aimed to prove that disgust sensitivity, which is higher among conservatives, increases conflicts about sexual issues. In addition, reappraisal is a way of rethinking before making a decision about an issue, and is assumed to be more frequent in liberals (Feinberg, et al., 2014). In other words, liberals are not affected by disgust much while discussing about sexual issues, because they reappraise their emotions. Feinberg et al. (2014) tried to find a relationship between disgust appraisals and political ideology. They found that disgust reappraisal had negative relationship with conservatism. In addition, compared to conservatives, liberals used reappraisals more often, which made them more tolerant about sexual issues.

Furthermore, Feinberg et al. (2014) tried to find more evidences about disgust reappraisal tendency between political ideologies. They showed disgust-eliciting vignettes to participants. The first vignette was about siblings having sex who took precautions to avoid pregnancy. Second vignette was about a man who buys a dead chicken to have sex with before he eats it. At the end of the experiment, they showed that liberals used complex moral reasoning processes and disgust reappraisals. Thus, they approached purity violations tolerantly. Feinberg et al. (2014) also examined the effects of disgust reappraisals and their role on the attitudes of conservatives. After they showed a video clip in which two men were kissing each other, they asked to participants what they are thinking about same sex marriage. They found that conservatives approached same-sex marriage positively when they were educated to reappraise their emotions, whereas other conservative groups who did not reappraise their emotions were disgusted by the violations.

Moreover, washing away sins is a defence mechanism that is mentioned among religious beliefs when an individual does something morally wrong (Zhong & Liljenquist, 2006). According to Zhong and Liljenquist (2006), symbolic cleaning in rituals provides cleaning for conscience. Islam, Christianity, and Hinduism are some religions that practice rituals to wash away sins. In addition, similar to washing away sins, disgust elicits defenses both



psychologically and physiologically (Zhong & Liljenquist, 2006). According to this defensive process, psychological and physiological cleaning are activated in the same regions of the brain. They also manifest similar facial expressions. Zhong and Liljenquist (2006) assumed that immoral acts trigger a need for physical cleansing. They used clean-related fragmented words and other fragmented words at the same form, in their study. Participants could fill the fragments either cleaning words or other words that were not related to cleaning. Vignettes that included moral violations triggered clean-related words more, whereas vignettes that were not related to morals did not trigger clean-related words.

Furthermore, Nussbaum (2001) assumed that disgust is directed against outgroup members who are defined as dangerous or deviant (as cited in Inbar, Pizarro, Konobe, & Bloom, 2009). Disgust is mostly elicited by homosexuals (Inbar et al., 2009). Inbar et al. assumed (2009) that people who are inclined to have the trait of disgust sensitivity make more negative judgments about gay people. Inbar et al. (2009) examined the judgments of liberal college students about homosexual individuals. Normally, they are supposed to have positive views toward gay men. Inbar et al. (2009) assumed that liberal college students might have negative views against gay individuals intuitively. Inbar et al. (2009) tried to find that participants who had higher disgust sensitivity were implicitly against gay public kissing. This gay public kissing was included in a vignette about a music director. This music director makes a clip that encourages gay couples' kissing in a public place. In the experiment, women were found to be more disgust sensitive than men. At the end, participants who had higher disgust sensitivity found the directors' behaviour more intentional which could encourage gay public kissing. In other words, implicit disapproval of gays or behaviours appears unintentionally. They also repeated the same experiment with "The Implicit Association Test." The second experiment had the same results, as disgust sensitivity elicited implicit negative moral judgments against gay men.

Outgroup members are perceived as threat signals by ingroup members in case they have possibility of contagious diseases (Navarrete & Fessler, 2006). According to Navarrete and Fessler (2006), foreigners are marginalized because they are perceived to carry

diseases that evoke disgust. For instance, ingroup members perceive immigrants as disease transmitters, which activate avoidance. The first trimester of pregnancy is a vulnerable time that pregnant women should be protected from pathogen agents (Navarrete, Fessler & Eng, 2007). In the first phase of pregnancy, disgust is evoked in order to be away from food-related diseases. Furthermore, in the first phase of the pregnancy, pregnant women can detect healthy individuals from unhealthy ones. Navarrete et al. (2007) studied women in the first trimester of their pregnancy and found that they showed more negativity towards outgroup members. They gave two essays to pregnant women, one of which was written about American values by a foreigner. The other essay is written by an American author who appreciates American values. They asked to participants which essay they liked most. Attraction toward the American author was high and disgust with the foreign author was evoked in the first trimester of pregnancy.

Related to law of contagion, Fincher and Thornhill (2012) associate strong family ties and religion with parasite stress. Human immune systems have evolved against parasites that carry infectious diseases. This evolution develops parasite stress against all threatening unknown organisms. Parasite stress does not only develop against parasites but also against foreigners. Fincher and Thornhill (2012) assumed that parasite stress might establish strong family ties, which are cultivated in collectivism. Collectivism and strong family ties are like defense mechanisms that rely on avoidance of outgroup members. Religion and religiosity also bind people together in which people have benefits from religion as social support and altruistic behaviours. According to stress parasite model, religiosity fixes and tightens the relationship between group members. Fincher and Thornhill (2012) assumed that people in regions who have high parasite stress are inclined to be more religious and have strong family ties. In their studies, they found that more religious participants and participants who had more strong family ties had lived in the countries where infectious diseases were present. Leeuwen, Park, Koenig, and Graham (2012) assumed that where infectious diseases are prevalent, loyalty, authority, and purity foundations are dominant. Related to those foundations, collectivism and conformity are higher in those places. Leeuwen et al. (2012) examined 160 countries and some geographical regions where

epidemic diseases are prevalent. In result, they found a relation between binding moral foundations and the parasite stress model.

#### **1.4. Disgust and Relational Basis of Neuroticism**

Disgust and neuroticism are related to each other. Researchers tried to prove a relationship between neuroticism and disgust sensitivity (Henning, Pösse, & Netter, 1996). Henning et al., (1996) conducted an experiment in which participants were manipulated to be disgusted with movie scenes. Otherwise, they did not find any support for the relationship between neuroticism and disgust. However, in their study some hormone secretions showed that there might be a relationship between disgust sensitivity and neuroticism. Secretory immunoglobulin declined in neurotic groups compared with control groups while participants were watching disgusting scenes (Henning et al., 1996). Henning et al. (1996) found that neuroticism can affect adapting recovery systems, which is expressed by reduction of secretory immunoglobulin.

Furthermore, attachments and disgust sensitivity are also related to the basis of neuroticism. In other words, anxiety and avoidant attachments determine the relationship between neuroticism and disgust sensitivity (Koleva, Selterman, Iyer, Ditto, & Graham, 2009). Koleva et al. assumed (2009) that people who express avoidant attachment in their relationships show more negative attitudes toward people. They find people untrustworthy and have low empathic relationships. Nevertheless, they assumed anxiously attached people would have higher empathic concerns and fairness expectations. They show more disgust toward moral violations than other people, so higher disgust sensitivity predicts harsher moral judgments. Koleva et al. (2009) examined that authority and ingroup concerns predict avoidant and anxiety attachment connected to disgust sensitivity. In addition, they predicted that anxiously attached people compared to avoidant ones have higher moral concerns around fairness and purity (related to their disgust sensitivity). The results showed that avoidance predicted weaker moral concern for harm and fairness, whereas high anxiety attachment predicted harsher moral concerns on fairness, harm, and

purity mediated by empathy and disgust sensitivity.

Anxiety disorders like spider phobia, contamination related obsessive-compulsive disorder, and blood injury phobia include some basic emotions such as fear, anxiety, and disgust (Cisler, Olatunji, & Lohr, 2009). Firstly, Cisler et al. (2009) explained discriminant characteristics of those emotions that take part in different anxiety disorders. First of all, Cisler et al. (2009) mentioned that the decline in heart rate is an expression of disgust, whereas increase in heart rate is an expression of fear. In addition, neural activation in brain regions for fear and disgust are different. While disgusting stimuli activates the anterior insula, fear activates the amygdala in the human brain. In facial expressions, Cisler et al. (2009) found that disgust evokes levator labii, which is a muscle on the face, expressed as raising of the upper lip. Furthermore, cognitive appraisals also change when either disgust or fear is evoked. Cognitive appraisal of disgust is the threat of contamination, whereas appraisal of fear is the threat of danger (Cisler, Olatunji, & Lohr, 2009). According to Woody and Teachman (2000), disgust and fear appraisals for anxiety disorders are either primary or secondary appraisals. Primary appraisals of disgust are about disgusting objects and related to how much disgust the object elicits (Woody & Teachman, 2000). Secondary appraisals of disgust are similar to fear, providing coping mechanisms that protect the individual from contamination.

In their studies, Cisler et al. (2009) found that spider-phobic participants expressed a stimulation of the levator labii muscle, which presented the disgust-related element of the phobia. In addition, Cisler et al. (2009) found an increase in heart rate among spider-phobic individuals who showed elements of fear among this group. Furthermore, neural activities expressed the presence of both disgust and fear among participants with spider phobia. Both fear and disgust were detected; both the amygdala and the insula showed activation. Otherwise, amygdala activation was more automatic than insula activation, which might be explained by fear having a main role in spider phobia. Furthermore, Cisler et al. (2009) showed that participants with spider phobia developed disgust toward neutral stimuli after seeing a spider. According to Cisler et al. (2009), spider phobia could be affected by the

law of contagion.

Woody and Teachman (2000) detected in their studies that participants with blood injection injury phobia showed more disgust toward phobic-related stimuli than non-phobic participants. In addition, fear and disgust were detected among participants with blood injection injury phobia, evidenced by both increase and decrease in heart rates. Otherwise, neural mechanisms showed high activation in the amygdala, which is the region activated when an individual experiences fear. Participants reported disgust and fear mutually in case of expectation for blood and injury related stimuli.

Neural studies showed that disgust is the dominant emotional response among participants with contamination-related OCD (Woody & Teachman, 2000). Only insula activations were found in most studies, but some studies showed activation of both the insula and the amygdala when contaminated stimuli appeared (Woody & Teachman, 2000). Furthermore, participants with contamination fear addressed the law of contagion in their appraisals (Woody & Teachman, 2000).

#### **1.4.1. Relationship Between Disgust and Obsessive-Compulsive Disorder**

OCD is an anxiety disorder that is a course of complaining, intrusive thoughts and irrational urges to do certain rituals (Sprengelmeyer-Young, et al., 1997). In DSM-V, in clinical setting, obsessions are defined as “intrusive and unwanted.” “Recurrent and persistent thoughts, urges or impulses” occur when individuals are distressed and when individuals try to suppress distress (American Psychiatric Association, 2013). In addition, compulsions are defined as “repetitive behaviours (hand washing, ordering, checking) or mental acts (praying, counting, repeating words silently).” They occur when an individual has obsessions or rules to reduce and neutralize stresses (American Psychiatric Association, 2013). In people with OCD, the frontoparietal lobe (which is related to disgust) is stimulated. In neurological studies, Sprengelmeyer-Young et al. (1997) proposed that OCD can be grounded in the dysfunction of brain regions that are related to

disgust. According to their assumptions, people with OCD also find it difficult to recognize facial expressions of disgust. Sprengelmeyer-Young et al. (1997) gave facial recognition tests to participants who had OCD and Gilles de la Tourette's syndrome. At the end of the face recognition tests, they found that recognition of disgusted facial expressions was distorted among participants with OCD and participants with Gilles de la Tourette's syndrome.

Furthermore, Berle and Phillips (2006) assumed that OCD is related to disgust for three reasons. First of all, cognitive appraisals of people with OCD involve contamination-related issues. Secondly, learning of disgust recognition is impaired (evidenced by difficulty interpreting facial expressions). Lastly, disgust and OCD are activated in similar brain regions. Berle and Phillips (2006) proposed that the dispositional trait of disgust sensitivity is related to OCD. In addition, obsessions and compulsions are defense mechanisms to neutralize threatening or disgusting stimuli (Berle & Phillips, 2006). Compulsions are kinds of avoidance behaviours, which are motivated by disgust. Those behaviours are supposed to protect organism from pathogens and microorganisms. Otherwise, symptoms can be stimulated by nonthreatening disgusting stimuli that are supposed to be threatening (Berle & Phillips, 2006). In those processes, the law of similarity is invoked when the neutral object similar to contaminated one also elicits disgust and motivates disgust-elicited avoidance behaviour. In addition, an irrational feeling about contagion is the origin of obsessions and compulsions. According to Berle and Phillips (2006), OCD is grounded on irrational beliefs about contagion and similarity. In addition, they assumed that people who have OCD might hardly recognize cues of disgusting stimuli or interpret cues irrationally. Neuroimaging studies showed that disgust activates the insula, which is also activated in OCD patients (Berle & Phillips, 2006).

In addition, Mancini, Gagnani, and D'Olimpio (2001) asserted that people with OCD are influenced by contamination and dirtiness. They proposed that disgust might be an essential emotion for OCD. According to Mancini et al. (2001), cleaning obsessions and compulsions may originate from disgust, whereas checking obsessions and compulsions

may originate from anxiety. In their study, they aimed to find the relationship between disgust and obsessive-compulsive symptoms controlled by anxiety and fear. They asked participants to fill out questionnaires that measured OCD, disgust, anxiety, and fear. At the end of the study, Mancini et al. (2001) proved that participants who had nonclinical obsessions and compulsions showed disgust reactions when anxiety and fear were controlled. Furthermore, Thorpe, Patel, and Simonds (2003) assumed that disgust sensitivity predicts obsessions and compulsions especially in cleaning compulsions. They found that disgust sensitivity predicted obsessions, contamination fears, fear of death, health anxiety, and general anxiety. Where cleaning compulsions were present, health anxiety had primary role. Thus, disgust sensitivity had a secondary role in cleaning compulsions.

People with OCD are persistently afraid of being contaminated by infections (Olatunji Sawchuk, Lohr, & Jong, 2004; Deacon & Olatunji, 2007). Olatunji et al. (2004) aimed to find a relationship between contamination-contagion fear and disgust sensitivity. They found evidence that hygiene domains, the law of magic, food related contaminations, death, odours, injections, mutilations, and animal concerns are mostly related to disgust. In addition, Olatunji, Haidt, McKayc, and David, (2008) found that core disgust, animal reminder disgust, and contamination disgust are all related to neuroticism, low self-esteem, and behavioural inhibition. Core disgust is especially related to avoidance. In addition, Olatunji et al. (2008) examined the effects of disgusting scenes on people with OCD. The results showed that core and contamination disgust activated behaviours of avoidance. In addition, different disgust domains evoked different physiological reactions (Olatunji, Ebesutani, Haidt, & Sawchuk, 2014). In their results, Olatunji et al. (2014) found that vomiting video reactions evoked core and contamination disgust. Scenes that included blood were related to animal reminder disgust. Furthermore, contamination disgust predicted contamination-related OCD and fear of animals. Besides, animal reminder disgust activated blood injury injection fear and fear of animals. They also examined gender differences of disgust. They found that females are more prone to be sensitive to disgust than males. Olatunji et al. (2014) added that all disgust domains are found to be

related to contamination based anxiety and avoidance behaviour. Animal reminder disgust is also related to anxiety. This is mostly explained by the avoidance of harm and fear of death.

Lastly, Thorpe et al. (2003) assumed that checking, doubting, orderliness, neutralizing, and washing compulsions are related to disgust sensitivity. According to Thorpe et al. (2003), those compulsions also provide protection from both physiological and moral contamination. In the study, Thorpe et al. (2003) examined disgust sensitivity and anxiety and their roles in religious obsessive compulsions. They found that there is a relationship between fear, disgust sensitivity, and religious obsessive compulsions related to purity and cleanliness. In addition, high moral standards related to obsessions were detected among religious people. Death issues among religious obsessions and compulsions were related to disgust. Contamination related disgust stimuli like sex and death were more relevant to those obsessions (Thorpe et al., 2003). Furthermore, Inozu, Ulukut, Ergun, and Alcolado (in press) found that an obsessive thinking style about moral purity is related to disgust sensitivity. Inozu et al. (in press) also found that disgust sensitivity affected washing and ordering symptoms in religious obsessive compulsions.

### **1.5. Study**

This study aims to investigate influences of disgust over moral foundations in a Turkish sample. Generally, it is assumed that disgust affects moral foundations, especially purity, loyalty, and authority foundations (binding foundations) (Haidt, 2001). According to Chapman and Anderson (2012), when disgust is elicited, people make harsher moral judgments. Wheatley and Haidt (2005) asserted that hypnotic effect of disgust changes moral decisions. Thus, the aim of this study is to find the effect of disgust over moral foundations. It is assumed that participants who are disgusted by manipulations prefer binding moral foundations (purity, loyalty, and authority) compared to non-disgusted groups.



In addition, there were limited numbers of studies that examined the effect of gender differences over moral foundations. Thus, in the current study, gender differences are investigated in relation to disgust sensitivity over moral foundations. Inbar et al. (2009) asserted that females are more inclined to be sensitive to disgust than males. In addition, Iyer (2010) assumed that empathy and universal constructs are indicative of female characteristics whereas males, especially conservative males, are inclined to have utilitarian ways of thinking that may explain their inclination for authority, loyalty, and sanctity.

Furthermore, moral foundations are related to conservative liberal politics (Haidt, Graham, & Joseph, 2009), religiosity, (Haidt et al., 1997) and disgust sensitivity (Schanall et al., 2008). Thus, the relationship between binding moral foundations and their predictors of disgust sensitivity, religiosity, conservative-liberal politics, obsessive compulsions, and gender are going to be addressed in this study. In addition, disgust sensitivity affects religiosity (Fincher & Thornhill, 2012), conservative liberal politics (Helzer & Pizarro, 2011) and obsessive compulsions (Berle & Phillips, 2006) in most ways. Thus this paper attempts to predict the relationship between disgust sensitivity and its predictors of religiosity, gender, conservative-liberal politics and obsessive compulsions. In other words, it is expected that religiosity, right-left political affiliations and obsessive-compulsive tendencies predict both disgust sensitivity and moral foundations.

### **Research Questions:**

- Are binding foundations more affected by disgust manipulation compared to individualizing foundations?
- Does gender affect nature of the relationship between disgust sensitivity and moral foundations?
- Are religiosity, conservative-liberal political differences, gender, experimental

group differences, obsessive-compulsive tendencies, and disgust sensitivity predictors of binding foundations?

- Are religiosity, conservative-liberal political differences, gender, experimental group differences, obsessive-compulsive tendencies, and disgust sensitivity predictors of individualizing foundations?
- Are religiosity, conservative-liberal political differences, gender, experimental group differences, obsessive-compulsive tendencies, and disgust sensitivity predictors of disgust sensitivity?

**Hypothesis and Expectations:**

- (1) If people are disgusted in a situation, they are inclined to make harsher moral decisions.
- (2) People make more binding-related moral decisions (compared to individualizing related moral decisions) when disgusted in a situation.
- (3) Females' scores over individualizing foundations will be higher than males' scores.
- (4) Males' scores over binding foundations will be higher than females' scores.
- (5) Compared to males' scores, females' scores over binding foundations will increase depending on disgust manipulation.
- (6) Religiosity, conservative-liberal political differences, experimental group differences, gender, and obsessive-compulsive tendencies will predict disgust sensitivity significantly.
- (7) Religiosity, disgust sensitivity, conservative-liberal political differences, gender, and

experimental group differences will predict binding foundations significantly.

- (8) Conservative-liberal political differences, gender, disgust sensitivity, and experimental group differences will predict individualizing foundations significantly.

## 2. METHOD

### 2.1. Participants

Participants were recruited from 255 Doğuş University (private university) students; 83 males (32.5 %) and 171 females (67.5 %). The mean age of the participants was 22.9 ( $SD = 3.22$ ), ranged between 19 and 25. The mean age of males was 23.08 ( $SD = 2.9$ ) and the mean age of females was 22.9 ( $SD = 3.36$ ). Most of the participants were belonging to middle and high middle economic status (SES); 125 participants middle, 104 high-middle, 12 high, 13 middle-low SES. Participants were randomly assigned to groups for the experimental design. 144 (56.9 %) out of 254 were assigned to the disgust group and 110 (43.1 %) of them to the neutral group (Table 2.1).

**Table 2.1. Distribution of gender according to experimental manipulation**

Gender	Groups of Manipulation		
	Disgusted	Nondisgusted	Total
Female	90	81	171
Male	54	29	83
<b>Total</b>	144	110	254

Most of the participants were Muslim (196; 76.9 %), 41 participants (16.1 %) reported that they believed in God but did not have any religion, 9 were atheist (3.5 %) and 9 (3.5 %) reported that they had other religions. The whole sample had a mean of 4.15 ( $SD = 1.72$ ) religiosity level (min. 1 - max. 7). Furthermore, political affiliation of the participants was reported as following: 64 Kemalist (25.2%), 29 Socialist (11.4%), 28 Nationalist (11%), 27 Apolitical (10.6%), 22 Conservative (8.7%), 21 Social Democrat (8.3%), 15 Liberal (5.9%), 15 Democrat (5.5 %), and 9 Turkish Nationalist (Ülkücü)(3.5%). Distribution of participants according to right-left politics is presented in Table 2.2.

**Table 2.2. Distribution of participants according to right left politics**

<b>Right left politics</b>	<b>Groups of Manipulation</b>		<b>Total</b>
	<b>Disgusted</b>	<b>Nondisgusted</b>	
<b>Extreme left</b>	19	15	34
<b>Middle</b>	108	81	189
<b>Extreme right</b>	13	8	21
<b>Total</b>	140	104	244

## 2.2 Materials

In the study, Looming of Disgust Questionnaire (Appendix A-Form A & Appendix B-Form B), Moral Foundations Questionnaire (Appendix B), Padua Inventory- Washington State University Revision (Appendix C), Disgust Scale (Appendix D), Contamination and Cognitions Scale (Appendix E), Obsessive Beliefs Scale (Appendix F), and Demographic Information Form (Appendix G) were used.

### 2.2.1 Looming of Disgust Questionnaire (LODQ)

Looming of Disgust Questionnaire (LODQ) was developed to examine cognitive biases related to disgust sensitivity and contamination-based disgust (Williams, Olatunji, Elwood, Connolly, & Lohr, 2006). The purpose of the measure is to find appraisals of disgust sensitivity. LODQ is constructed using the imagination of eight disgust scenarios, which consist of rotting food, potentially contaminated foods, body odours, death, envelope violations, vomit, and maggots. After imagining disgusting scenarios, participants answer six questions that are then scored using the 5-point Likert scale (0 = not at all to 5 = extremely). The final question evaluates capacity for coping with disgust scenarios. Similar items in each scenario are summed for total scores. Internal consistency for the scale had a range between .80 and .96 (William et al., 2006). The factors of the LODQ were constructed as secondary appraisal factor (coping) and four context-specific factors that

measure disgust sensitivity and contamination disgust (rotting foods and body odours, contaminated foods, death, envelope violations, and maggots). William et al., (2006) indicated satisfying convergent and discriminant validity for LODQ.

Uysal, İkikardeş, Gültekin, Yerlikaya, and Eremsoy (2013) translated LODQ from English to Turkish and evaluated its psychometric properties in a Turkish sample. The internal consistency ranged between .82 and .91 (Uysal et al., 2013). Convergent and discriminant validity results were also found to be satisfactory in the Turkish version.

LODQ was utilized for this study to manipulate participants and induce disgust them using disgust-related scenarios. At the same time, a neutral version of the LODQ was constructed for the control group in the current study. Eight disgust scenarios were changed to neutral ones (Appendix A - Form B). Besides, the internal consistencies of LODQ were found to range between .85 and .93 for Form A, and .85 and .94 for Form B.

### **2.2.2 Moral Foundations Questionnaire (MFQ)**

The Moral Foundations Questionnaire (MFQ) (Graham, Haidt, & Nosek, 2009) was developed to examine innate moral foundations and cultural differences of moral foundations. MFQ was constructed by 32 questions that are separated into two parts and scored using a 6-point scale (0 = never relevant to 6 = always relevant). The first part is about how relevant the foundation is for participants. Second part is about how much participants agree with the foundations (0 = totally disagree to 5 = totally agree). There are five factors that outline five different moral foundations: harm/care (1, 7, 12, 17, 23, 28), fairness/reciprocity (2, 8, 13, 18, 24, 29), ingroup/loyalty (3, 9, 14, 19, 25, 30), authority/respect (4, 10, 15, 20, 26, 31) and purity/sanctity (5, 11, 16, 21, 27, 32). The 6th and 22nd items are checks that were prepared for the participants who do not pay attention.

Graham et al. (2009) evaluated internal consistency of MFQ. The Cronbach alpha values were sequentially .65 (Harm), .61 (Fairness), .71 (Ingroup), .75 (Authority), and .84

(Purity). According to confirmatory factor analysis, the five-factor model supplied a reasonable fit for MFQ (Davies, Sibley & James, 2014).

Yılmaz (2014) translated Turkish version of the MFQ from English to Turkish. In Yılmaz (2014), internal consistency was higher for the two-factor model for moral foundations than the five-factor structure type. Besides, the two-factor model worked better in the factor analysis than the five-factor model. In the current study, the internal consistency of MFQ was .66 for harm/care, .64 for fairness/reciprocity, .65 for ingroup/loyalty, .81 for authority/respect, and .77 for purity/sanctity. Furthermore, internal consistency was examined according to the two-factor model. Cronbach values were found at .78 for harm - fairness, .89 for purity – authority - loyalty. Thus, fairness - harm (individualizing foundations) and purity – authority - loyalty (binding foundations) were used in accord with the two-factor model in the current study.

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

Padua Inventory (PI-WSUR) was used to find obsessive and compulsive symptoms for obsessive compulsive disorder (OCD) investigation (Burns, Ketroge, Formea, & Sternberger, 1996). Thirty-nine items were used to detect obsessive-compulsive symptoms and used to distinguish the OCD symptoms from worry. PI-WSUR was structured to depend on the Likert scale in which high scores show high OCD symptoms. Scores are rated from “0” (= not at all) to “4” (= very much). PI-WSUR includes five subscales: contamination obsession and washing compulsion (Items 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10), dressing/grooming compulsions ( Items11, 12 and 13), checking compulsions (Items 14, 15, 16, 17, 18, 19, 20, 21, 22 and 23), obsessional thoughts of harm to self/others (Items 24, 25, 26, 27, 28 and 29) and obsessional impulses to harm self /others (Items 31, 32, 33, 34, 35, 36, 37, 38, and 39). There are no reversed items in this inventory.

According to Burns et al. (1996), the psychometric properties of the PI-WSUR were useful to detect OCD symptoms (separated from worry). Discriminant validity of the PI-WSUR

items had higher correlations than the discriminant criteria of the Penn State Worry Questionnaire. In general, factors of PI-WSUR were loaded to 5 factors when the varimax rotation was completed. Their study expressed differences between worry and obsessive-compulsive symptoms. The shared variance between worry and obsessive-compulsive symptoms was only 12%. In addition, test-retest reliability was found .76 for 6 to 7 month interval. Internal consistency was performed as Cronbach  $\alpha$  which was .92 for total scale and changed between .77 and .88 for subscales.

The Turkish version of the PI-WSUR and psychometric properties were utilized (Beşiroğlu-Ağargün et al., 2005). In the Turkish version of the revised Padua Inventory, factorial structure of the PI-WSUR was found to be the same as the original version (6 factor). It was explained with the 62.1% variance of total variance. Cronbach  $\alpha$  was .95 for the Turkish version. In addition, compared to sub-scales, the lowest Cronbach  $\alpha$  value was .79 for impulsive and anxiety subscales. Furthermore, test-retest reliability values were statistically significant for total scale and subscales ( $r = .81$  to  $r = .92$ ,  $p < .001$ ).

In this study, the internal consistency of the PI-WSUR was highly similar to psychometric properties that other studies evaluated (Cronbach  $\alpha = .95$  for total).

#### **2.2.4 Disgust Scale-Revised (DS-R)**

Disgust Scale (DS) (Haidt, McCauley, & Rozin, 1994) was developed to detect personal differences in disgust sensitivity. The first version of the DS was composed of 32 items and consisted of two true false and two rating items including seven dimensions (food, animals, body products, sex, body envelope violations, death, and hygiene) and magical thinking. Then, Olatunji-Williams et al. (2007) revised the DS. This version was constructed of 27 items in form of the 5-point Likert scale (0 = definitely not agree to 4 = definitely agree). According to revision, three subscales were detected: core disgust (1, 3, 6, 8, 11, 13, 15, 17, 20, 22, 25, 27), animal reminder disgust (2, 3, 7, 10, 14, 24, 19, 21), and contamination based disgust (4, 9, 18, 23, 26). In the current revision of DS, the 1st, 6th, and 10th items



are reversely coded and 12nd, 16th items are not added to the total score. A higher total score indicates higher disgust sensitivity and depends on individual differences. The internal consistency of the Disgust Scale Revised (DS-R) was found to be .84 (Olatunji-Williams et al, 2007).

In the Turkish version of the DS-R (İnözü & Eremsoy, 2013), internal consistency was found to be .87. In addition, the test-retest reliability coefficient was .88 for the total scale. Confirmatory Factor Analysis was conducted for DS-R in which 3 factors were applicable for Turkish sample (İnözü & Eremsoy, 2013). Also, convergent validity and discriminant validity were satisfying. In the current study, internal consistency was found to be .89 for total scale.

### **2.2.5 Contamination and Cognitions Scale (CCS)**

The Contamination and Cognitions Scale (CCS) was developed to evaluate contamination-related anxiety and behavioral avoidance (Deacon & Olatunji, 2007). It assesses the probability of contamination when a person touches objects like toilet handles, toilet seats, sink faucets, door handles, workout equipment, telephone receivers, stairway railings, elevator buttons, animals, raw meat, money, unwashed produce, and foods. The scale was formed into two parts: first part involves the probability of contamination when a person touches the objects; second involves deciding how bad it would be if contamination occurs. The scoring is between 0 and 100 (0 = not at all likely, 100 = extremely likely; 0 = not at all bad, 100 = extremely bad). Total score of the two parts indicates contamination cognitions totally.

In psychometric study of CCS, the two parts were found to be correlated with each other ( $r = .83, p < .001$ ) (Deacon & Olatunji, 2007). Deacon and Olatunji (2007) found high internal consistency, .97 for total scale. One week after from the study, test-retest reliability was employed, which indicated a high test-retest reliability coefficient ( $r = .94, p < .001$ ).

The Turkish version of the CCS was translated and psychometric properties were evaluated (İnözü & Eremsoy, 2013). Internal consistency was very high according to the probability of contamination, threat of contamination, and total contamination ( $\alpha = .84, .83, \text{ and } .89$ ). Test-retest reliability was also analyzed during a four-week interval in which it was found to be high for CCS ( $r = .82, p < .001$ ). Internal consistency was evaluated in this study. High  $\alpha$  values were found: .96 for total, .93 for probability for contamination, and .95 for threat of contamination.

### **2.2.6 Obsessive Beliefs Questionnaire (OBQ)**

The Obsessive Compulsive Cognitions Working Group (OCCWG) developed and evaluated the Obsessive Beliefs Questionnaire (OBQ) to measure obsessive beliefs and obsessive appraisals (2001; 2003; 2005). The first version of the OBQ included 87 items which contained six subscales: overestimation of threat, tolerance of uncertainty, importance/control of thoughts, responsibility, and perfectionism. The first version of the scale indicated the perfect internal consistency (range between .71 and .96) and acceptable test-retest reliability for an interval of two days (.75 and .90). Otherwise, some shared constructs between subscales were found. Thus, OCCWG (2003) enhanced the psychometric properties of the OBQ study. Internal consistency and test-retest reliability were found to be sustained (OCCWG, 2003). However, the discriminant validity and factor analysis were not sufficient to use questionnaire. The last version of the OBQ was utilized to detect obsessive beliefs and appraisals (OCCWG, 2005). This scale consists of 44 items and involves three subscales: responsibility threat estimation (1, 5, 6, 8, 15, 16, 17, 19, 22, 23, 29, 33, 34, 39, 41), perfectionism/certainty (2, 3, 4, 9, 10, 11, 12, 14, 18, 25, 26, 31, 40, 43) and importance/control of thoughts (7, 13, 21, 24, 27, 28, 30, 32, 35, 42, 44). The OBQ is scored according to the 7-point Likert scale (1= not agree, 7 = totally agree). Internal consistency of the last version of OBQ was very high ( $\alpha = .93$  for both responsibility/threat estimation and perfectionism/certainty;  $\alpha = .89$  for importance/control of thoughts;  $\alpha = .95$  for OBQ total).

A Turkish version of the OBQ and psychometric study was conducted (Yorulmaz & Gencöz, 2008). Yorulmaz and Gencöz (2008) found high internal consistency and acceptable reliability values among a Turkish clinical and nonclinical sample. Similar to the original study, the Turkish form of OBQ was divided into 3 factors: responsibility/threat estimation, perfectionism/certainty and importance/control of thoughts. Yorulmaz and Gencöz (2008) found internal consistency of OBQ to be .91 among patients with OCD, .90 among a group of people who had anxiety in the nonclinical sample, and .91 among a sample of university students. In addition, similar to original study, the internal consistency of the OBQ was very high, ( $\alpha = .95$  for total,  $\alpha = .88$  for responsibility/threat estimation;  $\alpha = .88$  for perfectionism/certainty;  $\alpha = .86$  for importance/control of thoughts) (Boysan et al, 2010). Test-retest reliability for the total was found as .79 (Boysan, Beşiroğlu, Çetinkaya, Atlı, & Aydın, 2010). The test-retest reliability range between subscales was .69 and .81. Three dimensions were distributed the same as in the original study (Boysan et al, 2010). In the current study, internal consistency of the OBQ was .95 for total, .89 for responsibility/threat estimation, .89 for perfectionism/certainty, and .89 for importance/control of thoughts, subscales that expressed high internal consistency.

### **2.2.7 Demographic Information Form**

Demographic Information Form was used to take information about descriptive characteristics such as gender, age, socioeconomic status, education, religiosity and right left politics of the participants.

### **2.3 Procedure**

First of all, the permission for the study was taken from the ethics committee at Doğus University. Participants were recruited from Doğus University in return for extra course credit for voluntary participation (two or five points for total point). The study took approximately 40 minutes. The questionnaires were given in class setting. After informed

consent was taken, participants were randomly divided into two groups; disgusted and non-disgusted groups. After the grouping of the participants, they were given the battery set including PI, DS-R, CCS, OBQ, and Demographic Information Form, in a paper-pen format. After filling those scales, disgust manipulation was conducted. While the disgusted group was given the LODQ-Form A, the non-disgusted group was given LODQ-Form B, which included neutral scenarios. This manipulation involved asking the participants in the disgusted group to imagine disgust-inducing scenarios (rotting food, potentially contaminated foods, body odours, death, envelope violations, vomit, and maggots) and asking the participants to imagine neutral scenarios (the non-disgusted group). After the manipulation, MFQ was given to the two groups to look for the differences between groups' moral evaluations.

#### **2.4. Design**

The aim of the study is to find differences between disgusted and non-disgusted groups over individualizing moral foundations and binding moral foundations. It is expected that disgust affects binding moral foundations more than individualizing moral foundations. Subjects were assigned to the groups randomly. Independent Samples t test was used to show similarity between groups before manipulation. Besides, it was used to assess effectiveness of the manipulation. Furthermore, two-way analysis of variance (ANOVA) was conducted to find the influence of groups and genders over moral foundations. The relationship between measures in the study was examined and included right-left politics, obsessions, cleaning compulsions, contamination cognitions, religiosity, and moral foundations. In order to determine the relations between those variables, bivariate correlations were conducted. Furthermore, regression analysis was applied to obsessive-compulsive tendencies, religiosity, and right-left politics and was expected to predict disgust sensitivity (imagination of disgust reaction, feeling unpleasantness related to disgust situation, feeling nauseous, and likelihood that threat happened). Regression analysis was conducted on moral foundations, which would be predicted by disgust sensitivity, obsessive tendencies, religiosity, gender, and right-left politics.

### **3. RESULTS**

#### **3.1. Examination of Pretext Conditions and Differences Between Groups Before Experimental Manipulation**

The differences between variables were compared before experimental manipulation in order to examine pre-test conditions among disgusted and non-disgusted groups. Independent Samples t-test was applied to the variables before manipulations. According to this analysis, there were no significant differences found between experimental conditions before manipulation (Table 3.1).

Before experimental manipulation, participants in disgusted and non-disgusted groups did not indicate any differences in accord with cleaning compulsive symptoms, contamination cognitions, obsessive beliefs, right-left politics, religiosity, or disgust sensitivity.

**Table 3.1. Differences between groups of disgusted and non-disgusted groups before manipulation**

	<b>Disgusted and Non-disgusted Groups</b>		
	<b>Disgust</b>	<b>Neutral</b>	
	<b>Average (SD)</b>	<b>Average(SD)</b>	<b>t (df)</b>
Right left politics	3.86 (1.26)	3.82 (1.14)	.25 (242)
Religiosity	4.24 (1.78)	4.02 (1.64)	1.03 (252)
PI (cleaning)	47.29 (26.84)	46.48 (26.84)	.24 (250)
CCS	1218.78 (486.20)	1345.76 (578.76)	-1.89 (249)
OBQ	156.44 (39.85)	156.70 (42.53)	-.05 (250)
DS-R	61.61 (17.67)	63.66 (17.75)	-.91 (250)

*Note:* PI: Padua Inventory; CCS: Contamination and Cognitions Scale; OBQ: Obsessive Beliefs Questionnaire; DS-R: Disgust Scale-Revised

### **3.2. Examination for Efficacy of Manipulation Across Disgusted and Non-disgusted Groups**

Two disgust groups (disgusted and non-disgusted) were compared across conditions which included imagination of disgust reaction, feeling unpleasantness related to a disgust situation, feeling nauseous, increase of disgust sensitivity, and likelihood that a threat happened. For each dependent variable, Independent Sample t test was applied as an analysis to measure group differences. According to the results, there were significant

differences between disgusted and non-disgusted groups related to the disgust conditions that were used in manipulations (Table 3.2). These results showed the significance of experimental manipulation across groups. In other words, manipulation was successful in this experiment.

**Table 3.2. Comparison for experimental conditions across disgust manipulations of imagination of disgust reaction, feeling unpleasantness related to disgust situation, feeling nauseous, increase for disgust sensitivity and likelihood that threat happened**

	Disgusted and Non-disgusted Groups		<i>t (df)</i>
	Disgusted Average ( <i>SD</i> )	Nondisgusted Average( <i>SD</i> )	
Disgust reaction	28.74 (6.91)	13.29 (6.22)	18.24 (246)**
Feeling unpleasantness	27.76 (6.77)	20.83 (6.66)	8.04 (246)**
Feeling nauseous	27.24 (6.70)	19.29 (6.82)	9.19 (246)**
Increase	27.53 (6.81)	19.35 (6.88)	9.34 (246)**
Threat likelihood	18.41 (7.23)	15.49 (6.07)	3.37 (246)*

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

### 3.3. Correlations Coefficients of Moral Foundations and Other Variables Correlated to Them

Table 3.3 shows Pearson correlation coefficient values of measures that were used in the study. Binding foundations were all positively and significantly related to religiosity ( $r =$

.46,  $p < .01$ ), disgust sensitivity ( $r(252) = .40$ ,  $p < .01$ ), obsessive beliefs ( $r(252) = .29$ ,  $p < .01$ ), contamination cognitions ( $r = .25$ ,  $p < .01$ ), cleaning compulsions ( $r(252) = .30$ ,  $p < .01$ ) and right left politics ( $r(252) = .31$ ,  $p < .01$ ) seen table 3.3. In addition, individualizing foundations were positively and significantly correlated to disgust sensitivity ( $r(252) = .24$ ,  $p < .01$ ) and binding foundations ( $r(252) = .32$ ,  $p < .01$ ) (Table 3.3).

In addition, religiosity was positively and significantly correlated to contamination cognition ( $r(252) = .25$ ,  $p < .01$ ), disgust sensitivity ( $r(252) = .29$ ,  $p < .01$ ), obsessive beliefs ( $r = .22$ ,  $p < .01$ ), cleaning compulsions ( $r(252) = .24$ ,  $p < .01$ ) and right left politics ( $r(252) = .52$ ,  $p < .01$ ) (Table 3.3). Besides, right left politics were all related to religiosity and binding foundations moderately, to contamination condition ( $r(252) = .14$ ,  $p < .05$ ) slightly.

Furthermore, disgust sensitivity was significantly and positively correlated to all variables in the study, except right-left politics (Table 3.3). Obsessive beliefs were significantly and positively related to contamination cognitions ( $r(252) = .34$ ,  $p < .01$ ), cleaning compulsions ( $r(252) = .44$ ,  $p < .01$ ), disgust sensitivity ( $r(252) = .27$ ,  $p < .01$ ), religiosity ( $r(252) = .22$ ,  $p < .01$ ) and binding moral foundations ( $r(252) = .29$ ,  $p < .01$ ).



**Table 3.3 Coefficient values between variables in the study**

Measures	1	2	3	4	5	6	7	8
1.CCS		.34**	.52**	.43**	.14*	.25**	.25**	.00
2.OBQ			.44**	.27**	.12	.22**	.29**	.04
3.PI (Cleaning)				.35**	.11	.24**	.30**	.04
4.DS-R					.06	.29**	.40**	.24**
5.Right-left politics						.52**	.31**	.00
6.Religiosity							.46**	.07
7.MFQ- binding								.32**
8.MFQ- individualizing								

*Note.*  $N = 255$ . PI= Padua Inventory; OBQ= Obsessive Beliefs Questionnaire; CCS= Contamination Cognitions Scale; DS-R= Disgust Scale; MFQ= Moral Foundations Questionnaire.

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

### 3.4. Comparisons of Groups and Gender Differences Across Binding Moral Foundations and Individualizing Moral Foundations

Both binding moral foundations and individualizing moral foundations were compared according to mean differences between groups and genders. Gender (male, female) x Group (disgusted, non-disgusted), two-way analysis of variance was conducted.

The main effect on the groups yielded a ratio of  $F(1, 226) = 4.72, p < .05, d = .02$  for binding foundations (Table 3.4). The mean differences between groups were significantly more in disgusted groups ( $M = 18.49, SD = 5.20$ ) than in non-disgusted groups ( $M = 17.75, SD = 5.61$ ) for binding moral foundations. The main effect of gender yielded a ratio of  $F(1, 226) = 4.34, p < .05, d = .02$  (Table 3.4) which showed significantly higher scores for

males ( $M = 18.36$ ,  $SD = 5.39$ ) than females ( $M = 18.07$ ,  $SD = 5.40$ ) for binding foundations. Besides, the main effect of groups for individualizing foundations yielded a ratio of  $F(1, 226) = .84$ ,  $p < .05$  (Table 3.5). The mean differences between non-disgusted ( $M = 46.16$ ,  $SD = 8.09$ ) and disgusted groups ( $M = 46.02$ ,  $SD = 8.61$ ) were insignificant for individualizing foundations. The main effect of gender for individualizing foundations was  $F(1, 226) = 5.29$ ,  $p < .05$ ,  $d = .02$  which indicates a significant change between genders, indicating higher value for female ( $M = 47.26$ ,  $SD = 8.52$ ) than male ( $M = 43.62$ ,  $SD = 7.31$ ) (Table 3.5).

Interaction effects were significant between groups and genders for binding foundations, yielding a ratio of  $F(1, 226) = 4.64$ ,  $p < .05$ ,  $d = .02$  (Table 3.4, Figure 3.2). Male and disgusted groups had significantly ( $M = 19.54$ ,  $SD = 5.06$ ) higher scores than female and disgusted groups ( $M = 17.92$ ,  $SD = 5.23$ ). In non-disgusted groups, females ( $M = 18.23$ ,  $SD = 5.62$ ) had significantly greater scores than males ( $M = 16.48$ ,  $SD = 5.45$ ) for binding foundations. In addition, interaction effects were insignificant between groups and genders for individualizing foundations which yielded ratio of  $F(1, 226) = 2.67$ ,  $p < .05$ , mean and standard deviation values seen in Table 3.5 (Figure 3.1).

**Table 3.4. ANOVA results and descriptive statistics for binding foundations by gender differences and group conditions**

Variable	Mean	SD	n	
<b>Female</b>				
Disgusted	17.92	5.23	83	
Nondisgusted	18.23	5.62	76	
<b>Male</b>				
Disgusted	19.54	5.06	46	
Nondisgusted	16.48	5.45	29	
<b>Source</b>	<b>SS</b>	<b>df</b>	<b>MS</b>	<b>F</b>
Gender	96.68	1	96.68	4.34*
Group Conditions	105.06	1	105.06	4.72*
Group x Gender	103.22	1	103.22	4.64*
Error	5029.62	226	22.26	

\* $p < .05$

**Table 3.5. ANOVA results and descriptive statistics for individualizing foundations by gender differences and group conditions**

<b>Variable</b>	<b>Mean</b>	<b>SD</b>	<b>n</b>
<b>Female</b>			
Disgusted	46.93	9.11	83
Nondisgusted	47.63	7.87	76
<b>Male</b>			
Disgusted	44.77	5.63	46
Nondisgusted	41.79	9.19	29

<b>Source</b>	<b>SS</b>	<b>df</b>	<b>MS</b>	<b>F</b>
Gender	338.24	1	338.24	5.29*
Group Conditions	53.84	1	53.84	.84
Group x Gender	170.80	1	170.80	2.67
Error	14445.53	226	63.92	

$p < .05$

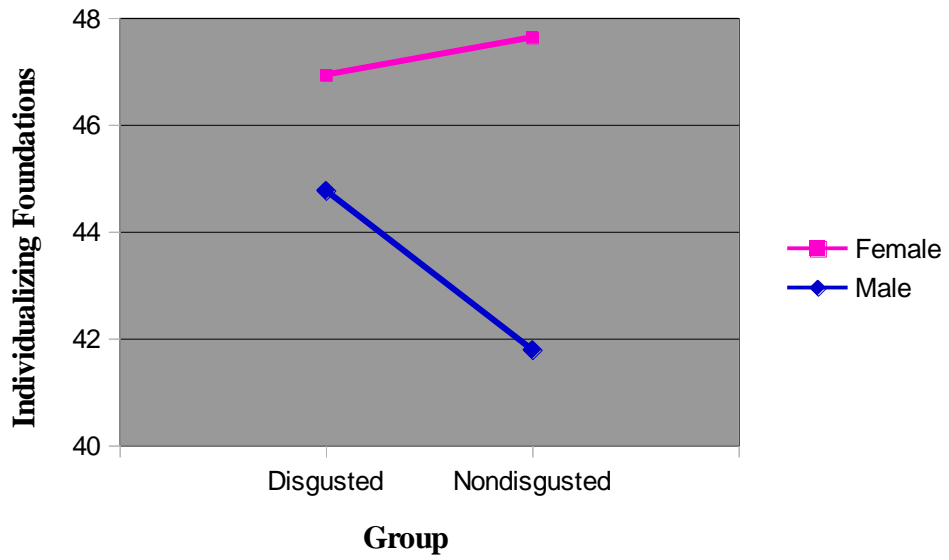


Figure 3.1. Individualizing foundations across group and gender differences

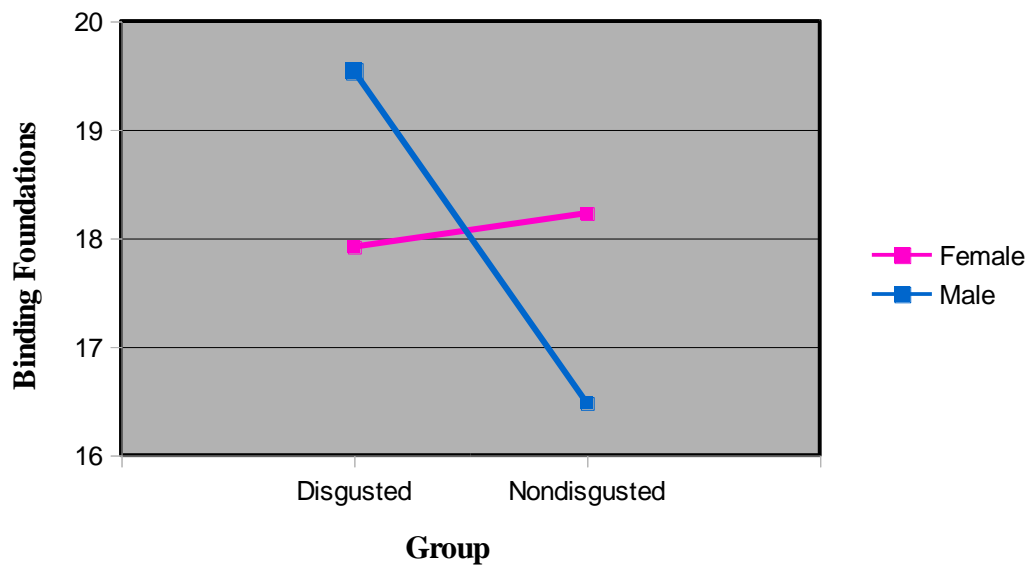


Figure 3.2. Binding foundations across groups and gender differences

### **3.5 Regression Analysis for Disgust Sensitivity Including Imagination of Disgust Reaction, Feeling Unpleasantness Related to Disgust Situation, Feeling Nauseous, and Likelihood That A Threat Happened**

Multiple hierarchical regression analysis was used to measure prediction of imagination of disgust reaction, feeling unpleasantness related to disgust situation, feeling nauseous and likelihood that threat happened. Predictors were right left politics, religiosity, group and gender in the first block; obsessive beliefs and contamination cognition in second block; lastly disgust sensitivity and cleaning compulsive tendencies were added to the third block.

#### **3.5.1 According to Imagination of Disgust Reaction**

Right-left politics, religiosity, group, and gender were entered in the first block of variance explained 62.5 % of total variance ( $F(4, 230) = 95.68, p < .001$ ) that better accounted for imagination of disgust reaction, predicted by gender ( $\beta = .14, t(230) = 3.35, p < .01$ ), by group ( $\beta = -.79, t(230) = -19.25, p < .001$ ), not significantly predicted by religiosity and right-left politics. In the second block, obsessive beliefs and contamination cognitions were added to the equation that 2.4 % of total variance was accounted for imagination of disgust reaction ( $F(6, 228) = 70.36, p < .001$ ), significantly predicted by contamination cognitions ( $\beta = .12, t(228) = 2.79, p < .01$ ), not significant for obsessive beliefs. On the third block, disgust sensitivity and cleaning compulsive tendencies were added to equation that explained 3.9% of variance ( $F(8, 226) = 62.83, p < .001$ ), sequentially cleaning compulsive tendencies ( $\beta = .09, t(226) = 1.93, p < .05$ ) and disgust sensitivity ( $\beta = .22, t(226) = 4.75, p < .001$ ) (Table 3.6).

**Table 3.6. Multiple Regression analysis for predictors of imagination for disgust reaction**

Order of entry set	Step	Variables entered	Beta	t	F	df	ModelR <sup>2</sup>
<b>I. Demographics and group variable</b>	1	Religiosity	.04	.77	95.68***	4, 230	.62
		Gender	.14	3.35**			
		Group	-.79	-.19.25***			
		Right-left politics	.02	.49			
<b>II. Obsessive tendency</b>	2	Obsessive Beliefs	.08	1.85	70.36***	6, 228	.65
		Contaminations and cognitions	.12	2.79**			
<b>III. Disgust sensitivity and compulsion</b>	3	Disgust Sensitivity	.22	4.75***	62.83***	8, 226	.69
		Cleaning	.09	1.93*			

Note \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

### **3.5.2. According to Imagination of Feeling Unpleasantness Related to A Disgust Situation**

Multiple regression analysis was applied to measure same variables over feeling unpleasantness related to disgust situation.

Right-left politics, religiosity, group, and gender were entered in the first block of variance and explained 30.5% of total variance ( $F(4, 230) = 25.21, p < .001$ ) that better accounted for the feeling of unpleasantness related to disgust situation predicted by gender ( $\beta = .22, t(230) = 3.88, p < .001$ ), by group ( $\beta = -.51, t(230) = -9.14, p < .001$ ) significantly, not significantly predicted by religiosity and right-left politics. In the second block, obsessive beliefs and contamination cognition were added to the equation that 2.6% of total variance was accounted for imagination of feeling of unpleasantness related to disgust situation ( $F(6, 228) = 18.84, p < .001$ ), not predicted significantly. On the third block, disgust sensitivity and cleaning compulsive tendencies were added to equation that explained 3.6% of variance ( $F(8, 226) = 16.09, p < .001$ ), predicted significantly by disgust sensitivity ( $\beta = .22, t(226) = 3.33, p < .01$ ) (Table 3.7).

**Table 3.7. Multiple Regression analysis for predictors of imagination of feeling unpleasantness related to disgust**

Order of entry set	Step	Variables entered	Beta	t	F	df	ModelR <sup>2</sup>
<b>I. Demographics and group variable</b>	1	Religiosity	.10	1.56	25.21***	4, 230	.31
		Gender	.22	3.88***			
		Group	-.51	-9.14***			
		Right-left politics	-.01	-.19			
<b>II. Obsessive tendency</b>	2	Obsessive Beliefs	.11	1.86	18.84***	6, 228	.33
		Contaminations and cognitions	.10	1.67			
<b>III. Disgust sensitivity and compulsion</b>	3	Disgust Sensitivity	.22	3.33**	16.09***	8, 226	.36
		Cleaning	-.02	-.29			

Note \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

### 3.5.3. According to Imagination of Feeling Nauseous

Multiple regression analysis was applied to measure the same variables over feeling nausea related to a disgust situation.



Right-left politics, religiosity, group, and gender were entered in the first block of variance explained 34.2 % of total variance ( $F(4, 230) = 29.93, p < .001$ ) better accounted for imagination of feeling of nauseous related to disgust situation. Feeling nauseous was predicted by gender ( $\beta = .18, t(230) = 3.29, p < .01$ ), by group ( $\beta = -.56, t(230) = -10.32, p < .001$ ) whereas, feeling nauseous was not significantly predicted by religiosity or right-left politics. In the second block, obsessive beliefs and contamination cognitions were added to the equation that 2.6% of total variance was accounted for imagination of feeling of nauseous related to disgust situation, ( $F(6, 228) = 22.17, p < .001$ ). Contamination cognitions predicted this ( $\beta = .13, t(228) = 2.16, p < .001$ ), but obsessive beliefs did not. In the third block, disgust sensitivity and cleaning compulsive tendencies were added to the equation that explained 2.4% of variance ( $F(8, 226) = 18.23, p < .001$ ) predicted significantly by disgust sensitivity ( $\beta = .19, t(226) = 2.94, p < .01$ ) (Table 3.8).

**Table 3.8. Multiple Regression analysis for predictors of imagination of feeling nauseous related to disgust**

Order of entry set	Step	Variables entered	Beta	t	F	df	Mode IR <sup>2</sup>
<b>I. Demographics and group variable</b>	1	Religiosity	.09	1.47	29.93****	4, 230	.34
		Gender	.18	3.29**			
		Group	-.56	-10.32****			
		Right-left politics	-.02	-.32			
<b>II. Obsessive tendency</b>	2	Obsessive Beliefs	.08	1.40	22.17****	6, 228	.37
		Contaminations and cognitions	.13	2.16*			
<b>III. Disgust sensitivity and compulsion</b>	3	Disgust Sensitivity	.19	2.94**	18.23****	8, 226	.39
		Cleaning	.00	-.01			

Note \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*\*  $p < .001$

#### 3.5.4. According to Imagination of Likelihood that Threat Happened

Multiple regression analysis was applied to measure same variables, but on imagination of

likelihood threat happened related to disgust situation.

Right-left politics, religiosity, group, and gender were entered in the first block of variance explained .06 % of total variance ( $F(4, 230) = 3.89, p < .01$ ) accounted for imagination of likelihood that threat happened related to disgust situation. Likelihood that a threat happened was predicted by group ( $\beta = -.24, t(230) = -3.64, p < .001$ ). It was not significantly predicted by gender, religiosity, or right-left politics. In the second block, obsessive beliefs and contamination cognitions were added to the equation that 9.6% of total variance better accounted for imagination of likelihood threat happened related to disgust situation, ( $F(6, 228) = 7.18, p < .001$ ) which was predicted significantly by contamination cognitions ( $\beta = .15, t(228) = 2.20, p < .05$ ), and also predicted significantly by obsessive beliefs ( $\beta = .24, t(228) = 3.66, p < .001$ ). In the third block, disgust sensitivity and cleaning compulsive tendencies were added to equation that explained 1.5% of variance ( $F(8, 226) = 5.94, p < .001$ ), it was insignificant for both variables (Table 3.9).

**Table 3.9. Multiple Regression analysis for predictors of likelihood that threat happened**

Order of entry set	Step	Variables entered	Beta	t	F	df	ModelR <sup>2</sup>
<b>I. Demographics and group variable</b>	1	Religiosity	.08	1.06	3.89**	4, 230	.06
		Gender	.02	.30			
		Group	-.24	-3.64***			
		Right-left politics	-.07	-.92			
<b>II. Obsessive tendency</b>	2	Obsessive Beliefs	.24	3.66***	7.18***	6, 228	.16
		Contaminations and cognitions	.15	2.20*			
<b>III. Disgust sensitivity and compulsion</b>	3	Disgust Sensitivity	.11	1.49	5.94***	8, 226	.17
		Cleaning	.09	1.13			

Note \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

### 3.6. Regression Analysis for Prediction of Two Moral Foundations: Binding and Individualizing Foundations

Multiple hierarchical regression analysis was conducted to find predictors of individualizing and binding moral foundations. The predictors that were used for analysis

were right-left politics, group, gender, and religiosity in the first block; obsessive beliefs and contamination cognitions was in the second block; and disgust sensitivity and cleaning obsessive tendencies in the third block.

Right-left politics, religiosity, group, and gender were entered in the first block of variance explained 24% of total variance ( $F(4, 221) = 17.16, p < .001$ ) accounted for binding foundations. Binding foundations were predicted significantly by religiosity ( $\beta = .44, t(221) = 6.22, p < .01$ ), and not significantly predicted by group, gender, or right-left politics. In the second block, obsessive beliefs and contamination cognitions were added to the equation explained 6.4% of total variance, ( $F(6, 219) = 15.73, p < .001$ ). Binding foundations were predicted significantly by contamination cognitions ( $\beta = .16, t(219) = 2.49, p < .05$ ) and obsessive beliefs ( $\beta = .17, t(219) = 2.77, p < .01$ ). In the third block, disgust sensitivity and cleaning compulsive tendencies were added to equation that explained 6.7% of variance ( $F(8, 217) = 15.80, p < .001$ ), significantly predicted by disgust sensitivity ( $\beta = .28, t(217) = 4.13, p < .001$ ) (Table 3.10).

Right-left politics, religiosity, group, and gender were entered in the first block of variance explained 6% of total variance ( $F(4, 221) = 13.48, p < .01$ ) accounted for individualizing foundations predicted significantly by gender ( $\beta = .24, t(221) = 3.57, p < .001$ ), not significantly predicted by group, religiosity, or right-left politics (Table 3.11). In the second block, obsessive beliefs and contamination cognitions were added to the equation accounted for 0.3% of total variance, ( $F(6, 219) = 2.43, p < .05$ ), obsessive tendencies and contamination cognitions were not significant predictors of individualizing foundations. In the third block, disgust sensitivity and cleaning compulsive tendencies were added to equation explained 2.7% of variance ( $F(8, 217) = 2.66, p < .01$ ), predicted significantly by disgust sensitivity ( $\beta = .21, t(217) = 2.53, p < .05$ ) (Table 3.11).

**Table 3.10. Multiple Regression analysis for predictors of binding foundations**

Order of entry set	Step	Variables entered	Beta	t	F	df	ModelR <sup>2</sup>
<b>I. Demographics and group variable</b>	1	Religiosity	.44	6.22***	17.16***	4, 221	.24
		Gender	-.06	-.96			
		Group	-.04	-.61			
		Right-left politics	-.08	1.10			
<b>II. Obsessive tendency</b>	2	Obsessive Beliefs	.17	2.77**	15.73***	6, 219	.30
		Contaminations and cognitions	.16	2.49*			
<b>III. Disgust sensitivity and compulsion</b>	3	Disgust Sensitivity	.28	4.13***	15.80***	8, 217	.37
		Cleaning	.12	1.79			

Note \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**Table 3.11. Multiple Regression analysis for predictors of individualizing foundations**

Order of entry set	Step	Variables entered	Beta	t	F	df	ModelR <sup>2</sup>
<b>I. Demographics and group variable</b>	1	Religiosity	.04	.47	13.48**	4, 221	.06
		Gender	.24	3.57***			
		Group	-.06	-.85			
		Right-left politics	.00	.02			
<b>II. Obsessive tendency</b>	2	Obsessive Beliefs	.06	.83	2.43*	6, 219	.06
		Contaminations and cognitions	-.07	-.09			
<b>III. Disgust sensitivity and compulsion</b>	3	Disgust Sensitivity	.21	2.53**	2.66***	8, 217	.10
		Cleaning	-.03	0.40			

Note \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

#### **4. DISCUSSION**

Before testing the hypothesis in the current study, precondition differences between variables among disgusted and non-disgusted groups were measured. According to the analysis, there were no differences between all variables among groups in the current study. Before the experimental method was applied, there were no differences between groups (disgusted and non-disgusted) on variables such as obsessive-compulsive symptoms, contamination cognitions, obsessive beliefs, and disgust sensitivity. It was expected that the manipulation would have changed moral foundations, and it did.

In addition, the effect of manipulation was tested in the current analysis. Looming of Disgust Questionnaire (Williams et al., 2006), which was used in this study to manipulate groups, measures disgust by disgusting scenarios. Scenarios that included imagination of disgust reaction, feeling unpleasantness related to disgust situation, feeling nauseous, increase for disgust sensitivity, and likelihood that threat happened all induced disgust significantly and increased the level of disgust sensitivity successfully in a manner that was consistent with expectation. In other words, disgust manipulation increased connected to increase in imagination of disgust reaction, feeling unpleasantness related to disgust situation, feeling nauseous, increase for disgust sensitivity, and likelihood that threat happened.

Measures that were utilized in current study were moderately to slightly correlated to each other. Contamination cognitions were moderately and significantly related to obsessive beliefs, cleaning compulsions, disgust sensitivity, religiosity, and binding moral foundations and slightly correlated to right-left politics. Obsessive beliefs were moderately and significantly correlated to cleaning compulsions, disgust sensitivity, religiosity, and binding moral foundations. Cleaning compulsions were moderately and significantly



related to disgust sensitivity, religiosity, and binding moral foundations. Disgust sensitivity was moderately and significantly correlated to religiosity, binding moral foundations, and individualizing moral foundations. Right-left politics is related to religiosity and binding moral foundations. Lastly, binding moral foundations were correlated to individualizing moral foundations. It was an expected result that constructs in the current study did not have high correlation coefficients. In other words, investigated constructs were different from each other which were examined in the current study..

The hypothesis of the experimental study was that people who are disgusted in a situation are inclined to make harsher moral decisions. The hypothesis that people make more binding-related moral decisions when disgusted was analyzed. In the results of the analysis, there was found a minimum effect of disgusted situation only for binding moral foundations. Disgust inducing situations make moral judgments harsher, especially in purity related judgments and binding related moral foundations (Greene & Haidt, 2002; Haidt, 2001; Haidt & Hersh, 2006; Schanall et al., 2008). Otherwise, there was minimum significant effect found over binding foundations in analysis of variance. This was not consistent with the literature, and will be discussed later. Otherwise, Jones and Fitness (2008) found no relation between disgust and morality related to politics in a sample recruited from the Australian secular community. In addition, Jones and Fitness (2008) asserted that inefficient findings can result from ineffective scenarios that do not elicit disgust. In addition, Inbar and Pizarro (2014) explained that emotions are triggered when moral violations occur. Thus, disgust may arise when moral violations are witnessed or experienced. Nevertheless, Wheatley and Haidt (2005) found that hypnosis-induced disgust is nonetheless effective on moral judgments.

The hypotheses is that females' scores over individualizing foundations would increase compared with males' scores, that males' scores over binding foundations would increase compared to females' scores, and that compared to males' scores, females' scores over binding foundations would increase depend on disgust manipulation were analyzed. According to hypothesis, there were significant findings that were expressed for both

gender and groups. According to findings, females tended to get higher scores from individualizing foundations compared to males when groups were not taken to analysis. It was an expected result that supported the hypothesis. Males tended to have higher scores from binding foundations compared to females when groups were not taken to analysis. This was also an expected result consistent with the hypothesis. Furthermore, it was found that there is a significant interaction effect between groups and genders. Males' scores were higher than females' when they were in the disgusted condition. This finding supported hypothesis partially because it is not consistent with literature that males are more affected by disgust than females (Herz, 2014). However, females were not much affected by group differences, but in the non-disgusted condition females were inclined to prefer binding foundations more than men. This result may be caused by the high number of females in the non-disgusted group. Otherwise, there were not many differences between female participants before manipulation and after manipulation. Mostly, the interaction effect was consistent with literature about the relationship between gender differences and moral foundations (Iyer, 2010). Iyer (2010) did not find any big differences between females and males. He detected small effect of sample sizes in which gender differences were not attainable for whole population. Otherwise, he assumed that empathy and universalist constructs are indicative of female characteristics, which are detected more often among liberals. According to his assumption, results in the current study that females are more inclined than males to prefer individualizing foundations which include harm/care and justice/fairness are understandable. According to Iyer (2010) males, especially conservative males, are inclined to have utilitarian ways of thinking that may explain their inclination for authority, loyalty, and sanctity. He found females are more emotionally reactive than males, but the current study showed that males are inclined to be disgusted more while preferring binding foundations. In addition, Eagly, Schmidt, and Koenig (2005) found that females possess more socially compassionate policies than males, especially on issues of inequality against women, gays, and lesbians. It is understandable that females are not emotionally reactive toward binding foundations. These proofs supported the results in the current study that suggest that females are more inclined to prefer individualizing foundations and males are more inclined to prefer

binding moral foundations. Otherwise, males in disgusted group prefer binding foundations more partially supported. In addition, females in non-disgusted group prefer binding foundations was not an expected result.

The hypothesis that religiosity, conservative-liberal political differences, experimental group differences, gender, and obsessive-compulsive tendencies will significantly predict disgust sensitivity was analyzed. Sequentially, findings indicated that experimental group differences significantly and negatively predicted disgust sensitivity. More disgust sensitivity increased the affectivity of the disgusting condition. The right-left differences did not significantly predict disgust sensitivity. It was expected that people who are conservative would be more inclined to be affected by a disgusting situation. In the literature, there were differences between right and left politics (conservative and liberals) according to disgusting situations (Inbar & Pizarro, 2014; Haidt et al., 2009; Helzer & Pizarro, 2011; Feinberg et al. 2014). The literature suggests that conservatives are more inclined to be affected by disgust and more inclined to be sensitive to disgust compared to liberals (Inbar et al., 2012). Findings in the current study did not support the hypothesis that disgust sensitivity is predicted by right-left differences. Furthermore, religiosity did not significantly predict disgust sensitivity. Otherwise, there was a positive correlation  $r=.29$  found between disgust sensitivity and religiosity. It was a small coefficient value that was not expected. Fincher and Thornhill (2012) assumed that strong family ties and religion elicit parasite stress relevant to disgust sensitivity. However, the findings in the current study did not support the literature. In addition, gender predicted disgust sensitivity, which supported the hypothesis. It is consistent with the literature (Inbar et al., 2009). Inbar et al. (2009) assumed that females are more inclined to show disgust sensitivity than males, which was also supported by the findings of this paper. The hypothesis that obsessive-compulsive tendencies predict disgust sensitivity was also supported. Imagination for disgust reaction was significantly predicted by contamination cognitions, but was not predicted by cleaning. Feeling nauseous was also significantly predicted by contamination cognitions, whereas feeling unpleasantness triggered by disgust was not significantly predicted by obsessions. Likelihood threat happened was predicted by obsessive beliefs

and contamination cognitions. In general, disgust sensitivity was predicted by obsessive beliefs and contamination cognitions significantly consistent with literature (Henning et al., 1996; Koleva et al., 2013; Berle & Phillips, 2006 ). Mancini et al., (2001) discussed that disgust might be an essential emotion for obsessive-compulsive disorder originated by contamination and dirtiness. The results of the current study supported this assertion. Mancini et al. (2001) added that obsessive beliefs and fear of contamination are elicited by disgust-related stimuli. In addition, cleaning compulsions are also related to fear of contamination (Olatunji et al., 2004). It is kind of avoidance behaviour. Otherwise, there was no significant prediction for cleaning since a nonclinical sample was selected in the current study.

The hypothesis that religiosity, gender, disgust sensitivity, conservative-liberal political differences, experimental group differences, and obsessive compulsive tendencies will significantly predict binding foundations and the hypothesis that conservative-liberal political differences, gender, disgust sensitivity, and experimental group differences will significantly predict individualizing foundations were analyzed. Disgust sensitivity significantly predicted both binding foundations and individualizing foundations. Otherwise, binding foundations were predicted slightly more often by disgust sensitivity than individualizing foundations. These findings were related to literature. People who are sensitive to disgust tend to be affected by disgust more, especially when they are making moral decisions (Schnall et al., 2008; Jones & Fitness, 2008; David & Olatunji, 2011). Otherwise, it is expected that purity-related moral domains tend to be more affected by disgust sensitivity (Helzer & Pizarro, 2011). It can be understandable that both foundations were predicted by disgust sensitivity. According to Jones and Fitness (2008), people who have higher disgust sensitivity show more sensitivity to moral decisions. Besides, they have tough attitudes and are connected to law and order more, and want to purge the community of immoral things (Jones & Fitness, 2008). Gender only significantly predicted individualizing foundations. However, binding foundations were not predicted by gender. Moreover, right-left differences did not significantly predict binding foundations. Adversely, people who are conservative are more inclined to give more binding-related

moral decisions (Graham et al., 2009; 2012). However, the correlation coefficients for right-left differences with binding foundations was  $r = .31$  positively related, but medium effect was indicated. Furthermore,, as expected, religiosity significantly predicted binding foundations, which was also supported by literature. Gladden et al. (2009) assumed that moral intuitions are elicited by disgust sensitivity, which increases with religious conservatism. Obsessive beliefs and contamination cognitions predicted binding foundations significantly. Binding foundations were inclined to be affected by these obsessive tendencies, but were not affected by compulsive behaviours of cleaning. Cleaning did not significantly predict binding foundations according to results.

#### **4.1. Conclusion**

To conclude, there was a minimum significant difference found between disgusted and non-disgusted groups only for binding foundations. It was found that there was a main effect of disgust over binding foundations according to variance analysis. Thus, it was shown that people who were disgusted preferred binding foundations more. It seemed that male participants were a lot more affected by disgust when preferring binding foundations over individualizing ones. This means that male participants were affected by disgust and disgust made them more inclined to authority, loyalty, and sanctity based on binding moral foundations whereas disgust did not impact female participants while making their moral choices. The main effect of the analysis indicated that female participants were more inclined to prefer individualizing foundations than males. In other words, whether they were disgusted or not, female participants gave more importance to harm/care and fairness/justice compared to men.

Overall disgust sensitivity affected participants' tendency to be affected by disgusting conditions. Thus, the influence of disgust was determined by disgust sensitivity. The manipulation of disgust was related to participants' disgust sensitivity. Participants who had high disgust sensitivity tended to be harsher in their moral decisions, no matter the individual or binding foundations. Binding foundations were much more important for

participants who had high disgust sensitivity levels. However, both individualizing foundations and binding foundations were predicted by disgust sensitivity. Gender predicted both disgust sensitivity and individual moral foundations. Female participants were more inclined to be sensitive to disgust than male participants, and preferred individualizing moral foundations more compared to male participants. Furthermore, binding foundations were predicted by obsessive beliefs and contamination cognitions. In other words, participants who had obsessive beliefs and contamination cognitions were more inclined to give importance toward authority, loyalty, and sanctity moral foundations. Disgust affected contamination cognitions and obsessive beliefs. Disgust sensitivity was evoked when participants imagined disgusting stimuli, felt unpleasant in disgusting conditions, or felt threatened by disgusting stimuli. Participants in these situations showed obsessive tendencies and contamination cognitions. This means that obsessive beliefs may originate in disgust or people who have obsessive tendencies may be affected by disgust more, vice-versa.

#### **4.2. Limitations of Study**

There are some limitations in current study that might have affected the experiment and might change the results.

First of all, the limitations in this study could be related to intervention, which measured variables. Participants were bored by filling out a long bunch of questionnaires, which took approximately 40 minutes. In addition, it could be a problem to apply experimental design as paper and pencil format, because the efficacy of manipulation might have declined. Manipulation was the looming of disgust scenarios that included imagining of disgusting scenarios on paper. Thus, there were not big differences between groups. Scenarios might not have been effective enough to evoke disgust. Had there been some pictures, odours, or materials to manipulate sample, it may have been even more effective. In addition, some disgust questionnaires (Disgust Scale and Contamination Cognitions Scale) were given before manipulation, in which all groups might have been affected by disgusting situations

. All participants might have been disgusted while they were answering questions. Perhaps, it might not be a remarkable problem for this study, but both methods might be used in future studies. Both giving various disgusting manipulations and giving questionnaires before and after manipulation could improve results.

Secondly, study might be biased because sample was chosen from university students who were of a high socioeconomic level and between 19 and 25. This sample also included many Turkish and Muslim people, the opinions of which may not be effectively generalized to all populations. Thus, there might not be a strong effect of religiosity or right-left differences over moral foundations and disgust sensitivity. Results might be affected from a sample that mostly gathered to the middle. There were not so many right-left differences or religiosity differences in the university sample. While measuring obsessive and compulsive tendencies, compulsive tendencies were not found among participants who had trait of disgust sensitivity. This could be caused by sample features that did not represent clinical characteristics. Thus, in future studies, this experiment might be conducted across different samples that include various socioeconomic levels, various people of different ages, education levels, and political choices. Cross-cultural studies, developmental studies, gender studies, and clinical studies might arrive at more generalized results for whole populations . Furthermore, the distribution of gender across disgusted and non-disgusted groups was heterogeneous, so the results might be biased. This heterogeneous distribution could be seen mostly while analyzing moral foundations over group conditions and gender together.

Thirdly, the moral foundation questionnaire was limited to two foundations, binding and individualizing ones, in the Turkish population. The five-factor model did not work out well in the sample. Thus, this material should be developed and adopted to the Turkish population. Studies of this questionnaire might be conducted in order to find the extraneous effect of culture over moral foundations.

Lastly, measurements could limit results. When investigating effects of disgust on moral

foundations, other types of disgust and their effects on moral foundations could be attained. Other emotions could also be taken as ground to prevent extraneous variables that might distort results (anger, for example) (Russel & Sorolla, 2011) . This might affect the nature of the relationship between morality and disgust. Morality could also be measured in lots of ways, so more moral violation scenarios could be added. Besides, morality could be measured by specific, imaginable, and attainable situations. Watching scenarios or imagining personal life experiences instead of reading written scenarios may provide different results.

In the future, there are lots of domains and variables that are deduced by moral issues. Above, limitations were discussed and some advice was given to find evidence about the relationship between morality and emotions. Methods can be developed to arrive at better results for studies. Firstly, the design of manipulations can be conducted in the manner of natural designs. For instance, current moral violations can be used to arrive at a conclusion about a human's moral behaviour. Observation, statistical analysis, and neuroimaging techniques can help to bind results together to reach an understanding about the nature of morality. Developmental morality and its relation to disgust can be taken for granted for future studies. In addition, social desirability bias and the branch of social desirability bias as impression management on moral foundations affect each other in literature (Haidt, 2001). This issue can be questioned in future research.

Moreover, disgust can be elicited using different methods. Odours or the mixture of disgusting scenes and disgusting odours can be efficient to manipulate participants. Besides, duration of disgusting manipulation can be measured. The most effective sequence of disgusting stimuli can also be discussed. In addition, to measure obsessions and compulsions, a clinical population should be added to sample. People's views about different ethnic, religious, and sexual groups that are labeled as "others" must be taken for granted in moral situations. In addition, disgust against outgroups can be discussed over minority/majority relations and ethnocentrism.



### **4.3. Clinical Implications and Future Directions**

In this study, obsessive tendencies were evaluated in terms of disgusting scenarios. The relationship between obsessive beliefs and contamination cognitions showed that there is a link between disgust and obsessive tendencies. This will be an important development for clinical interventions in which disgust may be desensitized by some regular techniques.

Moral domain could be understandable and its origin could be detectable for human nature in the aid of current study. The relationship between emotions and moral behaviours may differentiate the explanation of morality and its effects on political domains and religions. To understand nature of these domains, studies may provide communication between separate ideologies and may lead to compromise. Moral foundations and their relations to emotions may give an explanation that may help understand human morality. Understanding the essence of morality may structure morality in different ways. Thus, moral values are the most important issues that structure evil and boundaries among groups, genders, and nations. Finding the emotional or rational essences of morality may change people's view of themselves and others. Education systems and moral systems may change how people evaluate morality in the future. Disgust is an important basic emotion that may change people's morality or structures their morality. If disgust can be learned with experiences, it may also shape human moral behaviours, beliefs, and attitudes. Moral foundation theory explains human morality and its relation to the constructs of religion, political ideologies, and cultures. Moral foundation theory may express a clear perception of morality and explain authority, loyalty, sanctity, harm, and justice according to the emotions attached to these thoughts and ideologies.

In this research, the effect of disgust and gender over moral foundations is not clear, so there should be more investigations into this issue. Obsessive tendencies and their relationship with disgust sensitivity also should be questioned more widely in other studies. Religion, social desirability bias, socioeconomic level, education differences, ethnic differences, sexual differences, and different types of disgusts may be added to

future studies

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## APPENDIX A

### LOOMING OF DISGUST QUESTIONNAIRE (FORM A) (ABARTILMIŞ TİKSİNME ALGISI ÖLÇEĞİ FORM A)

#### Yönerge:

Aşağıdaki soruları cevaplayabilmeniz için bu yönergeleri dikkatle okumanız çok önemlidir. Bu ölçeğin amacı sizin olası tiksindirici olayları nasıl hayal ettiğinizi veya zihninizde nasıl canlandırdığınızı ölçmektir. İnsanlar olası tiksınme hissiyle karşılaştıklarında veya bu gibi durumlarla karşılaşmayı beklediklerinde, genellikle bu durumun çeşitli yönlerini zihinlerinde canlandırırlar (veya hayal ederler). Örneğin, bu durumun nasıl gelişebileceğini veya durumun olası sonuçlarını hayal edebilirsiniz. Sizden kendinizi aşağıda belirtilen durumlarda hayal etmenizi ve sonrasında olacaklarla ilgili beklentilerinize yönelik bir dizi soruyu cevaplamanızı istiyoruz.

Sizden aşağıda belirtilen her durum için iki şey yapmanızı istiyoruz:

1. Her bir durum için kendinizi gerçekten o durumun içindeymişsiniz gibi canlı bir şekilde hayal etmeye çalışın. Duruma odaklanın ve durumu olabildiğince canlı detaylarla hayal edin.
2. Kendinizi o durum içerisinde hayal etmeyi bitirdikten sonra, zihninizde canlandırdıklarınızla ilgili soruları cevaplayın (örneğin; beklentileriniz ve senaryonun zihninizdeki şekli). Doğru veya yanlış cevap yoktur ve kişisel bilgiler sorulmayacak, bütün cevaplar anonim olarak kalacaktır. Cevabınız üzerine uzun bir süre düşünmek yerine her durum için aklınıza ilk gelen cevabı verin. Lütfen cevabınızı her maddenin sağında bulunan sütunlardaki uygun ifadeyi daire içine alarak belirtin.

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I. Parka yürüyüşe çıktığınızı hayal edin. Yoruldunuz ve soluklanmak için bir banka oturdunuz. Bankın yanında her yeri kurtçuklarla dolu olan bir çöp kutusu var. Biraz oturduktan sonra bir an için içiniz geçiyor ve uyandığınızda çöp kutusundaki bazı kurtçukların bacağından yukarı tırmandığını fark ediyorsunuz.

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Kendinizi tarif edilen durumun içinde hayal ettikten sonra, lütfen aşağıdaki soruları cevaplayınız.

	Hiç	Az	Biraz	Çok	Çok Fazla
1. Kendinizi bu durumun içerisinde hayal ederken ne ölçüde tiksindiniz?					
2. Bu sahne gözünüzde canlandıkça, sıkıntı hissetme olasılığınız her geçen an artıyor mu?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
3. Bu sahne gözünüzde canlandıkça, midenizin bulanma tehlikesi her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
4. Bu sahne gözünüzde canlandıkça, tiksınme düzeyiniz her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor

5. Bu sahne gözünüzde canlandıkça. başınıza kötü bir şey gelme ihtimali nedir?	Hiç	Az	Biraz	Çok	Çok Fazla
6. Bu sahne gözünüzde canlandıkça. var olan durumla ne ölçüde başa çıkabileceğinize inanıyorsunuz?	Hiç	Az	Biraz	Çok	Çok Fazla

II. Bir partide olduğunuzu hayal edin ve biriyle tanışmaya karar veriyorsunuz. Kalabalık içinden çekici birini seçiyorsunuz ve onun yanına doğru yürüyorsunuz. Ayakta yalpaladığınızı ve içki içmekte olduğunu fark ediyorsunuz. Siz kendinizi tanıttıktan sonra o kişi konuşmaya çabalıyor ancak bunun yerine tam ayaklarınızın üstüne kusuyor.

1. Kendinizi bu durumun içerisinde hayal ederken ne ölçüde tiksindiniz?	Hiç	Az	Biraz	Çok	Çok Fazla
2. Bu sahne gözünüzde canlandıkça. sıkıntı hissetme olasılığınız her geçen an artıyor mu?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
3. Bu sahne gözünüzde canlandıkça. midenizin bulanma tehlikesi her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
4. Bu sahne gözünüzde canlandıkça. tikslenme düzeyiniz her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
5. Bu sahne gözünüzde canlandıkça. başınıza kötü bir şey gelme ihtimali nedir?	Hiç	Az	Biraz	Çok	Çok Fazla
6. Bu sahne gözünüzde canlandıkça. var olan durumla ne ölçüde başa çıkabileceğinize inanıyorsunuz?	Hiç	Az	Biraz	Çok	Çok Fazla

III. Bir yakınınızın öldüğünü hayal edin. Defin öncesi cenazenin yıkanması için gasilhanedesiniz (cenazelerin yıkandığı yer). Sıra bekliyorsunuz. Görevli tanımadığınız birinin cenazesini yıkarken cenazenin üstüne dökülen suyun bir kısmı kazara üzerinize sıçıyor.

1. Kendinizi bu durumun içerisinde hayal ederken ne ölçüde tiksindiniz?	Hiç	Az	Biraz	Çok	Çok Fazla
2. Bu sahne gözünüzde canlandıkça. sıkıntı hissetme olasılığınız her geçen an artıyor mu?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
3. Bu sahne gözünüzde canlandıkça. midenizin bulanma tehlikesi her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor

4. Bu sahne gözünüzde canlandıkça. tikslenme düzeyiniz her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
5. Bu sahne gözünüzde canlandıkça. başınıza kötü bir şey gelme ihtimali nedir?	Hiç	Az	Biraz	Çok	Çok Fazla
6. Bu sahne gözünüzde canlandıkça. var olan durumla ne ölçüde başa çıkabileceğinize inanıyorsunuz?	Hiç	Az	Biraz	Çok	Çok Fazla

IV. İşten eve dönmek üzere araba kullandığınızı hayal edin. Yolda tamamen ters dönmüş bir araba görüyorsunuz. Hemen oraya doğru sürüyorsunuz ve arabadan bir kaç adım ötede yerde yatan birisini görüyorsunuz. Her yerde kan var ve siz yerde yatan kişiye yaklaştıkça kan miktarı git gide artıyor. Nabzınızı kontrol etmek için yerde yatan kişiye doğru eğiliyorsunuz ve bağırsaklarınızın dışarıda olduğunu görüyorsunuz.

1. Kendinizi bu durumun içerisinde hayal ederken ne ölçüde tiksindiniz?	Hiç	Az	Biraz	Çok	Çok Fazla
2. Bu sahne gözünüzde canlandıkça. sıkıntı hissetme olasılığınız her geçen an artıyor mu?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
3. Bu sahne gözünüzde canlandıkça. midenizin bulanma tehlikesi her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
4. Bu sahne gözünüzde canlandıkça. tikslenme düzeyiniz her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
5. Bu sahne gözünüzde canlandıkça. başınıza kötü bir şey gelme ihtimali nedir?	Hiç	Az	Biraz	Çok	Çok Fazla
6. Bu sahne gözünüzde canlandıkça. var olan durumla ne ölçüde başa çıkabileceğinize inanıyorsunuz?	Hiç	Az	Biraz	Çok	Çok Fazla

V. Gece yarısı bir şeyler içmek için yataktan kalktığınızı hayal edin. Yorgunsunuz ve sabah işe gitmek için erken kalkmak zorundasınız. Karanlıkta sendeleyerek mutfağa doğru gidiyorsunuz ve hemen bir süt kaparak doğrudan kutusundan içiyorsunuz. Bir kaç büyük yudumdan sonra sütün bozulmuş olduğunu fark ediyorsunuz.

1. Kendinizi bu durumun içerisinde hayal ederken ne ölçüde tiksindiniz?	Hiç	Az	Biraz	Çok	Çok Fazla
2. Bu sahne gözünüzde canlandıkça. sıkıntı hissetme olasılığınız her geçen an artıyor mu?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
3. Bu sahne gözünüzde canlandıkça. midenizin bulanma tehlikesi her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor

4. Bu sahne gözünüzde canlandıkça. tikslenme düzeyiniz her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
5. Bu sahne gözünüzde canlandıkça. başınıza kötü bir şey gelme ihtimali nedir?	Hiç	Az	Biraz	Çok	Çok Fazla
6. Bu sahne gözünüzde canlandıkça. var olan durumla ne ölçüde başa çıkabileceğinize inanıyorsunuz?	Hiç	Az	Biraz	Çok	Çok Fazla

VI. Güzel bir restoranda biriyle akşam yemeğine çıktığınızı hayal edin. Tuvalete gidiyorsunuz ve mutfağın yanından geçerken aşçının bir kaç kez hapşırıldığını ve burnunu çıplak elleriyle sildiğini görüyorsunuz. Siz tuvalete girerken aşçı arkanızdan geliyor. tuvaleti kullanıyor ve görüyorsunuz ki ellerini yıkamadan çıkıp gidiyor.

1. Kendinizi bu durumun içerisinde hayal ederken ne ölçüde tiksindiniz?	Hiç	Az	Biraz	Çok	Çok Fazla
2. Bu sahne gözünüzde canlandıkça. sıkıntı hissetme olasılığınız her geçen an artıyor mu?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
3. Bu sahne gözünüzde canlandıkça. midenizin bulanma tehlikesi her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
4. Bu sahne gözünüzde canlandıkça. tikslenme düzeyiniz her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
5. Bu sahne gözünüzde canlandıkça. başınıza kötü bir şey gelme ihtimali nedir?	Hiç	Az	Biraz	Çok	Çok Fazla
6. Bu sahne gözünüzde canlandıkça. var olan durumla ne ölçüde başa çıkabileceğinize inanıyorsunuz?	Hiç	Az	Biraz	Çok	Çok Fazla

VII. Bir otelde olduğunuzu ve 43. kattaki odanıza çıkmak için zemin kattan asansöre bindiğinizi hayal edin. Asansör kapıları kapanırken başka bir kişi aceleyle içeri giriyor ve 50. kat düğmesine basıyor. Asansör yukarı çıkmaya devam ederken. bir anda diğer kişinin keskin vücut kokusunu yoğun olarak hissediyorsunuz.

1. Kendinizi bu durumun içerisinde hayal ederken ne ölçüde tiksindiniz?	Hiç	Az	Biraz	Çok	Çok Fazla
2. Bu sahne gözünüzde canlandıkça. sıkıntı hissetme olasılığınız her geçen an artıyor mu?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
3. Bu sahne gözünüzde canlandıkça. midenizin bulanma tehlikesi her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor

4. Bu sahne gözünüzde canlandıkça. tikslenme düzeyiniz her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
5. Bu sahne gözünüzde canlandıkça. başınıza kötü bir şey gelme ihtimali nedir?	Hiç	Az	Biraz	Çok	Çok Fazla
6. Bu sahne gözünüzde canlandıkça. var olan durumla ne ölçüde başa çıkabileceğinize inanıyorsunuz?	Hiç	Az	Biraz	Çok	Çok Fazla

VIII. Çok aç olduğunuzu ve eve girdiğinizde ev arkadaşınızın sizin en sevdiğiniz çorbayı yapmış olduğunu hayal edin. Ocağın üzerindeki büyük tencereden kendinize bir kase çorba koyuyorsunuz ve televizyon izlemek için oturma odasına gidiyorsunuz. Ev arkadaşınız yatak odasından çıkıyor. mutfığa giriyor ve çorbayı evde sinek öldürmek için kullandığınız bir aletle karıştırmaya başlıyor. Ona şok içersinde bakıyorsunuz ama size bu aletin önceden iyice temizlendiğini söylüyor.

1. Kendinizi bu durumun içerisinde hayal ederken ne ölçüde tiksindiniz?	Hiç	Az	Biraz	Çok	Çok Fazla
2. Bu sahne gözünüzde canlandıkça. sıkıntı hissetme olasılığınız her geçen an artıyor mu?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
3. Bu sahne gözünüzde canlandıkça. midenizin bulanma tehlikesi her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
4. Bu sahne gözünüzde canlandıkça. tikslenme düzeyiniz her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
5. Bu sahne gözünüzde canlandıkça. başınıza kötü bir şey gelme ihtimali nedir?	Hiç	Az	Biraz	Çok	Çok Fazla
6. Bu sahne gözünüzde canlandıkça. var olan durumla ne ölçüde başa çıkabileceğinize inanıyorsunuz?	Hiç	Az	Biraz	Çok	Çok Fazla



## APPENDIX B

### LOOMING OF DISGUST QUESTIONNAIRE (FORM B) (ABARTILMIŞ TİKSİNME ALGISI ÖLÇEĞİ FORM B)

#### Yönerge:

Aşağıdaki soruları cevaplayabilmeniz için bu yönergeleri dikkatle okumanız çok önemlidir. Bu ölçeğin amacı sizin olası tiksindirici olayları nasıl hayal ettiğinizi veya zihninizde nasıl canlandırdığınızı ölçmektir. İnsanlar olası tiksınme hissiyle karşılaştıklarında veya bu gibi durumlarla karşılaşmayı beklediklerinde, genellikle bu durumun çeşitli yönlerini zihinlerinde canlandırırlar (veya hayal ederler). Örneğin, bu durumun nasıl gelişebileceğini veya durumun olası sonuçlarını hayal edebilirsiniz. Sizden kendinizi aşağıda belirtilen durumlarda hayal etmenizi ve sonrasında olacaklarla ilgili beklentilerinize yönelik bir dizi soruyu cevaplamanızı istiyoruz.

Sizden aşağıda belirtilen her durum için iki şey yapmanızı istiyoruz:

3. Her bir durum için kendinizi gerçekten o durumun içindeymişsiniz gibi canlı bir şekilde hayal etmeye çalışın. Duruma odaklanın ve durumu olabildiğince canlı detaylarla hayal edin.
4. Kendinizi o durum içerisinde hayal etmeyi bitirdikten sonra, zihninizde canlandırdıklarınızla ilgili soruları cevaplayın (örneğin; beklentileriniz ve senaryonun zihninizdeki şekli). Doğru veya yanlış cevap yoktur ve kişisel bilgiler sorulmayacak, bütün cevaplar anonim olarak kalacaktır. Cevabınız üzerine uzun bir süre düşünmek yerine her durum için aklınıza ilk gelen cevabı verin. Lütfen cevabınızı her maddenin sağında bulunan sütunlardaki uygun ifadeyi daire içine alarak belirtin.

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I. Parka yürüyüşe çıktığınızı hayal edin. Yoruldunuz ve soluklanmak için bir banka oturdunuz. Biraz oturduktan sonra bir an için içiniz geçiyor ve uyandığınızda bacağınızın üzerine konmuş bir uğurböceği görüyorsunuz.

Kendinizi tarif edilen durumun içinde hayal ettikten sonra, lütfen aşağıdaki soruları cevaplayınız.

	Hiç	Az	Biraz	Çok	Çok Fazla
1. Kendinizi bu durumun içerisinde hayal ederken ne ölçüde tiksindiniz?					
2. Bu sahne gözünüzde canlandıkça, sıkıntı hissetme olasılığınız her geçen an artıyor mu?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
3. Bu sahne gözünüzde canlandıkça, midenizin bulanma tehlikesi her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
4. Bu sahne gözünüzde canlandıkça, tiksınme düzeyiniz her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor

5. Bu sahne gözünüzde canlandıkça. başınıza kötü bir şey gelme ihtimali nedir?	Hiç	Az	Biraz	Çok	Çok Fazla
6. Bu sahne gözünüzde canlandıkça. var olan durumla ne ölçüde başa çıkabileceğinize inanıyorsunuz?	Hiç	Az	Biraz	Çok	Çok Fazla

II. Bir partide olduğunuzu hayal edin ve biriyle tanışmaya karar veriyorsunuz. Kalabalık içinden çekici birini seçiyorsunuz ve onun yanına doğru yürüyorsunuz. Ayakta yalpaladığını ve içki içmekte olduğunu fark ediyorsunuz. Siz kendinizi tanıttikten sonra o kişi de sizinle konuşmaya başlıyor.

1. Kendinizi bu durumun içerisinde hayal ederken ne ölçüde tiksindiniz?	Hiç	Az	Biraz	Çok	Çok Fazla
2. Bu sahne gözünüzde canlandıkça. sıkıntı hissetme olasılığınız her geçen an artıyor mu?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
3. Bu sahne gözünüzde canlandıkça. midenizin bulanma tehlikesi her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
4. Bu sahne gözünüzde canlandıkça. tiksini düzeyiniz her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
5. Bu sahne gözünüzde canlandıkça. başınıza kötü bir şey gelme ihtimali nedir?	Hiç	Az	Biraz	Çok	Çok Fazla
6. Bu sahne gözünüzde canlandıkça. var olan durumla ne ölçüde başa çıkabileceğinize inanıyorsunuz?	Hiç	Az	Biraz	Çok	Çok Fazla

III. Tanıdığınız birinin öldüğünü hayal edin. Cenaze için camiye gidiyorsunuz ve ölen kişinin yakınlarına başsağlığı dilemek için tabutun yanına doğru yürüyorsunuz.

1. Kendinizi bu durumun içerisinde hayal ederken ne ölçüde tiksindiniz?	Hiç	Az	Biraz	Çok	Çok Fazla
2. Bu sahne gözünüzde canlandıkça. sıkıntı hissetme olasılığınız her geçen an artıyor mu?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
3. Bu sahne gözünüzde canlandıkça. midenizin bulanma tehlikesi her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
4. Bu sahne gözünüzde canlandıkça. tiksini düzeyiniz her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
5. Bu sahne gözünüzde canlandıkça. başınıza kötü bir şey gelme ihtimali nedir?	Hiç	Az	Biraz	Çok	Çok Fazla

6. Bu sahne gözünüzde canlandıkça. var olan durumla ne ölçüde başa çıkabileceğinize inanıyorsunuz?	Hiç	Az	Biraz	Çok	Çok Fazla
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IV. İşten eve dönmek üzere araba kullandığınızı hayal edin. Yolda bozulmuş bir araba görüyorsunuz. Hemen oraya doğru sürüyorsunuz ve arabadan bir kaç adım ötede iki kişi olduğunu görüyorsunuz. Sizden yardım istiyorlar.

1. Kendinizi bu durumun içerisinde hayal ederken ne ölçüde tiksindiniz?	Hiç	Az	Biraz	Çok	Çok Fazla
2. Bu sahne gözünüzde canlandıkça. sıkıntı hissetme olasılığınız her geçen an artıyor mu?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
3. Bu sahne gözünüzde canlandıkça. midenizin bulanma tehlikesi her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
4. Bu sahne gözünüzde canlandıkça. tiksini düzeyiniz her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
5. Bu sahne gözünüzde canlandıkça. başınıza kötü bir şey gelme ihtimali nedir?	Hiç	Az	Biraz	Çok	Çok Fazla
6. Bu sahne gözünüzde canlandıkça. var olan durumla ne ölçüde başa çıkabileceğinize inanıyorsunuz?	Hiç	Az	Biraz	Çok	Çok Fazla

V. Gece yarısı bir şeyler içmek için yataktan kalktığınızı hayal edin. Yorgunsunuz ve sabah işe gitmek için erken kalkmak zorundasınız. Karanlıkta sendeleyerek mutfağa doğru gidiyorsunuz ve dolaptan içecek birşeyler çıkartıyorsunuz.

1. Kendinizi bu durumun içerisinde hayal ederken ne ölçüde tiksindiniz?	Hiç	Az	Biraz	Çok	Çok Fazla
2. Bu sahne gözünüzde canlandıkça. sıkıntı hissetme olasılığınız her geçen an artıyor mu?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
3. Bu sahne gözünüzde canlandıkça. midenizin bulanma tehlikesi her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
4. Bu sahne gözünüzde canlandıkça. tiksini düzeyiniz her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
5. Bu sahne gözünüzde canlandıkça. başınıza kötü bir şey gelme ihtimali nedir?	Hiç	Az	Biraz	Çok	Çok Fazla
6. Bu sahne gözünüzde canlandıkça. var olan durumla ne ölçüde başa çıkabileceğinize inanıyorsunuz?	Hiç	Az	Biraz	Çok	Çok Fazla

VI. Güzel bir restoranda biriyle akşam yemeğine çıktığınızı hayal edin. Tuvalete gitmek için restoran içinde ilerlerken mutfakın önünden geçiyorsunuz ve çalışanları görüyorsunuz.

1. Kendinizi bu durumun içerisinde hayal ederken ne ölçüde tiksindiniz?	Hiç	Az	Biraz	Çok	Çok Fazla
2. Bu sahne gözünüzde canlandıkça. sıkıntı hissetme olasılığınız her geçen an artıyor mu?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
3. Bu sahne gözünüzde canlandıkça. midenizin bulanma tehlikesi her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
4. Bu sahne gözünüzde canlandıkça. tikslenme düzeyiniz her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
5. Bu sahne gözünüzde canlandıkça. başınıza kötü bir şey gelme ihtimali nedir?	Hiç	Az	Biraz	Çok	Çok Fazla
6. Bu sahne gözünüzde canlandıkça. var olan durumla ne ölçüde başa çıkabileceğinize inanıyorsunuz?	Hiç	Az	Biraz	Çok	Çok Fazla

VII. Bir otelde olduğunuzu ve 43. kattaki odanıza çıkmak için zemin kattan asansöre bindiğinizi hayal edin. Asansör kapıları kapanırken başka bir kişi aceleyle içeri giriyor ve 50. kat düğmesine basıyor. Asansör yukarı çıkmaya devam ederken. bir anda diğer kişinin parfüm kokusunu hissediyorsunuz.

1. Kendinizi bu durumun içerisinde hayal ederken ne ölçüde tiksindiniz?	Hiç	Az	Biraz	Çok	Çok Fazla
2. Bu sahne gözünüzde canlandıkça. sıkıntı hissetme olasılığınız her geçen an artıyor mu?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
3. Bu sahne gözünüzde canlandıkça. midenizin bulanma tehlikesi her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
4. Bu sahne gözünüzde canlandıkça. tikslenme düzeyiniz her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
5. Bu sahne gözünüzde canlandıkça. başınıza kötü bir şey gelme ihtimali nedir?	Hiç	Az	Biraz	Çok	Çok Fazla
6. Bu sahne gözünüzde canlandıkça. var olan durumla ne ölçüde başa çıkabileceğinize inanıyorsunuz?	Hiç	Az	Biraz	Çok	Çok Fazla

VIII. Çok aç olduğunuzu ve eve girdiğinizde ev arkadaşınızın sizin en sevdiğiniz çorbayı yapmış olduğunu hayal edin. Ocağın üzerindeki büyük tencereden kendinize bir kase çorba koyuyorsunuz ve televizyon izlemek için oturma odasına gidiyorsunuz. Ev arkadaşınız da yatak odasından çıkıyor. mutfağa giriyor ve çorbayı karıştırıp sizin yanınıza geliyor.

1. Kendinizi bu durumun içerisinde hayal ederken ne ölçüde tiksindiniz?	Hiç	Az	Biraz	Çok	Çok Fazla
2. Bu sahne gözünüzde canlandıkça. sıkıntı hissetme olasılığınız her geçen an artıyor mu?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
3. Bu sahne gözünüzde canlandıkça. midenizin bulanma tehlikesi her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
4. Bu sahne gözünüzde canlandıkça. tikslenme düzeyiniz her geçen an ne ölçüde artıyor?	Çok Azalıyor	Biraz Azalıyor	Aynı Kalıyor	Biraz Artıyor	Çok Artıyor
5. Bu sahne gözünüzde canlandıkça. başınıza kötü bir şey gelme ihtimali nedir?	Hiç	Az	Biraz	Çok	Çok Fazla
6. Bu sahne gözünüzde canlandıkça. var olan durumla ne ölçüde başa çıkabileceğinize inanıyorsunuz?	Hiç	Az	Biraz	Çok	Çok Fazla

**APPENDIX C**  
**MORAL FOUNDATIONS QUESTIONNAIRE**  
**(AHLAKİ TEMELLER ÖLÇEĞİ)**

Bir şeyin doğru veya yanlış olup olmadığına karar vermenizde aşağıda verilen düşünceler ne derecede etkilidir? Lütfen cevaplarınızı aşağıdaki skalayı kullanarak derecelendiriniz.

**0...hiç bir şekilde alakalı değildir (Bu düşünce doğru ve yanlış yargularıyla hiçbir şekilde alakalı değildir).**

**1...pek alakalı değildir**

**2...biraz alakalıdır**

**3...orta derecede alakalıdır**

**4...çok alakalıdır**

**5...kesinlikle alakalıdır (Bu düşünce bir şeyin doğru veya yanlış olduğuna karar verirken dikkat ettiğim en önemli faktörlerden biridir.)**

1) Birisinin duygusal olarak acı çekip çekmediği	0	1	2	3	4	5
2) Birilerinin diğerlerine göre farklı muamele görüp görmediği	0	1	2	3	4	5
3) Birisinin eyleminin ülkesi için sevgi göstergesi olup olmadığı	0	1	2	3	4	5
4) Birisinin otoriteye saygısızlık edip etmediği	0	1	2	3	4	5
5) Birisinin namus ve edep konusundaki normları ihlal edip etmediği	0	1	2	3	4	5
6) Birisinin matematiğinin iyi olup olmadığı	0	1	2	3	4	5
7) Birisinin güçsüz ve incinebilir olan birini koruyup korumadığı	0	1	2	3	4	5
8) Birisinin adaletsiz davranıp davranmadığı	0	1	2	3	4	5
9) Birisinin grubuna ihanet edecek bir şey yapıp yapmadığı	0	1	2	3	4	5
10) Birisinin toplumun geleneklerine uyup uymadığı	0	1	2	3	4	5
11) Birisinin iğrenç bir şey yapıp yapmadığı	0	1	2	3	4	5
12) Birisinin zalim olup olmadığı	0	1	2	3	4	5
13) Birinin haklarının elinden alınmış olup olmadığı	0	1	2	3	4	5
14) Birisinin sadakatsizlik gösterip göstermediği	0	1	2	3	4	5
15) Bir eylemin kaosa ya da düzensizliğe neden olup olmadığı	0	1	2	3	4	5
16) Birisinin Tanrı'nın onaylayacağı bir şekilde davranıp davranmadığı	0	1	2	3	4	5

Lütfen aşağıdaki cümleleri okuyunuz ve bunlara katılıp katılmadığınızı belirtiniz.

**0...kesinlikle katılmıyorum**

**1...katılmıyorum**

**2...pek katılmıyorum**

**3...biraz katılıyorum**

**4...katılıyorum**

**5...kesinlikle katılıyorum**

1) Acı çekenlere şefkat duyabilmek en önemli erdemdir.	0	1	2	3	4	5
2) Hükümet kanun yaparken teminat altına alınması gereken ilk kural herkese adil davranılmasıdır.	0	1	2	3	4	5
3) Ülkemin tarihiyle gurur duyarım.	0	1	2	3	4	5
4) Otoriteye saygı bütün çocukların öğrenmesi gereken bir şeydir	0	1	2	3	4	5
5) Hiç kimseye zarar vermese de insanlar iğrenç şeyler yapmamalıdır.	0	1	2	3	4	5
6) İyi olanı yapmak kötü olanı yapmaktan daha iyidir.	0	1	2	3	4	5
7) Birisinin yapabileceği en kötü şeylerden biri savunmasız bir hayvana zarar vermektir.	0	1	2	3	4	5
8) Adalet bir toplum için en önemli gereksinimdir.	0	1	2	3	4	5
9) İnsanlar. aile üyeleri yanlış bir şey yapmış olsa dahi onlara karşı sadık olmalıdırlar.	0	1	2	3	4	5
10) Erkeklerin ve kadınların toplum içinde farklı rolleri vardır.	0	1	2	3	4	5
11) Bazı hareketleri doğal olmadıkları için yanlış olarak nitelendiririm	0	1	2	3	4	5
12) Bir insanı öldürmek hiçbir zaman haklı bir hareket olamaz.	0	1	2	3	4	5
13) Bence fakir çocuklar miras olarak hiçbir şey alamazken zengin çocukların miras olarak çok para almaları ahlaki olarak yanlıştır.	0	1	2	3	4	5
14) Bir takım oyuncusu olmak birisinin kendisini bireysel olarak ifade etmesinden daha önemlidir.	0	1	2	3	4	5
15) Eğer bir asker olsaydım ve komutanımın emirleriyle aynı fikirde olmasaydım. yine de itaat ederdim çünkü bu benim görevimdir	0	1	2	3	4	5
16) İffet çok önemli ve değerli bir erdemdir.	0	1	2	3	4	5

## APPENDIX D

### PADUA INVENTORY- WASHINGTON STATE UNIVERSITY REVISION (PADUA ENVANTERİ- WASHINGTON DEVLET ÜNİVERSİTESİ REVİZYONU)

Aşağıdaki ifadeler, günlük hayatta herkesin karşılaşabileceği düşünce ve davranışlar ile ilgilidir. Her bir ifade için, bu tür düşünce ve davranışların sizde yaratacağı rahatsızlık düzeyini göz önüne alarak size en uygun olan cevabı seçiniz. Cevaplarınızı aşağıdaki gibi derecelendiriniz:

	0 = Hiç	1 = Biraz	2 = Oldukça	3 = Çok	4 = Çok Fazla
	Hiç	Biraz	Oldukça	Çok	Çok Fazla
1. Paraya dokunduğum zaman ellerimin kirlendiğini hissederim	0	1	2	3	4
2. Vücut sıvıları (ter, tükürük, idrar gibi) ile en ufak bir temasın bile giysilerimi kirleteceğini ve bir şekilde bana zarar vereceğini düşünürüm	0	1	2	3	4
3. Bir nesneye yabancıların yada bazı kimselerin dokunduğunu biliyorsam, ona dokunmakta zorlanırım	0	1	2	3	4
4. Çöplere veya kirli şeylere dokunmakta zorlanırım	0	1	2	3	4
5. Kirlenmekten ya da hastalanmaktan korktuğum için umumi tuvaletleri kullanmakta kaçınırım.	0	1	2	3	4
6. Hastalıklardan veya kirlenmekten korktuğum için umumi telefonları kullanmaktan kaçınırım	0	1	2	3	4
7. Ellerimi gerektiğinden daha sık ve daha uzun süre yıkarım	0	1	2	3	4
8. Bazen kendimi, sırf kirlenmiş olabileceğim ya da pis olduğum düşüncesiyle yıkanmak ya da temizlenmek zorunda hissediyorum	0	1	2	3	4
9. Mikrop bulaşmış veya kirli olduğunu düşündüğüm bir şeye dokunursam hemen yıkanmam veya temizlenmem gerekir	0	1	2	3	4
10. Bir hayvan bana değerse kendimi kirli hissederim ve hemen yıkanmam yada elbiselerimi değiştirmem gerekir	0	1	2	3	4
11. Giyinirken, soyunurken ve yıkanırken kendimi belirli bir sıra izlemek zorunda hissederim	0	1	2	3	4
12. Uyumadan önce bazı şeyleri belli bir sırayla yapmak zorundayım	0	1	2	3	4
13. Yatmadan önce, kıyafetlerimi özel bir şekilde asmalı ya da katlamalıyım	0	1	2	3	4
14. Doğru dürüst yapıldığını düşünemem için yaptıklarımı bir kaç kez tekrarlamam gerekir	0	1	2	3	4



15. Bazı şeyleri gereğinden daha sık kontrol etme eğilimindeyim	0	1	2	3	4
16. Gaz ve su musluklarını, elektrik düğmelerini kapattıktan sonra tekrar tekrar kontrol ederim	0	1	2	3	4
17. Düzgün kapatılıp kapatılmadıklarından emin olmak için eve dönüp kapıları, pencereleri ve çekmeceleri kontrol ederim	0	1	2	3	4
18. Doğru doldurduğumdan emin olmak için formları, evrakları, ve çekleri ayrıntılı olarak tekrar tekrar kontrol ederim	0	1	2	3	4
19. Kibrit, sigara vb'nin iyice söndürüldüğünü görmek için sürekli geri dönerim	0	1	2	3	4
20. Elime para aldığım zaman birkaç kez tekrar sayarım	0	1	2	3	4
21. Mektupları postalamadan önce bir çok kez dikkatlice kontrol ederim	0	1	2	3	4
22. Aslında yaptığımı bildiğim halde, bazen yapmış olduğumdan emin olamam	0	1	2	3	4
23. Okurken, önemli bir şeyi kaçırdığımdan dolayı geri dönmem, ve aynı pasajı iki veya üç kez okumam gerektiği izlenimine kapılırım	0	1	2	3	4
24. Dalgınlığının ve yaptığım küçük hataların felakete sonuçlanacağını hayal ederim	0	1	2	3	4
25. Bilmeden birini incittiğim konusunda çok fazla düşünürüm veya endişelenirim	0	1	2	3	4
26. Bir felaket olduğunu duyduğum zaman onun bir şekilde benim hatam olduğunu düşünürüm	0	1	2	3	4
27. Bazen sebepsiz yere kendime zarar verdiğime veya bir hastalığım olduğuna dair fazlaca endişelenirim	0	1	2	3	4
28. Bıçak, hançer ve diğer sivri uçlu nesnelere gördüğümde rahatsız olur ve endişelenirim	0	1	2	3	4
29. Bir intihar veya cinayet vakası duyduğumda, uzun süre üzülür ve bu konuda düşünmekten kendimi alamam	0	1	2	3	4
30. Mikroplar ve hastalıklar konusunda gereksiz endişeler yaratırım	0	1	2	3	4
31. Bir köprüden veya çok yüksek bir pencereden aşağı baktığımda kendimi boşluğa atmak için bir dürtü hissedirim	0	1	2	3	4
32. Yaklaşmakta olan bir tren gördüğümde, bazen kendimi trenin altına atabileceğimi düşünürüm	0	1	2	3	4
33. Bazı belirli anlarda umuma açık yerlerde kıyafetlerimi yırtmak için aşırı bir istek duyarım	0	1	2	3	4
34. Araba kullanırken, bazen arabayı birinin veya bir şeyin üzerine sürme dürtüsü duyarım	0	1	2	3	4

35. Silah görmek beni heyecanlandırır ve şiddet içeren düşünceleri aklıma getirir	0	1	2	3	4
36. Bazen hiçbir neden yokken bir şeyleri kırma ve zarar verme ihtiyacı hissedirim	0	1	2	3	4
37. Bazen işime yaramasa da. başkalarına ait olan şeyleri çalma dürtüsü hissedirim	0	1	2	3	4
38. Bazen süpermarketten bir şey çalmak için karşı konulmaz bir istek duyarım	0	1	2	3	4
39. Bazen savunmasız çocuklara ve hayvanlara zarar vermek için bir dürtü hissedirim	0	1	2	3	4

**APPENDIX E**  
**DISGUST SCALE-R**  
**(TİKSİNME DUYARLILIĞI ÖLÇEĞİ-REVİZE EDİLMİŞ FORM)**

**Her bir ifadenin sizi ne ölçüde tanımladığını ya da her bir ifadeye ne ölçüde katıldığınızı aşağıda verilen ölçekteki rakamları kullanarak değerlendiriniz ve uygun olan numarayı (0-4 arasında) ilgili maddenin yanındaki boşluğa yazınız.**

**0 = Kesinlikle katılmıyorum (Benim için hiç geçerli değil. %0)**

**1 = Kısmen katılmıyorum (Benim için kısmen geçerli değil)**

**2 = Ne katılıyorum ne katılmıyorum (%50)**

**3 = Kısmen katılıyorum (Benim için kısmen geçerli)**

**4 = Kesinlikle katılıyorum ( Benim için kesinlikle geçerli. %100)**

- \_\_\_ 1. Bazı durumlarda, maymun eti yemeyi deneyebilirim.
- \_\_\_ 2. Fen bilimleri dersinde (Fizik, Kimya, Biyoloji vb) kavanozun içinde bir insan eli görmek beni rahatsız eder.
- \_\_\_ 3. Birinin balgam dolu genzini temizlediğini duymak beni rahatsız eder.
- \_\_\_ 4. Umumi tuvaletlerin oturulacak yerine vücudumun herhangi bir yerinin değmesine asla izin vermem.
- \_\_\_ 5. Mezarlığın içinden geçmemek için yolumu değiştiririm.
- \_\_\_ 6. Bir başkasının evinde hamam böceği görmek beni rahatsız etmez.
- \_\_\_ 7. Ölü bir bedene dokunmak beni son derece rahatsız eder.
- \_\_\_ 8. Kusan birini görürsem midem bulanır.
- \_\_\_ 9. Devamlı gittiğim favori restoranımın aşçısının grip olduğunu öğrenirsem muhtemelen oraya gitmekten vazgeçerim.
- \_\_\_ 10. Protez (takma) göz kullanan birini bu gözü yuvasından çıkarırken görmek beni rahatsız etmez.
- \_\_\_ 11. Parkta yürürken önümden koşarak geçen bir fare görmek beni rahatsız eder.
- \_\_\_ 12. Bir kâğıt parçası yerine bir meyve parçası yemeyi tercih ederim.
- \_\_\_ 13. En sevdiğim çorbanın kullanılmış ancak çok iyi temizlenmiş bir sineklikle

karıştırıldığını biliyorsam. ne kadar aç olursam olayım. o çorbayı içmem.

\_\_\_ 14. Eğer bir gece önce bir adamın kalp krizi nedeniyle. kaldığım odada öldüğünü biliyorsam orada uyumak beni rahatsız eder.

**Lütfen aşağıda verilen durumları ne ölçüde tiksindirici bulduğunuzu aşağıdaki ölçekte yer alan 0 ile 4 arasındaki rakamları kullanarak belirtiniz.**

**0** = Hiç tiksindirici değil

**1** = Çok az tiksindirici

**2** = Kısmen tiksindirici

**3** = Oldukça tiksindirici

**4** = Son derece tiksindirici

\_\_\_ 15. Dışarıdaki çöp kovasının içinde üzeri kurtlanmış bir et parçası gördünüz.

\_\_\_ 16. Elmayı çatal bıçak ile yiyen birini gördünüz.

\_\_\_ 17. Demiryolunun altındaki tünelden geçerken idrar kokusu aldınız.

\_\_\_ 18. Sodayızdan bir yudum aldıktan sonra içtiğiniz bardağın arkadaşınıza ait olduğunu fark ettiniz.

\_\_\_ 19. Arkadaşınızın ölü kedisini çıplak elinizle tutmak zorundasınız.

\_\_\_ 20. Vanilyalı dondurma üzerine ketçap döküp yiyen birini gördünüz.

\_\_\_ 21. Bir kaza sonrası bağırsakları dışarı çıkmış birini gördünüz.

\_\_\_ 22. Arkadaşınızın iç çamaşırını haftada sadece bir kez değiştirdiğini öğrendiniz.

\_\_\_ 23. Arkadaşınız size köpek kakası şeklinde yapılmış bir parça çikolata ikram etti.

\_\_\_ 24 Yakılarak defnedilecek bir ölünün küllerine yanlışlıkla dokundunuz.

\_\_\_ 25. Bir bardak sütü içmek üzereyken sütün bozulmuş olduğunu anladığınız.

\_\_\_ 26. Cinsel eğitim dersinde. yeni açılmış bir (kayganlaştırıcısız) prezervatifi ağzınızla şişirmeniz gerekti.

\_\_\_ 27. Çıplak ayakla betonda yürürken bir solucana bastınız.

## APPENDIX F

**CONTAMINATIONS AND COGNITIONS SCALE  
(BULAŞMA/ KİRLENME BİLİŞLERİ ÖLÇEĞİ)**

Yönerge: Aşağıda bir dizi nesne ismi bulunmaktadır. Lütfen listede yer alan her bir nesneyi okuyun ve bu nesneye dokunduğunuzu ve ardından elinizi yıkama imkânınızın olmadığını hayal edin. Daha sonra her bir nesne için şu iki soruyu cevaplandırın:

**(9) Bu nesneye dokunduğunuzda size bir şey bulaşma/kirlenme olasılığı nedir?** Lütfen cevabınızı belirtmek için aşağıdaki ölçeğe uygun olarak 0-100 arasında bir değer verin:

0	10	20	30	40	50	60	70	80	90	100
Hiç mümkün					Kısmen					Son Derece
Değil					Mümkün					Mümkün

**(2) Bu nesneye dokunduğunuzda gerçektende size bir şey bulaşmışsa bu durum sizin için ne kadar kötü olabilir?** Lütfen cevabınızı belirtmek için aşağıdaki ölçeğe uygun olarak 0-100 arasında bir değer verin:

0	10	20	30	40	50	60	70	80	90	100
Hiç Kötü					Kısmen					Son Derece
Değil					Kötü					Kötü

Nesne	Bu nesneye dokunduğunuzda size bir şey bulaşma olasılığı (0-100 ölçeği)	Eğer gerçektende size bir şey bulaşmışsa bu durum ne kadar kötü olabilir? (0-100 ölçeği)
1. Umumi bir tuvaletteki kapı kolu		
2. Umumi bir tuvaletteki oturulacak yer		
3. Umumi bir tuvaletteki musluk		
4. Umumi yerlerdeki kapı kolları		
5. Herkesin kullanımına açık araç ve gereçler (örneği kütüphanedeki masalar, sandalyeler, bilgisayarlar vb.)		
6. Herkesin kullanımına açık telefon ahizeleri		
7. Merdiven korkulukları/tırabzanları		
8. Asansör düğmeleri		
9. Hayvanlar		
10. Çiğ et		

11. Para		
12. Yıkanmamış ürünler (örn: sebze meyve gibi)		
13. Başkalarının dokunduğu yiyecekler		

## APPENDIX G

**OBSSESSIVE BELIEFS QUESTIONNAIRE  
(OBSESİF İNANIŞLAR ÖLÇEĞİ)**

Bu ankette, insanların zaman zaman takındıkları bir dizi tutum ve inanış sıralanmıştır. Her bir ifadeyi dikkatlice okuyunuz ve ifadeye ne kadar katılıp katılmadığınızı belirtiniz.

*Her bir ifade için, nasıl düşündüğünüzü en iyi tanımlayan cevaba karşılık gelen rakamı seçiniz. İnsanlar birbirinden farklı olduğu için envanterde doğru veya yanlış cevap yoktur.*

*Sunulan ifadenin, tipik olarak yaşama bakış açınızı yansıtır yansıtmadığına karar vermek için sadece çoğu zaman nasıl olduğunuzu göz önünde bulundurunuz.*

Derecelendirme yaparken, ölçekteki orta değeri işaretlemekten (4) kaçınmaya çalışınız; bunun yerine, inanış ve tutumlarınızla ilgili ifadeye genellikle katılıp katılmadığınızı belirtiniz.

1	2	3	4	5	6	7	
Kesinlikle Katılmıyorum	Katılmıyorum	Biraz Katılmıyorum	Ne katılıyorum Ne katılmıyorum	Biraz Katılıyorum	Katılıyorum	Tamamen Katılıyorum	
1. Sıklıkla çevremdeki şeylerin tehlikeli olduğunu düşünürüm	1	2	3	4	5	6	7
2. Bir şeyden tamamıyla emin değilsem, kesin hata yaparım	1	2	3	4	5	6	7
3. Benim standartlarıma göre, her şey mükemmel olmalıdır	1	2	3	4	5	6	7
4. Değerli biri olmam için yaptığım her şeyde mükemmel olmalıyım	1	2	3	4	5	6	7
5. Herhangi bir fırsat bulduğumda, olumsuz şeylerin gerçekleşmesini önlemek için harekete geçmeliyim	1	2	3	4	5	6	7
6. Zarar verme/görme olasılığı çok az olsa bile, ne yapıp edip onu engellemeliyim	1	2	3	4	5	6	7
7. Bana göre, kötü/uygunsuz dürtülere sahip olmak aslında onları gerçekleştirmek kadar kötüdür	1	2	3	4	5	6	7
8. Bir tehlikeyi önceden görmeme karşın bir harekette bulunmazsam, herhangi bir sonuç için suçlanacak kişi konumuna ben düşerim	1	2	3	4	5	6	7
9. Birşeyi mükemmel biçimde yapamayacaksam hiç yapmamalıyım	1	2	3	4	5	6	7
10. Her zaman sahip olduğum tüm potansiyelimi kullanmalıyım	1	2	3	4	5	6	7
11. Benim için, bir durumla ilgili tüm olası sonuçları düşünmek çok önemlidir	1	2	3	4	5	6	7
12. En ufak hatalar bile, bir işin tamamlanmadığı anlamına gelir	1	2	3	4	5	6	7
13. Sevdiğim insanlarla ilgili saldırgan düşüncelerim veya dürtülerim varsa, bu gizlice onları incitmeyi istediğim anlamına gelir	1	2	3	4	5	6	7
14. Kararlarımdan emin olmalıyım	1	2	3	4	5	6	7
15. Her türlü günlük aktivitede, zarar vermeyi engellemede başarısız olmak kasten zarar vermek kadar kötüdür	1	2	3	4	5	6	7
16. Ciddi problemlerden (örneğin, hastalık veya kazalar) kaçınmak benim açımdan sürekli bir çaba gerektirir	1	2	3	4	5	6	7

17. Benim için, zararı önlememek zarar vermek kadar kötüdür	1	2	3	4	5	6	7
18. Bir hata yaparsam üzüntülü olmalıyım	1	2	3	4	5	6	7
19. Diğerlerinin, kararlarım veya davranışlarımdan doğan herhangi bir olumsuz sonuçtan korunduğundan emin olmalıyım	1	2	3	4	5	6	7
20. Benim için, herşey mükemmel olmazsa işler yolunda sayılmaz	1	2	3	4	5	6	7
21. Müstehcen düşüncelerin aklımdan geçmesi çok kötü bir insan olduğum anlamına gelir	1	2	3	4	5	6	7
22. . İlave önlemler almazsam, ciddi bir felaket yaşama veya felakete neden olma ihtimalim, diğer insanlara kıyasla daha fazladır	1	2	3	4	5	6	7
23. Kendimi güvende hissetmek için, yanlış gidebilecek herhangi bir şeye karşı olabildiğince hazırlıklı olmalıyım	1	2	3	4	5	6	7
24. Tuhaf veya iğrenç düşüncelerim olmamalı	1	2	3	4	5	6	7
25. Benim için, bir hata yapmak tamamen başarısız olmak kadar kötüdür	1	2	3	4	5	6	7
26. En önemsiz konularda bile herşey açık ve net olmalıdır	1	2	3	4	5	6	7
27. Din karşıtı bir düşünceye sahip olmak, kutsal şeylere karşı saygısız davranmak kadar kötüdür	1	2	3	4	5	6	7
28. Zihnimdeki tüm istenmeyen düşüncelerden kurtulabilmeliyim	1	2	3	4	5	6	7
29. Diğer insanlara kıyasla, kendime veya başkalarına kazara zarar vermem daha muhtemeldir	1	2	3	4	5	6	7
30. Kötü düşüncelere sahip olmak tuhaf veya anormal biri olduğum anlamına gelir	1	2	3	4	5	6	7
31. Benim için önemli olan şeylerde en iyi olmalıyım	1	2	3	4	5	6	7
32. İstenmeyen bir cinsel düşünce veya görüntünün aklıma gelmesi onu gerçekten yapmak istediğim anlamına gelir	1	2	3	4	5	6	7
33. Davranışlarımdan olası bir aksilik üzerinde en küçük bir etkisi varsa sonuçtan ben sorumluyum demektir	1	2	3	4	5	6	7
34. Dikkatli olsam da kötü şeylerin olabileceğini sıklıkla düşünürüm	1	2	3	4	5	6	7
35. İstenmeyen biçimde zihnimde beliren düşünceler, kontrolü kaybettiğim anlamına gelir	1	2	3	4	5	6	7
36. Dikkatli olmadığım takdirde zarar verici hadiseler yaşanabilir	1	2	3	4	5	6	7
37. Birşey tam anlamıyla doğru yapılmaya kadar üzerinde çalışmaya devam etmeliyim	1	2	3	4	5	6	7
38. Şiddet içerikli düşüncelere sahip olmak, kontrolü kaybedeceğim ve şiddet göstereceğim anlamına gelir	1	2	3	4	5	6	7
39. Benim için bir felaketi önlemekte başarısız olmak ona sebep olmak kadar kötüdür	1	2	3	4	5	6	7
40. Bir işi mükemmel biçimde yapmazsam insanlar bana saygı duymaz	1	2	3	4	5	6	7



41. Yaşamımdaki sıradan deneyimler bile tehlike doludur	1	2	3	4	5	6	7
42. Kötü bir düşünceye sahip olmak, ahlaki açıdan kötü bir şekilde davranmaktan çok da farklı değildir	1	2	3	4	5	6	7
43. Ne yaparsam yapayım, yaptığım iş yeterince iyi olmayacaktır	1	2	3	4	5	6	7
44. Düşüncelerimi kontrol edemezsem cezalandırılırim	1	2	3	4	5	6	7

**APPENDIX H**  
**DEMOGRAPHIC INFORMATION FORM**  
**(DEMOGRAFİK BİLGİ FORMU)**

**Yönerge:** Sizden. diğer ölçekleri cevaplandırmadan önce öncelikle aşağıda kişisel bilgilerinizle ilgili olan soruları cevaplandırmanızı rica ediyoruz. Lütfen bu soruları sizi en iyi ifade eden sayıyı yuvarlak içine alarak cevaplayınız.

**Cinsiyetiniz:**  Erkek  Kadın

**Yaşınız:** \_\_\_\_\_ (yıl olarak)

**Medeni Durumunuz:**

(1) Bekar (2) Evli/Birlikte Yaşıyor (3) Ayrılmış/ Boşanmış (4) Dul

**Hayatınızda en uzun süreyle hangi sosyo-ekonomik dilimde yer aldınız? (birini işaretleyiniz)**

Üst sınıf \_\_\_ Üst-Orta sınıf \_\_\_ Orta Sınıf \_\_\_ Düşük-Orta Sınıf \_\_\_ Düşük Sınıf \_\_\_

**Şimdiki sosyo-ekonomik düzeyiniz nedir (birini işaretleyiniz)?**

Üst sınıf \_\_\_ Üst-Orta Sınıf \_\_\_ Orta Sınıf \_\_\_ Düşük-Orta Sınıf \_\_\_ Düşük Sınıf \_\_\_

**Eğitim Seviyeniz**

- Okuryazar
- İlkokul mezunu
- İlköğretim mezunu (ilkokul ve ortaokul)
- Lise Mezunu
- Yüksekokul Mezunu
- Üniversite Öğrencisi
- Üniversite mezunu
- Lisansüstü Öğrencisi
- Lisansüstü Mezunu

**Aşağıdakilerden hangisi sizin dini/inanç sisteminizi en iyi ifade etmektedir?**

- Tanrı'ya inanmam (Ateistim)
- Tanrı'ya inanıyor ama bir dini tercih etmiyorum
- Müslümanım
- Diğer \_\_\_\_\_

**Kendinizi dindar/inanan biri olarak nitelendirir misiniz?**

1-----2-----3-----4-----5-----6-----7  
 Hiç dindar Orta Çok

**Hangi sıklıkla camiye dini toplantılara gidersiniz?**

- 1-Asla
- 2-Senede bir defa veya daha az
- 3-Senede birkaç defa
- 4-Ayda birkaç defa
- 5-Haftada bir
- 6-Haftada birden fazla

**Hangi sıklıkla dua etme ve Kur'an-ı Kerim veya diğer kutsal kitapları okuma gibi özel dini aktiviteler için zaman harcarsınız?**

- 1-Hiç veya çok az
- 2-Senede birkaç defa
- 3-Ayda birkaç defa
- 4-Haftada birkaç defa
- 5-Günde bir defa
- 6-Günde birden fazla

**Aşağıdaki dört ifadeden her biri sizi tanımlamak için ne kadar doğrudur?**

- 1-Kesinlikle yanlış
- 2-Biraz yanlış
- 3-Ne doğru ne yanlış
- 4-Biraz doğru
- 5-Kesinlikle doğru

1. Hayatımda kutsal olan yaratıcının varlığını hissediyorum	1	2	3	4	5
2. Dini inançlarım hayata tamamen nasıl yaklaştığımı belirler.	1	2	3	4	5
3. Dinimi hayatımda yaptığım her şeyin içinde bulundurmak için çok gayret ederim.	1	2	3	4	5
4. Dini inancım davranış ve kararlarımı belirlemede önemli bir rol oynar.	1	2	3	4	5

**Politik görüşünüz aşağıdaki kategorilerden hangisine daha yakındır? (lütfen sadece en yakın olduğunuz "bir" seçeneği işaretleyin)**

- Anarşist      Ülkücü      Sosyal Demokrat      Kemalist      Marksist  
Muhafazakar      Demokrat      Sosyalist      Komünist      Milliyetçi  
Liberal      Şeriatçı  
Apolitik      Diğer(lütfen belirtiniz)\_\_\_\_\_

**Seçtiğiniz politik görüşünüzü nerede konumlandırırsınız?**

1-----2-----3-----4-----5-----6-----7  
Aşırı sol Orta Aşırı sağ

**Şu anda sizi profesyonel bir yardım almaya yönlendiren ruh sağlığınızla ilgili bir probleminiz oldu mu?**

EVET

HAYIR

**APPENDIX I**  
**PARTICIPANT APPROVAL FORM**  
**(KATILIMCI ONAY FORMU)**

**ONAM FORMU**

Araştırmanın Adı : Tikslenme Duygusu ve Kişisel Özellikler  
Araştırmacı : Dilara Fatma Alcan & Yrd. Doç. Dr. Ekin Eremsoy

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Dilara Fatma Alcan & Yrd. Doç. Dr. Ekin Eremsoy tarafından yürütülmekte olan bu proje, bireylerin tikslenme duygusu ile bazı kişisel özellikleri arasındaki ilişkiyi incelemeyi amaçlamaktadır.

Bu çalışmada, sizden duygu durumunuzu, davranışlarınızı ve düşüncelerinizi değerlendirmenize yönelik bir dizi ölçeği doldurmanız istenecektir.

Çalışmanın tamamı yaklaşık 40 dakika sürmektedir ve katılımınız karşılığında Psikoloji Bölümü derslerinin birinden (tercih ettiğiniz) bir puan kazanacaksınız. Bu çalışmada vermiş olduğunuz tüm cevaplar tamamen gizlidir ve sadece bu araştırmanın kapsamı içinde kullanılacaktır. Tüm veriler, size verilecek bir katılımcı kodu ile girilecek, hiç bir yerde kimliğinize ilişkin herhangi bir bilgi sorulmayacaktır. Ayrıca, isminizi ya da imza gibi kimliğinizi belirtecek herhangi bir bilgiyi bu onam formu dışındaki hiçbir yazılı forma yazmamalısınız. Bu çalışmadan herhangi bir neden belirtmeksizin istediğiniz an çekilebilirsiniz. Çalışmadan çekilmeniz durumunda herhangi bir cezai yaptırımla karşılaşmayacaksınız ve yine de katılım puanı alacaksınız.

Bu çalışma ile ilgili herhangi bir endişeniz ya da sorunuz olursa bu projenin araştırmacısı olan Dilara Fatma Alcan (dilaralcan@gmail.com) Yrd. Doç. Dr. Ekin Eremsoy (1249 ya da eeremsoy@dogus.edu.tr) ile iletişim kurabilirsiniz.

Eğer bu çalışmaya katılmayı istiyorsanız, lütfen aşağıdaki onay formunu okuyarak imzalayınız.

Dilara Fatma Alcan ve Yrd. Doç. Dr. Ekin Eremsoy tarafından yürütülmekte olan bu çalışmaya katılmayı kabul ediyorum. Bilgi-Onam metnini okudum ve bu çalışmaya katılmakla ilgili olarak sormak istediğim soruları araştırmacının kendisine ya da asistanına sorarak öğrenme fırsatım olduğunu biliyorum. Çalışmadan herhangi bir neden belirtmeksizin istediğim her aşamada çekilebileceğimi biliyorum. Herhangi bir gerekçe ile bilgi almak istediğimde araştırmacılara başvurabileceğim konusunda bilgilendirildim.

*Eđer bu bilgiler doęrultusunda arařtırmaya katılmak istiyorsanız. lütfen Onam Formunu imzalayınız.*

Katılımcının Adı-Soyadı (lütfen yazınız): \_\_\_\_\_

Katılımcının İmzası: \_\_\_\_\_

Tarih: \_\_\_\_\_

Kredi istenen dersin kodu: \_\_\_\_\_

*Arařtırma projesine vermiş olduęunuz destek ve yardım için teřekkür ederiz.*

**APPENDIX J**  
**CURRICULUM VITAE**

Surname, Name : Alcan, Dilara Fatma

Date and Place of Birth : 27 March 1989, Istanbul.

**EDUCATION**

2012-present: Dogus University- Istanbul, Turkey

M.A. in Psychology

(TUBITAK 2210 Scholarship for Masters)

2007-2012: Bilgi University-Istanbul, Turkey

B. A. in Psychology

(TUBITAK 2202 Scholarship for Social Sciences)

**INTERNSHIPS**

2013-2014: Dogus University Psychology Education Centre

2014: Erenköy Ruh ve Sinir Hastalıkları Hastanesi

2010-2013: Bahçelievler Society of Protection for Children

2012: Çocuklara Yeniden Özgürlük Vakfı

2011: Aura Psychotherapy Centre

2011: Kanserli Çocuklara Umut Vakfı

2010: Cerrahpaşa Psychiatry Polyclinic

PUBLICATION

Alcan, D., F., Ata, S., Tan, E., Yılmaz, M., Yaşar, B. ve Eremsoy, E. (2013). *Ottawa Kendine Zarar Verme Envanterinin Türkçe'ye Standardizasyonu ve Psikometrik Çalışmaları*. Paper presented at the Işık Savaşır Clinical Psychology Symposium, İstanbul.