

THE RELATIONSHIPS BETWEEN CYBER BULLYING PERPETRATION
MOTIVES AND PERSONALITY TRAITS: TESTING USES AND
GRATIFICATIONS THEORY

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ABSTRACT

THE RELATIONSHIPS BETWEEN CYBER BULLYING PERPETRATION MOTIVES AND PERSONALITY TRAITS: TESTING USES AND GRATIFICATIONS THEORY

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This study aimed to examine the interplay between personality traits (online disinhibition, moral disengagement, narcissism and aggression) and cyber bullying perpetration motives (entertainment, revenge, harm and dominance). A structural equation model which was built in accordance with the *Uses and Gratifications Theory* was tested. Cyber bully-victims ($n= 598$) were the participants who were university students (61.3% were males) attending state universities and ranging in age from 17 to 27. Data collection instruments were Revised Cyber Bullying Inventory for University Students, Cyber bullying Perpetration Motives Scale, Online Disinhibition Scale, Propensity to Morally Disengage Scale, 16-items Narcissistic Personality Inventory, 12-item Aggression Questionnaire besides a demographic information form.

The tested model provided empirical support for the applicability of the *Uses and Gratifications Theory* as a theoretical framework in understanding cyber bullying perpetration. According to the results of the structural equation model test, online disinhibition was the single personality trait variable to be related to cyber bullying others for entertainment. Moral disengagement and aggression were the two variables associated with the revenge motive of cyber bullying perpetration. While moral

disengagement and aggression were positively linked with cyber bullying others for harm, online disinhibition was negatively related to the harm motive of cyber bullying perpetration. Moral disengagement and narcissism were the two personality trait variables associated with the dominance motive of cyber bullying perpetration. Results were discussed in the light of the existing literature, and implications for theory, research, practice and policy were presented in addition to the recommendations for the future studies.

Keywords: cyber bullying perpetration motives, personality traits, uses and gratifications theory, university students, structural equation model test

ÖZ

SİBER ZORBALIK YAPMA MOTİVLERİ İLE KİŞİLİK ÖZELLİKLERİ ARASINDAKİ İLİŞKİLER: KULLANIMLAR VE DOYUMLAR KURAMINI TEST ETME

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Bu çalışmanın amacı, kişilik özellikleri (çevrimiçi disinhibisyon, ahlaki değerlerden soyutlanma, narsisizm ve saldırganlık) ve siber zorbalık yapma motivleri (eğlenme, öç alma, zarar verme ve üstünlük kurma) arasındaki ilişkileri incelemektir. Bu amaca yönelik olarak *Kullanımlar ve Doyumlar Kuramı*'nı temel alan bir Yapısal Eşitlik Modeli (YEM) oluşturulup test edilmiştir. Bu araştırmanın katılımcıları, siber zorba-mağdur olduklarını raporlayan, yaşları 17 ile 27 arasında değişen 598 devlet üniversitesi öğrencisidir. Katılımcıların % 61.3'ü erkektir. Üniversite Öğrencileri için Yenilenmiş Siber Zorbalık Envanteri, Siber Zorbalık Yapma Motivleri Ölçeği, Çevrimiçi Disinhibisyon Ölçeği, Ahlaki Değerlerden Soyutlanma Eğilimi Ölçeği, 16 maddeli Narsistik Kişilik Envanteri, 12 maddeli Saldırganlık Ölçeği ve demografik bilgi formu veri toplama aracı olarak kullanılmıştır.

Test edilen model, *Kullanımlar ve Doyumlar Kuramı*'nın siber zorbalık yapma davranışlarını kuramsal olarak açıklayabileceğini amprik olarak desteklemiştir. YEM analizi sonuçlarına göre, çevrimiçi disinhibisyon, eğlenme amacıyla siber zorbalık yapma davranışıyla ilişkili tek kişilik özelliğidir. Ahlaki değerlerden soyutlanma ve

saldırganlığın ise  almak iin siber zorbalık yapma davranıřıyla iliřkili olduėu bulunmuřtur. Ahlaki deėerlerden soyutlanma ve saldırganlığın, zarar vermek iin siber zorbalık yapma davranıřıyla pozitif ynde ama evirimii disinhibisyon kiřilik zelliėiyle negatif ynde iliřkili olduėu bulunmuřtur. Ahlaki deėerlerden soyutlanma ve narsisizm, stnlk kurmak iin siber zorbalık yapma davranıřıyla iliřkili olduėu bulunmuřtur. Arařtırmanın sonuları ilgili alan yazın ıřıėında tartıřılıp sonuların kurama, arařtırmaya, uygulamaya ve politika geliřtirmeye ynelik katkıları aıklanmıřtır. Ayrıca, ileride yapılacak alıřmalar iin nerilerde bulunulmuřtur.

Anahtar Kelimeler: siber zorbalık yapma motivleri, kiřilik zellikleri, kullanımlar ve doyumlar kuramı, niversite ėrencileri, yapısal eřitlik modeli

Özgecan Aslan'a...

Ve şiddete/ zorbalığa maruz kalıp acı çekmiş tüm insanlara...

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CHAPTER I

INTRODUCTION

Starting with the background of the study, the purpose of the study, the significance of the study and the definition of the terms were respectively introduced in this chapter.

1.1 Background of the Study

Due to the proliferation and the high usage frequency of the information and communication technologies, young individuals have begun to experience an online type of aggression, called cyber bullying. Cyber bullying is defined as ‘any behavior performed through electronic or digital media by individuals or groups that repeatedly communicates hostile or aggressive messages intended to inflict harm or discomfort on others’ (Tokunaga, 2010, p. 278). Cyber bullying has been a concerning global issue commonly experienced by the children and the youth across different countries such as Austria (Gradinger, Strohmeier, & Spiel, 2010), Australia (Campbell, Spears, Slee, Butler, & Kift, 2012), Canada (Bonanno & Hymel, 2013), England (Marczak & Coyne, 2010), Greece (Kokkinos, Antoniadou, & Markos, 2014), Ireland (O’Moore, 2012), Malaysia (Balakrishnan, 2015), Netherlands (Kerstens & Stol, 2014), Spain (Del Rey, Elipe, & Ortega-Ruiz, 2012), Sweden (Laftman, Modin, & Östberg, 2013), and the United States (Bauman & Newman, 2013).

Despite the differences in involvement rates, about 20 to 40 percent of the young people were reported to have been involved in cyber bullying (Patchin & Hinduja, 2012; Tokunaga, 2010). The researchers have traditionally identified three groups regarding cyber bullying involvement (e.g., Arıcak, 2009; Kokkinos et al., 2014; O’Moore, 2012).

The first one is the '*pure cyber bullies*' who bullied others online but never became a cyber victim. The second group is the '*pure cyber victims*' who were victimized online but never cyber bullied others. The last group is the '*cyber bully-victims*' who not only cyber bullied others but were also victimized online. Besides these three groups, '*non-involved*' who neither cyber bullied others nor were never cyber victimized are identified by the cyber bullying researchers making comparisons between the *non-involved* and the other three groups.

Identification of the three groups involved in cyber bullying as pure bully, pure victim or bully-victim is important to the cyber bullying research for some aspects. To begin with, the nature of cyber bullying behavior requires two parties, one of which is the doer of the conduct (bully) and the other one is receiver of the conduct (victim). Some individuals however act as both doers and receivers (bully-victims) at the same time. Therefore, such identification helps the cyber bullying researchers conceptualize cyber bullying in its naturally existing form. Moreover, given that individuals differ in their roles in involvement of cyber bullying, similarities and differences can be expected between the groups. If research can unravel how these groups resemble to each other and/ or differ from each other, more efficient prevention and intervention programs can be performed against cyber bullying. In addition, if the distinctive individual characteristics of the pure cyber bullies, pure cyber victims or cyber bully-victims are known better, more accurate predictions can be made about the likelihood of an individual behaving as a bully, victim or bully-victim. By this way, specific prevention and intervention programs can be offered by professionals to help each group.

The role of gender and age in cyber bullying involvement as a bully or victim was questioned by the researchers, and mixed findings were reported. While males were mostly found as cyber bullies, females were frequently reported as being the cyber victims (e.g., Slonje & Smith, 2008; Wong, Chan, & Cheng, 2014). Some others reported females cyber bullied others more than males (Keith & Martin, 2005; Smith et al., 2008). On the other hand, some researchers claimed that no gender difference was

present with regards to cyber bullying involvement (e.g., Williams & Guerra, 2007; Ybarra & Mitchell, 2004a).

Similarly, the research reported mixed results about age. For instance, according to Sakellariou, Carroll, and Houghton (2012), junior secondary (grade 8-10) and senior secondary (grade 11-12) school students cyber bullied others more than the primary school students (grade 6-7) by e-mail, SMS, electronic images and Internet. Junior secondary school students, however, were more cyber victimized via SMS compared to the students from junior senior secondary school and primary school. These results suggested that junior secondary school students were more involved in cyber bullying compared to the primary school students and the senior secondary school students. On the other hand, Williams and Guerra (2007) found that while 5th grade students were the least cyber victimized group as the cyber victimization peaked at grade 8, and high school students' involvement were relatively less than all other age groups. When the findings of another study were taken into account, no significant age differences could be detected in cyber bullying perpetration among 6th, 7th and 8th graders (Wang, Iannotti, & Nansel, 2009). Similarly, Tokunaga (2010) could not identify any significant age differences in his review about cyber bullying victimization. Albeit these contradictions about cyber bullying experiences in different ages, the fact that cyber bullying experiences are not limited to age is obvious. The extant studies have substantial evidence showing that a wide range of age groups are involved in cyber bullying ranging from elementary school (DePaolis & Williford, 2014), middle school (Rice et al., 2015), high school (Udris, 2014) to university (Francisco, Simao, Ferreira, & das Dores Martins, 2015).

Convincing evidence has been accumulated about the linkage between cyber victimization and experiencing individual, relationship or school-related difficulties. The past research has indicated that regardless of age, being a victim was associated with psychological, mental, physical and/ or academic problems (e.g., Chang et al., 2013; Crosslin & Crosslin, 2014; Faucher, Jackson, & Cassidy, 2014; Laftman et al., 2013;

Smith & Yoon, 2013). Cyber victims have been the main research focus of most of the extant cyber bullying literature (e.g., Bastiaenssens et al., 2014; DePaolis & Williford, 2014; Topcu, 2014). This trend has happened probably because cyber victims have been supposed to be the ones more likely in agony. Yet, bullies may not be immune from the harms of cyber bullying. Recent investigations have provided significant proof regarding the relationship between being a cyber bully and experiencing negative outcomes. More specifically, cyber bullies, compared to the non-involved, scored higher on poor mental health, poor psychological well-being, problems of interpersonal relationships in addition to the poor academic success at school (Campbell, Slee, Spears, Butler, & Kift, 2013; Schenk, Fremouw, & Keelan, 2013). Therefore, focusing on cyber bullies is important in obtaining a deeper understanding about cyber bullying perpetration.

Thus far, some theories were suggested to shed light on cyber bullying. In 2005, Li mentioned about the *Theory of Planned Behavior* to conceptualize cyber bullying, but how this theory was applied to the research was not clarified. Later on, researchers have designed and tested theoretical frameworks. For instance, by employing a *General Strain Theory* approach, researchers have suggested that difficulties, tensions or inabilities that individuals experience may explain why individuals are involved in cyber bullying (Hay, Meldrum, & Mann, 2010; Jang, Song, & Kim, 2014; Patchin & Hinduja, 2011). Some other researchers have considered *Routine Activities Theory* (Navarro & Jasinski, 2012) and claimed that motivated offenders, appropriate targets, and nonexistence of guardianship can explain cyber bullying. *Theory of Reasoned Action* (Doane, Pearson, & Kelley, 2014) and *Theory of Planned Behavior* also formed the theoretical base of some other studies (Heirman, Walrave, 2012; Pabian & Vandebosch, 2014) by taking individuals' behavioral intentions and attitude into consideration while explaining cyber bullying.

The above mentioned theories have focused on the role of experiencing tensions or inabilities, appropriate targets and nonexistence of guardianship, and individuals' behavioral intentions and attitudes to reach a theoretical understanding about cyber

bullying so far. Understanding the underlying motives can also help to provide a theoretical explanation about cyber bullying. If we know why individuals cyber bully others, we can obtain some fundamental clues about the nature of the cyber bullying behaviors. Nonetheless, in their theoretical reasoning about cyber bullying behavior, the existent theories have not considered what motives individuals cyber bully others. For this reason, some other theoretical frameworks were considered by the researcher of this investigation to achieve a theoretical explanation about cyber bullying perpetration.

Originally being a communication/ media theory, the *Uses and Gratifications Theory* (UGT) (Blumler & Katz, 1974) is a theoretical framework to explore why and how individuals use communication media to gratify certain needs. The UGT claims that users are active and intentional in preference and their usage of certain communication media. Thus, users decide on which communication media to prefer to fulfill their needs to attain gratification. Three basic principles are present for the UGT; (a) individuals are goal-oriented while using communication media, (b) individuals are active in their communication media usage, (c) individuals are conscious of their motives/ needs, and intentionally choose some ICTs to gratify needs/ motives (Alonzo & Aiken, 2004; Ruggiero, 2000). In addition to these main principles, personality traits of the individuals have an essential role in the UGT.

Uses and Gratifications Theory (UGT) (Blumler & Katz, 1974) was considered in this present investigation as the theoretical framework in understanding cyber bullying perpetration behavior. Based on this theory, three basic principles are adapted for this study; (a) individuals are goal-oriented while using ICTs, (b) individuals are active in their ICT usage, (c) individuals are conscious of their motives/ needs, and intentionally choose some ICTs to gratify needs/ motives (Alonzo & Aiken, 2004; Ruggiero, 2000). This logic behind the *UGT* seems quite relevant to cyber bullying research. Being aware of the opportunities of the cyber platforms, individuals can be considered as actively and purposefully choosing cyber bullying to display their aggression. In fact, peer bullies were found to have been the same people who engaged in cyber bullying (Dempsey,

Sulkowski, Dempsey, & Storch, 2011; Tanrikulu & Campbell, 2015), and young individuals were reported consciously cyber bullying peers (Pettalia, Levin, & Dickinson, 2013). Therefore, based on *UGT*, this current study assumes that cyber bullies are active and goal-oriented individuals, and they willfully choose cyber environments to bully others.

Besides these main principles, personality traits of the individuals are important for *UGT*. This is because personality traits affect the individual motives which then impact the gratifications sought from a behavior (Alonzo & Aiken, 2004). Aiming to establish a theoretical framework to flaming motives in the light of *UGT*, Alonzo and Aiken (2004) found that personality traits played an important role in flaming others online. Flaming behavior is one of the subcategories of cyber bullying behaviors which include swearing at others, obscenity in addition to insulting others (Baas, de Jong, & Drossaert, 2013; Li, 2007; Willard, 2007). Based on the findings of Alonzo and Aiken (2004), *UGT* appears to be applicable in understanding cyber bullying perpetration behaviors as well. Hence, *UGT* guided this research as the theoretical framework to understand cyber bullying perpetration behavior.

The hypothetical model of this current research was based on *Uses and Gratifications Theory*. While building up the model, the cyber bullying perpetration motives were initially reviewed and decided. Then, the personality traits of the cyber bullies which were considered to be related to the pre-identified motives of cyber bullying were reviewed and decided. Therefore, while the selection procedure cyber bullying perpetration motives was initially presented below, the decision procedure about the personality traits of the cyber bullies were given next.

What motivates individuals to cyber bully others? Several motives were reported about cyber bullying perpetration. Entertainment (having fun, or relieving boredom), dominance (establishing power and status), revenge, harm, easiness, anonymity, disliking the victim were among the most reported motives of cyber bullying

perpetration (Compton, Campbell, Mergler, 2014; Englander, 2008; Fluck, 2014; Gradinger, Strohmeier, & Spiel, 2011; Mishna, Cook, Gadalla, Daciuk, & Solomon, 2010; Rafferty & Vander Ven, 2014; Vandebosch & Van Cleemput, 2008; Topcu, Yıldırım, & Erdur-Baker, 2013; Zhou et al., 2013). In addition to these motives, interpersonal problems (Akbulut & Erişti, 2011), inability to see the victim and avoiding from adult punishment (Englander, 2008; Compton et al., 2014), acceptance to a social group (Gradinger et. al., 2011), cyber sanctioning (Rafferty & Vander Ven, 2014), succorance and a response or defense against inferiority (Johnston et al., 2014), demonstrating technological skills (Vandebosch & Van Cleemput, 2008), social popularity (Yaman & Peker, 2012) as well as attracting attention and looking cool (Zhou et al., 2013) were the other cyber bullying perpetration motives.

To decide on which motives to inspect in this present study, the definitional criteria of cyber bullying were initially taken into consideration since the main cyber bullying perpetration motives were already provided by the definitions. The studies assessing the definitional criteria in cyber bullying unanimously agreed that *the intent to harm others* and establishing *power and status (domination)* are two basic criteria of cyber bullying (Dooley, Pyzalski, & Cross, 2009; Hinduja & Patchin, 2008; Kuhlman, Pieschl, & Porsch, 2013; Langos, 2012; Menesini et al., 2012; Nocentini et al., 2010; Vandebosch & Van Cleemput, 2008). In a consistent manner, young people confirmed these two criteria by reporting that harming and dominating others were among their main reasons for cyber bullying others (Mishna et al., 2010; Pettalia et al., 2013; Rafferty & Vander Ven, 2014; Talwar, Gomez-Garibello, Shariff, 2014; Topcu et al., 2013). Therefore, harming others and domination were decided to be included as the two motives to be explored in this present research. In addition to the intent to harm others and the power imbalance, cyber bullies reported that they bullied their previous perpetrator/s as their victim (Dehue, Bolman, & Völlink, 2008; König, Gollwitzer, & Steffgen, 2010). That is, individuals wanted to take revenge by cyber bullying the perpetrators who formerly victimized themselves. *Revenge* as a motive of cyber bullying perpetration was confirmed by the previous studies as well (e.g., Shapka & Law, 2013; Topcu et al.,

2013; Zhou et al., 2013). For these reasons, revenge as an additional motive of cyber bullying perpetration was included into this study. As a further motive of cyber bullying perpetration, *entertainment* has been continuously reported as one of the chief motives of cyber bullying perpetration by almost all researchers (e.g., Baas et al., 2013; Englander, 2008; Gradinger et al., 2011; Rafferty & Vander Ven, 2014). Taking the previous studies into consideration, entertainment was included in this research as the last motive of cyber bullying perpetration. Cyber bullies may like to deliberately harm victims in order to entertain themselves by enjoying the victims' pain. This phenomenon is named as "Schadenfreude" in the literature which refers to the enjoyment, pleasure or delight obtained from others' misfortunes (James, Kavanagh, Jonason, Chonody, & Scrutton, 2014). In a similar way, cyber bullies may entertain themselves at the misfortunes of their victims while harming, dominating or taking revenge from their victims. In short, harm, dominance, revenge and entertainment were examined in this current investigation as cyber bullying perpetration motives.

The earlier research has provided some information about the personality traits of cyber bullies. Empathy (Ang & Goh, 2010; Brewer & Kerslake, 2015; Kokkinos et al., 2014; Schultze-Krumbholz & Scheithauer, 2009; Steffgen, König, Pfetsch, Melzer, 2011; Topcu et al., 2013), self-esteem (Bayraktar, Machackova, Dedkova, & Cerna, 2014; Guarini, Passini, Melotti, & Brighi, 2012; Harman, Hansen, Cochran, & Lindsey, 2005; Patchin & Hinduja, 2010), loneliness (Brewer & Kerslake, 2015; Brighi, Guarini, Melotti, Galli, & Genta, 2012; Wachs, 2012), narcissism (Ang, Tan, & Mansor, 2010; Ekşi, 2012; Fanti, Demetriou, & Hawa, 2012; Fanti & Henrich, 2015; Goodboy & Martin, 2015), moral disengagement (Bussey, Fitzpatricki, & Raman, 2015; Menesini, Nocentini, & Camodeca, 2013; Perren & Gutzwiller-Helfenfinger, 2012; Pornari & Wood, 2010; Postorino, 2014; Renati, Berrone, & Zanetti, 2012; Robson & Witenberg, 2013; Sticca & Perren, 2015; Tanrikulu & Campbell, 2015; Wachs, 2012), aggression (Ang, Huan, & Florell, 2013; Bayraktar et al., 2014; Calvete, Orue, Estevez, Villardon, & Padilla, 2010; Dilmaç, 2009; Fletcher et al., 2014; Roberto, Eden, Ramos-Salzar, & Deiss, 2014; Schultze-Krumbholz & Scheithauer, 2009; Werner, Bumpus, & Rock,

2010) and online disinhibition (Barlett, 2015; Görzig & Olafsson, 2013; Udris, 2014; Veenstra, 2011; Wright, 2013; Wright, 2014) are among the frequently examined personality traits of cyber bullies. Some personality traits have been less frequently reported about cyber bullies. For instance, psychopathic personality traits including low levels of agreeableness, low levels of conscientiousness, disregard for others and vengefulness were significantly and positively related to being a cyber bully (Gibb & Devereux, 2014; Kokkinos, Antoniadou, Dalara, Koufogazou, & Papatziki, 2013; Kokkinos et al., 2014; König et al., 2010). In addition, cyber bullies were found as sensation seekers who are open to experiences (Çelik, Atak, Erguzen, 2012; Kokkinos et al., 2014) and emotionally unstable (Çelik et al., 2012; Kokkinos et al., 2013). It should be noted that the above mentioned personality traits take place under one of the dimensions of widely used measurement instruments of *The Sixteen Personality Factor Questionnaire* (Cattell, 2001) and *Big Five Personality Traits Inventory* (Carver & Scheier, 1996).

As mentioned above, several personality traits of the cyber bullies were reported by the extant studies. This made it difficult to pick out the personality traits to include into this present investigation. Hence, some criteria were considered to choose among the reported personality traits. The personality trait to be chosen had to be reported by the existing literature about cyber bullying perpetration. Most importantly, the personality traits had to have some possible associations with the already decided four motives of cyber bullying perpetration (harming others, dominance, revenge and entertainment).

The first selected personality trait was *online disinhibition* which is defined as 'loosening of social restrictions and displaying lower levels of behavioral inhibitions during the interactions with others in online environments' (Kerstens & Stol, 2014; Suler, 2004). Studies have found that a higher tendency of online disinhibition was a significant predictor of cyber bullying perpetration (Barlett, 2015; Görzig & Olafsson, 2013; Udris, 2014; Veenstra, 2011; Wright, 2013; Wright, 2014).

Suler's (2004) theoretical descriptions about online disinhibition can be considered to explain the possible relationships between online disinhibition and the motives of cyber bullying perpetration. For example, greater levels of online disinhibition may increase the probability of cyber bullying perpetration with the motive of harming others. Individuals behaving more negatively (more aggressive, less fearful, more courageous, more dissociative) or more positively (more caring, more emotional, more cheerful or more honest) may lead them to take more risks in online space. In addition, cyber bullies may want to take revenge from their previous offenders by behaving anonymous when online. Thanks to anonymity, they may want to avoid future victimization in online and offline spaces. Moreover, individuals with higher levels of online disinhibition may have a tendency of cyber bullying others with the motive of dominance. Being unable to truly evaluate others' social status or power online, cyber bullies may have relatively less fear of retaliation and disapproval in cyber space. Such feelings may encourage the cyber bullies to behave dominantly in cyber settings since they may think that the individuals they are interacting in online platforms are less powerful than themselves. Furthermore, individuals with greater levels of online disinhibition may see online settings as places to entertain themselves. Cyber bullies may not acknowledge the harmful influences of their cyber bullying perpetration behaviors since they were anonymous, and the cyber bullying perpetration came true in cyber space not in real life. Therefore, they may believe that they have the right to entertain themselves and may not be totally held responsible for the hurtful impacts of their behavior online.

The second personality trait examined in this present study was *moral disengagement*. Moral disengagement refers to cognitive processes for the justification of harmful behaviors, which are contrary to one's internal moral standards (Bandura, 2002). Previous investigations have documented substantial evidence suggesting that individuals scoring higher on moral disengagement are scoring higher on cyber bullying perpetration as well (e.g., Perren & Gutzwiller-Helfenfinger, 2012; Postorino, 2014; Robson & Witenberg, 2013; Sticca & Perren, 2015; Tanrikulu & Campbell, 2015).

Bandura (2002) proposes that people behave morally disengaged by using some cognitive mechanism. Bandura's suggested cognitive mechanisms can help to clarify the probable relationships between moral disengagement and the motives of cyber bullying perpetration. Greater levels of moral disengagement may increase the possibility of cyber bullying perpetration with the motive of inflicting harm on others. Unable to observe the direct influences of their perpetration in cyber environments, cyber bullies may become more morally disengaged since they may believe that they are posing no harm or somewhat less harm on the victims. Additionally, higher levels of moral disengagement may enhance the likelihood of cyber bullying others for taking revenge. Cyber bullies may formerly be exposed to traditional bullying (Dehue et al., 2008; König et al., 2010) or any type of violence in cyber or face-to-face settings. By reasoning that they have the right to fight against ruthless bullies who victimized themselves in the past, they can morally justify their perpetration behaviors. Moreover, morally disengaged individuals may also tend to cyber bully others with the intention of dominance. Some cyber bullies may think that they are physically, verbally or relationally disadvantaged in face-to-face environments, but they are technologically savvy and highly skillful in interactions online platforms. Such cyber bullies may like to dominate online settings by demonstrating their superiority in technology use. These cyber bullies may justify their harmful conducts by asserting that they have the right to dominate the online environments since others are using their physical power to dominate the physical environments. Individuals with higher levels of moral disengagement may also cyber bully others for entertainment. By using moral justification mechanisms of moral disengagement, cyber bullies may rationalize their perpetration and simply claim that they just wanted to have fun with the victim but the victim could not understand the joke.

Narcissism was the third personality trait examined in this current investigation. Narcissism is defined as “a grandiose yet fragile sense of self and entitlement as well as a preoccupation with success and demands for admiration (Ames, Rose, & Anderson, 2006, p. 440-441)”. According the existing study findings, a higher tendency of

narcissism was found a significant predictor of cyber bullying perpetration (Ang et al., 2010; Ekşi, 2012; Fanti et al., 2012; Fanti & Henrich, 2015; Goodboy & Martin, 2015). The main characteristics of individuals with higher levels of narcissistic tendencies are documented by Thomas (2012), and these characteristics can provide explanations about the possible associations between narcissism and the motives of cyber bullying perpetration. Greater levels of narcissism may increase the probability of cyber bullying others with the motive of inflicting harm. Narcissistically disposed individuals who are highly active in online networks may expect their online friends to like, admire or leave positive comments on their status updates and what they share online. Unless these expectations are fulfilled, such individuals may become angry and behave aggressively by harming others by cyber bullying. Revenge as a motive can also be obtained by narcissistically prone cyber bullies as well. Negative comments can be made about online status updates or sharings. In such situations, individuals with higher levels of narcissistic tendencies may become full of rage and retaliate by cyber bullying to take their vengeance online. Moreover, there is some evidence suggesting that young people who reported higher levels of narcissism as well as greater levels of engaging in traditional bullying are high in social dominance (Reijntjes et al., 2015). Such a relationship can be anticipated with higher levels of narcissism, cyber bullying perpetration and dominance. Cyber bullies who are prone to narcissism may employ cyber bullying perpetration with the motivation to dominate others. By means of cyber bullying, they may like to establish dominance by demonstrating their superiority in technology usage, by embarrassing online contacts whom they dislike, and by indicating that they are important and authoritative in cyber platforms. Narcissistically disposed individuals may also cyber bully others with the intention of entertainment. Higher levels of narcissism is linked with being selfish, feeling less guilty and remorseful toward others in addition to lower levels of empathy (Thomas, 2012). These personality features may increase the possibility of cyber bullying others to obtain enjoyment, pleasure or delight obtained from others' misfortunes.

Aggression was the last personality trait included to this current study. Anderson and Bushman (2002) define aggression as “any behavior directed toward another individual that is carried out with the immediate intent to cause harm (p. 28)”. The previous studies have documented that there is a significant positive relationship between aggression and cyber bullying perpetration (Ang et al., 2013; Arıcak, 2009; Bayraktar et al., 2014; Calvete et al., 2010; Dilmaç, 2009; Fletcher et al., 2014; Lonigro et al., 2015; Ozden & Icellioglu, 2014; Roberto et al., 2014; Schultze-Krumbholz & Scheithauer, 2009; Werner et al., 2010).

The features of the aggressive personality which were reported by Bergman, McIntyre, and James (2007) and Bryant and Smith (2001) can provide some explanations to understand the reasons behind the connection between aggression and the motives of cyber bullying perpetration. A higher tendency of aggression can be related to higher levels of cyber bullying others with the motives of harming others, revenge, dominance and entertainment. To begin with, individuals with aggressive personalities may seek for chances to display their aggression. In terms of the motive of harming others via cyber bullying, cyber bullying ensures easier and less risky ways of displaying aggression to the cyber bullies. With the help of cyber bullying, aggressive actions are not limited to time and space; and the aggressive cyber bullies can harm others whenever and wherever they like. Besides, the incidents of cyber bullying naturally exist online and continue to repeat in the cyber environments, and an infinite number of people can become involved or witness the cyber bullying incident. Therefore, being aware of the opportunities that cyber space affords to display aggression, aggressively prone individuals may more tend to harm others by cyber bullying. Next, cyber bullying may serve as an act of revenge for the aggressive cyber bullies to satisfy their feelings of revenge towards their former perpetrators in face-to-face and/ or cyber interactions. With respect to this assumption, aggressive individuals are inclined to be vengeful and tend to overcome frustrations with force (Bergman et al., 2007). König et al., (2010) reported that vengefulness is a common trait of cyber bullies having a tendency to victimize their earlier perpetrators who traditionally bullied them. Moreover, a link can

be anticipated between higher levels of aggressiveness and cyber bullying others for dominance. One of the commonly reported motives of cyber bullying perpetration is dominance (Gradinger et al., 2011; Fluck, 2014; Shapka & Law, 2013; Mishna et al., 2010; Vandebosch & Van Cleemput, 2008). Aggressively inclined individuals view social interactions as important ways to dominate others and consider establishing power and status is a way to earn others' respect (Bergman et al., 2007). By acting aggressively, cyber bullies may intend to dominate others in cyber settings. With regards to relationship between being aggressive and cyber bullying others to have fun, individuals with greater levels of aggression may regard aggression as a method to overcome their feelings of boredom. In addition to getting over boredom, cyber bullies may feel obliged to act aggressively even while trying to have fun. This is because individuals with higher levels of aggression are known to believe that behaving non-aggressively is a sign of weakness (Bergman et al., 2007). Thus, by avoiding from being considered as weak by others, such persons may use cyber bullying others to have fun.

In summary, the background of this study is based on the previous studies reporting that (a) cyber bullies have certain motives while targeting victims (e.g., Mishna et al., 2010; Pettalia et al., 2013; Rafferty & Vander Ven, 2014; Shapka & Law, 2013; Topcu et al., 2013) and (b) cyber bullies are different in personality traits compared to the other groups like victims or non-involveds (e.g., Bayraktar et al., 2014; Fanti & Henrich, 2015; Goodboy & Martin, 2015; Sticca & Perren, 2015). Drawing from these two lines of research, that personality traits of the cyber bullies could have a relationship between their motives of cyber bullying was anticipated in this current investigation. The *Uses and Gratifications Theory* which originally purposes to explain the interaction between motives and personality traits of the communication media users may account for cyber bullying perpetration conducts. Therefore, this present study aimed to shed light on whether such interaction may help to explain cyber bullying perpetration behaviors as well. Examining the existing research reveals that the associations between the personality traits of cyber bullies and their cyber bullying perpetration motives have not been examined yet. If these relationships are uncovered, what motivates individuals with

certain personality traits to cyber bully others can be known. Such knowledge can be used to improve cyber bullying prevention services besides its potential to provide more effective counseling help targeting the cyber bullies. The theoretical background of this present research was based on *Uses and Gratifications Theory*. By employing a model test strategy, this current study aimed to investigate the relationships between personality traits and cyber bullying perpetration motives.

1.2 Purpose of the Study

The main purpose of this study was to examine the associations between personality traits and cyber bullying perpetration motives. To reach this goal, this study utilized *Uses and Gratifications Theory*, and explored the interplay between the *personality traits* of cyber bullying perpetration which are online disinhibition, moral disengagement, narcissism and aggression and *motives* of cyber bullying perpetration which are entertainment, revenge, harm and dominance. In other words, this study investigated whether cyber bullying perpetration can be explained in terms of cyber bullies' personality traits which may be associated with their motives behind their cyber bullying perpetration behaviors.

1.3 Significance of the Study

This current investigation explored the role of personality traits in cyber bullying perpetration motives, and it is significant with its contributions to theory, research, practice and policy.

One of the most original merits of this current investigation is its contribution to the existing theoretical frameworks for explaining cyber bullying perpetration. Researchers have tested different approaches to explain cyber bullying perpetration including *General Strain Theory* (Hay et al., 2010; Jang et al., 2014; Patchin & Hinduja, 2011), *Theory of Planned Behavior* (Heirman, Walrave, 2012; Pabian & Vandebosch, 2014)

and *Theory of Reasoned Action* (Doane et al., 2014). However, the number of these studies aiming to establish a theoretical reasoning for cyber bullying perpetration is quite limited. Besides, these investigations have theoretically assessed (a) the role of experiencing daily life strains in cyber bullying perpetration, (b) intentions regarding cyber bullying others, (c) attitudes toward cyber bullying perpetration, (d) the perceived social pressure about engaging in cyber bullying, (e) and the personal ability to engage in cyber bullying. Yet, the role of personality traits on cyber bullying perpetration motives has not been theoretically considered yet. To fill these gaps, this study used *Uses and Gratifications Theory* (UGT) (Blumler & Katz, 1974) and provided evidence suggesting that it can offer a theoretical understanding to the cyber bullying perpetration behaviors. The UGT was chosen because Alonzo and Aiken (2004) reported empirical evidence about its utility in flaming behavior which is one of the cyber bullying perpetration behaviors. The UGT can provide a new perspective in the explanation of cyber bullying perpetration behaviors. By applying the UGT in cyber bullying, cyber bullying perpetration behaviors can be conceptualized as willful individual actions to achieve certain motives or goals. To the best of the knowledge of the researcher of this study, this current research is one of the pioneer research which is designed and tested under the guidance of the UGT. The results of this study provided evidence suggesting that *UGT* can open up a new perspective in understanding cyber bullying perpetration behaviors.

In terms of research on cyber bullying, this present study provided a number of significant contributions. First of all, this investigation is one of the first studies bringing together the research on personality traits of the cyberbullies and the motives of cyber bullying perpetration by considering the relationships between them. Combining the research on the personality traits of the cyberbullies and the motives of cyber bullying perpetration is important because researchers currently do not know about the possible connections between certain personality traits and the motives of cyber bullying perpetration. By employing a structural equation model testing strategy, these

relationships were empirically tested and validated for the first time by this present study.

By its research sample composed of university students, this study contributed to the research on cyber bullying. University students' experiences of cyber bullying have drawn the attention of the researchers for several years (e.g., Dooley et al., 2009). Nonetheless, the number of the studies assessing cyber bullying perpetration motives (e.g., Englander, 2008; Johnston et al., 2014; Rafferty & Vander Ven, 2014) and personality traits of cyber bullies (e.g., Gibb & Devereux, 2014; Kokkinos et al., 2014) in university level are internationally quite limited. Turkish researchers had also a similar early interest on the nature and the extent of cyber bullying among Turkish university students (e.g., Arıcak, 2009; Dilmaç, 2009). Yet, a similar limitation concerning the number of the studies seems present for the Turkish literature on cyber bullying perpetration motives (Akbulut & Erişti, 2011) and personality traits of cyber bullies (Arıcak, 2009; Dilmaç, 2009; Güzeller & Gencosman, 2013; Ozden & İcellioğlu, 2014). By specifically focusing on personality traits and motives of cyber bullying perpetration of Turkish university students, this present study added up to the national and international cyber bullying literature aiming to provide a deeper understanding of cyber bullying among university-aged individuals.

Examining the cyber bully-victims as a distinct group in this research is also significant for the research. Differences between cyber bully-victims and other groups involved in cyber bullying such as pure bullies, pure victims, or non-involveds have been commonly documented by the past research (e.g., Perren, Gutzwiller-Helfenfinger, Malti, & Hymel, 2012; Mishna et al., 2010; Völlink, Bolman, Dehue, & Jacobs, 2013). Most importantly, cyber bully-victims, in particular, were reported being in more desperate situation compared to the pure cyber bullies and non-involved students (Bayraktar et al., 2014; Kowalski & Limber, 2013; Schultze-Krumbholz, Jakel, Schultze, & Scheitha, 2012; Spears, Taddeo, Daly, Stretton, & Karlins, 2015; Ybarra & Mitchell, 2004b). However, there is a dearth of research focusing on cyber bully-victims as a separate group being

involved in cyber bullying. To the best of the researcher's knowledge, there has not been any research specifically investigating the cyber bully-victims as a study sample so far. Therefore, this was the first study which had explored the cyber bully-victims as a distinctive research sample by investigating their motives of cyber bullying perpetration as well as their personality traits.

This current study's focus of cyber bullying perpetration behaviors has provided an additional significance to the research. Until recently, researchers have assumed that cyber victims are the primary group needing help, since they are the main group suffering from individual, social or school-related problems. For this reason, most investigations have turned their attention on the victims (e.g., Bonanno & Hymel, 2013; Faucher et al., 2014). Yet, there has been a recent interest on cyber bullies. This is because of the latest discussions claiming that cyber bullies are not in good condition either. Recent evidence suggests that behaving as a cyber bully is associated with poor mental health, problems in psychological well-being, difficulties in interpersonal relationships in addition to the failure at school (Campbell et al., 2013; Schenk et al., 2013). Therefore, the nature, the extent and the impacts of cyber bullying on the perpetrators should be understood for more effective prevention and intervention efforts against cyber bullying. This present study fills this gap by specifically focusing on cyber bullying perpetrators, their personality traits besides their motives in engaging in cyber bullying perpetration.

This study also contributed to the cyber bullying research with its measurement instruments which were revised, developed or adapted. *Revised Cyber Bullying Inventory* (Topcu & Erdur Baker, 2010) was revised in this current research so that it could be more appropriate for the university student samples and could be free from specific names of the online technological tools. After the revision process, *RCBI for University Students* was created. Although university students are a distinct group compared to the other age groups, there has not been any instrument specifically designed to assess the cyber bullying experiences of the university students, to the best

of the researcher's knowledge. Thus, as an instrument for university student samples, *RCBI for University Students* contributes to the researchers who want to investigate cyber bullying among the university youth.

Furthermore, although there has been a recent interest regarding the motives behind cyber bullying perpetration (e.g., Compton et al., 2014; Fluck, 2014; Gradinger et al., 2011) no empirically validated instrument was proposed to assess the reasons of cyber bullying others at the time of this research was planned. The former studies inspecting the motives of cyber bullies were basically qualitative in methodology, and thus were limited to a small number of participants. To fill this gap, *Cyber bullying Perpetration Motives Scale* which aimed to evaluate the motives behind cyber bullying perpetration was developed by the researcher of this study. For the first time in the cyber bullying literature, cyber bullying perpetration motives were quantitatively examined with a large number of participants by this current investigation. An empirically validated instrument such as the *Cyber bullying Perpetration Motives Scale* to assess why individuals cyber bully others has the potential to advance the literature by stimulating more research about motives of cyber bullying perpetration.

Moreover, *Online Disinhibition Scale* (Kerstens & Stol, 2012), *Propensity to Morally Disengage Scale* (Moore, Detert, Trevino, Baker, & Mayer, 2012) in addition to *12-item Aggression Questionnaire* (Bryant & Smith, 2001) were translated and adapted into Turkish in this current study. These instruments were psychometrically validated in this present investigation, and can help the Turkish researchers conducting research on various topics such as violence or aggression including bullying (traditional or cyber) among the university-aged individuals. All in all, the revised, developed or adapted measurement instruments in this study can expand the existing Turkish literature on violent or aggressive behaviors by stimulating new directions for the future studies.

This present study's last contribution to the research is its presentation of the extensive literature review on cyber bullying and cyber bullying perpetration behaviors. In

addition to the studies conducted in Turkey, the international literature on cyber bullying and cyber bullying perpetration behaviors are brought together by this study. The most contemporary as well as the earlier works examining cyber bullying has been conceptually synthesized in this current investigation. Researchers interested in cyber bullying and cyber bullying perpetration behaviors can benefit from this study's literature review with its focus on the most up-to-date issues regarding the nature, the extent, gender and age differences, impacts, theoretical frameworks in cyber bullying perpetration as well as the review on motives and personality traits of the cyber bullies.

In addition to the aforementioned theoretical and the research-related contributions, this present research has a number of significances on the practice. To begin with, the main target of this current study was to uncover more about cyber bullying perpetration and to unravel the relationships between the personality traits and the motives of the cyber bullying perpetrators. Therefore, with the help of this present study, a deeper understanding about cyber bullying perpetration will be achieved. Such an understanding can help the professionals aiming to provide professional counseling help to the young individuals, especially to the university students.

Another significance of this study on practice is about its contribution on providing counseling help for the university students who have become involved in aggressive behaviors online. The desire to accomplish some motives can trigger the university students to cyber bully others, and the personality traits of the university students seems to have a significant role in their cyber bullying perpetration behaviors. Therefore, individuals with certain personality characteristics such as aggression, moral disengagement, online disinhibition or narcissism may be more prone to cyber bullying perpetration and other aggressive behaviors. With the help of this knowledge, cyber bullying can be conceptualized as a means to actualize certain motives such as harm, revenge, entertainment or dominance.

The last but not the least, this study is significant for the policy making about cyber bullying. Olweus (2013) states that young people's exposure to bullying victimization is a violation of human rights. In parallel with this proposition, researchers from different parts of the world such as Australia (Butler, Kift, Campbell, Slee, & Spears, 2011), United Kingdom (Marczak & Coyne, 2010) or United States (Gillespie, 2006; Hinduja & Patchin, 2011) have recently begun to discuss the legal aspects of the cyber bullying. As well as suggesting possible legal solutions, they have underlined the fact that authorities are responsible for providing safe environments in educational settings whether it is a school or university. Such countries have developed and implemented national strategies and policies against aggressive behaviors like cyber bullying at school or university level. There has been a recent interest about cyber crimes such as online fraudery or blackmailing and cyber security policies in Turkey (Hekim & Başbüyük, 2013), but Turkey does not yet have specific policies to tackle with cyber bullying. For this reason, it is high time a national policy against cyber bullying at school and university was created in Turkey.

1.4 Definitions of the Terms

Cyber bullying is “any behavior performed through electronic or digital media by individuals or groups that repeatedly communicates hostile or aggressive messages intended to inflict harm or discomfort on others” (Tokunaga 2010, p. 278).

Cyber bullying perpetration refers to bullying others online.

Cyber bullying victimization refers to being exposed to cyber bullying.

Cyber bully-victim group refers to the individuals who have cyber bullied someone and have been victimized by others.

Cyber bullying perpetration motives refers to the reasons why cyber bullies perpetrate others.

Entertainment motive refers that an individual cyber bullies others for having fun.

Revenge motive refers that an individual cyber bullies others for taking revenge.

Harm motive refers that an individual cyber bullies others for inducing harm.

Dominance motive refers that an individual cyber bullies others for showing power.

Online disinhibition is “loosening of social restrictions and displaying lower levels of behavioral inhibitions during the interactions with others in online environments (Kerstens & Stol, 2014; Suler, 2004)”.

Moral disengagement is “the cognitive processes to justify harmful behaviors, which normally do not conform to one’s internal moral standards (Bandura, 2002)”.

Narcissism is “a grandiose yet fragile sense of self and entitlement as well as a preoccupation with success and demands for admiration (Ames et al., 2006, p. 440-441)”.

Aggression is “any behavior directed toward another individual that is carried out with the immediate intent to cause harm” (Anderson & Bushman, 2002).

CHAPTER II

LITERATURE REVIEW

The main purpose of this study is to model the relationships between motives and personality traits of the perpetrators of cyber bullying. Four cyber bullying perpetration motives (entertainment, revenge, harm and dominance) and four personality traits of the cyber bullies (online disinhibition, moral disengagement, narcissism and aggression) were included to this study's model due to their specific importance for the cyber bullying literature. The existing studies have separately investigated cyber bullying perpetration motives as well as personality traits of the cyber bullies. Yet, motives and personality traits concerning cyber bullying perpetration have not been combined so far in a single research in order to have a deeper understanding about the relationships among motives and personality traits of the perpetrators of cyber bullying. Uncovering these relationships can provide important knowledge for the practitioners and researchers about what motivates individuals with certain personality traits to cyber bully others. Such knowledge can improve cyber bullying prevention and intervention services besides its potential to provide more effective counseling help targeting the cyber bullies.

Considering the main focus of this current study, the literature review section of this research was mainly built on the previous research specifically reporting about cyber bullying perpetration. Of note, pure cyber bullies (they cyber bullied others but were never cyber victimized) and cyber bully-victims (they cyber bullied others in addition to being cyber victimized by others) were considered as the perpetrators of cyber bullying for the specific purposes of this present investigation. This was because the pure cyber bullies and the cyber bully-victims were the two groups which had a history of bullying others in cyber space.

In this chapter, an extensive review of the literature is presented with regards to the aim of the present research. In the first section, information about the most up-to-date discussions about cyber bullying is provided. In detail, discussions are presented below with regards to cyber bullying as an international problem, the definition of cyber bullying, online settings where cyber bullying takes place and behavioral forms of cyber bullying perpetration, cyber bullying as a new type of online aggression, prevalence of cyber bullying perpetration, age and gender differences in cyber bullying perpetration in addition to the well-beings of the cyber bullies. In the second section, the theoretical background of this study is detailed. Literature review on the proposed model variables regarding the cyber bullying perpetration motives and the personality traits of the cyber bullies is provided in the third section. The literature review section of this study is summarized in the last section.

2.1 Discussions on Cyber Bullying Perpetration Research

2.1.1 Defining cyber bullying

The first known definition of cyber bullying dated back to 2003 by Bill Belsey who defined cyber bullying as “the use of information and communication technologies to support deliberate, repeated, and hostile behavior by an individual or group, which is intended to harm others”. Later on, several researchers such as Smith et al., (2008) or Tokunaga (2010) provided similar definitions for cyber bullying. The common characteristic of these definitions was their being dependent on Olweus’ (1993, p. 9) definition of traditional bullying which states that “a student is being bullied or victimized when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other students”. Olweus’ (1993) definition of traditional bullying relies on the three criteria of intention of harm, repetition and power imbalance. Researchers seem to have transferred these three criteria when searching for a definition of cyber bullying.

In cyber bullying literature, researchers have been discussing about on which operational definition criteria a perpetration behavior should be considered as cyber bullying. The studies seem to have agreed that harmful intentions, repetition and power imbalance as the three main criteria need to be included in the operational definition of cyber bullying. Concerning harm as a criterion of cyber bullying perpetration, cyber bullies' intention to harm the victim has been reported by the young participants as a prerequisite of cyberbullying perpetration behaviors (Kuhlman et al., 2013; Nocentini et al., 2010; Topcu et al., 2013; Vandebosch & Van Cleemput, 2008). In some situations, although a perpetrator does not intend to harm a target, the target can feel offended (Vandebosch & Van Cleemput, 2008). However, in some other incidents of cyber bullying, the doer does not intend to harm the receiver, and the receiver can be aware of the entertainment purpose. In such incidents, the intention of harm criterion becomes dependent on the victims' perception of the harm they experience. Therefore, examining how the victim perceived the cyber bullying is suggested as a possible method to decide on the harmful intention of cyber bullying (Langos, 2012; Naruskov, Luik, Nocentini, & Menesini, 2012).

Regarding repetition as a further criterion of cyber bullying perpetration, the incident may be considered as joking or teasing (Langos, 2012; Nocentini et al., 2010), unless a cyber bullying behavior is repeated,. In cyber space however, the perpetrator does not need to repeat the cyber bullying behavior twice or more since the content of the cyber bullying incident can be infinitely viewed by others (Dooley et al., 2009; Langos, 2012; Slonje & Smith, 2008; Vandebosch & Van Cleemput, 2008). Therefore, the cyber bully can continue to pose harm on the victim without perpetrating the victim time after time. For this reason, the victims of cyber bullying may perceive that they are exposed to victimization again and again. Therefore, even though repetition is still a valid criterion, the nature of the cyber world evolves the meaning of repetition in cyber bullying perpetration.

With regards to power imbalance as an additional criterion of cyber bullying perpetration, in online settings, cyber bullies can create power imbalance with the victims by (a) physical strength, age or technology usage skills (Dooley et al., 2009; Hinduja & Patchin, 2008; ; Langos, 2012; Vandebosch & Van Cleemput, 2008), (b) having a higher status in an online platform (Grigg, 2010), (c) the publicity of the incident and victims' being available online 24/7 (Dooley et al., 2009; Slonje & Smith, 2008), (d) deciding on the content, the target, time and setting of the cyber bullying behavior (Langos, 2012), (e) victims' incapability to remove the online content (Nocentini et al., 2010) (f) being anonymous (Langos, 2012).

In addition to these three criteria, Nocentini et al., (2010) note that there can be two extra aspects of cyber space which are useful in understanding the nature, the intensity and victim reactions. The first one is publicity which refers that the cyber bullying incident may not happen privately between two parties, but it can be observed and involved by a large audience. For instance, audio, visual or audio-visual content shared on cyber environments and aimed for cyber bullying someone becomes open to public; which may worsen the consequences of cyber bullying (Slonje & Smith, 2008). The second aspect suggested by Nocentini et al., (2010) is anonymity meaning that the cyber bullies can easily hide their real identities in cyber platforms by using fake accounts. Anonymity may increase the impact of cyber victimization by weakening the opportunities for the victims to defend themselves (Dooley et al., 2009; Menesini et al., 2012; Slonje & Smith, 2008; Mishna, Saini, & Solomon, 2009; Vandebosch & Van Cleemput, 2008). According to Nocentini et al., (2010), these two aspects are not essential criteria for the operational definition of cyber bullying, but they can help the researchers to better figure out the nature of cyber bullying.

To sum up, cyber bullying research seems to have consented upon the three operational definition criteria of cyber bullying perpetration behavior which are deliberate harm, repetition of the incident and power imbalance. However, these criteria have evolved and have gained a broader perspective in cyber bullying literature. Despite not being

essential criteria of the operational definition of cyber bullying, publicity and anonymity have also been suggested to achieve a better understanding about cyber bullying.

2.1.2 Is cyber bullying a global problem?

Researchers unanimously agree that young people internationally experience cyber bullying. Studies from Austria (Gradinger et al., 2010), Australia (Campbell et al., 2012), Canada (Bonanno & Hymel, 2013), England (Marczak & Coyne, 2010), Greece (Kokkinos et al., 2014), Ireland (O'Moore, 2012), Israel (Heiman & Olenik-Shemesh, 2015), Malaysia (Balakrishnan, 2015), Netherlands (Kerstens & Stol, 2014), Spain (Del Rey et al., 2012), Sweden (Laftman et al., 2013), Turkey (Topcu et al., 2013) and the United States (Bauman & Newman, 2013) have pointed out that cyber bullying is a worldwide problem which negatively affects the well-beings of young people. Therefore, the internationality of the problem highlights the importance of advancing our knowledge in understanding cyber bullying in order to develop and improve solutions to prevent it.

2.1.3 Online settings cyber bullying takes place and behavioral forms of cyber bullying perpetration

As its name suggests, cyber bullying takes place on cyber environments. Young people seem to be very skillful in turning any online setting into means to cyber bully others. Short text messages (SMS), phone calls, social networking websites, video sharing websites, e-mail, web-pages, blogging websites and chat rooms have been cited among the instruments of cyber bullying perpetration (e.g., Calvete et al., 2010; Monks, Robinson, & Worlidge, 2012; Slonje & Smith, 2008; Tanrıku, Akbaba-Altun, Erdur-Baker, & Yerin-Güneri, 2015). It should be noted that youngsters' preferences of online technologies usage for cyber bullying purposes seem to be based on the popularity of the online technologies. For example, at the beginning of the cyber bullying research, chat rooms and MSN were reported as the common platforms where cyber bullying occurred

(e.g., Arıcak et al., 2008; Erdur-Baker & Kavşut, 2007; Erdur-Baker, 2010; Li, 2007; Mesch, 2009). However, the recent studies have revealed that cyber bullies have begun to prefer mostly texting and social networking websites rather than chat rooms and MSN messenger (O'Neill & Dinh, 2015; Whittaker & Kowalski, 2015). This is probably because chat rooms and MSN messenger have lost their popularity at the moment.

Being aware of this fact, some of the most recent investigations have begun specifically to consider social networking websites including Facebook as places cyber bullying takes place (Dredge, Gleeson, & de la Piedad Garcia, 2014; Kwan & Skoric, 2013). This may have happened because social networking websites are more popular these days. What's more, smart phone applications (like ugly meter, enemy graph, or anonymous texting), massive multiplayer online games, proxy /ISP (Internet service provider) manipulation have been noted among the most contemporary methods for cyber bullying others (Chisholm & Day, 2013). Interestingly, since online environments are moving into smart glasses or smart watches these days, researchers are likely to discuss about cyber bullying behaviors happening via such new technologies in the near future. Given that the popularity of the online technologies among the youngsters is changing very fast, focusing on particular online tools may create measurement difficulties for the cyber bullying literature. Therefore, instead of concentrating on the specific cyber environments, investigating the specific behavioral forms can be more helpful in understanding cyber bullying perpetration (Topcu & Erdur-Baker, 2010).

Willard (2007) listed a total of eight cyber bullying perpetration behavioral forms. The first cyber bullying perpetration behavioral form is 'flaming' which refers to the aggressive and offensive interactions and/or fights on cyber space. Individuals commonly combine the use of profane language while engaging in flaming. The second form of cyber bullying perpetration behavior is 'harassment' which involves repeatedly sending obscene and derogatory comments or messages to the targets. The third form of cyber bullying perpetration behavior is 'denigration' which means that cyber bullying perpetrators are spreading rumors and/ or gossips about a target with the aim of harming

the victims' reputation or relationships with others. The next cyber bullying perpetration behavioral form is 'impersonation'. Cyber bullies can lead another person to be in trouble, fear or danger by posting online unpleasant materials on that person's behalf as if being that person. Moreover, 'outing' is another form of cyber bullying perpetration behavior. It refers that youngsters share secrets, private or embarrassing information including photos or videos online without taking the persons' permission. 'Trickery' is an additional behavioral form of cyber bullying perpetration. It means that a victim is firstly persuaded by a cyber bully to share private shameful information; then, posts such embarrassing information in online environments. Next, 'exclusion' is a further cyber bullying perpetration behavioral form. It involves deliberately ignoring or leaving a person or a group of individuals out from an online social group. The last cyber bullying perpetration behavioral form is 'cyber stalking' which refers that a perpetrator of cyber bullying persistently and intensely follow and harass a victim in order to create a feeling of substantial threat and fear.

These eight cyber bullying perpetration behavioral forms have been qualitatively as well as quantitatively confirmed by the existent studies (Heiman & Olenik-Shemesh, 2015; Jacobs, Goossens, Dehue, Völlink, & Lechner, 2015; Olumide, Adams, & Amodu, 2015). Indeed, the current instruments developed and psychometrically validated by the researchers (e.g., Del Rey et al., 2015; Lee, Abel, & Holmes, 2015; Palladino, Nocentini, & Menesini, 2015; Topcu, 2014) to assess cyber bullying perpetration have included most of the behaviors proposed by Willard (2007).

In short, any digital technology can be exploited for cyber bullying perpetration purposes in the hands of the young individuals. Different and newer types of cyber technologies are introduced almost every day nowadays. For that reason, if researchers focus on the online environments where cyber bullying takes place, they are more likely to experience measurement problems when the cyber settings they concentrate on lose their popularity. Therefore, rather than the cyber environments, examining the cyber

bullying perpetration behavioral forms can help the researchers understand and conceptualize cyber bullying perpetration more inclusively.

2.1.4 Is cyber bullying a new type of online aggression?

As detailed above in section 2.1.1., researchers basically made use of the three criteria (intentional harm, repetition and power imbalance) to operationally define cyber bullying (e.g., Smith et al., 2008; Tokunaga, 2010). This methodology implies that cyber bullying is not a different type of bullying but an extension of traditional bullying. Olweus (2012) and Hinduja and Patchin (2012) are among the researchers who strongly objected the idea that a new type of bullying has appeared in cyber space. They claim that a great majority of the young individuals who are involved in traditional forms of bullying are the same ones being involved in bullying in cyber space. In line with this, other researchers documented findings showing considerable overlap between traditional and cyber bullying (Erdur-Baker, 2010; Kowalski & Limber, 2013, Kwan & Skoric, 2013; Riebel, Jaeger, & Fischer, 2009; Schneider, O'Donnell, Stueve, & Coulter, 2012; Tanrikulu & Campbell, 2015; Waasdorp & Bradshaw, 2015; Ybarra, Diener-West, & Leaf, 2007).

Supporting this assertion, reviewing the contemporary theory and research on cyber bullying, Mehari, Farrell, and Le (2014) suggested that cyber bullying should be conceptualized as an extension of the present forms of aggression young people experience rather than as a distinct form of aggression. This was because empirical evidence was reported by the former research indicating close relationships between cyber bullying and aggression. Empirical support for the inter-relations between cyber bullying and aggression were presented by Mehari et al., (2014) with regards to the predictors, individual characteristics, family, peer and school variables in addition to situational predictors. As a further support, the prevalence of the pure cyber bullies who bullied others online but were neither cyber victimized nor never became involved in traditional bullying has been reported quite low in some research. The ratio of the pure

cyber bullies ranged from 1.4% ($n=7$, out of 500 participants) (Tanrikulu & Campbell, 2015); 3.3% ($n=63$, out of 1928 participants) (Wachs, Junger, & Sittichai, 2015); 5.8% ($n=173$, out of 2992 participants) (Chang et al., 2013) and to 7.5% ($n=60$, out of 799 participants) (Schenk et al., 2013).

On the other hand, another group of researchers contends that cyber bullying has distinctive features, and it should be conceptualized as a unique form of online aggression. Smith (2012), for example, noted that several important features of cyber bullying make it a distinctive behavior. According to Smith (2012), some knowledge on technology is necessary for cyber bullying; cyber bullying is happening indirectly since the parties are not seeing each other; the reactions of the cyber victims cannot be immediately observed; bystander roles are quite multifaceted; the cyber bullies cannot victimize and thus dominate others in front of others; infinite number of people can be the audience; and staying away from cyber bullying is not easy because victimization can come true in various modalities such as SMS or online comments on websites. Compatible with Smith (2012), Menesini (2012) and Nocentini et al., (2010) also agree that cyber bullying is unique with its features mentioned above. Additionally, Kubiszewski, Fontaine, Potard and Auzoult (2015) found that there was a slight overlap between traditional bullying and cyber bullying in their investigation because many cyber bullies (60%), cyber victims (62%) or cyber bully-victims (51%) in their sample reported that they were never involved in traditional bullying. Another study conducted by Laftman et al., (2013) shared parallel findings. Though Laftman et al., (2013) detected a limited overlap between traditional and cyber bullying, the majority of the participants involved in cyber bullying as bullies (32%) or victims (62%) reported not having been involved in traditional bullying.

The conclusion may be drawn from these discussions is that while cyber bullying and traditional bullying share some overlap, cyber bullying appears to be distinct in nature with some unique features. On the one hand, online technologies seem to have provided an extended place to display aggression for some individuals who are already

perpetrating others in the physical world. On the other hand, cyber technologies appear to have created a group of perpetrators who are engaging bullying perpetration only in cyber space.

2.1.5 How prevalent is cyber bullying perpetration? Differences with school level

From the very beginning of the research on cyber bullying, the pervasiveness of cyber bullying perpetration among young individuals has been a question of interest. By inspecting how widespread cyber bullying is, researchers have aimed to figure out and indicate the seriousness of cyber bullying as a problem for the youngsters. However, while evaluating the prevalence of cyber bullying, researchers need to be cautious about some issues. First of all, since experiencing cyber bullying is not limited to a certain age, the former studies have been conducted with different age groups ranging from elementary school to higher education level. Besides the studies considering a single age group, there is a group of researchers who have combined different age groups in their investigations. Additionally, the literature lacks data to provide exact percentages regarding cyber bullying perpetration. This is because the extant investigations reporting about the pervasiveness of cyber bullying lack random sampling, and they are not using nationally representative data. Furthermore, there has not been an agreement on the measurement strategy in the cyber bullying literature (Menesini, Nocentini, & Calussi, 2011); while some studies measure cyber bullying by a single global item after giving a description of cyber bullying, others assess cyber bullying by multiple items containing specific cyber bullying behaviors. Moreover, while measuring cyber bullying, the existing studies employ different time frames such as ‘the past couple of months’, ‘in the previous six months’ or ‘within the last year’. In other words, the current prevalence rates are basically outcomes of cross-sectional data composed of convenience samples in addition to being measured by different methods and time frames. For these reasons, the reader should keep in mind that the reported cyber bullying perpetration prevalence rates cannot be generalized, but they can give some ideas.

Of note, in order to provide a concise picture for the reader, the available prevalence of cyber bullying perpetration is detailed below with regards to different age groups including elementary school students, secondary school students, high school students as well as university students. In addition, the studies reported below did not significantly aim to examine the prevalence of cyber bullying perpetration, but they were listed to give some idea to the reader about the prevalence of cyber bullying perpetration. Nevertheless, studies carried out by considerably small samples were discarded.

Based on the knowledge of the researcher of this current study, only two studies have explored the cyber bullying perpetration among elementary school children as a separate research group. As the main goal of these two studies was not to explore the prevalence of cyber bullying perpetration, the prevalence rates they provided may be misleading. The reader therefore, should be aware that with their quite small samples, these two studies did not report representative prevalence rates concerning cyber bullying perpetration among elementary school students. However, these two investigations can give some idea to the reader about the prevalence of cyber bullying perpetration in elementary school level.

Arslan, Savaser, Hallett, and Balci (2012) conducted a study with 372 primary school children from grades 2, 3 and 4. They used multiple items to measure cyber bullying. Of the participants, while 18% self-reported being pure cyber bullies, 15% were cyber bully-victims in the previous six months. In addition to Arslan et al., (2012), Monks et al., (2012) explored cyber bullying perpetration of 220 elementary school students in age 7 through 11 by using a self-report multiple items questionnaire. Among their respondents, 5% reported having cyber bullied someone in the previous school term. An obvious scarcity is observed in the studies involving elementary school children as research samples. This may be because researchers may be thinking that children at early ages prefer face-to-face aggression types rather than online aggression. Nevertheless, studies of Arslan et al., (2012) and Monks et al., (2012) suggest that cyber

settings have become a means to bully others and display aggression even for the elementary school students as well.

Cyber bullying experiences of secondary school students have been examined by a number of investigations. Lower levels of cyber bullying perpetration among secondary school children has been documented by some studies. The lowest prevalence rate was reported by Kowalski and Limber (2007). Accordingly, out of 3737 secondary school children (from grade 6 to 8), 4% cyber bullied others once or more in the last couple of months, and 7% were cyber bully-victims. In addition, O'Moore (2012) carried out a study regarding the cyber bullying experiences of 3004 secondary school students from nine secondary schools in Ireland. She used a single item to assess cyber bullying after providing the definition of cyber bullying. According to the results of her study, 8.6% of the participants bullied others online within the last couple of months. Ayas and Horzum (2012) also used a single item to assess cyber bullying among 413 Turkish secondary schoolers, and found that 11.6% of the students cyber bullied others. Yet, another group of researchers found out higher percentages of cyber bullying perpetration among secondary school students. With a multiple item measurement strategy, Buelga, Cava, Musitu and Torralba (2015) investigated the prevalence of cyber bullying with 1415 Spanish secondary school students in 61 classrooms from three different cities. The students self-reported that 32% bullied someone over the last year. Parallel with this finding, 31.5% of the 1917 secondary school students in Hong Kong were found having cyber bullied others in the last month (Wong et al., 2014).

The prevalence of cyber bullying perpetration of high school students has been documented as well. Some researchers have reported lesser ratios of cyber bullying perpetration among high school students. As an example, Udris (2014) implemented a self-report multiple response questions to examine cyber bullying perpetration experiences of 887 senior Japanese high schoolers. When the students were asked whether they had ever cyber bullied someone since elementary school, the percentage of cyber bullying perpetration was 7.9%. However, this percentage decreased to 2.9%

when the participants reported their cyber bullying perpetration experiences in the last six months. Brewer and Kerslake (2015) designed a quantitative study with 90 British students aged 16-18 to evaluate the cyber bullying experiences in the previous six months. Participants' self-reports demonstrated that 13.54% of them were perpetrators of cyber bullying. On the other hand, some other researchers have identified higher levels of cyber bullying perpetration among high school students. By employing a multiple-item measurement method, Huang and Chou (2010) found that 20.4% of the 545 Taiwanese junior high school students cyber bullied someone. Zhou et al., (2013) also investigated cyber bullying with a multiple item inventory in a cross-sectional research with 1438 Chinese high school students ranging from grade 10 to 12, and discovered that 34.84% of the respondents were cyber bullies. Roberto et al., (2014) assessed 1606 participants' cyber bullying perpetration experiences, and the results showed that 35% of the participants cyber bullied one or more individuals in their last year of high school education.

University students' cyber bullying perpetration prevalences have also been investigated by several studies. Lower prevalence rates have been documented by a group of researchers. By using a multiple item strategy, Francisco et al., (2015) explored how prevalent cyber bullying perpetration was among undergraduate university students ranging in year levels 1-3. Their findings revealed that 8% of the respondents cyber bullied others. MacDonald and Roberts-Pittman (2010) examined cyber bullying perpetration experiences of 439 university students with a single item after giving a definition of cyber bullying. According to their results, 8.6% of their participants acknowledged having acted as cyber bullies since starting the university. However, some studies have found higher levels of cyber bullying perpetration among university students. For instance, 17.7% out of the 365 Malaysian freshmen students self-reported having cyber bullied others twice or three times in a month (Faryadi, 2011). Moreover, by employing a single global item assessment method, a study carried out with 666 Turkish university students revealed that 22.5% of the participants cyber bullied someone once or more in their life (Dilmaç, 2009). Using the same measurement

instrument, Arıcak (2009) discovered 19.7% of the 695 Turkish university students in his study cyber bullied others at least once; which is quite a similar prevalence rate with Dilmaç's (2009) study. Kokkinos et al., (2014) aimed to unravel cyber bullying experiences of 430 Greek university students by using a multiple-item questionnaire. In their study sample, whereas 14% of the respondents were identified as pure cyber bullies, 33% were cyber bully-victims.

In addition to the studies focusing on particular age groups such as secondary or high school students, an additional group of studies has combined different age groups to examine the prevalence of cyber bullying perpetration. These studies can be categorized regarding their cyber bullying perpetration prevalence rates lower or higher. Jung et al., (2012) reported the lowest percentages. They examined cyber bullying perpetration frequency of a sample comprised of 4531 elementary and middle school Korean male students (from grade 5 to 8, and ranging in age from 11 to 14). They found out that while 3.4% of the respondents were pure cyber bullies, 3.0% were cyber bully-victims. Findings of Hinduja and Pachin (2013) were a little more than Jung et al., (2012). With a sample made up of 4400 grade six through grade twelve American students, Hinduja and Pachin (2013) reported that 4.9% of the participants acknowledged having cyber bullied someone a few times or more in the last month. Study of Pabian and Vandebosch (2015) documented similar prevalence rates for cyber bullying perpetration. They collected data from a random stratified cluster sample composed of 2128 Belgian students among 10-17 years old (the mean age was 13.02). It was a short term longitudinal research, and the data were collected twice from the same sample in a 6-month time interval. The prevalence of cyber bullying perpetration was 10% in the first data set, and 9.6% for the second data set. Moreover, after collecting data from 3339 participants for their state wide bullying prevention initiative, Williams and Guerra (2007) obtained a second set of data from 2293 participants to explore cyber bullying. The participants were in grade 5, 8 and 11 students from several different school sites. A Likert-type single item without a definition of cyber bullying was used for the measurement. Among the total 5632 participants, 9.4% self-reported having cyber bullied someone since the beginning of the

school year. A relatively higher prevalence was documented by Spears et al., (2015). They assessed cyber bullying experiences with a list of cyber bullying behaviors among 2338 Australian youngsters aged 12-18 years. Accordingly, a total of 20.7% of the respondents cyber bullied others within the former school term. On the other hand, with a prevalence ratio of 33.6%, Balakrishnan (2015) reported the highest prevalence cyber bullying perpetration prevalence among 393 young adults ranging in age from 17 to 30. Of note, Balakrishnan (2015) investigated cyber bullying with a convenience sample by a single global item strategy.

Summarizing the several prevalence rates reported by individual studies mentioned above, all age groups of students in the global context seem to have engaged in cyber bullying perpetration. When the all age groups are overall considered, while the lowest prevalence was about 3%, the highest prevalence was approximately 35%. This highlights the fact that digital tools have turned into means for cyber bullying others in the hands of the young people. Most importantly, cyber bullies internationally cause suffering on their victims. Therefore, investigating the nature of cyber bullying perpetration can improve the existing prevention and intervention strategies against cyber bullying. By this way, research findings can produce knowledge that can inform the researchers and practitioners about how to provide help for the perpetrators of cyber bullying. The more the cyber bullies are professionally helped, the more prevention attempts can become effective. If individuals can be prevented from engaging in cyber bullying perpetration, fewer victims will suffer from cyber bullying.

2.1.6 The relationship of age with cyber bullying perpetration

Can an age-based developmental trajectory be identified in cyber bullying perpetration? Although researchers have sought an answer to this question, a consistent trajectory cannot be achieved yet. Please note that grade level was considered in the following paragraphs as a proxy for age in some studies because they did not report the precise age of their participants.

One group of research could not detect any significant age difference with regard to cyber bullying perpetration. As an example, working with elementary school children aged between 8 and 11, Arslan et al., (2012) reported that age was not a significant predictor of cyber bullying perpetration in their sample. Monks et al., (2012) also could not identify any age related differences in cyber bullying perpetration behaviors of the elementary school students. Besides, Karlier-Soydaş and Uçanok (2014) conducted a study with 1395 Turkish secondary and high school students (from grade 6 to 12, the mean age was 14.87), and reported no significant grade level differences concerning cyber bullying perpetration. An additional Turkish study examining cyber bullying among 357 high schoolers (through grade 9 to 12) was the study of Pamuk and Bavlı (2013) who documented no grade level differences in engaging in cyber bullying perpetration. Akbulut and Erişti (2011) did not also find any significant age difference among university students in terms of cyber bullying others. Another study focusing on university students belonged to Francisco et al., (2015) who also could not detect any significant difference regarding the year level of their university student sample. The study of Spears et al., (2015) also revealed no significant age differences in cyber bullying perpetration experiences of the young Australian individuals ranging in age from 12 to 18 years. Moreover, assessing cyber bullying experiences of individuals aging between 17 and 30, Balakrishnan (2015) noted no significant age differences in term of cyber bullying others.

On the other hand, a second group of researchers identified an interesting age trend for cyber bullying perpetration. They documented a trend suggesting that the older their participants are, the more they become engaged in cyber bullying perpetration. However, they reported this trend specific to their study group's age or grade level. Take secondary school students as a particular research group as an example. Kowalski and Limber (2007) found out that compared to the sixth graders, 7th and 8th grade students were more likely to be pure cyber bullies and cyber bully-victims. Furthermore, Ayas and Horzum (2012) detected a significant impact of grade on cyber bullying others;

more specifically, while 8th graders cyber bullied others more than the 7th and 6th graders, 7th graders cyber bullied others more than the 6th graders. Buelga et al., (2015) also reported that students in the last year of secondary school scored highest in cyber bullying perpetration acts compared to the others. Additionally, in their study sample composed of 533 secondary schoolers (ranging in grade 7 to 11), Smith et al., (2008) documented that older students cyber bullied others (grade 10 and 11) significantly more than the other age groups. A similar trend can be observed for the high school students as well. For example, Bauman, Toomey and Walker (2013) examined cyber bullying among 1491 students from grade 9 through grade 12, and detected a significant age difference in cyber bullying others. In their investigation, 12th graders were engaged in cyber bullying perpetration more than the students in other grade levels.

The trend suggesting that the individuals with older ages are cyber bullying others significantly more is also reported by the studies combining different levels of age groups. For instance, Walrave and Heirman (2011) aimed to unravel cyber bullying perpetration in their research composing 1318 Belgian students within the age groups from 12 to 18. Reporting a significant age difference regarding cyber bullying perpetration, they revealed that older students cyber bullied others slightly more than their younger peers. Besides, Williams and Guerra (2007) find out a significant association between grade and being a cyber bully in a sample composed of grade 5, grade 8 and grade 11 students. Accordingly, a lower level of cyber bullying perpetration existed for fifth graders, but cyber bullying perpetration peaked at grade 8, and then it slightly decreased in grade 11. Results of Pabian and Vandebosch (2015) who investigated cyber bullying among individuals aged between 10 and 17 demonstrated that the higher the age of the participant, the higher the possibility of being a perpetrator of cyber bullying. In addition, in the study of Bussey et al., (2015), the participants were 964 Australian grade 7 and grade 9 students. According to the results of the study, grade 9 students cyber bullied others significantly more than the grade 7 ones. Interestingly however, in their study conducted with 759 Swedish students from grades 4-6 (mean age was 11.120) and grades 7-9 (the mean age was 13.85), Slonje, Smith, and Frisen (2012)

found that grades 7-9 students self-reported having cyber bullied others more than the grades 4-6 individuals.

To put it in a nutshell, a steady developmental trajectory concerning the age differences in cyber bullying perpetration cannot be specified. Firstly, because several research results showed no significant age differences in term of cyber bullying others. Besides, although the findings of a second group of researchers put forward that cyber bullying perpetration increases with age, a certain age could not be determined in which cyber bullying perpetration is higher compared to the other ages. In addition to these, age differences in cyber bullying perpetration have been explored by a limited number of studies which lack longitudinal data. Moreover, age differences in cyber bullying perpetration among secondary and high school students were examined by a number of investigations. Yet, elementary school children and university youth are under-represented in terms of uncovering the significant age differences with regards to their cyber bullying perpetration behaviors.

2.1.7 The relationship of gender with cyber bullying perpetration

Besides examining possible age differences, researchers have explored whether gender is a significant factor in cyber bullying perpetration behaviors. However, gender has created one of the most complicated discussions in research with relation to cyber bullying perpetration.

The first group of researchers has reported that there are no significant differences between females and males in cyber bullying perpetration. Arıcak (2009), Balakrishnan (2015), Holfeld and Leadbeater (2015), Monks et al., (2012), Patchin and Hinduja (2006), Spears et al., (2015), Tokunaga (2010), Topcu, Erdur-Baker, and Çapa-Aydın (2008), Williams and Guerra (2007), Ybarra and Mitchell (2004a) are examples of the international research focusing on different age groups and presenting findings about the non- significant gender difference in cyber bullying others. Proposing an explanation

about this non-difference, Robson and Witenberg (2013) noted that young individuals are frequently making use of digital technologies in their daily life; thus, females and males can be equally expected to engage in cyber bullying perpetration.

The second group of researchers has indicated that females are bullying others online significantly more than males. For instance, according to the study of Beckman, Hagquist and Hellström (2013), females cyber bullied others equally as males and acted more as cyber bully-victims, compared to the males. Additional studies have also documented that females were cyber bullying others more than the males. Connel, Schell-Busey, Pearce, and Negro (2014), Erdur-Baker and Tanrikulu (2010), Rice et al., (2015) are the researchers who noted females as cyber bullies. Smith et al., (2008) stated that the indirect and the relational nature of cyber bullying can be a reason of females' cyber bullying others more compared to males. An additional reason of this difference can be stemmed from the fact that females act braver in online settings (Ybarra & Mitchell, 2004a).

The last group of researchers has found that males are cyber bullying others significantly more than females. Akbulut and Erişti (2011), Baştürk-Akca, Sayımer, & Ergül, 2015, Bauman et al., (2013), Bayraktar et al., (2014), Calvete et al., (2010), Doucette (2013), Ekşi, 2012, Erdur-Baker and Kavşut (2007), Erdur-Baker and Topcu, 2009, Erdur-Baker (2010), Erdur-Baker (2013), Francisco et al., (2015), Huang and Chou (2010), Karabacak et al., (2015), Lapidot-Lefler and Dolev-Cohen (2015), Li (2006), Ozden and Icellioğlu, 2014, Pamuk and Bavlı (2013), Slonje and Smith (2008), Şahin, Aydın, & Sarı (2012), Tanrikulu et al., (2015), Wong et al., (2014) are among the existing investigations claiming males are perpetrating others online more than females. According to Huang and Chou (2010), males are cyber bullying others more because they are using digital technologies more frequently, and they are more skillful at online technology usage compared to the females. Males' behaving more risky in cyber world can be an additional reason explaining the relationship between being male and being a cyber bully (Erdur-Baker, 2010).

Wrapping up the findings about the relationship of gender on cyber bullying perpetration behaviors, males seem to be internationally overrepresented in terms of cyber bullying others. Studies indicating a non-significant gender difference with regards to bullying others online are the second common ones. On the other hand, fewer number of studies pointed out that females are cyber bullies more than males. As a result, an agreement among the researchers in the global context has not been established about the influence of gender concerning cyber bullying perpetration.

2.1.8 Are cyber bullies in a better psychological, physical and academic well-being than the cyber victims?

Albeit the lack of longitudinal research designs in the literature, the findings of the correlational-design studies have provided evidence suggesting that cyber victims are not in good condition. Aiming to unravel the relationships between cyber bullying involvement and experiencing negative outcomes, the focus of the previous investigations has been extensively on the cyber victims. This may be because researchers have thought that cyber victims are the only group who are in desperate conditions. By an extensive body of research, being exposed to cyber victimization has been consistently found to be linked with the problems concerning psychological health, mental health, physical health and school achievement for the young people from elementary school to university (Arıcak, 2009; Bonanno & Hymel, 2013; Chang et al., 2013; Crosslin & Crosslin, 2014; Erdur-Baker & Tanrıku, 2010; Faucher et al., 2014; Laftman et al., 2013; Munawar, Inam-ul-aq, Ali, & Maqsood, 2014; Rivituso, 2012; Schenk & Fremouw, 2012; Smith & Yoon, 2013; Şahin et al., 2012).

What about cyber bullies? Are they in better conditions compared to the cyber victims? The findings of the existent studies draw a worrying picture for the youngsters engaged in cyber bullying perpetration. For instance, Campbell et al., (2013) carried out a research with students in grade 6 through 12 (the mean age was 13.96) to gain a better

understanding about the mental health of the perpetrators of cyber bullying. Their findings indicated that cyber bullies scored higher on social difficulties stress, depression and anxiety when compared with the non-involveds. Moreover, the associations between internalizing (insomnia, perceived social disintegration and psychological distress) and externalizing problems (aggressiveness and antisocial behavior) with cyber bullying perpetration were examined by Kubiszewski, Fontaine, Hure and Rusch (2013) with a sample composed of middle and high school students (the mean age was 14.80). The results demonstrated that cyber bully-victims were commonly experiencing all types of internalizing problems. In addition, pure cyber bullies scored highest in insomnia, and greater levels of antisocial behavior was associated with being a cyber bully.

Furthermore, by comparing pure cyber bullies, cyber bully-victims, pure cyber victims and non-involveds of cyber bullying, Ybarra and Mitchell (2004b) explored the characteristics of the cyber bullying perpetrators between the ages of 10 and 17 years (mean age was 14.14) in a sample involving 1501 regular internet users. They presented detailed findings about the characteristics regarding the pure cyber bullies and cyber bully-victims. Accordingly, the pure cyber bullies and the cyber bully-victims suffer from delinquent behaviors (damaging property, police contact, physically assaulting others, and stealing), disliking the school, drinking, smoking, major depression symptoms and emotional distance of the caregiver. When the statistically significant differences between the four groups were considered, the pure cyber bullies and the cyber bully-victims were engaging in delinquent behaviors significantly more than the pure cyber victims and non-involveds. In terms of disliking the school, cyber bullies did not like the school significantly more than the non-involved participants. In addition, while the cyber bully-victims had significantly more drinking problems compared to the not-involved students, the pure cyber bullies were suffering from drinking significantly more than the pure cyber victims and non-involveds. With regards to smoking problems, the cyber bully-victims and the pure cyber bullies were smoking significantly more than the non-involveds of cyber bullying. Moreover, the cyber bully-victims reported

significantly more depressive symptoms compared to the non-involved participants. Concerning the experiences of emotional distance of the caregiver, the cyber bully-victims and the pure cyber bullies had significantly poorer emotional bonds with the caregiver than the non-involveds of cyber bullying.

In addition to the middle school and high school students, psychological health of the cyber bullying perpetrators in the higher education level has also been investigated. University students who deemed themselves as pure cyber bullies or cyber bully-victims were found to score higher on depression, hostility, sensitivity to interpersonal rejection, paranoia, aggressiveness, phobic anxiety and psychoticism besides suicidal ideations/behaviors and illegal acts such as violent crimes and drug crimes (Schenk et al., 2013).

In their review study, Kowalski, Giumetti, Schroeder and Lattanner (2014) confirmed the study findings mentioned above. They reported that young people with higher levels of cyber bullying perpetration were more abusing drugs and alcohol, suffering more from lower academic success, and were in worse condition in terms of experiencing more anxiety, loneliness, and depression besides lower levels of self-esteem and life-satisfaction.

An additional group of researchers have provided interesting findings about the cyber bully-victims. They suggested that cyber bully-victims are in a worse condition compared to the pure cyber bullies, pure cyber victims or non-involveds of cyber bullying, in terms of psychological, physical or academic well-being. For example, Kowalski and Limber (2013) explored psychological, physical and academic associates of cyber bullying among 931 students ranging in grade from 6 to 12 (mean age was 15.16). They found that individuals behaving as cyber bullies or cyber bully-victims had psychological and health-related and school related problems. In detail, cyber bullying perpetration was significantly linked with anxiety, depression, low self-esteem, poor health, suicidal ideation, being absent from school in addition to leaving school early.

Most importantly, in comparison with the students never involved in cyber bullying, cyber bully-victims owned the poorest psychological and physical health scores besides scoring highest in problems about school performance. Moreover, in order to unravel emotional and behavioral problems related with cyber bullying, Schultze-Krumbholz et al., (2012) collected a cross-sectional data from 412 middle school students as well as an additional longitudinal data from 223 students. The findings of the cross-sectional sample showed that perpetrators of cyber bullying reported more aggression related problems. On the other hand, the findings of the longitudinal sample revealed that acting as a cyber bully-victim resulted in an increase in depression.

In addition, Bayraktar et al., (2014) inspected how different groups involved in cyber bullying (pure cyber bullies, pure cyber victims and cyber bully-victims) were different from each other in terms of individual and relational level variables. Their sample involved 2092 Czech primary and secondary school students in ages 12 through 18 (mean age was 15.1). Their findings revealed that pure cyber bullies and cyber bully-victims scored higher on being aggressive and peer rejection, whereas they had lower levels of self-control and parental attachment. More specifically, cyber bully-victims had the highest scores on poor self-control, peer rejection, besides poor parental attachment compared to the pure cyber bullies and cyber victims. Furthermore, Spears et al., (2015) investigated the relationship between mental health, social connectedness and help-seeking and experiencing cyber bullying among 2338 Australian students aged 12-18 years. According to their results, depression, anxiety, stress, poor mental health and social connectedness scores of pure cyber bullies and cyber bully-victims were significantly greater than the non-involved individuals. Most importantly, cyber bully-victims, in particular, were reported being in more desperate situation compared to the pure cyber bullies and non-involved students. This is because cyber bully-victims had poorer mental health, less social connectedness, higher stress, greater anxiety and higher levels of depression. They were also not inclined to seek help besides being tend to spend more time online after 11 p.m. Besides the studies mentioned above, Ybarra and Mitchell (2004b) reported that engaging in delinquent behaviors increased the

probability of being a cyber bully-victim about four times, whereas the likelihood of reporting emotional distress was almost six times higher for the cyber bully-victims than the pure cyber bullies.

Summing up the findings concerning the well-being of the perpetrators of cyber bullying, individuals cyber bullying others seem to be experiencing similar health-related or school-related difficulties with the individuals being exposed to cyber victimization. In fact, cyber bully-victims who are the individuals cyber bullying others and being cyber victimized at the same time appear to be suffering more severe health-related or school-related problems. Therefore, perpetrators of cyber bullying cannot be said to be in a better condition compared to the cyber victims.

2.2 Theoretical Framework of This Study

This second sub-section of the literature review is devoted to the presentation of the theoretical framework which guides the formation of this current study. It begins with detailing the existing theoretical frameworks applied by the previous investigations to cyber bullying perpetration behaviors. Then, it provides information about the *Uses and Gratification Theory* which makes up the theoretical framework of this present research. Lastly, how the *Uses and Gratification Theory* can be related to explain cyber bullying perpetration behavior is described. Of note, the *Uses and Gratification Theory* was considered as a guiding framework or a theoretical roadmap to base this present study on a firmer theoretical foundation.

2.2.1 Theories previously applied to cyber bullying perpetration behavior

Understanding what have been theoretically studied so far in cyber bullying perpetration research can help the reader to have an overall picture about the role of theory in cyber

bullying research. Therefore, before directly starting to discuss about the theoretical framework of this present research, the theories recently examined to provide an explanation about cyber bullying perpetration were initially presented below.

Tokunaga (2010) stated that researchers studying cyber bullying have somehow overlooked employing a theoretical background to their investigations to establish a theoretical foundation and to theoretically empower their studies. Recently however, a few researchers have attempted to consider some theories to fill this void in the literature. Among them, Hay et al., (2010) and Jang et al., (2014) regarded the *General Strain Theory*, and Navarro and Jasinski, (2012) employed *Routine Activities Theory* with the aim of reaching a theoretical foundation to explain cyber victimization. Yet, given that the target of this present investigation is to uncover the nature of cyber bullying perpetration, studies aiming to form a theoretical understanding about cyber victimization were disregarded. For this reason, research aiming to establish a theoretical establishment about cyber bullying perpetration were explained in detail below.

2.2.1.1 *General strain theory*

The *General Strain Theory* originally belonged to Agnew (1992) who suggested three main types of strains people generally experience. The first type of strains is the real or expected failure to reach positively appreciated goals. The second type of strains is actual or expected loss of positively valued stimuli. The last type of strains is the real or anticipated existence of negatively valued stimuli. According to the *General Strain Theory*, the more strains individuals go through, the higher the risks are for engaging in criminal or deviant conducts. However, strains are not directly related to delinquent behaviors. Agnew (1992) contended that strains create negative emotions including anger or frustration, and engaging in delinquent behaviors is a type of adaptation or coping mechanism to ventilate negative feelings.

Patchin and Hinduja (2011) tested a model based on the *General Strain Theory* in order to explain bullying perpetration. Their study sample was 1963 American middle school students ranging in grade 6 to 8 (their mean age was 12.8). Although they assessed both traditional bullying and cyber bullying at the same time, their discussion and findings specifically concerning cyber bullying perpetration were presented in this paragraph to be able to stick with the aim of this current investigation. They questioned whether the likelihood of cyber bullying perpetration was higher for the young individuals who are in more strain. They claimed that cyber bullying perpetration can be conceptualized as a possible outcome of experiencing strains. This is because young individuals may use cyber bullying others as a way to relieve negative feelings such as fear or anger caused by the strains experienced. Considering that cyber bullying someone provides the perpetrator a satisfaction of power or superiority, strained cyber bullies may regard their perpetration behaviors as a strategy to get rid of negative feelings and to feel better. Moreover, cyber settings have specifically provided newer advantages for engaging in cyber bullying perpetration such as anonymity or publicity. Therefore, being aware of these opportunities of cyber space, young individuals who would not behave aggressively in face-to-face environments may more tend to bully others online in order to relieve from the strains they experience.

According to the results of the study of Patchin and Hinduja (2011), the middle school aged participants who reported more strains were more prone to become engaged in cyber bullying perpetration. Additionally, a direct association was discovered between experiencing strains and being a cyber bully, and the participants with higher negative feelings were more likely to have cyber bullied someone. Therefore, the investigation of Patchin and Hinduja (2011) provided empirical support suggesting that the *General Strain Theory* is applicable in theoretical explanation of cyber bullying perpetration behaviors.

2.2.1.2 Theory of Reasoned Action

The development of the *Theory of Reasoned Action* was made by Ajzen and Fisbein (1980) who maintained that the positive or negative attitudes as well as the subjective norms regarding a particular behavior have an influence on behavioral intentions which then affect the behavior. In other words, behavioral intention of an individual is dependent upon two aspects: the positive or negative attitudes toward the behavior in addition to the subjective norms (the perceived social pressure about engaging in a behavior). Applying this to cyber bullying perpetration behavior, whether an individual cyber bullies others depends on (a) her/his favorable or unfavorable attitudes about cyber bullying perpetration, (b) how other people think about her/him when she/he bullies others online.

Doane et al., (2014) made use of the *Theory of Reasoned Action* to acquire a theoretical explanation of cyber bullying perpetration. Their study sample involved American university students in age 18 through 23. Of note, Doane et al., (2014) expanded the subjective norms originally mentioned by Ajzen and Fisbein (1980) by including perceived injunctive and descriptive norms the participants experience. They hypothesized that attitudes about cyber bullying perpetration, perceived injunctive and descriptive norms would predict cyber bullying perpetration. They also hypothesized that the empathy for the victims of cyber bullying would mediate the attitudes about cyber bullying perpetration, perceived injunctive and descriptive norms. The findings of Doane et al., (2014) showed that the *Theory of Reasoned Action* is an appropriate theoretical framework to understand cyber bullying perpetration. More specifically, they found that participants with higher levels of positive attitudes about cyber bullying perpetration were more likely to intend to cyber bully others. And more intentions of cyber bullying someone predicted a higher frequency of cyber bullying perpetration. They also reported that injunctive norms concerning cyber bullying predicted the intentions of engaging in cyber bullying perpetration. Lastly, their findings revealed that individuals with a lower level of empathy toward the cyber victims tend to have more

positive attitudes to cyber bully others. Hence, the study of Doane et al., (2014) presented empirical evidence pointing out that the *Theory of Reasoned Action* is a potential theoretical roadmap for the researchers who wish to establish their research in a theoretical framework.

2.2.1.3 Theory of Planned Behavior

The *Theory of Planned Behavior* is a subsequent extension of the *Theory of Reasoned Action* (Ajzen, 1991). In the previous version, namely in the *Theory of Reasoned Action*, attitudes and subjective norms were the two factors explaining engagement in a behavior. A new dimension which is ‘perceived behavioral control’ is included in the *Theory of Planned Behavior*. Perceived behavioral control refers to the individual ability to engage in a behavior. Individuals’ perceived behavioral control is formed by their personal perception of easiness or difficulty in terms of doing a behavior. Consequently, engagement in a behavior is dependent on the attitudes and subjective norms in addition to the perceived behavioral control. Behavioral intentions are the most significant predictor determining whether a person would engage in a behavior or not. Attitudes, subjective norms and perceived behavioral control make up the individual’s intention of doing a behavior, which in turn determines engagement in a specific behavior. All in all, higher levels of the favorable attitudes, the positive subjective norms as well as higher perceived behavioral control increase the likelihood of an individual’s engaging in a behavior.

The *Theory of Planned Behavior* has been applied to cyber bullying perpetration behaviors by two separate investigations. The first investigation was conducted by Heirman and Walvare (2012) with 1042 high school students in Belgium. They tested a structural equation model to explore if the *Theory of Planned Behavior* was a sound theoretical guide to understand cyber bullying perpetration behaviors of youngsters. Heirman and Walvare (2012) noted two reasons why they thought that the *Theory of Planned Behavior* could have a theoretical utility in gaining a clearer understanding in

cyber bullying perpetration. Initially, social influences including peers or bystanders are significant in cyber bullying behaviors. Social influences can be conceptualized as the counterpart of ‘subjective norms’ in the *Theory of Planned Behavior*. Secondly, better prevention and intervention strategies could be designed if researchers could have more empirical evidence with regards to the impact of individual’s attitudes, subjective norms and perceived behavioral control on cyber bullying others. According to the findings reported by Heirman and Walvare (2012), a significant association was found between the participants’ attitudes and behavioral intentions about engaging in cyber bullying perpetration. In fact, the variable of attitudes towards cyber bullying others was the strongest predictor of cyber bullying perpetration. Besides, the variables of subjective norms and perceived behavioral control were significant associates of cyber bullying intentions of the respondents. In summary, significant evidence regarding the applicability of the *Theory of Planned Behavior* in cyber bullying perpetration behaviors was presented by Heirman and Walvare (2012).

The second study examining the theoretical appropriateness of the *Theory of Planned Behavior* in cyber bullying perpetration behaviors belonged to Pabian and Vandebosch (2014). Their sample was composed of 1606 Belgian high school students ranging in age from 11 to 17. It was a longitudinal-design study, and there was a six-month time interval between the first and the second data collection. The goal of their study was to test a structural equation model to estimate the predictive value of attitudes, subjective norms besides perceived behavioral control in terms of cyber bullying perpetration. Pabian and Vandebosch’s (2014) study findings showed that attitudes, subjective norms and perceived behavioral control explained 28.8% of the variance in the intentions of cyber bullying perpetration. Yet, perceived behavioral control was not found having a significant impact on cyber bullying intentions. On the other hand, the intention to cyber bully others was a significant predictor of participants’ self-reported cyber bullying perpetration behaviors six months later. Indeed, the intention to cyber bully others by itself accounted for 8.6% of the variance concerning the cyber bullying perpetration behaviors reported after six months. In brief, Pabian and Vandebosch (2014) provided

further empirical evidence about the utility of the *Theory of Planned Behavior* as a useful theoretical roadmap to have a deeper understanding about cyber bullying perpetration.

Providing an overall summary regarding the theories formerly applied, there is an obvious dearth of research pertaining to establish a theoretical background to be able to conceptualize cyber bullying perpetration in an empirical way. A total of four investigations have, so far, provided empirical support from different age groups suggesting the applicability of three different theories in understanding cyber bullying perpetration. Taking the *General Strain Theory* in consideration to uncover more about cyber bullying perpetration, Patchin and Hinduja (2011) concluded that the high amount of the strains experienced by the individuals were more likely to engage in cyber bullying perpetration. In addition, Doane et al., (2014) used the *Theory of Reasoned Action* as a theoretical roadmap for their study. They explored whether individuals' attitudes as well as perceived injunctive and descriptive norms had significant predictive roles in cyber bullying perpetration. Their findings yielded empirical evidence pointing out the usefulness of the *Theory of Reasoned Action* in conceptualizing cyber bullying perpetration. Lastly, the suitability of the *Theory of Planned Behavior* in explaining cyber bullying perpetration was tested by Heirman and Walvare (2012) as well as by Pabian and Vandebosch (2014). The *Theory of Planned Behavior* was only different from the *Theory of Reasoned Action* by its extra dimension of 'perceived behavioral control'. Both Heirman and Walvare (2012) and Pabian and Vandebosch (2014) presented significant findings concerning the applicability of the *Theory of Planned Behavior* in the explanation of cyber bullying perpetration behaviors.

2.2.2 The procedure and the reasons for choosing 'uses and gratification theory' as the theoretical framework

Before starting to explain *Uses and Gratifications Theory* (UGT) in detail, the procedure behind selecting UGT as the theoretical roadmap for this present study was presented here. At the time of this current research was being planned, discussions started about the lack of theory in cyber bullying literature. For the first time, Tokunaga (2010) highlighted the fact that theory was missing in cyber bullying research. At that time, though Li (2005) mentioned about the *Theory of Planned Behavior* to conceptualize cyber bullying, how the theory was applied to the research was not clarified. To be able to find an appropriate theoretical structure to guide the organization of this present investigation, the theories suggested by Tokunaga (2010) were considered. Tokunaga (2010) noted that *Theory of Planned Behavior*, a *Socio-Cultural Discourse Approach*, *Social Cognitive Theory*, *The Buffering Hypothesis*, *Dual-Perspective Theory of Bullying* and *Uses and Gratifications Theory* can be used by the researchers aiming to found a theoretical basis for their research. Among these potential theories pointed out by Tokunaga (2010), *Uses and Gratifications Theory* (Blumler & Katz, 1974) seemed promising to guide this current study.

A number of reasons played a role in selecting *Uses and Gratifications Theory* (UGT) as the theoretical road map for this present research. To begin with, Alonzo and Aiken (2004) applied the UGT in the flaming behavior which is one of the forms of cyber bullying perpetration behaviors (e.g., Willard, 2007). Alonzo and Aiken (2004) reported that UGT was a useful theoretical background to explain flaming behaviors. However, no research had considered using UGT to gain a clearer understanding about all behaviors involving cyber bullying perpetration when this current investigation was being arranged. Secondly, there have been studies which regarded UGT in the explanation of online technology usage behaviors. For example, UGT has been applied to and yielded positive results in behaviors including the Internet usage (Stafford, Stafford, & Schkade, 2004), using social networking websites (Ha, Kim, Libaque-Saenz, Chang, & Park, 2015), mobile phone usage (Leung & Wei, 2000), playing online games (Wu, Wang, & Tsai, 2010), and owning a personal blog (Kaye, 2010). The researcher of this current investigation reasoned that if the UGT could provide explanations for the

use of online technology usage behaviors, the UGT could also explain the misuse of online technologies, which is cyber bullying.

Additionally, the UGT focuses on the role of personality traits on the motivation of engaging in a behavior. Personality traits as well as the motives of cyber bullying perpetrators were previously examined by the individual cyber bullying studies. Nonetheless, these two significant aspects of cyber bullying perpetration were not combined and tested in a single research. If these two aspects of cyber bullying perpetration could be combined, and empirical information could be produced about the role of personality traits on cyber bullying perpetration motives, important information could be attained with regards to cyber bullying prevention. With the help of such knowledge, the researchers can make predictions about which individuals with certain personality traits are more likely to engage in cyber bullying perpetration with which motives. If such predictions could be empirically made, prevention measures could be taken ahead, and the potential cyber bullies could be stopped before victimizing others. By this way, since the cyber bullying perpetration could be prevented even before it comes true, cyber bullying could not happen, and thus, there will be no victims to suffer.

Lastly, there existed an additional reason of choosing UGT as the theoretical guide of this current study when the already implemented theories in cyber bullying perpetration were considered. It was about the dimensions left un-investigated by the already employed theories explaining cyber bullying perpetration. After Tokunaga's (2010) drawing attention about the lack of theory in cyber bullying research, researchers designed studies examining cyber bullying perpetration in accordance with some theoretical frameworks which were the *General Strain Theory* (Patchin & Hinduja, 2011), the *Theory of Reasoned Action* (Doane et al., 2014) and the *Theory of Planned Behavior* (Heirman & Walvare, 2012). With the guidance of these theories, researchers, so far, have inspected (a) the role of experiencing daily life strains in cyber bullying perpetration, (b) intentions regarding cyber bullying others, (c) attitudes toward cyber bullying perpetration, (d) the perceived social pressure about engaging in cyber bullying,

(e) and the personal ability to engage in cyber bullying. However, these theory-based approaches have not yet considered the role of personality traits and the motives behind cyber bullying perpetration. Therefore, by testing a model dependent on UGT, this present investigation aimed to address this gap by taking the role of personality traits and cyber bullying perpetration motives into consideration. All in all, UGT seemed as a potential theoretical framework to provide an explanation concerning cyber bullying perpetration. To the best of the researcher's knowledge, UGT has not been applied to any cyber bullying research up until now. Hence, this current research was one the first investigations considering *Uses and Gratifications Theory* as the theoretical guide in exploring cyber bullying perpetration. By utilizing this particular theoretical outlook, motives of cyber bullying perpetration and the personality traits of the cyber bullies were aimed to link with cyber bullying perpetration acts.

2.2.3 Uses and gratification theory

Originally being a communication/ media theory, the *Uses and Gratifications Theory* (UGT) (Blumler & Katz, 1974) is a theoretical framework to assess why and how individuals use communication media to gratify certain needs. The UGT allows researchers to explore and better understand the reasons individuals choose certain communication media, and the gratifications they obtain from using them. According to the UGT, users are not passive in communication media usage. On the contrary, users are active and willful in preference and their usage of certain communication media. For this reason, users, themselves, decide on which communication media to prefer to fulfill their needs to attain gratification. Three basic principles are present for the UGT; (a) individuals are goal-oriented while using communication media, (b) individuals are active in their communication media usage, (c) individuals are conscious of their motives/ needs, and intentionally choose some communication media to gratify needs/ motives (Alonzo & Aiken, 2004; Ruggiero, 2000). In addition to these main tenets, personality traits of the individuals are important for the UGT. This is because personality traits affect the individual motives which then impact the gratifications

sought from a behavior (Alonzo & Aiken, 2004). Researchers have previously integrated the personality traits of the individuals to the UGT (e.g., Hanson & Haridakis, 2008; Orchard, Fullwood, Galbraith, & Morris, 2014) while examining why individuals utilize online technologies. Their findings provided evidence suggesting that personality traits are essential for the *Uses and Gratifications Theory* to figure out why people choose certain ICTs to accomplish some gratifications.

The UGT has been employed in a variety of user behaviors ranging from radio usage (e.g., Albarran et al., 2007), magazine readership (e.g., Kim, Lee, Jo, Jung, & Kang, 2015), using e-books (Shin, 2011), e-learning (e.g., Mondy, Woods, & Rafi, 2007), interactive advertising (e.g., Ko, Cho, & Roberts, 2005) and to online shopping (e.g., Lim & Ting, 2012). Nevertheless, the UGT has gained a global popularity with its application on television watching motives. An extensive body of international research has documented that the UGT has a significant utility in understanding people's motives and obtained gratifications regarding watching television (e.g., Bartsch, 2012; Harwood & Vicze, 2015; Khan & Manzoor, 2013). However, with the emergence and proliferation of computer/ internet-mediated online communication tools, the UGT seems to have gained further importance in having a clearer understanding about user behaviors in cyber technologies. Researchers have applied the UGT as the theoretical guide in examining user behaviors in almost all types of online communication tools. User behaviors on the Internet (e.g., Roy, 2008; Stafford et al., 2004), computer-mediated communications (e.g., Dixon, 1996), social networking web-sites (e.g., Cheung, Chiu, & Lee, 2011; Garcia-Martin & Garcia-Sanchez, 2015; Raacke & Bonds-Raacke, 2008; Smock, Ellison, Lampe, & Wohn, 2011), video sharing websites (e.g., Cha, 2014) and text messaging (e.g., Grellhesl, & Punyanunt-Carter, 2012) are among the online communication tools that have been examined under the framework of the UGT.

2.2.4 Uses and gratification theory in cyber bullying perpetration research

To the researcher's knowledge, Alonzo and Aiken (2004) were the first researchers having applied the UGT perspective in one of the behaviors of cyber bullying perpetration, which was flaming. Flaming refers to the aggressive and offensive interactions and/or fights on cyber space. The study of Alonzo and Aiken (2004) specifically concentrated on flaming as one of the cyber bullying perpetration behaviors. However, there has been no study examining cyber bullying perpetration behaviors in combination under the framework of *Uses and Gratifications Theory* (UGT). Therefore, this current research was one of the pioneer research which was designed and tested under the guidance of the UGT.

Alonzo and Aiken (2004) aimed to establish a theoretical framework to flaming motives in the light of *Uses and Gratifications Theory* (UGT). Flaming is 'hostile intentions characterized by words of profanity, obscenity, and insults that inflict harm to a person or an organization resulting from uninhibited behavior' (Alonzo & Aiken, 2004, p. 205). It is one of the forms of cyber bullying behaviors (Baas et al., 2013; Li, 2007; Willard, 2007). Alonzo and Aiken (2004) recruited a total 160 university students, and assigned the participants randomly to 20 groups of eight participants. On an electronic gallery writing program, the participants were expected to present thoughts about finding solutions to the parking problem at the university campus. The electronic gallery writing program allowed the participants to write ideas as well as comments in an anonymous and simultaneous fashion. When the participants finished the task, they filled out a questionnaire which examined four psychological variables (sensation seeking, anxiety, creativity, and assertiveness) and four flaming motives (pass time, relaxation, escape, and entertainment). The questionnaire also included questions related to anonymity, controversy, interest, importance, and appropriateness in addition to user satisfaction and user comments. In their conceptual model of flaming motives, they tested the relationships between the four psychological variables and the four flaming motives.

Alonzo and Aiken (2004) hypothesized that personality traits can play an important role in flaming motivation because individuals would obtain some gratifications from their flaming behaviors. According to the results, personality traits were found significantly associated with flaming motives. More specifically, while sensation seeking was positively and significantly related to flaming motives of passing time and entertainment, anxiety was a significant predictor of flaming motives of escape and relaxation. And greater levels of assertiveness were associated with flaming motives of passing time. Overall, Alonzo and Aiken (2004) obtained empirical evidence suggesting that UGT as a theoretical background had a utility in explaining flaming others in online settings.

Considering the basic tenets of the *Uses and Gratifications Theory* (UGT), the logic behind the UGT seems appropriate to cyber bullying perpetration research. UGT states that individuals are active and goal-oriented while using information and communication technologies (ICTs). In a similar manner, being aware of the opportunities of the cyber platforms (such as anonymity or publicity), individuals can be considered as actively and purposefully choosing ICTs to display their aggression. Peer bullies were found to have been the same people who engaged in cyber bullying perpetration (Dempsey et al., 2011; Tanrikulu & Campbell, 2015), and young individuals were reported consciously cyber bullying peers (Pettalia et al., 2013). These findings suggest that cyber bullies are active and goal-oriented in their choice of cyber space to display aggression. Online technologies may be providing easier ways for the bullies to reach goals or motives by affording lack of social cues, temporal delays, permanency of the digital data, anonymity or audience permanency (Runions, 2013). Therefore, based on UGT, this study anticipates that cyber bullies are active and goal-oriented individuals, and they willfully choose cyber environments to bully others.

In addition, personality traits of the individuals have been an important aspect of the research using the UGT as the theoretical background. According to the UGT, studies aiming to have a deeper understanding about the motives regarding the use of

information and communication technologies (ICTs) should consider the user personality traits. This is because user personality traits have the power to determine ICTs usage. In parallel with this proposition, the previous investigations have yielded in empirical support indicating that personality traits of the users have a significant influence on the motives about ICTs usage (e.g., Hanson & Haridakis, 2008; Orchard et al., 2014). Alonzo and Aiken (2004) also incorporated the personality traits of the users while examining flaming (hostile intentions characterized by words of profanity, obscenity, and insults that inflict harm to a person or an organization resulting from uninhibited behavior (Alonzo & Aiken, 2004, p. 205) in an online setting, and they reported significant associations between the user personality traits and flaming motives. Specifically considering the cyber bullying perpetration behaviors, a significant association between the personality traits of the cyber bullies and their motivations of cyber bullying others can be anticipated. For example, aggressiveness as a personality trait may lead individuals to seek for opportunities to display aggression. An individual with higher levels of aggressiveness may view cyber world as a supplementary place to the physical environments to behave aggressively. Thus, such an individual may tend to engage in cyber bullying perpetration more than less aggressive people.

2.3 Literature Review on the Proposed Model Variables

Under this title, the existent literature on the variables proposed for the current study's hypothesized model is presented. Of note, the following parts under this title were shaped in accordance with the *Uses and Gratifications Theory* (UGT). The UGT posits that the personality traits have a significant impact on the motives of the users of the information and communication technologies (ICTs). Therefore, there were two sets of variables examined in this present investigation. While the first set involved the variables regarding the cyber bullying perpetration motives, the second set was composed of the variables concerning the personality traits of the cyber bullies. While building up the hypothetical model based on the UGT, cyber bullying perpetration motives were initially established. Then, the personality traits to be investigated were

determined. As the cyber bullying perpetration motives needed to be firstly settled, details on the motives were presented in the following paragraphs.

2.3.1 Motives of cyber bullying perpetration

Motives are the reasons or goals which cause individuals to behave in certain ways, and motives of cyber bullying perpetration refer to the reasons why individuals cyber bully others. Investigation of cyber bullying perpetration motives can be important for some reasons. Understanding more about the motives of cyber bullying perpetration can firstly help prevention and intervention strategies by informing the researchers and the practitioners about the nature of cyber bullying perpetration behaviors. Furthermore, potential cyber bullies can be directed to more appropriate ways to satisfy the motives or needs they intend to achieve by cyber bullying. Such guidance may help to prevent cyber bullying even before it happens. That is, individuals who tend to cyber bully others can learn that there are other harmless ways to accomplish the motives they obtain from cyber bullying.

The extant literature on cyber bullying perpetration motives was reviewed to have an idea about the cyber bullying perpetration motives. Several motives were identified about cyber bullying perpetration. Entertainment (having fun, joking or relieving boredom), dominance (establishing power and status), revenge, harm, easiness, anonymity, disliking the victim were among the most reported motives of cyber bullying perpetration (Compton et al., 2014; Englander, 2008; Fluck, 2014; Gradinger et al., 2011; Mishna et al., 2010; Rafferty & Vander Ven, 2014; Vandebosch & Van Cleemput, 2008; Topcu et al., 2013; Zhou et al., 2013). In addition to these motives, interpersonal problems (Akbulut & Erişti, 2011), inability to see the victim and avoiding from adult punishment (Englander, 2008; Compton et al., 2014), acceptance to a social group (Gradinger, et. al., 2011), cyber sanctioning (Rafferty & Vander Ven, 2014), succorance and a response or defense against inferiority (Johnston et al., 2014), demonstrating technological skills (Vandebosch & Van Cleemput, 2008), social popularity (Yaman &

Peker, 2012) as well as attracting attention and looking cool (Zhou et al., 2013) were the other cyber bullying perpetration motives reported.

It is important to note that cyber bullying perpetration behaviors can help cyber bullies to achieve one motive at a time or more than one motive at the same time. More specifically, for a traditionally bullied individual, revenge, for example, can be the only motive of cyber bullying her/ his previous perpetrator(s). However, by cyber bullying her/ his former bully/ bullies, another cyber bully can be motivated to achieve dominating her/ his former perpetrator(s), and gaining social popularity among peers in addition to taking revenge. Therefore, while selecting among the reported motives of cyber bullying perpetration, the researcher of this study aimed to choose several motives which were related to each other. Providing more options about the motives of cyber bullying perpetration in this study could help the participants of this current research to report if they had only one motive or multiple motives while perpetrating others.

2.3.2 Selecting the motives of cyber bullying perpetration

As mentioned above, the former studies have reported several motives which were quite high in number. All of the motives previously reported could not be included in a single study. However, as the study sample of this present investigation was university students, whether university students and the other age groups reported different cyber bullying perpetration motives was examined first. To accomplish this comparison, investigations reporting about the cyber bullying perpetration motives of elementary school children, middle school children, high school students and university students were separately grouped. A comparison was made between studies reporting the cyber bullying perpetration motives of university students (e.g., Englander, 2008; Johnston et al., 2014; Rafferty & Vander Ven, 2014) and other age groups of school children (Baas, et al., 2013), middle school children (Fluck, 2014), and high school students (Topcu et al., 2013; Yaman & Peker, 2012; Varjas, Talley, Meyers, Parris, & Cutts, 2010; Zhou et

al., 2013). However, no apparent differences could be detected because the reported motives of cyber bullying perpetration were quite similar for the all age groups.

In addition to this first comparison, a second comparison with regards to cyber bullying perpetration motives was made between the Turkish university students and the university students from different cultures. Akbulut and Erişti's study (2011) was the only one conducted with Turkish university students. There were a total of three investigations by Englander (2008), Johnston et al., (2014) and Rafferty & Vander Ven (2014) which were all carried out by American students. Regardless of their cultures, university students seemed to agree on similar motives regarding their cyber bullying perpetration behaviors. Therefore, age-specific or culture-specific differences could not be considered while deciding on the motives to be chosen for this current investigation.

It should be noted that the above-mentioned comparisons were not empirically carried out. They were done by comparing the individual reports of the related studies. Nevertheless, these comparisons helped the researcher of this present investigation to create an opinion about the possible age-group differences as well as possible cultural differences in terms of cyber bullying perpetration motives.

To decide on which motives to choose for this study, the operational definition criteria of cyber bullying were initially taken into consideration since the main cyber bullying perpetration motives were already provided by the definitions. The studies assessing the definitional criteria in cyber bullying (Menesini et al., 2012; Nocentini et al., 2010; Vandebosch & Van Cleemput, 2008) unanimously agreed that the intent to harm others and establishing power and status (domination) are two basic criteria of cyber bullying. In a consistent manner, young people confirmed these two criteria by reporting that harming and dominating others were among their main reasons for cyber bullying others (Mishna et al., 2010; Pettalia et al., 2013; Rafferty & Vander Ven, 2014; Talwar et al., 2014; Topcu et al., 2013). Therefore, harming others and domination were decided to be included as the two motives to be explored in this present research. In addition to the

intent to harm others and the power imbalance, cyber bullies reported that they bullied their previous perpetrator/s as their victim (Dehue et al., 2008; König et al., 2010). That is, individuals wanted to take revenge by cyber bullying the perpetrators who formerly victimized themselves. Revenge as a motive of cyber bullying perpetration was confirmed by the previous studies as well (e.g., Shapka & Law, 2013; Topcu et al., 2013; Zhou et al., 2013). For these reasons, revenge as an additional motive of cyber bullying perpetration was included in this study.

Moreover, entertainment has been continuously reported as one of the chief motives of cyber bullying perpetration by almost all researchers (e.g., Baas et al., 2013; Englander, 2008; Gradinger et al., 2011; Rafferty & Vander Ven, 2014). Taking the previous studies into consideration, entertainment was included in this research as the last motive of cyber bullying perpetration. Two circumstances can be described with regards to entertainment motive in cyber bullying perpetration. In the first circumstance, the perpetrators may simply cyber bully others to overcome their feelings of boredom (Compton et al., 2014; Yaman & Peker, 2012; Zhou et al., 2013). In this situation, the perpetrator is the only one who assumes her/ his cyber bullying behavior is joyful, and the victim does not agree about the enjoyment of the behavior since she/ he feels offended (Vandebosch & Van Cleemput, 2008). For instance, imagine that a young individual uses swear words to a peer online, thinking that she/ he is only joking. The peer, however, feels offended by this behavior, since she/ he does not think that swearing online is not fun. She/ he may feel hurt, uncomfortable, unsafe or humiliated although the perpetrator does not intentionally wants to pose harm on her/ him. In such a situation, the intention of harm criterion becomes dependent on the victims' perception of the harm they experience in such an incident. Therefore, researchers suggested assessing whether the target perceived the incident as harmful to be able to decide on if the incident was cyber bullying or not (Langos, 2012; Naruskov et al., 2012).

In the second situation, the perpetrator becomes involved in a cyber bullying behavior in order to deliberately harm the receiver to be able entertain from the receiver's pain,

which is considered as cyber bullying. This phenomenon is named as “Schadenfreude” in the literature which refers to the enjoyment, pleasure or delight obtained from others’ misfortunes (James et al., 2014). In a similar way, cyber bullies may entertain themselves at the misfortunes of their victims while harming, dominating or taking revenge from their victims.

In brief, harming others, dominance, revenge and entertainment were the chosen cyber bullying perpetration motives which were examined in this current investigation. In spite of the fact that a single motive can prompt an individual to cyber bully others, multiple motives can also trigger cyber bullying perpetration. For that reason, the aforementioned four motives of cyber bullying perpetration were considered in combination in this present study.

2.3.3 Personality traits of cyber bullies

Personality traits are defined as the habitual patterns of behavior, thought and emotion which are constant in time, distinctive for individuals, and affect behaviors (Kassin, 2003). In other words, personality traits are among the main components of personality. Personality traits of the cyber bullies and cyber victims have attracted the attention of the researchers (e.g., Ang & Goh, 2010; Patchin & Hinduja, 2010; Perren & Gutzwiller-Helfenfinger, 2012). Understanding more about the personality traits can be quite significant for cyber bullying prevention. If the personality traits of the cyber bullies and cyber victims can be identified, the potential cyber bullies and cyber victims can be determined, and cyber bullying can be prevented even before it happens. Thus, such knowledge can increase the likelihood to help cyber bullies and cyber victims by providing evidence to develop more effective preventive measures.

With these in mind, the previous research reporting about the personality traits of the cyber bullies was inspected. Empathy, self-esteem, loneliness, narcissism, moral disengagement, aggression and online disinhibition are among the frequently examined

personality traits of cyber bullying perpetration. Empathy has been one of the mostly studied personality traits of the cyber bullies. Albeit some contradictions (Pettalia et al., 2013; Postorino, 2014), studies have found that, lower levels of empathy were related to higher levels of cyber bullying others (Ang & Goh, 2010; Brewer & Kerslake, 2015; Kokkinos et al., 2014; Schultze-Krumbholz & Scheithauer, 2009; Steffgen et al., 2011; Topcu et al., 2013). As a further personality trait, self-esteem has also been commonly questioned about its role in cyber bullying perpetration. Although some studies presented some conflicting findings (Sticca, Ruggieri, Alsaker, & Perren, 2013), low self-esteem was mostly found as a possible risk factor for cyber bullies (Bayraktar et al., 2014; Guarini et al., 2012; Harman et al., 2005; Patchin & Hinduja, 2010). Additionally, the role of loneliness in cyber bullying perpetration has been frequently examined by the researchers attempting to understand whether cyber bullies were lonely individuals. However, the reported study results have been highly conflictual because loneliness was associated with both victimization and perpetration of cyber bullying (Brewer & Kerslake, 2015; Brighi et al., 2012; Wachs, 2012).

Furthermore, narcissism as a personality trait has been considered as a potential correlate of cyber bullying perpetration. Yet, while a great majority of the studies have provided empirical evidence indicating that a higher tendency of narcissism was a significant predictor of cyber bullying perpetration (Ang et al., 2010; Ekşi, 2012; Fanti et al., 2012; Fanti & Henrich, 2015; Goodboy & Martin, 2015), some could not detect such a link (Gibb & Devereux, 2014; Pabian, De Backer, & Vandebosch, 2015). Additionally, moral disengagement has been another personality trait having links with cyber bullying perpetration. Individuals scoring higher on moral disengagement have been reported as scoring higher on cyber bullying perpetration as well (Bussey et al., 2015; Menesini et al., 2013; Perren & Gutzwiller-Helfenfinger, 2012; Pornari & Wood, 2010; Postorino, 2014; Renati et al., 2012; Robson & Witenberg, 2013; Sticca & Perren, 2015; Tanrıkuu & Campbell, 2015; Wachs, 2012). Despite this agreement on the significant role of moral disengagement, Bauman (2010), however, could not identify a relationship between moral disengagement and cyber bullying others.

Aggression has also been regarded as a possible risk factor of higher levels of cyber bullying perpetration. According to the findings of the previous investigations, when the tendency of aggressiveness is higher, the likelihood of cyber bullying others increases (Ang et al., 2013; Bayraktar et al., 2014; Calvete et al., 2010; Dilmaç, 2009; Fletcher et al., 2014; Roberto et al., 2014; Schultze-Krumbholz & Scheithauer, 2009; Werner et al., 2010). Although they did not directly measure aggressiveness, some other researchers have reported that cyber bullies in their study groups tended to score higher on psychoticism which includes anger, hostility besides aggression (Arıcak, 2009; Lonigro et al., 2015; Ozden & Icellioglu, 2014). Aggressiveness seems to be a rare personality trait that the research unanimously agreed on its significant positive relationship with cyber bullying perpetration. After an extensive review of the literature, the researcher of this study could not reach any study reporting the opposite.

Online disinhibition has also been linked with cyber bullying perpetration. Examining the role of online disinhibition in cyber bullying, studies have documented a significant positive relationship between online disinhibition and cyber bullying perpetration (Barlett, 2015; Görzig & Olafsson, 2013; Udris, 2014; Veenstra, 2011; Wright, 2013; Wright, 2014). Studies pointing out neutral or negative relationships between online disinhibition and cyber bullying perpetration could not be identified probably because it is relatively quite a new variable for the cyber bullying literature.

In addition to the group of frequently examined personality trait variables mentioned above, some personality traits have been less frequently reported. For instance, psychopathic personality traits including low levels of agreeableness, low levels of conscientiousness, disregard for others and vengefulness were significantly and positively related to being a cyber bully (Gibb & Devereux, 2014; Kokkinos et al., 2013; Kokkinos et al., 2014; König et al., 2010). In addition, cyber bullies were found as sensation seekers (Kokkinos et al., 2014) and emotionally unstable (Kokkinos et al., 2013).

2.3.4 Selecting the personality traits of cyber bullies

Several personality traits of the cyber bullies were reported by the extant studies as mentioned above. Some criteria were considered to choose among the reported personality traits. Firstly, the personality trait to be chosen had to be reported by the existing literature about cyber bullying perpetration. Secondly, the personality traits had to be related to already decided four motives of cyber bullying perpetration (harming others, dominance, revenge and entertainment). It should be noted that no comparison in terms of the reported personality traits of the cyber bullies was made between university students and other age groups. As personality traits are stable over time (Kassin, 2003), personality traits of cyber bullying perpetration were anticipated to be similar for university students and other age groups. Four personality traits which were online disinhibition, moral disengagement, narcissism and aggression were selected from the reported personality traits of cyber bullying perpetration. They were chosen because they were commonly reported by the past studies, and were related to the four previously identified motives of cyber bullying perpetration.

2.3.4.1 Online Disinhibition

The first personality trait selected in this present investigation was online disinhibition. It is defined as ‘loosening of social restrictions and displaying lower levels of behavioral inhibitions during the interactions with others in online environments’ (Kerstens & Stol, 2014; Suler, 2004). Disinhibition, as a personality trait, refers to the individual differences in freeing from social constraints and acting without considering the societal and behavioral inhibitions/ expectations (Latzman, Vaidya, Clark, & Watson, 2011). Traditionally, disinhibition has been regarded in face-to-face contexts. However, by affording anonymous interaction with others, online technologies have begun to provide a newer type of disinhibition which is named as online disinhibition. Anonymity or the opportunity to be able to hide behind fake names or identities in the online settings may

encourage individuals behave differently from the way they normally act in physical environments.

Suler (2004) proposes that online disinhibition is caused by six factors which are dissociative anonymity, invisibility, asynchronicity, solipsistic introjection, dissociative imagination, and minimization of authority. Dissociative anonymity refers to splitting online and offline behaviors from each other by hiding or altering real identities, and not fully accepting the impacts of their online behaviors because of the impact of being anonymous. Invisibility is defined as individuals' being incapable to see each other when online, which triggers courage for the online individuals to act differently than they normally would not. Asynchronicity is described as the inability of synchronously communicating with others when online. Since people do not have to care about others' immediate responses to their behaviors due to the asynchronicity of the cyber space, they tend to disinhibit more in online interactions. Solipsistic introjection means that as verbal and non-verbal face-to-face cues are missing in online platforms, individuals may unconsciously believe that their mind has merged with the mind of their online contacts. Thus, reading an online text of another individual may create the feeling that others' voices can be experienced within one's mind as a conversation. According to Suler (2004), "this conversation may be experienced unconsciously as talking to/with oneself, which encourages disinhibition because talking with oneself feels safer than talking with others" (p. 323). Dissociative imagination refers that individuals create an imaginary online character and separate cyber and real-life settings by imagining that cyber environments are not real. Since interactions and experiences in the online space are imaginary, one does not have to acknowledge the consequences of their behaviors in online settings. Minimization of authority is explained as behaving more enthusiastic and brave to freely express oneself online because cyber settings minimize the effect of verbal and non-verbal face-to-face cues reflecting individuals' authority. In brief, because of the online disinhibition impact, individuals, in contrast to their behaviors in usual face-to-face interactions, can behave more positively or more negatively toward others. When online, some individuals may become more caring, more emotional, more

cheerful or more honest in their exchanges with others. On the other hand, others may behave more aggressive, less fearful, more courageous, more dissociative or more risk-taking in cyber space.

Studies have found that a higher tendency of online disinhibition was a significant predictor of cyber bullying perpetration (Barlett, 2015; Görzig & Olafsson, 2013; Udris, 2014; Veenstra, 2011; Wright, 2013; Wright, 2014). Investigations reporting a neutral or negative relationship between online disinhibition and cyber bullying perpetration could not be found in the literature review conducted for this present research. Given that online disinhibition is quite a new variable compared to the other variables, this situation does not seem surprising. Consequently, considering that online disinhibition has an impact on cyber bullying perpetration, the question is “how can online disinhibition as a personality trait be associated with cyber bullying perpetration motives which are harm, revenge, dominance and entertainment in this present study?”

Of note to the reader, Suler’s (2004) theoretical descriptions about online disinhibition as summarized above were considered below to explain the possible relationships between online disinhibition and the motives of cyber bullying perpetration.

Greater levels of online disinhibition may increase the probability of cyber bullying perpetration with the motive of harming others. Individuals behaving more negatively (more aggressive, less fearful, more courageous, more dissociative) or more positively (more caring, more emotional, more cheerful or more honest) may lead them to take more risks in online space. There is some evidence proposing that engaging in more risky conducts in cyber settings can increase the likelihood of involvement in cyber bullying as a bully (Erdur-Baker, 2010). For the cyber bullies, since online disinhibition may provide courage to behave differently, for example more aggressively, an individual with higher levels of online disinhibition may tend to prefer online technologies to harm someone whom she/ he is not in good relations. Furthermore, with the effect of dissociative anonymity and invisibility of the online space as factors of online

disinhibition, cyber bullies may not admit the damage they cause on others. This is because the perpetration happened in online, and its direct impacts on the victims may not be observed immediately by the cyber bullies.

Individuals may be subjected to some types of violence including bullying in online and off-line spaces. In order to retaliate against such behaviors, individuals may choose to cyber bully their former offenders in cyber space due to the online disinhibition effect. In fact, the previous evidence showed that cyber bullies targeted their past bullies who victimized themselves in physical or cyber settings (Dehue et al., 2008; König et al., 2010). As a factor, invisibility of the online environments may activate online disinhibition for the cyber bullies who are after revenge. Cyber bullies may want to take revenge from their previous offenders by behaving anonymous when online. Thanks to anonymity, they may want to avoid future victimization in online and offline spaces. Additionally, minimization of authority experienced in cyber setting may cause cyber bullies to take revenge online. Specifically, individuals may not prefer trying to take revenge from any type of victimization they are exposed in face-to-face interactions when they are able to obtain verbal and non-verbal cues of the powerful perpetrators. Yet, with the impact of minimization of authority present in online space, the same individuals may like to behave vengeful against the victimization. This is because the verbal and non-verbal cues signifying the strength of the perpetrators are not obtainable in online communications.

Individuals with higher levels of online disinhibition may also have a tendency of cyber bullying others with the motive of dominance. Minimization of authority as a factor of online disinhibition may play a role in this tendency. Some cyber bullies may be dominant in face-to-face interactions, and may ensure dominance in cyber settings as well. Being unable to truly evaluate others' social status or power, cyber bullies may have relatively less fear of retaliation and disapproval in cyber space. Such feelings may encourage the cyber bullies to behave dominantly in cyber settings since they may think

that individuals they are interacting in online platforms are less powerful than themselves.

Individuals with greater levels of online disinhibition may see online settings as places to cheer themselves up. These persons may cyber bully others to experience fun. With the impact of dissociative anonymity, cyber bullies may not acknowledge the harmful influences of their cyber bullying perpetration behaviors. They were anonymous, and the cyber bullying perpetration came true in cyber space not in real life. Therefore, they may believe that they have the right to entertain themselves online and may not be totally held responsible for the hurtful impacts of their behavior. In addition, with the impact of asynchronicity, cyber bullies cannot directly witness the immediate consequences of their perpetration behaviors. Such an inability may hinder the cyber bullies from realizing that their perpetration hurts the victims. Since they are unaware of the immediate harmful impacts of their behavior, they may continue to assume that they are having an entertainment although their victims suffer in reality.

2.3.4.2 Moral Disengagement

The second personality trait examined in this present study was moral disengagement. Moral disengagement is the cognitive processes to justify harmful behaviors, which are normally against one's internal moral standards (Bandura, 2002). Even though Bauman (2010) did not report a significant relationship between moral disengagement and cyber bullying perpetration, other previous investigations have documented substantial evidence suggesting that individuals scoring higher on moral disengagement are scoring higher on cyber bullying perpetration as well (e.g., Perren & Gutzwiller-Helfenfinger, 2012; Postorino, 2014; Robson & Witenberg, 2013; Sticca & Perren, 2015; Tanrikulu & Campbell, 2015). In addition to these individual study reports, in their review study Kowalski et al., (2014) found that among the tested 10 possible risk factors such as frequent Internet usage, risky online behaviors or narcissism, moral disengagement had one of the strongest associations with cyber bullying perpetration. Although engaging in

harmful behaviors does not normally conform to their moral standards, individuals with higher level of moral disengagement may persuade themselves that posing harm on others can be acceptable in some justifiable situations or contexts. To be able to assure themselves that harmful behaviors are tolerable in certain circumstances, they use cognitive mechanisms for their damaging actions, which are justification of the harmful behaviors, euphemistic labelling, advantageous comparison, rejecting responsibility, ignoring the negative impacts of the harmful behaviors, dehumanizing the victim or blaming the victim (Bandura, 2002).

Of note to the reader, Bandura's (2002) cognitive mechanisms about moral disengagement were considered below to explain the possible relationships between moral disengagement and the motives of cyber bullying perpetration.

With respect to cyber bullying perpetration, morally disengaged cyber bullies may employ similar cognitive mechanisms towards their victims. Cyber bullies may justify their cyber bullying behaviors by claiming that cyber bullying serves a purpose. This is because this is one of the easiest and safest ways they can protect and defend themselves against others (justifying the damaging behaviors). Cyber bullies may also re-name their bullying perpetration as "teaching a lesson" to the victim (euphemistic labelling). Additionally, cyber bullies may consider themselves less strong compared with the others whom they regard are physically, verbally or relationally more powerful in daily interactions, and they cannot confront these people face-to-face. For that reason, they can view their cyber bullying perpetration moral since cyber bullying is the only way to guard themselves (advantageous comparison). Besides, cyber bullies may not accept the responsibility of their cyber bullying perpetration. They may argue that they are not alone while engaging in cyber bullying, or they are not the instigator of the cyber bullying. Thus, the group members are responsible for the cyber bullying perpetration (not accepting responsibility). In addition, as cyber bullies cannot directly observe the instant negative influences on the victims' physical and psychological well-being due to the online nature of cyber bullying, they may assume that the impact of their

perpetration on the victim is relatively less or minimum (ignoring the negative impacts of the harmful behaviors). Moreover, cyber bullies may dehumanize their victims by proclaiming that the victims were losers, freaks, stupid or ugly (dehumanizing the victim). Cyber bullies may also blame their victims by claiming that the victims deserved cyber bullying since it was the victims' own fault to provoke them to engage in cyber bullying (blaming the victim). Given that cyber bullies may employ cognitive mechanisms to justify their perpetration, the question is "how can moral disengagement as a personality trait be associated with cyber bullying perpetration motives which are harm, revenge, dominance and entertainment in this present study?"

Greater levels of moral disengagement may increase the possibility of cyber bullying perpetration with the motive of inflicting harm on others. Unable to observe the direct influences of their perpetration in cyber environments, cyber bullies may become more morally disengaged since they may believe that they are posing no harm or somewhat less harm on the victims. By comparing themselves with others, cyber bullies may conclude that other individuals are physically, verbally or relationally stronger than themselves; thus, if they do not inflict harm others, they will become victimized sooner or later. Furthermore, if cyber bullies dehumanize their victims as losers or freaks, they may think that such people naturally deserve being harmed as they are not normal human beings. Or by relabeling their perpetration as "teaching a lesson" to the victim rather than a harmful conduct, cyber bullies may not consider their behaviors as harmful because they may believe that their aim is not to harm the victim but to teach a lesson.

Higher levels of moral disengagement may also enhance the likelihood of cyber bullying others for taking revenge. Cyber bullies may formerly be exposed to traditional bullying (Dehue et al., 2008; König et al., 2010), cyber bullying or any type of violence in physical or cyber environments. Because of such earlier victimization experiences, cyber bullies may become motivated by feelings of vengefulness and may morally justify their bullying conducts on their earlier offenders. They may reason that they have the right to fight against ruthless bullies who victimized themselves in the past. In addition to

morally justifying their perpetration behaviors, cyber bullies may blame their victims by asserting that victims provoked the feeling of revenge by previously targeting them.

In addition, morally disengaged individuals may tend to cyber bully others with the intention of dominance. Dominant in face-to-face exchanges, cyber bullies may consider that it is their right to dominate others in cyber environments such as online groups or social networking interactions. On the other hand, some other cyber bullies may believe that although they are physically, verbally or relationally disadvantaged in face-to-face environments, they are technologically savvy and highly skillful in interactions online platforms. Such cyber bullies may like to dominate online settings by demonstrating their superiority in technology use. These cyber bullies may justify their harmful conducts by asserting that they have the right to dominate the online environments since others are using their physical power to dominate the physical environments.

Individuals with higher levels of moral disengagement may also cyber bully others for entertainment. By using mechanisms of moral disengagement, cyber bullies may rationalize their perpetration and simply claim that they just wanted to have fun with the victim, but the victim could not understand the joke. Moreover, by disregarding the impact of their perpetration, morally disengaged cyber bullies may think that their victim could not be negatively affected from cyber bullying since the aim was only to have fun. Next, cyber bullies may dehumanize the victims as losers or freaks and may aim to entertain themselves from the pain and harm the victims suffer, which is a type of enjoyment, pleasure or delight obtained from others' misfortunes (Schadenfreude; see James et al., 2014). A similar type of enjoyment may be obtained by cyber bullying their previous bullies/ perpetrators. By employing advantageous comparison mechanism of moral disengagement, cyber bullies may compare themselves with their past bullies/ perpetrators and may think that their former bullies/ perpetrators enjoyed their suffering in the past. And now, it is their turn to enjoy the misfortunes of their current victims.

2.3.4.3 Narcissism

Narcissism was the third personality trait examined in this current investigation. Narcissism is defined as “a grandiose yet fragile sense of self and entitlement as well as a preoccupation with success and demands for admiration (Ames et al., 2006, p. 440-441)”. Despite some inconsistent study findings (Gibb & Devereux, 2014; Pabian et al., 2015), most of the study findings revealed that a higher tendency of narcissism was found as a significant predictor of cyber bullying perpetration (Ang et al., 2010; Ekşi, 2012; Fanti et al., 2012; Fanti & Henrich, 2015; Goodboy & Martin, 2015). In their recent meta-analysis, Kowalski et al., (2014) also found out that there was a positive relationship between narcissism and cyber bullying perpetration. Thomas (2012) summarizes the main characteristics of individuals with higher levels of narcissistic tendencies. Such individuals are portrayed as exaggerating their achievements, believing in their exceptionality, arrogant, selfish, manipulative, self-focused, feeling less guilt and remorse, and lacking empathy. Individuals with higher levels of narcissism hold a highly positive self-view, and they also like being admired, showing-off, boasting about themselves and attracting attention. In addition, they have superficial relational exchanges with others, and they aim to achieve social status and establish authority in their interpersonal relationships. Moreover, they are highly aggressive against any insults directed to their abilities, self or ego, and hate the people who do not like or admire them.

Of note to the reader, characteristics of individuals with narcissistic tendencies documented by Thomas (2012) as summarized above were considered below to explain the possible relationships between narcissism and the motives of cyber bullying perpetration.

Cyber environments seem to afford lots of chances for the individuals who want to exhibit their narcissistic tendencies in online interactions. With the help of online sharings including personal messages, personal photography or personal videos,

individuals having higher levels of narcissistic inclinations may wish to create a unique self-image, attract attention or boast about themselves and their achievements. To achieve some other narcissistic goals, such individuals may engage in cyber bullying perpetration as well. Various types of narcissistic purposes can be accomplished via cyber bullying perpetration. However, the previously identified four motives of cyber bullying perpetration which are harming others, taking revenge, dominance and entertainment are the essential focus of this current study. Thus, the association between cyber bullying perpetration and narcissism as a personality trait in regard to these four motives is discussed in the following paragraphs.

Greater levels of narcissism may increase the probability of cyber bullying others with the motive of inflicting harm. Narcissistically prone individuals have been reported being very socially active in online settings (Buffardi & Campbell, 2008) as well as behaving aggressively and engaging harmful conducts online (Barry et al., 2007). Therefore, a higher level of narcissism can be associated with cyber bullying others aiming to harm others. As an example, narcissistically disposed individuals who are highly active in online networks may expect their online friends to like, admire or leave positive comments on their status updates and what they share online. Unless these expectations are fulfilled, such individuals may become angry and behave aggressively by harming others by cyber bullying.

Revenge as a motive can also be obtained by narcissistically prone cyber bullies as well. Narcissistically inclined individuals have been reported experiencing “narcissistic rage” which is an angry and hostile type of reaction to the threats targeting their fragile self (Krizan & Johar, 2015). Further, people high in narcissism were found to be more revengeful than others low in narcissism (Brown, 2004). In terms of cyber bullying perpetration, abilities, uniqueness of self-images or egos of the cyber bullies with higher level of narcissism may be threatened or insulted in online environments. For example, negative comments can be made about their online status updates or sharings. In such

situations, individuals with higher levels of narcissistic tendencies may become full of rage and retaliate by cyber bullying to take their vengeance online.

Narcissistically tended individuals are more likely to be manipulative, seeking for social status and authority over others in their interpersonal relationships (Thomas, 2012). There is some evidence suggesting that young people who reported higher levels of narcissism as well as greater levels of engaging in traditional bullying are high in social dominance (Reijntjes et al., 2015). Such a relationship can be anticipated between higher levels of narcissism and cyber bullying others for dominance. Cyber bullies who are more prone to narcissism may employ cyber bullying perpetration with the motivation to dominate others. By means of cyber bullying, they may like to establish dominance by demonstrating their superiority in technology usage, by embarrassing online contacts whom they dislike, and by indicating that they are important and authoritative in cyber platforms.

Narcissistically disposed individuals may also cyber bully others with the intention of entertainment. Higher levels of narcissism is linked with being selfish, feeling less guilty and remorseful toward others in addition to lower levels of empathy (Thomas, 2012). These personality features may increase the possibility of cyber bullying others to obtain enjoyment, pleasure or delight obtained from others' misfortunes (Schadenfreude; see James et al., 2014). For the cyber bullies with higher levels of narcissism, such enjoyment may emerge after harming or taking revenge online from someone who do not admire or like their narcissistic tendencies. Seeing that people who disregard their uniqueness, high achievements, power in physical and cyber settings are in harm and pain may create enjoyment, pleasure or delight for the narcissistically inclined cyber bullies.

2.3.4.4 Aggression

The last personality trait investigated in this study was aggression which is defined as “any behavior directed toward another individual that is carried out with the immediate intent to cause harm” (Anderson & Bushman, 2002, p. 28). It has been well reported that aggression is closely related to cyber bullying perpetration (Ang et al., 2013; Aricak, 2009; Bayraktar et al., 2014; Calvete et al., 2010; Dilmaç, 2009; Fletcher et al., 2014; Lonigro et al., 2015; Ozden & Icellioglu, 2014; Roberto et al., 2014; Schultze-Krumbholz & Scheithauer, 2009; Werner et al., 2010). Interestingly, the extensive review of the literature demonstrated that researchers internationally and unanimously presented findings pointing out a significant positive relationship between aggression and cyber bullying perpetration. There was no research suggesting a neutral or negative relationship between aggression and cyber bullying perpetration.

The features of the aggressive personality can provide some explanations to understand the reasons behind this connection. An aggressive personality basically involves high tendencies of physical and verbal aggression besides anger and hostility (Bryant & Smith, 2001). According to Bergman et al., (2007), it involves attacking, fighting, punishing, taking revenge and handling a resistance with force. In addition, aggressively inclined individuals see aggression as the best method to overcome frustration, they hate their victims, and they aim to harm their target, besides being not able to control aggressive impulses (Bergman et al., 2007). Moreover, for the aggressive individuals, social relations can be important ways to dominate others. That is, such individuals may consider aggression as a display of power which helps to earn others’ respect, and thus, behaving non-aggressively is a sign of weakness for them (Bergman et al., 2007). In consideration with the summarized attributes of the aggressive personality, the question is “how can aggressiveness be linked with cyber bullying perpetration motives which are harm, revenge, dominance and entertainment in this present study?”

Of note to the reader, the features of the aggressive personality reported by Bergman et al., (2007) and Bryant and Smith (2001) as summarized above were considered below to explain the possible relationships between aggression and the motives of cyber bullying perpetration.

Higher level of aggressiveness may lead individuals to involve in cyber bullying to harm others. For the aggressive individuals, harming someone in physical environments is restricted to a specific time, and the incident happens only once in a particular limited place. Posing harm on others in physical space is also limited in terms of people involved in and witnessed the incident. This harming strategy can be fairly difficult and risky because the identity of the aggressor is open to everyone who are involved in the incident as victims or bystanders. On the other hand, cyber platforms are providing newer opportunities for the individuals to reveal their aggression as cyber bullying. With the help of cyber bullying, aggressive actions are not limited to time and space; and the aggressive cyber bullies can harm others whenever and wherever they like. Besides, the incidents of cyber bullying naturally exist online and continue to repeat in the cyber environments. Hence, an infinite number of people can become involved or witness the cyber bullying incident. Additionally, cyber bullying ensures easier and less risky ways of displaying aggression to the cyber bullies since they can easily become anonymous and hide behind fake identities to target their victims. In parallel with this last assumption, aggressors reported that they preferred cyber bullying as it was easy and less risky (Compton et al., 2014; Topcu et al., 2013; Varjas et al., 2010). In short, since cyber bullying provides extra and advantageous opportunities, aggressively prone individuals may more tend to harm others by cyber bullying.

Moreover, individuals with greater levels of aggression may cyber bully others to satisfy their feelings of revenge towards their former perpetrators in face-to-face and/ or cyber interactions. In line with this anticipation, existing evidence has revealed that young individuals exhibit aggression in face-to-face as well as cyber interactions since aggressively tended individuals experience both perpetration and victimization in a

complex way (e.g., Tanrikulu & Campbell, 2015; Tokunaga, 2010). That is, such individuals do not always have the perpetrator role, because others also victimize them. Aggressive individuals are inclined to be vengeful and tend to overcome frustrations with force (Bergman et al., 2007). These tendencies may lead victimized aggressors to employ cyber bullying to pay it back. With respect to this assumption, König et al., (2010) reported that vengefulness is a common trait of cyber bullies having a tendency to victimize their earlier perpetrators who traditionally bullied them. In addition to targeting their previous traditional bullying perpetrators, cyber bullies can perpetrate their former online perpetrators as well. This may be because cyber bullying perpetration may serve as effective, speedy, safer and more diverse chances to take vengeance from others who challenged them in real-life or online settings.

Aggressively inclined individuals view social interactions as important ways to dominate others and consider establishing power and status is a way to earn others' respect (Bergman et al., 2007). Cyber bullies stated that they wanted to attain dominance over others by victimizing online (Gradinger et al., 2011; Fluck, 2014; Shapka & Law, 2013; Mishna et al., 2010; Vandebosch & Van Cleemput, 2008). Regarding these, an association can be expected between higher levels of aggressiveness and cyber bullying others for dominance. By acting aggressively, cyber bullies may intend to dominate others in cyber settings.

Aggressively inclined individuals may cyber bully others with the motivation of entertaining themselves. These individuals may regard aggression as a method to overcome their feelings of boredom. Individuals with higher levels of aggression tend to believe that behaving non-aggressively is a sign of weakness (Bergman et al., 2007). In order not be considered as weak by others, such persons may use cyber bullying others to have fun. In such situations, their targets may complain about cyber bullying perpetration. However, cyber bullies may excuse their behavior by claiming that they just wanted to have fun, but the targets took it seriously and could not enjoy it. Additionally, aggressively disposed individuals may obtain enjoyment, pleasure or

delight by harming others (Schadenfreude; see James et al., 2014). For the cyber bullies with higher levels of aggression, such enjoyment may emerge after overcoming frustration by harming or punishing others with whom they cannot get along.

2.4 Summary of the Literature Review

As the main focus of this current investigation is upon cyber bullies, the literature reporting about cyber bullying perpetration is detailed in this literature review chapter. The extensive review of the literature carried out for this present study has well revealed that cyber bullying has become a worldwide problem among almost all age groups ranging from elementary school children to the university students. When the all age groups are internationally considered, the prevalence of cyber bullying perpetration, while the reported lowest prevalence rate was about 3%, the highest prevalence rate was approximately 35%. This fact points out that cyber technologies have turned into means for cyber bullying others in the hands of the young people. Indeed, young individuals seem to be highly skillful in turning into any digital technology as means to cyber bully others. Social networking websites, video sharing websites or texting have been cited among the online environments where cyber bullying takes place. Although researchers have been proposing descriptions for cyber bullying, the essential criteria regarding the operational definition of cyber bullying is still under discussion. Another issue under debate is whether cyber bullying is an extension of traditional bullying or a new type of online aggression. While one group of researchers presents data suggesting that cyber bullying is an extension of traditional bullying, another group reports empirical findings suggesting the opposite. The roles of age and gender in cyber bullying perpetration behaviors are also uncertain. Up to now, researchers could neither determine a specific developmental age trajectory nor identify a specific gender in cyber bullying perpetration. Nevertheless, researchers globally agree upon the fact that cyber bullies are in an unfavorable condition in terms of psychological well-being, physical health, mental health, and success at school.

The *Uses and Gratification Theory* (UGT) was the guiding framework of this present study. Hence, the literature review section is shaped by the theoretical conceptualization of the UGT. The UGT posits that personality traits of the users of the communication media have an influence of their individual motives for using certain media. The motives of using certain media then affect the gratifications sought from a media usage behavior. Concerning cyber bullying perpetration, a similar link between the personality traits of the cyber bullies and their motivations of cyber bullying others can be anticipated. Personality traits and the motives of cyber bullying perpetrators were formerly investigated by the individual cyber bullying studies. However, these two aspects of cyber bullying perpetration are not combined and examined in a single study. With the help of the knowledge produced as a result of bringing these two lines of research together, the researchers can make predictions about which individuals with certain personality traits are more likely to engage in cyber bullying perpetration with which motives.

The motives to be included into the hypothesized model of this present study are firstly decided. To be able to decide on the motives, the operational definition criteria of cyber bullying were considered. The existent research has reported that intention to harm others and dominance are the two main criteria of cyber bullying. In addition, revenge and entertainment has been reported by the cyber bullies as their two main motives of cyber bullying others. Therefore, harm, dominance, revenge and entertainment are selected as the motives to be assessed in this current investigation. After deciding on the motives, the personality traits be involved into the hypothesized model of this current research are chosen. Yet, the personality traits should be theoretically related to the already decided four motives of cyber bullying perpetration. After reviewing the extant studies reporting about the personality traits of the cyber bullies, online disinhibition, moral disengagement, narcissism and aggression were selected as the personality traits to be examined in this current study.

All in all, the purpose of the present research is to model the relationships among motives and personality traits of the perpetrators of cyber bullying, and to suggest a theoretical framework to gain a better understanding in cyber bullying perpetration. In the model tested, the relationships between the variables of motives of cyber bullying perpetration and the variables of personality traits of cyber bullies are combined and investigated. And the relative contribution of the each variable in the proposed model is documented. Important information could be attained with regards to cyber bullying prevention and intervention strategies, if a clearer understanding is obtained about the cyber bullies' perpetration behaviors.

CHAPTER III

METHOD

This methodology chapter consists of research design, research questions, description of variables, data sources, data collection instruments, data collection procedures, data analysis, and the limitations of the study.

3.1. Overall Research Design

This is a quantitative correlational research design study which aims to investigate the relationships between personality traits (online disinhibition, moral disengagement, narcissism and aggression) and cyber bullying perpetration motives (entertainment, revenge, harm and dominance). As the data collection instrument, a questionnaire which included the *Revised Cyber Bullying Inventory for University Students*, *Cyber bullying Perpetration Motives Scale*, *Online Disinhibition Scale*, *Propensity to Morally Disengage Scale*, *16-item Narcissistic Personality Inventory*, *12-item Aggression Questionnaire* and a demographic information section was administered to the university students. Data were cross-sectional, and convenience sampling strategy was employed to collect data. Two sets of data were obtained from three large, urban public universities in the capital of Turkey. Structural Equation Modeling was the main analysis strategy to simultaneously test the associations among variables of personality traits and cyber bullying perpetration motives.

The study took place in two main phases. During the first phase, a pilot study was conducted to examine the validity and reliability properties of the instruments. *Revised Cyber Bullying Inventory for University Students* was re-revised and created by the researcher. *Cyber bullying Perpetration Motives Scale* was developed by the researcher

specifically for this study. *Online Disinhibition Scale*, *Propensity to Morally Disengage Scale* and the *12-item Aggression Questionnaire* were translated into Turkish by the researcher of this study. *Narcissistic Personality Inventory with 16 items* was used as its adapted form into Turkish by (Temel, 2008). A total of 395 participants who reported being a cyber bully-victim (151 females and 244 males) were recruited to test validity and reliability of the scales. The basic characteristics of the validity and reliability were confirmed. In the second phase, another set of data was gathered with similar characteristics and with similar strategies. With this data set, the hypothesis testing was realized. These procedures were detailed below followed by introducing research questions and hypotheses of the study.

3.2. Research Questions and Hypotheses

This study aimed at addressing these research questions;

Overall research question:

In what ways are online disinhibition, moral disengagement, narcissism and aggression (personality traits) related to entertainment, revenge, harm and dominance motives of cyber bullying perpetration?

Specific research questions:

1. How do cyber bullies' personality traits (being disinhibited online, being morally disengaged, being narcissistic and being aggressive) relate to *entertainment* as a motive of cyber bullying perpetration?
2. How do cyber bullies' personality traits (being disinhibited online, being morally disengaged, being narcissistic and being aggressive) relate to *revenge* as a motive of cyber bullying perpetration?

3. How do cyber bullies' personality traits (being disinhibited online, being morally disengaged, being narcissistic and being aggressive) relate to *harm* as a motive of cyber bullying perpetration?
4. How do cyber bullies' personality traits (being disinhibited online, being morally disengaged, being narcissistic and being aggressive) relate to *dominance* as a motive of cyber bullying perpetration?

The following hypotheses were proposed;

General hypothesis:

The hypothesized structural equation model exploring the interplay between personality traits and cyber bullying perpetration motives fits the data.

Specific hypotheses:

1. A higher level of online disinhibition is correlated to cyber bullying others for entertainment.
2. A higher level of moral disengagement is correlated to cyber bullying others for entertainment.
3. A higher level of narcissism is be correlated to cyber bullying others for entertainment.
4. A higher level of aggression is correlated to cyber bullying others for entertainment.
5. A higher level of online disinhibition is correlated to cyber bullying others for revenge.
6. A higher level of moral disengagement is correlated to cyber bullying others for revenge.
7. A higher level of narcissism is correlated to cyber bullying others for revenge.
8. A higher level of aggression is correlated to cyber bullying others for revenge.
9. A higher level of online disinhibition is correlated to cyber bullying others for harm.

10. A higher level of moral disengagement is correlated to cyber bullying others for harm.
11. A higher level of narcissism is correlated to cyber bullying others for harm.
12. A higher level of aggression is correlated to cyber bullying others for harm.
13. A higher level of online disinhibition is correlated to cyber bullying others for dominance.
14. A higher level of moral disengagement is correlated to cyber bullying others for dominance.
15. A higher level of narcissism is correlated to cyber bullying others for dominance.
16. A higher level of aggression is correlated to cyber bullying others for dominance.

3.3. Description of Variables

The first two variables used for filtering bully, victim, bully-victim and non-involved groups were as follows:

Cyber bullying Perpetration: The total score of the cyber bullying perpetration section of the *Revised Cyber Bullying Inventory for University Students*.

Cyber bullying Victimization: The total score of the cyber bullying victimization section of the *Revised Cyber Bullying Inventory*.

Cyber bully-victim group: To be able to identify a participant as a *cyber bully-victim*, a participant had to score two or above two in both cyber bullying perpetration section and cyber bullying victimization section.

It is important to note that cyber bullying perpetration scores and cyber bullying victimization scores were not included into the hypothesized model. As the theoretical background of this study was built to test a model associated with cyber bullying

perpetration, these two variables were used to filter bully, victim, bully-victim and non-involved groups participated to the study.

Other than these two filter variables, there were a total of eight variables which can be categorized in two sets. While the first set was ‘Variables of Cyber bullying Perpetration Motives’, the second set was ‘Variables of Personality Traits’. And each set involved four variables.

Variables of Cyber bullying Perpetration Motives:

Entertainment: The total score of the Entertainment subscale of the *Cyber bullying Perpetration Motives Scale*.

Revenge: The total score of the Revenge subscale of the *Cyber bullying Perpetration Motives Scale*.

Harm: The total score of the Harm subscale of the *Cyber bullying Perpetration Motives Scale*.

Dominance: The total score of the Dominance subscale of the *Cyber bullying Perpetration Motives Scale*.

Variables of Personality Traits:

Online Disinhibition: The total score of the *Online Disinhibition Scale*.

Moral Disengagement: The total score of the *Propensity to Morally Disengage Scale*.

Narcissism: The total score of the *Propensity to Narcissistic Personality Inventory*.

Aggression: The total score of the *Propensity to Aggression Questionnaire*.

3.4. Data Collection Procedures

The target population of this study was university students enrolled in an undergraduate program in Turkey, and who reported being a cyber bully-victim in the past six months. University students registered to an undergraduate program in Ankara and having been involved in a cyber bullying incidence as a bully-victim in the previous six months were the accessible population. A five-page survey which contained the *Revised Cyber Bullying Inventory for University Students*, *Cyber bullying Perpetration Motives Scale*, *Online Disinhibition Scale*, *Propensity to Morally Disengage Scale*, *16-item Narcissistic Personality Inventory*, *Aggression 12-item Questionnaire* and a demographic information section was initially designed. Then, ethical approval for conducting this research was attained from Middle East Technical University, Human Subjects Ethics Committee (Appendix A) whose rules and obligations were followed during the data collection procedure.

The researcher administered the survey by himself in regular class periods. Instructors of every classroom were informed about the study to be able to get permission and collaboration. Throughout the survey administration, instructors remained unobtrusively seated in the classrooms and did not see the responses of the volunteer participants. After getting consent from the instructors, the researcher introduced himself to the students, explained the aim of the study, and distributed the surveys to the volunteering participants. Detailed information about the aim of the study and the essential ethical principles followed throughout the data collection procedure were written on the head of the first page of the survey. Even so, students were verbally reminded that participation was firmly voluntary, there was no compensation for participating to the study, they could leave answering the survey at any time in case they felt uncomfortable, no identifying information was asked and their responses were anonymous and confidential. It was also emphasized that their responses should be honest. With the aim of preventing missing data, the researcher of this study took some precautions throughout the data

collection procedure. On some pages of the implemented survey, the participants were prompted, in writing, about missing data by a question phrase ‘Do you know that the surveys which you left some questions or sections blank or which you filled up negligently cannot be evaluated?’ Additionally, the researcher orally reminded the participants about the fact that missing values would hinder both the evaluation and interpretation of the study results. The survey took about 20 minutes to complete. Each individual was thanked for volunteering to participate to this study when they completed answering the questions in the survey.

The data collection procedure of this study was in two phases; data collection for the instrument validation phase and data collection for hypothesis testing phase. Therefore, the study involved independent samples formed for the each phase of the study.

3.4.1 Phase I: Participants and data collection procedures for the instrument validation

Data were collected to examine the psychometric features of the cyber bullying section of the *Revised Cyber Bullying Inventory for University Students*, cyber victimization section of the *Revised Cyber Bullying Inventory for University Students*, *Cyber bullying Perpetration Motives Scale*, *Online Disinhibition Scale*, *Propensity to Morally Disengage Scale*, *16-item Narcissistic Personality Inventory*, and *12-item Aggression Questionnaire*.

Through convenient sampling method, the data were obtained by the researcher during the spring semester of 2013-2014 academic year. Data were collected from 635 university students enrolled to a large, urban public university in Ankara. The participants were grouped into categories on the basis whether they became involved in cyber bullying incidents as a bully or a victim once or more. The categories were created as the following: 15 participants (2.4%) were identified as pure cyber bullies who cyber bullied others twice or more but were never victimized online; 117 (18.4%) were pure

cyber victims who were cyber victimized twice or more but never bullied others online; 274 (43.1%) were cyber bully-victims who not only cyber bullied others but also were victimized online twice or more; and 146 (23.0%) were not-involved who never cyber bullied others or were never victimized. In addition, there were a total of 83 (13.1%) participants who cannot be put under any of these groups. Cyber bully-victims ($n = 274$, 43.1%) was the group with which the following analyses were conducted.

Missing data were checked, and the cases with missing values less than 5% were replaced by using the mean substitution method. Univariate (via Z-scores) and multivariate (via Mahalanobis Distance and Cook's Distance) outlier analyses were conducted to check for possible outliers. One case resulted in both a univariate (critically over the z-score value of 3.29) and multivariate outlier (exceeding the chi-square criterion value of 22.4577 ($df = 6$, $p < .001$) by deviating from the expected univariate and multivariate outlier values. For this reason, it was excluded from the sample which became a total of 273 participants who were cyber bully-victims. Then, normality assumption was checked by skewness and kurtosis values which were within the acceptable range of +3 and -3 (Field, 2009).

To validate the previously identified factor structures of the cyber bullying section of the *Revised Cyber Bullying Inventory for University Students*, cyber victimization section of the *Revised Cyber Bullying Inventory for University Students*, *Online Disinhibition Scale*, *Propensity to Morally Disengage Scale*, *16-item Narcissistic Personality Inventory*, and *12-item Aggression Questionnaire*, Confirmatory Factor Analysis (CFA) carried by Amos 21. Besides assumptions of normality and influential outliers, linearity and multicollinearity assumptions needed to be tested before CFA analyses. Visually inspection of the residual plots and scatter plots did not reveal any violation of the linearity assumption. Multicollinearity was checked by bivariate correlation coefficients, VIF values and tolerance values. The bivariate correlation coefficients revealed that correlation coefficients ranged from .14 and .57 which were lower than .85 (Kline,

2011). Also, VIF values were less than 10, and tolerance values were higher than .20 (Tabachnick & Fidell, 2013). Therefore, multicollinearity assumption was not violated.

Among the 273 cyber bully-victim participants, 117 (42.9%) of them were females and 156 (57.1%) of them were males. They aged between 18 and 26 ($M = 21.28$, $SD = 1.91$). Among the cyber bully-victims, 59 (21.6%) of them were from prep school of English, 56 (20.5%) of them were from 1st year, 42 (15.4%) of them were from 2nd year, 45 (16.5%) of them from were 3rd year and 71 (26.0%) of them were from 4th year. Please note that these participants were not included to the main study.

It is important to note that the explained data set above was used to test the psychometric features of all the instruments administered in this study except for *Cyber bullying Perpetration Motives Scale*. A questionnaire to measure cyber bullying perpetration was developed, and data were collected for that questionnaire with the first data set explained above. Yet, since the items of that questionnaire required extensive updating and improving, the first data set collected for specifically for that questionnaire could not be considered. For that reason, an additional data set as explained below needed to be collected.

The additional set of data was obtained from 277 university students enlisted to a large, urban public university in Ankara during the summer school of 2013-2014 academic year. The participants were classified into categories on the basis whether they became involved in cyber bullying incidents as a bully or a victim once or more. The categories were as follows: 10 participants (3.6%) were identified as pure cyber bullies who cyber bullied others twice or more but were never victimized online; 44 (15.9%) were pure cyber victims who were cyber victimized twice or more but never bullied others online; 122 (44.0%) were cyber bully-victims who not only cyber bullied others but also were victimized online twice or more; and 58 (20.9%) were not-involved who never cyber bullied others or were never victimized. In addition, there were a total of 43 (15.4%)

participants who do not fit to any of these groups. Cyber bully-victims ($n= 122$, 44.0%) were the group with which the analyses were conducted.

A mean substitution method was used to replace the missing values on cases having fewer than 5% by following the suggestion of Tabachnick and Fidell (2013). Univariate (via Z-scores) and multivariate outliers (via Mahalanobis Distance and Cook's Distance) were checked. No outliers were detected in the data set. Then, normality assumption was checked by skewness and kurtosis values which were in the acceptable range of +3 and - 3 (Field, 2009).

Among the 122 cyber bully-victim participants, 34 (27.9%) were females and 88 (72.1%) were males. They aged between 18 and 26 ($M= 21.50$, $SD= 1.72$). The participants were distributed across to these year levels; 28 (23.0%) were from 1st year, 54 (44.3%) were from 2nd year, 27 (22.1%) from were 3rd year and 10 (8.2%) were from 4th year with 3 (2.5 %) unknown year level. These participants were not included to the main study.

3.4.2. Phase II: Participants and data collection procedure for hypothesis testing

Data for the hypothesis test were collected from 1328 university students who were enrolled to three of the state universities in Ankara. However, 47 cases were eliminated from the study because either more than 5% of the survey questions were left blank or the questionnaires were not completed independently by the participants. This elimination reduced the number of the eligible participants to 1281. The theoretical background of this study depends on a model regarding the personality traits of cyber bullies and motivations behind cyber bullying perpetration. For this reason, participants who cyberbullied others needed to be identified among the whole 1281 participants.

The identification procedure is based on the extant cyber bullying literature which suggests that a behavior can be identified as cyber bullying only if it is repeated twice or more (Langos, 2012; Nocentini et al., 2010). Thus, participants were categorized on the basis whether they became involved in cyber bullying incidents as a bully or a victim once or more. The categorization of the sample is given in Table 3.1. Accordingly, 38 participants (3.0%) were identified as pure cyber bullies who cyber bullied others twice or more but were never victimized online; 218 (17.0%) were pure cyber victims who were cyber victimized twice or more but never bullied others online; 598 (46.7%) were cyber bully-victims who not only cyber bullied others twice or more but also were victimized online twice or more; and 240 (18.7%) were not-involved who never cyber bullied others or were never victimized. In addition, there were a total of 187 (14.6%) participants who cannot be put under any of these groups. Some of these participants reported being a cyber bully and/or cyber victim just once, others acted as a cyber bully more than once but became victimized once, and some others were cyber victims twice or more but became a cyber bully just once.

Table 3.1

Categorization of the Participants by their Involvement of Cyber bullying (Hypothesis Testing Phase)

	<i>f</i>	<i>%</i>
Cyber Bully	38	3.0
Cyber Victim	218	17.0
Cyber Bully-Victim	598	46.7
Perpetrated Only Once	23	1.8
Victimized Only Once	52	4.1
Perpetrated and Victimized Only Once	25	1.9
Perpetrated More Than Once and Victimized Only Once	32	2.5
Perpetrated only Once and Victimized More Than Once	55	4.3
Not Involved	240	18.7
Total	1281	100

Among 1281 participants, cyber bully-victims ($n= 598$, 28.6%) were selected as the participants of this present research. A number of reasons played a role in this decision. Firstly, as well as being victimized themselves, cyber bully-victims were one of the perpetrator groups. Secondly, the cyber bullying literature indicates that bullies also experience victimization which transforms them from pure cyber bully status into cyber bully-victims (e.g., Tanrikulu & Campbell, 2015). Next, cyber bully-victims can be regarded as a unique group different from pure victims or bullies because they act bully and victim roles at the same time. However, studies examining the nature and extent of cyber bullying among cyber bully-victims, as a separate group, are limited. Thus, examining the cyber bully-victims, as a homogenous group, has the potential to contribute to the literature. Lastly, as this study focused on the bullies, pure victims and not-involveds were ignored. In addition, the participants who cannot fit to any cyber bully (such as perpetrated only once or perpetrated only once and victimized more than once) groups were also ignored since they did not ensure the cyber bully or victim criteria. Among the two groups left, the number of the participants in pure bully status ($n= 38$, 3.0%) was quite low compared to the cyber bully-victims ($n= 598$, 46.7%). As this low frequency prevented making a comparison between pure bullies and cyber bully-victims, pure bullies were not included to the study sample. Another reason for excluding pure bullies from the study was the distinction between pure bullies and cyber bully-victims. First, even though participants in the pure bully category only perpetrated others without being victimized, cyber bully-victims not only bullied others but also were victimized. In fact, the findings of the previous studies indicated this difference. For example, pure cyber bullies and cyber bully-victims differed in terms of self-esteem, depression, peer relations and stress (Aoyama, 2010). Cyber bully-victims, therefore became the study sample of this research.

Table 3.2 below details the demographics of the participants. There were 229 (38.7%) females and 362 (61.3%) males. Participants' age ranged from 17 to 27 with a mean age of 20.23 ($SD= 1.84$). Of the participants, 135 (22.8%) of them were from prep school of English, 119 (20.1%) of them were from 1st year, 136 (23.0%) of them were from 2nd

year, 87 (14.7%) of them were from 3rd year, and 114 (19.3%) of them were from 4th year. Among the participants, 239 (40.6%) of them were from Faculty of Engineering, 151 (25.6%) of them were from Faculty of Dentistry, 135 (22.9%) of them were from School of Foreign Languages, 35 (5.9%) of them were from Faculty of Education, 20 (3.4%) of them were from Faculty of Economics, six (1.0%) of them were from Faculty of Architecture, and three (0.5%) of them were from Arts and Sciences. Participants reported that smartphones ($n= 521$, 88.2%) and laptops ($n= 496$, 83.9%) were their most common tools for connecting Internet. They also connected to the Internet via PCs ($n= 209$, 35.4%) and Tablet PCs ($n= 169$, 28.6%) with lower frequencies. While only a 22 (3.8%) of the participants reported weekly spending a few hours on the Internet, a great majority of them seemed to be online quite often. On a daily basis, 107 (18.5%) of the participants were online 1 hour or less, 256 (44.2%) of them were online 2-3 hours in a day, 124 (21.4%) of them were online 4-5 hours in a day, and 70 (12.1%) of them were online six hours or more.

About the education levels of the participants' mothers, 10 (1.8%) of them were illiterate, 13 (2.3%) of them was literate, 128 (22.5%) of them were primary school graduates, 53 (9.3%) of them were secondary school graduates, 157 (27.5%) of them were high school graduates, 187 (32.8%) of them were university graduates, 17 (3.0%) of them were masters graduates, and 5 (0.9%) of them were doctorate graduates. Considering fathers, 4 (0.7%) of them were illiterate, 1 (0.2%) of them was literate, 60 (10.5%) of them were primary school graduates, 45 (7.9%) of them were secondary school graduates, 148 (25.9%) of them were high school graduates, 254 (44.5%) of them were university graduates, 40 (7.0%) of them were masters graduates, and 19 (3.3%) of them were doctorate graduates. And the monthly income levels of the parents changed from 500.00 TL to 30.000.00 TL with a mean monthly income level of 4038.45.

Table 3.2

Participants' Demographic Characteristics (Hypothesis Testing Phase)

	<i>f</i>	<i>%</i>
Gender		
Female	229	38.7
Male	362	61.3
Year Level		
Prep School of English	135	22.8
1 st Year	119	20.1
2 nd Year	136	23.0
3 rd Year	87	14.7
4th Year	114	19.3
Mother Education Level		
Illiterate	10	1.8
Literate	13	2.3
Primary School	128	22.5
Secondary School	53	9.3
High School	157	27.5
University	187	32.8
Masters	17	3.0
PhD	5	0.9
Father Education Level		
Illiterate	4	0.7
Literate	1	0.2
Primary School	60	10.5
Secondary School	45	7.9
High School	148	25.9
University	254	44.5
Masters	40	7.0
PhD	19	3.3
Internet Connection Devices		
Smart Phone	521	88.2
Laptop	496	83.9
PC	209	35.4
Tablet PC	169	28.6
Average Internet Usage Time		
A Few Hours in a Week	22	3.8
1 Hour or Less in a Day	107	18.5
2-3 Hours in a Day	256	44.2
4-5 Hours in a Day	124	21.4
6 or More in a Day	70	12.1

3.5. Data Collection Instruments

For the purpose of this research, while *Revised Cyber bullying Inventory-II* was revised, *Cyber bullying Perpetration Motives Scale* was developed by the researcher. *Narcissistic Personality Inventory-16* was already adapted into Turkish by Temel (2008); so, it was used in its adapted form. And, *Online Disinhibition Scale*, *Propensity to Morally Disengage Scale* and *Aggression Questionnaire-12* were translated into Turkish by the researcher of this study. The translation procedure of the translated instruments is presented below at first. Afterwards, detailed information about each instrument administered in this study is given.

3.5.1. Translation procedure of online disinhibition scale, propensity to morally disengage scale and aggression questionnaire-12

Online Disinhibition Scale (ODS) (Kerstens & Stol, 2012), *Propensity to Morally Disengage Scale (PMDS)* (Moore et al., 2012) and *12-item Aggression Questionnaire (AQ-12)* (Bryant & Smith, 2001) which were originally created in English were translated into Turkish in this study. Prior to the translation procedure, written permission via e-mail was obtained from the owners of the instruments (Appendix B). The items of the three instruments above were firstly translated from English to Turkish by three PhD candidates at Educational Sciences (Psychological Counseling and Guidance, Curriculum and Instruction and Educational Administration and Planning) who were advance in English proficiency. Next, the item translations of the each instrument were compared and contrasted by the researcher and his advisor, and they chose the best fitting items among all translations for every instrument. Afterwards, a back translation on the selected items in Turkish was conducted by a language expert who not only graduated from department of English language teaching but also was a PhD candidate at an English-medium university. This language expert was unfamiliar with the original English versions of the instruments. The back translation indicated that the items were accurately translated. Then, two other PhD candidates of Educational

Sciences made an additional check on the items to improve the grammar, the sentence formation and the understandability of the items. After that, a discussion group was carried out with five university students (three females and two males). The discussion group was conducted at a public university library, and it lasted for nearly 60 minutes. The discussion group participants by filling out the items on the three instruments, worked on each item in terms of content, choice of words, spelling, grammatical structure and comprehensibility. The items were further modified with the corrections obtained in the discussion group. Eventually, the instruments with their translated Turkish items were administrated to evaluate their psychometric characteristics.

3.5.2. Revision procedure of the revised cyber bullying inventory for university students

Edur-Baker and Kavşut developed the *Cyber bullying Inventory* in 2007. Topcu and Erdur Baker (2010) later revised it by generating some new items in addition to changing the wording of some existing items. They named the instrument as *Revised Cyber bullying Inventory* (RCBI). RCBI confirmed a one-factor structure. Its inter-item reliability coefficient (Cronbach's alpha) was reported .82 for the cyber bullying form, and .75 for the cyber victimization form. In this revision, the authors discussed the fact that online technologies are evolving very fast which creates difficulties in measuring cyber bullying involvement. They concluded that using specific types of information and communication technologies such as social networking websites, chatrooms, or using specific names of the online services such as Facebook or Twitter are likely to cause measurement difficulties for cyber bullying involvement in the future because of the ever-changing nature of the online technologies. They recommended making use of general terms instead of particular names for the online technologies. Following this recommendation, Topcu (2014) made a second revision and developed the *Revised Cyber bullying Inventory-II* (RCBI-II) whose items are free of the names of the specific online technologies. Topcu's (2014) revision of RCBI-II was specifically designed for children and early adolescents. Nevertheless, the participants of this present research

were university students. For this reason, a revision particular to university student samples was needed. Independent from Topcu (2014), the researcher of this study made a third revision on the *Revised Cyber bullying Inventory*, and named it *Revised Cyber Bullying Inventory for University Students (RCBI for University Students)*. In *RCBI for University Students*, the items of the *Revised Cyber bullying Inventory* (Topcu & Erdur-Baler, 2010) were reworded, some items were combined into one item, and distinctive names of the online technologies were changed with general names such as ‘on the Internet’ or ‘on cyber space’. These two revision methods were similar to RCBI-II (Topcu, 2014). Different from RCBI-II, newer forms of bullying behaviors acted on online platforms were included as items to *RCBI for University Students*. These behaviors were obtained from an up-to-date investigation of how information and communication technologies were misused by Turkish youngsters as reflected by newspaper reports (Tanrikulu et al., 2015). Swearing others, sexting and blackmailing were the added cyber bullying behaviors. Also, throughout the revision process, the items were refined to make them appropriate for the university students. After the revision process, expert opinion was solicited from two researchers who had a profound research experience on cyber bullying. Modifications of sentence structures were proposed by the experts. Then, three PhD candidates of Psychological Counseling and Guidance program were requested to make an additional check to improve the understandability of the items. After taking their suggestions into consideration, a discussion group with six university students (four females and two males) was conducted by the researcher. The discussion group was held at a public university library, and it lasted for about 45 minutes. The participants of the discussion group completed the *RCBI for University Students* and gave feedback. A detailed further review was done with the participants regarding the contents, choice of words, spelling, grammatical structure and understandability of the items.

The initial version of the *RCBI for University Students* had 15 items in total. After the data collection, it was realized that among the subsequently added behaviors on the *RCBI for University Students*, two behaviors, sexting and blackmailing, were not

endorsed by the participants. Hence, three items containing sexting and blackmailing were deleted from the instrument, which finally resulted in 12 items. The analyses below with regards to the validity and reliability of the *RCBI for University Students* were conducted with the 12 items.

3.5.2.1. *RCBI for university students*

RCBI for University Students with its 12 items measures the cyber bullying experiences with two separate parts; one part for measuring cyber bullying perpetration and one part for measuring cyber bullying victimization. While cyber bullying experiences are responded as ‘I did’, cyber victimization experiences are replied as ‘It happened to me’. The two sections share the same items. Participants are asked to report being a cyber bully or cyber victim in the previous six months by filling up the two parts separately. *RCBI for University Students* is rated on a 4-point Likert scale, 1 = *never*, 2 = *once*, 3 = *twice-three times*, 4 = *more than three times*. Sample items can be viewed in Appendix C, and one of the items as an example is ‘Sending threatening, offending, embarrassing messages on the Internet’. The two sections of cyber bullying perpetration and cyber bullying victimization can be evaluated independently. In this case, scores range from 12 to 48 for each section. Higher scores show how frequent a participant has been a cyber bully or a cyber victim for the last six months. The two sections can also be considered together. In this case, higher scores suggest more involvement of cyber bullying perpetration and cyber bullying victimization. A categorical grouping of pure cyber bullies, pure cyber victims, cyber bully-victims and not-involveds can also be made with *RCBI for University Students*. Pure cyber bullies can be identified as the participants who cyber bullied others twice or more but were never victimized online. Pure cyber victims can be categorized as being cyber victimized twice or more but never bullied others online. Cyber bully-victims can be identified not only having cyber bullied others but also having been cyber victimized twice or more. And not-involveds can be categorized as the participants who never cyber bullied others or were never victimized.

3.5.2.2. Validity and reliability evidence for the RCBI for university students

In order to establish construct validity, a Confirmatory Factor analysis was carried on *RCBI for University Students*. It had two parallel sections which shared the same 12 items. The first section was for measuring cyber bullying perpetration. As one-factor solution was suggested by Topcu and Erdur Baker (2010), one-factor solution was tested for cyber bullying perpetration section of the *RCBI for University Students*. While testing CFA models, item parceling is recommended for the instruments with more than five items (Kline, 2011). Item parceling was performed by generating four parcels with twelve items. The unidimensional factor structure was confirmed by the CFA ($\chi^2 = 2.56$, $df = 2$, $p = .27$; $\chi^2/df = 1.28$; GFI = .99, CFI = .99, TLI = .98, SRMR = .02, RMSEA = .03). Standardized estimates of the model were between .40 and .73. The inter-item reliability coefficient (Cronbach's alpha) was .80 for cyber bullying perpetration form in this study.

The second section of the *RCBI for University Students* was about cyber bullying victimization. Four parcels were created with the item parceling technique. One factor-structure proposed by Topcu and Erdur Baker (2010) was supported by the CFA results ($\chi^2 = 1.36$, $df = 2$, $p = .50$; $\chi^2/df = .68$; GFI = .99, CFI = 1.00, TLI = 1.00, SRMR = .01, RMSEA = .00). Standardized estimates of the model were between .30 and .57. The inter-item reliability coefficient (Cronbach's alpha) was .73 for cyber bullying victimization form.

3.5.3. Cyber bullying perpetration motives scale (CBPMS)

The purpose of this study was to test a model of cyber bullying perpetration motives. Since, to the best of researcher's knowledge, there was no instrument to measure cyber bullying perpetration motives at the time of this research was conducted, *Cyber bullying Perpetration Motives Scale* (CBPMS) was developed by the researcher.

3.5.3.1. *Development procedure of CBPMS*

The primary step of the *CBPMS* development procedure was to clearly identify what to measure. This study was theoretically based on *Uses and Gratifications Theory* (Blumler & Katz, 1974) which served as the primary guide of the *CBPMS* development procedure. The literature examining the cyber bullying perpetration motives were reviewed at first. The literature listed several motives of cyber bullying perpetration motives such as entertainment, gaining power and status, revenge, harm, avoiding from adult punishment or demonstrating technological skills (e.g., Englander, 2008; Compton et al., 2014; Tocu et al., 2013; Vandebosch & Van Cleemput, 2008).

As it was not possible to include every reported motive in an instrument, specific motives needed to be picked out. Detailed explanation about the selection process of the motives can be found in the introduction section of this research. In short, the most relevant and the most frequently reported motives considering the definitional criteria of cyber bullying were included into the instrument. Entertainment, revenge, harm and dominance were the most relevant and the most commonly reported motives of cyber bullying perpetration (Baas et al., 2013; König et al., 2010; Mishna et al., 2010; Rafferty & Vander Ven, 2014; Zhou et al., 2013). Hence, they were chosen as the four factorial dimensions of the *CBPMS*. In sum, *CBPMS* aimed to measure why cyber bullies perpetrate others by specifically considering entertainment, revenge, harm and dominance motives, and it takes the most frequently reported four motives of cyber bullying perpetration into consideration.

As the second step, an item pool was generated. While producing the items, the literature on entertainment, revenge, harm and dominance were extensively examined, and the items were written to reflect the purpose of the each sub-dimension of the *CBPMS*. The instruments already having being used for measuring motives such as TV viewing motives or internet motives were taken into consideration to decide for the item formats. In line with the previous TV viewing motives or internet motives research, all items

were positively worded, a 5-point Likert type response method was implemented, and the measurement format was designed as 1 = *not at all*, 2 = *little*, 3 = *some*, 4 = *much*, 5 = *very much*. The participants were, in written, prompted to skip *CBPMS* unless they had bullied someone online. However, if they cyber bullied anyone at least once, they were asked to report the reason/s why they cyber bullied others. To guide the participants think about the reasons of cyber bullying others, a sentence prompt at the beginning of the instrument was provided as '*I became engaged in cyber bullying perpetration behaviors because*'. One sample item is 'These types of behaviors were also done to me'. More items can be viewed at Appendix D.

In the next step, two experts who are knowledgeable and experienced in cyber bullying research reviewed the generated item pool. They not only evaluated the items in terms of relevancy and understandability, but they also suggested possible additional items to include to the instrument. Afterwards, four PhD candidates of Psychological Counseling and Guidance program made an additional revision to improve the items. Afterwards, a discussion group was performed with four university students (two females and two males). The discussion group was taken place at a public university library, and it lasted for approximately 60 minutes. The discussion group participants firstly responded to the items on the instrument, and then revised each item in terms of content, choice of words, spelling, grammatical structure and comprehensibility. The items were further refined with the corrections obtained in the discussion group. Finally, a total of 22 items were administrated to investigate the psychometric characteristics of the *CBPMS* with its hypothesized four factor structure.

3.5.3.2. *Validity and reliability evidence for the CBPMS*

The following exploratory factor analysis was performed with the data set ($n = 277$) which was used to examine the psychometric characteristics of the *Cyber bullying Perpetration Motives Scale*.

An exploratory factor analysis (EFA) was performed to reveal the underlying factor structure of *CPBMS* and to provide evidence for construct validity for *CBPMS*. To evaluate if the data were appropriate for EFA, the KaiserMeyer- Olkin (KMO) measure of sampling adequacy and Barlett’s test of sphericity were checked. KMO value was .83 which was above .60, and Barlett’s test was significant ($\chi^2 (231) = 1829.56, p < .001$) as suggested by Tabachnick and Fidell (2013). Principal axis factoring with direct oblimin rotation (Kaiser Normalization) revealed that the first factor (revenge) explained 36.16% of the variance, the second factor (entertainment) explained 16.57% of the variance, the third factor (dominance) explained 8.35% of the variance, and the fourth factor (harm) explained 6.03% of the variance. The four factors explained 67.11% of the total variance. Eigen values of the four factors were 7.95, 3.65, 1.84 and 1.33, respectively. The visual inspection of the scree plot also supported the four factor structure (*Figure 3.1*).

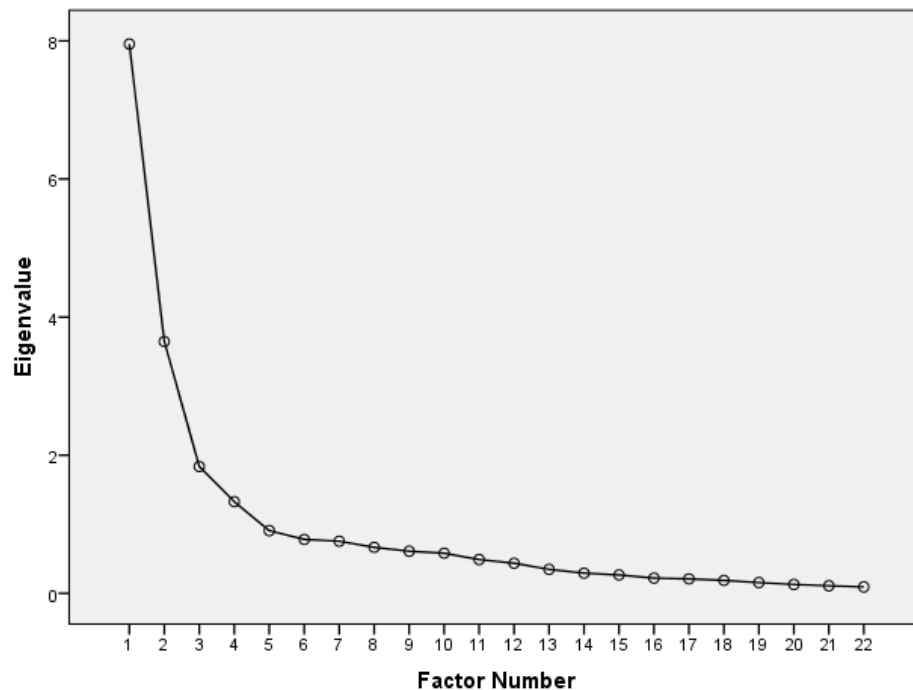


Figure 3.1 Scree plot of the cyber bullying perpetration motives scale.

Table 3.3

Pattern Matrix of CBPMS

Items	Revenge	Entertainment	Dominance	Harm
mot13	.934			
mot17	.662			
mot21	.635			
mot15	.624			
mot7	.509			
mot11	.478			
mot16	.405			
mot12		.930		
mot5		.851		
mot19		.850		
mot10		.843		
mot14		.755		
mot2			.815	
mot6			.765	
mot3			.664	
mot4			.588	
mot9			.419	-.390
mot18				-.757
mot20				-.744
mot8				-.665
mot22				-.622
mot1				-.546

Note: Factor loadings < .30 were omitted. And, 'mot' refers to each of the motive items.

Examining the factor loadings of each item on the pattern matrix table (Table 3.3), all items except for item 9 loaded as expected. As item 9 cross-loaded on factor 3 and 4, and its loading value was quite close to factor 3 (.419) and factor 4 (.390), it was deleted.

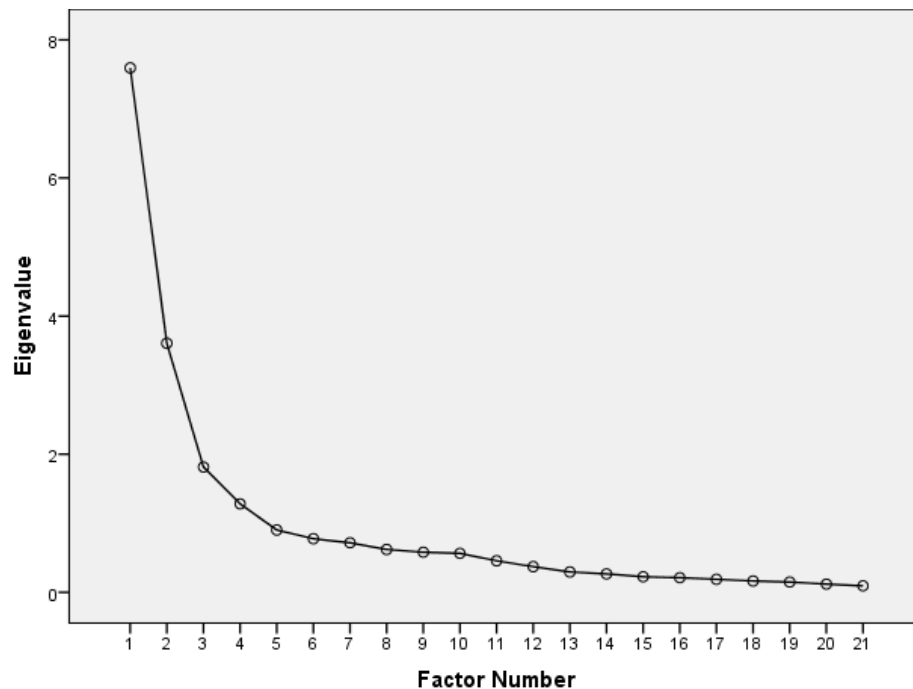


Figure 3.2 Scree plot of the CPMS after deleting item 9.

Figure 3.2 visually presents the factor structure of the CBPMS after deleting item 9. And Table 3.4 below details the *pattern matrix of CBPMS* after deleting item 9. Once the item 9 was eliminated, the first factor (revenge) explained 36.16% of the variance, the second factor (entertainment) explained 17.17% of the variance, the third factor (dominance) explained 8.64% of the variance, and the last factor (harm) explained 6.10% of the variance. The four factors explained 68.08% of the total variance. Eigen values of the four factors were 7.59, 3.61, 1.81 and 1.28, respectively. Thus, 21 items revealed a better factor structure for the CBPMS. In CBPMS with 21 items, the possible lowest score was 21, and the possible highest score was 105. Higher scores pointed out that a participant is more motivated to cyber bully others. The data with 21 items revealed the inter-item reliability coefficient (Cronbach's alpha) for the revenge subscale was .85, for the entertainment subscale was .93, for the dominance subscale was .86 and for the harm subscale was .83. The inter-item reliability coefficient for the whole scale was .90.

Table 3.4

Pattern Matrix of CBPMS after Deleting Item 9

Items	Revenge	Entertainment	Dominance	Harm
mot13	.943			
mot17	.664			
mot21	.632			
mot15	.614			
mot7	.488			
mot11	.468			
mot16	.394			
mot12		.941		
mot5		.852		
mot19		.843		
mot10		.839		
mot14		.753		
mot2			.858	
mot6			.741	
mot3			.647	
mot4			.573	
mot18				-.775
mot20				-.773
mot8				-.646
mot22				-.644
mot1				-.558

Note: Factor loadings < .30 were omitted. And, 'mot' refers to each of the motive items.

Please note that as the items of the first questionnaire developed for *CBPMS* necessitated extensive updating and improving, the first data set collected for instrument validation phase could not be used. For that reason, an additional data set as explained below was collected, and the above explained EFA procedure was carried out by that additional data (See Section 3.4.1.). Therefore, the confirmatory factor analysis explained below was carried out by using the *CBPMS* data ($n = 598$) collected for the hypothesis testing (See Section 3.4.2.).

A confirmatory factor analysis (CFA) was conducted to test the construct validity of the *CBPMS*. The hypothesized four factor structure was tested. Item parceling was conducted for revenge and dominance subscales whose number of items was more than five. As, as item parceling could not be done with entertainment and harm subscales, which were five items and four items respectively, their original items were used in

CFA. For the four factor model of the CBPMS, CFA indicated a poor fit ($\chi^2 = 343.33$, $df = 84$, $p = .00$; $\chi^2/df = 4.09$; GFI = .92, CFI = .95, TLI = .94, SRMR = .05, RMSEA = .07). Modification indices were checked, and the error covariance between item 1 and item 3 was freely estimated, which improved the model fit ($\chi^2 = 268.95$, $df = 83$, $p = .00$; $\chi^2/df = 3.24$; GFI = .94, CFI = .96, TLI = .95, SRMR = .05, RMSEA = .06). Standardized estimates of the model were between .61 and .91.

The data with 21 items in total revealed the inter-item reliability coefficient (Cronbach's alpha) for the revenge subscale was .87, for the entertainment subscale was .89, for the dominance subscale was .87 and for the harm subscale was .80. The inter-item reliability coefficient for the whole scale was found .90 in this research.

3.5.4. Online disinhibition scale (ODS)

Online Disinhibition Scale (ODS) was developed by Kerstens and Stol (2012), and it measures to the extent people feel detached from societal restraints and inhibitions when online. The original items of *ODS* was in Dutch. The items in English were obtained from the authors. And the items in English were translated into Turkish by the researcher of this study as detailed in section 3.5.1. *ODS* is a 7-item, 5-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5). Items are summed up to estimate an overall tendency of online disinhibition. Scores range from 7 to 35. Higher scores on this scale suggest a greater level of disinhibition while online. An example item read as follows 'I am more myself on the Internet than in real life'. Some more sample items can be checked at Appendix E as well. Kerstens and Stol (2012) reported the scale's inter-item reliability coefficient as .86, and *ODS* measured online disinhibition as a single-factor construct.

3.5.4.1. *Validity and reliability evidence for the ODS*

To provide evidence for construct validity, a CFA on *ODS* was performed. One-factor solution was tested for *ODS*. Item parceling was not performed because *ODS* had only 7 items. Results of the CFA showed a poor fit for the data ($\chi^2 = 63.26$, $df = 14$, $p = .00$; $\chi^2/df = 4.52$; GFI = .93, CFI = .91, TLI = .86, SRMR = .05, RMSEA = .11). Modification indices were examined and the error covariance between item 1 and item 4, item 3 and item 7, item 5 and item 6 were freely estimated. Since these items aimed to evaluate the same construct, freely estimating their error covariances was theoretically appropriate. The model fit indices improved after this modification ($\chi^2 = 21.75$, $df = 11$, $p = .02$; $\chi^2/df = 1.97$; GFI = .98, CFI = .98, TLI = .96, SRMR = .03, RMSEA = .06). Standardized estimates of the model were between .46 and .80. The inter-item reliability coefficient (Cronbach's alpha) was .82 for *ODS* in this research.

3.5.5. Propensity to morally disengage scale (PMDS)

Developed by Moore et al., (2012), *Propensity to Morally Disengage Scale* (PMDS) assesses participants' tendencies to make themselves believe that they may conduct some unethical behaviors under certain circumstances. Twenty-four and 16 item versions of the *PMDS* are also available but the 8-item version of the *PMDS* was used in this study. The items were in English, and they were translated into Turkish by the researcher of this study as detailed in section 3.5.1. Items were rated on a 7-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (7). Scores change from 8 to 56. A general tendency of moral disengagement is calculated by summing up the items. The higher the scores are, the more likely a respondent engage in morally disengaged behaviors. A sample item read as 'It is okay to spread rumors to defend those you care about'. More sample items can be viewed at Appendix F as well. In the original study, Moore et al., (2012) provided evidence for a single-factor structure for the *PMDS*. It was administered to 5 different samples in different times, and its inter-item reliability coefficient ranged from .70 to .90.

3.5.5.1. Validity and reliability evidence for the PDMS

To provide support for the construct validity of the PDMS a CFA was performed. One-factor solution was tested. Considering that PDMS is made up of only 8 items, no item parceling was done. CFA confirmed the unidimensional factor structure of the PDMS ($\chi^2 = 35.06$, $df = 20$, $p = .20$; $\chi^2/df = 1.75$; GFI = .97, CFI = .93, TLI = .91, SRMR = .02, RMSEA = .04). Standardized estimates of the model were between .28 and .58. The inter-item reliability coefficient (Cronbach's alpha) was found as .71 for the PDMS in this study.

3.5.6. 16-item narcissistic personality inventory (NPI-16)

Narcissistic Personality Inventory with 16 items (NPI-16) (Ames et al., 2006) is the shorter and validated form of the previous 40-item version developed by Raskin and Terry (1988). Inclination towards narcissism is measured by NPI-16. Each item consists of two sentences one for narcissism and another for non-narcissism. As a sample item, while 'I like to be the center of attention' is the narcissistic response, 'I prefer to blend in with the crowd' is the non-narcissistic response of the same item. More items can be seen at Appendix G. In terms of scoring, the responses related to narcissism are scored as 1, whereas the responses related to non-narcissism are coded as 0. A general tendency of narcissism is calculated by summing up the narcissistic response items. The highest score that a participant can get from NPI-16 is sixteen, and the lowest score is zero. Higher scores show a higher level of narcissism.

In the original study, Ames et al., (2006) provided evidence for a single-factor structure for the NPI-16. It was administered to 5 different samples in different times, and its inter-item reliability coefficient ranged from .65 to .72. NPI-16 was translated into Turkish by Temel (2008) who reported the NPI-16 as a valid and reliable instrument with an inter-item reliability coefficient value of .65.

3.5.6.1. *Validity and reliability evidence for the NPI-16*

Confirmatory Factor Analysis was used to test construct validity of NPI-16. One-factor solution was tested. As NPI-16 had 16 items in total, item parceling was done, and four parcels were created. CFA confirmed the unidimensional factor structure of the NPI-16 ($\chi^2 = 0.50$, $df = 2$, $p = .77$; $\chi^2/df = .25$; GFI = .99, CFI = 1.00, TLI = 1.00, SRMR = .00, RMSEA = .00). Standardized estimates of the model were between .62 and .73. The inter-item reliability coefficient (Cronbach's alpha) was found .74 for the NPI-16 in this study.

3.5.7. The 12-item aggression questionnaire (AQ-12)

The *12-item Aggression Questionnaire (AQ-12)* (Bryant & Smith, 2001) is a refined version of the 29-item previous version developed by Buss and Warren (2000). *AQ-12* measures aggressive tendencies of the participants. A sample item is 'I have threatened people I know'. More items can be checked at Appendix H. The items are rated on a 5-point Likert scale ranging from *uncharacteristic of me* (1) to *extremely characteristic of me* (5). Five different scores can be obtained from *AQ-12*. In addition to the total aggression score, total scores of its four subscales, which are physical aggression, verbal aggression, anger, and hostility, can be calculated. Higher scores reflect greater levels of aggressive tendencies. Traditionally, items of the previous versions of the *Aggression Questionnaire* are needed to be randomized in each research conducted. Following this requirement, the order of the items which was randomized by Bryant and Smith (2001) in the *AQ-12* was randomized in this study as well. The items of the *AQ-12* were originally in English, and they were translated into Turkish by the researcher of this study as described in section 3.5.1. A unidimensional first-order factor structure, four-factor structure and a single second-order factor structure are available for the *Aggression Questionnaire*. Since the aim of this research was to examine aggression as a single construct, a unidimensional first-order factor structure for the *AQ-12* was

preferred. Ang (2007) reported that reliability estimates of the total aggression were .84 and .82 for two separate research samples.

3.5.7.1. *Validity and reliability evidence for the AQ-12*

To verify the factor structure of *AQ-12*, Confirmatory Factor Analysis was used as the evidence for construct validity. Single-factor solution was tested. Because *AQ-12* had 12 items, an item parceling procedure was carried out, and four parcels were created. Results of the CFA showed a poor fit for the data ($\chi^2 = 22.97$, $df = 2$, $p = .00$; $\chi^2/df = 11.48$; GFI = .96, CFI = .93, TLI = .79, SRMR = .04, RMSEA = .19). Modification indices were examined and the error covariance between parcel 1 and parcel 2 was freely estimated. The model fit indices improved after this modification ($\chi^2 = 2.12$, $df = 1$, $p = .14$; $\chi^2/df = 2.12$; GFI = .99, CFI = .99, TLI = .98, SRMR = .01, RMSEA = .06). Standardized estimates of the model were between .63 and .87. The inter-item reliability coefficient (Cronbach's alpha) was .79 for *AQ-12* in this research.

3.5.8. Demographic information form

Participants' age, gender, name of the enrolled faculty/department and the university, year level, monthly income level of the parents, educational levels of the mothers and fathers (ranging from illiterate to doctorate) were inquired at first. The tools the participants used to connect to the Internet (PC, laptop, smart phone, tablet and other) were explored as well. An additional question was about the Internet usage frequency of the participants (ranging from a few hours in a week to 6 or more hours in a day).

3.5.9. Summary of the validity and reliability analysis findings of the instruments used

In sum, the validity and the reliability analyses provided statistical support indicating that the instruments administered for the specific purpose of this research were valid and

reliable. Table 3.5 below summarizes the validity (fit indices for the confirmatory factor analysis) and the reliability analyses (Cronbach's alpha, denoted as α) findings related to each instrument.

Table 3.5

Summary of the Confirmatory Factor Analysis and Reliability Analysis Findings

	χ^2	df	p	χ^2/df	GFI	CFI	TLI	SRMR	RMSEA	α
Cyber bullying perpetration section of the <i>RCBI for University Students</i>	2.56	2	.27	1.28	.99	.99	.98	.02	.03	.80
Cyber bullying victimization section of the <i>RCBI for University Students</i>	1.36	2	.50	.68	.99	1.00	1.00	.01	.00	.73
Cyber Bullying Perpetration Motives Scale	268.95	83	.00	3.24	.94	.96	.95	.05	.06	.90
Online Disinhibition Scale	21.75	11	.02	1.97	.98	.98	.96	.03	.06	.82
Propensity to Morally Disengage Scale	35.06	20	.20	1.75	.97	.93	.91	.02	.04	.71
Narcissistic Personality Inventory-16	0.50	2	.77	.25	.99	1.00	1.00	.00	.00	.74
Aggression Questionnaire-12	2.12	1	.14	2.12	.99	.99	.98	.01	.06	.79

3.6. Data Analysis

Before conducting the analyses, data cleaning and screening were done, and then, relevant assumptions were checked. Descriptive statistics were employed to describe the data. A t-test analysis was conducted to explore the gender differences in terms of cyber bullying perpetration. To investigate the relationships between variables, bivariate correlations were computed. Structural Equation Modeling (SEM) was employed to test the hypothesized model. Finally, a Structural Invariance Analysis was carried out to examine if the theoretical architecture underlying the final structural model of this study was equivalent across females and males. While SEM and the Structural Invariance Analysis were employed by Analysis of Moment Structures (AMOS) program version 21, other analyses were carried out by SPSS program version 22. The alpha level for all significance tests was set at the .05 level in this present study.

3.7. Limitations of the Study

This study bears certain limitations. This study is mainly limited to the selected variables of personality trait variables and motivations of the perpetrators of cyber bullying. Some other personality or motivational variables which were not considered by the current research can also be related to the hypothesized model. Other limitations were discussed in terms of internal and external validity threats.

3.7.1. Internal validity threats

Subject characteristics are a possible internal validity threat of this research. The participants were from three different state universities with different year levels ranging from prep school of English to 4th year, and their age, parental educational levels, income levels and average Internet usage time differed from each other. Besides these reported characteristics of the participants, some other characteristics like Internet usage skills and academic success can also impact the findings of this research. Moreover, the

data of this study were collected at the very beginning of the fall semester of 2014-2015 when students returned from summer holiday. During the summer holiday, the participants may have more time to become involved in Internet usage rather than studying, which may increase their involvement of cyber bullying incidents.

3.7.2. External validity threats

The findings of this current study cannot be generalized to all university students in Turkey. First, convenient sampling method was used for data collection, and the data were limited to the participants registered to one of the three public universities in Ankara, which restricted the representativeness of the sample. Next, self-report measures were the main data collection tool; thus, the collected data is subject to the participants' understanding of the constructs, honest responses or the social desirability of the topic under investigation. For instance, reporting about cyber bullying involvement may be regarded as a socially undesirable issue which may prevent them reporting their cyber bullying experiences. Lastly, due to the cross-sectional nature of this research referring that variables were measured at one time point, causality cannot be inferred from the study findings since inferring causal relationships is only possible with longitudinal and experimental investigations.

CHAPTER IV

RESULTS

In this chapter, the study findings are presented. The results section begins with the preliminary analysis which involves data screening, missing data and outlier check. Then, the assumptions of the Structural Equation Modeling (SEM) analysis (adequacy of the sample size, independence of the observations, normality, linearity and homoscedasticity, and multicollinearity) were examined. Descriptive statistics, gender differences, year level differences and correlations among the study variables were reported next. Afterwards, findings related to the measurement model and the hypothesized structural model were detailed. Subsequently, results with regards to the structural invariance test of the final model across gender were elaborated. The study findings were summed up at the end of the chapter.

4.1. Preliminary Analyses

Data were firstly screened to validate its accuracy and appropriateness for testing the hypothesized SEM model. Frequencies, minimum and maximum values for each study variable were examined to locate out-of-range scores at the outset of data screening process by using SPSS version 22. When uncommon numbers were noticed, the hardcopies of the instruments were checked and corrected. As there were not any reversed items, no items were recoded.

4.1.1. Missing data and outlier check

Missing data were checked on the study variables in the data set. Cases involving missing data more than 5% were deleted. Some cases had missing values less than 5%.

A mean substitution method was used to replace these missing values by following the suggestion of Tabachnick and Fidell (2013). Univariate (via Z-scores) and multivariate outliers (via Mahalanobis Distance) were checked as well. No univariate outlier cases were detected having a Z-score higher than +3.29 or lower than -3.29. Yet, seven multivariate outlier cases which greatly exceeded the chi-square criterion value of 26.1245 ($df = 8$, $p < .001$) were identified. These seven cases were deleted, which resulted in 591 participants out of 598 participants who reported being a cyber bully-victim in the previous six months.

4.2. Assumptions

4.2.1. Adequacy of the sample size

The hypothesized model of this study was tested with a total of 591 participants. This number satisfies the assumption of sample size adequacy considering that Kline (2011) suggested the sample size should be above 200 while carrying out model testing with SEM.

4.2.2. Independence of the observations

The data were gathered by the researcher of this present study. Throughout the data collection process, the volunteered participants verbally reminded of the fact that unless the questionnaires were completed by themselves, independent from other respondents, the evaluation and the interpretation of the data would not be possible. Nevertheless, some participants were observed failing independently filling up the questionnaire, and their questionnaires had to be eliminated.

4.2.3. Normality

Univariate normality was checked by skewness and kurtosis values of the study variables. As can be seen from Table 4. 1, the skewness and kurtosis values of the study variables were within the acceptable range of +3 and -3 (Field, 2009).

Table 4. 1

Normality Indices for the Study Variables

Study Variables	Skewness	Kurtosis
Motive of Entertainment	.20	-1.22
Motive of Revenge	1.33	1.19
Motive of Harm	1.53	2.16
Motive of Dominance	1.70	2.35
Online Disinhibition	.44	-.30
Moral Disengagement	.51	-.13
Narcissism	.53	-.16
Aggression	.27	-.16

Multivariate normality was checked by Mardia's test. It was found significant, which indicated that the multivariate normality assumption was not met. According to Byrne (2010), unless the multivariate normality assumption is fulfilled, results based on Maximum Likelihood Estimation can be misleading. In such a case, the estimation of Asymptotic Distribution-Free (ADF) is suggested to perform a hypothesis test on AMOS. Nonetheless, ADF estimation technique necessitates very large samples ranging from 1.000 to 5.000. Byrne (2010) also noted that sample sizes which are, at least, ten times higher than the estimated parameters would be satisfactory to use ADF as an estimation technique. The number of the estimated parameters of the hypothesized model of this current research was 76 which consequently required at least 760 (76x10) participants to be able to make use of ADF as an estimation technique. And, the total number of the participants of this study was 591, which was not sufficient to utilize ADF estimation technique. On the other hand, Byrne (2010) suggested bootstrapping as a

means to cope with non-normal data. In accordance with this suggestion, bootstrapping strategy was employed as a method to handle multivariate non-normality of the data set of this present research.

4.2.4. Linearity and homoscedasticity

The assumptions of linearity and homoscedasticity are two aspects related to the multivariate normality of the data set. The visual inspection of the scatterplots is suggested one of the ways to check linearity and homoscedasticity (Kline, 2011). The scatterplot matrix of this study is illustrated in Appendix I. The scatterplot showed that there was an approximate linear relationship between the variables whose variances were homogenously distributed.

In addition to scatterplot matrix, residual plots were checked to provide more support for the linearity and homoscedasticity assumptions. Visual inspection of the residual plots which were reported below showed no violation of the linearity and homoscedasticity assumptions. The residual plots can be seen in Appendix J.

4.2.5. Multicollinearity

With the purpose of checking multicollinearity, bivariate correlations among the study variables, VIF (variance inflation factor) and tolerance values were explored. In order to fulfill this assumption, the bivariate correlations among the study variables needs to be below .85 (Kline, 2011), whereas VIF values should be lower than 10 and tolerance values are expected to be over .20 (Tabachnick & Fidell, 2013). The bivariate correlations among variables of this research are illustrated in Table 4.4 (under section 4.3.2.) which indicates that the bivariate correlations were lower than .85. Also, while VIF values ranged between 2.25 and 1.07, tolerance values ranged between .93 and .44 in this study. All in all, the assumption of multicollinearity was not violated in this study.

4.3. Descriptive Analyses

Under this title, gender and year level differences were initially reported. Then, bivariate correlations among the study variables were provided and discussed.

4.3.1. Gender and year level differences

The subsequent analyses were performed with the cyber bully-victim group who constituted the study sample of this research. Before reporting the findings related to the gender and year level differences, it should be noted that comparing the pure cyber bully group and cyber bully-victim group in terms of study variables were considered. However, as the number of the participants who reported being an only cyber bully ($n = 38$) was not enough to be compared with cyber bully-victim group ($n = 591$), the comparison was not possible.

4.3.1.1. Gender and year level differences regarding the cyber bullying perpetration and cyber bullying victimization scores

Please note that cyber bullying perpetration scores and cyber bullying victimization scores of the participants were not used as variables in the main analysis of the model testing in this present study. These two variables were only used for filtering the different groups such as cyber bullies or cyber victims involved in a cyber bullying incident. However, analyses were carried out so that any significant gender and year level differences with respect to cyber bullying perpetration scores and cyber bullying victimization scores could be identified.

Gender Differences

Whether the females or males scored higher on cyber bullying perpetration and cyber victimization was examined via t-test analyses. The p-value was adjusted by using Bonferroni's correction to decrease the Type-1 error on multiple comparisons ($0.05 / 2 = 0.025$). The results showed that males ($M = 20.71, SD = 6.16$) not only had significantly higher scores of cyber bullying perpetration than females ($M = 18.69, SD = 5.31$), $t(535.83) = -4.24, p = .000$, but they ($M = 21.09, SD = 5.99$) also had significantly higher scores of cyber bullying victimization compared to the females ($M = 19.94, SD = 5.08$), $t(540.91) = -2.49, p = .01$. In short, males acted as cyber bullies and cyber victims significantly more than females.

Year Level Differences

In addition to the gender differences, year level differences were evaluated. A one-way multivariate analysis of variance (MANOVA) was conducted to examine year level differences in cyber bullying perpetration and cyber bullying victimization. The dependent variables were cyber bullying perpetration and cyber bullying victimization, and the independent variable was year level. According to the findings, there were not any statistically significant differences among the participants' year levels on the combined dependent variables, $F(8, 1.172), p = .25$, Pillai's Trace = .02, partial eta squared = .01. In other words, the participants did not significantly differ on cyber bullying perpetration and cyber bullying victimization when their year levels were considered.

4.3.1.2. Gender and year level differences regarding cyber bullying perpetration motive and personality trait variables as study variables

Analyses of t-tests and a multivariate analysis of variance were performed to figure out whether there were significant differences with respect to gender and year level considering the study variables. Since this current study was based on a model aiming to explore the relationships between personality traits and cyber bullying perpetration motives, gender and year level were not included into the hypothesized model tested.

Gender Differences

By using a series of independent samples t-tests, gender differences regarding the variables of cyber bullying perpetration were initially examined. The p-value was adjusted by using Bonferroni's correction to decrease the Type-1 error on multiple comparisons ($0.05 / 4 = 0.0125$). Results showed significant differences on cyber bullying perpetration motive of entertainment [$t(589) = -5.60, p = .00$] between females ($M = 12.10, SD = 6.18$) and males ($M = 15.07, SD = 6.32$); motive of revenge [$t(572.28) = -3.93, p = .00$] between females ($M = 10.16, SD = 4.75$) and males ($M = 11.95, SD = 6.34$); motive of harm [$t(570.47) = -3.83, p = .00$] between females ($M = 6.30, SD = 2.94$) and males ($M = 7.38, SD = 3.89$); and motive of dominance [$t(586.554) = -5.89, p = .00$] between females ($M = 8.28, SD = 3.87$) and males ($M = 10.60, SD = 5.73$). In short, these results suggested that males scored significantly higher than females in terms of cyber bullying perpetration motives.

Afterwards, gender differences regarding the variables of personality traits were explored. The p-value was adjusted by using Bonferroni's correction to decrease the Type-1 error on multiple comparisons ($0.05 / 4 = 0.0125$). According to the results, there were no significant gender differences in terms of personality trait variable of online disinhibition [$t(589) = -.84, p = .40$] between females ($M = 16.93, SD = 5.79$) and males ($M = 17.36, SD = 6.19$); moral disengagement [$t(589) = -.65, p = .52$] between females

($M = 20.00$, $SD = 6.95$) and males ($M = 20.40$, $SD = 7.44$); narcissism [$t(534.96) = -1.19$, $p = .23$] between females ($M = 4.96$, $SD = 2.81$) and males ($M = 5.25$, $SD = 3.24$); and aggression [$t(589) = -1.15$, $p = .25$] between females ($M = 31.94$, $SD = 8.02$) and males ($M = 32.75$, $SD = 8.56$). In brief, males and females did not significantly differ with regards to personality trait variables. Table 4. 2 below presents the means and standard deviations of the study variables by gender.

Table 4. 2

Means and Standard Deviations of the Study Variables by Gender

	Female ($n = 229$)		Male ($n = 362$)		Total ($n = 591$)	
	M	SD	M	SD	M	SD
Entertainment	12.10	6.18	15.07*	6.32	13.92	6.42
Revenge	10.16	4.75	11.95*	6.34	11.25	5.84
Harm	6.30	2.94	7.38*	3.89	6.96	3.59
Dominance	8.28	3.87	10.60*	5.73	9.70	5.21
Online Disinhibition	16.93	5.79	17.36	6.19	17.20	6.03
Moral Disengagement	20.00	6.95	20.40	7.44	20.25	7.25
Narcissism	4.96	2.81	5.25	3.24	5.14	3.08
Aggression	31.94	8.02	32.75	8.56	32.44	8.36

Note: * $p < .0125$, two-tailed.

Year Level Differences

Considering that variables of this research were categorized in two sets, two one-way MANOVA tests were separately performed to test the year level differences. One test was carried on the variables of cyber bullying perpetration motives (entertainment, revenge, harm and dominance), and another was conducted for variables of personality traits (online disinhibition, moral disengagement, narcissism and aggression).

Table 4. 3

Means and Standard Deviations of the Study Variables by Year Level

	Prep School (n = 135)		1 st Year (n = 119)		2 nd Year (n = 136)		3 rd Year (n = 87)		4 th Year (n = 119)		Total (n = 591)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Ent.	13.98	6.74	14.40	6.54	13.7 6	6.20	13.10	5.96	14.17	6.55	13.92	6.42
Rev.	12.58	6.68	11.00	5.60	11.3 2	5.30	9.82	4.93	10.98	6.04	11.25	5.84
Harm	7.55	4.16	6.69	3.35	7.23	3.73	6.28	2.86	6.75	3.36	6.96	3.59
Dom.	10.67	6.15	9.30	4.79	9.82	4.55	8.60	4.58	9.69	5.47	9.70	5.21
O.Dis	17.18	5.88	17.73	6.40	17.1 2	5.70	16.88	6.41	16.99	6.00	17.20	6.03
M.Dis	21.90	7.57	19.92	7.49	20.5 6	6.27	18.94	7.18	19.25	7.46	20.25	7.25
Narc.	5.55	3.08	4.91	3.06	4.84	2.90	5.03	3.15	5.33	3.25	5.14	3.08
Aggr.	33.58	7.86	32.30	8.09	32.2 7	8.77	31.24	8.49	32.34	8.60	32.44	8.36

Note: Ent. means entertainment, Rev. means revenge, Dom. means dominance, O. Dis. means online disinhibition, M. Dis. means moral disengagement, Narc. means narcissism, and Aggr. means aggression.

In the first test, while variables of cyber bullying perpetration motives were the dependent variables, the independent variable was year level. The results showed that there were not any statistically significant differences among the participants' cyber bullying perpetration motives scores considering their year levels, $F(16, 2.344)$, $p = .29$, Pillai's Trace = .03, partial eta squared = .01. In the second test, while variables of personality traits were the dependent variables, the independent variable was year level. The results also demonstrated that there were not any statistically significant differences among the participants' personality trait scores considering their year levels, $F(16, 2.344)$, $p = .19$, Pillai's Trace = .03, partial eta squared = .01. In short, these results suggested that the participants did not significantly differ on cyber bullying perpetration motives and personality traits when their year levels were taken into account. Table 4. 3 shows the means and standard deviations of the study variables by year level.

4.3.2. Bivariate correlations

Prior to model testing, bivariate correlations were computed to understand relationships between the study variables. The correlation matrix is shown in Table 4. 4.

Table 4. 4

Correlation Matrix of the Study Variables

	1.	2.	3.	4.	5.	6.	7.	8.
1. Entertainment	-							
2. Revenge	.13**	-						
3. Harm	.20**	.69**	-					
4. Dominance	.26**	.61**	.61**	-				
5. Online Disinhibition	.17**	.13**	.07	.15**	-			
6. Moral Disengagement	.17**	.32**	.33*	.31**	.32**	-		
7. Narcissism	.08*	.13**	.17**	.24**	.00	.19**	-	
8. Aggression	.11**	.30**	.24**	.22**	.20**	.28**	.16**	-

Note: * $p < .05$, two-tailed and ** $p < .01$, two-tailed.

The entertainment motive was positively correlated to online disinhibition ($r = .17$, $p < .01$), moral disengagement ($r = .17$, $p < .01$), narcissism ($r = .08$, $p < .05$) and aggression ($r = .11$, $p < .01$). In other words, participants with higher scores on online disinhibition, moral disengagement, narcissism and aggression tended to score higher on cyber bullying others for having fun. As the next motive of cyber bullying perpetration, revenge was positively correlated to online disinhibition ($r = .13$, $p < .01$), moral disengagement ($r = .32$, $p < .01$), narcissism ($r = .13$, $p < .01$) and aggression ($r = .30$, $p < .01$). That is to say, the higher the participants scored on online disinhibition, moral disengagement, narcissism and aggression, the more they cyber bullied others for having revenge. As the third motive of cyber bullying perpetration, harm was positively correlated to moral disengagement ($r = .33$, $p < .05$), narcissism ($r = .17$, $p < .01$) and aggression ($r = .24$, $p < .01$), but it was not correlated to online disinhibition ($r = .07$, $p > .05$). More specifically, higher scores on moral disengagement, narcissism and aggression were associated with greater levels of cyber bullying others with the purpose of harm. Inconsistent with the study hypothesis, online disinhibition was not found related to cyber bullying others for harm. Lastly, the dominance motive was positively correlated to online disinhibition ($r = .15$, $p < .01$), moral disengagement ($r = .17$, $p < .01$), narcissism ($r = .08$, $p < .01$) and aggression ($r = .11$, $p < .01$). Put differently, the greater the participants scored on online disinhibition, moral disengagement, narcissism and aggression, the more they cyber bullied with the aim of dominating others.

In addition to the correlations between the two sets of the variables explained above, the variables within each set were significantly correlated to one another as well. Variables within the cyber bullying perpetration motives set were all significantly correlated to one another with correlations ranging from .13 to .69. And except for the correlation between online disinhibition and narcissism, variables within the personality traits set were all significantly correlated to one another with correlations ranging from .16 to .32. Further details can be viewed from Table 4.4.

In summary, the correlations among the variables of cyber bullying perpetration motives and variables of personality traits were as hypothesized except for the correlation between online disinhibition and harm. And the significant correlations among the study variables in general were small to large ranging from .08 to .69.

4.4. Model Testing

Under this heading, item parceling procedure, the estimation method and bootstrapping procedure in model testing were reported at first. The measurement model was tested next. Finally, after testing the full hypothesized structural model, the trimmed model was tested to assess the hypotheses of this study.

4.4.1. Item parceling procedure

Item parceling technique was employed in this study while testing the measurement model and structural model. Item parceling is described as combining two or more items (summing or averaging) in order to acquire aggregate-level indicators which are used in SEM analysis instead of individual items (Bandalos, 2002; Little, Cunningham, Shahar, & Widaman, 2002). Little et al., (2002) suggests that models built with item parceling, by comparison with the models constructed with individual items, help to obtain more continuous and normal data in addition to providing a more parsimonious model. Furthermore, greater stability in parameter estimates, fewer possibilities for residuals to be correlated and reducing sampling error are among the additional advantages of item parceling (Little et al., 2002).

Among the item parceling techniques reported by the literature (Little et al., 2002; Matsunaga, 2008), random assignment technique was utilized in this current research. Besides, random assignment technique, item-to-construct balance which was detailed by Little et al., (2002) was also tried out by the researcher. But, the results with random assignment technique yielded better fit indices. Random assignment technique involves

assigning each item to one of the parcels constructed; that is, every item is randomly allocated to one parcel only once without replacement. To be able to randomly assign the items of the instruments to the parcels, an online website (www.random.org) generating random numbers was used.

Random assignment technique is appropriate for unidimensional instruments. In this study, *Cyber bullying Perpetration Motives Scale* had four-factors which were entertainment motive, revenge motive, harm motive and dominance motive. This scale included the variables of the cyber bullying perpetration motives set. Since each motive was evaluated separately in the hypothesized structural model, they were considered as individual factors. *Online Disinhibition Scale*, *Propensity to Morally Disengage Scale*, *Narcissistic Personality Inventory-16* and *Aggression Questionnaire-12* which constituted the variables of the personality traits set were all unidimensional instruments. In spite of the fact that producing one or more parcels by using all of the items for an instrument is acceptable (Matsunaga, 2008), generating three item parcels for each instrument was preferred in this study. This is because three parcels approach not only keeps the number of parcels for every factor minimum to improve the model fit, but it also prevents estimation bias (Matsunaga, 2008). It is important to note that no item parceling was performed on entertainment and harm subscales because entertainment subscale had only five items and harm subscale was made up of only four items. Table 4. 5 indicates which items constitute the parcels created.

Table 4. 5

Item Parceling of the Latent Variables

Latent Variables and Parcels	Item Numbers
Entertainment Motive	5, 9, 11, 13, 18. (No item parceling)
Revenge Motive	
RevP1	7, 12.
RevP2	16, 20.
RevP3	14, 15.
Harm Motive	2, 3, 4, 6. (No item parceling)
Dominance Motive	
DomP1	8, 10.
DomP2	1, 17.
DomP3	19, 21.
Online Disinhibition	
OnDisP1	2, 5, 6.
OnDisP2	4, 7.
OnDisP3	1, 3.
Moral Disengagement	
MoDisP1	4, 5, 8.
MoDisP2	3, 6, 7.
MoDisP3	1, 2.
Narcissism	
NPiP1	2, 4, 9, 13, 14, 15.
NPiP2	3, 5, 8, 10, 12.
NPiP3	1, 6, 7, 11, 16.
Aggression	
AggP1	3, 6, 7, 11.
AggP2	2, 4, 5, 10.
AggP3	1, 8, 9, 12.

4.4.2. Estimation method and bootstrapping procedure in model testing

The measurement model and the hypothesized structural model were tested by AMOS (Analysis of Moment Structures) version 21. While running the measurement model and the structural model, maximum likelihood estimation (MLE) was selected as the estimation method. MLE maximizes the likelihood that the observed data are derived from a population supposed to be consistent with the observed data. And bootstrapping was employed while running the measurement model and the structural model. Bootstrapping was performed on the data as an aid to cope with the multivariate non-normality of the data set of this present research. Following the recommendation of Cheung and Lau (2008), the number of the bootstrap samples was set to be 1.000 and the confidence interval (*CI*) was fixed to 95%.

4.4.3. Stages in model testing

Testing a model in SEM is mainly a two-stage process. While in the first stage, the measurement model examines the relationships among the observed and latent variables, the second stage is testing the hypothesized structural model. The hypothesized structural model of this research included two sets of variables; variables of cyber bullying perpetration motives which were entertainment, revenge, harm and dominance, and variables of personality traits which were online disinhibition, moral disengagement, narcissism and aggression. Apart from the two primary stages detailed above, the hypothesized structural model was tested in two steps in this current study. In the first step, the full model was tested with all pre-hypothesized relationships between variables of cyber bullying perpetration motives and variables of personality traits. In the second step, the trimmed model was tested with only the significant relationships identified in the first model.

4.4.4. Testing the measurement model

Through the measurement model, the relationships among the latent variables which were entertainment motive, revenge motive, harm motive and dominance motive and their indicators which were composed of items and item parcels were explored. An eight-factor model was tested by CFA. The tested measurement model with its standardized estimates is presented in Figure 4. 1.

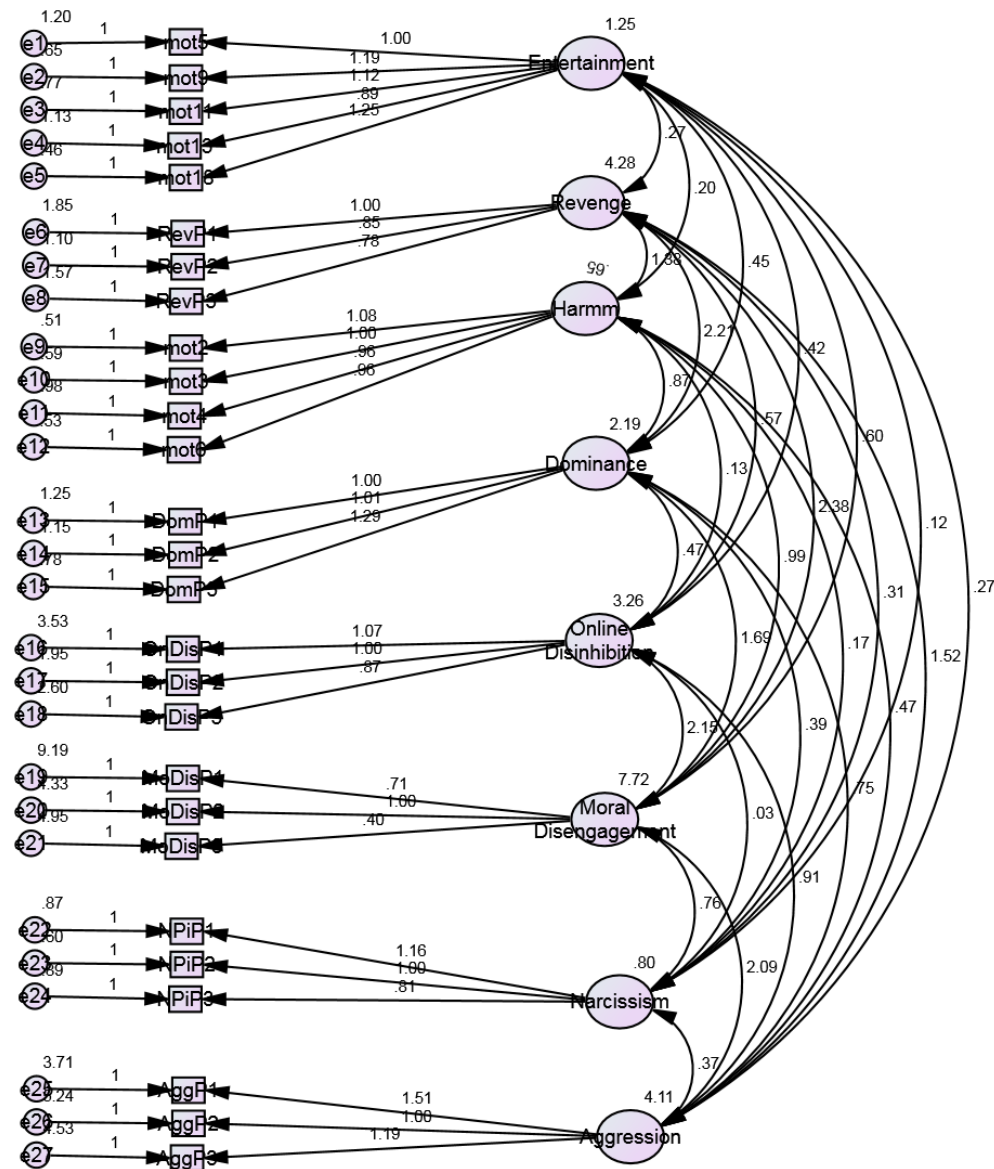


Figure 4. 1 The measurement model.

According to the results, the measurement model yielded a good fit to the data ($\chi^2 = 662.19$, $df = 296$, $p = .00$; $\chi^2 / df = 2.24$; GFI = .92, CFI = .95, TLI = .94, SRMR = .05 RMSEA = .04). The standardized factor loadings were all significant and were ranged from .45 to .91. More details about the standardized factor loadings between the observed and latent variables can be viewed from Table 4. 6.

Table 4. 6

Standardized Regression Weights between the Observed and Latent Variables

Observed		Latent	Loadings
mot5	---	Entertainment	.714
mot9	---	Entertainment	.854
mot11	---	Entertainment	.821
mot13	---	Entertainment	.684
mot18	---	Entertainment	.898
RevP1	---	Revenge	.836
RevP2	---	Revenge	.859
RevP3	---	Revenge	.789
mot2	---	Harm	.771
mot3	---	Harm	.724
mot4	---	Harm	.615
mot6	---	Harm	.726
DomP1	---	Dominance	.798
DomP2	---	Dominance	.812
DomP3	---	Dominance	.908
OnDisP1	---	Online Disinhibition	.718
OnDisP2	---	Online Disinhibition	.791
OnDisP3	---	Online Disinhibition	.699
MoDisP1	---	Moral Disengagement	.546
MoDisP2	---	Moral Disengagement	.801
MoDisP3	---	Moral Disengagement	.447
NPiP1	---	Narcissism	.743
NPiP2	---	Narcissism	.757
NPiP3	---	Narcissism	.611
AggP1	---	Aggression	.846
AggP2	---	Aggression	.663
AggP3	---	Aggression	.751

Moreover, as can be seen in Table 4. 7, most of the correlations among the latent variables were found statistically significant.

Table 4. 7

Correlations among the Latent Variables for the Measurement Model

	1.	2.	3.	4.	5.	6.	7.	8.
1. Entertainment	-							
2. Revenge	.11 [*]	-						
3. Harm	.22 ^{***}	.83 ^{***}	-					
4. Dominance	.27 ^{***}	.72 ^{***}	.73 ^{***}	-				
5. Online Disinhibition	.21 ^{***}	.15 ^{**}	.09	.18 ^{***}	-			
6. Moral Disengagement	.19 ^{***}	.41 ^{***}	.44 ^{***}	.41 ^{***}	.43 ^{***}	-		
7. Narcissism	.12 [*]	.16 ^{**}	.23 ^{**}	.29 ^{***}	.02	.30 ^{***}	-	
8. Aggression	.12 [*]	.36 ^{***}	.28 ^{***}	.25 ^{***}	.25 ^{***}	.37 ^{***}	.20 ^{***}	-

Note: ^{*} $p < .05$, ^{**} $p < .01$, and ^{***} $p < .001$, two-tailed.

4.4.5. Testing the hypothesized structural model

The hypothesized structural model was tested in two steps. In the first step, the full model was tested with all pre-hypothesized relationships between variables of cyber bullying perpetration motives and variables of personality traits. In the second step, the trimmed model was tested with only the significant relationships identified in the first stage.

4.4.5.1. Testing the full hypothesized structural model

The full hypothesized structural model incorporated all of the pre-hypothesized relationships between variables of cyber bullying perpetration motives and variables of personality traits. The model was tested by using bootstrapping method (1000 bootstrapped samples and 95% *CI*) so that the potential influence of multivariate non-normality could be prevented. The hypothesized structural model is basically made up of two portions. The first part of the model is called the *measurement portion* which

assessed the relationships between the indicators and the latent variables. When the measurement portion of the model was checked, the relationships between the indicators (items and item parcels) and the latent variables were all significant and between .61 and .90. The second part is called the *structural portion* of the model which explores the fit indices of the tested model. When checked, the model yielded a good fit to the data ($\chi^2 = 662.19$, $df = 296$, $p = .00$; $\chi^2 / df = 2.24$; GFI = .92, CFI = .95, TLI = .94, SRMR = .04 RMSEA = .04). The full model with the standardized coefficient values is shown in Figure 4. 2.

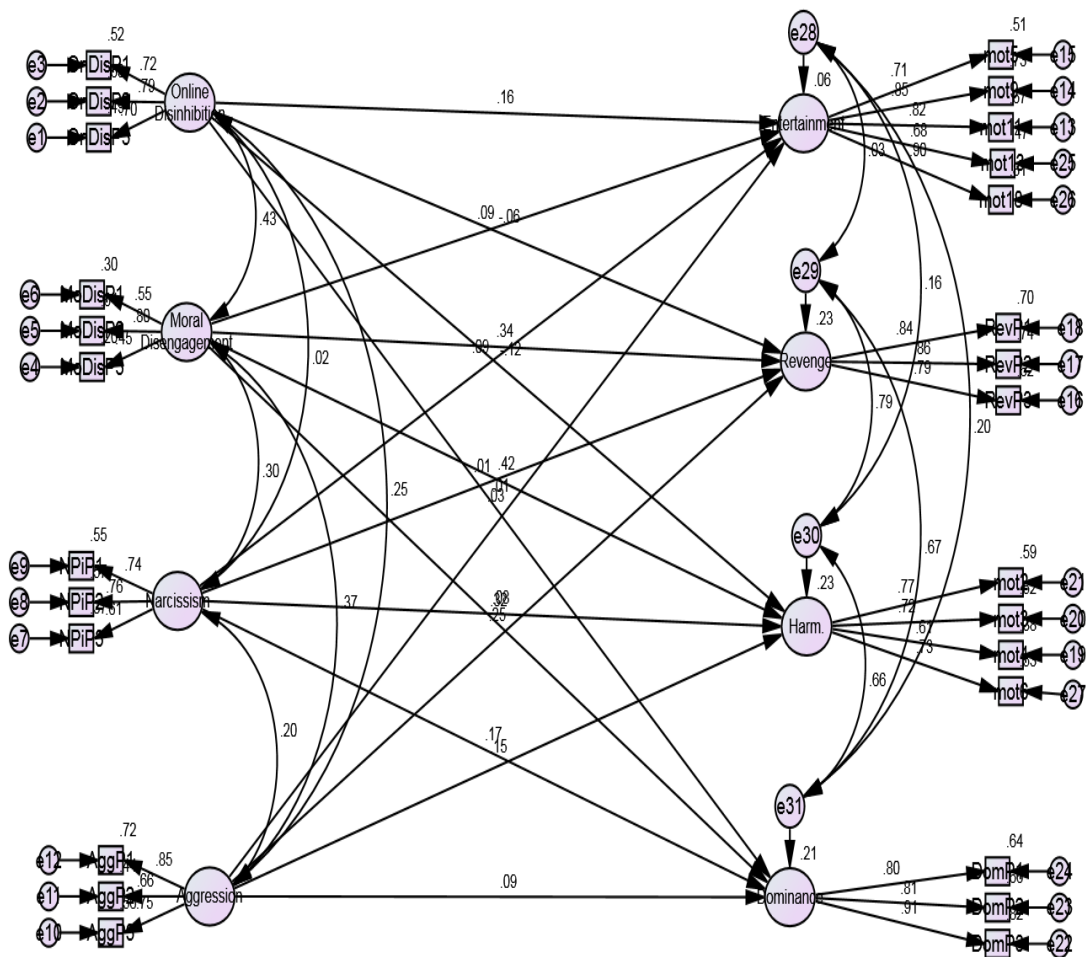


Figure 4. 2 The coefficients with their standardized values for the full hypothesized model.

In order to check the amount of variance the personality traits variables explained in cyber bullying perpetration motive variables, the squared multiple correlations (R^2) were examined. The squared multiple correlations were listed in Table 4. 8. Accordingly, while the personality traits variables accounted for 6% of the variance in entertainment motive, they accounted for 23% of the variance in revenge motive, 23% of the variance in harm motive and 21% of the variance in dominance motive.

Table 4. 8

The Squared Multiple Correlations for the Hypothesized Model

	Entertainment	Revenge	Harm	Dominance
R^2	.06	.23	.23	.21

4.4.5.1.1. Examining the General and Specific Hypotheses of the Study

Under this heading, the general and specific hypotheses of the study were explored regarding the findings of the full hypothesized structural model. This present study's general hypothesis posited that the hypothesized structural equation model exploring the interplay between personality traits and cyber bullying perpetration motives would fit the data. The fit indices obtained from testing the full model detailed above indicated that the general hypothesis of this study was confirmed. Table 4. 9 below details the standardized coefficients, standard errors, t-values as well as significances between the cyber bullying perpetration motive variables and personality traits variables. The information provided by this table was used to check the specific hypotheses of this current research.

This paragraph elaborates the hypotheses with regards to the entertainment motive of cyber bullying perpetration. That a higher level of online disinhibition would be correlated to cyber bullying others for entertainment was hypothesized. The results confirmed this hypothesis by showing that online disinhibition ($\gamma = .16, p < .01$) had a positive and significant impact on entertainment motive. That is, the participants with

greater levels of online disinhibition cyber bullied others more for entertainment. That a higher level of moral disengagement would be correlated to cyber bullying others for entertainment was hypothesized next. Contrary to the hypothesis, moral disengagement ($\gamma = .09, p > .05$) did not have any impact on entertainment motive. Furthermore, that a higher level of narcissism would be correlated to cyber bullying others for entertainment was hypothesized. This hypothesis was not validated since narcissism ($\gamma = .09, p > .05$) did not have any impact on entertainment motive. The last hypothesis regarding the entertainment motive stated that a higher level of aggression would be correlated to cyber bullying others for entertainment. In contrast to the hypothesis, aggression ($\gamma = .03, p > .05$) did not have any impact on entertainment motive. In summary, the more the participants became morally disengaged, the more they cyber bullied others for fun.

Table 4. 9

The Standardized Coefficients for the Full Hypothesized Model

			Standardized Coefficient	Standard Error	<i>t</i> -values
Online Disinhibition	---	Entertainment	.16**	.05	2.80
Moral Disengagement	---	Entertainment	.09	.08	1.30
Narcissism	---	Entertainment	.09	.09	1.63
Aggression	---	Entertainment	.03	.03	.54
Online Disinhibition	---	Revenge	-.06	.06	-1.00
Moral Disengagement	---	Revenge	.34***	.11	4.67
Narcissism	---	Revenge	.01	.12	.21
Aggression	---	Revenge	.25***	.03	4.69
Online Disinhibition	---	Harm	-.12*	.03	-2.09
Moral Disengagement	---	Harm	.42***	.06	5.06
Narcissism	---	Harm	.08	.06	1.44
Aggression	---	Harm	.14**	.02	2.66
Online Disinhibition	---	Dominance	.01	.07	.25
Moral Disengagement	---	Dominance	.32***	.12	4.44
Narcissism	---	Dominance	.17***	.14	3.31
Aggression	---	Dominance	.09	.04	1.83

Note: * $p < .05$, ** $p < .01$, and *** $p < .001$, two-tailed.

This paragraph detailed the hypotheses concerning the revenge motive of cyber bullying perpetration. The first hypothesis proposed that a higher level of online disinhibition would be correlated to cyber bullying others for revenge. Yet, this hypothesis was not confirmed because online disinhibition ($\gamma = -.06, p > .05$) did not have any impact on revenge motive. The next hypothesis suggested that a higher level of moral disengagement would be correlated to cyber bullying others for revenge. This hypothesis was confirmed considering that moral disengagement ($\gamma = .34, p < .001$) had a significant and positive impact on the revenge motive of cyber bullying perpetration. In other words, the more the participants became morally disengaged, the more they cyber bullied others for taking revenge. The following hypothesis was that a higher level of narcissism would be correlated to cyber bullying others for revenge. Since narcissism ($\gamma = .01, p > .05$) did not have any impact on the revenge motive, this hypothesis was not validated. The last hypothesis concerning the revenge motive stated that a higher level of aggression would be correlated to cyber bullying others for revenge. This hypothesis was confirmed as aggression ($\gamma = .25, p < .001$) had a significant and positive impact on the revenge motive of cyber bullying perpetration. In other words, as the aggressive inclinations of the participants increased, they more tended to cyber bully others for taking revenge. To sum up, higher levels of moral disengagement and aggression increased the possibility of cyber bullying others for taking revenge.

This paragraph elaborated the hypotheses concerning the harm motive of cyber bullying perpetration. That a higher level of online disinhibition would be correlated to cyber bullying others for harm was hypothesized. Although online disinhibition had a significant impact on the harm motive, the direction of the impact was negative ($\gamma = -.12, p < .05$). This was contrary to the expectation which posited an increase in online disinhibition would heighten the possibility of cyber bullying others for harm. This means that the more the participants were disinhibited online, the less they became motivated to harm others by cyber bullying. Next, that a higher level of moral disengagement would be correlated to cyber bullying others for harm was hypothesized. This hypothesis was validated as moral disengagement ($\gamma = .42, p < .001$) had a positive

impact on harm motive of cyber bullying perpetration. Namely, when the moral disengagement tendencies of the participants increased, the possibility of their harming others by cyber bullying increased. The following hypothesis was that a higher level of narcissism would be correlated to cyber bullying others for harm. This hypothesis was not confirmed because narcissism ($\gamma = .08, p > .05$) did not have any impact on harm motive. The last hypothesis concerning the harm motive stated that a higher level of aggression would be correlated to cyber bullying others for harm. This hypothesis was confirmed considering that aggression ($\gamma = .14, p < .001$) had a positive and significant impact on harm motive of cyber bullying perpetration. This means that the participants with higher levels of aggression tended to cyber bully others with the aim of harm. In conclusion, greater levels of moral disengagement and aggression increased the possibility of cyber bullying others with the intention of harming.

This paragraph detailed the hypotheses concerning the dominance motive of cyber bullying perpetration. The initial hypothesis was that a higher level of online disinhibition would be correlated to cyber bullying others for dominance. This hypothesis was not confirmed because online disinhibition ($\gamma = .01, p > .05$) did not have any impact on the dominance motive. Next, that a higher level of moral disengagement would be correlated to cyber bullying others for dominance was hypothesized. This hypothesis was confirmed seeing that moral disengagement ($\gamma = .32, p < .001$) had a positive and significant impact on the dominance motive. In other words, the more the participants became morally disengaged, the more they cyber bullied with the aim of dominating others. The following hypothesis was that a higher level of narcissism would be correlated to cyber bullying others for dominance. This hypothesis was validated since narcissism ($\gamma = .17, p < .001$) had a positive and significant impact on the dominance motive. That is the participants with higher levels of narcissism tended to cyber bully others for domination. The last hypothesis concerning the dominance motive proposed that a higher level of aggression would be correlated to cyber bullying others for dominance. This hypothesis was not confirmed considering that aggression ($\gamma = .09, p > .05$) did not have any impact on the dominance motive. In short, higher levels of

moral disengagement and narcissism increased the likelihood of cyber bullying others for domination.

4.4.5.2. *Testing the trimmed structural model*

Considering the results of the full hypothesized model, some paths were not significant. So that a better fitting and more parsimonious model could be acquired, model trimming was performed by removing the non-significant paths from the model. The deleted paths were (a) from moral disengagement to entertainment, (b) from narcissism to entertainment, (c) from aggression to entertainment, (d) from online disinhibition to revenge, (e) from narcissism to revenge, (f) from narcissism to harm, (g) from online disinhibition to dominance, (h) from aggression to dominance. Thus, a total of eight non-significant paths were eliminated from the full model, and the trimmed model was generated and tested with the remaining eight significant paths. Figure 4.3 presents the coefficients with their standardized values for the trimmed model.

The model was tested by using bootstrapping method (1000 bootstrapped samples and 95% *CI*) so that the potential influence of multivariate non-normality could be prevented. According to the results, the trimmed model demonstrated a good fit to the data ($\chi^2 = 697.56$, $df = 304$, $p = .00$; $\chi^2 / df = 2.23$; GFI = .92, CFI = .95, TLI = .94, SRMR = .05 RMSEA = .04). As the full model and the trimmed model were nested in sequence, the two models were compared to check which model was better. The chi-square difference statistics was used to examine the statistical significance of the improvement when some paths in the model are deleted. The chi-square difference was found significant $\Delta\chi^2 (8) = 35.37$, $p < .001$. In spite of the fact that the chi-square difference obtained (35.37) was small, the chi-square difference test is likely to be significant with large sample sizes because the chi-square difference test is reported as very sensitive to the sample size (Tabachnick & Fidell, 2013). Seeing that the full model and the trimmed model shared quite close fit indices, the trimmed model was preferred as it was more parsimonious than the full model. In the subsequent sections, the trimmed model will be referred as the final model of this study.

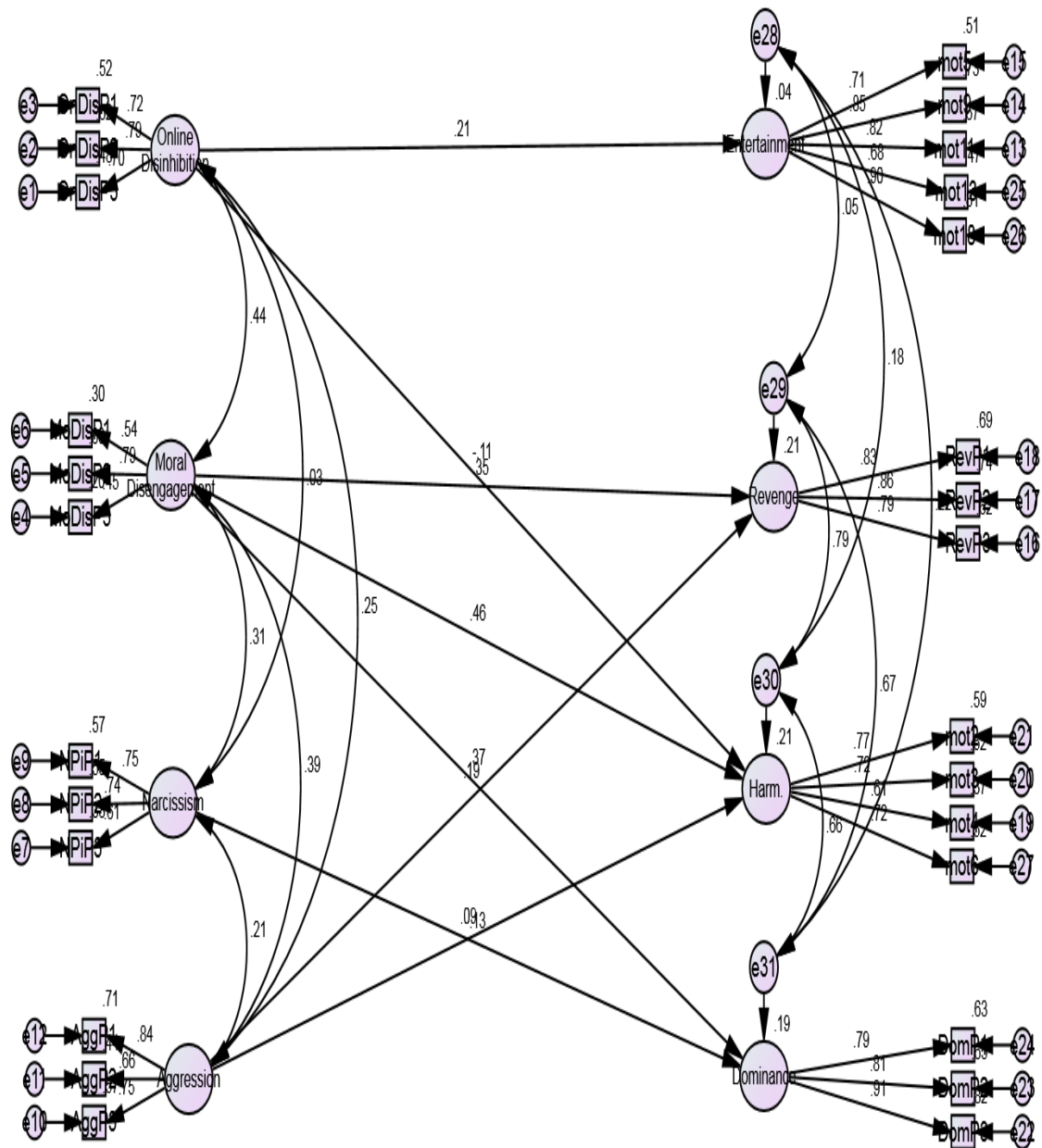


Figure 4. 3 The coefficients with their standardized values for the trimmed model

Considering the final model, the standardized coefficients, standard errors, t-values as well as significances between the cyber bullying perpetration motive variables and personality traits variables are shown in Table 4. 10.

Table 4. 10

The Standardized Coefficients for the Final Model

			Standardized Coefficient	Standard Error	t-values
Online Disinhibition	---	Entertainment	.21***	.04	4.34
Moral Disengagement	---	Revenge	.35***	.09	5.53
Aggression	---	Revenge	.19***	.03	4.40
Online Disinhibition	---	Harm	-.11**	.02	-2.60
Moral Disengagement	---	Harm	.46***	.05	5.90
Aggression	---	Harm	.09*	.01	2.02
Moral Disengagement	---	Dominance	.37***	.10	6.07
Narcissism	---	Dominance	.13***	.10	3.31

Note: * $p < .05$, ** $p < .01$, and *** $p < .001$, two-tailed.

In this final model, online disinhibition ($\gamma = .21$, $p < .01$) had a positive and significant association with entertainment motive. That is, the participants with greater levels of online disinhibition cyber bullied others more for entertainment. Furthermore, moral disengagement ($\gamma = .35$, $p < .001$) had a significant and positive impact on the revenge motive of cyber bullying perpetration. In other words, the more the participants became morally disengaged, the more they cyber bullied others for taking revenge. Moreover, aggression ($\gamma = .19$, $p < .001$) had a significant and positive impact on the revenge motive of cyber bullying perpetration. In other words, as the aggressive inclinations of the participants increased, they more tended to cyber bully others for taking revenge. In addition, online disinhibition had a significant but negative impact on the harm motive ($\gamma = -.11$, $p < .01$). This means that the more the participants were disinhibited online, the less they became motivated to harm other by cyber bullying. Additionally, moral disengagement ($\gamma = .46$, $p < .001$) had a positive and significant impact on harm motive of cyber bullying perpetration. Namely, when the moral disengagement tendencies of the participants increased, the possibility of their harming others by cyber bullying increased. Besides, aggression ($\gamma = .09$, $p < .05$) had a positive and significant impact on

harm motive of cyber bullying perpetration. This means that the participants with higher levels of aggression tended to cyber bully others with the aim of harm. Moreover, moral disengagement ($\gamma = .37, p < .001$) had a positive and significant impact on the dominance motive. In other words, the more the participants became morally disengaged, the more they cyber bullied with the aim of dominating others. Lastly, narcissism ($\gamma = .13, p < .001$) had a positive and significant impact on the dominance motive. That is, the participants with higher levels of narcissism tended to cyber bully others for domination.

The squared multiple correlations for the final model were examined to evaluate the amount of variance the variables of personality traits explained in cyber bullying perpetration motive variables. The squared multiple correlations regarding the final model were listed in Table 4. 11. Accordingly, while the personality traits variables accounted for 4% of the variance in entertainment motive, they accounted for 20% of the variance in revenge motive, 21% of the variance in harm motive and 19% of the variance in dominance motive.

Table 4. 11

The Squared Multiple Correlations for the Final Model

	Entertainment	Revenge	Harm	Dominance
R^2	.04	.20	.21	.19

4.5. Testing for the structural invariance of the final model across gender

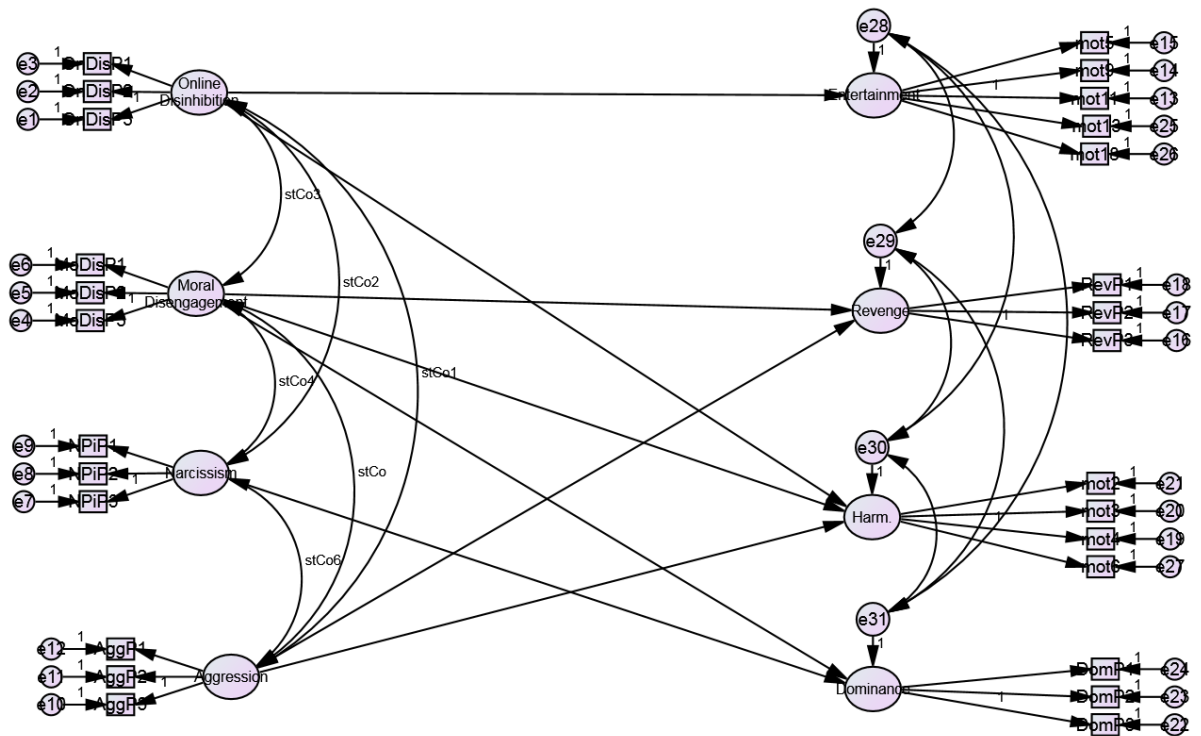
Findings of this current research indicated a gender difference regarding participants' cyber bullying perpetration scores, cyber bullying victimization scores besides their cyber bullying perpetration motives scores. Considering the fact that the final model was tested with females and males in combination, whether or not the final structural model was invariant or equivalent for females and males was investigated. A multigroup invariance analysis was conducted to assess if the theoretical architecture underlying the

final structural model of this study was equivalent across females and males. For this purpose, the analysis procedure detailed by Byrne (2010) was pursued.

Two models were tested. In the first model which Byrne (2010) named as the configural model, the final structural model of this study was tested without imposing any constraints. In other words, the parameter estimates of the model were freely tested across females and males in the configural model. The configural model of the final structural model of this study was tested across gender. So that the possible influence of multivariate non-normality could be avoided, the test was carried out by bootstrapping method (1000 bootstrapped samples and 95% *CI*). The results showed that the configural model yielded a good fit for females and males ($\chi^2 = 1092.90$, $df = 608$, $p = .000$; $\chi^2 / df = 1.80$; GFI = .88, CFI = .93, TLI = .92, SRMR = .07 RMSEA = .03). In the second step, the configural model needed to be constrained in terms of its structural covariances (Byrne, 2010). Hence, the second model specified all loadings except for the six constrained covariances among the variables of personality traits (online disinhibition, moral disengagement, narcissism and aggression). This constrained model can be seen in Figure 4. 4. To be able to prevent the influence of multivariate non-normality, the test was conducted by bootstrapping method (1000 bootstrapped samples and 95% *CI*). According to the results, this constrained model demonstrated a good fit to the data ($\chi^2 = 1095.32$, $df = 614$, $p = .000$; $\chi^2 / df = 1.78$; GFI = .88, CFI = .93, TLI = .92, SRMR = .07 RMSEA = .03).

In assessing whether or not this constrained model was invariant or equivalent across females and males, a χ^2 difference test ($\Delta\chi^2$) was performed by comparing the configural model with the constrained model (Byrne, 2010). Evidence of invariance is obtained when the value of the χ^2 difference test between the configural model and the constrained model is statistically non-significant. In this comparison, the configural model served as the baseline model which was contrasted by the constrained model. While the chi-square value of the configural model was 1092.90 ₍₆₀₈₎, the chi-square value of the constrained model was 1095.32 ₍₆₁₄₎. The comparison of the constrained

model with the configural model resulted in a statistically non-significant chi-square difference ($\Delta\chi^2_{(6)} = 2.42, ns$), which revealed that the structural model was invariant across females and males. In addition to the χ^2 difference test, Cheung and Rensvold (2002) suggested using the difference of the CFI values (ΔCFI) as further evidence regarding the invariance of the structural model. Accordingly, the difference between the CFI values should be equal to or less than 0.01. In the current research, the difference between the constrained model's CFI value and the configural model's CFI value yielded a value of 0.00 ($\Delta CFI = 0.00$). Therefore, this additional finding also showed that the final structural model was invariant across females and males.



Note: stCo refers to the constrained structural covariances

Figure 4. 4 The constrained model

4.6. Summary of the findings

This study tested a model investigating the relationships between personality traits (online disinhibition, moral disengagement, narcissism and aggression) and cyber bullying perpetration motives (entertainment, revenge, harm and dominance) by Structural Equational Modelling (SEM).

When descriptive statistics were taken into consideration, 18.7% of the participants self-reported not having been involved in any cyber bullying incidents as a bully or victim during the last six months. However, a total of 66.7% of the participants reported that they became involved in a previous cyber bullying incident as only cyber bully, only cyber victim or cyber bully-victim.

A great majority of those involvers belonged to the cyber bully-victim group ($n = 598$, 46.7% of the whole participants). The cyber bully-victim group was the study participants of this current research basically because of being a perpetrator group in nature, and being a unique group among other involvers of cyber bullying incidents.

In terms of gender differences, males scored significantly higher on cyber bullying perpetration and cyber bullying victimization when compared to the females. In addition, even though males scored significantly higher than females in terms of cyber bullying perpetration motives, they did not significantly differ with regards to personality trait variables. With regards to year level differences, no significant difference existed considering the participants' cyber bullying perpetration and cyber bullying victimization scores. In the same way, the participants did not significantly differ in cyber bullying perpetration motives and personality trait variables when their year level was taken into consideration. When bivariate correlations among the study variables were considered, all of the variables were found significantly correlated with each other except for the correlation between online disinhibition and harm and the correlation between online disinhibition and narcissism.

Considering the model testing, the tested measurement model fitted to the data well, and all of the items and item parcels as indicators were significantly related to the latent variables. And, the results of the multigroup invariance analysis revealed that the final structural model of this study was equivalent across females and males. When findings of the final hypothesized model were taken into account, personality traits, overall, seemed to be related to the motives behind cyber bullying others.

More specifically,

1. As the participants became more disinhibited online, they tended more to cyber bully others for entertaining themselves. Nevertheless, moral disengagement, narcissism and aggression were not found related to the entertainment motive of cyber bullying perpetration.
2. The more the participants' moral disengagement and aggression levels increased, the more they were more likely to cyberbully others for taking revenge. But, online disinhibition and narcissism were not found related to the revenge motive of cyber bullying perpetration.
3. When the moral disengagement and aggressive tendencies of the participants increased, the possibility of their harming others by cyber bullying increased. On the other hand, as the participants became more disinhibited online, they became less motivated to harm others by cyber bullying. Yet, narcissism was not found related to the harm motive of cyber bullying perpetration.
4. The more the participants became morally disengaged and the more they had narcissistic tendencies, they were more likely to cyber bully with the aim of dominating others. Nonetheless, online disinhibition and aggression were not found related to the dominance motive of cyber bullying perpetration.

CHAPTER V

DISCUSSION

The findings of this current research are discussed in this last chapter. In the first section under this heading, the study findings are discussed in the light of the existing literature. The second section outlines how the study findings serve for the theory, practice and policy to intervene and prevent cyber bullying besides presenting the recommendations for further research.

5.1. Discussion of the Findings

The study findings were discussed in three sections below. While the discussions concerning the descriptive findings were initially introduced, the second section outlined the discussions about the findings related to the tested model, and the last section discussed the specific hypotheses.

5.1.1. Discussion of the descriptive findings

The main goal of this study was not to explore the prevalence of cyber bullying among university students. In fact, the representativeness of the study participants was quite low. However, an interesting prevalence ratio was found in this research. The results of this current investigation indicated that almost half of the study sample (49.7% in total; 46.7% was cyber bully-victims and 3.0% was pure cyber bullies), who were university students, self-reported having cyber bullied someone twice or more as a perpetrator or a victim in the previous six months. Up to now, Francisco et al., (2015) noted a prevalence rate of 8% cyber bullying perpetration, and MacDonald and Roberts-Pittman (2010) documented a rate of 8.6% cyber bullying perpetration among university-aged

individuals. With higher prevalence ratios, Faryadi (2011), Dilmaç (2009) and Arıcak (2009) found out cyber bullying perpetration prevalences of, respectively, 17.7%, 22.5% and 19.7%. With a 47% of cyber bullying perpetrators, Kokkinos et al., (2014) reported the highest rate of cyber bullying perpetration among the university youth. Considering these prevalence rates, the ratio of cyber bullying perpetration found by this present investigation was quite high considering the existent literature. Such a high prevalence rate was quite surprising. This is because this high prevalence was found even after participants who reported cyber bullying others only once were not included as the perpetrators of cyber bullying. Previous research proposes usage frequency of ICTs could be a significant predictor for cyber bullying perpetration (Erdur-Baker, 2010). In line with this proposition, the high usage frequency of information and communication technologies (ICTs) among the Turkish university-aged individuals (TÜİK, 2014) can be speculated as one of the possible reasons of this high rate of cyber bullying perpetration.

Gender differences in cyber bullying perpetration has been a hot topic of debate in cyber bullying literature, and this present research examined whether female or male participants cyber bullied others more. The results revealed that males engaged in cyber bullying perpetration significantly more than females. This finding was compatible with a group of international studies reporting males acting more as cyber bullies (e.g., Bauman et al., 2013; Bayraktar et al., 2014; Calvete et al., 2010; Doucette, 2013; Francisco et al., 2015; Huang & Chou, 2010; Lapidot-Lefler & Dolev-Cohen, 2014; Li, 2006; Slonje & Smith, 2008; Wong et al., 2014). On the other hand, this finding was conflicting with the research reporting that females were more acting as cyber bullies (Beckman et al., 2013; Connel et al., 2014; Erdur-Baker & Tanrıku, 2010; Rice et al., 2015) or there was no gender difference between females and males in engaging cyber bullying perpetration (Arıcak, 2009; Balakrishnan, 2015; Holfeld & Leadbeater, 2015; Monks et al., 2012; Patchin & Hinduja, 2006; Spears et al., 2015; Tokunaga, 2010; Topcu et al., 2008; Williams & Guerra, 2007; Ybarra & Mitchell, 2004a).

This finding, nevertheless, was overlapping with the great majority of the investigations conducted with the Turkish youngsters. The Turkish cyber bullying literature seems to suggest a male majority in cyber bullying perpetration. The number of studies reporting males as cyber bullies (Akbulut & Erişti, 2011; Baştürk-Akca et al., 2015; Ekşi, 2012; Erdur-Baker & Kavşut, 2007; Erdur-Baker & Topcu, 2009; Erdur-Baker, 2010; Erdur-Baker, 2013; Karabacak et al., 2015; Ozden & Icellioğlu, 2014; Pamuk & Bavlı, 2013; Şahin et al., 2012; Tanrikulu et al., 2015) is much more than the ones documenting no difference (Arıcak, 2009; Topcu et al., 2008) and the ones noting females behaving more as cyber bullies (Erdur-Baker & Tanrikulu, 2010). So, why do the Turkish males cyber bully others more than the Turkish females? In spite of the fact that there has not been any longitudinal research yet, some researchers have offered some explanations for possible the reasons underlying this difference. For example, Topcu and Erdur-Baker, (2012), and Akbulut and Erişti (2011) noted that gender socialization processes males experience in the society can explain this difference. While females are expected to comply with the societal rules and to behave more compliant with the society, such expectations are not necessary for the males because of the Turkish society's dominant patriarchal nature. Such an attitude may be one of the triggering causes why Turkish males are cyber bullying others more. Moreover, males' using digital technologies more frequently besides being more skillful at online technology usage compared to the females can be another potential reason to explain the male dominance in cyber bullying perpetration behaviors (Huang & Chou, 2010). Nevertheless, high usage frequency of online technologies may not be the main reason why males act more as cyber bullies. For example, empathy levels (Topcu & Erdur-Baker, 2012), risky Internet usage (Erdur-Baker & Akbaba-Altun, 2010) and moral disengagement and aggression levels (Erdur-Baker, Tanrikulu & Topcu, 2015) have been suggested as the mediators explaining the underlying mechanism between being a male and being a cyber bully.

In addition to these, some researchers noted some important mediators that could explain why Turkish males cyber bully others more. For example, Topcu and Erdur-Baker (2012) proposed empathy as a potential mediating factor as a factor in gender difference

in cyber bullying behaviors. In addition, Erdur-Baker and Akbaba-Altun (2010) found that risky Internet usage played a mediating role in gender differences. Moreover, Erdur-Baker, Tanrikulu and Topcu (2015) reported that moral disengagement and aggression were two significant mediators explaining the gender differences in cyber bullying perpetration. Therefore, empathy, safe internet use as well as moral disengagement and aggression could be the mediators that can provide an explanation why males engage in cyber bullying perpetration more than girls.

In this current investigation, a similar tendency of male dominance was discovered in terms of being more motivated to harm others, to establish dominance, to take revenge, and to have fun via cyber bullying others. In other words, males in this study reported significantly more tendencies to cyber bully others with the aims of harming, dominating, revenging and entertaining. Therefore, males seem to gratify more needs/motives by cyber bullying others. Since this gender difference in cyber bullying perpetration motives was reported for the first time by this present research, it is difficult to reach some conclusions about why such a difference exists. However, the above-mentioned gender socialization processes between females and males may help to figure out this gender difference in cyber bullying perpetration motives. That is, females may feel more constraint and may limit their aggressive behaviors to gratify motives, so that others in their offline and online social networks may not judge them as an aggressive person. On the other hand, males may feel more relaxed to behave aggressively to satisfy motives in online space, since being aggressive in physical or cyber settings is more tolerable for their gender.

5.1.2. Discussion on the tested model

A structural model was hypothesized and tested in this present study. The general hypothesis of this current research proposed that the hypothesized structural equation model exploring the interplay between personality traits and cyber bullying perpetration motives would fit the data. In line with this hypothesis, the interplay between the

personality traits of cyber bullying perpetration which are online disinhibition, moral disengagement, narcissism and aggression and *motives* of cyber bullying perpetration which are entertainment, revenge, harm and dominance was examined in the model tested. As one of the key findings of this current investigation, the results of the Structural Equation Model test revealed that the tested model provided a good fit to the data. The model, as a result, provided support for the general hypothesis. Therefore, these results provided empirical support for the applicability of the *Uses and Gratifications Theory* (UGT) (Blumler & Katz, 1974) as a theoretical framework in understanding cyber bullying perpetration. Consistent with the UGT, significant associations were found between the motives and the personality traits concerning cyber bullying perpetration. In a previous study, Alonzo and Aiken (2004) reported some empirical evidence suggesting about the usefulness of the UGT in providing a theoretical background for conceptualizing cyber bullying perpetration. Yet, their focus was specifically on flaming others which is one of the cyber bullying perpetration behaviors. The current study extended Alonzo and Aiken's (2004) research by mainly considering several types of cyber bullying perpetration behaviors in combination. In this respect, motives related to cyber bullying perpetration behaviors in general besides the personality traits concerning bullying perpetration behaviors were included into the model. For that reason, this current investigation is one of the pioneer studies providing empirical support for the applicability of the UGT in the conceptualization of cyber bullying perpetration behaviors.

As mentioned before, the literature on cyber bullying perpetration has been somewhat inconsistent about whether females or males are more engaging in cyber bullying perpetration (e.g., Balakrishnan, 2015; Rice et al., 2015; Wong et al., 2014). In addition, males were found as cyber bullying others more than the females in this present study. For these reasons, the integrity of the hypothesized tested model of this research was checked across gender groups by structural invariance test. According to the results of the structural invariance test, the model tested in this present investigation was

equivalent for females and males. Hence, as an important finding, a further advantage of the wider applicability of the proposed model was found in this study.

5.1.3. Discussion on the specific hypotheses

Of note to the reader, the relationships between the personality traits of the cyber bullies and the motives of cyber bullying others have not been inspected beforehand in the existing literature. These relationships were examined by this present investigation for the first time in cyber bullying research. Since there were no previous research findings to be able to directly cross-check the findings revealed by this present study, some earlier research results were indirectly considered while discussing the study findings.

Hypotheses 1 to 4: These hypotheses assumed that cyber bullying others with the motive of entertainment would be correlated to the personality traits of (a) online disinhibition, (b) moral disengagement, (c) narcissism and (d) aggression. Only the first hypothesis was supported by the data of this current research. That is, as the participants became more disinhibited online, they tended more to cyber bully others for self-entertainment. There is some indirect support in the literature regarding this relationship. The past research reported that a higher tendency of online disinhibition was a significant predictor of cyber bullying perpetration (Barlett, 2015; Görzig & Olafsson, 2013; Udris, 2014; Veenstra, 2011; Wright, 2013; Wright, 2014). However, this study brought the extant literature one step ahead by revealing that online disinhibition had a positive and significant link with entertainment motive of cyber bullying perpetration.

As this investigation was one of the first research, it is difficult to determine the possible reasons for this relationship. Perhaps, Suler's (2004) explanations on the factors regarding being disinhibited online may help reach some understanding about the relationship between online disinhibition and cyber bullying others for fun. One of the factors of online disinhibition suggested by Suler (2004) is dissociative anonymity. It refers to splitting online and offline behaviors from each other by hiding or altering real

identities, and not fully accepting the impacts of their online behaviors because of the impact of being anonymous. With the impact of dissociative anonymity, cyber bullies may not acknowledge the harmful influences of their cyber bullying perpetration behaviors. They were anonymous, and the cyber bullying perpetration came true in cyber space not in real life. Therefore, they may believe that they have the right to entertain themselves online and may not be totally held responsible for the damaging impacts of their behavior. Another aspect of online disinhibition noted by Suler (2004) is asynchronicity. It is described as the inability of synchronously communicating with others when online. Since people do not have to care about others' immediate responses/reactions to their behaviors due to the asynchronicity of the cyber space, they tend to disinhibit more in online interactions. Cyber bullies cannot directly witness the immediate consequences of their perpetration behaviors. Such an inability may hinder the cyber bullies from realizing that their perpetration hurts the victims. Since they are unaware of the immediate harmful impacts of their behavior, they may continue to assume that they are having an entertainment although the victims suffer in reality.

Hypotheses 5 to 8: These hypotheses assumed that cyber bullying others with the motive of revenge would be correlated to the personality traits of (a) online disinhibition, (b) moral disengagement, (c) narcissism and (d) aggression. The results revealed that moral disengagement and aggression were significantly and positively linked to taking revenge from others via cyber bullying. In other words, the more the participants' moral disengagement and aggression levels increased, the more they were more likely to cyberbully others for taking revenge. The earlier investigations presented results indirectly supporting these associations. For instance, Kowalski et al., (2014), Perren and Gutzwiller-Helfenfinger (2012), Postorino (2014), Robson and Witenberg (2013), Sticca and Perren (2015), and Tanrikulu and Campbell (2015) reported that individuals scoring higher on moral disengagement are significantly scoring higher on cyber bullying perpetration as well. Concerning aggression, the extant investigations well documented a significant linkage between being aggressive and cyber bullying others (Ang et al., 2013; Aricak, 2009; Bayraktar et al., 2014; Calvete et al., 2010; Dilmaç,

2009; Fletcher et al., 2014; Lonigro et al., 2015; Ozden & Icellioglu, 2014; Roberto et al., 2014; Schultze-Krumholz & Scheithauer, 2009; Werner et al., 2010). Extending these earlier research, this current investigation found that moral disengagement and aggression had a significant relationship with cyber bullying others for taking revenge.

This study lacked empirical data to explain why there is an association between moral disengagement and aggression and cyber bullying others with the motive of taking revenge. Yet, some speculations can be made. Bandura's (2002) cognitive mechanisms on moral agency can provide an understanding regarding the relationship between moral disengagement and cyber bullying perpetration. In line with Bandura's propositions (2002), cyber bullies may employ some cognitive mechanisms to justify their cyber bullying conducts. By being previously exposed to traditional bullying (Dehue et al., 2008; König et al., 2010), cyber bullying or any type of violence in physical or cyber environments, cyber bullies may become motivated by feelings of vengefulness and may morally justify their bullying acts on their earlier offenders. They may reason that they have the right to fight against merciless bullies who victimized themselves in the past. In addition to morally justifying their perpetration behaviors, cyber bullies may blame their victims by asserting that victims provoked the feeling of revenge by formerly targeting them.

As regards to the relationship between being aggressive and cyber bullying others with the motive of take revenge, the characteristics of the aggressive individuals can help understand this relationship. Aggressive individuals are reported being prone to be revengeful and tend to overcome frustrations with force (Bergman et al., 2007). These tendencies may cause victimized aggressors to engage in cyber bullying perpetration to take vengeance. With respect to this assumption, König et al., (2010) reported that vengefulness is a common trait of cyber bullies having a tendency to victimize their earlier perpetrators who traditionally bullied them. In addition to targeting their previous traditional bullying perpetrators, cyber bullies can perpetrate their former online perpetrators as well. This may be because cyber bullying perpetration may serve as

effective, speedy, safer and more diverse chances to take vengeance from others who challenged them in real-life or online settings.

Hypotheses 9 to 12: These hypotheses assumed that cyber bullying others with the motive of harming others would be correlated to the personality traits of (a) online disinhibition, (b) moral disengagement, (c) narcissism and (d) aggression. According to the results, moral disengagement and aggression were significantly and positively related to harming others via cyber bullying. This finding suggested that the more the participants' moral disengagement and aggression levels increased, the more they were likely to cyber bully others for harming. As mentioned in the paragraphs above, some past investigations provided empirical support for the relationship between moral disengagement and cyber bullying perpetration (e.g., Sticca & Perren, 2015) in addition to the association between aggression and cyber bullying perpetration (e.g., Bayraktar et al., 2014). However, to the best of the researcher's knowledge, no research has yet investigated the links between moral disengagement, aggression and harming others as a motive of cyber bullying others. Moreover, this present study did not have any empirical data to answer the question of how moral disengagement and aggressiveness can be linked with cyber bullying perpetration motive of harm.

The reason behind the relationship between moral disengagement and cyber bullying to harm others can be because of the cognitive mechanisms of moral agency suggested by Bandura (2002). Unable to observe the direct influences of their perpetration in cyber environments, cyber bullies may become more morally disengaged since they may believe that they are posing no harm or somewhat less harm on the victims. By comparing themselves with others, cyber bullies may conclude that other individuals are physically, verbally or relationally stronger than themselves; thus, if they do not inflict harm others, they will become victimized sooner or later. Furthermore, if cyber bullies dehumanize their victims as "losers" or "freaks", they may think that such people naturally deserve being harmed as they are not normal human beings. Or by relabeling their perpetration as "teaching a lesson" to the victim rather than a harmful conduct,

cyber bullies may not consider their behaviors as harmful because they may believe that their aim is not to harm the victim but to teach a lesson.

Some speculations can be made about the association between aggression and being motivated to harm others by cyber bullying. Cyber platforms are providing newer opportunities for the individuals to reveal their aggression as cyber bullying. With the help of cyber bullying, aggressive actions are not limited to time and space; and the aggressive cyber bullies can harm others whenever and wherever they like. Besides, the incidents of cyber bullying naturally exist online and continue to repeat in the cyber environments. Hence, an infinite number of people can become involved or witness the cyber bullying incident. Additionally, cyber bullying ensures easier and less risky ways of displaying aggression to the cyber bullies since they can easily become anonymous and hide behind fake identities to target their victims. In parallel with this last assumption, aggressors reported that they preferred cyber bullying as it was easy and less risky (Compton et al., 2014; Topcu et al., 2013; Varjas et al., 2010).

Although the relationships between moral disengagement, aggression and cyber bullying perpetration motive of harm were as anticipated, an unexpected finding was detected in the link between online disinhibition and cyber bullying others with the motive of harm. Online disinhibition was significantly but negatively correlated to engaging in cyber bullying to harm others. Given that this present study was one of the first investigations, it is not easy to shed some light on this unanticipated finding. Online disinhibition was assumed to provide individuals the courage to behave more aggressive, less fearful, more courageous and more dissociative while online. Contrary to this anticipation, individuals with higher levels of online disinhibition may become more vulnerable against the risks in cyber space. Therefore, greater levels of online disinhibition may increase the likelihood of cyber bullying victimization rather than cyber bullying perpetration.

Hypotheses 13 to 16: These hypotheses assumed that cyber bullying others with the motive of domination would be correlated to the personality traits of (a) online disinhibition, (b) moral disengagement, (c) narcissism and (d) aggression. The second and the third hypotheses were confirmed by the findings of this research. In other words, moral disengagement and narcissism were significantly and positively associated to cyber bullying with the aim of dominating others. Some indirect empirical evidence exists about these relationships. For example, a group of researchers have documented that the higher levels of moral disengagement is a significant risk factor for cyber bullying others (Kowalski et al., 2014; Robson & Witenberg, 2013), and another group of researchers have found that a higher tendency of narcissism was as a significant predictor of cyber bullying perpetration (Ang et al., 2010; Ekşi, 2012; Fanti et al., 2012; Fanti & Henrich, 2015; Goodboy & Martin, 2015). The results of this current investigation extended these former studies by identifying significant relationships between moral disengagement, narcissism and cyber bullying perpetration.

Perhaps, Bandura's (2002) cognitive mechanisms of moral disengagement can provide some understanding. Bandura's (2002) explanations on cognitive mechanisms of moral disengagement can be applied to why individuals with higher levels of moral disengagement more tend to cyber bully to establish dominance over others. Dominant in face-to-face communications, cyber bullies may consider that it is also their right to dominate others in cyber environments. On the other hand, some other cyber bullies may believe that although they are physically, verbally or relationally disadvantaged in face-to-face environments, they are technologically savvy and highly skillful in interactions online platforms. Such cyber bullies may like to dominate online settings by demonstrating their superiority in technology use. These cyber bullies may justify their harmful conducts by asserting that they have the right to dominate the online environments since others are using their physical power to dominate the physical environments.

Concerning the relationship between narcissism and dominating others by cyber bullying, there is no existent study providing some evidence in cyber bullying research. However, some evidence regarding this association was reported by the study of Reijntjes et al., (2015) exploring traditional bullying. Reijntjes et al., (2015) reported that young people with higher levels of narcissism as well as greater levels of engaging in traditional bullying perpetration are seeking for social dominance in their relationship with others. The characteristics of the individuals with higher tendencies of narcissism may help conceptualize the relationship between narcissism and cyber bullying others for dominance. Thomas (2012) posits that narcissistically tended individuals are more likely to be manipulative and seeking for social status and authority over others in their interpersonal relationships. In line with Thomas' (2012) proposition, cyber bullies may like to establish dominance by demonstrating their superiority in technology usage, by embarrassing online contacts whom they dislike, by manipulating online communications and by indicating that they are important and authoritative in cyber platforms.

5.2. Implications of the Findings and Recommendations for Further Research

Before discussing the specific implications of the findings of this present study, some general recommendations for the future studies should be made for the research on cyber bullying. There has been a recent interest on the longitudinal research designs to unravel cyber bullying experiences of the youth (e.g., Barlett, 2015; Hemphill, Kotevski, & Heerde, 2015). Yet, the existent cyber bullying literature seems to be dominated by one-shot survey designs, and the number of the longitudinal investigations assessing cyber bullying is quite limited. Hence, more longitudinal research is welcomed in cyber bullying literature. Besides the longitudinal research designs, some researchers recently have begun to examine cyber bullying and develop prevention methods via experimental research designs. As the most contemporary examples, in their experimental research design works of Garaigordobil and Martínez-Valderrey (2015), and Tanrıku, Koç and Arıcak (2015) provided favorable evidence about the efficacy of different computer-

based programs as tools for cyber bullying prevention. Thus, future experimental research design studies are recommended involving different approaches to uncover cyber bullying more and have a clearer understanding about how to intervene and prevent it. As a further suggestion for the future studies, researchers can turn their attention to the non-involved individuals of cyber bullying. The non-involved individuals are the individuals who have neither engaged in cyber bullying perpetration nor were ever victimized. Traditionally, the researchers have paid great attention to the cyber bullies as well as the cyber victims, and they considered the non-involved individuals to make comparisons. Yet, non-involved individuals can provide significant rich data for the researchers aiming to understand the mechanisms behind avoiding being involved in cyber bullying as a bully or victim.

Implications of the findings of this present study can be grouped within four categories: (1) implications for the theory, (2) implications for the research, (3) implications for the practice, and (4) implications for the policy. Recommendations for the future studies were presented for each category.

5.2.1. Implications for the theory

The findings of this investigation have significant implications for the theory in cyber bullying literature. This current study was guided by the *Uses and Gratification Theory* (UGT) to have a basis on a firmer theoretical background. The findings revealed in this study yielded empirical support for the applicability of the UGT in conceptualization of cyber bullying perpetration. That is, this study's model built in accordance with the UGT showed that the personality traits of the cyber bullies had a predictive power on the motives of their cyber bullying perpetration. However, in addition to Alonzo and Aiken (2004) who tested the UGT in flaming behaviors, this study was the only attempt to employ the UGT as a theoretical map. Therefore, more research is certainly needed to validate the role of the UGT in understanding cyber bullying perpetration behaviors. Furthermore, given that the study participants of this research were university students,

the future studies should involve different age groups to test the utility of the UGT. Young individuals ranging from elementary school to university self-reported having bullied others online (e.g., Arslan et al., 2012; Kokkinos et al., 2014). Therefore, more empirical evidence from different age groups about the utility of the UGT as a theoretical framework can be obtained to explain cyber bullying perpetration.

Moreover, besides the UGT, three additional theories aiming to explain cyber bullying perpetration have been formerly regarded by the researchers. These theories were the *General Strain Theory* (Agnew, 1992) performed by Patchin and Hinduja (2011), *Theory of Reasoned Action* (Ajzen & Fisbein, 1980) utilized by Doane et al., (2014) and the *Theory of Planned Behavior* (Ajzen, 1991) applied by Heirman and Walvare (2012) and Pabian and Vandebosch (2014). The common feature of these four theories as well as the present investigation is their focus on the individual. They have so far examined the role of individual personality traits, individuals' strains in daily life and individuals' behavioral intentions in cyber bullying perpetration behaviors. However, cyber bullying is a social phenomenon happening between individuals in online settings, and it includes a number of variables including the individual, peers, family as well as the society. Yet, the social side of the cyber bullying behavior is missing in the existent theoretical conceptualizations. Therefore, future studies should consider theories aiming to explain cyber bullying perpetration in a broader social context. In this respect, *Social-Ecological Model* (Bronfenbrenner, 1979) can be suggested as a potential theoretical framework which may have applicability in conceptualization of cyber bullying perpetration.

5.2.2. Implications for the research

A number of implications for the research can be made. To begin with, the findings of this current investigation have brought attention to the need for more research on cyber bullying perpetration. Unfortunately, examination of the nature and the extent of cyber bullying appear to have been somehow ignored by the researchers since they have mostly explored cyber victimization. Nevertheless, if researchers aim to create effective

methods to intervene and prevent cyber bullying among youngsters, one of the best ways can be preventing cyber bullying before it happens. Focusing on the perpetrators of the cyber bullies can be suggested as an efficient strategy to stop cyber bullying before it happens. With these in mind, this current study aimed to achieve a greater understanding about cyber bullying perpetration and examined the associations among cyber bullying perpetration motives and personality traits of the cyber bullies. The findings showed that the personality traits of the cyber bullies had a significant relationship on the motives of cyber bullying others. Therefore, the results of this current study imply that researchers make use of certain personality traits to identify potential cyber bullies. By this way, cyber bullies can be easily helped, and cyber bullying can be prevented before it happens.

Furthermore, among 1281 university-aged participants of this investigation, almost half of them (49.7%) self-reported having bullied someone online in the last six months. This finding suggests that cyber bullying perpetration is quite widespread among university students. Even though cyber bullying experiences of the university students have been previously explored (e.g., Faryadi, 2011; Francisco et al., 2015), relatively less is known about the nature of cyber bullying perpetration among the students in higher education. For that reason, more research is welcomed to extend the knowledge regarding cyber bullying perpetration among university students. Additionally, the results of this investigation revealed that 49.7% of the participants reported concurrently acting as both bullies and victims in cyber bullying incidents. This implies that there is a close relationship between being a perpetrator and a victim of cyber bullying. Hence, researchers interested in designing prevention and intervention studies should be aware of this likely association between young individuals' coexisting roles of being a perpetrator and a victim.

Moreover, this study revealed that male participants cyber bullied others, and were exposed to cyber victimization significantly more than the females. The well-beings of the participants were not examined in this study. Yet, the existing studies have well

documented that young individuals who are involved in cyber bullying as a bully or victim are not in good conditions in terms of psychological well-being, mental health, social relationships, physical well-being as well as school success (e.g., Crosslin & Crosslin, 2014; Faucher et al., 2014; Kubiszewski et al., 2013; Schenk et al., 2013). In addition, male individuals have been known less likely to engage in help-seeking behaviors from health professionals, despite the several physical, psychological or behavioral difficulties they experience in daily life, (Galdas, Cheater, & Marshall, 2005). Given these information, male cyber bullies can be concluded to be in more psychological or physical pain, but to be less likely to ask for help to avoid the negative impacts of cyber bullying involvement. Therefore, whether and how male cyber bullies engage in help-seeking behaviors require the further attention of the researchers. If efficient strategies to provide more psychological or physical help can be created for the male cyber bullies, the likelihood of being involved in cyber bullying can be decreased for the males.

5.2.3. Implications for the practice

In addition to the aforementioned theoretical and the research-related implications, this present research has a number of implications on the practice. Considering the prevalence of cyber bullying among the university students, the Council of Higher Education (YÖK) can develop strategies to prevent cyber bullying among the students in the higher education level. For the academic personnel, YÖK can develop educational information programs and services in order to inform them about the nature, the extent and the risks of being involved in cyber bullying. In addition, ethics in information and communication technology usage can be presented as a topic in computer classes at university level. With the help of such strategies suggested by the Council of Higher Education, a more comprehensive awareness can be achieved, which can enhance the effectiveness of the cyber bullying prevention and intervention programs.

Furthermore, counseling professionals working at university counseling centers should develop strategies to provide counseling help to the individuals who are involved in cyber bullying. By taking the findings about the gender differences discovered in terms of cyber bullying perpetration behaviors in this present investigation, counselors can benefit from this study in a number of ways. First of all, in the counseling help process, significant importance can be placed by the counselors on the male individuals who are less likely to engage in help-seeking behaviors. Psycho-educational group interventions particularly designed for the males can be developed by the counselors as a possible method to provide professional counseling help. In addition to these, significant information was provided for the counselors with regards to the relationship between the personality traits and cyber bullying perpetration. The results of this present investigation indicated that individuals are cyber bullying others with certain motives such as entertainment, revenge, harm or dominance. Therefore, while helping a cyber bully, the motives of the cyber bully is one of the initial questions that counselors should search for an answer. Having a deeper understanding the motives of cyber bullying perpetration behaviors can help the counselors respond more effectively to their individual needs of the cyber bullies. Moreover, the findings of this current study demonstrated that the personality traits of the cyber bullies have a significant impact on engaging in as well as motives of cyber bullying perpetration. For this reason, while helping a cyber bully, counselors should be knowledgeable about the personality traits of their cyber bully clients. Counselors can use the existing personality assessment instruments to have a clearer idea about their cyber bully clients. By this way, the clients can gain more awareness about the links between their personality traits and their cyber bullying perpetrations conducts.

University counseling centers should also take cyber bullying seriously, and should develop strategies to raise awareness about cyber bullying. In the awareness raising procedures, researchers need to take the lead, and explain the nature and the extent of cyber bullying among university-aged individuals. The more the awareness increases

about cyber bullying, the more the prevention and intervention programs can be effective.

In addition to the university counseling centers and the counselors, university managements should be aware that cyber bullying involvement as bully or victim can negatively influence their students in terms of mental health, poor psychological well-being, problems of interpersonal relationships in addition to the poor academic success. University managements should also remind that existence of cyber bullying among the university students can also negatively affect the safety of the atmosphere in a university. Therefore, it is of high importance that university managements cooperate with the researchers to develop and implement policies against cyber bullying.

Another implication of this study on practice is about providing counseling help for the university students who have cyber bullied others online. The findings of this present research imply that the desire to accomplish certain motives can trigger university students to cyber bully others, and the personality traits of the university students have a significant role in their cyber bullying perpetration behaviors. Therefore, while working with clients at university settings, counselors should be aware of the fact that individuals with certain personality characteristics such as aggression, moral disengagement, online disinhibition or narcissism may be more prone to cyber bullying perpetration besides other aggressive behaviors. Counselors should also remind that individuals use cyber bullying as a means to actualize certain motives such as harm, revenge, entertainment or dominance. Considering this relationship, counselors can develop and implement psychoeducational group interventions to prevent cyber bullying in university level.

This investigation also contributed to the practice by providing awareness for the parents of the university students. Parents should be informed that although their children are at university level, they are not away from the dangers of cyber bullying. Parents need to be assisted to be knowledgeable about the nature, the extent and the impacts of cyber bullying involvement in order to be conscious and to provide help for their children.

Nonetheless, there is a gap in the literature in term of involving the parents of the university students in cyber bullying prevention approaches. Future investigations can fill this gap by involving the parents of the university students in their prevention and intervention model of cyber bullying. Besides parents, the findings of this current study point out the need regarding the awareness for the university academic staff. There has been a recent interest in using information and communication technologies (ICTs) in the university classroom (e.g., Baran, 2014). Yet, the university academic staff should be aware of the fact that university students may also cyber bully others by ICTs in addition to using ICTs for educational purposes. Hence, the university academic staff should inform and encourage the university students about the ethical and conscious use of ICTs.

5.2.4. Implications for the policy

This present investigation also has implications for the policy concerning cyber bullying. Fighting against cyber bullying with the help of individual researchers, individual practitioners at schools or universities may not be definitely effective. For this reason, large scale policies involving stakeholders from different disciplines, institutions or backgrounds are required. Given that all universities in Turkey are led by the Council of Higher Education (YÖK), strategies to prevent cyber bullying among the students in the higher education level can be created by the Council of Higher Education. More comprehensive awareness can be achieved, and thus, the effectiveness of the cyber bullying prevention and intervention programs can be improved.

Researchers from different parts of the world such as Australia (Butler et al., 2011), United Kingdom (Marczak & Coyne, 2010) or United States (Gillespie, 2006; Hinduja & Patchin, 2011) have begun to discuss the legal aspects of the cyber bullying. As well as suggesting possible legal solutions, they have underlined the fact that authorities are responsible for providing safe environments in educational settings whether it is a school or university. Such countries have developed and implemented national strategies and

policies against aggressive behaviors like cyber bullying at school or university level. There has been a recent interest about cyber crimes such as online fraudery or blackmailing and cyber security policies in Turkey (Hekim & Başbüyük, 2013), but Turkey does not yet have specific policies to tackle with cyber bullying. For this reason, it is high time a national policy against cyber bullying at educational settings was created and implemented in Turkey.

5.3. Conclusion

With its focus on the perpetrators of cyber bullying, this present research pointed out to the fact that understanding more about cyber bullying perpetration is essential for developing effective prevention and intervention strategies against cyber bullying. If a deeper understanding can be achieved about cyber bullies, they can be professionally approached and helped. With the help of such inclusive strategies aimed at cyber bullies, cyber bullying can be stopped before it happens. Consequently, fewer young individuals may suffer as cyber victims. Moreover, the findings of this present investigation revealed that cyber bullying perpetration is quite common among university students. This implies that starting from elementary school, cyber bullying continues existing in older ages as well; and thus, university-aged young individuals are not immune from the risks of being involved in cyber bullying. Therefore, conceptualizing cyber bullying seems to require a perspective which should involve the nature of cyber bullying at the early and the later ages of the individuals. All in all, significant associations were identified between personality traits (online disinhibition, moral disengagement, narcissism and aggression) and cyber bullying perpetration motives (entertainment, revenge, harm and dominance) in this current research. This suggests that the personality traits of the cyber bullies are important indicators presenting cues about the interplay between which individuals engage in cyber bullying with which motives. Therefore, learning more about the personality traits and the motives of the cyber bullies offer significant opportunities to the researchers who aim to prevent youngsters suffer from cyber bullying.

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APPENDICES

Appendix A: Approval Letter From Middle East Technical University Human Subjects Ethics Committee

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Gönderen : Prof. Dr. Canan Özgen
IAK Başkanı

İlgili : Etik Onayı

Danışmanlığını yapmış olduğunuz Eğitim Bilimleri Bölümü öğrencisi İbrahim Tanrıku'nun " Associations of Personality Traits with Cyberbullying Perpetration Motives " isimli araştırması "İnsan Araştırmaları Komitesi" tarafından uygun görülerek gerekli onay verilmiştir.

Bilgilerinize saygılarımla sunarım.

Etik Komite Onayı

Uygundur

21/02/2014

Prof. Dr. Canan Özgen
Uygulamalı Etik Araştırma Merkezi
(UEAM) Başkanı
ODTÜ 06531 ANKARA

**Appendix B: Author Permission for Translating and Adapting the Online
Disinhibition Scale**

Dear Ibrahim,

Hereby I'll send you our instrument: the online disinhibition scale (Kerstens, J., Jansen, J. & Veenstra, S., 2011). We created this scale ourselves, based on studies about the online disinhibition effect (e.g. Suler, 2004). Some of the items we used can also be found in studies on Social Anxiety in relation to Internet use (e.g. Valkenburg, P. M., Schouten, A.P., & Peter, J. (2005). Adolescents' Internet-based identity experiments: An exploratory survey. *New Media and Society*, 7, 383-402.).

The core concept of the online disinhibition effect refers to a loosening of social restrictions and inhibitions that would otherwise be present in normal face-to-face interaction during interactions with others on the Internet.

In our research the scale has a Cronbach Alpha 0.85. The scale consists of 7 items. We wish you all the best with your study! We would be pleased to receive a publication on your research in due course.

Kind regards,

Joyce Kerstens, **February 6, 2012**

Drs J. Kerstens

Senior researcher in Cybersafety, NHL University of Applied Sciences

Phone: +31 (0)58-2512.329

E-mail: j.kerstens@ecma.nhl.nl

URL: www.nhl.nl/cybersafety

Cybersafety network: www.cyren-jeugd.nl

**Author Permission for Translating and Adapting the Propensity to Morally
Disengage Scale**

Hi Ibrahim,

You may absolutely use the scale. Though we did it online, below are the instructions and the items we used (the JAP article clarifies which 24 items were used in the final scale based on the psychometrics, which are also reported in the article).

You might also decide to use a shorter scale, which you can find in the attached article that was published in Personnel Psychology. It presents more extensive psychometric evidence. As an author on that, I can tell you that you can certainly use that scale in whatever research you want.

Best wishes.

Jim

September 20, 2013

Jim Detert

Associate Professor of Management

Johnson Graduate School of Management

Cornell University

342 Sage Hall, Ithaca NY 14853

jdetert@cornell.edu; 607-255-2501

<http://www.johnson.cornell.edu/Faculty-And-Research/Profile.aspx?id=jrd239>

Author Permission for Using the 16-item Narcissistic Personality Inventory

Merhaba,

16 maddeli Narsistik Kişilik Envanteri’ni tabiki kullanabilirsiniz, ölçekle ilgili elimde bulunan belgeleri ekte yolluyorum, kolaylıklar dilerim,
iyi günler

Diğdem Temel Gündüz

2 Şubat 2012

Author Permission for Translating and Adapting the 12-item Aggression Questionnaire

Dear Ibrahim:

Thank you for your interest in the short form of the Buss-Perry Aggression Questionnaire (AQ), which Bruce Smith and I developed and published in 2001 (Bryant & Smith, 2001).

I am pleased to give you permission to use the short form of the AQ in your research.

In response to your request, I have attached two Word documents -- one containing an electronic version of the 12-item short form of the AQ; the other, detailed instructions for scoring the short form of the AQ.

Note that the version of the short form of the AQ that I have attached here (and the instructions for scoring the short form of the AQ) uses the original 5-point response scale that Buss and Perry used, rather than the 6-point response scale that Bruce Smith and I used. Feel free to modify the response scale to a 6-point format, if you wish to use this alternative response scale.

I have also attached an electronic reprint of my original 2001 article with co-author Bruce Smith reporting the development and validation of the short form of the Buss-Perry AQ.

Thanks again for your interest in my work on the AQ.

I wish you all the best with your interesting research. Please send me a copy of the Turkish version of the short form of the AQ after you have created it, and let me know what you find in your research.

Sincerely,

Fred

Fred B. Bryant, Ph.D.

September 18, 2013

Appendix C: Sample Items for Revised Cyber Bullying Inventory for University Students

1. İzin almadan, kişisel bilgisayar veya akıllı telefondaki bilgileri (dosya, fotoğraf, yazılı mesaj kayıtları vb.) almak
2. İnternette tehdit içeren, utandırıcı, kırıcı mesajlar göndermek
3. Küçük düşürücü bir mesajı, fotoğrafı veya video görüntüsünü sanal ortamda izinsiz paylaşmak

Appendix D: Sample Items for Cyber bullying Perpetration Motives Scale

Birinci kısımdaki davranışı/davranışları (siber zorbalık davranışları) yaptım

ÇÜNKÜ ...

1. Teknoloji kullanmadaki üstünlüğümü göstermek istedim.
2. Eğlenmek istedim.
3. Davranışı yaptığım kişiye zarar vermek istedim.
4. Bana zarar veren birisinin acı çekmesini istedim.

Appendix E: Sample Items for the Turkish Version of the Online Disinhibition Scale

1. İnternette kendimi ifade etmek gerek hayatta kendimi ifade etmekten daha kolaydır.
2. Gerek hayatta konuřmaktan ekindiklerimi, internette rahatlıkla konuřurum.
3. Gerek hayatta yapmaya cesaret edemeyeceėim řeyleri internette yaparım.

**Appendix F: Sample Items for the Turkish Version of the Propensity to Morally
Disengage Scale**

1. Önemseydiğiniz insanları korumak için söylenti yaymakta bir sakınca yoktur.
2. Etrafındakiler de yapıyorsa, insanlar yaptıkları yanlış şeyler için suçlanamazlar.
3. Kötü muamele gören insanlar genellikle bunu hak edecek bir şeyler yapmışlardır.

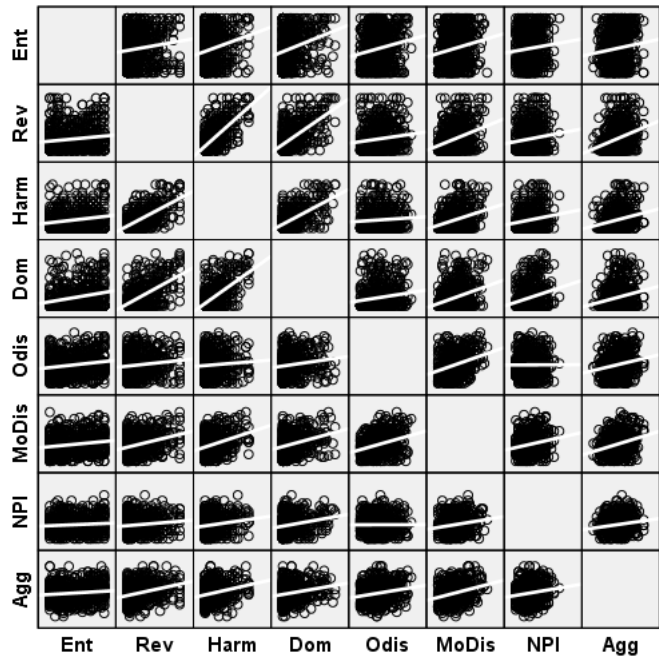
Appendix G: Sample Items for 16-item Narcissistic Personality Inventory

1. ____ İlgi odağı olmayı gerçekten severim.
____ İlgi odağı olmaktan rahatsızlık duyarım.
2. ____ Ben herkes gibi birisiyim.
____ Ben olağandışı biriyim.
3. ____ Başkalarından daha yetenekliyimdir.
____ Başkalarından öğrenebileceğim çok şey var.

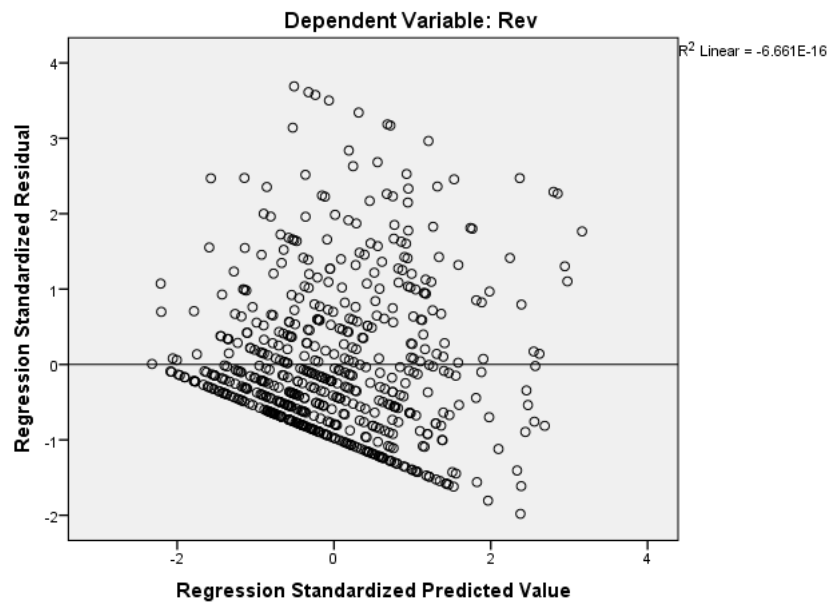
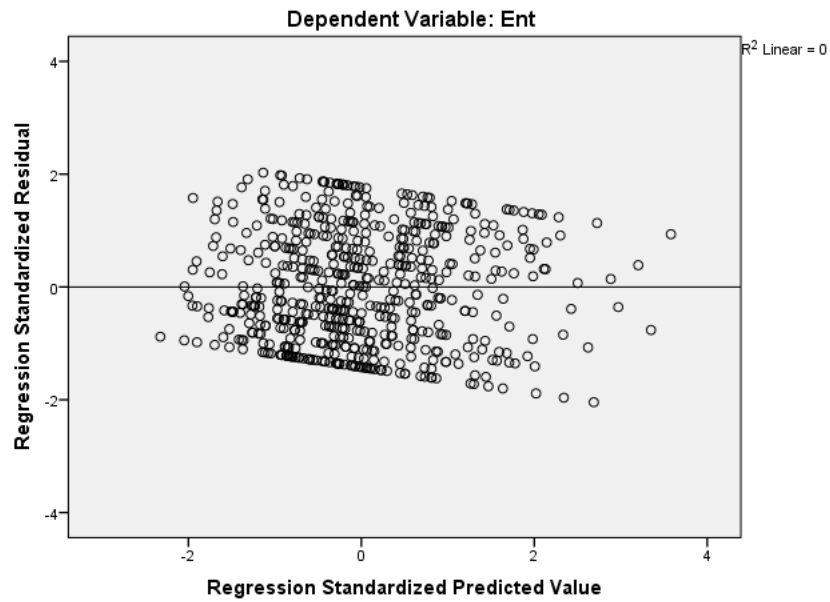
Appendix H: Sample Items for the Turkish Version of the 12-item Aggression Questionnaire

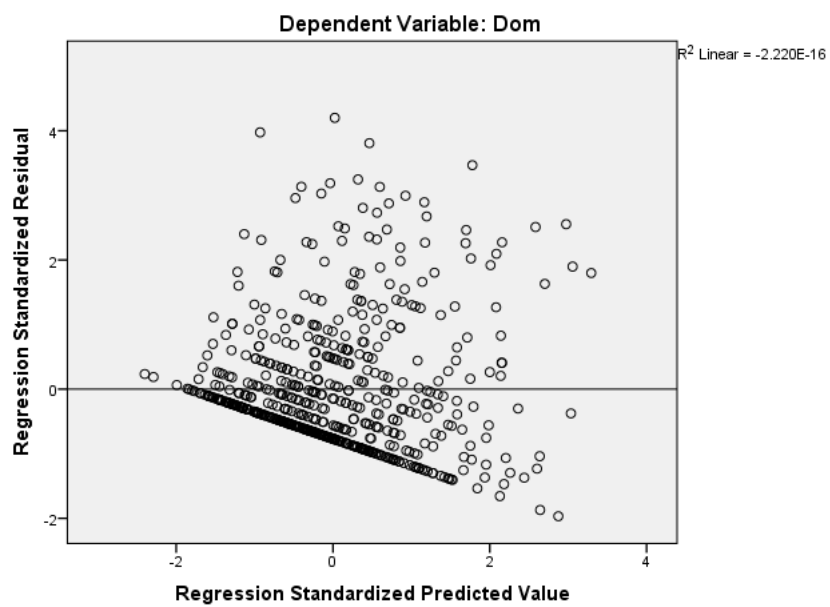
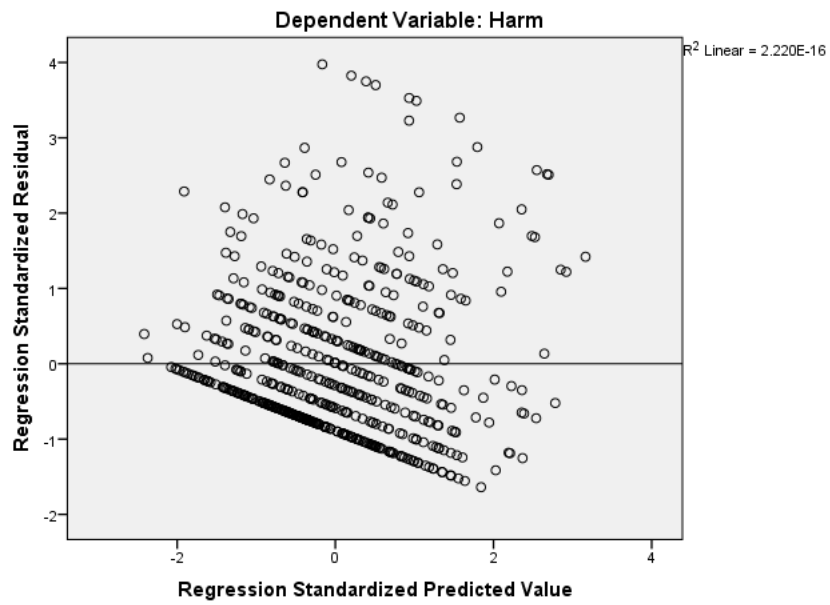
1. Olan biten şeylere neden bu kadar kızdığımı bazen anlamıyorum.
2. Öfkemi kontrol etmekte zorlanırım.
3. Çabuk öfkelenirim ama çabuk da sakinleşirim.

Appendix I: Scatterplot



Appendix J: Residual Plots





Appendix K: Turnitin Originality Report



Turnitin Originality Report

Thesis by Ibrahim Tanrikulu
From Thesis Check (PhD Thesis)

Processed on 09-Jun-2015 19:22
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ID: 549260014
Word Count: 60155

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http://www.researchgate.net/publication/264537049_A_meta-analysis_of_sex_differences_in_cyber-bullying_behavior_The_moderating_role_of_age
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- 5 < 1% match (Internet from 24-Jan-2014)
http://eprints.usq.edu.au/23860/1/Sankey_2013_whole.pdf
- 6 < 1% match (publications)
[Topcu, A. and Erdur-Baker. "The Revised Cyber Bullying Inventory \(RCBI\): validity and reliability studies", Procedia - Social and Behavioral Sciences, 2010.](#)
- 7 < 1% match (Internet from 12-Mar-2014)
<http://thehoardingproject.org/wp-content/uploads/2013/07/Grad-School-Formatted-Dissertation.pdf>
- 8 < 1% match (Internet from 24-Aug-2014)
http://www.nosp.ie/nosp_literature_review.pdf
- 9 < 1% match (Internet from 26-Sep-2010)
http://adr.coalliance.org/cogru/fez/eserv/cogru:317/Beebe_unco_0161N_10029.pdf
- 10 < 1% match (Internet from 21-May-2015)
<http://www.slideshare.net/Trainingcoordinator/sm1501201508>

Appendix L: Curriculum Vitae

İbrahim Tanrikulu

ibrahimtanrikulu@gmail.com

EDUCATION

- **PhD (Integrated):** 2008 – 2015 Psychological Counseling and Guidance, Middle East Technical University, Ankara
- **Bachelor of Arts:** 2003 – 2007 Foreign Language Education, Middle East Technical University, Ankara

WORK EXPERIENCE

- **December 2007 - August 2015:** Research Assistant, Department of Educational Sciences, METU, Ankara, TURKEY.
- **July 2012-July 2013:** Visiting Researcher, School of Learning and Professional Studies, Queensland University of Technology, Brisbane-Australia.

Scholarships

Turkish Higher Education Council, Overseas Doctoral Research Scholarship, 2012.

Research Interests

Peer bullying; Cyberbullying; Online applications in counseling.

Affiliations

Turkish Psychological Counseling and Guidance Association

Publications

International Articles

- Tanrikulu, İ., Campbell, M. (in press). Correlates of traditional bullying and cyberbullying perpetration among Australian students. *Children and Youth Services Review*.
- Tanrikulu, İ., Akbaba Altun, S., Erdur Baker, Ö., & Yerin Güneri, O. (2015). Misuse of ICTs among Turkish children and youth: A study on newspaper reports. *International Journal of Human Sciences*, 12, 1230-1243.
doi:10.14687/ijhs.v12i1.3131
- Tanrikulu, İ., & Campbell, M. A. (2015). Sibling bullying perpetration: Associations with gender, grade, peer perpetration, trait anger, and moral disengagement. *Journal of Interpersonal Violence*, 30, 1010-1024.
doi:10.1177/0886260514539763.
- Erdur-Baker, Ö. & Tanrikulu, İ. (2009). Cyber bullying in turkey: Its correlates and links to depressive symptoms. *Journal of eHealth Technology and Application*, 7, 16-23.

International Chapters in a Book

- Erdur-Baker, Ö., Tanrikulu, İ. Topcu, Ç. (2015). Gender differences in cyber bullying perpetration: The role of moral disengagement and aggression. Manuscript submitted for publication.

International Proceedings

- Tanrikulu, İ. (2011). Self-help books and bibliotherapy: Reflections for Turkey. *Procedia Social and Behavioral Sciences*, 30, 1862-1866.
- Erdur-Baker, Ö. & Tanrikulu, İ. (2010). Psychological consequences of cyber bullying experiences among Turkish secondary school children. *Procedia Social and Behavioral Sciences*, 2(2), 2771-2776.

Tanrikulu, İ. (2009). Counselors-in-training students' attitudes towards online counseling. *Procedia Social and Behavioral Sciences*, 1(1), 785-788.

International Paper Presentations

Tanrikulu, İ. (2011, May). *Self-help books and bibliotherapy: Reflections for Turkey*.

Paper presented at 2nd World Conference on Psychology, Counseling and Guidance, *Antalya-Turkey*.

Önen, Ö. & Tanrikulu, İ. (2010, June). *Examination of Informed consent in masters and doctorate theses of educational sciences*. Paper presented at XIV. World Congress of Comparative education societies, *Istanbul-Turkey*.

Erdur-Baker, Ö. & Tanrikulu, İ. (2010, August). *Cyber bullying and risky Internet use among university students*. Paper presented at European Educational Research Association (ECER), *Helsinki-Finland*.

Erdur-Baker, Ö. & Tanrikulu, İ. (2010, February). *Psychological consequences of cyber bullying experiences among Turkish secondary school children*. Paper presented at World Conference on Educational Sciences, *Bahçeşehir University, İstanbul-Turkey*.

Tanrikulu, İ. (2009, February). *Counselors-in-training students' attitudes towards online counseling*. Paper presented at World Conference on Educational Sciences, *Near East University, North Cyprus*.

National Paper Presentations

Ceylandag, F.R., Dolunay, F., Özbek, G., Tanrikulu, İ., Topcu, Ç., Turan, N., & Çapa-Aydın, Y. (2012, September). *Academic and Non-Academic Needs of Graduate Students [Lisansüstü Öğrencilerinin Akademik ve Akademik Olmayan İhtiyaçları]*. Paper presented at Applied Education Congress, *Ankara-Turkey*.

Tanrikulu, İ. (2010, July). *İntihar ve İntiharı Önleme: Psikolojik Danışmanlar için İpuçları [Suicide and the preventing suicide: Helpful tips for counselors]*. Paper presented at 7. PDR Öğrencileri Kongresi [7th National Counseling and Guidance Students Congress], *Samsun-Turkey*.

- Tanrikulu, İ. (2009, July). *İnternet temelli iletişim araçlarının psikolojik danışmanların eğitim ve meslek kalitesini artırmada rolü ve önemi* [The role and importance of Internet-based communication tools in increasing counselors' educational and professional quality]. Paper presented at 6. PDR Öğrencileri Kongresi [6th National Counseling and Guidance Students Congress], Bursa-Turkey.
- Tanrikulu, İ., Akbaba-Altun, S., Erdur-Baker, Ö., & Yerin-Güneri, O. (2009, October). *Bilgi ve iletişim teknolojilerinin kötüye kullanımının yazılı basında temsili* [Depicting ICT misuse in printed media]. Paper presented at 10.ULUSAL-PDR-KONGRESİ [10th National Counseling and Guidance Congress], Adana-Turkey.
- Yerin-Güneri, O., Owen, D. W., Tanrikulu, İ., Dolunay, F., & Büyükgöze-Kavas, A. (2009, October). *Eğitim Fakültesi Öğrencilerinin Kariyer Gelişimi İhtiyaçlarının İncelenmesi* [Investigation of the career development needs of students in Faculty of Education]. Paper presented at 10.ULUSAL-PDR-KONGRESİ [10th National Counseling and Guidance Congress], Adana-Turkey.
- Tanrikulu, İ. (2008, November). *Ana/baba bakış açısıyla ergenler arasında İnternet kullanımı ve İnternet Güvenliği* [Internet usage and security among adolescents: Viewpoints of the parents]. Symposium conducted at the meeting of 2008 Mersin Symposium, Mersin-Turkey.

Non-Refereed National Journal Articles

- Tanrikulu, İ. (2012, May-June). 5Ws & 1H of cyber bullying. *n'den N'ye Gezinti İstatistik Dergisi* [Journey from n to N-Journal of Statistics], 1(6), 14-17.
- Tanrikulu, İ. (2012, May-June). Internet security practice (in Turkey): A new period of Internet use. *n'denN'ye Gezinti İstatistik Dergisi* [Journey from n to N-Journal of Statistics], 1(6), 22-23.

Research Projects

- Üniversite Öğrencileri Arasında Siber Zorbalığın Görünümleri ve Psikolojik Etkileri* [Appearances and psychological impacts of cyber bullying among university students]. Funded by BAP-05-02-2009-03, 2009.

Interviews

Tanrikulu, İ. (2014, October 5). Kampf der Geschwister [War With Siblings]. Interview by Von Fanny Jimenez. Welt am Sonntag [Sunday Newspaper Supplement], Die Welt [Newspaper Die Welt], Germany.

<http://www.welt.de/print/wams/wissen/article132921597/Kampf-der-Geschwister.html>

Appendix M: Turkish Summary

TÜRKÇE ÖZET

SİBER ZORBALIK YAPMA MOTİVLERİ İLE KİŞİLİK ÖZELLİKLERİ ARASINDAKİ İLİŞKİLER: KULLANIMLAR VE DOYUMLAR KURAMINI TEST ETME

GİRİŞ

Bilgi ve iletişim teknolojilerinin yaygınlaşmasıyla beraber, çocuklar ve gençler “siber zorbalık” adı verilen çevrimiçi bir saldırganlık davranışını yaşamaya başladılar. Siber zorbalık “elektronik veya digital teknolojiler aracılığıyla başkalarına zarar veya rahatsızlık vermeyi hedefleyen ve tekrar eden davranışlar”olarak tanımlanmaktadır (Tokunaga, 2010, s. 278). Amerika (Bauman ve Newman, 2013), Avustralya (Campbell, Spears, Slee, Butler, ve Kift, 2012) veya Yunanistan (Kokkinos, Antoniadou, ve Markos, 2014) gibi farklı ülkelerde yapılan yapılan araştırmalar, siber zorbalığın çocuklar ve gençler arasında görülen uluslararası ve kaygı verici bir sorun olduğunu göstermektedir.

Bu araştırmanın kuramsal arka planı *Kullanımlar ve Doyumlar Kuramı*’na (Blumler ve Katz, 1974) dayanmaktadır. Bu nedenle, bu çalışmada ele alınan değişkenler *Kullanımlar ve Doyumlar Kuramı*’nın öngördüğü biçimde oluşturulmuştur.

Orijinalinde bir iletişim/ medya kuramı olan *Kullanımlar ve Doyumlar Kuramı* (Blumler ve Katz, 1974) bireylerin iletişim/ medya araçlarını neden ve nasıl kullandıklarını açıklamayı hedeflemektedir. *Kullanımlar ve Doyumlar Kuramı*’na göre, (a) kişiler iletişim/ medya araçlarını bir amaca yönelik olarak kullanırlar, (b) kişiler iletişim/ medya araçlarını kullanımında aktif rol oynarlar, (c) kişiler iletişim/ medya araçlarını bilinçli bir şekilde, bazı motivlerini/ gereksinimlerini karşılama amacıyla kullanırlar

(Alonzo ve Aiken, 2004; Ruggiero, 2000). Bu temel prensiplerin yanında, *Kullanımlar ve Doyumlar Kuramı*'na göre, bireylerin kişilik özellikleri iletişim/ medya araçlarının kullanımında önemli bir rol oynamaktadır.

Siber zorbalık davranışı göz önünde bulundurularak yukarıda sözü edilen prensipler bu çalışmaya uyarlanmıştır. Yapılan uyarlamaya göre, (a) kişiler bilgi ve iletişim teknolojilerini belirli bir amaca yönelik olarak yani siber zorbalık yapmak için kullanırlar, (b) kişiler bilgi ve iletişim teknolojilerini kullanırken aktiftirler ve siber zorbalık yapıp yapmayacaklarına kendileri karar verirler, (c) kişiler bilgi ve iletişim teknolojilerini bilinçli bir şekilde, bazı motivlerini/ gereksinimlerini karşılama amacıyla siber zorbalık yapmak için kullanırlar. Bu temel prensiplerle beraber, bireylerin kişilik özellikleri bilgi ve iletişim teknolojilerini siber zorbalık yapma amacıyla kullanımında önemli bir rol oynayabilir.

Bu araştırma, Alonzo ve Aiken'in (2004) bir siber zorbalık davranışı çeşidi olan "ortamı kızıştırma (flaming)" davranışı ile *Kullanımlar ve Doyumlar Kuramı*'nı ampirik olarak test ettiği çalışmayı temel almıştır. Alonzo ve Aiken'in (2004) çalışmasında, bireylerin kişilik özelliklerinin ile onların ortamı kızıştırma davranışı yapma motivleri arasındaki ilişkileri sınanmıştır. Alonzo ve Aiken'in (2004) araştırmasını dikkate alarak, bu araştırmanın Yapısal Eşitlik Modeli'ni oluştururken ilk önce siber zorbalık yapma motivleri belirlenmiş ardından da siber zorbalık yapan bireylerin kişilik özelliklerinin neler olduğu alan yazın dikkate alınarak belirlenmiştir.

Bu çalışmaya dahil edilecek siber zorbalık yapma motivlerini belirlemek için ilkin siber zorbalığın operasyonel tanımından faydalanmıştır. Siber zorbalığın alanyazınında üzerinden hem fikir olunan iki konu siber zorbalığın zarar verme amacıyla yapılması ve siber zorbalık davranışında zorba ile mağdur arasında bir güç eşitsizliği olmasıdır (Dooley, Pyzalski, ve Cross, 2009; Hinduja ve Patchin, 2008; Kuhlman, Pieschl, ve Porsch, 2013; Langos, 2012; Menesini ve diğ., 2012; Nocentini ve diğ., 2010; Vandebosch ve Van Cleemput, 2008). Bu nedenle, *zarar verme motivini* ve *üstünlük*

kurma motivini bu çalışmada araştırılacak ilk iki motiv olarak belirlendi. Zarar verme ve üstünlük kurmayla birlikte *öç almak motivini* ve *eğlenme motivini* de bu çalışmada araştırılacak diğer iki motiv olarak belirlendi. Öç almak motivinin (Dehue, Bolman, ve Völlink, 2008; König, Gollwitzer, ve Steffgen, 2010; Shapka ve Law, 2013; Topcu ve diğ., 2013; Zhou ve diğ., 2013) ve eğlenme motivinin (Baas ve diğ., 2013; Englander, 2008; Gradinger ve diğ., 2011; Rafferty ve Vander Ven, 2014) seçilmesinde bu iki motivin alanyazında en sık tekrarlanan siber zorbalık motivleri olmaları etkili olmuştur. Sonuç olarak bu araştırmada, zarar verme motivleri, üstünlük kurma motivleri, öç alma motivleri ve eğlenme motivleri olmak üzere dört siber zorbalık motivleri ele alınmıştır.

Motivlerin belirlenmesinin ardından bu araştırmaya değişken olarak katmak için siber zorbalıkların kişilik özelliklerinin neler olduğunu belirlemek gerekiyordu. Bunun için alanyazın detaylı bir şekilde gözden geçirilmiştir. Fakat, alan yazın siber zorbalıkların kişilik özelliklerine yönelik olarak birçoğusunda kişilik özelliğini raporlamaktadır. Bu nedenle siber zorbalıkların kişilik özelliklerini belirlemek için bazı kriterler göz önünde bulundurulmuştur. Seçilecek kişilik özellikleri öncelikle alanyazın tarafından raporlanmak zorundaydı. Daha da önemlisi, seçilecek kişilik özellikleri daha önce belirlenen siber zorbalık motivleri ile kuramsal olarak ilişkili olmak zorundaydı.

Yukarıda söz edilen iki kriter dikkate alındığında, “*çevirimiçi disinhibisyon*” ilk kişilik özelliği olarak bu araştırmaya dahil edildi. Çevirimiçi disinhibisyon, kişilerin çevirimiçi ortamdayken kendilerini sosyal kısıtlamalardan ne kadar kopuk veya uzak düşündükleri veya davrandıklarıdır (Kerstens ve Stol, 2014; Suler, 2004). Çevirimiçi disinhibisyon kişilik özelliği ile siber zorbalık yapma davranışı arasında pozitif ve anlamlı ilişkiler önceki çalışmalar tarafından raporlanmıştır (Barlett, 2015; Görzig ve Olafsson, 2013; Udris, 2014; Veenstra, 2011; Wright, 2013; Wright, 2014). Bu araştırmada, çevirimiçi disinhibisyon kişilik özelliğinin, zarar verme motivleri, üstünlük kurma motivleri, öç alma motivleri ve eğlenme motivileriyle anlamlı ve pozitif yönde bir ilişki kurması beklenmiştir.

“*Ahlaki değerlerden soyutlanma*” ikinci kişilik özelliği olarak bu araştırmaya dahil edilmiştir. Ahlaki değerlerden soyutlanma, bireylerin normalde ahlaki bulmadıkları davranışları belirli durumlarda yapmaya olan eğilimli olmalarıdır (Moore ve diğ., 2012). Ahlaki değerlerden soyutlanma kişilik özelliği ile siber zorbalık yapma davranışı arasında pozitif ve anlamlı ilişkiler önceki çalışmalar tarafından raporlanmıştır (Perren ve Gutzwiller-Helfenfinger, 2012; Postorino, 2014; Robson ve Witenberg, 2013; Sticca ve Perren, 2015; Tanrıkulu ve Campbell, 2015). Bu araştırmada, ahlaki değerlerden soyutlanma kişilik özelliğinin, zarar verme motivisi, üstünlük kurma motivisi, öç alma motivisi ve eğlenme motivisiyle anlamlı ve pozitif yönde bir ilişki kurması beklenmiştir.

“*Narsisizm*” üçüncü kişilik özelliği olarak bu araştırmaya dahil edilmiştir. Narsistik kişilik özelliği ile siber zorbalık yapma davranışı arasında pozitif ve anlamlı ilişkiler önceki çalışmalar tarafından raporlanmıştır (Ang ve diğ., 2010; Ekşi, 2012; Fanti ve diğ., 2012; Fanti ve Henrich, 2015; Goodboy ve Martin, 2015). Bu araştırmada, narsistik kişilik özelliğinin, zarar verme motivisi, üstünlük kurma motivisi, öç alma motivisi ve eğlenme motivisiyle anlamlı ve pozitif yönde bir ilişki kurması beklenmiştir.

“*Saldırganlık*” dördüncü ve son kişilik özelliği olarak bu araştırmaya dahil edilmiştir. Saldırganlık kişilik özelliği ile siber zorbalık yapma davranışı arasında pozitif ve anlamlı ilişkiler önceki çalışmalar tarafından raporlanmıştır (Ang ve diğ., 2013; Arıca, 2009; Bayraktar ve diğ., 2014; Calvete ve diğ., 2010; Dilmaç, 2009; Fletcher ve diğ., 2014; Lonigro ve diğ., 2015; Ozden ve Icellioğlu, 2014; Roberto ve diğ., 2014; Schultze-Krumbholz ve Scheithauer, 2009; Werner ve diğ., 2010). Bu araştırmada, saldırganlık kişilik özelliğinin, zarar verme motivisi, üstünlük kurma motivisi, öç alma motivisi ve eğlenme motivisiyle anlamlı ve pozitif yönde bir ilişki kurması beklenmiştir.

Özet olarak, bu araştırmanın amacı siber zorbalık yapma motivileri ile siber zorbaların kişilik özelliklerinin arasındaki ilişkileri incelemektir. Siber zorbalık yapma motivileri ile siber zorbaların kişilik özelliklerinin arasındaki ilişkilerin belirlenmesi araştırmacılara ve uygulayıcı olan psikolojik yardım sağlayıcılara siber zorbalık yapma davranışının doğası

hakkında önemli bilgiler sağlayabilecektir. Bu araştırmanın kuramsal arkaplanını *Kullanımlar ve Doyumlar Kuramı* (Blumler ve Katz, 1974) oluşturmaktadır. Ve bu araştırmada yer alan tüm değişkenler *Kullanımlar ve Doyumlar Kuramı*'nın ön gördüğü şekilde ilgili siber zorbalık alan yazını dikkate alarak şekillendirilmiştir. Bu araştırmada siber zorbalık motivleri ve siber zorbaların kişilik özellikleri olmak üzere iki grup değişken vardır. İlk grup değişkenler, zarar verme motivisi, üstünlük kurma motivisi, öç alma motivisi ve eğlenme motivlerinden oluşurken, ikinci grup değişkenler çevrimiçi disinhibisyon, ahlaki değerlerden soyutlanma, narsisizm ve saldırganlık kişilik özelliklerinden oluşmaktadır.

1.1. Çalışmanın amacı

Bu çalışmanın temel amacı siber zorbalık yapma motivleri ile siber zorbaların kişilik özelliklerinin arasındaki ilişkileri incelemektir. Bu amaca ulaşmak için, *Kullanımlar ve Doyumlar Kuramı*'ni kuramsal temel olarak bir Yapısal Eşitlik Modeli kuruldu ve siber zorbalık yapma motivleri (eğlenme, öç alma, zarar verme ve üstünlük kurma) ile siber zorbaların kişilik özelliklerinin (çevrimiçi disinhibisyon, ahlaki değerlerden soyutlanma, narsisizm ve saldırganlık) arasındaki ilişkiler sınanmıştır. Başka bir deyişle bu çalışmada, siber zorbalık yapma motivlerinin siber zorbaların kişisel özellikleri ile açıklanıp açıklanmayacağı araştırılmıştır.

1.2. Çalışmanın önemi

Bu çalışma, kuram, araştırma, uygulama ve politika belirleme açılarından önemlidir.

Bu çalışmada ilk defa, siber zorbalık yapma davranışı kuramsal açıdan Kullanımlar ve Doyumlar Kuramı'na dayandırılarak açıklanmaya çalışılmıştır. Çalışmanın araştırmaya yönelik önemleri dikkate alındığında siber zorbalık yapma motivleri ve siber zorbaların kişilik özellikleri ile ilgili iki ayrı alanyazını bir araya getirmiştir. Siber zorbalık yapma motivleri ve siber zorbaların kişilik özellikleri arasındaki ilişkiler henüz bilinmediği için

bu iki literatürü bir araya getirmek önemlidir. Ayrıca, üniversite öğrencileri arasında siber zorbalık davranışları daha önce incelenmesine rağmen, ilk kez siber zorba-mağdurları ele alan bir araştırma olarak bu çalışma literatürdeki yerini almıştır. Önceki çalışmalar, genellikle siber mağdurlara yönelik olduğu için siber zorbalık yapmanın daha iyi anlaşılmasına yönelik araştırmaların sayısı oldukça azdır. Bu çalışma, siber zorbalık davranışlarını kuramsal bir arka plana dayandırıp açıklamaya çalışarak alanyazına katkı sağlamayı hedeflemektedir. Bu çalışmada yenilenen *Üniversite Öğrencileri için Yenilenmiş Siber Zorbalık Envanteri*, bu çalışma için geliştirilen *Siber Zorbalık Yapma Motivleri Ölçeği*, bu çalışma için Türkçeye çevirilip adapte edilen *Çevirimiçi Disinhibisyon Ölçeği*, *Ahlaki Değerlerden Soyutlanma Eğilimi Ölçeği*, ve *12 maddeli Saldırganlık Ölçeği* sayesinde uluslararası alanyazına ve Türk alan yazınına katkı sağlayan araştırmacılara da fayda sağlamayı hedeflemektedir.

Bu araştırmanın uygulamaya yönelik önemleri düşünüldüğünde, siber zorbalık yapma davranışlarını daha iyi kavramsallaştırmaya çalışarak bu çalışma siber zorbalık davranışının doğasının ne olduğu konusunda uygulayıcılara önemli bilgiler kazandıracaktır. Bununla beraber, psikolojik danışmanlar, bu çalışmadan elde edilen bulgular sayesinde siber zorbalık yapan bireylere nasıl daha iyi psikolojik yardım hizmeti verebilecekleri konusunda bilgiler edinebileceklerdir.

Son olarak bu çalışmanın bulguları, ülkemizde siber zorbalığı önlemeye yönelik yasal düzenlemeler yapılmasına yönelik dikkat çekmesi açısından önem arz etmektedir. Üniversite gençliğinin, fiziksel ortamlarda olduğu kadar çevirimiçi ortamlarda da kanunlar tarafından korunması önemlidir.

YÖNTEM

2.1. Örneklem

Araştırma için 1281 üniversite öğrencisinden veri toplanmıştır. Katılımcılar, sadece zorba, sadece mağdur ya da zorba-mağdur olarak gruplanmıştır. Gruplama yapılırken ilgili literatürün (Langos, 2012; Nocentini ve diğ., 2010) öngördüğü gibi zorba ya da mağdur davranışının en az iki veya daha fazla yapılması gerektiği kriteri göz önünde bulundurulmuştur. Yani, iki veya daha çok siber zorbalık davranışı yapmış bir katılımcı *sadece zorba*, iki veya daha çok siber zorbalık davranışına maruz kalmış bir katılımcı *sadece mağdur*, iki veya daha çok siber zorbalık davranışı yapmış ve siber zorbalığa maruz kalmış bir katılımcı *zorba-mağdur*, ve hiç bir zorbalık davranışı yapmamış ve hiç bir zorbalık davranışına maruz kalmamış bir katılımcı ise *siber zorba ya da mağdur olmayan* olarak gruplandırılmıştır. Yapılan gruplamanın sonucuna göre 38 katılımcının (%3.0) *sadece zorba*, 218 (%17) katılımcının *sadece mağdur*, 598 (%46.7) katılımcının *zorba-mağdur* ve 240 (18.7%) katılımcının *siber zorba ya da mağdur olmayan* gruplarında oldukları görülmüştür. Araştırma örnekleminde, bu gruplarla birlikte 187 (%14.6) katılımcı daha vardı. Bu katılımcılar, yukarıdaki gruplardan daha farklı siber zorba veya mağdur davranışlar gösterdiklerini belirtmişlerdir. Örneğin, bir grup katılımcı sadece bir kez siber zorba veya mağdur olduğunu, diğer bir grup katılımcı birden çok siber zorbalık yaptığını ama sadece bir kez mağdur olduğunu, başka bir grup ise birden çok siber zorbalığa maruz kaldığını ama sadece bir kez siber zorbalık yaptığını belirtmiştir. Bu nedenle bu katılımcılar yukarıdaki gruplara dahil edilmemiştir.

Bu çalışma, siber zorbalık yapmış bireylerin kişilik özellikleri ile siber zorbalık yapma motivlerini ele almayı amaçladığı için yapılacak analizlerin siber zorbalık yaptıklarını raporlamış bireylerle yapılması gerekiyordu. Sadece siber zorba ve siber zorba-mağdur grubundakiler başkalarına siber zorbalık yaptıklarını belirttikleri için en başta bu iki grup dikkate alındı. Fakat, sadece zorba olan grubun toplanan veri setindeki oranı ($n= 38$, %3.0) oldukça düşük olması sebebiyle bu araştırmanın örnekleminin siber zorba-mağdur

grubundaki katılımcıların olmasına karar verilmiştir. Alınan bu kararı literatürün raporladığı sadece siber zorbalık ve siber zorba-mağdurlar arasındaki muhtemel farklar da etkilemiştir. Örneğin, Aoyama (2010) sadece siber zorbalık ve siber zorba-mağdur grupları arasında benlik saygısı, depresyon, akran ilişkileri ve stres açısından anlamlı farklar olduğunu raporlamıştır. Sonuç olarak, bu çalışmanın örneklemini siber zorba-mağdur olduklarını raporlamış 598 katılımcı oluşturmaktadır.

Katılımcıların 229'u kadın (%38.7) ve 362'si erkektir (%61.3) ve yaşları 17 ile 27 arasında değişmektedir. Katılımcıların 135'i (%22.8) İngilizce hazırlık sınıfı, 119'u (%20.1) birinci sınıf, 136'sı (%23.0) ikinci sınıf, 87'si (%14.7) üçüncü sınıf ve 114'ü (%19.3) son sınıf öğrencisi olduklarını belirtmişlerdir. Katılımcılar, en sık akıllı telefon ($n= 521$, %88.2) ve diz üstü bilgisayar ($n= 496$, %83.9) kullanarak İnternete bağlandıklarını raporlamışlardır. Katılımcıların %44.2'si İnternete hergün en az 1-2 saat bağlandıklarını ifade ederken sadece %3.8'si hafta yalnızca birkaç saat İnternete bağlandıklarını belirtmişlerdir.

2.2. Veri toplama araçları

Bu araştırma için *Üniversite Öğrencileri için Yenilenmiş Siber Zorbalık Envanteri* oluşturulmuş, *Siber Zorbalık Yapma Motivleri Ölçeği* araştırmacı tarafından geliştirilmiş, *Çevrimiçi Disinhibisyon Ölçeği*, *Ahlaki Değerlerden Soyutlanma Eğilimi Ölçeği* ve *12 maddeli Saldırganlık Ölçeği* Türkçeye adapte edilmiştir. Ayrıca, Temel (2008) tarafından Türkçeye kazandırılan *16 maddeli Narsistik Kişilik Envanteri* de kullanılmıştır.

2.2.1. Üniversite Öğrencileri için Yenilenmiş Siber Zorbalık Envanteri

Üniversite Öğrencileri için Yenilenmiş Siber Zorbalık Envanteri, *Yenilenmiş Siber Zorbalık Envanteri*'nin (Topcu ve Erdur-Baker, 2010) üniversite öğrencileri için oluşturulmuş halidir. Toplamda 12 maddeden oluşan envanter katılımcıların siber

zorbalık yapma ve siber zorbalığa maruz kalma deneyimlerini iki bölümde ölçmektedir. İlk bölüm siber zorbalık yapma ikinci kısım ise siber zorbalığa maruz kalma deneyimlerini ölçmektedir. Envanterin iki bölümü de aynı maddelerden oluşmaktadır. Ancak katılımcıların siber zorbalık davranışların içeren maddelere, son altı ayda siber zorbalık yaptılarsa ilk kısımda “*ben yaptım*” son altı ayda siber zorbalığa maruz kaldılarsa ikinci kısımda “*bana yapıldı*” diye düşünerek cevap vermeleri istenmiştir. *Üniversite Öğrencileri için Yenilenmiş Siber Zorbalık Envanteri*, dörtlü derecelendirme ile (1 = *asla*, 2 = *bir kez*, 3 = *iki veya üç kez*, 4 = *üçten çok kez*) cevaplanmaktadır. Örnek bir madde olarak, “İnternette tehdit içeren, utandırıcı, kırıcı mesajlar göndermek” verilebilir. Envanterden alınan yüksek puanlar daha sık siber zorbalık davranışı yapmanın veya daha sık siber zorbalığa maruz kalmanın söz konusu olduğunu gösterir. Sadece siber zorba, sadece siber mağdur, siber zorba-mağdur ve siber zorba ya da mağdur olmayan grupları belirlemek için şu şekilde bir yöntem kullanılabilir. Eğer katılımcının puanı siber zorbalık yaptım kısmında 14 veya üzeri ama siber zorbalığa maruz kaldım kısmındaki puanı 12 ise sadece siber zorba; katılımcının puanı siber zorbalık yaptım kısmında 12 ama siber zorbalığa maruz kaldım kısmındaki puanı 14 ve üzeri ise sadece siber mağdur; katılımcının puanı hem siber zorbalık yaptım kısmında 14 ve üzeri hem de siber zorbalığa maruz kaldım kısmında 14 ve üzeri ise siber zorba-mağdur; katılımcının puanı hem siber zorbalık yaptım kısmında 12 hem de siber zorbalığa maruz kaldım kısmında 12 ise siber zorba ya da mağdur olmayan olarak gruplama yapılabilir. Yapılan doğrulayıcı faktör analizi sonuçları ölçeğin siber zorba bölümünün ($\chi^2 = 2.56$, $df = 2$, $p = .27$; $\chi^2/df = 1.28$; GFI = .99, CFI = .99, TLI = .98, SRMR = .02, RMSEA = .03) ve siber mağdur bölümünün ($\chi^2 = 1.36$, $df = 2$, $p = .50$; $\chi^2/df = .68$; GFI = .99, CFI = 1.00, TLI = 1.00, SRMR = .01, RMSEA = .00) tek faktörlü yapıyı doğruladıklarını göstermiştir. Envanterin siber zorba bölümü için iç tutarlık kat sayısı .80 iken siber mağdur bölümü için .73’tür.

2.2.2. Siber Zorbalık Yapma Motivleri Ölçeği

Siber Zorbalık Yapma Motivleri Ölçeği bu çalışmanın araştırmacısı tarafından geliştirilmiştir. Ölçek eğlenme, öç alma, zarar verme ve üstünlük kurma olmak üzere dört alt boyuttan oluşmaktadır. Toplam 21 maddeden oluşan ölçek maddeleri siber zorbalık yapmayla ilgili cümlelerden oluşmaktadır. Örnek bir madde olarak “Bu davranışlar daha önce bana yapıldı” verilebilir. Ölçeğin en başında “Siber zorbalık davranışları yaptım çünkü ...” ifadesiyle katılımcılardan siber zorbalık yapma nedenlerinin verilen ifadelerle ne kadar örtüştüğünü belirtmeleri istenmiştir. Ölçek, beşli derecelendirme ile (1 = *hiç*, 2 = *çok az*, 3 = *biraz*, 4 = *oldukça*, 5 = *tamamen*) cevaplandırılmaktadır.

Yapılan açıklayıcı faktör analizi sonucunda teorik olarak ortaya çıkması beklenen 4 faktörün ortaya çıktığı görülmüştür. Ortaya çıkan ilk faktör olan öç alma varyansın %36.16’sını, ikinci faktör olan eğlenme varyansın %17.7’sini, üçüncü faktör olan üstünlük kurma varyansın %8.64’ünü ve dördüncü faktör olan zarar verme ise varyansın %6.10’unu açıkladığı görülmüştür. Dört faktör, toplam varyansın %68.08’ini açıklamıştır. Ortaya çıkan bu dört faktörün doğrulanıp doğrulanmadığını test etmek için bir doğrulayıcı faktör analizi yapılmıştır. Analizin sonuçları dört faktörlü yapının doğruladığını ortaya çıkarmıştır ($\chi^2 = 268.95$, $df = 83$, $p = .00$; $\chi^2/df = 3.24$; GFI = .94, CFI = .96, TLI = .95, SRMR = .05, RMSEA = .06). Ölçeğin iç tutarlık kat sayısı tüm ölçek için .90, eğlenme alt boyutu için .89, öç alma alt boyutu için .87, zarar verme alt boyutu için .80 ve üstünlük kurma alt boyutu için .87’dir.

2.2.3. Çevirimiçi Disinhibisyon Ölçeği

Çevirimiçi Disinhibisyon Ölçeği, 2012 yılında Kerstens ve Stol tarafından geliştirilmiştir, ve bu çalışmada kullanılabilmesi için bu çalışmanın araştırmacısı tarafından Türkçeye adapte edilmiştir. Ölçek, bireyler çevirimiçi ortamdayken kendilerini sosyal kısıtlamalardan ne kadar kopuk/ uzak düşündüklerini veya

davrandıklarını ölçmektedir. Toplam yedi maddeden oluşan ölçek, beşli derecelendirme ile (1 = *kesinlikle katılmıyorum*, 2 = *katılmıyorum*, 3 = *kararsızım*, 4 = *katılıyorum*, 5 = *kesinlikle katılıyorum*) cevaplandırılmaktadır. Ölçekten alınan yüksek puan katılımcının çevrimiçi ortamda sosyal kısıtlamalardan daha çok kopuk/ uzak düşündüğünü veya davrandığını göstermektedir. Örnek bir madde olarak “İnternette, gerçek hayatta olduğumdan daha fazla kendim gibi davranırım” verilebilir. *Çevrimiçi Disinhibisyon Ölçeği*’nin tek faktörlü yapısını doğrulamak amacıyla yapılan doğrulayıcı faktör analizi tek faktörlü yapıyı doğrulamıştır ($\chi^2 = 21.75$, $df = 11$, $p = .02$; $\chi^2/df = 1.97$; GFI = .98, CFI = .98, TLI = .96, SRMR = .03, RMSEA = .06). Ölçeğin iç tutarlık kat sayısı bu çalışmada .82 olarak bulunmuştur.

2.2.4. Ahlaki Değerlerden Soyutlanma Eğilimi Ölçeği

Moore ve diğerleri (2012) tarafından geliştirilen ve bu çalışmada kullanılabilmesi için bu çalışmanın araştırmacısı tarafından Türkçeye adapte edilen *Ahlaki Değerlerden Soyutlanma Eğilimi Ölçeği*, katılımcıların normalde ahlaki bulmadıkları davranışları belirli durumlarda yapmaya olan eğilimlerini ölçmektedir. Sekiz maddeden oluşan ölçek, yedili derecelendirme ile (1 = *kesinlikle katılmıyorum*, 2 = *katılmıyorum*, 3 = *biraz katılmıyorum*, 4 = *kararsızım*, 5 = *biraz katılıyorum*, 6 = *katılıyorum*, 7 = *kesinlikle katılıyorum*) cevaplandırılmaktadır. Ölçekten alınan yüksek puan, katılımcının ahlaki değerlerden soyutlanmaya daha fazla eğilimi olduğunu göstermektedir. Örnek bir madde olarak “Önemsediğiniz insanları korumak için söylenti yaymakta bir sakınca yoktur” verilebilir. *Ahlaki Değerlerden Soyutlanma Eğilimi Ölçeği*’nin tek faktörlü yapısını doğrulamak amacıyla yapılan doğrulayıcı faktör analizi tek faktörlü yapıyı doğrulamıştır ($\chi^2 = 35.06$, $df = 20$, $p = .20$; $\chi^2/df = 1.75$; GFI = .97, CFI = .93, TLI = .91, SRMR = .02, RMSEA = .04). Ölçeğin iç tutarlık kat sayısı bu çalışmada .71 olarak bulunmuştur.

2.2.5. 16 Maddeli Narsistik Kişilik Envanteri

16 maddeli Narsistik Kişilik Envanteri, Ames ve diğerleri (2006) tarafından geliştirilmiş ve Temel (2008) tarafından Türkçeye kazandırılmıştır. Ölçek, katılımcıların narsizme olan eğilimlerini ölçmektedir. Ölçek 16 maddeden oluşmaktadır ve ölçeğin her maddesi biri narsizm ile ilgili diğeri ise narsizm ile ilgili olmayan iki cümleden oluşmaktadır. Örnek bir madde olarak “İlgi odağı olmayı gerçekten severim (narsizm ile ilgili ilk cümle)” “İlgi odağı olmaktan rahatsızlık duyarım (narsizm ile ilgisi olmayan ikinci cümle)” verilebilir. Ölçek değerlendirilirken, narsizm ile ilgili olan ifade “1”, narsizm ile ilgili olmayan iki cümle “0” olarak değerlendirilir ve yüksek bir puan narsizme daha fazla yakın olmayı gösterir. *16 maddeli Narsistik Kişilik Envanteri*’nin tek faktörlü yapısını doğrulamak amacıyla yapılan doğrulayıcı faktör analizi tek faktörlü yapıyı doğrulamıştır ($\chi^2 = 0.50$, $df = 2$, $p = .77$; $\chi^2/df = .25$; GFI = .99, CFI = 1.00, TLI = 1.00, SRMR = .00, RMSEA = .00). Ölçeğin iç tutarlık kat sayısı bu çalışmada .74 olarak bulunmuştur.

2.2.6. 12 Maddeli Saldırganlık Ölçeği

12 maddeli Saldırganlık Ölçeği, Bryant ve Smith (2001) tarafından geliştirilmiştir ve bu çalışmada kullanılabilmesi için bu çalışmanın araştırmacısı tarafından Türkçeye adapte edilmiştir. Toplam 12 maddeden oluşan ölçek, katılımcıların saldırganlığa olan eğilimlerini ölçmektedir. Ölçek, beşli derecelendirme ile (1 = *hiç uygun değil*, 2 = *çok az uygun*, 3 = *biraz uygun*, 4 = *çok uygun*, 5 = *tamamen uygun*) cevaplandırılmaktadır. Ölçekten alınan yüksek puan, katılımcının saldırganlığa daha fazla meyilli olduğunu göstermektedir. Örnek bir madde olarak “Tanıdıklarımı tehdit ettiğim oldu” verilebilir. *12 maddeli Saldırganlık Ölçeği*’nin tek faktörlü yapısını doğrulamak amacıyla yapılan doğrulayıcı faktör analizi tek faktörlü yapıyı doğrulamıştır ($\chi^2 = 2.12$, $df = 1$, $p = .14$; $\chi^2/df = 2.12$; GFI = .99, CFI = .99, TLI = .98, SRMR = .01, RMSEA = .06). Ölçeğin iç tutarlık kat sayısı bu çalışmada .79 olarak bulunmuştur.

2.2.7. Demografik Bilgi Formu

Demografik bilgi formunda, katılımcıların yaşları, cinsiyetleri, kayıtlı oldukları üniversite, fakülte ve bölümleri, aylık gelirleri, anne/ babalarının eğitim seviyeleri, İnternete hangi elektronik araçlarla bağlandıkları, günlük/ haftalık İnternet kullanım süreleri sorulmuştur.

2.3. İşlem

Veri toplamaya başlamadan önce Orta Doğu Teknik Üniversitesi, Etik Kurulu'ndan üniversite öğrencilerinden veri toplayabilmek için izin alınmıştır. Veriler 2014 sonbahar döneminde araştırmacı tarafından toplanmıştır. Veri toplayabilmek için öncelikle ders veren öğretim görevlileri/ üyelerine çalışmanın amacı açıklanıp izin istenmiştir. İzin veren öğretim görevlilerinin/ üyelerinin sınıflarındaki öğrencilere de çalışmanın amacı açıklanmıştır. Öğrencilerin çalışmaya katılımları tamamen gönüllülük esasına dayalıdır. Katılımcılara doldurmaları için beş sayfalık bir anket verilmiştir ve katılımcıların anketi doldurmaları yaklaşık 20 dakika sürmüştür.

2.4. Verilerin analizi

Toplanan veriler, iki aşamada analiz edilmiştir. İlk aşamada siber zorbalık yapmada cinsiyet farkını anlamak için bir t-test analizi, değişkenler arasındaki ilişkileri anlamak için korelasyon analizi yapılmıştır. Araştırma için oluşturulan model, Yapısal Eşitlik Modeli ile test edilmiştir. Son olarak, test edilen modelin hem kadınlar hem de erkekler için geçerliliğini test etmek için Yapısal Model Değişmezliği testi kullanılmıştır.

3. BULGULAR

3.1. Siber Zorbalık Yapma ve Siber Zorbalığa Maruz Kalma Puanlarında Cinsiyet Farkı

Kadınlar ve erkekler arasında siber zorbalık yapma ve siber zorbalığa maruz kalma puanlarında cinsiyet farkı olup olmadığı t-testi ile sınanmıştır. Sonuçlar, erkek katılımcıların hem siber zorbalık yapma ($M = 20.71, SD = 6.16$) ($t(535.83) = -4.24, p = .000$) hem de siber zorbalığa maruz kalma ($M = 19.94, SD = 5.08$) ($t(540.91) = -2.49, p = .01$) açısından kadınlara göre (zorbalık yapma için ($M = 18.69, SD = 5.31$); zorbalığa maruz kalma için ($M = 19.94, SD = 5.08$)) anlamlı olarak daha yüksek puanlarının olduğunu göstermiştir. Yani erkekler, kadınlara kıyasla daha çok siber zorbalık yapmaktadırlar ve daha çok siber zorbalığa maruz kalmaktadırlar.

3.2. Siber Zorbalık Yapma ve Siber Zorbalığa Maruz Kalma Puanlarında Sınıf Farkı

Siber zorbalık yapma ve siber zorbalığa maruz kalma puanların içim sınıf farkları, MANOVA testiyle sınanmıştır. Sonuçlar, siber zorbalık yapma ve siber zorbalığa maruz kalma açısından anlamlı sınıf farkları olmadığını göstermiştir ($F(8, 1.172), p = .25$, Pillai's Trace = .02, partial eta squared = .01).

3.3. Siber Zorbalık Yapma Motivleri ve Kişilik Özellikleri Değişkenleri Açısından Cinsiyet Farkı

Bu araştırmada, eğlenme, öç alma, zarar verme ve üstünlük kurmayı dört temel siber zorbalık motivisi olarak ele alınmıştır. Bu motivilerden elde edilen puanların, cinsiyete göre farklılaşıp farklılaşmadığı t-testi analizi ile sınanmıştır. Sonuçlar, erkekler ($M = 15.07, SD = 6.32$) ve kadınlar ($M = 12.10, SD = 6.18$) arasında eğlenme [$t(589) = -5.60, p = .00$], erkekler ($M = 11.95, SD = 6.34$) ve kadınlar ($M = 10.16, SD = 4.75$) arasında öç

alma [$t(572.28) = -3.93, p = .00$], erkekler ($M = 7.38, SD = 3.89$) ve kadınlar ($M = 6.30, SD = 2.94$) arasında zarar verme [$t(570.47) = -3.83, p = .00$], erkekler ($M = 10.60, SD = 5.73$) ve kadınlar ($M = 8.28, SD = 3.87$) arasında üstünlük kurma [$t(586.554) = -5.89, p = .00$] motivleri arasında anlamlı cinsiyet farkları olduğunu göstermiştir. Yani, erkekler kadınlara göre siber zorbalık yapmaya eğlenme, öç alma, zarar verme ve üstünlük kurma açılarından daha fazla motive olduklarını raporlamışlardır.

Bu araştırmada, çevrimiçi disinhibisyon, ahlaki değerlerden soyutlanma, narsisizm ve saldırganlık siber zorbaların dört kişilik özelliği olarak ele alınmıştır. Bu kişilik özelliklerinden elde edilen puanların, cinsiyete göre farklılaşıp farklılaşmadığı t-testi analizi ile sınanmıştır. Sonuçlar, erkekler ($M = 17.36, SD = 6.19$) ve kadınlar ($M = 16.93, SD = 5.79$) arasında çevrimiçi disinhibisyon [$t(589) = -.84, p = .40$]; erkekler ($M = 20.40, SD = 7.44$) ve kadınlar ($M = 20.00, SD = 6.95$) arasında ahlaki değerlerden soyutlanma [$t(589) = -.65, p = .52$]; erkekler ($M = 5.25, SD = 3.24$) ve kadınlar ($M = 4.96, SD = 2.81$) arasında narsisizm [$t(534.96) = -1.19, p = .23$]; erkekler ($M = 32.75, SD = 8.56$) ve kadınlar ($M = 31.94, SD = 8.02$) arasında saldırganlık [$t(589) = -1.15, p = .25$] kişilik özellikleri açısından anlamlı cinsiyet farkları olmadığını göstermiştir.

3.4. Siber Zorbalık Yapma Motivleri ve Kişilik Özellikleri Değişkenleri Açısından Sınıf Farkı

Eğlenme, öç alma, zarar verme ve üstünlük kurma motivlerinden elde edilen puanların, sınıfa göre farklılaşıp farklılaşmadığı MANOVA testi ile sınanmıştır. Sonuçlar, eğlenme, öç alma, zarar verme ve üstünlük kurma motivleri açısından anlamlı sınıf farkları olmadığını göstermiştir $F(16, 2.344), p = .29$, Pillai's Trace = .03, partial eta squared = .01.

Çevrimiçi disinhibisyon, ahlaki değerlerden soyutlanma, narsisizm ve saldırganlık kişilik özelliklerinden elde edilen puanların, sınıfa göre farklılaşıp farklılaşmadığı MANOVA testi ile sınanmıştır. Sonuçlar, Çevrimiçi disinhibisyon, ahlaki değerlerden

soyutlanma, narsisizm ve saldırganlık kişilik özellikleri açısından anlamlı sınıf farkları olmadığını göstermiştir $F(16, 2.344)$, $p = .19$, Pillai's Trace = .03, partial eta squared = .01.

3.5. Değişkenler Arasındaki Korelasyonlar

Eğlenme motivisi ile çevrimiçi disinhibisyon ($r = .17$, $p < .01$), ahlaki değerlerden soyutlanma ($r = .17$, $p < .01$), narsisizm ($r = .08$, $p < .05$) ve saldırganlık ($r = .11$, $p < .01$) arasında pozitif bir ilişki bulunmuştur. Öç alma motivisi ile çevrimiçi disinhibisyon ($r = .13$, $p < .01$), ahlaki değerlerden soyutlanma ($r = .32$, $p < .01$), narsisizm ($r = .13$, $p < .01$) ve saldırganlık ($r = .30$, $p < .01$) arasında pozitif bir ilişki bulunmuştur. Zarar verme motivisi ile ahlaki değerlerden soyutlanma ($r = .33$, $p < .05$), narsisizm ($r = .17$, $p < .01$) ve saldırganlık ($r = .24$, $p < .01$) arasında pozitif bir ilişki bulunmuştur. Üstünlük kurma çevrimiçi disinhibisyon ($r = .15$, $p < .01$), ahlaki değerlerden soyutlanma ($r = .17$, $p < .01$), narsisizm ($r = .08$, $p < .01$) ve saldırganlık ($r = .11$, $p < .01$) arasında pozitif bir ilişki bulunmuştur.

3.6. Model Testi

Bu çalışma, siber zorbaların kişilik özellikleri (çevrimiçi disinhibisyon, ahlaki değerlerden soyutlanma, narsisizm ve saldırganlık) ve siber zorbalık yapma motivileri (eğlenme, öç alma, zarar verme ve üstünlük kurma) arasındaki ilişkileri incelemeyi hedeflemiştir. Bu amaca yönelik olarak *Kullanımlar ve Doyumlar Kuramı*'ni temel alan bir Yapısal Eşitlik Modeli (YEM) oluşturulup test edilmiştir.

YEM analizi sonuçlarına göre, test edilen modelin uyum iyiliği indekslerinin kabul edilebilir olduğu görülmüştür. Modelin uyum indeksleri şu şekildedir; ($\chi^2 = 662.19$, $df = 296$, $p = .00$; $\chi^2 / df = 2.24$; GFI = .92, CFI = .95, TLI = .94, SRMR = .04, RMSEA = .04). Fakat test edilen bu modelde, ilişkili olması beklenen bütün yollar istatistiksel olarak anlamlı bulunmamıştır.

Bu yüzden, istatistiksel olarak anlamlı olmayan yollar modelden çıkarılıp model yeniden test edilmiştir. Elde edilen bu yeni modelin de uyum iyiliği indekslerinin kabul edilebilir aralıkta olduğu görülmüştür ($\chi^2 = 697.56$, $df = 304$, $p = .00$; $\chi^2 / df = 2.23$; GFI = .92, CFI = .95, TLI = .94, SRMR = .05 RMSEA = .04). Bu modeldeki anlamlı ilişkiler göz önünde bulundurulduğunda, çevrimiçi disinhibisyon ($\gamma = .21$, $p < .01$), eğlenme amacıyla siber zorbalık yapma davranışıyla ilişkili tek kişilik özelliğidir. Ahlaki değerlerden soyutlanma ($\gamma = .35$, $p < .001$) ve saldırganlığın ($\gamma = .19$, $p < .001$) ise öç almak için siber zorbalık yapma davranışıyla ilişkili olduğu bulunmuştur. Ahlaki değerlerden soyutlanma ($\gamma = .46$, $p < .001$) ve saldırganlığın ($\gamma = .09$, $p < .05$), zarar vermek için siber zorbalık yapma davranışıyla pozitif yönde ama çevrimiçi disinhibisyon ($\gamma = -.11$, $p < .01$) kişilik özelliğiyle negatif yönde ilişkili olduğu bulunmuştur. Ahlaki değerlerden soyutlanma ($\gamma = .37$, $p < .001$) ve narsisizm ($\gamma = .13$, $p < .001$), üstünlük kurmak için siber zorbalık yapma davranışıyla ilişkili olduğu bulunmuştur.

Bu çalışmada cinsiyetin, siber zorbalık yapma puanları ve siber zorbalık yapma motivleri üzerinde önemli bir rolü olduğu bulunmuştur. Fakat, bu çalışmada test edilen model hem kadın hem de erkek katılımcılar bir arada tutularak sınanmıştır. Bu nedenle, test edilen modelin hem kadınlar hem de erkekler için değişmez olup olmadığı Yapısal Model Değişmezliği testi kullanılarak sınanmıştır. Yapısal Model Değişmezliği testini yürütebilmek için Byrne'ın (2010) detaylandığı prosedürler takip edilmiştir. Yapısal Model Değişmezliği analizi testinin sonucunda, test edilen modelin uyum iyiliği indekslerinin kabul edilebilir olduğu görülmüştür. Modelin uyum indeksleri şu şekildedir; ($\chi^2 = 1095.32$, $df = 614$, $p = .000$; $\chi^2 / df = 1.78$; GFI = .88, CFI = .93, TLI = .92, SRMR = .07 RMSEA = .03). Sonuç olarak, bu araştırmada test edilen modelin hem kadınlar hem de erkekler için geçerli bir model olduğu testpit edilmiştir.

4. TARTIŞMA

Bu çalışmanın asıl hedefi siber zorbalığın üniversite öğrencileri arasındaki yaygınlığını belirlemek olmasa da bu çalışmada, üniversite öğrencileri arasında oldukça yüksek bir siber zorbalık yapma yaygınlığının olduğu görülmüştür. Araştırmaya katılan üniversite öğrencilerinden neredeyse yarısı (toplamda %49.7 ve bu toplamın %46.7'si siber zorba-mağdur ve %3'ü sadece zorba) son altı ayda birilerine siber zorbalık yaptıklarını raporlamışlardır. Bu çalışmada, katılımcıların siber zorba-mağdur veya sadece zorba olarak gruplanabilmeleri için siber zorbalık davranışların iki veya daha çok yapmaları gerektiği düşünüldüğünde bu yaygınlık oldukça yüksek gibi görünmektedir. Bu orana benzer olarak Kokkinos ve diğ., (2014) %47 lik bir siber zorbalık yapma yaygınlığı raporlamışlardır. Diğer yandan, Francisco ve diğ., (2015) ve MacDonald ve Roberts-Pittman (2010) gib araştırmacılar, kendi çalışmalarında üniversite öğrencileri arasında siber zorbalık yapma yaygınlığının %10'un altında olduğunu raporlamışlardır. Dilmaç (2009) ve Arıcak (2009) ise Türk üniversite öğrencileriyle yaptıkları araştırmalarında siber zorbalık yapma yaygınlığını sırasıyla %22.5 ve %19.7 olarak tespit etmişlerdir. Siber zorbalık yapmanın yaygın olmasının muhtemel bir nedeni, bilgi iletişim teknolojilerinin Türk üniversite öğrencileri arasında sıkça kullanılıyor olması olarak düşünülebilir (Erdur-Baker, 2010). Bu nedenle bağlantılı olarak, Türkiye İstatistik Kurumu'nun (TÜİK) 2014 yılında bilgi iletişim teknolojilerinin kullanım sıklığı dikkate alınabilir. TÜİK (2014) bilgi iletişim teknolojilerinin en sık kullanıldığı yaş grubunun üniversite çağındaki bireylerin olduğunu saptamıştır. Yani, bilgi iletişim teknolojilerinin kullanım sıklığının artmasının gençlerin siber zorbalığa karışma ihtimallerini arttırdığı düşünülebilir.

Bu çalışmanın sonuçları erkeklerin kadınlara kıyasla daha fazla siber zorbalık yaptıklarını ortaya koymuştur. Bu bulgu, erkeklerin siber zorba olarak daha çok hareket ettiklerini belgeleyen uluslararası bir grup çalışmayla bağdaşmaktadır (Bauman ve diğ., 2013; Bayraktar ve diğ., 2014; Calvete ve diğ., 2010; Doucette, 2013; Francisco ve diğ., 2015; Huang ve Chou, 2010; Lapidot-Lefler ve Dolev-Cohen, 2014; Li, 2006, Slonje ve

Smith, 2008; Wong ve diğ., 2014). Ancak, bu bulgu kadınların daha çok siber zorbalık yaptıklarını raporlayan (Beckman ve diğ., 2013; Connel ve diğ., 2014; Erdur-Baker ve Tanrıkulu, 2010; Rice ve diğ., 2015) ve siber zorbalık yapmada herhangi bir cinsiyet farkı olmadığını bulan çalışmalarla da ters düşmektedir (Arıcak, 2009; Balakrishnan, 2015; Holfeld ve Leadbeater, 2015; Monks ve diğ., 2012; Patchin ve Hinduja, 2006; Spears ve diğ., 2015; Tokunaga, 2010; Topcu ve diğ., 2008; Williams ve Guerra, 2007; Ybarra ve Mitchell, 2004a).

Yine de bu araştırmada tespit edilen erkeklerin daha çok siber zorbalık yaptığı bulgusu, Türk gençleri ile yapılan çalışmaların büyük çoğunluğuyla uyumludur. Türk gençleri ile yapılan siber zorbalık araştırmalarının bulgularında siber zorba olarak davranmakta Türk erkeklerin daha baskın oldukları görülmektedir. Doğrusu, erkekleri daha fazla siber zorba olarak raporlayan çalışmaların sayısı (Akbulut ve Erişti, 2011; Baştürk-Akca ve diğ., 2015; Ekşi, 2012; Erdur-Baker ve Kavşut, 2007; Erdur-Baker ve Topcu, 2009; Erdur-Baker, 2010; Erdur-Baker, 2013; Karabacak ve diğ., 2015; Ozden ve Icellioğlu, 2014; Pamuk ve Bavlı, 2013; Şahin ve diğ., 2012; Tanrıkulu ve diğ., 2015), kadınları siber zorba olarak raporlayan (Erdur-Baker ve Tanrıkulu, 2010) veya cinsiyetin siber zorbalıkta önemli bir rolünün olmadığını raporlayan (Arıcak, 2009; Topcu ve diğ., 2008) çalışmaların sayılarına kıyasla gözle görünür şekilde fazladır.

Peki, Türk erkekleri kadınlara kıyasla neden daha çok siber zorbalık yapıyorlar? Bu konuda, henüz boylamsal bir araştırma deseninde tasarlanmış bir çalışma olmasa da bazı araştırmacılar bu konu hakkında bazı açıklamalarda bulunmuşlardır. Mesela, Topcu ve Erdur-Baker, (2012), ve Akbulut ve Erişti (2011) Türk toplumunda var olan kadın ve erkek cinsiyet rollerinin, toplum tarafından birbirlerinden farklı olarak şekillendirilmesini erkeklerin neden siber zorbalık yapmaya daha meyilli olduklarını açıklaabilecek önemli bir neden olarak öne sürmüşlerdir. Bu öngörüye göre, toplum kadınların sosyal kurallara daha bağlı kalmalarını beklerken, bu tür beklentiler erkekler için çok fazla söz konusu değildir. Bu da, Türk toplumunda erkeklerin neden daha çok siber zorbalık yapmaya yatkın olduklarını açıklayıcı temel sebeplerden birini

oluşturabilmektedir. Erkeklerin neden daha çok siber zorbalık yaptıklarını açıklamaya yönelik bir diğer sebep ise erkeklerin kadınlara göre kendilerini bilgi iletişim teknolojilerini kullanmada daha becerikli görmeleri olabilir (Huang ve Chou, 2010). Toplumun kadın ve erkek cinsiyet rollerini farklı şekilde şekillendirmesi ve erkeklerin kendilerini teknoloji kullanmada daha iyi görmelerinin yanı sıra, bazı araştırmacılar Türk erkeklerin neden daha çok siber zorbalık yapmaya meyilli olduklarını açıklayabilecek birkaç aracı değişken (mediator) önermişlerdir. Empatinin (Topcu ve Erdur-Baker, 2012), riskli İnternet kullanımının (Erdur-Baker ve Akbaba-Altun, 2010), ahlaki değerlerden soyutlanma ve saldırganlığın (Erdur-Baker, Tanrikulu ve Topcu, 2015) cinsiyet ve siber zorbalık yapma davranışını açıklayabilecek aracı rollerinin oldukları raporlanmıştır.

Bu araştırmanın en temel bulgularından birisi, Yapısal Eşitlik Modeli ile sınanan modelin uyum iyiliği indekslerinin araştırmada yararlanılan veri setiyle oldukça uyumlu olmasıdır. Sonuç olarak, bu araştırmanın kuramsal arka planını oluşturan *Kullanımlar ve Doyumlar* kuramının (Blumler ve Katz, 1974), siber zorbalık yapma davranışlarını açıklayabildiği ortaya çıkmıştır. Bu açıdan, bu çalışma siber zorbalık yapma davranışlarını açıklamaya yönelik olarak Kullanımlar ve Doyumlar (Blumler ve Katz, 1974) kuramını dikkate alıp bu kuramı ampirik olarak test eden ve bu kuramın siber zorbalık davranışlarına uygulanabilirliğini ortaya koyan öncü çalışmalardan biridir.

Yapısal Eşitlik Modeli ile test edilen modelin siber zorbalık yapma motivleri ve siber zorbaların kişilik özellikleri arasındaki beklenen ilişkilere yönelik hipotezler göz önüne alındığında sonuçlar aşağıdaki gibidir.

Birinci - dördüncü hipotezler: Bu hipotezlere göre, eğlenme amacıyla siber zorbalık yapma motivleri ile çevrimiçi disinhibisyon, ahlaki değerlerden soyutlanma, narsisizm ve saldırganlık arasında pozitif ve anlamlı ilişkiler beklenmekteydi. Bu dört hipotezden yalnızca, eğlenme amacıyla siber zorbalık yapma motivleri ile çevrimiçi disinhibisyon arasındaki ilişki pozitif ve anlamlı olarak doğrulandı. Yani, çevrimiçi disinhibisyon

seviyesi yükseldikçe eğlenme amacıyla siber zorbalık yapma ihtimalinin de yüksek olduğu testpit edildi. Alanyazında, bu ilişkiyi doğrudan açıklayabilecek bir araştırma bulunmamasına rağmen bu ilişki dolaylı olarak açıklanabilir. Mesela, önceki çalışmalar, yüksek çevirimiçi disinhibisyon seviyesinin daha çok siber zorbalık yapmanın anlamlı bir yordayıcısı olduğunu bulmuştur (Barlett, 2015; Görzig ve Olafsson, 2013; Udris, 2014; Veenstra, 2011; Wright, 2013; Wright, 2014). Eğlenme amacıyla siber zorbalık yapma ile çevirimiçi disinhibisyon arasındaki ilişkiyi anlamlandırmada Suler'in (2004) çevirimiçi disinhibisyonu oluşturan faktörlerin neler olduğuna dair açıklamaları kullanılabilir. Bu faktörlerden bir tanesi, gerçek kimliğin saklanmasıyla çevirimiçi ve çevirimdışı (offline) davranışların sonuçlarının tamamen kabul edilmemesi anlamına gelen "ayrıştırıcı anonimlik (dissociative anonymity)"tir. Ayrıştırıcı anonimlik nedeniyle siber zorbalar çevirimiçi davranışlarını sorumluluğunu üstlenmeyip çevirimiçi dünyada eğlenmeye haklarının olduğunu bu sebeple de çevirimiçi davranışlarının sonuçlarından tamamen sorumlu olmadıklarını düşünebilirler. Suler'in (2004) sözünü ettiği çevirimiçi disinhibisyonu oluşturan faktörlerden bir diğeri de bireylerin çevirimiçi dünyada eşzamanlı olarak iletişim kuramaması yani "eşzamanlı olmama (asynchronicity)"dır. Siber zorbalar, yaptıklarını zorbalık davranışının sonuçlarını anlık olarak doğrudan gözlemleyemektedir. Bu engel, siber zorbaların, yaptıkları davranışlarının tam olarak nasıl sonuçlar doğurduğunu anlamalarını engelleyebilir. Davranışlarının olumsuz etkilerinin neler olduğunu anlayamayan bir siber zorba, kendisinin eğlendiğini farz ederek başkalarına siber zorbalık yapmaya devam edebilir.

Beşinci - sekizinci hipotezler: Bu hipotezlere göre, öç alma amacıyla siber zorbalık yapma motivi ile çevirimiçi disinhibisyon, ahlaki değerlerden soyutlanma, narsisizm ve saldırganlık arasında pozitif ve anlamlı ilişkiler beklenmiştir. Sonuçlar, bu hipotezlerden yalnızca, öç alma amacıyla siber zorbalık yapma motivi ile ahlaki değerlerden soyutlanma ve saldırganlık arasında pozitif ve anlamlı bir ilişki olduğunu göstermiştir. Bir başka deyişle, ahlaki değerlerden soyutlanma ve saldırganlık seviyeleri arttıkça, öç almak için siber zorbalık yapma riskinin arttığı bulgulanmıştır. Ahlaki değerlerden soyutlanma ve siber zorbalık yapma (örn., Perren ve Gutzwiller-Helfenfinger, 2012;

Tanrikulu ve Campbell, 2015) ve saldırganlık ve siber zorbalık yapma (örn., Fletcher ve diğ., 2014; Lonigro ve diğ., 2015) arasındaki ilişkiler halihazırda raporlanmıştır. Ancak, ahlaki değerlerden soyutlanma ve saldırganlık ile öç alma amacıyla siber zorbalık yapma arasındaki ilişkiler mevcut başka çalışmalardan yararlanılarak dolaylı yoldan açıklanabilir.

Bandura'nın (2002) ahlaki değerlerle ilgili öne sürdüğü bilişsel mekanizmalar ahlaki değerlerden soyutlanma ve öç almak için siber zorbalık yapma arasındaki ilişkileri açıklamak için göz önünde bulundurulabilir. Bandura'nın (2002) önermeleri dikkate alındığında siber zorbaların zorbalık davranışlarını haklı çıkarmaya çalışabilecekleri düşünülebilir. Örneğin, daha önce yüz yüze gerçekleşen akran zorbalığına maruz kalmış bir birey, kendisine zorbalık yapanlardan intikam almak isteyip yaptığı siber zorbalık davranışına gerekçe olarak kendisinin daha önce yüz yüze akran zorbalığına maruz kalmış olduğunu gösterebilir. Ayrıca, siber zorbalar, zorbalık davranışlarını haklı göstermek için kendilerine daha önce zorbalık yapmış olan kişileri suçlayabilirler.

Saldırganlık ve öç almak için siber zorbalık yapma arasındaki ilişkileri açıklamak için halihazırdaki alanyazın bulguları dikkate alınabilir. Bergman ve diğerleri (2007) saldırgan bireylerin öç almaya da meyilli olduklarını bulmuşlardır. Bu durum, siber zorbalık için de söz konusu olabilir. Nitekim, König ve diğerleri (2010), kindar olmanın siber zorbaların ortak bir özelliği olduğunu bulgulamışlardır.

Dokuzuncu - on ikinci hipotezler: Bu hipotezlere göre, zarar verme amacıyla siber zorbalık yapma motivisi ile çevirimiçi disinhibisyon, ahlaki değerlerden soyutlanma, narsisizm ve saldırganlık arasında pozitif ve anlamlı ilişkiler beklenmiştir. Sonuçlar, bu hipotezlerden, zarar verme amacıyla siber zorbalık yapma motivisi ile ahlaki değerlerden soyutlanma ve saldırganlık arasında pozitif ve anlamlı bir ilişki olduğunu göstermiştir. Öte yandan, çevirimiçi disinhibisyon ve zarar verme amacıyla siber zorbalık yapma motivisi arasında negatif ve anlamlı bir ilişki bulunmuştur. Başka bir deyişle, ahlaki değerlerden soyutlanma ve saldırganlık seviyeleri arttıkça, zarar vermek için siber

zorbalık yapma riskinin arttığı fakat çevirimiçi disinhibisyon arttıkça zarar vermek için siber zorbalık yapma riskinin azaldığı bulunmuştur.

Bandura'nın (2002) ahlaki değerlerle ilgili öne sürdüğü bilişsel mekanizmalar ahlaki değerlerden soyutlanma ve zarar vermek için siber zorbalık yapma arasındaki ilişkileri açıklamak için göz önünde bulundurulabilir. Siber zorbalar, zorbalık davranışlarının etkilerini anlık olarak göremedikleri için hedef aldıkları kişilere verdikleri zararın farkında olmayabilirler veya verdikleri zararı azımsayabilirler. Bu nedenle, siber zorbalık yaparak birilerini mağdur etmeye devam edebilirler. Siber zorbalar, kendilerini mağdurlarla kıyaslayarak da yaptıkları zorbalık davranışlarını bilişsel olarak kavramsallaştırabilirler. Mesela, zorbalık yapmak istediği kişiyi kendisinden fiziksel, sözel ya da ilişkisel olarak daha güçlü gören bir siber zorba, eğer kendisi karşı tarafı hedef almazsa er ya da geç kendisinin siber zorbalığa maruz kalabileceğini düşünebilir. Bunlarla beraber, siber zorbalar mağdurları “zavallı veya ucube” gibi isimlendirip mağdurların zarar görmeyi hak ettiklerini çünkü onların normal insanlar olmadıklarını düşünebilirler. Siber zorbalar, yaptıkları zorbalık davranışlarına başka yeni adlar uydurarak da siber zorbalık yapmayı normalleştirebilirler. Zorbalık yapmayı bir “ders verme” olarak niteleyen bir zorba, mağdura zarar vermediğini aksine zorbanın gerçek hayatla ilgili öğrenmesi gerekenleri öğrettiğini iddia edebilir.

Saldırganlık ve zarar vermek için siber zorbalık yapma arasındaki ilişkileri açıklamak için doğrudan çalışmalar olmasa da bazı geçmişteki alan yazına dayanan bazı çıkarımlar yapılabilir. Çevirimiçi ortamlar, saldırgan olan ve siber zorbalık yapmak isteyen bireylere birçok yeni fırsatlar yaratmaktadır. Siber zorbalık sayesinde, saldırganca davranışlar zamanla ve mekanla sınırlı olmaktan kurtulup sınırsız bir insan grubuna açık hale gelmiştir. Daha da önemlisi, siber zorbalık sayesinde saldırgan bireyler daha kolay ve daha az riskli bir şekilde ama daha saldırganca davranabilmektedirler. Yukarıda bahsi geçen çıkarımla ilgili olarak, saldırganca davranış sergileyen bireyler daha kolay ve daha az riskli olduğu için siber zorbalık yaptıklarını belirtmişlerdir (Compton ve diğ., 2014; Topcu ve diğ., 2013; Varjas ve diğ., 2010).

Çevirimiçi disinhibisyon ve zarar verme amacıyla siber zorbalık yapma motivisi arasında bulunan negatif ve anlamlı ilişki öngörölmeyen bir bulguydu. Çevirimiçi disinhibisyon, çevirim içi ortamda bireye daha çok cesaret ve daha az korku sağlayabilir. Bu sebeple, daha yüksek seviyede çevirimiçi disinhibisyon yaşayan bireyler çevirimiçi ortamda daha çok riskli davranış gösterebilirler. Ve bu risk de onların siber zorbalığa maruz kalma ihtimallerini arttırabilir. Bundan dolayı da, çevirimiçi disinhibisyon, siber zorbalık yapmaktan ziyade siber zorbalığa maruz kalma ile ilişkili olabilir.

On üçüncü - on sekizinci hipotezler: Bu hipotezlere göre, üstünlük kurma amacıyla siber zorbalık yapma motivisi ile çevirimiçi disinhibisyon, ahlaki değerlerden soyutlanma, narsisizm ve saldırganlık arasında pozitif ve anlamlı ilişkiler beklenmekteydi. Sonuçlar, bu hipotezlerden yalnızca, üstünlük kurma amacıyla siber zorbalık yapma motivisi ile ahlaki değerlerden soyutlanma ve narsisizm arasında pozitif ve anlamlı bir ilişki olduğunu gösterdi. Yani, ahlaki değerlerden soyutlanma ve narsisizm arttıkça üstünlük kurmak için siber zorbalık yapma riski artmaktadır.

Bandura'nın (2002) ahlaki değerlerle ilgili öne sürdüğü bilişsel mekanizmalar ahlaki değerlerden soyutlanma ve üstünlük kurmak için siber zorbalık yapma arasındaki ilişkileri açıklamak için göz önünde bulundurulabilir. Fiziksel ortamlarda dominant olan bireyler, çevirimiçi ortamlarda da üstünlüklerini devam ettirmek isteyebilirler. Ya da tam aksine, fiziksel ortamlarda fiziksel, sözel veya ilişkisel olarak dominant olmayan bireyler, teknoloji kullanmadaki bilgi ve becerilerine dayanarak çevirimiçi ortamları domine etmek isteyebilirler. Bu ikinci tip bireyler, kendilerinin fiziksel ortamda dezavantajlı ama çevirimiçi ortamlarda avantajlı olduklarını iddia ederek siber zorbalık davranışlarını rasyonelleştirebilirler.

Narsisizm ve üstünlük kurmak için siber zorbalık yapma arasındaki ilişkiler ile ilgili siber zorbalık alanyazınında bir çalışmaya rastlanılmasa da narsisizm ve üstünlük kurmak için yüz yüze akran zorbalığı yapma arasında pozitif ve anlamlı bir ilişki Reijntjes ve diğerleri (2015) tarafından raporlanmıştır.

Narsisizm ve üstünlük kurmak için siber zorbalık yapma arasındaki ilişkiyi açıklamak için narsist bireylerin kişilik özelliklerinden yararlanılabilir. Thomas'a (2012) göre narsizme meyilli bireyler, başkalarıyla ilişkilerinde, sosyal statü kazanmak, başkalarının üstünde otorite kurmak veya manipülatif olmak isterler. Bu kişilik özellikleri dikkate alındığında, narsizme daha çok yatkın olan siber zorbaların teknoloji aracılığıyla başkalarına çevrimiçi ortamlarda üstünlük kurmaya çalışabilecekleri, çevrimiçi temas kurduğu ama sevmedikleri kişileri utandırmak isteyebilecekleri veya çevrimiçi ortamlarda kendilerinin önemli ve üstün olduklarını kanıtlamak isteyebilecekleri düşünülebilir.

4.1. Bulgulara ve İleriki Çalışmalara Yönelik Çıkarımlar

Bu çalışma, siber zorbalık yapma davranışının kuramsal açıklamasının yapılabilmesi için Kullanımlar ve Doyumlar Kuramı'nın kullanılabileceğini ampirik olarak ortaya koymuştur. Alonzo ve Aiken (2004), bir siber zorbalık davranışı çeşidi olan “ortamı kızıltırma (flaming)” davranışı ile *Kullanımlar ve Doyumlar Kuramı*'nı ampirik olarak test etmiştir. Ama, *Kullanımlar ve Doyumlar Kuramı*, siber zorbalık davranışının kuramsal dayanağı olarak ilk kez bu çalışmada sınanmıştır. Bu nedenle, *Kullanımlar ve Doyumlar Kuramı*'nı siber zorbalık davranışı yapma ile ilişkilendirip bu kuramın uygunluğunu ampirik olarak test edecek daha çok çalışmaya gerekesininim vardır. Bu nedenle, ileriki çalışmalar, *Kullanımlar ve Doyumlar Kuramı*'nı siber zorbalık yapma davranışı ile ilişkilendirip bu kuramın uygunluğunu ampirik olarak test etmelidirler.

Bu çalışmanın kurama olduğu kadar siber zorbalık alanındaki araştırmalara da katkıları vardır. İlk olarak, bu çalışma siber zorbalık yapan bireylerin siber zorbalık davranışlarının ardında yatan motivlerin neler olduğunu ve bu motivlerle siber zorbaların kişilik özellikleri arasındaki muhtemel ilişkileri sinayarak siber zorbalık davranışını anlamlandırmaya çalışmıştır. Siber zorbalık alanyazını dikkate alındığında, çalışmaların büyük bir kısmının siber zorbalığa maruz kalmış mağdurlara yönelik olduğu gözlemlenmektedir. Bu çalışma, siber zorbalara odaklanarak, alanyazına ve

araştırmacalara siber zorbalığı etkili bir şekilde önleyebilmek için siber zorbalara da odaklanılması gerektiğinin altını çizmiştir.

Bu araştırmanın uygulamaya yönelik çıkarımlarına gelince, Yüksek Eğitim Kurumu'nun (YÖK) siber zorbalık yapma davranışının üniversitelerde yaygın olduğunun farkında olup siber zorbalığı önlemeye yönelik programlar geliştirmesinde yarar vardır. Ayrıca, lisans öğrencilerini almakta olduğu bilgisayar kullanımı veya bilgi ve iletişim teknolojileri derslerinde bilişim etiği, riskli İnternet kullanımı veya siber zorbalıktan nasıl korunulur gibi içerikler YÖK tarafından önerilebilir.

Bu çalışmanın sonuçlarının, üniversite psikolojik danışma ve rehberlik birimlerinde görev yapmakta olan psikolojik danışmanlara yönelik çıkarımları da vardır. Psikolojik danışmanlar, siber zorbalığın üniversite öğrencileri arasında yaygın olduğunun ve hem mağdurlar hem de zorbalılar üzerinde siber zorbalığın olumsuz etkilerinin olduğunun bilincinde olmalılar. Fakat, siber zorbalık yapan bireylere psikolojik danışmanların nasıl bir yardım sağlayacaklarına yönelik bilgi alanyazında oldukça sınırlıdır. Bu nedenle, siber zorbalılara profesyonel psikolojik yardım sağlamaya yönelik gelecekte yapılacak araştırmalar oldukça önemlidir. Bu araştırmanın bulguları, erkeklerin daha çok siber zorbalık yaptıklarını göstermiştir. Bu bulguya dayalı olarak, psikolojik danışmanlar, siber zorbalık yapan erkek kişilere profesyonel yardım sağlamaya özen gösterebilirler. Erkeklerin kadınlara göre daha az psikolojik destek istedikleri göz önüne alındığında, erkek siber zorbalılara yönelik psikolojik yardım hizmetleri büyük önem kazanmaktadır.

Üniversite yönetimleri de siber zorbalığın kampüste var olduğunu, ve üniversite gençliğinin siber zorbalık nedeniyle birçok sıkıntı yaşayabileceğini dikkate almalıdırlar. Siber zorbalığın kampüsteki varlığı, gençlerin bireysel ve sosyal yaşamlarını olumsuz etkileyebileceği için siber zorbalık üniversite kampüsündeki güven ortamını olumsuz etkileyebilir. Bu nedenle, üniversite yönetimlerinin siber zorbalığı önlemeye yönelik geliştirip uygulamaya koyacağı önleme ve müdahale programları üniversite kampüsündeki güven ortamını olumlu yönde etkileyebilir.

Bu çalışmanın bulguları, siber zorbalığı önleyecek politika geliştirmeye yönelik çıkarımlar da içermektedir. Ülkemizdeki tüm üniversitelerin YÖK tarafından idare edildiği düşünüldüğünde YÖK'ün uygulamaya koyacağı, üniversite öğrencileri arasında çevrimiçi ortamların daha güvenli hale gelmesine yönelik siber zorbalığı önleyici programların uygulamaya koyulması önemlidir. Bu sayede, üniversite gençliği arasında çevirim içi saldırganlık davranışına ve siber zorbalığa yönelik farkındalık artabilir. Ülkemizde, çevrimiçi şantaj, sahtekarlık veya siber güvenliğe yönelik yasal düzenlemeler yapılsa da (Hekim ve Başbüyük, 2013), siber zorbalığı önlemeye yönelik herhangi bir yasal düzenleme henüz yapılmamıştır. Fakat, siber zorbalığı önlemeye yönelik uluslararası yasal düzenlemeler dikkate alındığında Avustralya (Butler ve diğ., 2011), İngiltere (Marczak ve Coyne, 2010) veya Amerika'da (Gillespie, 2006; Hinduja ve Patchin, 2011) siber zorbalığın hukuki boyutu tartışılmaktadır. Bu sebeple, ülkemizde de siber zorbalığın hukuki boyutunu ele alan yasal düzenlemeler, siber zorbalığın önlenmesinde fayda sağlayabilir.

Appendix R: Tez Fotokopi İzin Formu

ENSTİTÜ

Fen Bilimleri Enstitüsü

☐

Sosyal Bilimler Enstitüsü

☒

Uygulamalı Matematik Enstitüsü

☐

Enformatik Enstitüsü

☐

Deniz Bilimleri Enstitüsü

☐

YAZARIN

Soyadı : Tanrıkulu

Adı : İbrahim

Bölümü : Eğitim Bilimleri Bölümü- Psikolojik Rehberlik Anbilim Dalı

TEZİN ADI: The Relationships among Cyber Bullying Perpetration Motives and Personality Traits: Testing of Uses and Gratifications Theory

TEZİN TÜRÜ : Yüksek Lisans

☐

Doktora

☒

1. Tezimin tamamı dünya çapında erişime açılsın ve kaynak gösterilmek şartıyla tezimin bir kısmı veya tamamının fotokopisi alınsın. ☐

2. Tezimin tamamı yalnızca Orta Doğu Teknik Üniversitesi kullanıcılarının erişimine açılsın. (Bu seçenekle tezinizin fotokopisi ya da elektronik kopyası Kütüphane aracılığı ile ODTÜ dışına dağıtılmayacaktır.) ☐

3. Tezim bir (1) yıl süreyle erişime kapalı olsun. (Bu seçenekle tezinizin fotokopisi ya da elektronik kopyası Kütüphane aracılığı ile ODTÜ dışına dağıtılmayacaktır.) ☒

Yazarın imzası

Tarih