BULLYING AT UNIVERSITY: PERSONALITY TRAITS, PSYCHOPATHOLOGY AND INTERRELATIONSHIPS IN ROLES PROMOTING CYBERBULLYING AMONG UNIVERSITY STUDENTS.

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For a dissertation in fulfillment of the requirements of the degree of

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Researcher declaration

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I Angela Lambrou-Louca certify that I am the author of the work Bullying at University: Personality Traits, Psychopathology and Interrelationships in Roles Promoting Cyberbullying Among University Students that I have presented for examination for the PhD thesis at the University of Nicosia. I also certify that this is solely my own original work, other than where I have clearly indicated, in the thesis, that it is the work of others.

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Abstract

The growth of research body surrounding cyberbullying behavior through the utilization of technology, has raised issues regarding the personality traits, psychological symptoms and interrelational roles of individuals involved in such behaviors. The current research included three separate studies, two quantitative and one qualitative study that investigated the relationship between the distinguishing characteristics and engagement in cyberbullying behaviors as well as the perceptions of students regarding this phenomenon. Overall, 431 university undergraduate and graduate students (mean age = 22.28, 73.3% female) currently studying in Cyprus, completed self-report questionnaires, measuring cyberbullying, cyber-victimization, personality characteristics, and psychological symptoms. The participants (N=20) of Study III were interviewed using a semi-structured interview questionnaire in order to investigate their perceptions and experiences with cyberbullying behaviors. Latent profile analysis indicated four distinct groups of participants (uninvolved, perpetrators, victims, perpetrator/victim). Results indicated that approximately 46% of the overall sample had participated in a cyber-bullying incident assuming any role. Cyber perpetrator/victim, the most common participant role, endorsed more psychological symptoms, more psychological traits and distinct personality characteristics compare to the rest of the groups. These findings confirm that cyber-aggression is an ongoing phenomenon in university that warrants special attention and the development of effective prevention and intervention programs to eliminate negative consequences associated with cyberbullying in university population as it is discussed.

Keywords: Cyberbullying, University Students, Personality traits, Psychopathology, Interrelational Roles

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Dedication

To my family, my parents, my husband and children for their support and patience without which the completion of this paper would not have been possible.

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CHAPTER 1

INTRODUCTION

Overview

Digital media have altered our everyday lives and offer a plethora of communication and interaction capabilities. To mention a few, blogs, social networking sites, instant messengers, email, chat, forums, and video messaging are applications that enable the user to stay in touch and interact with other individuals wherever they may be. Regardless of the numerous benefits that the internet provides, when used wrongfully it may cause intentional harm to other individuals, a phenomenon known as cyberbullying. When describing the current cyberbullying crisis in the United States, researchers stated "The schoolyard physical assault has been replaced by a twenty-four hour per day, seven day-a week online bashing" (The Status of Cyberbullying, 2015).

This new form of bullying can cross physical, cultural and geographical barriers in just a matter of moments (Albin 2012; Hvidston, Paullet & Pinchot, 2014; Range, & Harbour, 2012). At the turn of the twenty-first century, young adults grow up in a world that is dominated by technology and digitization. Internet-enabled world offers blogs, social networking, and instant messaging that are competing with the traditional form of face-to-face and telephone communication and are frequently used among youth and adolescents (Boyd, 2008; Hinduja & Patchin, 2008). The benefits of information, entertainment and speed enable youth to develop various social and emotional skills, express sentiments and engage in critical thinking and decision making while at the same time promoting social isolation because of significantly high use of technology and computers (Berson, 2000). However, even though the majority of youth have developed a productive way of using computers and the internet, a small but constantly growing proportion of young adults are experiencing interpersonal violence,

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aggression and harassment through cyberbullying (Hinduja & Patchin, 2008). The novel technology options provide the opportunity to expand the traditional configuration of bullying into the new sphere of cyberspace, thus creating an expeditiously developing form of online psychological bullying (Hinduja, & Patchin, 2014; Kowalski & Limber, 2007). Adolescents and young adults seek novel ways to harass and embarrass their peers using the new forms technology to construct a new pattern of bullying generally referred to as cyberbullying (Aftab, 2006).

1.1 Background

Cyberbullying definitions seem to differ in research, which has led researchers to study acutely different phenomena while using similar terminology; thus, often limiting cross-study comparisons (Tokunaga, 2010). An amalgamated definition has been provided by Tokunaga (2010), who "synthesized" 25 scholarly definitions of cyberbullying in order to define it as "any behavior performed through electronic media by individuals or groups of individuals that repeatedly communicates hostile or aggressive messages intended to inflict harm or discomfort on others" (p.278).

Cyberbullying may appear in different forms including dissemination of hateful rumors online, posting embarrassing or sensitive information, sending abusive, photos, or videos of someone on the internet, offensive or derogatory messages, and various other forms which are explained in detail in Chapter II (Bauman, 2014). Similarly, to traditional bullying, cyberbullying could be detected easily by foul messages, reciprocal harassment, and derogatory or disgraceful posts (Musharraf, & Anis-ul-Haque, 2018). Research confirms that adverse mental health effects of perpetrators of cyberbullying and victims of cyberbullying were significantly higher than those suffered by victims of traditional offline bullying (Campbell, 2005). This might be due to the unique features that cyberbullying possesses, such as providing anonymity to the perpetrators, sharing an act of cyberbullying with a wider

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audience, no geographical boundary, and access to the victims of cyberbullying 24 hours, 7 days a week (Vaillancourt, Faris, & Mishna, 2017).

The results of studies regarding the prevalence of cyberbullying vary immensely possibly due to the aforementioned variations in the definition of cyberbullying as well as in the measurement construct, the period for reporting cyberbullying, methodologies and sample size utilized by different studies (Musharraf & Anis-ul-Haque, 2018). At the university level perpetration of cyberbullying acts are estimated between 8.6% and 22.5% (Selkie, Kota, & Moreno, 2017). Recent statistical calculations estimate the incidence rate of cyberbullying among university students to be 22% (Orel, Campbell, Wozencroft, Leong, & Kimpton, 2017). Internationally, the current rates of cyberbullying are between 20 and 40%, while specifically for university students, the rates are on the high end of the range and reach 34% (Florida Atlantic University, 2017; Pham & Adesman, 2015).

Even though cyberbullying occurs among students in university, the bulk of cyberbullying research has focused on middle school and high school students (Crosslin & Golman, 2014). The emerging studies concerning cyberbullying among college students have focused on their perceptions of the phenomenon, the prevalence of cyberbullying among higher education students, and the digital setting e.g. the social media and the internet. Although there is a great amount of research (Çelik, Atak, & Erguzen, 2012; Fanti, Demetriou, & Hawa, 2012; Gibb & Devereux, 2014; Kokkinos, Antoniadou, & Markos, 2014; Peluchette, Karl, Wood, Williams, 2015; van Geel, Goemans, Toprak, & Vedder, 2017), that has focused on the personality characteristics of perpetrators and victims of cyberbullying of traditional bullying, there is no systematic research on cyberbullying intrapersonal and interpersonal correlates, albeit suggestions that have been made regarding the similarity of characteristics found in cyberbullying with traditional bullying (Kokkinos, Antoniadou, & Markos, 2014).

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1.2 Social Contexts

Zalaquett and Chatters (2014), state that cyberbullying may result in a more intense emotional impact for university students than high school students. Both victims and perpetrators of cyberbullying are at an increased risk for depression and suicide (Bonanno & Hymel, 2013). Higher risks for suicide are also associated with both perpetrators and victims of traditional bullying and cyberbullying (Patchin & Hinduja, 2012). Research on university students indicated that victims of cyberbullying report side effects, which include low academic achievement, depression, suicidal ideation, embarrassment, problems with the opposite gender, and increased incidence of missing classes (Cassidy, Faucher, & Jackson, 2017). Smith and Yoon (2013), conducted a study among undergraduate students and reported that 13.2% of the victims of cyberbullying had depression, 16.5% suffered social withdrawal, and 5.3% presented anger issues. Schenk, Fremouw, and Keelan (2013), considered the consequences suffered by perpetrators and victims of cyberbullying in higher education and found that these individuals presented high scores in phobic anxiety, interpersonal sensitivity, hostility, depression, and psychoticism than non-involved individuals. The perpetrator/victim group was involved in more violent crimes than students who admitted to being perpetrators. Findings from the Florida Atlantic University, report that 37% of the individuals who are victims of cyberbullying developed social anxiety, 61% had feelings of low self-esteem, while 36% fell into depression, and 24% have contemplated suicide after continuous cyberbullying (Hinduja & Patchin, 2014).

During young adulthood, identity development is still an ongoing process and it is extremely important (Hinduja & Patchin, 2010). Identity development occurs as they make decisions regarding their own character, what they agree or disagree with, what makes them different from others and what their future plans will be (Santrock, 2009). This process is largely dependent on their interaction with their peers and their social environment (Hinduja

& Patchin, 2010). Like adolescents, young adults have a strong need for belonging which can contribute to their engagement with electronic media, thereby making them more vulnerable to exposure to cyberbullying.

1.3 Theoretical Assumptions

Hinduja and Patchin (2007), used the General Strain Theory (GST) to contribute to the knowledge of factors that are related to traditional and electronic bullying. In this study the researchers found that youth who are angry or frustrated are more likely to become perpetrators of bulling, youth who experience strain are significantly more likely to become perpetrators of cyberbullying, and in an attempt to cope with stress that derives from peer conflict, youth may resolve to using bullying or cyberbullying. Chapell, et al., (2006), in their evaluation of undergraduate students found that in a sample of 119 participants more than 70% of students who experienced bullying in elementary and middle school, tended to become perpetrators of bullying in university. According to Agnew (2001), there are multiple sources of strain which include the actual or anticipated failure to a) achieve positively valued goals, b) for the removal of positively valued stimuli, and c) presentation of negatively valued stimuli. The General Strain Theory (GST) posits that strain is the result of negative relationships with other individuals. Unpleasant interactions with another person and negative experiences may cause strain. For example, a perpetrator is presenting negatively valued stimuli (physical or emotional abuse) to his/her victim. In turn these sources of strain are indirectly linked to negative behaviors such as delinquency, producing negative affect, anger, frustration, or sadness. In order to cope with these situations an individual may engage in criminal or deviant behavior. For example, the victim may seek to either escape the negative feelings by turning to substance abuse or he may seek revenge by becoming a perpetrator him/herself (Compas, Orosan, & Grant, 1993). Bullying whether in person or online is a corrective action that youth

experiencing strain may adopt. In addition, research has shown that adolescents use maladaptive ways such as hostility resignation, and evasion to cope with strain (Compas, Orosan, & Grant, 1993; Hampel & Petermann, 2005).

The GST may also be used to explain the significance of social acceptance among youth in relation to cyberbullying. Approval and acceptance by peers are often desired during adolescence and young adulthood. However, cyberbullying may stymie that goal through exclusion and rejection. Research has shown that individuals who feel rejected or socially excluded may develop emotional, behavioral, or psychological problems (Leary, Schreindorfer & Haupt, 1995). Victimization through cyberbullying may therefore be a source of negative and stressful feelings. In addition, young adults who are victimized intensively and repeatedly may develop fear for their safety due to their online intimidation. Hence victims of cyberbullying who experience online threats and harassments may employ avoidance techniques which in turn will interfere with their ability to focus on academic work, family, responsibilities, and their social life (Hinduja & Patchin, 2007). It is therefore not hard to see that based on the General Strain Theory cyberbullying and victimization may be a potential source of strain that is related to electronic aggression and may result in psychological difficulties.

The Social Dominance theory may also be applied to provide a better understanding of bullying. In their study Pratto, Sidanius and Levin (2006), assessed studies from 15 years that support this theory. According to this theory social groups are classified into three groups: gender system (men have unequal power when compared to women), age system (adults have social power over children), and arbitrary-set system (random groups have access to optimistic and pessimistic social values). These social based hierarchies are based on discrimination between dominant over subordinate groups. This theory posits that bullying may be the result of justifying fabrications that allow arbitrary-set-systems and gender systems to define this

power struggle. Technology provides an easier way for this struggle to exist (Walker, Sockman, & Koehn, 2011). In his study Walker (2014), put the social dominance theory to test with 695 undergraduate student participants and reported that from the sample approximately 6.9% of females and 9.6% of males engaged in cyberbullying others. Amado, Matos, Pessoa, and Jäger (2009), report that similarly to traditional bullying, cyberbullying is based on an inequity of power but cyberbullying also requires skills and advantages in mastering technology, thus the perpetrator does not have to be larger than the victim.

Ajzen, (2012), first applied Theory of Reasoned Action to behaviors for which the individuals have absolute control and it was extended to incorporate the awareness of one's ability to present a behavior and it was renamed as the Theory of Planned Behavior. Because university students have access to internet and cell phones, they are provided with the ability to engage in cyberbullying. In the USA approximately 98% of young adults use the internet (Pew Internet & American Life Project, 2013 as found in Duggan, & Brenner, 2013), 97% of young adults use their cell phone for texting (Duggan & Rainie, 2012), and cyberbullying can be anonymously conducted. This theory posits that one's perception toward a specific behavior and idiosyncratic norms of the behavior effect behavioral intents which in turn influence behavior (Ajzen, 1985). According to Ajzen (1985), attitudes control the positive or negative evaluation of a behavior by a person, and according to Olweus (1993), perpetrators often have more positive attitudes towards violence and low empathy toward victims. Studies of university students seem to support this argument (Boulton, Loyed, Down, & Marx, 2012). Among university students in the UK, the individuals that report fewer accepting attitudes toward bullying were less likely to report engaging using the social media, sending text messages, or engaging in verbal and physical bullying (Boulton et al., 2012). In the same study the individuals with less accepting attitudes toward perpetrators were less likely to engage in verbal or social exclusion bullying. Barlett and Gentile (2012), found that if an individual presented

higher acceptability of weaker and smaller people, engaged in cyberbullying perpetrators to get revenge, and presented more accepting attitudes toward anonymity, more positive attitudes toward cyberbullying perpetration which in turn was related to cyberbullying. However, more research is needed to demonstrate that this theory can be effectively applied to explain cyberbullying perpetration.

This study is based on the General Strain Theory that supports that cyberbullying allows delinquency to occur in ways that are less visible and overt. This theory also posits that cyberbullying affects internalizing forms of deviance such as self-harm and suicidal ideation (Hay, Meldrum, & Mann, 2010). The social dominance theory and the theory of reasoned action are used to better explain the factors related to cyberbullying. In this chapter a definition of cyberbullying was provided and the numerous types of cyberbullying such as flaming, cyberstalking, and denigration, were illustrated. Several factors contributing to cyberbullying were examined such as anonymity and aggression, focusing on certain personality traits which may lead individuals to engage in cyberbullying. The effects of cyberbullying as well as interrelationships in roles of cyberbullying experiences were addressed as to their relation to this phenomenon. Literature has shown that cyberbullying continues to be a disturbing trend not only among adolescents but also university students. Recent studies (Watts, Wagner, Velasquez, & Behrens, 2017), have shown that students who are victims or perpetrators of cyberbullying as children tend to continue in these roles in higher education, however university students are still less likely to report cyberbullying. There is a growing concern that these young adults will bring these attitudes into the workplace (Watts, Wagner, Velasquez, & Behrens, 2017). This possibility may rely in their innate personality characteristics.

In a study with adolescents Topcu, Yıldırım, and Erdur-Baker (2013) indicated that the primary reasons for cyberbullying include revenge, joking, harm, and ease of access to cyberspace. Since they are related to social behavior, the Big Five traits have been recently

utilized to investigate the use of social media (Amichai-Hamburger & Vinitzky, 2010; Ross, Orr, Sisic, Arseneault, Simmering, & Orr, 2009).

Individuals who engage in cyberbullying usually present low levels of Extroversion, tend to be solitary, reclusive, and negative, with low levels of self-esteem. As they feel they are week in the real world and unable to cope, they may choose the Internet as a space where they can behave violently to recompense for their weakness (Misha, et al., 2010). However, some individuals may present high levels of Extroversion, and are determined, selfless, impulsive, domineering and may have characteristics of narcissistic behavior (Baldasare, et al., 2012).

Among many other things the Big Five model of personality (McCrae, & Costa, 1997) has been found to relate to general online behavior. This model posits that the Big Five personality factors of Neuroticism (N), Extroversion (E), Openness to Experience (O), Agreeableness (A), and Conscientiousness (C), are vested in the highest level of the personality pyramid, and are considered to include the entire sphere of more narrow personality traits that fall at the lower-levels of the hierarchy. Research findings on cyberbullying and personality are limited. The existing studies suggest that perpetrators of cyberbullying are generally characterized by low levels of Agreeableness, Conscientiousness, Openness to Experience and high levels of Neuroticism (Karl, Peluchette, & Schaegel, 2010). The evidence on Extroversion is conflicting. Some researchers argue perpetrators of cyberbullying tend to report higher levels of Extroversion (Baldasare, Bauman, Goldman, & Robie, 2012), whereas others report low levels (Misha, Cook, Gadalla, Daciuk, & Solomon, 2010). While examining the relationship of Agreeableness to cyberbullying, research has shown that individuals with low levels of this trait (McCullough, Bellah, Kilpatrick, & Johnson, 2001), are liable to be discourteous, revengeful, uncharitable, confrontational, and disobliging as well as prone toward presenting deviant behavior due to lack of effective management of interpersonal hostility, low empathy,

and disagreements. These individuals are also more likely to engage in inappropriate and antisocial behaviors on the internet, for instance ridiculing others or uttering something foul (Karl et al., 2010), and may even pursue for vengeance through online means because in this means they feel more prevailing (Baldasare et al., 2012).

Another one of the Big Five personality characteristics, Conscientiousness, is highly associated with engagement in positive and pro-social behaviors, managing a devotion to social norms, and interpersonal alignment (Roberts, Jackson, Fayard, Edmonds, & Meints, 2009). These individuals are unlikely to display unseemly and antisocial Internet behaviors and they tend to present greater regret over their behavior. Therefore, perpetrators of cyberbullying who have low levels of Conscientiousness and Agreeableness, are more likely to present higher levels of psychoticism, tend to behave more pugnaciously and without empathy or benevolence (Aricak, 2009; Ybarra & Mitchell, 2007).

Neurotic personality characteristics include anxiety and emotional instability in social situations (McCrae & Costa, 1999). Individuals with high levels on this trait may be exasperated individuals, who present poor social perception, low self-restraint, raised depressive symptoms, low self-esteem, and present unsuitable and unfriendly behavior on the Internet to compensate for their weakness in the real world (Karl et al.,2010; Misha et al., 2010; Sontag, Clemans, Graber, & Lyndon, 2011).

Openness to Experience is high in individuals who tend to be more sociable and seek new experiences. These individuals are more active on the internet and tend to disclose more private information (Amichai-Hamburger & Vinitzky, 2010), which may no longer comprise an inimitable experience to them. Given the characteristics of these individuals, research has shown a negative association between Openness to Experience and cyberbullying. This meant that they are more prone to becoming victims of cyberbullying.

It is therefore clear from the existing literature that cyberbullying is a rapidly growing phenomenon that requires attention and further research to identify how the unique elements of technology may contribute to the impact of victimization and increase the occurrence of perpetration. It is suggested by researchers (Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996; Smith, 2016), that the construct of bullying should be taken as a continuum ranging between perpetrator and victim and the participants roles should be further investigated. Given the explosion in social media popularity, the present study is primed to ascertain the personality qualities of those university students who are more prone to create hostile environment on Internet and estimate those personality features of cyberbullying participation.

Research up until now has explored how cyberbullying may perhaps diverge as a function of a user's discrete personality features. This study focused on the contracted traits of Big Five personality features to investigate the prospect that students with personality characteristics are prone to engage in cyberbullying and establish whether these characteristics, in consort with interrelational roles i.e. previously being a victim of such behavior, are related to cyberbullying.

1.4 Problem Statement

Cyberbullying research has mostly focused on students and adolescents while there are scarce up to date studies regarding university students (Kokkinos, Antoniadou, & Markos, 2014; Schenk, Fremouw, & Keelan, 2013). It is presumed that cyberbullying occurrence decreases during the transition from middle school to university, but current indications suggest that the percentage of cyberbullying participation in university students varies between 10 and 35%, while in certain occasions, this percentage may rise even higher when compared to the adolescent population (Annemberg Public Policy Center, as cited in Lawler & Molluzzo,

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2011). Additionally, in their study Kraft and Wang (2010), report that being a victim of cyberbullying in middle school was an important risk factor for continuing to be a victim of cyberbullying in university. This new form of aggression can have a momentum effect on students' psychosocial welfare, academic commitment, and interactive relationships. Increasing knowledge in these areas may enhance prevention and intervention efforts to reduce the incidence and prevalence of cyberbullying.

1.5 Purpose of the study

Cyberbullying behaviors have become more visible in high school and university-aged populations (Hinjuja & Patchin, 2009), and given that the high school population has been widely studied, there is a need for research to focus on university students. Although research on cyberbullying experiences among university students has increased, the personality characteristics of the participants have not been thoroughly investigated yet. Therefore, it is important to understand what the individual characteristics and mental status of those who engage in such behaviors in a variety of social situations.

Thus, this study was designed to increase the understanding of cyberbullying among university students, explore the psychosocial profile of university students participating in cyberbullying and to investigate the contribution of personality characteristics and psychological symptoms that relate to participation in cyberbullying.

Specifically, the purpose of this study is to investigate the extent to which personality traits and psychological symptoms are related to participation in perpetration and victimization, and the extent to which interrelationships in roles are relevant to cyberbullying behaviors. Based on the existing literature:

a) Personality traits (Big 5,) will be strong predictors of cyberbullying/victims of cyberbullying (H1).

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b) Individuals who are perpetrators of cyberbullying exhibit psychological symptoms including lack of empathy, anxiety, depression, low self-esteem, suicidal ideation impulsiveness, manipulative behavior, and increased tendencies to commit violent acts (H2).

c) Some individuals experience cyberbullying as a victim and a target simultaneously because of previous experiences as a victim therefore their interrelational roles may contribute to such behavior (H3).

Much of the research on cyberbullying has focused on adolescents, which suggests that a lot of individuals probably present this behavior at least as early as adolescence. Furthermore, there is a growing concern that students carry out these behaviors in the workplace. It is, therefore, important to identify what, if any, personality characteristics are related to engagement in cyberbullying behaviors, what psychological symptoms and psychological consequences university students experience, and the interrelational roles of cyberbullying among these populations. Understanding cyberbullying among university students may lead to a better understanding of the factors related to such behaviors which in turn may contribute to the development of preventive interventions, both at an individual and organizational level.

1.6 Significance of the Study

The internet and social media are useful tools for university students given that they are used for communication, collaboration, information sharing, grouping and enjoyment. They offer opportunities for instant, private and public messaging, sharing documents, photos, and status, but they may also stipulate a medium of distressing behavior. Therefore, university institutions must commit towards tackling this phenomenon, which generates a negative education environment with possibly adverse long-term effects. Interventions should focus on both those individuals involved as well as the institution as an organization. Participants

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diverge considerably in terms of their psychosocial features and consequently efficient prevention and intervention programs should be developed and modified according to their specific requirements (Schenk, Fremouw, & Keelan, 2013). Although some cyberbullying participants may not present with psychological symptoms, literature has shown that perpetrators and victims of cyberbullying may have underlying personal difficulties that can be addressed with appropriate assessment and treatment.

Overall, the increased risks that young adults face regarding cyberbullying indicate that universities should become more active towards the welfare of their student communities. This study aims to provide a profile of the participants' characteristics and seeks to provide empirical basis for the development of the prevention programs. It is hoped that findings from the present study will contribute to research and better practice in helping mental health professionals, education counselors, and policy makers to become more aware of the pervasiveness and psychological effect of cyberbullying among university students.

The next chapter focuses on the existing knowledge base and research studies that are available as they relate to cyberbullying. Cyberbullying is discussed in detail, examining the definitions, identification, prevalence, and specific types of cyberbullying. The consequences for both victims and perpetrators of cyberbullying are examined and their personality traits are explored as well as the correlates of interrelational roles to further understand this phenomenon.

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CHAPTER 2

LITERATURE REVIEW

2.1 History of Cyberbullying

At the turn of the twenty-first century young adults live in a world that is dominated by technology. Internet-enabled world offers blogs, social networking, and instant messaging that are competing with the traditional form of face-to-face and telephone communication and are frequently used among youth and adolescents (Boyd, 2008; Hinduja & Patchin, 2008). The benefits of information, entertainment and speed enable youth to develop various social and emotional skills, express sentiments and engage in critical thinking and decision making but at the same time promote social isolation as a result of obsession with technology and computers (Berson, 2000). However, even though most of the youth have developed a productive way of using computers and the internet, a small but constantly growing proportion of young adults are experiencing interpersonal violence, aggression and harassment through cyberbullying (Hinduja & Patchin, 2008). The novel technology provides the prospect to expand the traditional structure of bullying into the new kingdom of cyberspace, thus generating a swiftly shifting mode of psychological electronical bullying (Hinduja, & Patchin, 2014; Kowalski & Limber, 2007). Adolescents and young adults seek novel ways to harass and embarrass their peers using the new technologies to create a new format of bullying commonly known as cyberbullying (Aftab, 2006).

2.2 What is Cyberbullying?

Bullying according to Olweus (2003), occurs when a group of people or a person takes negative action towards others with the intention of inflicting injury or cause discomfort on

others. Bullying has been widely researched and has been of concern since 1970. As studies (Olweus, 1993; Wang, Iannotti, & Nansel, 2009) have shown, a significant percentage of adolescents are affected by this problem. Cyberbullying is considered a unique form of bullying that has gained the researchers' attention over the past decade. As research concerning this subject is still in the infantile stages and concerns mostly identifying the prevalence of cyberbullying behaviors among adolescent population (Hinduja & Patchin, 2007; Kowalski & Limber, 2007; Li, 2007; Stavrinides, Paradisiotou, Tziogouros, & Lazarou, 2010), researchers have proposed numerous areas in need of study, including the psychosocial and psychological risk factors associated with cyberbullying, strategies of prevention and intervention in order to deal with cyberbullying, gender and age effect in cyberbullying. However, cyberbullying seems to occur among students in university as well, even though most of research has focused on adolescents and high school students (Crosslin & Golman, 2014; Walker, Sockman, & Koehn, 2011).

Cyberbullying is a type of bullying that has been linked to maladaptive emotional and psychological behaviors such as depression, aggression, and anxiety (Hinduja & Patchin, 2007). Typically cyberbullying involves harassing or threatening others by sending emails, instant messages on the cellular phone or posting comments, videos, or photographs of someone on a Website (Hinduja & Patchin, 2007). Cyberbullying according to Tokunaga (2010), is defined as any behavior performed through the use of an electronic or digital device (e-mail, cell phone, personal digital assistant (PDA)), instant messaging, or the World Wide Web), by a group or an individual aiming at communicating hostile or aggressive messages with the intention to cause damage or distress to other individuals. Langos (2012), further analyzed the definition of cyberbullying and labeled two subdivisions of cyberbullying: a) undeviating cyberbullying takes place between the perpetrator and the victim only, and b) indirect cyberbullying occurs when the perpetrator posts information about the victim in the

social media where multiple individuals have access to. In addition, she noted that multiple elements should be present in order to label an act as cyberbullying such as recurrence, power differential, aggression, and intent. Without these elements it would be difficult to label a behavior as a malicious act of cyberbullying (Watts, Wagner, Velasquez, & Behrens, 2017).

2.3 Types of Cyberbullying

With the primary tools of the Internet and mobile phones, there are several distinct modes in which cyberbullying is expressed (Bauman, 2014).

a) *Flaming:* This comprises of sending heated and impolite messages about an individual to an online group or directly to that person using electronic mail or text messaging. It may take place in a variety of settings, including online forums, chat rooms, discussion boards, and e-mail. These messages are usually written in capital letters to stress anger and their content is often cruel, vicious, and tend to disregard fact or reason (Bauman, 2014). Flames erupt between a small group of protagonists who are arguing and insulting each other or between individuals (Willard, 2007). It is usually a short-lived event that occurs between socially balanced individuals in terms of social power. It is important to note that flames can be very heated and include veiled or not-so-veiled threats of violence that may or may not be real threats (Willard, 2007).

b) *Online harassment:* Harassment refers to hostile actions related to someone's gender, age, sexual orientation, race etc., and it is against the law. It involves repeatedly sending offensive messages to a person via email or text messaging and doing so persistently. These messages may include threats or may defame the victim from any location at any time. When the sender is known a person can block the email and text messages, however the harassers often use strategies to remain anonymous (Bauman, 2014). The anguish of the targets is that they are constantly receiving hurtful messages every time they use the internet or their phone.

The main factor that distinguishes harassment form flaming is that this type of cyberbullying is one-sided. One person is the protagonist and the other person is simply trying to end communication. In certain instances, harassment may occur by proxy, in other words many adolescents establish networks of communication with strangers who they use to attack a target. Therefore, the target may receive messages from strangers throughout the world (Willard, 2007).

c) *Cyberstalking:* Stalking incorporates a variety of behaviors introduced by an individual who participates in a configuration of pestering or intimidating behavior (Ashcroft, 2001). The rise of interactive technology like the internet offers an additional means for pursuers to seek out their victims, commonly referred to as cyberstalking (Alexy, Burgess, Baker, & Smoyak, 2005). Cyberstalking can be defined as the recurrent chase of an individual using electronic or internet-capable appliances (Reyns, Henson, & Fisher, 2012). These behaviors include harassment or threats via email, instant messenger, chat rooms, message or bulletin boards, or other Internet sites (Baum, 2011). Stalking is considered a crime and legal action can be taken against it. However, certain elements must be present in order to proceed with legal action such as the intention to terrorize and hurt the victim (Bauman, 2014). Repetition is considered to be the most salient feature of cyberstalking.

d) *Denigration:* This is the action of demeaning or disrespecting another person using technology. This action can be accomplished in a variety of settings and it usually involves posting in public false, harmful, or cruel statements and images about a person (Bauman, 2014). What differs in comparison to other types of cyberbullying is that the target is not generally the direct recipient of the material, the intended recipients are other individuals. This type of cyberbullying is most often used by students against school employees, teachers, or administrators (Willard, 2007).

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e) *Masquerade:* This is a technique that involves using someone else's identity and sending material that appear to come from that person that cause harm to the person. One way to achieve this is by hacking into an individual's email account and sending the messages directly (Bauman, 2014). A perpetrator of cyberbullying can use a false identity to annoy their victim, thus concealing their own trajectories. Alternatively, the perpetrator can mimic their victim in order to ruin a reputation, manipulate the victim's special relationships by forwarding messages to persons from the victim's e-mail, mobile phone, or instant messaging electronic account (Dempsey, Sulkowski, Nichols, & Storch, 2009). Usually the remarks made by the perpetrator are conflicting to the personality of the victim and the latter's interactions with other individuals are damaged while the victim is unsuspecting of the grounds (Agatston, Kowalski, & Limber, 2012; Willard, 2006; Wright, Burnham, Inman, & Ogorchock, 2009).

f) *Outing or Trickery:* Posting online or sending via text messaging information regarding a person that comprises of delicate, personal, or humiliating information (Agosto, Forte, & Magee, 2012; Dempsey et al., 2009; Willard 2006). The information can be obtained by means of electronic media but the perpetrator can also wheedle the information orally from their victim and circulate it to the social media. Outing usually involves material that the person harassed would wish to keep classified (Ubanski & Permuth, 2009). One could consider sexting incidents as a modification of this type of cyberbullying. The perpetrator of cyberbullying convinces the victim to send a nude or very revealing photo through text messaging, declaring it is just for his or her personal use to admire. At a later stage when the relationship fades the pictures are dispatched to several receivers (Bauman, 2014).

f) *Exclusion:* Deliberately omitting someone from an online group in a cruel way (Bauman, 2014). It is a premeditated and steered action to make it evident to individuals that they are not a member of the group and that their company is undesirable (Agosto et al., 2012; Wright et al., 2009). On the Internet a person may be removed from friend lists and not included

in conversations. On social networking sites, individuals may unfriend somebody, which indicates their capacity to comment, view profiles and many other abilities are inaccessible (Bauman & Newman, 2013).

g) "*Happy slapping":* This is a relatively new form of cyberbullying that takes place when there is confrontational physical assault on a victim, which is typically encapsulated on video (using a mobile phone or other electronic devices). The video is then distributed via electronic media (Smith, Mahdavi, Carvalho, Fisher, Russell, & Tippett, 2008; Urbanski & Permuth, 2009). The escalation of violence broadcast on the Internet is evident through numerous videos featuring school violence and victimization being viewed on YouTube.

h) Internet polling: This type of cyberbullying involves the creation of a blog or a website by an individual who proceeds to invite other persons to value another individual or cast out a vote on an insulting or humiliating question regarding the specific individual (Li, 2007; Miller & Hufstedler, 2009; Strom & Storm 2012). Questions may include: "Who is the ugliest/fattest person in class?" or "Who do you hate and why?" (Li, 2007; Urbanski & Permuth, 2009).

i) Sexting: is a risky behavior that many young individuals engage in, during which photos of sexual nature are distributed via electronic media (Thomas & McGee, 2012). Sexting content can be kept and utilized by the perpetrator of cyberbullying in the future. The victim has confidence that their messages will not be viewed by anybody, however, when a relationship fades the perpetrator often makes the photos public. This causes the victims to experience alienation emotional distress, and loss of privacy (Badenhorst, 2014). Sexting can have long-term and far reaching consequences, not only for the victim but for other vulnerable individuals in the public.

Research on traditional bullying has linked bullying to aggression, substance abuse, anxiety, and depression (Olweus, 1993; Georgiou, & Stavrinides, 2008), personality

characteristics and interrelational roles, but it has yet to be determined whether these outcomes are also the result of cyberbullying. Considering all the information, it is possible that cyberbullying poses a serious mental health concern and has severe implications on mental health of university students as well (Hinduja & Patchin 2007; Ybarra, 2004). The studies regarding this population are still limited and therefore more empirical studies are essential to enhance the understanding of this rapidly growing phenomenon.

2.4 Historical Perspective and Prevalence among University students

Cyberbullying and victimization through intimidations of violence is a comparatively novel area that is becoming further explored (Berson, 2000; Hinduja & Patchin 2007; Ybarra & Mitchell, 2007). According to Hinduja and Patchin (2008), there is a growing number of perpetrators and victims of cyberbullying due to the wide availability of computers and the internet. Ellison and Boyd (2013), found that cyberbullying is mostly performed utilizing social networks, such as Twitter, Facebook, You Tube, MySpace, LinkedIn, and Google Plus. Social media are developing into the most popular platform for cyberbullying especially among adolescents and young adults. In a study of 623 teenagers (aged 12-17) who used social media regularly, the researchers found that 85% of the participants witnessed negative interactions via social media (Lenhart, Madden, Smith, Purcell, Zickuhr, & Rainie, 2011). Festl and Quandt (2013), in their study reported that 52% of 12-19-year-olds in a sample of 498 teenagers, had been victims of cyberbullying. All these studies point to the increasing prevalence of cyberbullying not only among adolescents but university students as well.

The prevalence of cyberbullying tends to vary across studies due to the differences in definitions, sample characteristics, and types of technology that may be observed (Juvonen & Gross, 2008). Although there have been countless improvements in research regarding

electronic aggression, most of this research is conducted among adolescents, with a limited number of studies turning their attention to young adults (Wright & Li, 2013). The prevalence of cyberbullying among adolescents seems to be increasing dramatically every year due to the advances in technology (Willard, 2007). In the United Kingdom studies revealed that about 17.9% of 11-15-year-olds being victims of cyberbullying in the two months prior to the survey. In the United States resent studies revealed approximately 34% of the student's report experiencing cyberbullying in their lifetimes. When students replied to a question regarding specific forms of cyberbullying experienced in the last 30 days, nasty or cruel comments (22.5%) and gossips, students reported being victims of cyberbullying in one or more of the eleven specific types reported, two or more times over the course of the previous 30 days. In the same study approximately 12% of the participants self-confessed to cyberbullying other individuals at some instant in their lifespan. Posting hurtful remarks online seems to have been the most commonly reported form of cyberbullying that students reported during the last 30 days (7.1%). Approximately 8% of the participants self-confessed cyberbullying others using one or more of the eleven forms reported, two or more times over the course of the last month (Patchin & Hinduja, 2016). The Children's safety commission in Australia reported that approximately 19% of adolescents aged 14-17 admit to being victims of cyberbullying online at least once in 12 months. Around 30% of youth reported witnessing cyberbullying of other individuals online. From this sample 64% were streaming video, 78% were emailing, 47% playing online games, 54% were social networking, and 78% were navigating or performing research (eSafety Commission, 2016). In the Netherlands about 16% of youth has engaged in cyberbullying and 23% report to have been victims of cyberbullying (DeHue, Bolman, & Völlink, 2008). In Germany a recent study revealed 26.7 % of ninth-grade students experienced psychological cyberbullying and 2.4% experienced sexual cyberbullying (Bergmann & Baier, 2018).

However, this phenomenon is not only present in adolescence, it also occurs among young adults and university students (Dilmac 2009; Finn, 2004; Kraft & Wang, 2010; Sockman & Koehn, 2011; Walker & Francisco, 2012). Research has indicated that individuals who have been victims or perpetrators of cyberbullying during their high school years, tend to fall into the same categories in university and college (Beran, Rinaldi, Bickham, & Rich, 2012; Kraft & Wang, 2010; Selkie, Kota, Chan, & Moreno, 2015). Finn (2004), reported that a possible cause of cyberbullying, is the effortless access the university students have to online platforms and the wireless network in universities and faculties. In Finn's study 10-15% of 339 students had received emails relevant to electronic violence from acquaintances, unknown individuals, or significant other. Chapell, Hasselman, Kitchin, Lomon, MacIver, and Sarullo (2006), reported that students who were victims, perpetrators, or a combination of both as children tended to hold the same roles during university years. In their study of 119 students, they reported that 72% of victims in university had been victims in high school, and 54% of perpetrators of cyberbullying in university had been victims of cyberbullying in high school and elementary school. About 42% of the participants were perpetrator/victim of cyberbullying in high school and college. Dilmac (2009), in her study reported that males self-confessed to more cyberbullying behaviors than females at university but females were more often exposed to cyberbullying situations than men. According to Dilmac, 22.5% of students were perpetrators of cyberbullying and 55.3% reported having been victimized at least once. Kraft and Wang (2010), performed a research study using university student participants from New Jersey and found that 10% had already been victims of cyberbullying or cyberstalking. Walker et al., (2011), in their study of 120 undergraduate students found that 11% of the students had been victims of cyberbullying themselves, and 54% of participants knew someone who had been a victim of cyberbullying. In addition, 56% of undergraduate students reported they had a known acquaintance who had been a victim of cyberbullying on Facebook or other social

media platforms. A study involving 613 university students reported that 35% of students self-reported that they were victims of cyberbullying while in high school, but only 19% of these students experienced cyberbullying while in university (Zalaquett & Chatters, 2014). Beran et al., (2012), in a study of 1368 college students found that the students who were previously victims of cyberbullying in middle school were as much as three times more likely to be victims of cyberbullying in university, and perpetrators of cyberbullying in middle school were more likely to continue cyberbullying in college. Selkie et al., (2015), reported that students who experienced cyberbullying as younger adolescents continued to experience cyberbullying in college.

Some studies found that the prevalence of cyberbullying may be difficult to estimate, as cybervictimization is not always reported. This might be due to their less-accepting view of cyberbullying (Boulton, Lloyd, Down, & Marx, 2012). In a study of 55 students, Akbulut and Cuhadar (2011), asked participants to listen to a lecture regarding the ramifications of cyberbullying. After listening to the lecture forty-two participants reported they had been either perpetrators or victims of cyberbullying, and seven participants expressed regrets about their actions. Unfortunately, students do not always tell their parents or teachers if they have been victims of cyberbullying (Glasner, 2010; Kraft & Wang, 2010) and this lack of awareness could lead to increased cyberbullying incidences among university students. Paullet and Pinchot (2014), found that participants told a friend about the cyberbullying but did not report to an adult or any authority. This may be an indication of the victims' avoidance to talk to parents or friends about cyberbullying because they fear it may be childish (Crosslin & Golman, 2014). DeLara (2012), found through the Grounded Theory approach that many students avoid reporting incidents of bullying because they felt helpless, ashamed, self-reliant, and worried about the reactions of adults. To explore this phenomenon further, research has focused on contributing factors such as personality traits, psychopathology, and interrelational roles.

Factors contributing to cyberbullying

Anonymity

Because of the nature of cyberbullying, it could be enacted via any digital device used for communication. It provides perpetrators the opportunity to remain anonymous and the abuse of victims may last for months or even years (Watts et al., 2017). Anonymity is the one main difference of cyberbullying, when compared to traditional bullying, that makes it even more attractive, as the perpetrator could target someone he or she does not even know. Alternatively, the perpetrator can create a false identity which decreases the chance of being caught (Wong-lo, Bullock, & Gable, 2011).

A relevant aspect to anonymity is the disinhibition effect that may explain cyberbullying/bullying behavior. Manson (2008), reported that anonymity allows the perpetrator to discard the private self, and transform into a social self that can lead to increased aggression, impulsivity, and irrationality online. Willard (2007), noted that the fact that the perpetrator cannot see the victim's instant reaction may add to the lack of apprehension for effects and diminished inhibitions. This can be related to lack of pre-frontal cortex development, which controls proper response to good and bad action, and behavior.

2.5 Profiles of Perpetrators and Victims of Cyberbullying

Most perpetrators of cyberbullying engage in risky online behaviors and seem to spend a considerable amount of time online. However, individual differences and differences in personality may be factors that affect cyberbullying (Görzig, & Ólafsson, 2013). Perpetrators tend to have personalities that lack sensitivity and self-control (Ozden, & Icellioglu, 2014). Researchers have also reported that perpetrators may be individuals who wish to demonstrate their power in cyberspace (Kowalski, Limber, Limber, & Agatston, 2012). It may also be the

case that victims of traditional bullying may be seeking revenge through electronic devices as they are more powerful when online (Hinduja & Patchin, 2008). In this case individuals who are perpetrators of cyberbullying may have low self-esteem and engage in aggressive behaviors in order to compensate for their weakness (Anderson & Sturm, 2007).

Research regarding the characteristics of perpetrator/victim of cyberbullying (in other words individuals who carry both roles), demonstrates that cybervictimization and cyberbullying are highly correlated with each other (Erdur-Baker, 2010; Varjas, Henrich, Meyers, 2009). Ybara and Mitchel (2004), in their study note that individuals who engage in problem behaviors are four times as likely to be a perpetrator/victim. Perpetrator/victims appear to have higher scores of sensation seeking and psychological traits (Kokkinos, Antoniadou, & Markos, 2014). According to previous studies perpetrator/victims score higher in anxiety, hostility, depression, and interpersonal sensitivity (Aricak, 2009; Schenk, Fremouw, & Keelan, 2013). Sensation seeking has been linked to aggression and psychological traits have been linked to aggressive behavior (Frick & Hare, 2001). Kokkinos et al., (2014), found that individuals with low affective empathy are more likely to get involved in cyberbullying behaviors. Bayraktar, Machackova, Dedkova, Cerna, and Ševčíková, (2015), indicated that perpetrator/victims were found to have higher reactive/proactive aggression, lower self-control, and weaker social bonds. Hence it seems necessary to research further factors that may contribute to understanding the profiles perpetrators, victims, and perpetrator/victims of cyberbullying such as their personality characteristics.

2.6 Cyberbullying and Personality Characteristics

A rather large number of research studies (Celik, et al., 2012; Gibb & Deveruex, 2014; Kokkinos et al., 2014; Peluhette et al., 2015; van Geel et al., 2017) have concentrated on the

personality characteristics constituting the individuals more vulnerable to cyberbullying and the findings show low levels of empathy compared to non-involved individuals. Empathy consists of two main components: a cognitive part which reflects an individual's ability to identify and cognitively process another person's emotional state, and an affective part which facilitates emotional understanding and communication (Shamay-Tsoory, Aharon-Peretz, & Perry, 2009). High cognitive and affective empathy may also be one of the characteristics of antisocial behavior and of individuals who are inhibited and more impulsive (Jolliffe & Farrington, 2006). These personality characteristics have been studied in relation to aggression and grouped into three dimensions; affective, interpersonal, and behavioral (Kokkinos, Antoniadou, & Markos, 2014). Individuals within these dimensions may find the internet as the ideal setting for the manifestation of these traits due to the anonymity, invisibility, and asynchronous communication that it provides, which in turn may encourage aggressive behavior (Kerig & Stellwagen, 2010). The characteristics of individuals usually involved in bullying include aggression, lack of empathy, a strong need to dominate others and a positive attitude towards violence (Connolly & O'Moore, 2003). Eysenck's theory of criminality (Eysenck, 1964), and theory of antisocial behavior (Eysenck, Rust & Eysenck, 1977), suggest that such behavior is more frequently found in individuals with high scores on Extroversion, Neuroticism, and psychoticism. According to Slee and Rigby (1993), extraverted individuals are more likely to commit crime and present more antisocial behavior because they need to acquire rewards without fearing the consequences and show high scores of impatience and impulsivity. Personality traits such as hostility, Neuroticism, and psychoticism seem to be related to cyberbullying. Aricak (2009), found that hostility and psychoticism significantly predicted cyberbullying. Campbell and Morrison (2007), indicated that traditional bullying is associated with a predisposition to experiencing psychotic symptoms, suggesting that if an individual experiences psychotic-like symptoms it raises the possibility that their interpersonal

environment is comprised of peer violence and rejection. Camodea and Goossens (2005), in their study reported a strong relation between bullying and hostility. Connolly and O'Moore (2003), found that bullying is strongly related to Neuroticism and psychoticism. Celik, Atak and Erguzen (2012), in their study of the effect of personality on cyberbullying found that emotional instability is the leading predictor of being victims of cyberbullying, mainly due to the fact that loneliness leads these individuals to overuse the Internet and social networks and in turn making them more exposed to bulling. According to this study, Extravertedness, Agreeableness, and Conscientiousness have a negative relational role on bullying (Batigun & Kilic, 2011; Tuten & Bosnjak, 2001). Kraut, Kiesler, Boneva, Cummings, Helgeson, and Crawford (2002), maintain there is a negative relation between Internet use and being extraverted and agreeable, therefore minimizing the possibilities of cyberbullying by these individuals. Gibb and Devereux (2014), studied cyberbullying among 297 undergraduate students and report that the Dark Triad characteristics (Machiavellianism, Narcissism and Psychopathy), are associated with cyberbullying. Individuals who endorse more Machiavellian traits are characterized by manipulative behaviors and to maintain influence over others they may engage in negative behaviors (Rauthmann & Kollar, 2012). These individuals engage in cyberbullying to conceal, preserve, or ascertain their place within their social network because of the comparatively low risk related to the nature of these behaviors and potentially large influence on their social network (Gibb & Devereux, 2014). Narcissistic individuals are characterized by physical aggression (Reidy, Zeichner, Foster, & Martinez, 2008), and antisocial behaviors on Facebook (Carpenter, 2012), as well as cyberbullying behaviors in adolescents. Persons who present high levels of narcissism may engage in cyberbullying behaviors because it may cast them socially invincible (Ang, Tan, & Mansor, 2011). High impulsivity and thrill-seeking behavior, combined with low levels of empathy, and low social anxiety are the main characteristics of subclinical psychopathy (Paulhus & Williams, 2002).

According to Gibb and Devereux (2014), individuals who report high levels of this trait are significantly more likely to engage in cyberbullying behaviors than individuals who are low in this trait. Sensation seeking, is a biologically-based personality trait which motivates individuals to seek novel and intense experiences (Zuckerman, 1979). This personality trait has been frequently linked to problematic Internet use and to cyberbullying (Kim & Davis, 2009; Kokkinos et al., 2014). Individuals who are sensation seekers usually take social, physical, financial, and legal risks. University students who engage in risk taking behavior and danger are attracted to Internet activities which provide this excitement while at the same time they may create fake and provocative identities to attract others (Kim & Davis, 2009; Kokkinos et al., 2014; Lyng, 2005). It therefore seems that easily accessible technology in combination with certain personality characteristics may facilitate cyberbullying behaviors which are yet to be explored among students in university.

2.7 Cyberbullying and Psychopathology

Although the Internet has great benefits when used appropriately and carefully, heavy and inappropriate use of the Internet has been associated with various mental health problems. For example, Schenk, Fremouw, and Keelan (2013), found that university students who are perpetrators of cyberbullying score higher on paranoia and psychotic symptoms. These findings may indicate the presence of psychopathology in individuals partaking in cyberbullying. Additionally, individuals who manifest hostility tend to present with anger outbursts and intense irritability, which may lead them to extreme responses, provocation, or misunderstood intentions (Ruiperez, Ibáñez, Lorente, Moro, & Ortet, 2001). Aggressive tendencies and different forms of aggression such as proactive, reactive, direct, and indirect, have been associated with cyberbullying. Proactive aggression and justification of violence

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were found to be significantly related to cyberbullying (Calvete, Orsue, Estevez, Villardon & Padilla, 2010), as well as relational aggression which refers to acts of planned aggression directed towards a goal (Johnson, 2009; Schultze-Krumbholz & Scheithauer, 2009; Sontag, Clemans, Graber, & Lyndon, 2011). High proactive aggression has been found to correspond with higher incidence of psychopathology in adults and adolescents (Raine, Dodge, Loeber, Gatzke-Kopp, Lynam, Reynolds, & Liu, 2006; Woodworth & Porter, 2002). Attributes of psychopathology include lack, of empathy, callousness, impulsiveness, manipulative behavior, discard for the rights of others, increased tendencies to commit violent acts, and parasitic tendencies (Patrick, 2005). Fanti (2009), found that individuals with high scores in callousness were more likely to engage in reactive and proactive aggression. Raine et al., (2006), found that reactive aggression may be related to the fearlessness or low empathy exhibited by perpetrators which may be the component that leads them towards reactive aggression. Baughman, Dearing, Giammarco, and Vernon (2012), found that psychopathology was the correlated to traditional bullying, while Jones and Paulhus (2010), found that individuals with psychological difficulties tend to be aggressive even when they are not provoked. Ybarra and Mitchell (2004), found that perpetrators of cyberbullying are more likely than non-perpetrators to engage in problematic offline behaviors including damaging property, police contact, physically assaulting other individuals, and taking something that did not belong to them. Common behavior for adolescent perpetrators of cyberbullying also includes drinking, fighting, rule breaking, substance abuse, and poor parental relationships (Kiriakides & Kavoura, 2010; Schenk et al., 2013). However, few studies to this day have investigated these psychological traits in individuals who engage in cyberbullying behaviors in university, and often result in detrimental psychological consequences.

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2.8 Psychological Consequences

Due to the progression of technology, traditional bullying has changed from physical to computer generated. The Internet constitutes an attractive platform of social interactions, allowing individuals to say and act anonymously. Therefore, cyberbullying may have destructive corollaries on the individuals being victimized varying from isolation, anxiety, depression, to more serious consequences such as suicidal ideation and in some cases suicide. A known case of cyberbullying that had become viral resulted in a teenager from Canada committing suicide when photos of her being assaulted were posted in the social media (Popkin, 2013). In September 2010, Tyler Clementi an 18-year-old young teenager committed suicide jumping from the George Washington bridge after his roommate publicized a video of him and another male over the internet (Friedman, 2010). Research among university students that focuses on the consequences of cyberbullying reports a significantly higher rate of suicidal thoughts and behaviors as well as higher rates of anxiety, depression, drinking alcohol, smoking, low commitments to academics, and paranoia (Chapell, Hasselman, Kitchin, & Lomon, 2006; Schenk & Fremouw, 2012; Ybara & Mitchell, 2004). Isaacs, Hodges and Salmivalli (2008), conducted a longitudinal study measuring the long-term consequences of victimization by peers, and their results indicated that adolescent experiences of victimization do indeed contribute to long-term adjustment difficulties in adulthood. Adolescent victimization predicted increases in depression, decreases in self-esteem, and negative views of peers in adulthood. Thomas (2006), found that school phobia, depression, anxiety, emotional distress, lowered self-esteem, and suicide were acknowledged as potential results of being a victim of cyberbullying. It is therefore clear from research that either traditional bullying or the new forms of electronic aggression may cause university students to experience psychosocial difficulties (David-Ferdon & Hertz, 2009). These problems may include internalizing problems

such as anxiety, loneliness, sadness, and insecurity, or externalizing problems such as hyperactivity and impulsiveness (House of Commons: Education and Skills Committee, 2006-07). Some studies suggest that children who are targeted by cyberbullying display similar problems that include, anger, sadness, and frustration (Beran & Li, 2005; Hinduja & Patchin, 2007). Ybarra, Alexander and Mitchell (2005), found that individuals who used the internet more often were likely to experience depressive symptomatology. Selkie et al., (2015), in a study of 265 female university students, that participated in cyberbullying behaviors either as perpetrators, victims, or perpetrator/victims, found they presented higher rates of depression and alcohol use. Social anxiety is also related to negative consequences as it was found to increase when individuals where interacting with peers (Pabian & Vandebosch, 2016). Research has shown that the impact of cyberbullying is substantial and negative. The fact that the Internet has an increased difficulty to escape cyberbullying is a factor that can escalate the severity of its impact. The psychological consequences that many university students experience and may well continue through adult life, may also be the result of the role that individuals take on about bullying, which not only depends on their personality characteristics, but also on their previous bullying experiences.

2.9 Interrelationships in roles of Cyberbullying experiences

In face-to-face bullying everyone takes on a role e.g. perpetrator, victim, perpetrator assistant, perpetrator reinforcer, victim defenders, or outsider (Moore, Nakano, Enomoto, & Suda, 2012; Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996). Individuals can also occupy various roles at the same time such as the role of perpetrator/victim where they engage in and experience bullying simultaneously. There is some evidence that individuals fulfill similar roles in cyberbullying (Wachs, 2012), with the roles being that of a victim,

perpetrator, and perpetrator/victim. The victims of cyberbullying are the individuals who report they are the target of cyberbullying, whereas perpetrators are those who engage in cyberbullying behaviors targeted at others. Research has generally focused on exploring the two main roles of victims and perpetrators individually (Gahagan, Vaterlaus, & Frost, 2016; Kokkinos, Balzidis, & Xynogala, 2016). Notwithstanding, some individuals may be the target of cyberbullying and engage in cyberbullying behaviors at the same time leading in them being categorized as perpetrator/victim (Lam, Cheng, & Liu, 2013; Selkie, Kota, Chan, & Moreno, 2015). There are certain indications that the perpetrator/victim is proportionally the principal role of all cyberbullying roles among university students (Brack & Caltabiano, 2014). Betts, Gkimitzoudis, Spenser, and Baguley (2017), identified four different groups that varied according to the individual's involvement in cyberbullying: "not involved", "rarely victim and perpetrator", 'typically victim", and "retaliator". Brack and Caltabiano, 2014, found that groups consisting of pure perpetrators and victims of cyberbullying have roughly the same prevalence with 11% and 10% respectively, while the perpetrator/victim group appears to be the largest group with a rate of 62%, supporting the suggestion that individuals who lack social power become more assertive through Internet communication (Hinduja & Patchin, 2014). In their study they also found that cyberbullying and cybervictimization rates do not decrease with age. In cyberbullying some individuals help the perpetrator by sending posts to attack a victim, some may encourage the perpetrator by laughing at the victim through the posts, some may help the victim to defend themselves, and some may observe and take no action. Hence, cyberbullying roles appear to be more complicated than the roles implicated in traditional bullying due to the nature of communication technology which allows perpetrators to hide from view behind the computer screen as well as abettors or supporters who forward the embarrassing photos or cruel words posted in the social media (Huang & Chou, 2010). In cyberspace, everyone with internet access and basic operation skills can easily broadcast

rumors and send hurtful emails and harm the victims, in other words it provides the opportunity to victims to fight back through technology. In the case of cyberbullying, individuals who advance the ill-intentioned messages to other individuals can be considered members of the perpetrator group. At the same time, onlookers who receive the hurtful messages concerning friends may regard themselves as members of the victim group. It is also the case that the person who provided the original message did not intend to hurt someone, but that other individuals that have access to accounts in cyberspace might brutally change or broadly broadcast the message that is open to public view, creating a vicious circle. Therefore, cyberbullying roles are not inescapably unchanging and may change depending on the situation. An individual, for example, may consistently be a perpetrator, sometimes he/she maybe a victim or perpetrator, or may turn to aggressive behaviors such as perpetrator of cyberbullying as a reaction to face-to-face bullying (Betts, Gkimitzoudis, Spenser, & Baguley 2017; Camodeca, Goossens, Schuenge, & Terwogt, 2003; Frey, Pearson, & Cohen, 2015). This retaliation, which serves as a protective measure for the victims of cyberbullying in that they are not an easy target, also provides a mechanism for individuals to redress negative feelings that derive from being a victim (Varjas, Talley, Myers, Parris, & Cutts, 2010).

However, cyberspace also provides the opportunity for any bystander to put a stop to vicious circles by taking positive actions to stop the spread of the materials (Huang & Chou, 2010). Gini, Pozzo, Borghi, and Franzoni (2008), note that the intertwined relationship among perpetrators of cyberbullying, victims, and the enormous group of online onlookers wiled sufficient power to terminate or the least, minimize bullying. Understanding the roles in cyberbullying, which have been investigated by very few studies at this level (Brack & Caltabiano, 2014), may be beneficial in identifying the reasons for the existence of cyberbullying among university students and use the pool of bystanders to eliminate this

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behavior. To fully assess students' involvement in cyberbullying it is of utmost importance to examine their experiences both as a victim and a perpetrator.

Identifying possible causes of perpetrator/victim relationship and the expression of this relationship is a start to preventing a possibly destructive act. Researchers are clearly concerned for the emotional, mental, social, and academic health of perpetrators and victims, and are progressively concerned with the ramifications of online victimization. This study aims to raise awareness of this continuing trend of cyberbullying among university students and investigate personality factors and interrelationship roles that may lead to the exacerbation of this behavior.

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CHAPTER 3

METHODOLOGY AND DESIGN

3.1 Participants

The population in this study was university students. Participation criteria for the study include individuals who are from 18 years of age and over and are currently university or college students. A total sample of 431 (70.8 %female, 29.2% male), completed these studies. Study I was completed by 202 participants; Study II by 209 participants, and for Study III 20 participants were interviewed. The age range was 18- 48 and the mean age was 20.03 (*SD=3.59*). A statistical power analysis was performed for sample size estimation, based on data from relevant research (Kokkinos, Antoniadou, & Markos, 2014; Kokkinos, Baltzidis, & Xynogala, 2016; Musharraf, & Anis-ul-Haque, 2018). With an alpha = .05 and power = 0.80, the projected sample size needed for a large effect size is approximately N=380 for this within-group comparison. The total population of students in Cyprus at the moment was approximately 38,647 for 2018-2019, and with a confidence interval 95%, and a margin of error 5%, the suggested sample size 381. Thus, the total sample size of N=431, that derived from the combination of the three studies (N=209, N=202, N=20), was deemed adequate for this study and allowed to afford potential attrition and the researcher's additional objectives of controlling for possible moderating factors analysis.

Participants were recruited through the universities by providing a detailed description of the study and the purpose it serves and through a convenience sample. Posters were placed in the university common areas where individuals interested in participating in the survey could contact the researcher (Appendix IV). The surveys were conducted in the Fall of 2016 using a secure online survey tool (Google Forms). The link was provided to the university students and the participants could access the survey at any time they wished.

Study I which comprised of a demographic's questionnaire, the BFI and the RCBI, took approximately 8 -10 minutes to complete. Study II which included a demographics questionnaire, the ASR and the RCBI took 12-14 minutes to complete.

3.2 Materials

Informed consent forms were used containing information about procedures, benefits, and an explanation of how to acquire results to the research, availability of counseling services, voluntary participation, and contact information of the researcher. Professionalism was maintained during all interactions and participant confidentiality was ensured. Raw data was safeguarded by keeping it in a locked cabinet where only the researcher had access and electronic data was kept in a folder for which only the researcher knew the password. For the purpose of this study three questionnaires were employed in order to measure one independent variable and three main dependent variables. Study I employed a questionnaire packet consisting of a consent form, a demographics sheet, the Big Five Inventory (BFI) and the Revised Cyberbullying Inventory (RCBI). For Study II the ASEBA Adult Self Report questionnaire and the RCBI were used. For Study III a semi-structured questionnaire was used to conduct a 15-minute interview that was developed based on the research hypothesis. The tools used are outlined in the following paragraphs.

Independent Variable: Cyberbullying perpetration and cybervictimization was measured using the Revised Cyberbullying Inventory (RCBI) devised by Erdur-Baker and Kavsut (2007). The RCBI is a 28 item self-report measure with a 4-point Likert scale which requires the participant to respond to two subscales: first if they have performed the fourteen listed behaviors (Perpetrator scale), and second, if others have used the behaviors against them (Victim scale) during the previous twelve months. Summed scores range from 14-56, where higher scores indicate more frequent cyberbullying than victimization. The RCBI has been

found to have strong reliability and Cronbach coefficients at .92 for the perpetrator scale and .80 for the victim scale. It also provides higher construct validity than similar scales by assessing fourteen specific instances of behavior, rather than singular global measures of bullying behavior (Topcu & Erdur-Baker, 2010).

Dependent Variables: There are three main dependent variables in this study. The personality traits which constitute the first dependent variable were measured using The Big Five Inventory (BFI; John, Donahue, & Kentle, 1991) is a 44-item questionnaire that assesses the Big Five personality domains; Neuroticism, Extroversion, Openness to Experience, Agreeableness, and Conscientiousness. It was developed to represent the prototype definitions developed through expert ratings and subsequent factor analytic verification in observer personality ratings. This tool represents a brief inventory that allows efficient and flexible assessment of the five dimensions. It uses short phrases based on the trait adjectives known to be prototypical markers of the Big Five. It includes eight to ten items on each scale related to each of the six facets as postulated by Costa and McCrae (2009). The alpha reliabilities of the BFI scales typically range from .75 to .90 and average above .80. Three-month test-retest reliabilities range from .80 to .90, with a mean of .85. validity evidence includes substantial convergent and divergent relations with other Big Five instruments and peer ratings. In previous research, its domain scales have shown high reliability, clear factor structure, strong convergence with longer Big Five measures, and substantial self-peer agreement (John & Srivastava, 1999). Reliabilities are reported in Table 1.

The Adult Self-Report (ASR) (Achenbach & Rescorla, 2003), is an objective self-report measure of behavioral, emotional, and social problems in adults, and it was used to measure the second dependent variable, that is the psychological symptoms promoting cyberbullying. The ASR was designed to measure Achenbach's eight syndrome model of psychopathology. The eight syndrome scales are labeled Anxious-depressed, Withdrawn,

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Somatic complaints, Thought problems, Attention problems, Aggressive behavior, Rule-breaking behavior, and Intrusive behavior. The scoring profiles for the ASR include normed scales for adaptive functioning, personal strengths, empirically based syndromes, substance use, internalizing, externalizing and total problems. In addition, this tool features DSM-oriented scales consisting of items that experts identified as being very consistent with DSM-5 categories. The profiles also include a Critical Items scale consisting of items of particular concern to clinicians. The ASR was used to assess the students' adaptive functioning (friends, family, relationships, and personal strengths). The syndrome scales were used to investigate psychological symptoms such as depression, anxiety, suicidal ideation, etc.

In order to measure the interrelational roles in cyberbullying, the third dependent variable, the same measure as for cyberbullying received was used, that is the Revised Cyberbullying Inventory (RCBI). To explore whether there is a significant difference in cyberbullying experiences the type of cyberbullying perpetration (violent image, unpleasant image, insulting or threatening communication), the group a young person belongs to (not involved, rarely a victim and perpetrator, typically victim, retaliator), and the reported levels of cyberbullying perpetration and victimization were analyzed (Betts, Gkimitzoudis, Spenser, & Baguley, 2017).

Three student surveys were undertaken. The surveys were designed to collect information regarding cyberbullying experiences in the university. In order to measure these factors, two separate surveys were developed, which were deemed the most appropriate method to obtain the data. A survey method was chosen as it allowed for reaching a wider sample of students. Two web-based surveys were created for this purpose so as to ensure easy access and anonymity while at the same time questionnaires were given in person to students in universities.

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The surveys were designed according to a cross-sectional design in order to collect information regarding the personality, psychopathology and interrelational roles of university students that may promote cyberbullying behavior. The use of established questionnaires and surveys contributed to improving the reliability and validity of the research study conducted. The tools used included the Big Five Inventory (BFI), the Adult Self Report (ASR), and the Revised Cyberbullying Inventory (RCBI), all of which have well established reliability and validity. The demographic part of the surveys collected only the gender, the current level of studies at the university, the age, and the ethnicity resulting in total anonymity. When the surveys were completed they were removed from the Internet and all files were deleted.

3.3 Design and Procedure

Prior to the data collection a pilot study was conducted so that the researcher could identify possible difficulties related to the process, which may have had a negative impact on the results. Participants of the pilot study included 20 university students ages 18-35 who were recruited from two different universities in different districts and were given the online survey. Ten students were supplied with the interview questions. Participants were asked to go through the questions and to highlight any word/sentences that are ambiguous or difficult to understand. Four interviews were conducted in order to pilot the semi-structured interview questionnaire. Following this procedure, the questionnaire was reviewed based on the results provided by the pilot study where problematic questions were eliminated and vague questions were rephrased.

The steps used to pilot the questionnaires for the purpose of this study on a small group of volunteers, who are as similar as possible to the target population, are listed below:

- The questionnaire and the interview were administered to pilot participants in the same way as it was administered in the main study.

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- The participants were asked for feedback to identify ambiguities and incomprehensible questions
- The time taken to complete the questionnaire was recorded and it was decided whether it was reasonable
- All unnecessary, difficult, or ambiguous questions were discarded or rephrased
- The questions were assessed for the range of adequate responses
- A check was made that all the questions were answered
- Questions that were not answered as expected were re-written or re-scaled

(Source: Table 3.23 in Peat, Mellis, Williams, & Xuan, 2002)

From the pilot study the following changes were made:

1. A spelling mistake was corrected on the supervisor's email address on the Informed Consent Form.
2. On the Questionnaire for Study II:
    - Item 6 had only one option for an answer and it was changed to provide more choices.
    - Item 9 in the same questionnaire was missing an extra space for the participants to describe their thoughts.
    - On item 56 separate boxes were inserted for participants to record their answers.
    - Items 113 & 114 had an extra field that was removed.
    - Items 124, 125 and 126 had no space between words and needed an additional field to insert number of days.
3. On the Revised Cyberbullying Inventory an additional field for those who have not experienced or were perpetrators of cyberbullying was added and an additional field

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for those who were perpetrators or experienced cyberbullying was added in order to record how often per day, month or year the behavior occurred.

The research design of this study was a mixed methods quantitative and qualitative study. This study employed questionnaires for quantitative data and individual interviews for qualitative data collection. A mixed methods design was used as it provides the opportunity to the researcher to use both quantitative and qualitative information as well as all tools of the data collection. It also assists in gaining better comprehension of the research aims and questions. When they are used together they permit the researcher to achieve a more vigorous analysis (Ivankova, Cresswell, & Stick, 2006).

This research study is separated into three different studies. Study I was designed to test Hypothesis 1: Personality traits (The Big 5 characteristics) will be associated with cyberbullying/victimization. Study II aimed to test the consequences caused by cyberbullying and test Hypothesis 2: Cyberbullying is related to psychological consequences (anxiety, depression, suicidal thoughts etc.) for perpetrators and victims of cyberbullying. Study III consisted of semi-structured interview sessions for which a questionnaire with open ended and closed questions was prepared. Study III was preliminary and its aim was to study the emotions and perceptions of the participants while gathering information regarding the personality of the perpetrators and victims of cyberbullying, and the coping mechanisms that students use to deal with this phenomenon. In addition, it aimed at exploring the student's suggestion regarding prevention and intervention strategies that universities can use. To test Hypothesis 3: Some individuals experience cyberbullying as a victim and a target simultaneously as a result of previous experiences as a victim, data from all sets of questionnaires were used.

To inform this research, one quantitative online survey was developed for students that aimed at determining the contribution of personality factors to cyberbullying. The survey

obtained information from 202 undergraduate and graduate students from universities. A second online survey was developed for students aiming at determining the psychological symptoms that may contribute to cyberbullying behaviors. This survey obtained data from 209 students. The interview protocol that followed, aimed at a greater understanding of cyberbullying behavior, emotions, attitudes, and perceptions of cyberbullying, and obtained data from 20 participants. The researcher conducted the interviews. The online questionnaires were developed from a combination of questions taken from valid, reliable, and standardized tools readily available to measure the variables.

Content validity was tested in order to understand how well the questions on the questionnaires measure the complexity of the variables being studied. Factual validity of the questionnaires was assessed by comparing responses, and face validity of the questionnaire was examined by asking the participants face-to-face after they completed the questionnaire to determine whether the responses they reported in the questionnaire were adjunct with their actual opinions.

For self-complete questionnaires as the two designed for this study, two aspects of reliability were examined. Test-retest reliability was assessed by asking participants to complete the questionnaire on two separate occasions two weeks apart, given that their circumstances have remained the same during this interval. The two sets of responses were then compared statistically using Spearman's Rank Correlation Coefficient (or its non-parametric equivalent, the Wilcoxon Rank Sum test) for continuous data and weighted Kappa 12 for categorical data. The internal consistency of the questionnaire was determined by asking a question in more than one way during the questionnaire. The responses given were then compared to the ones previously provided.

After the pilot study, exclusion criteria were implemented and 202 participants completed the online questionnaire for Study I, 209 participants completed the online

questionnaire for Study II, and 20 participants were interviewed. Participants that chose to take part in the research study completed all the self-report measures via Google Forms. Google forms is a web-based survey management system specifically designed to facilitate research conducted at universities. Both studies were entitled "Internet Experiences of University Students" in an effort to avoid a selection effect of participants of victims or perpetrators of cyberbullying. All respondents first read an informed consent form, which detailed the purpose of the study. After reading this information, participants that chose to take part in the study had to select the "I Agree" option before being allowed to continue. They were then directed to the anonymous survey. Participants for Study I completed a demographics questionnaire, the Big Five Inventory (BFI) and the Revised Cyberbullying Inventory (RCBI) (Appendix V). Participants for Study II completed a demographics questionnaire, the Adult Self Report (ASR) and the Revised Cyberbullying Inventory (RCBI) (Appendix VI). Details of the survey instruments are provided in the paragraphs to follow. All participants could decline to answer any question and they reserved the right to withdraw from the study at any point they deemed appropriate. Upon completion of the study, participants were given information regarding their participation and were provided with contact information should they had any questions regarding the study.

For the purpose of Study III, interview sessions were carried out taking all appropriate measures to maintain confidentiality. The interviews were conducted in English. Limitations of not conducting the interviews in the participants mother language are discussed in the limitations section of the study. The duration of each interview was around 20-30 minutes. A brief introduction was given to the students regarding the purpose of the research. For this study the semi-structured interview type was selected as it provides both structure and flexibility and allows for discourse between the participant and the researcher that could be of value to discussions later on (Appendix VII). It also provided the participants with the

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opportunity and possibility to elaborate and develop their answers and express their emotions, thoughts and opinions concerning cyberbullying.

Statistical analyses were conducted using IBM Statistics SPSS (Version 23.0). Analysis of data begun with a description of the sample from which the data was collected including information on age, ethnicity, gender and university status as well as the means, modes, range and standard deviation for the BFI, the ASR, and the RCBI scores. The analysis was computed using descriptive statistics.

To determine which factors were related to engagement in cyberbullying behaviors at a university level, a series of Multivariate Analyses of Variance were conducted with cyberbullying perpetrator or cyberbullying victim as the dependent variable. Pearson correlations were computed to assess the relationship between cyberbullying and the Big Five personality factors (Hypothesis 1).

To identify differences in psychological symptoms between perpetrators of cyberbullying, victim of cyberbullying, and individuals who do not engage in either (control participants), a multivariate analysis of variance (MANOVA) was conducted with the subscales of the ASR as dependent variables and the participant group (perpetrator, victim or control) as independent variables. The results of the three participant groups univariate analyses of variance (ANOVAs), were analyzed to identify significant differences on the individual's scales of the ASR (Hypothesis 2).

To explore the participants role classification based on the cyberbullying perpetrator/victim scores, a chi-square test was used. One-way ANOVAs were used to test whether participant roles have any significant effect on students' scores (RCBI) on the variables under study. In all cases, post hoc multiple comparisons using the Scheffe test were used. The Pearson correlation analysis was exploited to respond to one of the aims of the study as exploring the relationship between cyberbullying and being victims of

cyberbullying. In order to define the distribution of the group in terms of bullying and being bullied, Ward's hierarchical cluster analysis was conducted on the points obtained from the perpetrator scale of the RCBI. Means and standard deviations related to cluster analysis were computed (Hypothesis 3).

Pearson correlations were computed to assess the relationship between cyberbullying, victimization, and the rest of the variables. To determine the extent to which cyberbullying, and victimization are related to personality, psychological symptoms and interrelational roles, several univariate analyses of variances were performed. Variable selection was conducted using a combination of theory-based and statistically recommended procedures. Sets of variables were entered into the analysis in a predetermined order informed by their theoretical significance. Thus, interrelational roles were entered into the model last in order to evaluate their relative contribution once the effects of personality characteristics and psychological problems are accounted for. In all three studies gender was controlled for in order to reduce error terms and eliminate the gender effect on the relationship between the independent variables and the dependent variables.

Finally, missing items were treated by using the multiple imputation (MI) method. This method disregards some variable information (Schafer, 1999) and is therefore considered better than traditional methods such as listwise (LD). MI can also be used for data which is not missing completely at random (MCAR). In this case the missing values on a particular variable X are unrelated to other variables in the data as well as the underlying values of X itself (Peugh & Enders, 2004). The SPSS Missing Values Analysis (MVA) option supports Little's MCAR test, which is a Chi-square test for MCAR. If the *p* value for Little's MCAR test is not significant at the 0.05 level, then the data may be assumed to be MCAR (SPSS, 2013). Appropriate treatment of missing data is of utmost importance in order to avoid biased sample statistics (Peugh & Enders, 2004).

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CHAPTER 4

DATA ANALYSIS AND RESULTS

The following section depicts the results as gathered from the research questions and hypotheses stated for this study. Analysis and discussion of the demographic data, is provided through descriptive statistics and the results of cyberbullying and victimization that were measured using the Revised Cyberbullying Inventory (RCBI), The Adult Self-Report (ASR), and The Big Five Inventory (BFI) are provided via Pearson Correlations and Multivariate Analyses of Variance (MANOVA). A confidence level of *Alpha* = .05 was also utilized to analyze the results of the RCBI, the ASR, and the BFI. The scale reliabilities for all the measures used are presented in Table 1.

Table 1

Scale Reliabilities

Measure	Items in Scale	Cronbach's Alpha
Revised Cyberbullying Inventory (RCBI)	28	.92
Cyberbullying scale		.92
Cybervictimization scale		.80
Adult Self Report (ASR)	125	.90
Empirically Based		.88
Critical Items		.87
DSM-Oriented		.83
Substance Use		.87
Adaptive Functioning		.79
Big Five Inventory (BFI)	44	.80
Neuroticism		.74
Extroversion		.83
Openness to Experience		.85
Agreeableness		.81
Conscientiousness		.90

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4.1 Study I: Overview

Study I aimed to explore cyberbullying behavior and specifically to examine personality traits associated with cyberbullying behavior and victimization among university students as it is generally considered that such behavior peeks in early adolescence and is rarely observed in early adulthood. It is important to understand associative factors of engagement in such behaviors like personality, psychological traits, previous experiences as a victim, and interrelational roles. The current study examines personality factors believed to be associated with engagement in cyberbullying behaviors in addition to the previously established factors and adds to the existing body of knowledge, by studying the relationship between key traits from the Big Five model cyberbullying, and victimization. Little is known about personality traits that are related to victimization in cyberbullying, especially among university students.

Few studies have investigated the association between Big Five personality traits both in victimization and engagement in cyberbullying. Research has shown that personality influences individuals' probability to participate in cyberbullying behavior. Amichai-Hamburger and Vinitzky (2010), found that elevated levels of Openness to Experience are associated with revealing a greater amount of private information, whereas high levels of Extroversion were associated with sharing a greater depth of intimate information. Festl and Quandt (2013), found that victims of cyberbullying characterized by a high degree of Openness, were inclined to be more Extraverted, and exhibited low levels of Agreeableness. Wilcox, Sullivan, Jones, and Van Gelder (2014), reported a negative relationship between victimization Conscientiousness and Agreeableness. Ellrich and Baier (2016), found that the individuals that scored higher on Openness to Experience and Neuroticism traits were inclined to become victims. Peluchette, Karl, Wood, and Williams, (2015), found noteworthy

associations between personality characteristics and cyberspace behaviors, including frequent use of the internet, posting indiscrete content themselves, great number of Facebook friends, and encouraging friends to post indiscrete content. However, Openness to Experience and Extroversion were the only traits significantly and positively related to victimization and cyberbullying. Many of these studies focused on middle school age participants, even though increasing evidence exists that cyberbullying is evidently problematic among university students and generally young adults. The prevalence of this phenomenon ranges from 10% to as high as 50%. Cyberbullying among young adults is proving to be a significant problem among university students (Crosslin & Golman, 2014; Fransicsco, Simao, Ferreira, & Martins, 2015; Gibb & Devereux, 2014; Kokkinos, Antoniadou, & Markos, 2014; Whitaker & Kowalski, 2015). As a result, researchers are suggesting that more studies focus on the risk factors related to cyberbullying among university students and young adults.

By examining the factors associated to cyberbullying behaviors it is trusted that a better outline of the individuals that engage in such behaviors can be established. It is anticipated that these findings will lead to a better understanding of how to develop prevention strategies to decrease the occurrence of these behaviors. The current study also seeks to understand if the proposed distinguishing personality traits are related to a wider range of roles and to more recent engagement in cyberbullying behaviors thus providing insights into opportunities for preventions.

4.1.1 Research Questions and Hypotheses

The following research questions were evaluated via this research design:

RQ1: What are the personality traits that predispose an individual to engage in cyberbullying behavior?

RQ2: Which personality traits tend to make individuals more vulnerable to victimization?

Based on the existing literature the following hypotheses were formed:

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Hypothesis 1: Openness to Experience will be positively associated with the likelihood of engaging in cyberbullying behavior and negatively associated to victimization.

Hypothesis 1a: Extroversion will be positively associated with the likelihood of engaging in cyberbullying behavior and victimization.

Hypothesis 1b: Neuroticism will be negatively associated with the likelihood of engaging in cyberbullying behavior and victimization.

Hypothesis 1c: Conscientiousness will be negatively associated with the likelihood of engaging in cyberbullying behavior and victimization.

Hypothesis 1d: Agreeableness will be negatively associated with the likelihood of engaging in cyberbullying behavior and positively associated with victimization.

4.1.2 Study I- Method

Participants

A statistical power analysis was performed for sample size estimation, based on data from relevant research (Kokkinos, Antoniadou, & Markos, 2014; Kokkinos & Baltzidis, & Xynogala, 2016; Musharraf, & Anis-ul-Haque, 2018). With an alpha = .05 and power = 0.80, the projected sample size needed for a large effect size is approximately N = 180 for this group comparison. Thus, the sample size of N= 202 was considered adequate for the main objective of this study.

Before proceeding to the analysis, the data was checked for normality using skewness and kurtosis statistics. A skewness value >1 indicates that the distribution varies significantly from normal. Similarly, a standardized kurtosis value that is less than -2 or greater than +2 indicates that the distribution varies significantly from normal (Green, Salkind, & Jones, 1996). The calculated statistics suggested that the distributions of the majority of the scales were within the expected range (skewness: -.01 to .495; kurtosis: -.887 to .920).

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Specifically, the participants for Study I were conveniently selected undergraduate and graduate students (*N= 202; Mean age= 22.28, SD= .44*) currently studying at universities. Participation criteria for the study included individuals who were 18 years of age and over and are currently university or college students, and they had articulate knowledge of English language.

4.1.3 Materials

Study I employed a questionnaire consisting of a consent form, a demographics sheet, the Big Five Inventory (BFI), and the Revised Cyberbullying Inventory (RCBI) which required approximately 8-10 minutes to complete.

Independent Variable: Cyberbullying/Cybervictimization was measured using the Revised Cyberbullying Inventory (RCBI) devised by Erdur-Baker and Kavsut (2007).

Dependent Variables: The Personality traits which constitute the dependent variable for this study were measured using The Big Five Inventory *(BFI*).

4.1.4 Design and Procedure

Participants were recruited through the universities by providing a detailed description of the study and the purpose it serves, and through a convenience sample. Posters were placed in the university common areas where individuals interested in participating in the survey could either contact the researcher or scan a code that would send them directly to the survey link (Appendix IV). The survey was conducted in the Fall of 2016 using a secure online survey tool (Google Forms) and by distributing questionnaires face to face. The link for the online survey was provided to the university students and the participants could access the survey at any time they wished. The online surveys produced 196 participants and 215 questionnaires were collected in person. The majority of participants were female (*n = 148,*

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73.3%). The remaining sample were male (*n= 54, 26.7%*). The age range was 18-48 and the mean age was 22.28 (*SD= 4.23*). The sample consisted of students currently studying for their Diploma (*n=20, 9.9%*), their Bachelor's degree (*n=159, 78.7%*) which was the vast majority of participants, their Master's degree (*n=14, 6.9%*), their Doctoral degree (*n=4, 2%*), and other types of degrees (*n=5, 2.5%*). Completed demographics of the participants are presented in Table 2.

Table 2

Participant Demographic Information

Variable	*Statistics*	*Percentage*
Age		
M	22.28	
SD	4.230	
Minimum	17	
Maximum	48	
Gender	Frequency (N)	Percentage (%)
Female	148	73.3
Male	54	26.7
Education Level		
Diploma	20	9.9
Bachelor's Degree	159	78.0
Master's Degree	14	6.9
Doctoral Degree	4	2.0
Other	5	2.5
Ethnicity		
Cypriot	94	46.5
Non-Cypriot	108	53.5

The sample of 202 participants was further divided into perpetrators of cyberbullying, victims, perpetrator/victims, and controls. Participants were defined as perpetrators if they advocated any form of cyberbullying behavior four times or more since they have been registered in university and victims if they had been victims more than four times since they have been studying at university. Types of cyberbullying behaviors included: stealing of computer nicknames or screen names, posting threats in online forums (like chat rooms,

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Facebook, or twitter), utilizing personal information from computer (like files, email addresses, pictures, IM messages, or Facebook information), offending in online platforms (like chat rooms, Facebook, or |Twitter), rejecting others in online forums by blocking their comments or removing them, insulting by posting fake images on the Internet, sharing personal and intimate Internet conversations without the other individuals knowledge (such as chatting with a friend on Skype with other (s) in room), making fun of comments in online forums (such as Facebook), sending harmful or intimidating comments via electronic mail, stealing email access (usernames and passwords) and blocking true owner's access, stealing email access and reading personal messages, sending threatening and /or hurtful text messages, misleading by pretending to be other gender (male/female), and if they published online an embarrassing photo without a permission.

Examination of the participants revealed that 68 out of 202 (33.6%), can be classified as perpetrators of cyberbullying, 84 out of the 202 (41.6%), reported they were victims of cyberbullying more than four times, and 25 out of 68 (36.7%) participants that reported cyberbullying other individuals, had also been victims of cyberbullying four times or more since they have been at university and self-identified as victims of cyberbullying. The students reported the aforementioned behavior occurred at least four times regardless of the time they have been at university. Therefore, a distinct group of perpetrator/victim of cyberbullying was created that included participants who were both perpetrators and victims of cyberbullying at least four times or more. The remaining 50 participants reported they have never been perpetrators of cyberbullying nor have they been a victim of cyberbullying and they constitute the control group. A total of 202 participants were included in all subsequent analyses as reported in Table 3.

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Table 3

Demographic data by participant group

	Perpetrators of cyberbullying N=68		*Perpetrator/victim N=25*		*Victims N=84*		*Control Group N=50*	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Age	23.44	5.37	21.56	2.45	21.63	3.91	21.67	3.57
	N	%	N	%	N	%	N	%
Gender								
Female	46	67.2	21	84	62	72.9	41	80.4
Male	22	32.4	4	16	22	27.1	10	19.6
Education Level								
Diploma	15	22.1	1	4	4	4.7	2	3.9
Undergraduate	31	45.6	20	80	80	94.1	48	94.1
Master's	14	20.6	2	8	1	1.2	1	2.0
Doctoral Degree	3	4.4	1	4				
Other	5	7.4	1	4				
Ethnicity								
Cypriot	26	38.2	7	28	44	52.4	24	47.1
Non-Cypriot	42	61.8	18	72	40	47.6	27	52.9

4.1.5 Study I- Results

Summary Statistics

For the purpose of analysis data were split into four groups, perpetrators, victims, perpetrator/victims, and controls. The items from the Big Five inventory were separated into five groups by defining and using variable sets. Normality was tested for each personality trait by using stem-and-leaf plots and histograms. The statistics calculated suggested that the distributions of most of the scales were within the expected range (skewness: -.01 to .495; kurtosis: -.887 to .920). Gender was controlled for in all the analyses that follow.

4.1.6 Frequency of cyber-victimization behaviors

In terms of the specific cyberbullying behaviors, results indicated that stealing email access and reading personal messages was the most frequent behavior (*M= 2.14, SD= .428*) stealing computer nicknames and sending threatening or hurtful comments followed (*M =*

1.97, SD = 0.65), while excluding in online forums by blocking others' comments or removing them was the least frequent (*M = 1.36, SD = 0.57*). In terms of cybervictimization, the most commonly reported behavior was making fun of comments in online forums (*M = 1.71, SD = 1.0*) and stealing email access (*M = 1.06, SD = 0.35*), as well as sending threatening and hurtful messages (*M = 1.07, SD = 0.33*) which were the least reported behaviors respectively. It should be noted that although these behaviors were most frequently reported, they were quite rare, since the mean lies between the two least frequent response categories i.e. "never" and "once or twice." Means and standard deviations for all variables were computed as shown in Table 4.

Table 4

Means and standard deviations for personality characteristics and behavior of Perpetrators of cyberbullying and Victims

Variable	*M-V	*M- P	*SD-V	*SD- P	M	SD
Cyberbullying Behavior						
1. Stealing of Personal Information from computer	1.19	1.46	.596	.617		
2. Stealing of computer nicknames or screen names.	1.14	1.97	.462	.605		
3.Threatening in online forums	1.17	1.50	.583	.763		
4. Insulting in online forums	1.38	1.90	.791	.848		
5. Excluding in online forums by blocking others' comments or removing them.	1.59	1.51	.953	.829		
6. Excluding in online forums by blocking others' comments or removing them.	1.16	1.36	.588	.568		
7. Sharing private internet conversations without the other's knowledge	1.60	1.45	1.003	.904		
8. Making fun of comments in online forums	1.71	1.91	1.049	.933		
9. Sending threatening or hurtful comments through e-mail.	1.07	1.97	.330	.612		
10. Stealing email access	1.06	1.58	.347	.480		
11. Stealing email access and reading personal messages.	1.17	2.14	.520	.428		
12. Sending threatening and /or hurtful text messages	1.15	1.82	.486	.646		
13. Misleading by pretending to be other gender	1.16	1.67	.462	.607		
14. Published online an embarrassing photo without a permission.	1.12	1.43	.457	.503		
Personality						
Extroversion					3.44	.986
Agreeableness					2.86	1.134
Conscientiousness					3.28	1.137
Neuroticism					2.69	1.056
Openness to Experience					3.65	1.077

Note: The following abbreviations stand for: *(M-V) Means of Victims, * (M-P) Means of Perpetrators, * (SD-V) Standard Deviation of Victims, * (SD-P) Standard Deviation of Perpetrators, *

4.1.7 Multivariate Analysis of Variance

To investigate whether individuals with certain personality characteristics are more inclined to be perpetrators of cyberbullying or more vulnerable to victimization, a series of single-factor between subjects' multivariate analyses of variance (MANOVA) were performed since there were more than one dependent variables in the study and each of the variables consisted of several items. The first of the MANOVAS looked at the Big Five factors and a significant multivariate effect was found, F (5, 202) = 1,548, p = .001, multivariate, $\eta^2 = .028$. Follow up univariate analyses of each dependent variable revealed that perpetrators of cyberbullying had significantly high scores on Conscientiousness $F(10, 202)=1.750$, p = .005, Wilks Lamda= 0.4, $\eta^2 = .031$, on Neuroticism, $F(15, 202)= 1.498$ p = .005, Wilks Lamda= 0.4, $\eta^2 = .045$, on Extroversion, $F(15, 202)= .924$ p = .005, Wilks Lamda= 0.4, $\eta^2 = .026$, on Agreeableness, $F(15, 202)= .967$ p = .005, Wilks Lamda= 0.4, $\eta^2 = .016$, and on Openness to Experience $F(21, 202)= .940$, p = .005, Wilks Lamda= 0.5 , $\eta^2 = .020$ (Table 5).

Table 5

Multivariate Analyses of Variance: Personality Characteristics of Perpetrators

Dependent Variable	*df*	*F*	*p*	η^2
Big Five -Personality Characteristics	5	1.568	.001	.028
Conscientiousness	10	1.750	.005	.031
Neuroticism	15	1.498	.005	.045
Extroversion	15	.924	.005	.026
Agreeableness	15	.967	.005	.016
Openness to Experience	21	.940	.005	.020

Each personality characteristic was further analyzed in relation to the type of cyberbullying behavior used. The analysis of the scores are presented in Table 6.

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Table 6

Multivariate Analyses of Variance of RCBI items: Perpetrators of cyberbullying

Dependent Variable	*df*	*F*	Sig	η^2
Extroversion				
Stealing of personal information from computer	15	.521	.929	.016
Stealing computer nicknames or screen names	15	.594	.880	.019
Threatening in online forums	15	.686	.799	.021
Insulting in online Forums	15	.110	.353	.034
Excluding in online forums by blocking others comments or removing them	15	.831	.642	.024
Slandering by posting fake photos on the internet	15	.670	.815	.040
Sharing private internet conversations without the others knowledge	15	.831	.643	.026
Making fun of comments in online forums	15	1.05	.405	.026
Sending threatening hurtful comments through email	10	.140	.182	.021
Stealing email access	15	.798	.681	.026
Stealing email access and reading personal messages	10	.927	.508	.021
Sending threatening and hurtful text messages	15	.892	.574	.026
Misleading by pretending to be other gender	15	.924	.653	.021
Published online and embarrassing photo without a permission.	15	.749	.537	.032
Agreeableness				
Stealing of personal information from computer	12	.912	.735	.042
Stealing computer nicknames or screen names	12	.883	.255	025
Threatening in online forums	12	.881	.069	.029
Insulting in online Forums	12	.881	.062	.023
Excluding in online forums by blocking others comments or removing them	12	.861	.061	.030
Slandering by posting fake photos on the internet	12	.952	.021	.041
Sharing private internet conversations without the others knowledge	12	.935	.792	.041
Making fun of comments in online forums	12	.926	.552	.041
Sending threatening hurtful comments through email	12	.946	.417	.049
Stealing email access	12	.967	.357	.016
Stealing email access and reading personal messages	8	.933	.946	.022
Sending threatening and hurtful text messages	12	.844	.196	.025
Misleading by pretending to be other gender	12	.924	.007	.027
Published online and embarrassing photo without a permission.	12	.951	.399	.011
Conscientiousness				
Stealing of personal information from computer	15	.568	.784	.018
Stealing computer nicknames or screen names	15	1.149	.899	.035

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Threatening in online forums	15	1.226	.310	.037
Insulting in online Forums	15	.685	.248	.021
Excluding in online forums by blocking others comments or removing them	15	.997	.800	.021
Slandering by posting fake photos on the internet	15	1.013	.457	.031
Sharing private internet conversations without the others knowledge	15	.767	.440	.031
Making fun of comments in online forums	15	.994	.714	.024
Sending threatening hurtful comments through email	10	1.750	.460	.031
Stealing email access	15	1.234	.069	.053
Stealing email access and reading personal messages	10	.852	.242	.038
Sending threatening and hurtful text messages	15	.821	.579	.026
Misleading by pretending to be other gender	15	.486	.948	.015
Published online and embarrassing photo without a permission.	15	.524	.928	.016
Neuroticism				
Stealing of personal information from computer	15	.507	.937	.016
Stealing computer nicknames or screen names	15	1.117	.338	.034
Threatening in online forums	15	1.498	.102	.045
Insulting in online Forums	15	.804	.674	.025
Excluding in online forums by blocking others comments or removing them	15	1.268	.219	.039
Slandering by posting fake photos on the internet	15	1.241	.237	.038
Sharing private internet conversations without the others knowledge	15	.774	.707	.024
Making fun of comments in online forums	15	.480	.950	.015
Sending threatening hurtful comments through email	10	1.382	.187	.042
Stealing email access	15	.769	.713	.024
Stealing email access and reading personal messages	10	.944	.493	.029
Sending threatening and hurtful text messages	15	.577	.907	.017
Misleading by pretending to be other gender	15	.771	.710	.024
Published online and embarrassing photo without a permission.	15	.796	.683	.025
Openness to Experience				
Stealing of personal information from computer	21	.862	.319	.048
Stealing computer nicknames or screen names	21	.865	.345	.047
Threatening in online forums	21	.844	.174	.055
Insulting in online Forums	21	.901	.739	.034
Excluding in online forums by blocking others comments or removing them	21	.878	.480	.043
Slandering by posting fake photos on the internet	21	.883	.535	.041
Sharing private internet conversations without the others knowledge	21	.869	.382	.046
Making fun of comments in online forums	21	.863	.322	.048
Sending threatening hurtful comments through email	14	.895	.230	.054
Stealing email access	21	.881	.514	.041

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Stealing email access and reading personal messages	14	.843	.019	.082
Sending threatening and hurtful text messages	21	.940	.981	.020
Misleading by pretending to be other gender	21	.866	.357	.047
Published online and embarrassing photo without a permission.	21	.913	.854	.030

Multivariate analysis of variance that followed examined the victim's behavior in relation to personality traits. These analyses revealed that victims of cyberbullying scored significantly high on Agreeableness $F(12, 202)= 2.003$, $p = .005$, Wilks Lamda= 0.6 , $\eta^2 = .048$, on Extroversion, $F(15, 202)= 1.967$ $p = .005$, Wilks Lamda= 0.4, $\eta^2 = .059$, on Openness to Experience $F(21, 202)= 1.889$ $p = .005$, Wilks Lamda= 0.38 , $\eta^2 = .089$., on Conscientiousness $F(15, 202)= 1.680$, $p = .005$, Wilks Lamda= 0.4 , $\eta^2 = .050$, and Neuroticism $F (15, 202)= 1.351$ $p = .005$, Wilks Lamda= 0.4 , $\eta^2 = .041$ (Table 7).

Table 7

Multivariate Analyses of Variance: Personality Characteristics of Victims

Dependent Variable	*df*	*F*	Sig	Partial Eta Squared
Big Five -Personality Characteristics	*12*	*2.003*	.005	.048
Conscientiousness	*10*	*1.680*	.005	.050
Neuroticism	*15*	*1.351*	.005	.041
Extroversion	*15*	*1.967*	.005	.059
Agreeableness	*12*	*2.003*	.005	.048
Openness to Experience	*21*	*1.889*	.005	.089

Each personality characteristic was analyzed in relation to the type of cyberbullying behavior experienced. The analysis of the scores are presented in Table 8.

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Table 8

Multivariate Analyses of Variance of RCBI items: Victims

Dependent Variable	*df*	*F*	Sig	η^2
Extroversion				
Stealing of personal information from computer	15	.885	.578	.027
Threatening in online forums	15	1.399	.180	.042
Insulting in online Forums	15	1.551	.084	.047
Excluding in online forums by blocking others comments or removing them	15	1.448	.121	.044
Slandering by posting fake photos on the internet	15	.388	.982	.012
Sharing private internet conversations without the others knowledge	15	1.335	.177	.040
Making fun of comments in online forums	15	.995	.459	.030
Sending threatening hurtful comments through email	10	.899	.534	.028
Stealing email access	15	.902	.532	.028
Stealing email access and reading personal messages	10	1.539	.088	.046
Sending threatening and hurtful text messages	15	.438	.968	.014
Misleading by pretending to be other gender	15	1.967	.036	.039
Published online and embarrassing photo without a permission.	15	1.063	.389	.032
Agreeableness				
Stealing of personal information from computer	12	.969	.481	.024
Stealing computer nicknames or screen names	8	.488	.864	.012
Threatening in online forums	12	.607	.837	.015
Insulting in online Forums	12	1.860	.037	.045
Excluding in online forums by blocking others comments or removing them	12	1.067	.386	.026
Slandering by posting fake photos on the internet	12	.495	.917	.012
Sharing private internet conversations without the others knowledge	12	.501	.914	0.12
Making fun of comments in online forums	12	1.562	.100	.038
Sending threatening hurtful comments through email	12	.807	.597	.020
Stealing email access	12	2.003	.046	.048
Stealing email access and reading personal messages	8	1.449	.141	.035
Sending threatening and hurtful text messages	12	1.469	.133	.036
Misleading by pretending to be other gender	12	1.994	.047	.048

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Published online and embarrassing photo without a permission.	12	.678	.773	.017
Conscientiousness				
Stealing of personal information from computer	15	1.184	.280	.036
Stealing computer nicknames or screen names	10	.758	.669	.023
Threatening in online forums	15	.581	.890	.018
Insulting in online Forums	15	.784	.696	.024
Excluding in online forums by blocking others comments or removing them	15	.724	.760	.022
Slandering by posting fake photos on the internet	15	.945	.513	.029
Sharing private internet conversations without the others knowledge	15	1.048	.404	.032
Making fun of comments in online forums	15	1.390	.148	.042
Sending threatening hurtful comments through email	10	.683	.740	.021
Stealing email access	10	.936	.500	.029
Sending threatening and hurtful text messages	15	1.967	.016	.058
Published online and embarrassing photo without a permission.	15	1.285	.208	.039
Neuroticism				
Stealing of personal information from computer	15	.452	.781	.014
Stealing computer nicknames or screen names				
Threatening in online forums	15	.638	.854	.020
Insulting in online Forums	15	.627	.921	.019
Excluding in online forums by blocking others comments or removing them	15	.534	.804	.017
Slandering by posting fake photos on the internet	15	.681	.582	.021
Sharing private internet conversations without the others knowledge	15	.884	.024	.027
Making fun of comments in online forums	15	1.869	.581	.056
Sending threatening hurtful comments through email	10	.682	.202	.021
Stealing email access	15	1.351	.814	.041
Stealing email access and reading personal messages	10	.671	.814	.021
Sending threatening and hurtful text messages	15	1.351	.168	.041
Misleading by pretending to be other gender	15	1.348	.204	.041
Published online and embarrassing photo without a permission.	15	.594	.880	.018
Openness to Experience				
Stealing of personal information from computer	21	.789	.752	.039

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Stealing computer nicknames or screen names				
Threatening in online forums	21	.899	.571	.044
Insulting in online Forums	21	.758	.790	.038
Excluding in online forums by blocking others comments or removing them	21	1.006	.456	.049
Slandering by posting fake photos on the internet	21	1.171	.264	.057
Sharing private internet conversations without the others knowledge	21	1.586	.040	.075
Making fun of comments in online forums	21	1.265	.181	.061
Sending threatening hurtful comments through email	21	.884	.625	.044
Stealing email access	14	.935	.530	.046
Stealing email access and reading personal message	21	.700	.794	.035
Sending threatening and hurtful text messages	14	1.248	.195	.060
Misleading by pretending to be other gender	21	1.889	.007	.089
Published online and embarrassing photo without a permission.	21	.850	.628	.042
	21	.797	.742	.039

4.1.8 Frequency of types of cyberbullying in relation to personality traits

Further analysis of the sample revealed 18% of the participants that scored high on Extroversion reported insulting others in online forums at least once and stealing personal information from a computer, like files, pictures, messages etc. Approximately 13% reported making fun of comments in online forums, 12 % misleading by pretending to be the other gender, and 10% sharing private internet conversations without other's knowledge. About 17% of individuals who scored high in Openness to Experience reported insulting in online forums, 11% excluding others in online forums by blocking their comments or removing them, 10% sharing private internet conversations without others knowledge, about 9% reported sending threatening or hurtful messages, and 4% reported they published online an embarrassing photo without permission.

As far as victims of cyberbullying are concerned analysis revealed that approximately 14% of the individuals who scored high in Agreeableness, Neuroticism, and Conscientiousness reported that they were excluded or blocked by others, 13% reported

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others made fun of their comments in online forums, 12% reported others shared their private internet conversations without their knowledge , about 11% reported they were insulted by others in online forums, and approximately 9% reported they were misled at least once by others who pretended to be the opposite sex.

4.1.9 Correlation Analysis

Pearson correlations assessed the relationship between cyberbullying and the Big Five personality factors, and the rest of the variables measured in this study. The analysis of the correlations between the personality variables and cyberbullying behavior and victimization revealed several significant relationships. Coefficients ranged between .24 and .48. Specifically, in the case of perpetrators, cyberbullying behavior was positively correlated with Extroversion (*r= .37, n=202, p =.005*) and Neuroticism (*r=.32, n=202, p=001*), and negatively correlated with Agreeableness (*r= .28, n=202, p =.005*), and Conscientiousness (*r= .23, n=202, p =.001*). Openness to Experience was found unrelated to cyberbullying behaviors although some studies reveal a relationship between this trait and cyberbullying behavior. Victimization was positively correlated with Extroversion (*r=. 27 n=202, p =.005*.), Agreeableness (*r= .32, n=202, p =.001*), Neuroticism (*r= .34, n=202, p =.005*), Conscientiousness (*r= .23, n=202, p =.004*), and Openness to Experience (*r=.24, n=202, p= .005*).

Extroversion was generally related to optimism and high self-esteem, characteristics which bear no correlation to antisocial behavior. However, this trait is highly associated with narcissism leading to greater self-presentation online, which may explain the positive correlation with cyberbullying behaviors. Agreeableness and Conscientiousness were negatively correlated with cyberbullying behavior which may be associated to low empathy the main constituent of offensive and rude behavior. Openness to Experience is mostly linked to prosocial behavior which may partly explain the why it appears unrelated to cyberbullying

behaviors. Neuroticism is mostly characterized by emotional instability when individuals are socially exposed, frustration and low self-control, as well as low self-esteem. These characteristics may be related to cyberbullying behavior. Details of the correlations of personality traits with cyber bullying behavior are presented in Table 9.

Table 9

Correlations of Personality traits with Cyberbullying behavior

Personality trait	Correlation Coefficient
Extroversion	.276**
Neuroticism	.325*
Agreeableness	.287*
Conscientiousness	.236**

In examining personality traits that may lead to cyberbullying victimization, the results revealed that those who are high in Extroversion are more social and this increases their likelihood of sharing more information and being victimized. This characteristic may contribute to the risk of being a victim of cyberbullying behaviors. Individuals who score low on Conscientiousness are more likely to share sensitive information on the social media which may increase the risk for victimization. The results regarding Neuroticism were conflicting since this trait was found to be related both to bullying and victimization. This trait is related to interpersonal sensitivity, which makes individuals more likely to avoid risky relationships, and avoid danger on cyberspace. Finally, the analysis revealed that individuals that are low in Agreeableness are less likely to post indiscreet information hence reducing the risk of becoming a victim. Details of the correlations of personality traits with cyber victimization are presented in Table 10.

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Table 10

Correlations of Personality traits with Victimization

Personality trait	Correlation Coefficient
Extroversion	.276**
Neuroticism	.342*
Agreeableness	.325**
Conscientiousness	.231*
Openness to Experience	.244*
	.

Pearson correlation coefficients (two-tailed) were also calculated to investigate the relationship between preferences for types of bullying and the Big Five. There were significant positive correlations between Extroversion and various items of the RCBI but the strongest preference was for making fun of comments in online forums (*r= .197, n=202, p =.030*). There was also significant correlation between Neuroticism on various items on RCBI with the strongest preference being stealing email access (*r= .814, n=202, p =.021*) in both personality traits.

4.1.10 Study I- Brief discussion

The present study set out to gain better understanding of cyberbullying among university students. Specifically, the study examined the association of participants personality (Big Five) and types of cyberbullying and cybervictimization. The results showed that although all the personality traits were positively associated with cyberbullying behavior, individuals who scored high in Conscientiousness, Neuroticism, and Extroversion had the highest score in cyberbullying behavior. Remarkably the same personality traits Conscientiousness and Neuroticism carried the lowest scores in specific cyberbullying behaviors, a novel finding to the researcher's knowledge. Furthermore, par few exceptions,

all the measured personality characteristics were found to be significantly associated with differential preferences for types of cyberbullying behavior. This result corresponds to previous research (Ryan & Xenos, 2011) while at the same time contributes to research with novel findings.

The study also revealed that the Big Five factors of Agreeableness, Extroversion, Openness to Experience, Conscientiousness, and Neuroticism were significantly correlated with victimization. Those who scored high in Extroversion seem to be more social and their nature may increase their likelihood to share more information with a wider range of people (Peluchette et al., 2015). Extroverts are more likely than introverts to make acquaintances on the social media and hence share more sensitive information. This may partly explain the higher probability for victimization. Individuals who score high in Openness are drawn to new information and are willing to experience risky situations (Hollenbaugh & Ferris, 2014; Moore & McElroy, 2012). As expected, Openness was also found to be related to victimization. Those individuals who scored high in Openness to Experience tend to be curious about new things and are willing to experience risky situations. This characteristic contributes to the risk of being perceived as an easy target (Festi & Quanndt, 2013). As predicted, and in accordance to previous research (Amichai-Hamburger & Vinitzky, 2010; Hollenbaugh & Ferris, 2014), individuals who scored high in Conscientiousness are more likely to become victims of cyberbullying. However, to the researchers surprise and contrary to other research studies, the lowest scores of victimization were also found in individuals who scored high in Extroversion and Neuroticism. Analyses of the personality traits of victims show that individuals with high scores in Agreeableness, Extroversion, Openness to Experience, and Conscientiousness, have higher odds of becoming a victim of cyberbullying behavior due to more exposure to the social media, the need to associate with more

individuals, and sharing more personal information that makes them more susceptible to victimization.

In summary, partial support for hypotheses 1a through 1d were found in that many of the individuals with traits of Extroversion were related to cyberbullying behavior. Partial support was also found for all hypotheses as all of the personality variables were significantly associated to at least two of the cyberbullying types of behavior. By building on previous research, this study has extended what is known about the impact of personality characteristic on cyberbullying and victimization. A more detailed discussion of the findings related to Study I is included in Chapter V. Cyberbullying is relatively a new area of research that requires empirical attention to understand. To shed more light to this phenomenon, in relation to the personality characteristics, research should also investigate the psychological traits and psychological symptoms that are associated with cyberbullying and cybervictimization. Study II was designed to serve this purpose.

4.2.1 Study II- Overview

The internet as electronic technology has become one of the most widespread means of interaction among university students around the world (Hong Li, Mao, & Stanton, 2006). Technology often becomes a gateway, exposing young adults to numerous disreputable activities including illegal substance, aggression, and cyberbullying (Agaston, Kowalski, & Limber, 2012). Although online technologies provide several advantages such as acquiring and teaching activities, electronic technology also has potential danger as it can be used for harm.

Research has focused on some individual characteristics of those who are more likely to present cyberbullying behavior. Those that are involved in cyberbullying behavior show less empathy as compared to those not involved, which may also be a characteristic of

individuals with antisocial behavior who are more impulsive and less reserved (Jolliffe & Farrington, 2006). In addition, grandiose and manipulative behavior have been particularly implicated in cyberbullying (Kokkinos & Andoniadou, 2014). This kind of behavior is usually exhibited by individuals who anticipate feedback and constant validation (Keen, 2011). Zuckerman (1979), notes that sensation seeking provides motivation to individuals to search for novel and intense experiences, a personality trait that has been frequently linked to cyberbullying (Kim & Davis, 2009). University students who are fascinated by danger and risk, seek activities that will provide them with excitement, often creating fake identities as a means of alluring others (Lyng, 2005). Research findings validate that higher levels of aggression are associated with cyberbullying. Sontag et al., (2011), found that perpetrators of cyberbullying scored higher in reactive aggression as well as in proactive aggression when compared to individuals uninvolved in bullying. However, because different ways were used to measure aggression, additional research is needed to gain more understanding on how aggressive behavior is associated with cyberbullying.

Although the internet can provide numerous social and intellectual benefits, it has also been connected to various mental health difficulties including, depression, loneliness, and anxiety (Fahy, Stansfeld, Smuk, Smith,Cummins, & Clark, 2016). Research has also revealed that individuals who are socially rejected by their peers are more prone to using the internet in dangerous ways, behaviors often related to cybervictimization experiences. Students that have been victimized may use the internet to exceed the limits of their physical selves (Campbell, 2007; Kim & Davis, 2009). Schenk et al., (2013), in a study of college students, found that victims of cyberbullying were more likely to have suicidal ideation, planned, and attempted suicide. Just a few of the well-known cases of individuals who committed suicide because of cyberbullying are Ryan Halligan, Megan Meire, Jessica Logan, Hope Witsell, Tyler Clementi and Amanda Todd. These six cyberbullying suicide cases were the main

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reason legislation was put forth to protect people from this new and developing form of bullying (Sumrall, 2016). Given that cyberbullying becomes more prevalent in adolescence and continues well into university, more research is warranted to provide information regarding the psychological characteristics of university perpetrators of cyberbullying, victims, and those individuals who are both victims and perpetrators of cyberbullying.

The widespread effects of cyberbullying are detrimental and prolonged. The increasing possibility of university students to engage in cyberbullying incidents, the long-term negative effects that can impact their lives, and the fact that compulsive perpetrators may extent these behaviors well into their adult life (Coloroso, 2008), indicate the need for more vigorous research to aid early prevention and intervention. Although research concerning cyberbullying among university students has been enhanced in the last years, the mental health status and individual characteristics of the participants have not been thoroughly investigated to date.

The purpose of Study II was to investigate the relationships between cyberbullying and psychological traits among university students participating in cyberbullying and the extent to which these traits and psychological symptoms relate to participation in cyberbullying and lead to cybervictimization. In addition, this study seeks to investigate the psychological characteristics of the perpetrators of cyberbullying who were victims of cyberbullying themselves (henceforth referred to as perpetrator/victims) thereby explaining the interrelationships in roles promoting cyberbullying.

The following research questions were evaluated via this research study:

RQ1: Is there a relationship between psychological traits and cyberbullying behavior?

RQ2: What are the psychological consequences that student victims of cyberbullying face?

RQ3: Is there a relationship between previously being a victim of cyberbullying and cyberbullying behavior?

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According to the theories of individual differences, and based on existing literature it was hypothesized that:

Hypothesis 2: Innate and stable personal characteristics and psychological symptoms will be strongly associated with an individual's behavior.

Hypothesis 2a: Cyberbullying behaviors will be positively associated with grandiose, manipulative traits.

Hypothesis 2b: Cyberbullying behaviors will be positively associated with sensation seeking.

Hypothesis 2c: Cyberbullying behaviors will be positively associated with lack of empathy.

Hypothesis 2d: Cyberbullying behaviors will be positively associated with engaging in more illegal behaviors.

Hypothesis 3: Cyberbullying has adverse psychological consequences (anxiety, depression, suicidal thoughts) for perpetrators and victims of cyberbullying.

Hypothesis 3a: Cybervictimization will be strongly associated with depression

Hypothesis 3b: Cybervictimization will be strongly associated with anxiety

Hypothesis 3c: Cybervictimization will be strongly associated with low self-esteem.

Hypothesis 4. Cyberbullying behavior is related to previously being a victim. Interrelational roles are significantly correlated to cyberbullying behavior.

4.2.2 Study II-Methods

4.2.3 Participants

The population in this study was university students conveniently selected from three different universities. Participation criteria for the study include individuals who are 18 years of age and over and are currently university or college students. A total sample of 209 (*68.9 % female, 31.1% male*) completed a demographics questionnaire, the Adult Self Report (ASR) and the Revised Cyberbullying Inventory (RCBI) for Study II (Appendix VI). IBM

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SPSS Statistics 23.0 was used to analyze the data sets with descriptive statistics, correlation, and multivariate analysis of variance (MANOVA).

The survey was conducted in the Fall of 2016 using a secure online survey tool (Google Forms) and by distributing questionnaires face to face. The online surveys produced 196 participants and 215 questionnaires were collected in person. The link for the online survey was provided to the university students and the participants could access the survey at any time they wished. A majority of participants were women (*N = 144, 68.9%).* The remaining sample were males (*N= 65, 31.1%).* The age range was 18- 48 and the mean age was 22.22 (*SD= 4.73*). The sample consisted of students currently studying for their Diploma (*N=28, 13.4%),* their Bachelor's degree (*N=150, 71.8%)* which was the clear majority of participants, their Master's degree (*N=22, 10.5%*), their Doctoral degree (*N=2, 1%),* and other types of degrees (*N=7, 3.3%).* Completed demographics are presented in Table 11.

Table 11

Study II Participant Demographics

	N	*M*	*SD*	*%*
Age	209	22.22	4.725	
Gender				68.9
Female	144			31.1
Male	65			
Education Level				
Diploma	28			13.4
Undergraduate	150			71.8
Master's Degree	22			10,5
Doctoral Degree	2			1.0
Other	7			3.3

4.2.4 Materials

Study II employed a questionnaire consisting of a consent form, and participants responded to demographic questions regarding age, ethnicity, sex, and educational level.

For this study two questionnaires were employed to measure one independent variable and three main dependent variables; the ASEBA Adult Self Report (ASR) questionnaire and the Revised Cyberbullying Inventory (RCBI).

The sample of 209 participants was further divided into perpetrators of cyberbullying, victims, perpetrator victims, and controls. Participants were defined as perpetrators of cyberbullying if they engaged in any type of cyberbullying four times or more since they have been studying at the university, and as victims of cyberbullying if they had experienced any type of cyberbullying behavior more than four times since they have been studying in university. Types of cyberbullying behaviors included: stealing of computer nicknames or screen names, posting threats in online forums (like chat rooms, Facebook, or Twitter), utilizing personal information from computer (like files, email addresses, pictures, IM messages, or Facebook information), offending in online platforms (like chat rooms, Facebook, or Twitter), rejecting others in online forums by blocking their comments or removing them, insulting by posting fake images on the internet, sharing personal and intimate internet conversations without the other individuals knowledge (such as chatting with a friend on Skype with other (s) in room), making fun of comments in online forums (such as Facebook), sending harmful or intimidating comments via electronic mail, stealing email access (usernames and passwords) and blocking true owner's access, stealing email access and reading personal messages, sending threatening and /or hurtful text messages, misleading by pretending to be other gender (male/female) and, if they published online an embarrassing photo without a permission.

Frequency analyses revealed that 72 out of the 209 participants were perpetrators of cyberbullying, 113 reported they were victims of cyberbullying, and 24 out of 72 participants that were perpetrators reported they had also been victims of cyberbullying four times or more. Therefore, a distinct group of perpetrator/victims was created that included participants

who were both perpetrators and victims at least four times or more. The remaining 24 participants reported they have never been perpetrators nor have they been victims of such behavior and they constitute the control group. A total of 209 participants were included in all subsequent analyses see Table 12.

Table 12

Demographic data by participant group

	Perpetrators of cyberbullying N=72		*Perpetrator/victim N=24*		*Victims N=113*		*Control Group N=24*	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Age	22.69	6.05	25.36	6.19	21.22	2.75	21.60	4.73
	N	%	N	%	N	%	N	%
Gender								
Female	53	26.4	23	95.8	75	65.8	20	80
Male	19	73.6	1	4.2	39	34.2	4	20
Education Level								
Diploma	19	26.4	1	4.2	9	10.17	8	32
Undergraduate	38	52.8	6	25.0	78	69.0	13	52
D	10	3.9	3	12.5	22	19.4	3	12
Master's Degree	1	1.4	3	12.5	1	0.88	0	0
Doctoral Degree	4	5.6	11	45.8	2	1.76	1	4
Other								
Ethnicity								
Cypriot	33	45.8	12	50.0	63	55.0	7	28
Non-Cypriot	39	54.2	12	50.0	51	44.7	18	72

4.3.5 Design and Procedures

For Study II a survey method was employed as it allowed for reaching a wider sample of students. Two web-based surveys were created for this purpose to ensure easy access and anonymity while at the same time questionnaires were given in person to students at three universities. The study was developed as a cross-sectional analysis, which was deemed the most appropriate approach for this research. The Bioethics Committee of Cyprus approved this study to secure the wellbeing of the participants. The participants were informed in detail of the purpose of the study, the measures taken to ensure anonymity and of the right to

withdraw from the survey at any point the wished. They were also asked to sign an online and paper and pencil informed consent form.

While developing a quantitative survey special attention was given to validity and reliability, as well as ensuring that the survey was made accessible to the population that was of interest. The surveys were designed according to a cross-sectional design to collect information regarding psychopathology and interrelational roles of university students that may promote cyberbullying behavior. The use of established questionnaires and surveys led to increased reliability and validity of the research conducted. The tools used included the Adult Self Report (ASR) and the Revised Cyberbullying Inventory (RCBI) both of which have sufficient report of their reliability and validity. The surveys collected the gender, the current level of studies at the university, the age, and the ethnicity resulting in total anonymity. When the surveys were completed they were removed from the Internet and all files were deleted.

IBM SPSS Statistics 23.0 was used to analyze the data sets with descriptive statistics, correlation, and multivariate analysis of variance (MANOVA).

4.2.6 Study II -Results

4,2.7 Prevalence of cyberbullying

A total of 209 participants completed the questionnaires in a valid manner. The sample consisted of 144 females (68.9%) and 65 males (31.1%). Examination of the participants revealed that 72 (34.4%) were perpetrators of cyberbullying, 113 (54%) reported they were victims of cyberbullying, and 24 (11.5%) out of 72 participants who were perpetrators had also been victims of cyberbullying four times or more. Therefore, a distinct group of perpetrator/victims was created that included participants who were both

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perpetrators and victims of cyberbullying at least four times or more. The remaining 24 participants reported they have never been perpetrators nor victims of such behavior.

4.2.8 Psychological symptomatology

Participants completed the Adult Self-Report (ASR) (Achenbach & Rescorla, 2003), to detect dissimilarities in psychological symptomatology between perpetrators, victims, and perpetrator/victims. To explore this possibility, a multivariate analysis of variance (MANOVA) was conducted with the subscales of the ASR (Anxious, Depressed, Withdrawn, Aggressive, Rule Breaking, Antisocial, Thought Problems and OCD) used as dependent variables and participant group (perpetrator, victim, perpetrator/victim, controls) used as independent variables. There were significant main effects for participant group, in other words there were significant differences between perpetrators, victims, perpetrator/victims, and controls according to the self-reported ASR scores. The results of the univariate analyses of variance were analyzed to detect significant differences on the individual scales of the ASR. Perpetrators scored significantly in the clinical scales of depression $F(9,45)=2.160$, $p = .004$, $\eta^2= .030$, as well as victims $F(9,70)=1.646$, $p = .005$, $\eta^2= .017$, and perpetrator/victims $F(9,45)=1.710$, $p = .026$, $\eta^2= .025$. Perpetrators $F(9,43)=1.305$, $p = .026$, $\eta^2 = .021$, victims $F(9,45)=1.238$, $p = .001$, $\eta^2= .046$ and perpetrator/victims $F(9,50)=1.544$, $p = .015$, $\eta^2 = .016$, scored significantly high in anxiety. Victims $F(3,74)=1.111$, $p = .005$, $\eta^2= .043$, scored significantly high in thought problems as well as perpetrators $F(3,74)=1.436$, $p = .004$, $\eta^2= .030$, and perpetrator/victims $F(4,50)=1.387$, $p = .021$, $\eta^2 = .047$. Participants in all three groups, perpetrators $F(4,73)=1.645$, $p = .002$, $\eta^2 = .067$, victims $F(4,73)=1.685$, $p = .002$, $\eta^2 = .069$, and perpetrator/victims $F(4,10)=1.690$, $p = .005$, $\eta^2 = .055$, scored significantly higher in OCD compare to the control group (Table 13).

Table 13

Adult Self Report (ASR) subscales for perpetrators of cyberbullying, victims of cyberbullying and perpetrator victims

ASR Scale	*Perpetrators of cyberbullying N=72*			*Perpetrator/victim N=24*			*Victims N=113*		
	F	*p*	η^2	*F*	*p*	η^2	*F*	*p*	η^2
Anxious	1.305	.021	.026	1.544	.015	.016	1.238	.001	.046
Depressed	2.160	.004	.030	1.710	.026	.025	1.646	.005	.017
Withdrawn	1.496	.005	.031	1.313	.005	.038	1.516	.002	.037
Aggressive	1.385	.002	.023	1.413	.021	.037	1.493	.004	.062
Rule Breaking	1.496	.002	.025	1.540	.002	.029	1.363	.004	.030
Antisocial	1.385	.001	.041	1.312	.001	.049	1.356	.001	.057
Thought Problems	1.436	.004	.030	1.387	.021	.047	1.111	.005	.043
OCD	1.645	.002	.067	1.690	.005	.055	1.685	.002	.069

Separate univariate Frequency analyses and ANOVAS were conducted for suicidal ideation, low self-esteem, grandiose and manipulative traits, sensation seeking, lack of empathy, and illegal behaviors.

4.2.9 Suicidal behaviors

Differences in suicidal behaviors were examined among perpetrators, perpetrator/victims, and victims. Individual ANOVA's were conducted with items on the Adult Self Report. Perpetrator/victims scored significantly high in thinking about killing themselves, F (2,13) =1.295, p = .005, η^2 = .056 as well as victims F (2,13) =1.890 p = .005, η^2 = .041. Perpetrators scored significantly high in having thought about killing themselves as well F (2,77) = 1.619, p = .002, η^2 = .024, which was indicative of these individuals experiencing more suicidal ideation than controls (Table 14).

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Table 14

Frequency of suicidal ideation by participant group

	None n(%)	*Suicidal Ideation n(%)*	*M*	*SD*	*F*	*p*	η^2
Perpetrators	22(30.6)	15(20.8)	18	.45	1.619	.002	.024
Victims	74(64.9)	24(21.1)	.90	.72	1.890	.005	.041
Perpetrator/ Victims	17 (68)	8(32)	.56	.71	1.295	.005	.056

4.2.10 Self-Esteem and *Grandiose and Manipulative Traits*

Perpetrators and perpetrator/victims were hypothesized to have higher self-esteem compare to victims. A multivariate ANOVA showed significant differences between perpetrators, F (3,51) =1.489, p = .022, η^2= .081, victims, F (3,76) =1.322, p = .027, η^2= .050, and perpetrator/victims F (3,7) =2.901, p = .011, η^2 = .055 on self-esteem (Table 15).

Table 15

Frequency and means of low self-esteem by participant group

	None n(%)	*I am not liked by others n(%)*	*I lack self-confidence n(%)*	*I feel inferior n(%)*	*M*	*SD*	*F*	*p*	η^2
Perpetrators	54(75)	5(6.9)	15(20.8)	3(4.2)	.15	.43	1.489	.022	.081
Victims	15(13.3)	24(21.1)	51(44.7)	23(20.2)	.76	.71	1.322	.027	.050
Perpetrator/ Victims	4(16)	7(28)	17(68)	6(24)	.36	.57	2.901	.011	.055

It was expected that perpetrators would present high grandiose and manipulative traits compare to victims and perpetrator/victims. A multivariate ANOVA showed significant scores for perpetrators, F (2,51) =1.144, p = .032, η^2= .043, victims F (2,78) =1.234, p = .029, η^2 = .031, and perpetrator/victims F (2,51) =1.171, p = .033, η^2= .013, on grandiose and manipulative traits (Table 16).

Table 16

Frequency and means of grandiose and manipulative traits by participant group

	None n(%)	*I brag n(%)*	*I like to get a lot of attention*	*M*	*SD*	*F*	*p*	η^2
Perpetrators	26(36.1)	26(36.1)	21(29.2)	.36	.48	1.144	.032	.043
Victims	54(47.8)	27(23.7)	28(24.6)	.29	.51	1.234	.029	.031
Perpetrator/ Victims	8(32.0)	6(24.0)	7(28.0)	.36	.57	1.171	.033	.013

Perpetrators where hypothesized to score high on sensation seeking traits compare to victims and perpetrator/victims. A multivariate ANOVA showed that perpetrators scored significantly high on this trait, F (8,16) =3.796, p = .000, η^2= .013, as well as victims F (3,10) =4.758, p = .003, η^2= .070, and perpetrator/victims F (4,17) =3,629 p = .007, η^2= .067 (Table 17).

Table 17

Frequency and means of sensation seeking by participant group

	None n(%)	*Sensation Seeking n(%)*	*M*	*SD*	*F*	*p*	η^2
Perpetrators	42(58.3)	23 (31.9)	.11	.36	3.796	.000	.013
Victims	30(26.5)	16(14)	.71	.70	4.758	.003	.070
Perpetrator /Victims	19(76)	5(20)	.28	.54	3.629	.007	.067

In subsequent analyses, one-way ANOVA tests indicated that perpetrators of cyberbullying scored high in lack of empathy F (4,16) =1.656, p = .065, η^2 = .032, victims scored F (2, 10) = .919, p = .034, η^2 = .020, and perpetrator/victims F (2, 17) = 1.162, p = .033, η^2 = .022 (Table 18).

Table 18

Frequency and means of lack of empathy by participant group

	None n (%)	*I don't feel guilty after doing something I shouldn't n(%)*	*M*	*SD*	*F*	*p*	η^2
Perpetrators	51(70.8)	15(20.8)	.41	.64	1.656	.065	.032
Victims	66(57.9)	16(14)	.57	.75	.919	.034	.020
Perpetrator/ Victims	17(68)	4(16)	.48	.77	1.162	.033	.022

In a similar vein, perpetrators scored high in illegal behaviors F (4,16) =1.656, p = .065, η^2 = .032. Perpetrator/victims F (4,19) =3.947, p = .004, η^2 = .073, and victims F (4,14) =4.581, p = .001, η^2 = .082, who scored significantly high in the same scale (Table 19).

Table 19

Frequency of illegal behaviors by participant group

	None n(%)	*Lie or Cheat n(%)*	*Violent n(%)*	*Trouble with law n(%)*	*Drug Use n(%)*	*Stealing n(%)*	*F*	*p*	η^2
Perpetrators	7(9.7)	17(23.6)	15(20.8)	16(22.2)	10(13.9)	7(9.7)	3.639	.007	.067
Victims	48(42.5)	26(22.8)	13(11.4)	16(14)	8(7)	2(1.8)	4.581	.001	.082
Perpetrator/ Victims	2(8)	4(16)	8(32)	4(16)	3(12)	3(12)	3.947	.004	.073

4.2.11 Participant Roles

Analysis of variance (ANOVA) and Levene's analyses were performed to investigate the differences among means and mean ranks of different groups. Suicidal ideation, low self-esteem, grandiose and manipulative traits, sensation seeking, lack of empathy and illegal behaviors were tested with one-way ANOVA, and in all cases, post hoc multiple comparisons using the Tukey HSD test were used.

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A series of Levene's tests that were performed due to homogeneity invariance revealed that in terms of suicidal ideation perpetrators scored significantly high F (4,17) = 1.322 p = .006, η^2 = .014, and victims scored higher than perpetrators F (4,13) = 1.219, p = .002 η^2 = .052, and perpetrator/victims F (3,14) = 1.233, p = .003, η^2 = .018. As far as lack of empathy is concerned perpetrators scored significantly high F (4,7) = 1.651, p = .003 η^2 = .032, as well as perpetrator/victims F (3,10) = 1.120, p = .004, η^2 = .018, whereas victims scored significantly high F (3,10) = 1.674, p = .022 η^2 = .019, but lower than the other two groups. When measuring low self-esteem perpetrators scored significantly high F (3,9) = 1,185, p =.007, η^2 = .016 as well as victims F (8,15) = 1.487, p = .002 η^2 = .021, but perpetrator/victims had the highest scores in this scale F (3,15) = 1.264, p = .003, η^2 = .018. Sensation seeking behaviors where significantly high for perpetrators, F (8, 15) = 1.482 p = .001 η^2 = .001, as well as perpetrator/victims, F (3,11) = 1.349, p = .003, η^2 = 019, with victims scoring significantly high but lower than the other two groups, F (4,18) = 1.784, p = .022 η^2 = .034. Perpetrators scored significantly high in grandiose-manipulative traits, F (4,13) = 1.289, p = .000 η^2 = .043, as well as perpetrator/victims F (3,12) = 1.506, p = .005, η^2 = .03, whereas victims scored significantly but lower than the other two groups F (3,19) = 1.577, p = .024 η^2 = .027. In terms of illegal behaviors perpetrators had the highest score F (3.13) = 1.568, p = .000, η^2 = .022, followed by the perpetrator/victims F (3,14) = 1.376, p = .007, η^2 = .041 and victims who scored lower than the other two groups. F (4,16) = 1.240, p = .042 η^2 = .048, (Table 20).

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Table 20

Differences in Participant Roles

	F	*p*	η^2
Perpetrators			
Suicidal Ideation	1.322	.006	.014
Lack of Empathy	1.651	.003	.032
Low Self Esteem	1.185	.007	.016
Sensation seeking	1.482	.001	.032
Grandiose and Manipulative traits	1.289	.000	.043
Illegal Behaviors	1.568	.000	.022
Victims			
Suicidal Ideation	1.219	.002	.052
Lack of Empathy	1.674	.022	.019
Low Self Esteem	1.487	.002	.021
Sensation seeking			
Grandiose and Manipulative traits	1.784	.022	.034
Illegal Behaviors	1.577	.024	.027
Perpetrator/ Victims	1.240	.042	.048
Suicidal Ideation	3.947	.003	.072
Lack of Empathy	1.120	.004	.018
Low Self Esteem	1.264	.003	.018
Sensation seeking	1.349	.003	.019
Grandiose and Manipulative traits	1.596	.005	.037
Illegal Behaviors	1.376	.007	.041

4.2.12 Study II-Brief Discussion

The results revealed four distinct groups of participants, perpetrators, perpetrator/victims, victims, and controls. Although this phenomenon has been previously studied, the distinction between perpetrators and perpetrator/victims of cyberbullying is not clear. For example, participants in the perpetrator group could also be labeled as perpetrators

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since they participated in cyberbullying. In addition, the scores between bullying and victimization were not that immense in some of the variables measured. Previous studies show that more students adopt the perpetrator/victim role, which seems to be the ability of the victim to retaliate with ease in cyberspace. Hence it seems that most of the students involved in cyberbullying behaviors have been a victim of such behaviors more than three times (Gradinger, Strohmeier, & Spiel, 2009). The group of victims seems to be the largest one in studies investigating cyberbullying since perpetrators usually target more than one person at a time to satisfy their need to dominate (Olweus, 1993). However, it is not always possible to compare the percentage between the two groups as findings may be based on different methodologies and rely on self-report measures.

Overall the findings of this study provide support for previous claims that cyberbullying and cybervictimization co-occur, or that both are related to specific and psychological characteristics (Bauman & Newman 2013), as well as contribute to research with the novel finding of high OCD symptoms in all three groups involved in such behavior.

While research regarding cyberbullying is focusing on providing information regarding the effects of the behavior of both perpetrators and victims, a major gap in literature exists regarding the reasons that perpetrators resolve to these negative behaviors. Study III attempted to understand cyberbullying by examining the students own perspective on this phenomenon.

4.3 Study III (Qualitative Study)-Overview

To fully understand the effects of cyberbullying and victimization on students, research should focus more into the personal perspective of participants. A deeper understanding requires more qualitative data, which will allow psychologists and other

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scientists to understand the emotional and psychological mindset of the participant. The present study sought more information regarding the reasons that university students believed they cyberbullied others or that they were victims of cyberbullying themselves. This study was preliminary rather than confirmatory and its purpose was to understand the lived experiences of university students who have participated in the act of cyberbullying or have been victims of such behavior. The student's perspectives were explored through interviews to acquire a deeper understanding of the phenomena through the participants experiences.

Connecting feeling with personal life experiences through individual expressions in language, art, and philosophy, has been the quest for many individuals throughout the course of human history (van Manen, 1990). The rapid advancement in technology has increased personal expression online through chat rooms, blogs, messenger, and various other social media. When this opportunity is combined with the disinhibition effect that characterizes cyberbullying (Kowalski et al., 2012; Mason, 2008) the results in terms of cyberbullying can be immense and the consequences detrimental. This phenomenon has created the need to further explore the lived experiences of perpetrators and victims of cyberbullying and interpret their feelings and expressions. The interpretation provides a greater understanding of the effects of cyberbullying to mental health professionals who need to enhance the understanding of the nature of cyberspace and the connection of cyberspace to student's well-being.

4.3.1Research Questions:

RQ1: What do students consider to be the reasons for cyberbullying behavior?

RQ2: How do students experience the extent and the consequences of cyberbullying?

RQ3: What methods and strategies in the student's opinion, could be used to prevent cyberbullying in university?

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Study III-Methods

4.3.2 Setting and Participants

This study took place at a large private university. The university campus was chosen in order for the students to feel comfortable in a familiar and secure environment. The participants for the study were 20 university students, 35% male (*N=7*) and 65% female (*N=13*). Their age was between 18 and 26 years of age (*M=21.60*). They were all undergraduate students. The participants in this study shared their experiences and their perspective on cyberbullying. The small number of participants allowed for a deeper and thorough investigation of the experience of each participant, which led to a better understanding of the participants perspective.

4.3.3 Methods and Procedure

After gaining approval from the Bioethics Committee of Cyprus, interviews were used as the principal data collection method. Leading researchers indicate that interviews may effectively constitute the primary method of data collection (Bogdan & Biklen, 2007). As in the online surveys used for Study I and Study II, the participants were given a full explanation of the purpose of the study, the measures taken to ensure anonymity and of their right to withdraw from the interview at any point they wished. They were also asked to sign a consent form before the interview was conducted. The interviews were semi-structured and lasted 20-25 minutes. Interviews are further discussed in the following paragraphs

4.3.4 Data collection

The purpose of the interviews was mainly to explore the experiences of university students regarding cyberbullying as witnessed and observe them. The participants were selected using

a convenience sample. Individuals were recruited using the university's web side were an announcement was posted providing details of the research and asking for students who were willing to participate in the study.

Once the participants expressed interest to participate, a time and meeting place within the university was set to meet. The interviews were carried out face-to-face to ensure any non-verbal communication was not missed. Prior to the interview, each participant read the information about the study (see Appendix II) and signed the informed consent form (see Appendix III). They were ensured of the anonymity and the confidentiality of the interview. The interview was conducted in English and followed a semi-structured questionnaire (see Appendix VIII) were both open-ended and closed questions were asked to fulfil the research interest and inquiry. The participants were interviewed individually and the researcher was taking written notes during the interview.

In order to collect data from the participants during the interviews questions were created (Appendix VIII), the questions were generated based on findings from Study I and Study II as well as current quantitative research in the field. To ensure content validity grounding of questions in prior studies was insured. Five types of questions were included as suggested by Krueger (1980 in Wibeck, 2010): opening questions, introduction questions, crossing question, key-questions, and ending questions. Questions were checked by posing them to undergraduate students who did not participate in the study to ensure that questions remain valid in the participants eyes. In order to understand how questions are interpreted, pilot interviews were conducted to certify the comprehensive understanding of all the questions included. Any ambiguities were pointed out and questions were rewritten accordingly or excluded if they were found to be irrelevant for the aim of this study, before they were presented to the participants during data collection.

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To the researcher's knowledge no related qualitative research study for Cyprus exists in the area of cyberbullying to threaten the objectivity prior to the study. The researcher had no prior knowledge of any specific lived experience of any participant that could create bias prior to the commencement of the study.

In the analysis of the data, the researcher focused on specific themes connected to the interviews and the interview questions. When analyzing the data patterns in the findings were observed and themes were developed.

Study III-Analysis and Results

4.3.5 Interview Data Analysis

Once the data collection was completed the researcher transcribed all the data into a printable format in order to facilitate the analysis process. While transcribing the data possible code ideas were compiled. The codes where mostly drawn from the analysis of the existing data and the transcripts in combination with relevant literature. The data was analyzed using the Thematic Content analysis (Silverman & Marvasti, 2008). Each participant was given a number and the data was organized according to the number assigned by the participant. It was then organized into a folder containing all the responses of the individual participant. The researcher used open coding and after several readings the data was formally coded in a cohesive manner (Patton, 2002). Categorical data were analyzed using key phrases and sentences in order to identify themes with broader patterns of meaning. To guide the exploration of the lived experience of cyberbullying and victimization thematic organization was used. The information was organized into categories and the researcher made connections crossing over categorical lines to form themes based on the information

gathered. This process provided for a deeper and better understanding of the themes that connected cyberbullying and victimization through the connection of codes. The themes were reviewed to make sure they fit the data and they were then defined, named, and coded. This study used primarily a thematic approach and therefore used themes to create a systematic investigation of the factors affecting cyberbullying and cybervictimization and the interrelational roles that may lead to such behavior. Coherent narrative was used including quotes from the interviewees to effectively communicate analyzed data.

4.3.6 Results

The goal of this qualitative study was to examine the origination and manifestation of cyberbullying from the student's perspective, further enhancing a deeper understanding of the personality, psychopathology, mental health consequences, and interrelational roles related to cyberbullying.

Data analysis showed that 14 out of the 20 participants knew someone that was a victim of cyberbullying and six were victims of cyberbullying themselves, 10 of the participants were victims of cyberbullying through social networks, four in chatrooms, two by instant messaging, and one by mobile phone call. From the interviews emerged that many students had vicarious experiences of cyberbullying, in other words they observed other individuals being exposed to cyberbullying. When asked if they knew someone from university that was a victim of cyberbullying 15 of the participants reported that they did. When asked why they were victims of cyberbullying three reported they were bullied for their music choices, four because some persons had a different opinion from them for their body and two because of some pictures that were too sexy for the net, two because of a photo they uploaded, three because of their weight, three because of their image, and four just for fun. The participants reported that their perpetrators used words such as "fat cow" and "ugly," "immature," and "stupid," they were threatened, made fun of, and were degraded

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with the use of profanities. One of the participants reported their perpetrators told them to kill themselves. In terms of gender four of the individuals who were perpetrators were male and one female. In terms of individuals that the participants bullied three were females and two were males.

4.3.8 *Emerging Themes*

All participants commented on possible reasons of cyberbullying. Data analysis produced four themes common to the lived experiences of students participating in this study. Data indicates that cyberbullying may be the result of seeking revenge, faulty human relationships, jealousy, and intentional harm (RQ1).

Participants referred to problems in communication and human relationships as one of the main reasons of cyberbullying. Seven of the participants mentioned that after breaking a romantic relationship jealousy emerged that in their opinion was a direct cause for their victimization or someone they knew.

> "Individuals bully to feel good about themselves, feel that they have more power, knowing that people are afraid of them" (Participant 6).

Dissolved friendships were also mentioned as a cause of cyberbullying origination especially from female participants. From their experience, all participants mentioned arguments among friends as a direct cause of cyberbullying and victimization, as well as the spreading of invalid information and rumors among friends and acquaintances.

> "I had a best friend and I believe she was posting information about me on Facebook because she was the only one who knew details about me" (Participant 10).

Prejudices against sexual orientation were mentioned by seven participants as causes of cyberbullying and victimization, and two participants mentioned differences in political and religious believes as possible causes of cyberbullying. Generally, the participants view

regarding human relationships, whether romantic, friendships of prejudicial stances are that they are one of the leading reasons for cyberbullying.

Research has shown that taking revenge on face-to-face bullying seems to be the most important reason for cyberbullying (König, Gollwitzer, & Steffgen, 2010). Four of the participants in the present study expressed views that supports these findings. Participants believed that cyberbullying is intended to cause intentional harm by exposing victims to public humiliation. Almost all the participants mentioned incidences of humiliation in the social media especially on Facebook, either from their own experience or someone they knew.

> "They said I like to seduce men and that I have HIV" (Participant 2).
>
> "They took a photo of me while I was sleeping while I was in my underwear and published it on Facebook" (Participant 10).

They were unanimous in believing that hidden identities and anonymity not only provide disinhibition, but they provide a sense of safety causing the individuals to behave differently online than they would in person.

> "A lot of people use pictures of cars, flowers or other items for their profile picture, therefore you don't know who is sending you a message" (Participant 4).

Although there is no specific profile for the individuals who are perpetrators, some personality and psychological characteristics seem to prevail in these individuals as well as in the individuals who are victimized. According to the participants it is difficult to guess who might be the perpetrator, because of the anonymity and hidden identities which provide virtually anyone the opportunity to be a perpetrator. The same stands for a victim as any individual are equally likely to be the target of cyberbullying. However, most of the participants reported that perpetrators are usually isolated, unloved individuals, who lack empathy that allows them to act the way they do with no remorse, prominent characteristics

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of antisocial personalities. They are usually rude, do not care about other individuals' feelings, and need to experience a power differential. Twelve of the participants reported that perpetrators have most probably been victims of cyberbullying themselves or they have suffered some form of maltreatment or abuse during their lives.

> "I think a lot of the perpetrators have been victims as well and they need to feel more superior by taking revenge through cyberbullying" (Participant 13).
>
> "Usually perpetrators have problems themselves. Their home situation is not very pleasant and they build up anger. They bully to feel better" (Participant 9).
>
> "Cyberbullying is surely related to the way you are raised, family problems, and if you don't feel good about yourself you want to make others feel bad so you can feel better" (Participant 3).

Previous research has shown that victims of cyberbullying may also possess some common characteristics. When the participants were asked what the characteristics of a victim might be, they reported them as being introverted, or extroverted, as having a disability, being different in terms of religion, political stance, or sexual orientation that would make them an easy target. The participants reported that although most of the victims of cyberbullying seem to be introverts, extroverts are exposed to more danger since they easily become friends with individuals online, they are more popular thus causing envy, and they may ignore internet security rules. The participants were unanimous in believing that victims of cyberbullying are mostly individuals with low self-esteem.

> "I don't like looking at myself in the mirror. I have no confidence at all" (Participant 14).
>
> "I felt so bad about myself I didn't even want to be me" (Participant 8).

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The characteristics mentioned by the participants are consistent with the findings in previous studies as well as in Study I and Study II regarding the personality and psychological traits of perpetrators of cyberbullying.

In terms of emotions (RQ2), most of the students reported that the social media evokes sadness, stress, frustration, anger, revenge, loneliness, and anxiety. The most frequently mentioned feelings include sadness, hurt and anger.

"I felt really lonely for days and very sad. I felt like nobody wanted to be near me" (Participant 15).

Three of the participants that were victims reported becoming isolated in fear of being victimized again.

"I decide to withdraw from certain people, but I actually withdrew from everyone. I was so afraid it would happen again" (Participant 12).

One participant reported ostracism and six participants reported suffering from depression after they were victimized. Four participants reported trying to respond to their victimization by fighting online.

"Your personality changes and you become aggressive even though you know that deep down you are not an aggressive person" (Participant 1).

"If you keep quiet you feel more hurt because you are not standing up for yourself" Participant 20).

These participants would fit the perpetrator/victim profile. Some participants reported that ignoring the cyberbullying and avoiding the perpetrator if possible would be the best strategies to deal with cyberbullying. From the participants experience, fighting back would only prolong the victimization and would not resolve the matter.

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"I would never fight back because I know it will come back to me and when it comes it will be worse" (Participant 11).

The final theme that was addressed in the interviews was cyberbullying prevention. Only 10 of the participants indicated that they had received education regarding appropriate online behavior. Five of the participants mentioned a brief seminar at their high school regarding internet security as part of an awareness month where no formal instructions were provided regarding victimization. A reoccurring theme in the interview was the lack of knowledge that adults have of the reality of cyberspace. Most of the participants believed that law enforcement and university administrators do not fully understand cyberbullying. They unanimously believed that even if they report the incidents of cyberbullying there is nothing anyone can do about it.

"Once it starts there is nothing anyone can do to stop it" (Participant 6).

They also mentioned that people seem to think they have more real problems to deal with and since it is something they cannot see they do not grasp the severity of the problem. Twelve participants believed that telling others might help resolve the problem, while eight participants believed telling others cannot stop victimization. Five participants believed the only thing that would help was to learn to ignore the problem and develop coping mechanisms.

4.3.8 Coping Mechanisms and Suggested Strategies

When the participants were asked what coping mechanisms they would use they mentioned talking to their closest friend because they are probably the only person they trust and they are the ones that would understand what they are going through. Five participants mentioned that friends may be able to provide support and understanding but they are not

always able to help resolve the problem. Most of the participants report they would avoid telling adults or authority figures in fear of the cyberbullying becoming worse if their perpetrator found out. None of the participants mentioned reaching out to law enforcement personnel as they believed they would not devote the appropriate attention to the problem, and they responded strongly when asked if school, university leaders, or law enforcement could do anything to stop cyberbullying.

> "I would encourage all victims to speak to a friend, an adult, their parents or someone they trust. Don't keep it inside because you will not realize the anger" (Participant 7).

Participants were asked to provide suggestions on strategies for dealing or preventing cyberbullying (RQ3). Two participants suggested creating a special unit at University Student Affairs which would provide them with ways to deal with their problem, and twelve students stressed the need for universities to have trained counselors available to talk to students who may be a victim of cyberbullying.

> "There should be an anti-bullying unit in University where we can report these incidents and they can help us deal with them" (Participant 17).

Four students suggested contacting the IT department of the university which might be able to bypass security and identify the perpetrator or examine the content of the posts to ascertain who it is. Students were unanimous in Blocking the perpetrators as a good measure of dealing with the problem, however, they mentioned that the perpetrators may create new accounts with a different name. In such instances, participants suggested to report their actions to the site administrators, along with evidence that has been compiled. Programs designed to educate students about what constitutes bullying and the long-lasting impacts on the victims were suggested by ten participants.

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> "Seminars on what we should do when we are victimized would really be helpful" (Participant 4).
>
> "Posters and bulletin boards should be used in the residence halls and in computer labs that are designed to educate and inform students about what they can do or who they can talk to if they are the victim would really be useful. Victims are often at loss" (Participant 18).

Three students suggested that the faculty should also be educated to help both perpetrators and victims, and should dedicate more time to listen to them when they come with a problem of that nature. Students who were previously victims of cyberbullying suggested that they are informed upon their registration at the university of the policies regarding cyberbullying and what type of action the university will take when it comes to their attention that cyberbullying is taking place.

In an attempt to prevent cyberbullying, many students reported increased security and awareness.

> "You can use password protection, restricting who has access to online networking profiles, limiting the amount of personal information available online, and being more aware of who you are talking to" (Participant 5).

Fifteen of the participants suggested Going Private in social media that allows users to do so.

> "that way you gain control of who sees what is shared by you" (Participant 2).

However, the majority of students reported there is no way to stop cyberbullying.

> "You can't stop someone from posting online, and even if you do they will find another way" (Participant 19).

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One participant suggested to address perpetrators and find out the reasons why they resolve to such behavior in an attempt to reduce the problem.

> "People focus on the victims, but maybe you should look into the reasons why perpetrators do what they do" (Participant 1).

4.3.9 Study III-Summary

Three research questions guided this study. The first research question asked what students consider to be the reasons for cyberbullying behavior. The findings of this study are in line with previous research (Boyd, 2012; Parris, Varjas, & Meyers, 2014), and indicate that the students' experiences led them to believe that human relationships, revenge, jealousy, and intentional harm, are the main reasons for cyberbullying.

The second research question asked how students experience the extent and the consequences of cyberbullying. Most of the students reported that a wide array of emotions is the result of cyberbullying leaving the victims in search of means to cope with these behaviors. The most common emotions cited were sadness, stress, frustration, anger, revenge, loneliness, and anxiety.

The third research question asked what methods and strategies in the student's opinion, could be used to prevent cyberbullying in university. The majority of the participants reported that there is nothing that can be done as they have lost trust in the ability of adults or law enforcement to help them with cyber-related issues. Few students reported adult intervention as an effective way to reduce cyberbullying. The most common coping strategy mentioned by the students was turning to their closest friend who would be capable of understanding their lived reality and provide them with support. However, they realize that in many cases this strategy will not resolve their problem. Students suggested increasing

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protection efforts when online, becoming more aware of who they are talking to and who sees the information they share. They also suggested educating students and faculty through seminars providing them with the means for prevention and intervention.

The purpose of this qualitative study was to understand the experiences of university students, who have either been victims or preparators of cyberbullying.

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CHAPTER V

DISCUSSION

5.1 Study I

New technology and online media constitute a big part of our daily lives and they are affecting the way of communicating and relating to other individuals in both positive and negative ways, especially among youth. Among the negative aspects in the use of technology is its usage to harm other individuals, a phenomenon known as Cyberbullying (Felipe-Castaño et al., 2019).

Cyberbullying is a fairly new phenomenon that has gained more attention lately due to the tragic suicides of some victims. Even though most cyberbullying research focused on adolescents, cyberbullying occurs among university students, as well (Crosslin & Golamn, 2014). As reviewed by Kyriakides and Kavoura (2010), studies have indicated a pattern where the frequency of cyberbullying behaviors increased as age increased; in other words. as adolescents moved from middle school to high school the frequency of cyberbullying perpetration increased. Hence, there is reason to believe that this trend will continue as individuals move from high school to the university (Kraft & Wang, 2010). To date, little is known about cyberbullying in university students and more research studies are needed to enhance our understanding of this phenomenon among these young adults (Walker, Sockman, & Kehn, 2011). The current study was designed to increase understanding regarding cyberbullying among university students focusing specifically on the personality characteristics, the psychological traits and symptoms, and the interrelational roles as factors associated to cyberbullying behaviors. By understating more about the perpetrators of cyberbullying, prevention and intervention programs can be designed specifically for those individuals who are inclined to engage in cyberbullying, thereby maximizing the effectiveness of such programs. Perpetrators, as well as victims, seem to have various

underlying problems that need to be addressed using suitable assessment and treatment interventions; hence, identifying and further exploring these problems may reduce their engagement in bullying.

The current studies were purported 1. to identify the association of personality correlates based on the Big Five traits with cyberbullying behaviors and victimization and 2. to investigate the effect of students' psychopathology in their involvement in such acts, and 3. to identify the significance of interrelational roles in cyberbullying behaviors. For this purposes, three separate studies where employed with two of the studies being of quantitative nature and the third being a qualitative study. The results of these studies are discussed in the paragraphs below. Overall, this study, in line with previous research studies, has shown that perpetrators and victims of cyberbullying differ in terms of their personality characteristics, psychological traits and previous interrelational experiences.

Study I indented to examine the Big Five personality traits and their association to cyberbullying in a sample of university students (RQ1). Research has shown that individuals who possess a combination of certain personality characteristics seem to be the prime candidates for such bullying behavior. For example, Kinga, Kármen, ENIKŐ, Andrea, and Noémi-Emese (2014) reported that perpetrators, perpetrator/victims, and victims scored higher in Extroversion, Conscientiousness, and Openness to Experience. Additionally, in the same study, perpetrators were found to be less honest and much less emotional. The results of the current study are in line with previous literature (Festl & Quandt, 2013; Kokkinos et al., 2014; Kokkinos et al., 2016; Volk Schiralli, Xia, Zhao, & Dane, 2018), in that individuals with low Conscientiousness find it difficult to restrain themselves from cyberbullying. This, most probably, was due to the lack of awareness of the consequences of their actions (You & Lim, 2016). Consistent with the researcher's hypothesis (H1a), these findings imply that low Conscientiousness seems to be a robust personality correlate of cyberbullying behavior.

Extroversion describes a broad range of characteristics such as assertiveness, gregariousness, and high levels of activity and sensation-seeking behavior (John & Srivastava, 1999). Based on previous research it was hypothesized that Extroversion and Openness to Experience will be positively correlated with the likelihood of engaging in cyberbullying, while Neuroticism, Conscientiousness, and Agreeableness were hypothesized to be negatively associated with the likelihood of engaging in cyberbullying behavior.

To the researchers' expectation, and in line with previous research (van Geel, Goemans, Toprak, & Vedder, 2017), cyberbullying behavior was found to be positively correlated with Extroversion (H1a). These findings are consistent with previous research (Mitsopoulou, & Giovazolias, 2015; Sesar, Šimić, & Barišić, 2011), that found Extroversion to be associated with both cyberbullying and victimization. Additionally, aggressiveness seems to be related to high levels of popularity, sociability, and leadership skills, all of which are elements measured under the umbrella of Extroversion. Tani, Greenman, Schneider and Fregoso (2003), found that Agreeableness and Neuroticism emerged as the most salient characteristics of perpetrators. The fact that high Agreeableness and low Extroversion coexist in the perpetrator's personality may seem illogical, but it may be partly explained by their involvement in sensation seeking activities which requires little sensitivity. Extroversion is generally related to optimism and high self-esteem, although in the current study the perpetrators' self-esteem was not their highest score, which sets them apart from individuals exhibiting antisocial personality characteristics. However, high self-esteem is highly associated with narcissism leading to greater self-presentation online, which may explain the positive correlation with cyberbullying behaviors.

Agreeableness and Conscientiousness were found in this study to be negatively correlated with cyberbullying behavior (H1c, H1d), which signify low empathy. Low empathy in literature is often found to be the main constituent of offensive and rude behavior,

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stubbornness, low levels of modesty, sympathy, and altruism (John & Srivastava, 1999). Perpetrators were rated as significantly lower than the other groups in levels of empathy. Such findings suggest that the behavior of a perpetrator may be more specific depending on where its taking place, in that individuals who are high on Extroversion and low on Agreeableness are more likely to be antagonistic with others and have an innate need for social status. Additionally, these results are in line with previous research (Bollmer, Harris, & Milich, 2006) and imply that individuals with low levels of Agreeableness may be aggressive or offensive, hostile, confrontational, antisocial, impulsive, and unable to sustain positive interpersonal relationships which may offer an explanation to the reasons why these individuals are more inclined to act violently toward others (Gleason, Jensen-Campbell, & South Richardson, 2004). It can, therefore, be presumed that in addition to low levels of Agreeableness, high levels of Neuroticism would exacerbate the level of impulsivity and hostility at times when the individual feels frustrated.

Neuroticism is mostly characterized by emotional instability (when individuals are socially exposed), frustration, sensitivity to stress, suspiciousness of others motives, impulsiveness, vulnerability, low self-control, and low self-esteem (McCrae & Costa, 1999). Thus, Neuroticism encompasses both internalizing (e.g. suspiciousness) and externalizing traits (e.g. impulsivity). In this study, cyberbullying, consistent with previous literature (Kokkinos et al., 2014; Zezulka & Seigfried-Spellar, 2016), was found to be associated with greater negative emotionality and Neuroticism (H1b). People presenting with Neuroticism have also been discussed as having low threshold for stress (Atkinson, Atkinson, Smith, Bem, Nolen-Hoeksema, & Smith, 2000), and considering the high levels of stress among university students leading to high levels of Neuroticism, this may increase the risk of impulsive and externalizing behaviors, such as cyberbullying. Individuals who score high on Neuroticism and engage in cyberbullying may view verbal aggression as a legitimate response to

presumed confrontations, and also due to their suspiciousness, perceive ambiguous interpersonal events negatively. This trait is particularly important as emotional instability may be viewed as a strong variable to cyberbullying behavior.

The specific combination of personality characteristics' levels may influence the individual's risk of engaging in cyberbullying. Specifically, when high levels of Extroversion and Neuroticism are combined with low levels of Agreeableness, it may cause increased impulsivity, anger, hostility, narcissism, and self-confidence which may lead to taking unnecessary risks to increase online friends, and decrease sympathy for others outside the friendship cycle.

Contrary to the researcher's expectations (H1) and some previous studies, Openness to Experience was found unrelated to cyberbullying behaviors. Openness to Experience is mostly linked to prosocial behavior which may partly explain why it appears unrelated to cyberbullying behaviors. Prior research on the association between Openness to Experience and cyberbullying has produced mixed results. For example, Kokkinos and colleagues (2013), found that cyberbullying was negatively correlated with Openness, whereas Zezulka and Seigfried-Spellar (2016), found that individuals who scored high on Openness where more likely to engage in the social media which in turn may result in higher possibility of victimization. Celik and colleagues (2012), found that being victims of cyberbullying tends to decrease as Openness to Experience increases. The inconsistency in results may be explained by the relatively lower internal consistency found for this trait compared to other traits. In addition, Openness has been difficult to replicate across cultures, and therefore there is uncertainty about the validity of the specific dimension. A different explanation may be that individuals who score very low on openness may become targets of perpetrators due to their lack of imagination, lack of humor, and lack of intellectual resources, while if they score high on this dimension they may cyberbully another person because of envy or sanctions of

being an overachiever as compared to group norms (Pallesen, Nielsen, Magerøy, Andreassen, & Einarsen, 2017).

In terms of types of cyberbullying behaviors, the results revealed that individuals who score high in Extroversion are more likely to insult others in public forums, they are more likely to steal personal information from a computer, and they make fun of other individuals posts. Individuals who scored high in Openness to Experience tend to insult in online forums, exclude others in online forums by blocking their comments or removing them, share private internet conversations without others knowledge, send threatening or hurtful messages, and they publish online an embarrassing photo without permission. These results are consistent with previous research and with the theory of antisocial behavior (Eysenck, 1977) as well as behavior criminality presented by Eysenck (Eysenck & Eysenck, 1964). It is suggested that extraverts are more inclined to present antisocial behavior and more criminal acts because they lack fear of the consequences in their pursue of rewards, and they are generally intolerant and impetuous (Byrne, 1994; Slee & Rigby, 1993). Additionally, a possible explanation for the correlation of Neuroticism with cyberbullying behavior may be explained by the anxiety, depression and strong emotional reactions that characterize such individuals which in turn may intensify their reactions (Connoly & O'Moore, 2003).

The second part of Study I focused on which personality traits make individuals more vulnerable to victimization (RQ2). Previous research has found victimization to escalate as a result of an individual's degree of Extroversion and Openness to Experience and decline as a result of Agreeableness (Cawvey, Hayes, Canache, & Mondak, 2018). It was expected that victimization will be positively correlated with Extroversion (H1a) and negatively correlated with Agreeableness, Openness to Experience, Neuroticism, and Conscientiousness (H1, H1b, H1c, H1d).

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In line with previous research the results revealed that those who are high in Extroversion are more social and this increases their likelihood of sharing more information and being victimized (H1a). Extroverts are more likely than introverts to make acquaintances on the social media and hence share more sensitive information. This may partly explain the higher probability for victimization. Some studies found that Extroversion was significantly negatively associated with victimization as higher reports of victimization were associated with lower scores on Extroversion (Deliberto, 2016). This may be explained by the tendency of individuals who score low on Extroversion to be more reserved, to prefer solidary activities, being less assertive and quieter, characteristics which render them prone to victimization. Assertiveness and power display are generally considered to be central aspects of Extroversion, which would render subjects low on this trade more susceptible to cyberbullying compare to those with higher scores. Additionally, social support has been shown to buffer against the consequences of victimization. Individuals who score low on Extroversion often receive less social support and have a lower number of friendships possibly due to their poor social skills (Egan & Perry, 1998; Graham & Juvonen, 2001). However, as the results of this study lack of social acceptance and support have depicted it may be one of the reasons that extroverts engage in cyberbullying behavior.

A more nuanced effect was expected for Agreeableness and consistent with the researcher's hypothesis (H1d) it was negatively related to victimization which seems to decrease this effect as a function of the related characteristics. Agreeableness is a dimension that relates to victimization not to the occurrence of interaction, but to the quality of social interaction when communication with a perpetrator occurs, and especially how this interaction is understood. In addition, individuals who score high in this dimension are inclined to overlook negative incidents, or to perceive them compassionately when they do occur. This however, may interfere with an individual's capacity to recognize an incidence of

victimization when it occurs. Additionally, these individuals exhibit self-control in stressful situations (Jensen-Campbell, Knack, Waldrip, & Campbell, 2007), which may lead potential perpetrators to resist from targeting them. Individuals who score high on the Agreeableness dimension may gain the support of their adversaries protecting themselves against some incidents of victimization (Cawvey et al., 2018). Such immunization might signify that Agreeableness may reduce the risk for victimization that accompanies Extroversion and Openness to Experience.

As expected Openness to Experience was found to be negatively correlated to victimization (H1). Individuals who score high in Openness flourish on innovation, intentionally placing themselves into familiar and strange environments, are drawn to new information, and are eager to be subjected to risky circumstances which might contribute to making them an easy target for perpetrators of cyberbullying (Festl & Quandt, 2013). Consistent with previous research (Hollenbaugh & Ferris 2014; Moore & McElroy, 2012; Peluchette et al., 2015), it was found that this characteristic may contribute to the risk of being a victim of cyberbullying behaviors as scoring high on this dimension will expose an individual to a higher risk of exposure to incidents that may result in victimization. Pallesen and colleagues (2017), found that being a victim may be related to extreme scores on this dimension, based on the theoretical explanation that scoring low on Openness may render them in danger of becoming a victim because of their lack of imagination, poor sense of humor, and marginal intellectual resources.

The negative correlation between Neuroticism and victimization found in this study (H1b) may be explained by the negative affect associated related with the dimension of Neuroticism that creates a certain susceptibility to victimization especially when it is coalesced with the nonexistence of limits associated with low Conscientiousness. These results are consistent with previous research; however, this research found a higher

correlation with victimization and Neuroticism compare to previous studies who found Neuroticism to be more strongly related to perpetration (Mitsopoulou & Giovazolias, 2015; van de Weijer & Leukfeldt, 2017). This result may be subject to the combination of personality characteristics that an individual bear as well as other contributing factors. For example, individuals who score low on Conscientiousness and high on Neuroticism may lack the ability to regulate their behavior in a conflict situation, they may be more insecure and reach high anxiety levels, which may exacerbate the situation. Since they experience inner loneliness more than other individuals (Morahan-Martin & Schumacher, 2000), and feel alone they tend to overuse the social media and the internet thereby increasing the risk of being victims of cyberbullying. Another possible explanation that relates to the findings of this study, is the assumption that Neuroticism is related to behaviors regarded as annoying and may trigger negative reactions from other individuals (Milam, Spitzmueller, & Penney, 2009). Due to their anxiety, victims struggle to defend themselves. The results regarding Neuroticism were conflicting since this trait was found to be related both to perpetration and victimization. This trait is related to interpersonal sensitivity, which makes individuals more likely to avoid risky relationships, and avoid danger on cyberspace. In this study the students that identified with victimization exhibited characteristics such as high Neuroticism, low Extroversion, and low Conscientiousness. It is possible that individuals who exhibit anger would elicit cyberbullying by peers, but at the same time it is reasonable to assume that individuals who are victimized for a long time express angry emotion (Bollmer, Harris, & Milich, 2006). The association between victimization, Conscientiousness, and Neuroticism may be due to the particular vulnerability that is created when individuals present a combination of these traits. This combination may result to lack of restraint, i.e. behavior regulation in a conflict situation, increased anxiety, and insecurity, which may exacerbate the situation.

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Individuals who score low on Conscientiousness are more inclined to share sensitive information on the social media which may intensify the risk for victimization. Thus, the researcher posits that victimization will decrease as a function of Conscientiousness (H1c). Conscientiousness is a trade that is highly associated with self-regulation (Jensen-Campbell et al., 2007), whereas low as risky and reckless behavior might be characteristics of individuals who score low on this dimension (Arthur & Graziano, 1996; Cawvey et al., 2018; Kower & Hermann, 1997). This finding may be explained since conscientious individuals are known to be more disciplined and trusted, they have a diminished need for using the internet for social purposes thus decreasing the possibility of being bullied. In addition, when victimization does occur these individuals are less prone to escalating the tension. This finding is partly supported by previous research (Çelik, Atak, & Erguzen, 2012; Karl et al., 2010; Moore & McElroy, 2012; Newness, Steinert, & Viswesvaran, 2012; Schreck et al., 2013).

The Theory of Reasoned Action first applied by Ajzen (2012), to behaviors for which the individuals have exclusive control supports the results of Study III. This theory was later extended to comprise the perception of one's capacity to express a behavior and it was renamed as the Theory of Planned Behavior. Because university students have easy access to online platforms and cellular phones, it seems that they are provided with the capacity to engage in cyberbullying behaviors. In the USA approximately 98% of youth make daily use of the internet (Pew Internet & American Life Project, 2013 as found in Duggan, & Brenner, 2013), 97% of young adults use their mobile phones to send messages (Duggan & Rainie, 2012) and cyberbullying can be anonymously manifested. This theory posits that one's attitude toward a behavior and subjective norms of the behavior influence behavioral intentions which in turn influence behavior (Ajzen, 1985). According to Ajzen (1985), attitudes control how positively or negatively a person evaluates a behavior, and according to

Olweus (1993), perpetrators often have more positive attitudes towards violence and low empathy toward victims. This may be based on the individual's personality characteristics. Studies of university students support this argument (Boulton, Loyed, Down, & Marx, 2012). Among university students in the UK, the individuals with less accepting attitudes toward bullying, high on Conscientiousness, were less likely to report engaging in social networking, text, physical, or verbal bullying (Boulton et al., 2012). In the same study the individuals with less accepting attitudes toward perpetrators predicted less likelihood of verbal or social exclusion bullying. Barlett and Gentile (2012), found higher acceptability of weaker and smaller people cyberbullying to get even, and more accepting attitudes toward anonymity, predicted more positive attitudes toward cyberbullying perpetration which in turn predicted cyberbullying. This theory was taken together with Bandura's moral disengagement theory (2002), which posits that the cognitive process an individual undergoes in order to justify damaging behaviors, are contrary to one's own moral standards, a process closely related to cyberbullying perpetration because of the anonymity, lack of moral standards, and invisibility that perpetrators adhere to in cyberspace. An individual whose personality combines specific traits such as Extroversion and low Conscientiousness has an increased likelihood of being a perpetrator of cyberbullying because their personality characteristics and the attitudes they present towards bullying behaviors, will help them disengage their moral self for gain to cyberbully other individuals.

Social learning theory has been applied in various areas of research to explain phenomena such as cyberbullying. This theory posits that definitions auspicious to a behavior, the differential support of behavior and the differential connection with that of behavior will intensify an individual's probability of demonstrating that behavior (Bandura & Walters, 1977). Differential support is the stated endorsement or disapproval of the behavior as perceived by the person acting it out. Differential connection refers to any expected

consequences of taking part in that behavior in combination with how the person that acts out the behavior perceives other individuals' engagement in the behavior. Modeling is engaging in the behavior when it is observed in individuals respected by the actor (Gagnon, 2018). The vicinity and level of contact to those accepting the behavior will determine the probability of imitating the behavior. Typically, this theory has been used to explain perpetrator behavior but evidently it can be used to explain victimization. Social theory posits that victims generally seek support after their victimization from their peers or social support networks. This action can be directly associated to differential reinforcement and differential association. Additionally, social learning theory points to the similarities between learning delinquent behaviors and the increased risk of victimization (Fox, 2013). Lucas (2018), found that individuals who observe other people engaging in cyberbullying behaviors, were less likely to be victimized regardless if they had experienced cyberbullying victimization prior to university. In other words, those who present high levels of imitation are less likely to be victimized. In addition, he found that the way individuals perceive cyberbullying can ultimately impact whether they are victimized themselves. For example, if they support cyberbullying behaviors they are more likely to be victimized. Hence similarly to learning how to be a perpetrator, individuals learn how to be victims. According to the social learning theory it is therefore possible that victims of cyberbullying may become friends with their perpetrators, they may believe that there are some situations where bullying is appropriate or it could be rewarding to be victimized. In other words, an individual who believes cyberbullying to be ordinary, common, and an acceptable behavior among peers, could be more likely to become a victim given their pro-cyberbullying beliefs.

Steady, functionally strong effects of personality are seen for most of the Big Five personality traits and specifically for Extroversion, Openness to Experience, and Agreeableness. The results have yielded support for all but one of the researcher's hypotheses

and demonstrate both that personality traits are essential to any general account of cyberbullying and victimization. Personality attributions made by the researcher regarding perpetrators and victims fit well with self-reported personality traits of perpetrators and victims. In sum, personality attributions based on the findings of Study I are in line with relevant theoretical and research perspectives on the association between personality and cyberbullying. In addition to demonstrating that variation in personality is important for patterns of bullying and victimization, the findings of this study bring a key implication regarding the fact that traits of people's attitudinal and behavioral patterns are likely to be continuous across individuals, or whether effects might vary as a function of a person's psychological dispositions.

5.2 Study II

Research has shown that students who are perpetrators or victims may experience heightened social, emotional and health problems and studies have revealed that depression, anxiety, and low self-esteem may not be the resulting consequences of, but a precursor to cyberbullying behavior (Bauman et al., 2013; Kowalski & Limber, 2013). Research supports that prolonged engagement in cyberbullying acts put individuals at a greater risk for developing adverse psychological effects (Dooley, Pyzialski & Cross, 2010), and suggests that individuals who develop depression because of cyberbullying place themselves at greater risk for self-harm and suicidal ideation (Hinduja & Patchin, 2010). Study II was intended to investigate the relationship between psychological traits and cyberbullying behavior (RQ1), the psychological consequences that victims face (RQ2), and the relationship between previously being a victim of cyberbullying resolving to cyberbullying behavior (RQ3). The expected differential patterns of mental health problems were shown with higher internalizing

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problems for victims and more frequent externalizing problems for perpetrators. However, depressive symptoms and anxiety were higher among all groups compared to uninvolved individuals (control group).

It was hypothesized that innate and stable personal characteristics (H2) will be associated to cyberbullying behavior. Specifically, it was hypothesized that cyberbullying behaviors will be positively associated with grandiose, and manipulative traits (H2a). It was also hypothesized that perpetrators will be positively associated with sensation seeking (H2b), negatively associated with lack of empathy (H2c), and negatively associated with engaging in more illegal behaviors (H2d).

As expected, and consistent with previous research perpetrators (36.1%) reported more grandiose and manipulative traits compare to victims (23.7%), and perpetrator/victims (24%) (H2a). The results indicated significant differences between perpetrators, victims, and perpetrator/victim's self-esteem regarding grandiosity. Perpetrators present a significantly higher score in their grandiose traits than victims, but a similar score with perpetrator/victims who also present a high score in their grandiose and manipulative traits. The internet seems to provide individuals, with this characteristic, with constant display to an infinite audience and immediate feedback, which is important for their grandiosity (Baldasare, Bauman, Goldman, & Robie, 2012), while providing them with the opportunity for direct aggression which they are especially apt due to their manipulative tendencies. This result is consistent with previous research (Antoniadou & Kokkinos, 2013; Antoniadou, Kokkinos, & Markos, 2016; Balakrishnan, Khan, Fernandez, & Arabnia, 2019; Fanti, Demetriou, & Hawa, 2012; Gibb & Devereux, 2014), which found grandiosity to be associated with cyberbullying. Gini, Pozzoli, and Bussey (2015), found that the relationship between proactive aggression and grandiose-manipulative traits was stronger in individuals who presented high levels of moral disengagement hence facilitating individuals with these traits to use aggression to obtain their

goals. Results suggest that perpetrators have a grandiose self-view which is associated with their investment in establishing dominance and being respected over others (Orue & Calvete, 2019).

Students who are looking for challenging online behaviors, and are attracted to challenging and aggressive behavior, are usually high sensation seekers (Antoniadou & Kokkinos, 2013; Zuckerman, 1994). Sensation seeking is "defined by the seeking of varied, novel, complex, and intensive sensations and experiences, and the willingness to take physical social, legal and financial risks for the sake of such experiences" (Zuckerman, 1994, p.27). Sensation seekers may be described as individuals who engage in certain behaviors in order to increase the level of stimulation that they experience, thus pursuing arousal (Roberti, 2004). A small number of studies have examined the relationship between cyberbullying and sensation seeking and their results show that sensation seeking is commonly correlated to cyberbullying (Antoniadou et al., 2016; Antoniadou & Kokkinos; 2013; Graf, Yanagida, & Spiel, 2019; Kokkinos et al., 2014). Additionally, they found that cyberbullying is positively correlated with need for stimulation. Based on previous research it was hypothesized that cyberbullying behaviors will be positively associated with sensation seeking (H2b), and it was found that perpetrators have higher scores (31.9%) on sensation seeking than the other two groups and perpetrator/victims (20%) have higher scores than victims (14%) on sensation seeking. The findings of this study are in line with previous research (Antoniadou & Kokkinos; 2013; Kokkinos et al., 2014;) and indicate that sensation seeking should be recognized as a risk factor for cyberbullying. These results may be explained by the relationship between boredom and aggressive behavior such as cyberbullying which may be used by sensation seeking individuals to counteract the restless and irritable feeling that these individuals experience (Barbalet, 1999). When they are not using the internet, these individuals tend to seek adventure and thrill through delinquent behavior, while when they

are using the social media they are most likely to socialize with strangers and post provocative material for their own benefit (Livingstone & Helsper, 2007). Students who tend to get bored easily and look for online adventures, may convert what they consider teasing actions into cyberbullying. They are more likely to be experienced seekers, intolerant of repetition, and restless individuals who prefer exciting out of the ordinary experiences.

Individual personality traits such as empathy have repeatedly been proven to play a role in cyberbullying, while empathy has been consistently found to be negatively correlated with antisocial behavior (Jolliffe & Farrington, 2006). There are two elements of empathy, understanding the feeling of other individuals (cognitive empathy) and experiencing their emotional state (affective empathy). Research studies have shown the association of cognitive empathy and affective with cyberbullying (Kowalski et al., 2014; Steffgen, König, Pfetsch, & Melzer, 2011; Tokunaga, 2010; Topcu & Erdur-Baker, 2013). However, the results of the studies were conflicting. Several studies reported that perpetrators may have lower scores of affective empathy (Pfetsch et al., 2017; Steffgen 2011), but not on cognitive empathy. Other studies found affective empathy to be negatively correlated to cyberbullying behavior (Ang & Goh, 2010; Kokkinos et al., 2014) and that students involved in cyberbullying are inclined to show lower levels of affective empathy (Ang & Goh, 2010). It was assumed that individuals who self-reported lack of empathy (H2c) will be more involved in cyberbullying behaviors than the other groups. Results indicate that perpetrators scored higher (20.8%) than the two other groups in lack of empathy. In a similar vein perpetrator/victim scored higher (16%) than victims (14%) on this trait. This finding is supported by previous research (Ang & Goh, 2010; Antoniadou et al., 2016; Pfetsch, 2017). While the research results are vague, they generally imply a negative correlation between affective empathy and cyberbullying behavior, signifying that affective empathy or lack of could be a probable correlate for cyberbullying behavior. This might be due to the fact that

individuals who cyberbully others might not be compassionate and not feel sorry for their victims because they have low levels of empathy. Additionally, the findings suggest that perpetrators may not be very socially competent and they probably have problems understanding social evidences (Crick & Dodge, 1999). Another possible explanation for the results is that perpetrators are not able to detect the victim's emotional indications or the direct effects of their behavior (Steffgen, König, Pfetsch, & Melzer, 2011; Topcu & Erdur-Baker, 2013) which might render empathy unimportant. This interpretation gains further support through the findings of this study.

Hinduja and Patchin (2008), found that perpetrators of cyberbullying in the United states engaged in more delinquent and illegal behaviors including use of drugs and alcohol, physical assault, cheating, and stealing. Kyriakides and Kavoura (2010), in a review of literature about cyberbullying reported that perpetrators were more likely to exhibit violent behavior, substance abuse and rule breaking behaviors. Based on previous studies it was expected that perpetrators and perpetrator/victims, would engage in more illegal behaviors than the non-involved individuals (H2d). There was a significant difference in illegal activities found in this study, where perpetrators and perpetrator/victims scored significantly higher than victims in most of the behaviors measured. Perpetrator/victims scored higher (32%) than perpetrators (20.8%) and victims (11.4%) in terms of violence. Perpetrators (13.9%) and perpetrator/victims (12%) had similar scores in drug use compare to victims (7%). The findings of this study are in line with previous research that has shown perpetrators score higher in illicit substance use (Niemelä, Brunstein-Klomek, Sillanmäki, Helenius, Piha, Kumpulainen, & Sourander, 2011; Sánchez, Navarro-Zaragoza, Ruiz-Cabello, Romero, & Maldonado, 2017), but this study also shows that perpetrator/victims tend to score higher in externalizing and violent behaviors including substance use. This result may be due to the heightened risk for substance abuse and delinquent behavior that has been observed as a

consequence and as a risk factor of cyberbullying victimization. In addition, it appears that cyberbullying others may be one of many delinquent behaviors these individuals are choosing to commit in, in order to get revenge.

Cyberbullying has been repeatedly associated to delinquent behavior in terms of both internalizing such as damaging other people's property and getting in trouble with the law, and externalizing forms of deviance like intentional self-harm and suicidal ideation. In accord with previous research (Hay et al., 2010), in this study perpetrators scored higher (22.2%) than perpetrator/victims (16%), and victims (14%) in getting in trouble with the law. Perpetrator/victims had the highest score form all three groups in stealing (12%). In the lying or cheating scale perpetrators had the highest score (23.6%), compare to victims (22.8%) and perpetrator/victims (16%). One likely justification for the results of this study implicates that bullying may socially ostracize its victims. When victims are excluded by other individuals or willingly become isolated from social interactions, they may promote internalizing rather than externalizing emotional behavioral reactions. The increased involvement in illegal activity found in this study supports previous research that found an increase in delinquent and challenging behavior among perpetrators and perpetrator/victims (Hinduja & Patchin, 2008; Johnson, 2009; Kiriakidis & Kavoura, 2010; Schenk, Fremouw, & Keelan, 2013; Ybarra & Mitchell, 2004).

Study II was also designed to investigate if cyberbullying has adverse psychological consequences (anxiety, depression, suicidal thoughts) for perpetrators of cyberbullying and victims. Cross-sectional and longitudinal data show positive links between depression and cyberbullying. The findings of this study revealed that it is not only the victims that are distressed but also the perpetrators. As hypothesized, students who were involved in cyberbullying reported higher levels of internalizing problems such as low self-esteem, depression, anxiety, and suicidal ideation. This finding indicates a discrepancy in

psychological well-being between individuals involved in cyberbullying acts and uninvolved individuals, and it is consistent with previous research (Haltigan & Vaillancourt, 2014; Schenk, Fremouw, & Keelan, 2013).

Low and Espelage (2013), found that higher involvement with cyberbullying was associated with higher levels of depression. Gámez-Guadix, Orue, Smith, and Calvete (2013), as well as Chen, Ho, and Lwin (2017), found that victimization was associated with depression. In line with several investigations, results revealed that increased involvement in cyberbullying and victimization was associated with greater depressive symptoms (H3a). Perpetrators scored significantly higher in the clinical scales of depression whereas victims, although they were significantly more likely to report negative health symptoms, scored lower on depression than perpetrators and perpetrator/victims. This finding indicates that not only victims, but perpetrators as well as perpetrator/victims, exhibit pathological symptoms, even more slightly than victims in certain cases. These findings are in line with existing research (Field, 2018; Iranzo, Buelga, Cava, & Ortega-Barón, 2019; Schenk, Fremouw, & Keelan, 2013; Wendt, Appel-Silva, Kovas, & Bloniewski, 2018) regarding university students, that showed perpetrators and victims of cyberbullying scored significantly higher than the control group on depression, phobic anxiety, hostility, and psychoticism. A possible explanation for the findings of this study might be the critical developmental period for the emergence of mental disorders, such as depression, which makes young adults susceptible to the adverse effects of cyberbullying. For example, students have developed abstract thinking at this age which allows them to construct self-concept within their peer group, their family, and the world. Specifically, they have developed sufficient social skills to explore the exercise of social engagement (Pepler Craig, Connolly, Yuile, Master, & Jiang, 2006; Shaffer, 2008). However, despite their abilities they may lack emotional, intellectual, behavioral skills, and capabilities (Blakemore & Choudhury, 2006). The combination of

these characteristics makes them vulnerable to victimization which in turn makes them susceptible to emotional problems such as depression and suicidality (Elgar Napoletano, Saul, Dirks, Craig, Poteat, & Koenig, 2014; Gamez-Guadix et al., 2013; Hamm, Newton, Chisholm, Shulhan, Milne, Sundar, & Hartling, 2015). To understand how depressive symptoms, relate to cyberbullying and victimization the Interpersonal Risk, Symptoms-Driven, and Transactional models suggested by Kochel and colleagues (2012), may be used. The Interpersonal Risk model posits that young adults who have not yet developed a full identity and struggle to maintain peer relationships are inclined to undergo victimization which in turn may increase the possibility of internalizing symptoms such as depression. The Symptoms-Driven model suggests that young adults who are depressed or exhibit aggressive behaviors are more susceptible to experiences of victimization over time. In order to fit in with a group of their peers, these individuals may become targets for victimization. Thus, their depressive symptoms may place them at risk for victimization. Lastly the Transactional model states that both internalizing and externalizing difficulties are associated with cyberbullying over time. Young adults who continue to struggle with their social relationships tend to feel more depressed and anxious and are more prone to engaging in aggressive behavior. Therefore, internalizing, and externalizing difficulties are presumed as risk factors as well as outcomes of experiences from cybervictimization (Casper & Card, 2017; Holfeld & Mishna, 2019).

Research has repeatedly shown that cyberbullying is associated with high levels of anxiety. Copeland and collogues (2013), showed that victims are at a higher risk for anxiety disorders and specifically agoraphobia and panic disorders. Similarly, the Avon study reports that victimized adolescents are as much as three times more prone to developing an anxiety disorder and various internalizing diagnoses (Stapinski, Bowes, Wolke, Pearson, Mahedy, Button, & Araya, 2014). Musharraf (2018), in his study found that perpetrator/victims were

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more likely to report high levels of anxiety, followed by perpetrators and victims. Schenk and Fremouw (2013), found that victims presented elevated rates of phobic anxiety and most frequently felt stressed compare to control participants. In this study cyberbullying and victimization were expected to be associated with increased levels of anxiety (H3b). In line with previous research perpetrators were found to have highest level of anxiety compare to victims. Perpetrator/victims presented the lowest rate of anxiety compare to uninvolved individuals. These results are consistent with other cyberbullying studies indicating that cyberbullying is related to increased levels of anxiety (Card et al., 2007; Espelage & Holt, 2001; Ferguson et al., 2009; Hinduja & Patchin 2010; Musharraf & Anis-ul-Haque, 2018; Patching & Hinduja, 2010; Ybarra, 2004). From a current fear learning standpoint, victims' experiences steer the way to learned fear reaction to social and other stimuli related to the victimization context (Dygdon, Conger, & Strahan, 2004). The combination of early learning experiences with individual vulnerabilities are considered to add to an elevated expectation of threat and danger (Barlow, 2000). The role of self-efficacy is supported by evidence from previous research (Singh & Bussey, 2011), and threat assessment is supported in the relationship between anxiety disorders and peer victimization (Giannotta, Settanni, Kliewer, & Ciairano, 2012). The results of this study are consistent with the growing number of studies suggesting a correlation between cyberbullying and anxiety in both the perpetrators and victims.

An interesting and novel finding in the current study is that Obsessive-Compulsive Disorder (OCD) symptoms are significantly higher in all three groups compare to the control group. Obsessive Compulsive Disorder (OCD) is a psychological disorder characterized by the intrusion of unwanted thoughts or disturbing images (obsessions) that are difficult to resist, or the repetition of ritualistic behaviors (compulsions). Compulsions may be carried out to prevent harm or to relieve feeling of distress (Storch, Heidgerken, Adkins, Cole,

Murphy, & Geffken, 2005). Victimization may elicit these symptoms. Research has shown that OCD symptoms may increase the likelihood of excessive technology use while various studies (Carli, Durkee, Wasserman, Hadlaczky, Despalins, Kramarz, & Kaess, 2013; Lee, Chang, Lin, & Cheng, 2014; Santos, Nardi, & King, 2015) have shown common factors involved in OCD and internet-related disorders characterized by spontaneity and low inhibitory control (Littel, Van den Berg, Luijten, van Rooij, Keemink, & Franken, 2012; Zermatten & Van der Linden, 2008). OCD has also been associated with excessive need for control (Lee et al., 2014). In this study perpetrator/victims scored higher than victims and perpetrators, who had the lowest score of all three groups. A possible explanation for this result as far as victims are concerned, is that OCD symptoms are associated with a constant urge to check and use social networks due to fear of missing something which in turn increases the probability of being victims of cyberbullying. In the case of perpetrator/victims the need to be in control, which characterizes this disorder, may explain the high score in OCD compare to the other groups (Andreassen, 2015; Lee, Chang et al., 2014). Additionally, obsessions concerning certain cyberbullying incidents may be invasive, disturbing, and of irrepressible nature. Compulsions may develop through unexpected or professed connections between executing a ritual and provoking associated stimuli. An alternative explanation is that adverse experiences with peers may contribute to the development of imprecise cognitions concerning responsibility or damage, resulting in numerous efforts to establish a method of refuting cyberbullying. To the researcher's knowledge this is the first study to report this relation empirically, and this finding is supported by this assumption.

van Geel, Vedder and Tanilon (2014), in their meta-analysis revealed that the relationship of suicidal ideation and cyberbullying is greater than the one found with traditional bullying. Specifically, they found that 20% of the individuals who were victims of cyberbullying thought of suicide as a way to solve their problems and escape from this

traumatic experience. Differences in suicidal behaviors were examined for perpetrators of cyberbullying, perpetrator/victims and victims. Contrary to the researchers' expectations and to previous research, perpetrator/victims endorsed significantly higher in suicidal ideation (32%) than perpetrators (20.8%), and victims (21.1%) (H3). Although Hinduja and Patchin's study (2010), as well as Schenk and Fremouw's, study (2012), showed that victims had the highest scores in suicidal ideation, in another study Schenk Fremouw, and Keelan (2013), found that suicidality is increased for perpetrator/victims. In this study perpetrator/victims scored significantly higher than the other two groups in thinking about killing themselves. Victims were more likely than perpetrators to having thought about killing themselves, which was suggestive of these individuals having experienced more suicidal ideation than the other participants. The interpersonal theory of suicide, posits that the presence of two proximal interpersonal risk factors, perceived burdensomeness and belongingness (i.e. the belief that one's death is worth more to others than one's life), increases the risk for suicidal ideation (Mitchell, Seegan, Roush, Brown, Sustaíta, & Cukrowicz, 2018). When considering the associated factors of being victims of cyberbullying (low self-esteem, increased depressive symptoms, increased anxiety) it is possible that both belongingness and perceived burdensomeness may increase due to cyberbullying behaviors. In addition, social hopelessness and problems with interpersonal relations may partially contribute to suicidal ideation since the victims often feel lonely, unpopular, and unaccepted (Bonanno & Hymel, 2013). The results of this study confirm that victimization is strongly associated to psychosocial maladjustment such as depression and anxiety symptoms, which have been found to be risk factors for suicidal ideation (Hinduja & Patchin, 2010), and confirm that cyberbullying victimization produces strong emotional reactions with a significant effect on suicidal ideation.

Based on previous research, it was hypothesized that cybervictimization will be strongly associated with low self-esteem (H3c). Researchers reported that a low level of self-esteem is not only strongly associated with victimization but also an adverse effect of a cyberbullying experience (Chang, Lee, Chiu, Hsi, Huang, & Pan, 2013; Extremera, Quintana-Orts, Mérida-López, & Rey, 2018). Palermiti, Servidio, Bartolo, and Costabile (2017), suggested that it is not only victims of cyberbullying who appear to have low self-esteem, but perpetrators who use the internet to cause harm and ridicule other individuals have also been found to have low-self-esteem (Kowalski & Limber, 2013). Studies investigating university students are scarce and mostly indicate no relationship between victimization and self-esteem (Brack & Caltabiano, 2014). Perpetrators and perpetrator/victims were hypothesized to have higher self-esteem compare to victims. The results showed significant differences between perpetrators and perpetrator/victims on self-esteem, consistent with previous research that pointed to the adverse psychological and emotional effects of cyberbullying and victimization (Balakrishnan, 2015; Crosslin & Golman, 2014; Hinduja & Patchin 2010; Patching & Hinduja, 2010; Ybarra, 2004). Victims scored significantly lower on self-esteem compare to perpetrators and perpetrator/victims. Perpetrator/victims scored higher than any other group in the low self-esteem scale. The findings may be explained by the fact that victimization may decrease one's self-esteem, or that individuals who present with low self-esteem are prone to be targeted as victims. Self-esteem is considered to be "an internal representation of social acceptance and rejection and a psychological gauge monitoring the degree to which a person is included vs excluded by others" (Leary, Downs, & Kernis, 1995, p. 15). This conceptualization underscores the fact that self-esteem is the perception of one's own personal value and how it is affected by one's participation in the social world, where there are often interpersonal difficulties which subsequently lead to behavior such as cyberbullying. Although the direction of the relationship between cyberbullying and self-

esteem is not clear by the available research, it seems that the relationship to self-esteem, regardless of its direction, is stronger among victims than perpetrators.

Finally, it was hypothesized that cyberbullying behavior is related to previously being a victim and interrelational roles are significantly correlated to cyberbullying behavior (H4). Research has shown that individuals exposed to bullying are 2.5 times more likely to be bullied or cyberbully others (Hinduja & Patchin, 2008). A possible explanation for the increased numbers in perpetrator/victims of cyberbullying found in this study, is that more students adopt this role, especially in the social media because it provides the ability to retaliate with ease (Gradinger, Strohmeier, & Spiel, 2009). In addition, findings of this study may provide support to previous claims that cyberbullying has not created new victims and perpetrators, rather that there are no "pure" cyber victims or perpetrators (Olweus, 2012). Essentially it seems that students classified as perpetrator/victims, are occasionally perpetrators and victims, which may be attributed to their lack of skills and personality characteristics to avoid counterattacks (Antoniadou et al., 2019). Additionally, studies have repeatedly shown that perpetrator/victims are at a particularly high risk of adverse and long-term outcomes. Researchers have demonstrated that being involved both as a perpetrator and a victim seems to compound the impact of bullying. Perpetrator/victims are presenting higher symptomatology than perpetrators or victims, and greater susceptibility to anxiety, depression, low-self-esteem, substance abuse, self-harm- suicidal ideation, aggression, and delinquency (Berkowitz & Benbenishty, 2012; Copeland, Wolke, Angold, & Costello, 2013). In this study victims and perpetrator/victims had higher levels of anxiety and depression (Woods, Wolke, Nowicki, & Hall, 2009). Consistent with previous research, the elevated levels of psychological problems for perpetrator/victims was also reflected in an increase of suicidal ideation (Hinduja & Patchin, 2010; Klomek, Sourander, & Gould, 2010; Schenk & Fremouw, 2012). Perpetrator/victims are also at a higher risk of later development of

antisocial personality disorder (Sourander, Jensen, Rönning, Niemelä, Helenius, Sillanmäki, & Almqvist, 2007) and psychotic experiences (Wolke, Copeland, Angold, & Costello, 2013) which may explain the tendency of victims to become perpetrators. Furthermore, research showed (Klomek, Sourander, Niemelä, Kumpulainen, Piha, Tamminen, & Gould, 2009), that perpetrator/victims are at an increased risk of suicidality as well as being involved in risky or illegal behaviors. As can be understood from the findings of this study, previous exposure to cyberbullying as a victim may lead to adopting a perpetrator/victim role which may have detrimental effects on an individual's life.

5.3 Study III

While quantitative research has investigated various aspects of cyberbullying among university students, qualitative research was lacking since no in-depth qualitative studies have been conducted to explore the perspective of students through their experience. The qualitative gap relating to the origins and manifestation of cyberbullying is what drove the researcher to conduct this study in an attempt to understand those aspects of cyberbullying and prevent future occurrences that threaten the mental health of students. Study III was a preliminary study and explored the experiences and coping strategies of a group of university students who were exposed to cyberbullying directly or indirectly. For this purpose, the lived experiences of 20 students were recorded through face to face interviews and categorized into the emergent themes. The questions that helped establish the research schema and to further the analysis were: a) What do students consider to be the reasons for cyberbullying behavior? b) How do students experience the extent and the consequences of cyberbullying? c) What methods and strategies in the student's opinion, could be used to prevent cyberbullying in university?

This study examined cyberbullying and victimization using the lived experiences and the perspective of students. The data was sorted through the use of open coding and data

analysis based on van Manen's (1990) phenomenological approach, that is used to study a person's lived experience, seeking to obtain a complete understanding of that experience and consequently in more depth. Using key phrases and partial sentences common themes to the lived experiences of students participating in this study were identified, and categorical data was organized into those themes. Thematic organization was used to guide the exploration of the students experiences of cyberbullying and victimization. Themes were produced following van Manen's (1990), approach of themes as navigational beacons that arrange and guide an exploration of the lived experience.

The in-depth analysis of the data revealed four themes. Data indicated that cyberbullying maybe the result of seeking revenge, faulty human relationships, jealousy, and intentional harm. Participants referred to problems in communication and human relationships as one of the main reasons of cyberbullying.

Dissolved friendships were also mentioned as a cause of cyberbullying origination especially from female participants. When friendships dissolved, many participants reported being bullied as a result of the broken friendship.

Prejudices against sexual orientation and general intolerance were mentioned by participants as causes of cyberbullying and victimization as well as differences in political and religious believes as possible causes of cyberbullying.

Generally, the participants view regarding human relationships, whether romantic, friendships, or prejudicial stances are that they are one of the leading reasons for cyberbullying. Research has shown that preexisting relationships often cause cyberbullying and victimization (Kowalski et al., 2008). This study supports previous research findings as all the participants unanimously reported preexisting relationships among victims of cyberbullying and perpetrators.

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Participants believed that cyberbullying is intended to cause intentional harm by exposing victims to public humiliation and embarrassment. Almost all the participants mentioned incidences of humiliation in the social media especially on Facebook, either from their own experience or someone they knew. They were unanimous in believing that hidden identities and anonymity not only provide disinhibition, but they provide a sense of safety causing the individuals to behave differently online than they would in person.

According to the participants it is difficult to guess who might be the perpetrator, because of the anonymity and hidden identities which provide virtually anyone the opportunity to be a perpetrator. The same stands for a victim as any individual is equally likely to be the target of cyberbullying.

When the participants were asked what the characteristics of a victim might be they reported them as being introverted, or extroverted, as having a disability, being different in terms of religion, political stance, or sexual orientation that would make them an easy target. The participants reported that although most of the victims of cyberbullying seem to be introverts, victims that are extroverts are exposed to more danger since they easily become friends with individuals online, they are more popular thus causing envy, and they may ignore internet security rules. The characteristics mentioned by the participants are consistent with the findings in Study I and Study II regarding the personality and psychological traits of perpetrators and victims.

In terms of emotions, most of the students reported that the social media evokes sadness, stress, frustration, anger, revenge, loneliness, and anxiety. The most frequently mentioned feelings include sadness, hurt, and anger.

The final theme that was addressed in the interviews was cyberbullying prevention. Some participants indicated that they had received education regarding appropriate online behavior, such as a brief seminar at their high school regarding internet security as part of an

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awareness month where no formal instructions were provided regarding victimization. A reoccurring theme in the interview was the lack of knowledge that adults have of the reality of cyberspace. Most of the participants believed that law enforcement and university administrators do not fully understand cyberbullying. They unanimously believed that even if they report the incidents of cyberbullying there is nothing anyone can do about it because they believed that telling others might help resolve the problem, but they also believed that telling others cannot stop victimization. They mentioned that the only thing that would help was to learn to ignore the problem and develop coping mechanisms.

5.4 Coping Mechanisms and Suggested Strategies

When the participants were asked what coping mechanisms they would use they mentioned talking to their closest friend because they are probably the only person they trust and they are the ones that would understand what they are going through. This finding provides support for findings on coping through friends (Cassidy, Jackson, & Brown, 2009; Slonje & Smith, 2007; Topcu, Erdur-Baker, & Capa-Aydin, 2008). Participants reported they would avoid telling adults or authority figures in fear of the cyberbullying becoming worse if their perpetrator found out. The results of this study strongly support Li's (2010), Boyd's (2008), and Smith et al., (2008), findings that victims strongly believe authority figures are incapable of effectively addressing cyberbullying.

Participants were asked to provide suggestions on strategies for dealing or preventing cyberbullying and among other solutions they suggested creating a special unit at University Student Affairs which would provide them with ways to deal with their problem.

Students were unanimous in Blocking the perpetrators as a good measure of dealing with the problem, however, they mentioned that the perpetrators may create new accounts

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with a different name. This finding supports previous research that involves blocking, deleting, or ignoring cyberbullying messages (Dejue, Bolman, & Vollink, 2008; Price & Dalgliesh, 2010; Tokunaga, 2010). An alternative view is that blocking may be temporary and unproductive as perpetrators may resolve to other means such as email or text messages (Cassidy et al., 2017; Dehue et al., 2008). Therefore, it may be considered that university students view this strategy as an effective and easily accessible first line of defense for cybervictimization that can be used until other strategies can be employed.

Programs designed to educate students about what constitutes bullying and the long-lasting impacts on the victims where suggested by participants, posters and bulletin boards in the residence halls and in computer labs that are designed to educate and inform students about what they can do or who they can talk to if they are the victim, would really be useful. Faculty should also be educated to help both perpetrators and victims, and should dedicate more time to listen to them when they come with a problem of that nature. This result may also be attributed to the expectation that victimization would be managed more confidentially compare to confiding to other students. Previous research regarding cyberbullying among university students has shown that victims are more likely to cope by seeking help from a lecturer when they are perceived to be supportive (Cassidy, 2017; Orel et al., 2017; Perren, Corcoran, Mc Guckin, Cowie, Dehue, Völlink, & Tsatsou, 2012). This may explain why university students may have an expectation that university faculty will have the necessary knowledge and skills to attend to such behavior when it occurs on a university platform. University students may also feel they have better communication with a lecturer and they can work to manage the problem in a cooperative way. Students who were previously victims suggested that they are informed upon their registration at the University of the policies regarding cyberbullying and what type of action the university will take when it comes to their attention that cyberbullying is taking place.

In an effort to prevent cyberbullying, a number of students stated that increased security and awareness would help. Specifically, they mentioned restricting who has access to online networking profiles, password protection, being more aware of who you are talking to, and limiting the amount of personal information available online.

The results derived from this study contribute to answering the research questions posed, in other words they provide preliminary evidence to indicate what students consider to be the reasons for cyberbullying behavior, how students experience the extent and the consequences of cyberbullying, which coping strategies university students resolve to, whether these strategies appear to be effective, and what methods and strategies in the student's opinion, can be used to prevent cyberbullying in university.

While there may be numerous explanations regarding the student's perspectives it seems that the first theme that emerged from this study, that cyberbullying may be the result of damaged human relationships can be well explained using Vygotsky's (1986) socio-cultural theory which posits that social experience of the participant is extremely important to the learning experience (Jaramillo, 1996). Through his theory, Vygotsky supports that learning arises from the social and cultural experiences that students encounter through their lives. Therefore, damaged, and dissolved relationships can have detrimental effects on their socialization and learning. The participants that referred to broken relationships held strong beliefs regarding spreading rumors among friend groups and jealousy for their victimization. Therefore, problems in the social and cultural realm of the student may result in disturbed well-being. Another theory that may explain the contribution of broken relationships to cyberbullying is Maslow's (1954) Hierarchy of Needs which suggests that all individuals need to feel safe, to be loved, to belong, to have high self-esteem in order to progress to self-actualization (McLeod, 2007). As love and belonging are questioned as a result of broken relationships, progress into the upper stages is inhibited. Rather the fear caused by

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cyberbullying is causing participants to regress into the previous stage of safety as an attempt to protect themselves from psychological bullying on a public forum while at the same time they seek love and belonging through individuals they trust.

Adolescents traditionally rely on parents, and other adults that they can trust, when their safety is threatened (Maslow, 1943). However, it seems through the participants lived experiences that cyberbullying victimization led to a regression for their position on the hierarchy of needs. When asked "how do students experience the extent and the consequences of cyberbullying?" they reported feeling angry, frustrated, anxious, depressed and tended to become isolated, all of which indicate a position requiring to fulfill basic safety needs in order to move up on Maslow's hierarchy. Cyberbullying victimization can affect a student's self-concept, which may lead to depression and sadness. Prolonged victimization in combination with lack of social support places students at a higher risk of becoming reclusive, and dealing with incidents of their own. They often become isolated and lonely leading to internalization of symptoms of sadness and depression which in turn may lead to suicidal ideation and self-harm (Hanish & Guerra, 2000; Hay & Meldrum, 2010). When they felt that their safety was being threatened, participants reacted with a fight or flight decision automatically but they soon discovered that fighting back did not only solve their problem but prolonged and increased their victimization leaving them feeling more helpless and depressed. Although this was a natural response to their safety that was being threatened, it seems they chose to fight back because they were unwilling to let their victimization unanswered from fear of losing their socio-cultural position among friend groups, a reaction explained by Vygotsky's theory.

The third theme addressed the methods and strategies in the student's opinion, that could be used to prevent cyberbullying in university. The majority of the participants reported that there is nothing you can really do to stop cyberbullying. They indicate that help

only arises from those who actually understand the reality of cyberspace and had similar experiences of such phenomena. Socio-cultural needs and the self-actualization need of students may be set aside when they need help. Although traditionally they would turn to parents and educators for help, their perception that adults do not understand their generation and the severity of online treats, they tend to seek help from friends both to vent and to confirm their position. At the same time, they achieve belonging and confirmation of their friends love at a time when their self-esteem is bruised. According to Maslow (1943), friends provide a sociocultural outlet for expression outlined by Vygotsky (1986). From the participants lived experiences, adults seemed to have been pushed aside because either they did not understand the severity of cybervictimization or because they did not have the expertise to assist. Participants viewed adults as incompetent to deal with the problems that arise from online venues, while educators and law enforcement were seen as incapable of aiding or stopping cyberbullying. This view can be explained by the participants perception of adult's naivety of online interaction, lack of understanding of cyberspace, and inability to understand the reality of the younger generation.

The results of Study III indicate that university students may participate in cyberbullying or be victimized due to various reasons. The themes identified in this study provide additional insight into the reasons that university students may participate in the act of cyberbullying or become victims themselves. The most prominent themes of this study indicate that cyberbullying maybe the result of seeking revenge, faulty human relationships, jealousy, and causing intentional harm. The popular and visible nature of the internet presents the ideal forum. Attacks can be harsh and very difficult to avoid. They can lead to dangerous emotions and problem behaviors if they are not adequately addressed.

Concerning the personality characteristics of individuals who cyberbully, participants referred to characteristics that are mostly met in individuals with antisocial personality such

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as lack of empathy and disregard for other individuals' feelings. Regarding the profile of victims, the participants were unanimous in that low-self-esteem is the common characteristic met in all victims. `

Unfortunately, participants believed that authorities and adults cannot be trusted. They expressed a unanimous belief that there is a gap in the reality that exists between generations. As a result, participants turn to their friends who they believe they understand their reality in order to form a protective shield around them and provide them with a sense of safety. They expressed the opinion that adults and authority figures should be educated regarding this phenomenon, take the consequences of cyberbullying more seriously, and address the root causes of this phenomenon in an attempt to prevent and eliminate it.

Social changes regarding acceptable behavior on the internet along with greater value placed on kindness and empathy may hold the key to eliminating cyberbullying behaviors. If the desire is to decrease participation in the act of cyberbullying, the root causes of the phenomenon need to be addressed and recognized. The following chapter provides implications for prevention and intervention regarding this phenomenon.

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CHAPTER 6

CONCLUSIONS

6.1 Contributions of the Study

Most research pertaining to cyberbullying has a central focus on adolescents but recent research has also depicted that cyberbullying affects up to 22% of university students (Macdonald & Roberts-Pittman, 2010; Walker, Sockman & Koehn, 2011). The findings of this study contribute to further understanding cyberbullying among university students by showing the importance of concentrating not only on the personality, psychopathology and interrelational roles of victims, but of perpetrators as well. Furthermore, this study has contributed to the literature in the area of cyberbullying perpetration and victimization by identifying specific personality traits involved in the act of cyberbullying, identifying OCD as the highest trait in psychopathology among both perpetrators and victims, a novel finding in the literature, and showing that perpetrator/victims are the most susceptible group to engaging in cyberbullying behaviors as well as the group of individuals presenting with the highest risk for suicide and other negative consequences compared to perpetrators and victims.

Even though it may not be possible to fully construct an explicit profile for perpetrators and victims, it is necessary to identify personality characteristics, and psychological traits that may act as contributing factors for such behavior and demonstrate that certain individuals are more prone to becoming a perpetrator or a victim of cyberbullying. Cyberbullying is a worldwide phenomenon that makes no exception among gender, ethnicity, or age, and has the capabilities to affect any individual at any period in their lives. It is therefore vital to begin implementing prevention and intervention programs to inform youth of the dangers and the consequences that can possibly follow technology, and to

equip educators, university faculty members, and mental health professionals with the knowledge to deal with the pitfalls.

6.2 Implications for practice at an Individual level

The results of this study should be considered when researching probable factors related to cyberbullying perpetration and victimization. The results showed among other findings that there was a significant relationship between the Big Five personality traits and perpetration and victimization of cyberbullying. The current study aimed at extending the research of the Big Five personality model involving university students, in the hope of finding relationships with both perpetrators and victims. Intervention and prevention efforts to help eliminate this phenomenon should target both those individuals involved, as well as the institution as an organization.

While the specific structures associated with bullying are not yet unambiguously substantiated, research so far shows that personality acts as a contributing factor to the cognitive and emotional reactions to victimization and bullying (Bollmer et al., 2006). It seems that individuals who score high in neurotic traits are more prone to experiencing intense emotional reactions during peer conflict incidents and tend to decode the behavior of others in extremely negative ways, which may be associated with victimization. These individuals have difficulty in emotion regulation, leading to such behavior that may exacerbate the conflict. Therefore, at an individual level of intervention, it is suggested that these individuals will benefit from a personality-focused bulling intervention such as learning skills to manage their emotions, learn to control their impulsivity so that they can delay their response to their peers and break the cycle of cyberbullying. It is also suggested that teaching these individuals useful coping skills may reduce the risk of other related difficulties. For

example, challenging negative thinking and developing positive ways of manifesting low mood, may reduce the risk of developing depressive symptoms and suicidal thoughts in individuals with neurotic personality traits. Risk personality dimensions could be treated with specific interventions that have been found to be successful for substance abuse treatment and may prove beneficial in decreasing aggressive behaviors including cyberbullying.

Within the context of cyberbullying, this study showed that certain individual factors, such as low self-esteem, high anxiety, and depressive symptoms are significant factors related to internalizing and externalizing behaviors. University students involved in cyberbullying whether perpetrators or victims, reported experiencing increased levels of depression, anxiety, and illegal substances abuse (Kraft & Wang, 2010; Schenk et al., 2013; Schenk & Fremouw, 2012) as well as elevated feelings of ostracism (Crosslin & Golman, 2014). Hymel (2013), in his study found that engaging in cyberbullying as a perpetrator or a victim contributes to depression and suicidal thoughts. Olenik-Shemesh, Heinman, and Eden's (2012), report that cyberbullying is related to elevated feelings of loneliness and depression. Patchin and Hinduja (2010), in their study showed that cyberbullying may negatively impact the victim's self-confidence and self-esteem. Hence, based on the results of this study, it can be concluded that since depression appears to be associated with victimization, prevention programs at an individual level could be fostered by promoting self-esteem, and increasing social support. Providing counseling services to treat internalizing problems could reduce depressive symptoms and subsequently the risk for suicide. Horowitz, Rosenberg, and Bartholomew (1993), reported that exploitable interpersonal problems display improvement through therapy. In relation to cyberbullying experiences, victims may show a high improvement rate when dealing with cybervictimization experiences, since these individuals are more vulnerable.

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Study II showed an association of psychological traits to an increased propensity to engage in cyberbullying behaviors. The transition to university due to the stress of academic requirements that may be combined with moving away from home, may intensify these problems leading to cyberbullying behaviors. In these cases, it is suggested that social skills training, effective and more acceptable ways of expressing conflict and rage, and recommendations for more proper social interaction can be used to help individuals resolve their conflicts. University mental health advisors could be more vigilant for the detection of perpetrators and victims. Previous research has proposed that if possible pre-existing problems of perpetrators are successfully treated it could contribute to reducing their engagement in such incidents (Schenk et al., 2013).

Mental health professionals may teach problem solving skills, resolve to assertiveness training, and relaxation techniques, as a means of reconstructing the individuals of their violent and antisocial behaviors (Ragarz et al., 2011). In a review of cyberbullying intervention programs, Doane, Kelley, and Pearson (2016), found that the most commonly used management skills for the university students were communication, coping skills, and social skills (Hutson, Kelly, & Militello, 2018). It is suggested that personalized intervention programs could include online services to make them more accessible to university students and enhance their use in an attempt to combat cyberbullying.

Extreme bullying remains pervasive to this day and it is often contiguous with tragic consequences. It has strong empirical links to a variety of adverse psychosocial outcomes and it has been implicated to school shootings and suicides. Accordingly bullying prevention and interventions can be developed through a better understanding of the perpetrators and the victim's psychological problems. Additionally, putting forward effective anti-bullying response strategies tailored to psychological problems and personality, can ultimately decrease harmful bullying behaviors. While intervention and prevention efforts geared

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towards perpetrators remain important a more comprehensive approach inclusive of victims and perpetrator/victims may be just as crucial.

There is a variety of programs that can be employed to combat cyberbullying that are currently being used. An example of a successful general anti-bullying program is the KiVa program in Finland which includes computer-based activities and protection for the victims (Snakenborg, Van Acker, & Gable, 2011). Various other programs that have been investigated and are effective in combating this phenomenon are the "iSafe Internet Safety Program" (i-SAFE Inc, 1998, 2009) which is a subscription-based prevention program, the "Lions-Quest Conflict Management" program (Notar, Padgett, & Roden, 2013), which addresses bullying and prejudice, the "Sticks and Stones" program (Notar, Padgett, & Roden, 2013), which involves a film of a victim of cyberbullying accompanied by a comprehensive guide to facilitate group discussion, the " Cyberbullying Bullying in the Digital Age" Malden Blackwell Publishing (Kowalski, et al., 2008) program which provides essential information regarding this epidemic, and "The second Step Violence Prevention Program" which has been efficacious in reducing aggressive behaviors and increasing prosocial behaviors (Craig, Pepler, & Atlas, 2000; Rigby & Smith, 2011). These are just a few of the many examples of prevention programs that have been identified as important in helping individuals to deal with this phenomenon. However, to reach the core of the problem, organizations should also expand the ways they are helping students deal with problems and social tensions that they may face on a daily basis.

6.3 Implications for practice at an organizational level

In order for intervention and prevention efforts to be successful they should target both those individuals involved as it was previously mentioned, as well as the institution as

an organization. Given the detrimental consequences of cyberbullying, the current study can inform cyberbullying prevention and intervention efforts for the institution as an organization in several ways. At the organizational level university authorities could employ ICT (Information and Communication Technology) use, to aim prevention of cyberbullying incidents. They can also include use of appropriate online social conduct in the university syllabus, and thoroughly express the institution's expectations concerning student behavior on-and-off the university grounds. In order to endorse modification and become proactive in handling cyberbullying issues among university students, faculty education through awareness programs and training on ways to help combat some of the constitutional challenges that universities often face (National Academies of Sciences, Engineering, and Medicine, 2017), is a priority among university institutions (Redmond, Lock, & Smart, 2018). Additionally, developing policies and clear outlined procedures for faculty to follow would help clear misconceptions and inconsistencies.

Undoubtedly efforts to effectively attend to cyberbullying require an epidemiological methodology integrating various levels of prevention and intervention. Prevention efforts may also include educating individuals on Internet safety, personal safety, intellectual property, increased security, cybersecurity, awareness, and knowledge of the laws that apply to online behavior. These strategies may include teaching the students about password protection, learning how to restrict access to online networking profiles, being more aware of the cyber context, and minimizing the quantity while being wary of the quality of personal information that is made available online. Warning others of perpetrators by using the social media and social networking sites may also be a preventive strategy that students can be taught to use. The main aim of prevention efforts is to increase the students' awareness regarding the risks related to the use of technology, increase social responsibility, and develop empathy towards others. Several prevention procedures aiding in the elimination of

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cyberbullying are available online and ought to be introduced to students. For example, blocking emails, messages, or phone calls from an individual who is targeting them is a readily accessible procedure to any individual using the social media. However, some students may not have adequate knowledge of technology and may need to be educated through seminars on the proper use these prevention procedures. Additionally, teaching students problem solving skills such as encouraging them to talk in person to an individual during a conflict, may help prevent leading to a negative situation. For example, the tone of the conversation or sarcasm cannot easily be detected online thus exacerbating a situation. Personal contact can help a student distinguish the tone of conversation, and detect sarcasm, so that they can readily and appropriately react based on the actual circumstances. Online communication can be very different in the way the sender writes it compare to the way the recipient reads it.

Although prevention efforts are warranted and are considered the ideal way of dealing with the phenomenon of cyberbullying, intervention efforts put forth by the universities are also crucial to ensure the safety of young adults for whom technology is increasingly an academic and social necessity and way of life. The simple procedures that can be taught to students to fight cyberbullying require four steps: Stop, Save, Block, and Tell. The first strategy that students should be taught is to avoid reacting in any mode to the individual who is cyberbullying them. Any reaction or act of retaliation will intensify the circumstances. Students should be encouraged to save all cyberbullying material (message, text, picture) as this will aid in the identification of the perpetrator and lead to blocking further communication with them. Many of the social media sites provide a link where cyberbullying can be reported (e.g. abuse@facebook.com) available to report any misuse of their site and students should be made aware of this. In order to increase awareness social network providers such as Facebook, could inform their users of the risks associated with the way

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they use their site and warn them about the types of information they share. Based on research one of the most used intervention programs is the I-SAFE curriculum. This program includes five lessons and youth empowerment activities in the areas of cyber community citizenship, cyber security, personal safety, predator identification, and intellectual property (Snakenborg, Van Acker, & Gable, 2011). Universities could help eliminate cyberbullying behaviors by encapsulating such intervention programs within their curriculum.

One of the factors strongly associated with engagement in cyberbullying behavior is past experiences. Such behaviors suggest that one way to prevent their development is to provide services to the victims (Gibb & Devereux, 2014). In an effort to decrease the possibility of becoming a perpetrator/victim, which is currently the largest growing group of individuals involved in cyberbullying behavior, support should be provided to victims in order to resolve their conflicts, and process their feelings of anger and resentment without resolving to using aggressive behavior themselves such as cyberbullying in order to get revenge. Within universities in the US cyberbullying has resulted in students committing suicide (Tyler Clementi, Phoebe Prince etc.) while they were held responsible for failing to safeguard their students from harm (Dasgupta, 2019; Washington, 2014). It is therefore of utmost importance that universities attend to this matter momentously. Students should become aware of the impact of their personality on online behavior and of the risk of becoming victims themselves.

Finally, to promote prevention, intervention, and enforcement of cyberbullying, universities can also work collaboratively with nationally known cyberbullying organizations such as “End of Cyberbullying” and “Stop Cyberbullying” (Paullet & Pinchot, 2014). Professionals from these organizations can be invited to provide training, education, or workshops to all university students. Students who attend these programs may become more aware of the risks of this phenomenon and learn how to cope with its negative consequences.

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Additionally, the Anti-Defamation League has developed workshops for educators and parents: “Trickery, Trolling, and Threats: Understanding and Addressing Cyberbullying, and “Cyberbullying and Online Cruelty: Challenging Social Norms (Snakenborg, et al., 2011) to raise the awareness regarding this phenomenon. The “Theory of Reasoned Action (TRA)-based video program is another program that could be used by universities, and it was found to be effective in increasing cyberbullying knowledge, reducing favorable attitudes toward cyberbullying, decreasing positive injunctive and descriptive norms about cyberbullying, and reducing cyberbullying intentions and cyberbullying behavior (Doane et al., 2016).

6.4 Implications for Mental Health Professionals

The World Health Organization has stated that “bullying is a major public health problem that demands the concerted and coordinated time and attention of health-care providers, policy makers and families"(Srabstein, & Leventhal, 2010, p.403). In order to prevent the long-term effects that cyberbullying has on young adult’s health, much more guidance is needed for mental health care providers. Mental health professionals could incorporate questions about bullying on an intake form to encourage such disclosures. This type of questions could address whether the individual is bullying others or is being bullied by others, where is it taking place, how long has this been happening, and what kind of an impact these experiences had on the student’s mental, physical, and social health. Since individuals often do not voluntarily discuss this matter, especially with adults since they usually confide in a friend, mental health practitioners should be aware of the possible symptoms about which to be alert, such as sudden anger, detachment from friends, low self-esteem, increased depression or anxiety, withdrawal at home, stomach aches, headaches, trouble sleeping, frequent nightmares, and self-destructive behavior (Kowalski & Limber,

2013). Mental health providers should then attempt to raise and discuss such concerns with these individuals when they deem appropriate.

Because of the negative effects, mental health professionals should inform students about the psychological impact of cyberbullying through different workshops or educational seminars (Zalaquett & Chatters, 2014). A university-based group workshop is recommended for the victims to lessen or prevent the negative consequences of cyberbullying as well. By attending these workshops students may become aware of this problem and learn effective ways to cope with it in the future. Mental health professionals can also work with victims of in individual or group settings. Group therapy, however, maybe more beneficial as being in an environment with other students with similar experiences may help them feel more comfortable in counseling.

Even though researchers coincide that cyberbullying prevention and intervention are necessary, there is no agreement on the means that should be used to prevent or address cyberbullying (Aboujaoude, Savage, Starcevic, & Salame, 2015). As this study showed, cyberbullying participants whether perpetrators or victims, present significant differences in terms of their personality traits and psychopathology indicating the necessity for effective intervention and prevention programs to be tailored to the individuals' requirements (Schenk et al., 2013). Mental health professionals should be aware of the occurrence of cyberbullying and its association with metal health problems. The results of this study have some important implications for both perpetrators and victims and designate that greater awareness of online behavior and the risks it places for perpetration and victimization, is generally needed.

6.5 Limitations

As any study, this research has several limitations which should be taken into consideration when attempting to generalize the results. First, this research establishes

student profiles that are limited to the factors used in the analysis of the data. The cross-sectional nature of the study may be considered a major limitation as it does not allow to draw conclusions regarding causation. Some of the Big Five personality traits were found to have a statistically significant relationship with cyberbullying perpetration and victimization. However, the nature of this study did not allow the researcher to determine whether specific personality traits determine if an individual will become a perpetrator or a victim of cyberbullying. A further concern is the cross-sectional nature of the data impedes chronological extrapolations. It was therefore difficult to determine whether university students first experience psychological symptoms and then experience or engage in cyberbullying, or alternatively were involved in cyberbullying or victimization and experienced psychological symptoms as a result.

The geographical limitation of this study must also be considered. Irrespective of the geographical location, conducting research regarding cyberspace is challenging to organize in an all-embracing way. Cyberspace has the volatile capacity to surpass geography, so choosing a specific location of any kind only affords a fractional depiction of the course of online behavior. Although ethnic diversity exists among students at university, it is highly possible that diversity was limited by socio-economic status, culture, and regional influence. It is unclear how demographical and cultural factors may impact cyberbullying and victimization, and since changes in demography may differ from site to site, the site must be considered a limitation. The sample included only university students which may limit the generalizability of the findings form other populations such as adolescents, young adults currently not attending university, in addition to older adults. Moreover, the sample size may limit analyses to the forms that can be run in order to examine measurement invariance of the scales across the three distinct groups.

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The self-report data that were employed may be considered an additional limitation for this study. The instruments used were self-report, opening the possibility of insincere reportage and social desirability biases. Participants, in the name of self-protection, may have limited the information they reported or may not have been honest in what they reported even though every precaution was taken to safeguard identity and confidentiality of responses. The qualitative interviews were all carried out in English. Interviewing in a non-native language carries some limitations including differences language differences in interpretations, pressure to perform in a different language, difficulty in expressing their authentic feelings and thoughts. Some of these problems may have interfered with the process of interviewing and hence are considered a limitation of this study.

Despite the limitations the current study serves to further illuminate associations between personality, psychological traits, interrelational roles and cyberbullying among university students. This study identified, for the first time, the association of OCD with both cyberbullying perpetration and victimization, while also indicating that other personality and psychological contributing factors maybe measure-specific.

6.6 Implications *for Future Research*

Cyberbullying remains a fairly new-fangled topic with a variety of openings in research. The results produced by this study offer a variety of new avenues in need of exploration. After completing the study and examining the results it is clear that more research is needed to better understand cyberbullying behaviors at a university level, and also explore newer information related to developing trends in a higher education setting.

One of the most important recommendations is that further research should investigate the participants characteristics in more depth both personality traits as well as

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psychological traits, and interrelational roles, utilizing longitudinal research to aid in the development of the prevention and intervention programs. Studying psychological characteristics and personality traits in their less severe forms may help in understanding the cause of this phenomenon.

Future research could further investigate the perceptions of disinhibition effect and moral disengagement, which are characteristics prominent in narcissistic and antisocial personalities commonly found among perpetrators, and investigate their relation to online behavior. Additional comprehension is needed of those specific characteristics in order to understand their association to online cyberbullying behaviors more fully as found in this study.

In addition to researching the holistic viewpoint of psychological traits, further research of the relationship of Obsessive-Compulsive Disorder symptoms with cyberbullying behaviors is warranted. This study found high scores of OCD symptoms in perpetrators, victims, and perpetrator/victim and briefly discussed the possible relation between this disorder and cyberbullying. Further research could work to determine whether these characteristics pre-exist and are exacerbated by cyberbullying or if they are developed due to victimization as a means of dealing with unpleasant thoughts and used to avoid rumination of the incident.

This study discussed the importance of creating effective prevention and intervention programs in order to help both perpetrators and victims avoid negative consequences caused by cyberbullying. Notwithstanding, future research could also determine the effectiveness of intervention programs through treatment of psychological difficulties and the effect that these difficulties have in engaging in cyberbullying. It would be interesting to investigate if reducing the suffering of perpetrators consequently reduces their cyberbullying behavior. It might be beneficial for researchers to explore additional variables such as social support,

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religion, or hopefulness that may be helpful in developing university prevention and intervention programs to support students who are dealing with mental health issues caused by cyberbullying.

This study revealed that most of the students were uninformed or unaware of any particular strategies, reporting processes, or the authority figures to report to in the case of an incident of cyberbullying. Furthermore, the results of the qualitative study revealed that victims are inclined to seek peers to confide in instead of authority figures. Research on the ways in which authority figures would address cyberbullying incidents utilizing case studies would be a potential hope providing opportunity for research in determining whether the reasons that participants fears of worsening the problem are substantiated.

Finally, the comparison with universities in other countries in future research would provide more depth into the perceptions of university students on the matters of cyberbullying regarding reporting strategies, individuals involved in this phenomenon, and policies that should be followed. Research in that area could provide significant information regarding the methods that authority figures could employ to enhance trust between generations as well as methods utilized to interact with the new generation in order to increase the rates of responding and tackle cyberbullying behaviors.

6.7 Conclusions

The research available the past few years regarding the phenomenon of cyberbullying, indicates that it is becoming more prevalent among university students and is negatively related to mental health. As more students gain access to technology, it has become more likely that social media will be utilized in an aggressive manner. According to the National Center of Education statistics of over 5,000 students in the US, 17.4% reported they were a

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target of cyberbullying in 2019. Approximately 1 in 20 students experience suicide in 1 year (2019), with students who experienced cyberbullying being 1.9% more likely, and perpetrators 1.5% more likely, to have attempted suicide compare to those that are not involved. About 7.4% of students have attempted suicide one or more times. Furthermore, statistics show that approximately 1 in 5 students experience serious emotional disturbance due to cyberbullying, yet only 20% of them receive the help they need. Given these rates, and the continuous increase that has been observed over the past few years, it is important to understand behaviors that utilize technology, including aggressive behaviors that utilize the medium.

The present study supported past studies findings that university students involved in cyberbullying whether perpetrators or victims have specific personality traits that may contribute to the development and exacerbation of the phenomenon. In addition, findings from this study indicate that students involved in such behaviors reported more internalizing problems than individuals who were not involved. The results indicated that a great majority of the individuals involved in cyberbullying were both victims and perpetrators and had the highest scores of psychological traits such as low self-esteem, higher depression, anxiety, and stress when compared to perpetrators or victims. The high OCD symptoms in all three groups involved was a novel finding in this research study that warrants more investigation. Generally, the results suggest the complexity and intricacy of cyberbullying and depict why it is important to understand that it exists among university population as these students may be at higher risk of psychological problems and dropping out of university (Baldasare et al., 2012). It is also possible that students will suffer academically by avoiding to attend classes or withdrawal from online discussions because they fear they may be attacked.

The current studies found approximately half of the respondents reported engaging in cyberbullying behaviors, and that a similar percentage had been the target of such behaviors.

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It is important that both researchers and university administrators become aware of such behaviors, and take the necessary action to decrease the behaviors as much as possible. It is also important that victims are provided with supportive services that are necessary to cope with these harmful events and complete their education. It is the researcher's opinion that the consequences resulting from so many unique processes for handling, cyberbullying has the potential result not only in unfavorable outcomes but also in undesirable consequences (e.g. institutional lawsuits) for those involved. It is recommended, therefore, that universities provide all the individuals concerned with clear directions regarding the expectations and their role regarding cyberbullying within university institutions. It is essential that faculty, administration, authority figures, and university staff can benefit from deeper clarification regarding these matters.

The increased risks that young adults face regarding cyberbullying indicate that universities should become more active towards the welfare of their communities. Despite of the limitations it is hoped that the findings of this this study will provide a better understanding of the cyberbullying participants profile and guide university communities in developing adequate prevention and intervention strategies for this phenomenon. It is hoped that the research findings of the present study will be helpful for universities and future researchers to better understand the phenomenon, advance the field of cyberbullying research, and eventually prevent further tragedies such as youth suicide due to cyberbullying. Even though cyberbullying is a digital act, aggressive acts committed within this realm may have increasingly severe real-world consequences.

UNIVERSITY of NICOSIA

REFERENCES

Achenbach, T. M., Dumenci, L., & Rescorla, L. A. (2003). DSM-oriented and empirically based approaches to constructing scales from the same item pools. *Journal of clinical child and adolescent psychology*, *32*(3), 328-340.

Aftab, P. (2006). Stop cyberbullying. *Wired Kids, Inc. Retrieved November*, *28*, 2013.

Agatston, P., Kowalski, R., & Limber, S. (2012). Youth views on cyberbullying. *Cyberbullying prevention and response: Expert perspectives*, 57-71.

Agnew, R. (2001). Building on the foundation of general strain theory: Specifying the types of strain most likely to lead to crime and delinquency. *Journal of Research in* Crime *and Delinquency*, 38(4), 319-361.

Agosto, D. E., Forte, A., & Magee, R. (2012). Cyberbullying and teens: what YA librarians can do to help. *Young Adult Library Services*, *10*(2), 38.

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action control* (pp. 11-39). Springer Berlin Heidelberg.

Ajzen, I. (2012). Martin Fishbein's legacy: The reasoned action approach. *The Annals of the American Academy of Political and Social Science*, *640*(1), 11-27.

Akbulut, & Çuhadar, C. (2011). Reflections of Preservice Information Technology Teachers Regarding Cyberbullying. *Online Submission*, *2*(3), 67-76.

Albin, K. A. (2012). Perpetrators in a wired world: The impact of cyberspace victimization on adolescent mental health and the need for cyberbullying legislation in Ohio. *JL & Health*, *25*, 155.

Alexy, E. M., Burgess, A. Baker, T., & Smoyak, S. A. (2005). Perceptions of cyberstalking among college students. *Brief treatment and crisis intervention*, *5*(3), 279.

UNIVERSITY of NICOSIA

Amado, J., Matos, A., Pessoa, T., & Jäger, T. (2009). Cyberbullying: um desafio à investigação e à formação. *Revista Interacções*, 301p-326p.

Amichai-Hamburger, & Vinitzky, G. (2010). Social network use and personality. *Computers in human behavior*, *26*(6), 1289-1295.

Anderson, T., & Sturm, B. (2007). Cyberbullying: From playground to computer. *Young Adult Library Services*, *5*(2), 24.

Andreassen, C. S., Billieux, J., Griffiths, M. D., Kuss, D. J., Demetrovics, Z., Mazzoni, E., & Pallesen, S. (2016). The relationship between addictive use of social media and video games and symptoms of psychological disorders: A large-scale cross-sectional study. *Psychology of Addictive Behaviors*, *30*(2), 252.

Ang, R. P., & Goh, D. (2010). Cyberbullying among adolescents: The role of affective and cognitive empathy, and gender. *Child Psychiatry & Human Development*, *41*(4), 387-397.

Ang, R. P., Tan, K. A., & Talib Mansor, A. (2011). Normative beliefs about aggression as a mediator of narcissistic exploitativeness and cyberbullying. *Journal of interpersonal violence*, *26*(13), 2619-2634.

Antoniadou, N., Kokkinos, C. M., & Markos, A. (2016). Possible common correlates between bullying and cyber-bullying among adolescents. *Psicología Educativa*, *22*(1), 27-38.

Arıcak, O. T. (2009). Psychological symptomatology as a predictor of cyberbullying among university students. *Eurasian Journal of Educational Research (EJER)*, (34). Ary, D., Jacobs, L. C., Razavieh, A., & Sorensen, C. (2006). Introduction to research ineducation. *Belmont, CA: Wadsworth*.

Arthur Jr, & Graziano, G. (1996). The five-factor model, Conscientiousness, and driving accident involvement. *Journal of personality*, *64*(3), 593-618.

Ashcroft, J. (2001). Stalking and domestic violence: Report to Congress. *Washington, DC: US Department of Justice, Office of Justice Programs*.

Atkinson, R. L., Atkinson, R. C., Smith, E. E., Bem, D. J., Nolen-Hoeksema, S., & Smith, C. D. (2000). Hilgard's Introduction to Psychology. 12th.

Badenhorst, C. (2011). Legal responses to cyber bullying and sexting in South Africa. *Centre for Justice and Crime Prevention (CJCP) Issue Paper*, *10*, 1-20.

Balakrishnan, V., Khan, S., Fernandez, T., & Arabnia, R. (2019). Cyberbullying detection on twitter using Big Five and Dark Triad features. *Personality and Individual Differences*, *141*, 252-257.

Baldasare, A., Bauman, S., Goldman, L., & Robie, A. (2012). Chapter 8 Cyberbullying? Voices of College Students. In *Misbehavior online in higher education* (pp. 127-155). Emerald Group Publishing Limited.

Bandura, A., & Walters, R. (1977). *Social learning theory* (Vol. 1). Englewood Cliffs, NJ: Prentice-hall.

Bandura, A. (2002). Selective moral disengagement in the exercise of moral agency. *Journal of moral education*, *31*(2), 101-119.

Barbalet, J. M. (1999). Boredom and social meaning. *The British journal of sociology*, *50*(4), 631-646.

Barlett, C. P., & Gentile, D. A. (2012). Attacking others online: The formation of cyberbullying in late adolescence. *Psychology of Popular Media Culture*, *1*(2), 123.

Barlow, D. (2000). Unraveling the mysteries of anxiety and its disorders from the perspective of emotion theory. *American psychologist*, *55*(11), 1247.

UNIVERSITY of NICOSIA

Batigün, A. D., & Kiliç, N. (2011). Internet Bagimliligi ile Kisilik Özellikleri, Sosyal Destek, Psikolojik Belirtiler ve Bazi Sosyo-Demografik Degiskenler Arasindaki Iliskiler/The Relationships between Internet Addiction, Social Support, Psychological Symptoms and Some Socio-Demographical Variables. *Türk Psikoloji Dergisi*, *26*(67), 1.

Baughman, M., Dearing, S., Giammarco, E., & Vernon, P. A. (2012). Relationships between bullying behaviours and the Dark Triad: A study with adults. *Personality and Individual Differences*, *52*(5), 571-575.

Baum, K. (2011). *Stalking victimization in the United States*. DIANE Publishing.

Bauman, S. (2014). *Cyberbullying: What counselors need to know*. John Wiley & Sons.

Bauman, S., & Newman, M. L. (2013). Testing assumptions about cyberbullying: Perceived distress associated with acts of conventional and cyber bullying. *Psychology of violence*, *3*(1), 27.

Bayraktar, F., Machackova, Dedkova, L., Cerna, A., & Ševčíková, A. (2015). Cyberbullying: The discriminant factors among perpetrators of cyberbullying, victims, and perpetrator-victims of cyberbullyingin a Czech adolescent sample. *Journal of interpersonal violence*, *30*(18), 3192-3216.

Begle, A. M., Hanson, R. F., Danielson, C. K., McCart, M. R., Ruggiero, K. J., Amstadter, A. B., ... & Kilpatrick, D. G. (2011). Longitudinal pathways of victimization, substance use, and delinquency: Findings from the National Survey of Adolescents. *Addictive behaviors*, *36*(7), 682-689.

Beran, T., & Li, Q. (2007). The Relationship between Cyberbullying and School Bullying. *Journal of Student Wellbeing, 1(2),* 15-33.

Beran, T. N., Rinaldi, C., Bickham, D. S., & Rich, M. (2012). Evidence for the need to support adolescents dealing with harassment and cyber-harassment: Prevalence, progression, and impact. *School Psychology International*, *33*(5), 562-576.

Bergmann, M. C., & Baier, D. (2018). Prevalence and correlates of cyberbullying perpetration. Findings from a German representative student survey. *International journal of environmental research and public health*, *15*(2), 274.

Berkowitz, R., & Benbenishty, R. (2012). Perceptions of teachers' support, safety, and absence from school because of fear among victims, perpetrators, and perpetrator-victims. *American Journal of Orthopsychiatry*, *82*(1), 67.

Berson, M. J. (2000). The Computer Can't See You Blush. *Kappa Delta Pi Record, 36(4)*, 158-162.

Betts, L. R., Gkimitzoudis, A., Spenser, K. A., & Baguley, T. (2017). Examining the roles young people fulfill in five types of cyber bullying. *Journal of Social and Personal Relationships*, *34*(7), 1080-1098

Blakemore, S. J., & Choudhury, S. (2006). Development of the adolescent brain: implications for executive function and social cognition. *Journal of child psychology and psychiatry*, *47*(3-4), 296-312.

Bocskor, Á., Hunyadi, M., & Vince, D. (2017). National Academies of Sciences, Engineering, and Medicine (2015) The Integration of Immigrants into American Society. Washington, DC: The National Academies Press. 458 pages. *INTERSECTIONS: EAST EUROPEAN JOURNAL OF SOCIETY AND POLITICS*, *3*(3), 157-161.

Bogdan, R. C., & Biklen, S. K. (2007). Research for education: An introduction to theories and methods. *Boston, MA: Allen and Bacon*.

Bollmer, J. M., Harris, M. J., & Milich, R. (2006). Reactions to bullying and peer victimization: Narratives, physiological arousal, and personality. *Journal of Research in Personality*, *40*(5), 803-828.

Bonanno, R. A., & Hymel, S. (2013). Cyber bullying and internalizing difficulties: Above and beyond the impact of traditional forms of bullying. *Journal of youth and adolescence*, *42*(5), 685-697.

Boulton, M., Lloyd, J., Down, J., & Marx, (2012). Predicting undergraduates' self-reported engagement in traditional and cyberbullying from attitudes. *Cyberpsychology, Behavior, and Social Networking*, *15*(3), 141-147.

Boyd, D. M. (2008). *Taken out of context: American teen sociality in networked publics*. University of California, Berkeley.

Brack, K., & Caltabiano, N. (2014). Cyberbullying and self-esteem in Australian adults. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, *8*(2).

Brooks, F., Chester, K., Klemera, E., & Magnusson, J. (2017). Cyberbullying: An analysis of data from the Health Behaviour in School-aged Children (HBSC) survey for England, 2014.

Bryman, A. (2006). Integrating quantitative and qualitative research: how is it done?. *Qualitative research*, *6*(1), 97-113.

Byrne, B. J. (1994). Perpetrators and victims of cyberbullyingin a school setting with reference to some Dublin schools. *The Irish Journal of Psychology*, *15*(4), 574-586.

Calvete, E., Orue, I., Estévez, A., Villardón, L., & Padilla, P. (2010). Cyberbullying in adolescents: Modalities and aggressors' profile. *Computers in Human Behavior*, *26*(5), 1128-1135.

UNIVERSITY of NICOSIA

Camodeca, M., & Goossens, F. A. (2005). Aggression, social cognitions, anger and sadness in perpetrators and victims. *Journal of Child Psychology and Psychiatry*, *46*(2), 186-197.

Camodeca, M., Goossens, F. A., Schuengel, C., & Terwogt, M. M. (2003). Links between social information processing in middle childhood and involvement in bullying. *Aggressive behavior*, *29*(2), 116-127.

Campbell, M. A. (2005). Cyber bullying: An old problem in a new guise?. *Journal of Psychologists and Counsellors in Schools*, *15*(1), 68-76.

Campbell, M. L., & Morrison, A. P. (2007). The relationship between bullying, psychotic-like experiences and appraisals in 14–16-year olds. *Behaviour research and therapy*, *45*(7), 1579-1591.

Card, N. A., Isaacs, J., & Hodges, E. V. (2007). Correlates of school victimization: Implications for prevention and intervention. *Bullying, victimization, and peer harassment: A handbook of prevention and intervention*, 339-366.

Carli, V., Durkee, T., Wasserman, D., Hadlaczky, G., Despalins, R., Kramarz, E., ... & Kaess, M. (2013). The association between pathological internet use and comorbid psychopathology: a systematic review. *Psychopathology*, *46*(1), 1-13

Carpenter, C. J. (2012). Narcissism on Facebook: Self-promotional and anti-social behavior. *Personality and individual differences*, *52*(4), 482-486.

Casper, D. M., & Card, N. A. (2017). Overt and relational victimization: A meta-analytic review of their overlap and associations with social–psychological adjustment. *Child development*, *88*(2), 466-483.

Cassidy, Faucher, C., & Jackson, M. (2017). Adversity in university: cyberbullying and its impacts on students, faculty and administrators. *International journal of environmental research and public health*, *14*(8), 888.

UNIVERSITY of NICOSIA

Cassidy, Jackson, M., & Brown, K. N. (2009). Sticks and stones can break my bones, but how can pixels hurt me? Students' experiences with cyber-bullying. *School psychology international*, *30*(4), 383.

Cawvey, M., Hayes, M., Canache, D., & Mondak, J. J. (2018). Personality and victimization in the Americas. *International Review of Victimology*, *24*(1), 123-139.

Çelik, S., Atak, & Erguzen, A. (2012). The Effect of Personality on Cyberbullying among University Students in Turkey. *Eurasian Journal of Educational Research*, *49*, 129-150.

Chang, F. C., Lee, C. M., Chiu, C. Hsi, Huang, T. F., & Pan, C. (2013). Relationships among cyberbullying, school bullying, and mental health in Taiwanese adolescents. *Journal of school health*, *83*(6), 454-462.

Chapell, M. S., Hasselman, S. L., Kitchin, T., Lomon, S. N., MacIver, K. & Sarullo, P. L. (2006). Bullying in elementary school, high school, and college. *Adolescence*, *41*(164).

Chen, L., Ho, S. S., & Lwin, M. O. (2017). A meta-analysis of factors predicting cyberbullying perpetration and victimization: From the social cognitive and media effects approach. *New Media & Society*, *19*(8), 1194-1213.

Coloroso, B. (2008). The perpetrator, the bullied and the bystander. From pre-school to high school: How parents and educators can help break the cycle of violence.

Compas, B.E., Orosan, P.G., & Grant, K.E. (1993). Adolescent stress and coping: Implications for psychopathology during adolescence. *Journal of Adolescence, 16*, 331-349.

Connolly, I., & O' Moore, M. (2003). Personality and family relations of children who perpetrator. *Personality and individual differences*, *35*(3), 559-567.

UNIVERSITY of NICOSIA

Copeland, E., Wolke, D., Angold, A., & Costello, E. J. (2013). Adult psychological outcomes of bullying and being bullied by peers in childhood and adolescence. *JAMA psychiatry*, *70*(4), 419-426.

Costa, P. T., & McCrae, R. R. (2009). The five-factor model and the NEO inventories. *Oxford handbook of personality assessment*, 299-322.

Craig, W. M., Pepler, D., & Atlas, R. (2000). Observations of bullying in the playground and in the classroom. *School psychology international*, *21*(1), 22-36.

Crick, N. R., & Dodge, K. A. (1999). 'Superiority'is in the eye of the beholder: A comment on Sutton, Smith, and Swettenham. *Social Development*, *8*(1), 128-131.

Crosslin, K., & Golman, M. (2014). "Maybe you don't want to face it"–College students' perspectives on cyberbullying. *Computers in Human Behavior*, *41*, 14-20.

Dasgupta, K. (2019). Youth response to state cyberbullying laws. *New Zealand Economic Papers*, *53*(2), 184-202.

David-Ferdon C. & Hertz M. F. (2009). Electronic Media and Youth Violence: A CDC Issue Brief for Researchers. *Atlanta (GA): Centers for Disease Control. Journal of Adolescent Health, 41,* S1–S5.

DeHue, F., Bolman, C., & Völlink, T. (2008). Cyberbullying: Youngsters' experiences and parental perception. *CyberPsychology & Behavior*, *11*(2), 217-223.

DeLara, E. (2012). Why adolescents don't disclose incidents of bullying and harassment. *Journal of School Violence*, *11*(4), 288-305.

Deliberto, E. (2016). *Adolescent bullying: An analysis of personality characteristics, bullying participant behaviors, and social anxiety* (Doctoral dissertation, Northern Illinois University).

UNIVERSITY of NICOSIA

Dilmac, B. (2009). Psychological needs as a predictor of cyber bullying: A preliminary report on college students. *Educational Sciences: Theory and Practice*, *9*(3), 1307-1325.

Dempsey, A. G., Sulkowski, M. L., Nichols, R., & Storch, E. A. (2009). Differences between peer victimization in cyber and physical settings and associated psychosocial adjustment in early adolescence. *Psychology in the Schools*, *46*(10), 962-972.

Doane, A. N., Kelley, M. L., & Pearson, M. R. (2016). Reducing cyberbullying: A theory of reasoned action-based video prevention program for college students. *Aggressive Behavior*, *42*(2), 136-146.

Doane, A. N., Pearson, M. R., & Kelley, M. L. (2014). Predictors of cyberbullying perpetration among college students: An application of the theory of reasoned action. *Computers in Human Behavior*, *36*, 154-162.

Duggan, M., & Brenner, J. (2013). *The demographics of social media users, 2012* (Vol. 14). Washington, DC: Pew Research Center's Internet & American Life Project.

Duggan, M., & Rainie, L. (2013). *Cell phone activities 2013* (pp. 07-04). Washington, DC: Pew Research Center's Internet & American Life Project.

Dygdon, J. A., Conger, A. J., & Strahan, E. (2004). Multimodal classical conditioning of fear: contributions of direct, observational, and verbal experiences to current fears. *Psychological reports*, *95*(1), 133-153

Egan, S. K., & Perry, D. G. (1998). Does low self-regard invite victimization?. *Developmental psychology*, *34*(2), 299.

UNIVERSITY of NICOSIA

Elgar, F. J., Napoletano, A., Saul, G., Dirks, M. A., Craig, Poteat, V. P., ... & Koenig, B. (2014). Cyberbullying victimization and mental health in adolescents and the moderating role of family dinners. *JAMA pediatrics*, *168*(11), 1015-10

Ellison, N. B., & Boyd, D. M. (2013). Sociality through social network sites. In *The Oxford handbook of internet studies*.

Ellrich, K., & Baier, D. (2016). The influence of personality on violent victimization–a study on police officers. *Psychology, Crime & Law*, *22*(6), 538-560.

Erdur-Baker, O., & Kavsut, F. (2007). Cyber bullying: a new face of peer bullying. *Egitim Arastirmalari-Eurasian Journal of Educational Research*, *7*(27), 31-42.

Erdur-Baker, Ö. (2010). Cyberbullying and its correlation to traditional bullying, gender and frequent and risky usage of internet-mediated communication tools. *New media & society*, *12*(1), 109-125.

Errasti-Ibarrondo, B., Jordán, J. A., Díez-Del-Corral, M. P., & Arantzamendi, M. (2019). van Manen's phenomenology of practice: How can it contribute to nursing?. *Nursing inquiry*, *26*(1), e12259.

eSafety Commission. (2016). Social Networking. *Office of the Children's eSafety Commissioner*.

Espelage, D. L., & Holt, M. K. (2001). Bullying and victimization during early adolescence: Peer influences and psychosocial correlates. *Journal of Emotional Abuse*, *2*(2-3), 123-142.

Extremera, N., Quintana-Orts, C., Mérida-López, S., & Rey, L. (2018). Cyberbullying victimization, self-esteem and suicidal ideation in adolescence: does emotional intelligence play a buffering role?. *Frontiers in psychology*, *9*, 367.

Eysenck, S. B. G., Rust, J., & Eysenck, J. (1977). Personality and the classification of adult offenders. *Brit. J. Criminology*, *17*, 169.

UNIVERSITY of NICOSIA

Eysenck, J. (1964). *Manual of the Eysenck personality inventory* (p. 20). London: University of London Press.

Fahy, A. E., Stansfeld, S. A., Smuk, M., Smith, N. R., Cummins, S., & Clark, C. (2016). Longitudinal associations between cyberbullying involvement and adolescent mental health. *Journal of Adolescent Health*, *59*(5), 502-509.

Fanti, K. A., Frick, P. J., & Georgiou, S. (2009). Linking callous-unemotional traits to instrumental and non-instrumental forms of aggression. *Journal of Psychopathology and Behavioral Assessment*, *31*(4), 285.

Fanti, K. A., Demetriou, A. G., & Hawa, V. V. (2012). A longitudinal study of cyberbullying: Examining riskand protective factors. *European Journal of Developmental Psychology*, *9*(2), 168-181.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G* Power 3.1: Tests for correlation and regression analyses. *Behavior research methods*, *41*(4), 1149-1160.

Felipe-Castaño, E., León Del Barco, B., Del Río, P., Isabel, M., Mendo Lázaro, S., Gómez Carroza, T., & Fajardo-Bullon, F. (2019). Differential Analysis of Psychological Impact of Cyberbullying in University students. *Frontiers in Psychology*, *10*, 1620.

Festl, R., & Quandt, T. (2013). Social relations and cyberbullying: The influence of individual and structural attributes on victimization and perpetration via the internet. *Human communication research*, *39*(1), 101-126.

Field, T. (2018). Cyberbullying: A narrative review.

Finn, J. (2004). A survey of online harassment at a university campus. *Journal of Interpersonal violence*, *19*(4), 468-483.

UNIVERSITY of NICOSIA

Fox, K. A. (2013). New developments and implications for understanding the victimization of gang members. *Violence and victims*, *28*(6), 1015-1040.

Francisco, S. M. (2012). *Cyberbullying: A faceta de um fenómeno em jovens universitários portugueses* (Doctoral dissertation).

Francisco, S. M., Simão, A. M. V., Ferreira, P. C., & das Dores Martins, M. J. (2015). Cyberbullying: The hidden side of college students. *Computers in human behavior*, *43*, 167-182.

Frey, K. S., Pearson, C. R., & Cohen, D. (2015). Revenge is seductive, if not sweet: Why friends matter for prevention efforts. *Journal of Applied Developmental Psychology*, *37*, 25-35.

Frick, P. J., & Hare, R. D. (2001). *Antisocial process screening device: APSD*. Toronto: Multi-Health Systems.

Friedman, E. (2010). Victim of secret dorm sex tape posts Facebook goodbye, jumps to his death. *ABC News*, *29*.

Gagnon, A. (2018). Extending social learning theory to explain victimization among gang and ex-gang offenders. *International journal of offender therapy and comparative criminology*, *62*(13), 4124-4141.

Gahagan, K., Vaterlaus, J. M., & Frost, L. R. (2016). College student cyberbullying on social networking sites: Conceptualization, prevalence, and perceived bystander responsibility. *Computers in human behavior*, *55*, 1097-1105.

Gámez-Guadix, M., Orue, I., Smith, P. K., & Calvete, E. (2013). Longitudinal and reciprocal relations of cyberbullying with depression, substance use, and problematic internet use among adolescents. *Journal of Adolescent Health*, *53*(4), 446-452.

UNIVERSITY of NICOSIA

Georgiou, S. N., & Stavrinides, P. (2008). Perpetrators, victims of cyberbullyingand perpetrator-victims: Psychosocial profiles and attribution styles. *School Psychology International*, *29*(5), 574-589.

Giannotta, F., Settanni, M., Kliewer, & Ciairano, S. (2012). The role of threat appraisal in the relation between peer victimization and adjustment problems in early Italian adolescents. *Journal of Applied Social Psychology*, *42*(9), 2077-2095.

Gibb, Z. G., & Devereux, P. G. (2014). Who does that anyway? Predictors and personality correlates of cyberbullying in college. *Computers in Human Behavior*, *38*, 8-16.

Gini, G., Pozzoli, T., Borghi, F., & Franzoni, L. (2008). The role of bystanders in students' perception of bullying and sense of safety. *Journal of school psychology*, *46*(6), 617-638.

Gini, G., Pozzoli, T., & Bussey, K. (2015). Moral disengagement moderates the link between psychological traits and aggressive behavior among early adolescents. *Merrill-Palmer Quarterly*, *61*(1), 51-67.

Glasner, A. T. (2010). On the front lines: Educating teachers about bullying and prevention methods. *Journal of social sciences*.

Gleason, K. A., Jensen-Campbell, L. A., & South Richardson, D. (2004). Agreeableness as a predictor of aggression in adolescence. *Aggressive Behavior: Official Journal of the International Society for Research on Aggression*, *30*(1), 43-61.

Gradinger, P., Strohmeier, D., & Spiel, C. (2009). Traditional bullying and cyberbullying: Identification of risk groups for adjustment problems. *Zeitschrift für Psychologie/Journal of Psychology*, *217*(4), 205-213.

UNIVERSITY of NICOSIA

Graf, D., Yanagida, T., & Spiel, C. (2019). Sensation seeking´ s differential role in traditional and cyberbullying: Taking perceived contextual properties into account. *Frontiers in psychology*, *10*, 1572.

Graham, S., & Juvonen, J. (2001). An attributional approach to peer victimization. *Peer harassment in school: The plight of the vulnerable and victimized*, 49-72.

Goodboy, A. K., & Martin, M. M. (2015). The personality profile of a perpetrator: Examining the Dark Triad. *Computers in human behavior*, *49*, 1-4.

Görzig, A., & Ólafsson, K. (2013). What makes a perpetrator a perpetrator? Unravelling the characteristics of perpetrators of cyberbullyingacross twenty-five European countries. *Journal of Children and Media*, *7*(1), 9-27.

Gradinger, P., Strohmeier, D., & Spiel, C. (2009). Traditional bullying and cyberbullying: Identification of risk groups for adjustment problems. *Zeitschrift für Psychologie/Journal of Psychology*, *217*(4), 205-213.

Green, S. B., Salkind, N. J., & Jones, T. M. (1996). *Using SPSS for Windows; analyzing and understanding data*. Prentice Hall PTR.

Haltigan, J. D., & Vaillancourt, T. (2014). Joint trajectories of bullying and peer victimization across elementary and middle school and associations with symptoms of psychopathology. *Developmental psychology*, *50*(11), 2426.

Hamm, M. P., Newton, A. S., Chisholm, A., Shulhan, J., Milne, A., Sundar, P., ... & Hartling, L. (2015). Prevalence and effect of cyberbullying on children and young people: A scoping review of social media studies. *JAMA pediatrics*, *169*(8), 770-777.

Hampel, P. & Petermann, F. (2005). Age and gender effects on coping in children and adolescents. *Journal of Youth and Adolescence, 34*, 73-83.

UNIVERSITY of NICOSIA

Hanish, L. D., & Guerra, N. G. (2000). The roles of ethnicity and school context in predicting children's victimization by peers. *American journal of community psychology*, *28*(2), 201-223.

Hay, C., Meldrum, R., & Mann, K. (2010). Traditional bullying, cyber bullying, and deviance: A general strain theory approach. *Journal of Contemporary Criminal Justice*, *26*(2), 130-147.

Hinduja, S. & Patchin, J., (2007). Offline Consequences of Online Victimization: School Violence and Delinquency. *Journal of School Violence, 6(3)*, 89-112.

Hinduja, S. & Patchin, J., (2008). Cyberbullying: An Exploratory Analysis of Factors Related to Offending and Victimization. *Deviant Behavior, 29(2)*, 129-156.

Hinduja, S., & Patchin, J. (2014). *Bullying beyond the schoolyard: Preventing and responding to cyberbullying*. Corwin Press.

Holfeld, B., & Mishna, F. (2019). Internalizing symptoms and externalizing problems: risk factors for or consequences of cyber victimization?. *Journal of youth and adolescence*, *48*(3), 567-580.

Hollenbaugh, E. E., & Ferris, A. L. (2014). Facebook self-disclosure: Examining the role of traits, social cohesion, and motives. *Computers in Human Behavior*, *30*, 50-58.

Hong, Li, X., Mao, R., & Stanton, B. (2006). Internet use among Chinese college students: implications for sex education and HIV prevention. *CyberPsychology & Behavior*, *10*(2), 161-169.

Horowitz, L. M., Rosenberg, S. E., & Bartholomew, K. (1993). Interpersonal problems, attachment styles, and outcome in brief dynamic psychotherapy. *Journal of consulting and clinical psychology*, *61*(4), 549.

House of Commons: Education and Skills Committee. (2006-07). Bullying: third report of session 2006-07. *By Great Britain: Parliament, UK.*

Huang, & Chou, C. (2010). An analysis of multiple factors of cyberbullying among junior high school students in Taiwan. *Computers in Human Behavior*, *26*(6), 1581-1590.

Hutson, E., Kelly, S., & Militello, L. K. (2018). Systematic review of cyberbullying interventions for youth and parents with implications for evidence-based practice. *Worldviews on evidence-based nursing*, *15*(1), 72-79.

Hvidston, D. J., Hvidston, B. A., Range, B. G., & Harbour, C. P. (2013). Cyberbullying: Implications for principal leadership. *NASSP bulletin*, *97*(4), 297-313.

Iranzo, B., Buelga, S., Cava, M. J., & Ortega-Barón, J. (2019). Cyberbullying, psychosocial adjustment, and suicidal ideation in adolescence. *Psychosocial Intervention*.

Isaacs, J., Hodges, E. V., & Salmivalli, C. (2008). Long-term consequences of victimization by peers: A follow-up from adolescence to young adulthood. *International Journal of Developmental Science*, *2*(4), 387-397.

Ivankova, N. V., Creswell, J. & Stick, S. L. (2006). Using mixed-methods sequential explanatory design: From theory to practice. *Field methods*, *18*(1), 3-20.

Jaramillo, J. A. (1996). Vygotsky's sociocultural theory and contributions to the development of constructivist curricula. *Education*, *117*(1), 133-141.

Jensen-Campbell, L. A., Knack, J. M., Waldrip, A. M., & Campbell, S. D. (2007). Do Big Five personality traits associated with self-control influence the regulation of anger and aggression? *Journal of Research in Personality*, *41*(2), 403-424.

John, O. P., Donahue, E. M., & Kentle, R. L. (1991). The Big Five inventory—versions 4a and 54.

John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. *Handbook of personality: Theory and research*, *2*(1999), 102-138.

Johnson, J. M. (2009, March). The impact of cyber bullying: A new type of relational aggression. In *American Counseling Association Annual Conference and Exposition*.

Johnson, A. L. R. (2017). *Negative effects of cyberbullying and social media use among young adolescents* (Doctoral dissertation, Texas Southern University).

Jolliffe, D., & Farrington, D. P. (2006). Examining the relationship between low empathy and bullying. *Aggressive behavior*, *32*(6), 540-550.

Jones, D. N., & Paulhus, D. L. (2010). Different provocations trigger aggression in narcissists and psychopaths. *Social Psychological and Personality Science*, *1*(1), 12-18.

Juvonen, J., & Gross, E. F. (2008). Extending the school grounds?—Bullying experiences in cyberspace. *Journal of School health*, *78*(9), 496-505.

Karl, K., Peluchette, J., & Schlaegel, C. (2010). Who's posting Facebook faux pas? A cross-cultural examination of personality differences. *International Journal of Selection and Assessment*, *18*(2), 174-186.

Keen, A. (2011). *The Cult of the Amateur: How blogs, MySpace, YouTube and the rest of today's user-generated media are killing our culture and economy*. Hachette UK.

Kerig, P. K., & Stellwagen, K. K. (2010). Roles of callous-unemotional traits, narcissism, and Machiavellianism in childhood aggression. *Journal of Psychopathology and Behavioral Assessment*, *32*(3), 343-352.

UNIVERSITY of NICOSIA

Kim, K., & Davis, K. E. (2009). Toward a comprehensive theory of problematic Internet use: Evaluating the role of self-esteem, anxiety, flow, and the self-rated importance of Internet activities. *Computers in Human Behavior*, *25*(2), 490-500.

Kinga, S., Kármen, D., ENIKŐ, B., Andrea, B., & Noémi-Emese, K. (2014). Creativity and personality profiles of adolescents based on cyberbullying roles-pilot study. *Transylvanian Journal of Psychology*, (2).

Kiriakidis, S. P., & Kavoura, A. (2010). Cyberbullying: A review of the literature on harassment through the internet and other electronic means. *Family & community health*, *33*(2), 82-93.

Klomek, A. B., Sourander, A., & Gould, M. (2010). The association of suicide and bullying in childhood to young adulthood: A review of cross-sectional and longitudinal research findings. *The Canadian Journal of Psychiatry*, *55*(5), 282-288.

Klomek, A. B., Sourander, A., Niemelä, S., Kumpulainen, K., Piha, J., Tamminen, T., ... & Gould, M. S. (2009). Childhood bullying behaviors as a risk for suicide attempts and completed suicides: a population-based birth cohort study. *Journal of the American academy of child & adolescent psychiatry*, *48*(3), 254-261.

Kokkinos, C. M., Antoniadou, N., & Markos, A. (2014). Cyber-bullying: An investigation of the psychological profile of university student participants. *Journal of Applied Developmental Psychology*, *35*(3), 204-214.

Kokkinos, C. M., Baltzidis, E., & Xynogala, D. (2016). Prevalence and personality correlates of Facebook bullying among university undergraduates. *Computers in Human Behavior*, *55*, 840-850.

König, A., Gollwitzer, M., & Steffgen, G. (2010). Cyberbullying as an act of revenge?. *Journal of Psychologists and Counsellors in Schools*, *20*(2), 210-224.

UNIVERSITY of NICOSIA

Kowalski, R. M., & Limber, S. P. (2007) Electronic Bullying Among Middle School Students. *Journal of Adolescent Health, 41, S22*–S30. *Journal of Adolescent Health, 41, S22*–S30.

Kowalski, R. M., Limber, S. P., Limber, S., & Agatston, P. (2012). *Cyberbullying: Bullying in the digital age*. John Wiley & Sons.

Kowalski, R. M., & Limber, S. P. (2013). Psychological, physical, and academic correlates of cyberbullying and traditional bullying. *Journal of Adolescent Health*, *53*(1), S13-S20.

Kowert, P. A., & Hermann, M. G. (1997). Who takes risks? Daring and caution in foreign policy making. *Journal of conflict Resolution*, *41*(5), 611-637.

Kraft, E., & Wang, J. (2010). An exploratory study of the cyberbullying and cyberstalking experiences and factors related to victimization of students at a public liberal arts college. *International Journal of Technoethics (IJT)*, *1*(4), 74-91.

Kraut, R., Kiesler, S., Boneva, B., Cummings, J., Helgeson, V., & Crawford, A. (2002). Internet paradox revisited. *Journal of social issues*, *58*(1), 49-74.

Kvale, S., & Brinkmann, S. (2009). *Interviews: Learning the craft of qualitative research interviewing*. Sage.

Lam, L. T., Cheng, Z., & Liu, X. (2013). Violent online games exposure and cyberbullying/victimization among adolescents. *Cyberpsychology, Behavior, and Social Networking*, *16*(3), 159-165.

Langos, C. (2012). Cyberbullying: The challenge to define. *Cyberpsychology, Behavior, and Social Networking*, *15*(6), 285-289.

UNIVERSITY of NICOSIA

Lawler, J. P., & Molluzzo, J. C. (2011). A survey of first-year college student perceptions of privacy in social networking. *Journal of Computing Sciences in Colleges*, *26*(3), 36-41.

Leary, M. R., Downs, D. L., & Kernis, M. (1995). Interpersonal functions of the self-esteem motive: The self-esteem system as a sociometer. Efficacy, agency, and self-esteem.

Leary, M. R., Schreindorfer, L. S., & Haupt, A. L. (1995). The role of low self-esteem in emotional and behavioral problems: Why is low self-esteem dysfunctional?. *Journal of Social and Clinical Psychology*, *14*(3), 297.

Lee, K., Chang, C. T., Lin, & Cheng, Z. (2014). The dark side of smartphone usage: Psychological traits, compulsive behavior and technostress. *Computers in human behavior*, *31*, 373-383

Lenhart, A., Madden, M., Smith, A., Purcell, K., Zickuhr, K., & Rainie, L. (2011). Teens, Kindness and Cruelty on Social Network Sites: How American Teens Navigate the New World of" Digital Citizenship". *Pew Internet & American Life Project*.

Li, Q. (2007). Bullying in the new playground: Research into cyberbullying and cyber victimization. *Australasian Journal of Technology, 23(4),* 435-454

Li, Q. (2010). Cyberbullying in high schools: A study of students' behaviors and beliefs about this new phenomenon. *Journal of Aggression, Maltreatment & Trauma*, *19*(4), 372-392.

Littel, M., Van den Berg, I., Luijten, M., van Rooij, A. J., Keemink, L., & Franken, I. (2012). Error processing and response inhibition in excessive computer game players: an event-related potential study. *Addiction biology*, *17*(5), 934-947.

UNIVERSITY of NICOSIA

Livingstone, S., & Helsper, E. J. (2007). Taking risks when communicating on the Internet: The role of offline social-psychological factors in young people's vulnerability to online risks. *Information, Communication & Society*, *10*(5), 619-644.

Low, S., & Espelage, D. (2013). Differentiating cyber bullying perpetration from non-physical bullying: Commonalities across race, individual, and family predictors. *Psychology of Violence*, *3*(1), 39.

Lucas, K. (2018). Cyber-Bullying Among College Students: A Test of Social Learning Theory.

Lyng, S. (2005). Edgework and the risk-taking experience. *Edgework: The sociology of risk-taking*, 3-16.

Maslow, A. (1943). A theory of human motivation. *Psychological review*, *50*(4), 370.

Mason, K. L. (2008). Cyberbullying: A preliminary assessment for school personnel. *Psychology in the Schools*, *45*(4), 323-348.

McCrae, R. R., & Costa Jr, P. T. (1997). Personality trait structure as a human universal. *American psychologist*, *52*(5), 509.

McCullough, M. E., Bellah, C. G., Kilpatrick, S. D., & Johnson, J. L. (2001). Vengefulness: Relationships with forgiveness, rumination, well-being, and the Big Five. *Personality and social psychology bulletin*, *27*(5), 601-610.

MacDonald, C. D., & Roberts-Pittman, B. (2010). Cyberbullying among college students: Prevalence and demographic differences. *Procedia-Social and Behavioral Sciences*, *9*, 2003-2009.

McLeod, S. (2007). Maslow's hierarchy of needs. *Simply psychology*, *1*.

McLeod, S. A. (2007). What is reliability?. Retrieved from https://cyberbullying.simplypsychology.org/reliability.html

UNIVERSITY of NICOSIA

Milam, A. C., Spitzmueller, C., & Penney, L. M. (2009). Investigating individual differences among targets of workplace incivility. *Journal of occupational health psychology*, *14*(1), 58.

Miller, J. D., & Hufstedler, S. M. (2009). Cyberbullying Knows No Borders. *Australian Teacher Education Association*.

Mitchell, S. M., Seegan, P. L., Roush, J. F., Brown, S. L., Sustaíta, M. A., & Cukrowicz, K. C. (2018). Retrospective cyberbullying and suicide ideation: the mediating roles of depressive symptoms, perceived burdensomeness, and thwarted belongingness. *Journal of interpersonal violence*, *33*(16), 2602-2620.

Mitsopoulou, E., & Giovazolias, T. (2015). Personality traits, empathy and bullying behavior: A meta-analytic approach. *Aggression and violent behavior*, *21*, 61-72.

Mishna, F., Cook, C., Gadalla, T., Daciuk, J., & Solomon, S. (2010). Cyber bullying behaviors among middle and high school students. *American Journal of Orthopsychiatry*, *80*(3), 362-374.

Moon, B., Hwang, & McCluskey, J. D. (2011). Causes of school bullying: Empirical test of general theory of crime, differential association, general strain theory. *Crime & Delinquency*, 6(57), 849–877. doi:10.1177/0011128708315740

Moore, K., & McElroy, J. C. (2012). The influence of personality on Facebook usage, wall postings, and regret. *Computers in Human Behavior*, *28*(1), 267-274.

Moore, M. J., Nakano, T., Enomoto, A., & Suda, T. (2012). Anonymity and roles associated with aggressive posts in an online forum. *Computers in Human Behavior*, *28*(3), 861-867.

Morahan-Martin, J., & Schumacher, P. (2000). Incidence and correlates of pathological Internet use among college students. *Computers in human behavior*, *16*(1), 13-29.

Musharraf, S., & Anis-ul-Haque, M. (2018). Cyberbullying in Different Participant Roles: Exploring Differences in Psychopathology and Well-being in University Students. *Pakistan Journal of Medical Research*, *57*(1), 33-39.

Newness, K., Steinert, J., & Viswesvaran, C. (2012). Effects of personality on social network disclosure: Do emotionally intelligent individuals post inappropriate content?. *Psihologijske teme*, *21*(3), 473-486.

Niemelä, S., Brunstein-Klomek, A., Sillanmäki, L., Helenius, Piha, J., Kumpulainen, K., ... & Sourander, A. (2011). Childhood bullying behaviors at age eight and substance use at age 18 among males. A nationwide prospective study. *Addictive behaviors*, *36*(3), 256-260.

Notar, C. E., Padgett, S., & Roden, J. (2013). Cyberbullying: Resources for Intervention and Prevention. *Universal Journal of Educational Research*, *1*(3), 133-145.

Olenik-Shemesh, D., Heiman, T., & Eden, S. (2012). Cyberbullying victimisation in adolescence: Relationships with loneliness and depressive mood. *Emotional and behavioural difficulties*, *17*(3-4), 361-374.

Olweus, D. (1993). *Bullying at School*. Oxford, U.K: Blackwell.

Olweus, D. (2003). A profile of bullying at school. *Educational Leadership, 60,* 12–19.

Olweus, D. (2012). Cyberbullying: An overrated phenomenon?. *European Journal of Developmental Psychology*, *9*(5), 520-538.

Orel, A., Campbell, M., Wozencroft, K., Leong, E., & Kimpton, M. (2017). Exploring university students' coping strategy intentions for cyberbullying. *Journal of interpersonal violence*, *32*(3), 446-462.

Orue, I., & Calvete, E. (2019). Psychological traits and moral disengagement interact to relate to bullying and cyberbullying among adolescents. *Journal of interpersonal violence*, *34*(11), 2313-2332.

UNIVERSITY of NICOSIA

Ozden, M. S., & Icellioglu, S. (2014). The perception of cyberbullying and cybervictimization by university students in terms of their personality factors. *Procedia-Social and Behavioral Sciences*, *116*, 4379-4383.

Pabian, S., & Vandebosch, (2016). An investigation of short-term longitudinal associations between social anxiety and victimization and perpetration of traditional bullying and cyberbullying. *Journal of youth and adolescence*, *45*(2), 328-339.

Palermiti, A. L., Servidio, R., Bartolo, M. G., & Costabile, A. (2017). Cyberbullying and self-esteem: An Italian study. *Computers in Human Behavior*, *69*, 136-141.

Pallesen, S., Nielsen, M. B., Magerøy, N., Andreassen, C. S., & Einarsen, S. (2017). An experimental study on the attribution of personality traits to perpetrators and targets in a workplace setting. *Frontiers in psychology*, *8*, 1045.

Parris, L. N., Varjas, K., & Meyers, J. (2014). "The Internet is a Mask": High School Students' Suggestions for Preventing Cyberbullying. *Western Journal of Emergency Medicine*, *15*(5), 587.

Patchin, J. & Hinduja, S. (2010). Cyberbullying and self-esteem. *Journal of school health*, *80*(12), 614-621.

Patchin, J. & Hinduja, S. (2016). *Bullying today: Bullet points and best practices*. Corwin Press

Patrick, C. J. (Ed.). (2005). *Handbook of psychopathy*. Guilford Press.

Patton, M. Q. (2002). Two decades of developments in qualitative inquiry: A personal, experiential perspective. *Qualitative social work*, *1*(3), 261-283.

Paulhus, D. L., & Williams, K. M. (2002). The dark triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of research in personality*, *36*(6), 556-563.

UNIVERSITY of NICOSIA

Paullet, K., & Pinchot, J. (2014). Behind the screen where today's perpetrator plays: Perceptions of college students on cyberbullying. *Journal of information systems education*, *25*(1), 63.

Peluchette, J. V., Karl, K., Wood, C., & Williams, J. (2015). Cyberbullying victimization: Do victims' personality and risky social network behaviors contribute to the problem?. *Computers in Human Behavior*, *52*, 424-435.

Pepler, D. J., Craig, M., Connolly, J. A., Yuile, A., McMaster, L., & Jiang, D. (2006). A developmental perspective on bullying. *Aggressive Behavior: Official Journal of the International Society for Research on Aggression*, *32*(4), 376-384.

Perren, S., Corcoran, L., Mc Guckin, C., Cowie, Dehue, F., Völlink, T., ... & Tsatsou, P. (2012). Tackling cyberbullying: Review of empirical evidence regarding successful responses by students, parents, and schools.

Peugh, J. L., & Enders, C. K. (2004). Missing data in educational research: A review of reporting practices and suggestions for improvement. *Review of educational research*, *74*(4), 525-556.

Pham, T., & Adesman, A. (2015). Teen victimization: Prevalence and consequences of traditional and cyberbullying. *Current Opinion in Pediatrics, 26*(6), 748-56. doi: 10.1097/mop.0000000000000290

Popkin, A. S. (2013). Bullied dead girl's image used in dating ad on Facebook. From http://cyberbullying.nbcnews.com/technology/bullied-dead-girls-image-used-dating- ad-facebook-4B11187466.

Pratto, F., Sidanius, J., & Levin, S. (2006). Social dominance theory and the dynamics of intergroup relations: Taking stock and looking forward. *European review of social psychology*, *17*(1), 271-320.

UNIVERSITY of NICOSIA

Price, M., & Dalgleish, J. (2010). Cyberbullying: Experiences, impacts and coping strategies as described by Australian young people. *Youth Studies Australia*, *29*(2), 51.

Ragatz, L. L., Anderson, R. J., Fremouw, & Schwartz, R. (2011). Criminal thinking patterns, aggression styles, and the psychological traits of late high school perpetrators and perpetrator-victims. *Aggressive behavior*, *37*(2), 145-160.

Raine, A., Dodge, K., Loeber, R., Gatzke-Kopp, L., Lynam, D., Reynolds, C., ... & Liu, J. (2006). The reactive–proactive aggression questionnaire: Differential correlates of reactive and proactive aggression in adolescent boys. *Aggressive behavior*, *32*(2), 159-171.

Rammsayer, T., & Schmiga, K. (2003). Mobbing und Persönlichkeit: Unterschiede in grundlegenden Persönlichkeitsdimensionen zwischen Mobbing-Betroffenen und Nicht-Betroffenen. *Wirtschaftspsychologie*, *5*(2), 3-11.

Rauthmann, J. F., & Kolar, G. P. (2012). How "dark" are the Dark Triad traits? Examining the perceived darkness of narcissism, Machiavellianism, and psychopathy. *Personality and Individual Differences*, *53*(7), 884-889.

Redmond, P., Lock, J. V., & Smart, V. (2018). Pre-service teachers' perspectives of cyberbullying. *Computers & Education*, *119*, 1-13.

Reidy, D. E., Zeichner, A., Foster, J. D., & Martinez, M. A. (2008). Effects of narcissistic entitlement and exploitativeness on human physical aggression. *Personality and Individual Differences*, *44*(4), 865-875.

Resett, S., & Gámez-Guadix, M. (2017). Traditional bullying and cyberbullying: Differences in emotional problems, and personality. Are perpetrators of cyberbullyingmore Machiavellians?. *Journal of adolescence*, *61*, 113-116

UNIVERSITY of NICOSIA

Reyns, B. Henson, B., & Fisher, B. S. (2012). Stalking in the twilight zone: Extent of cyberstalking victimization and offending among college students. *Deviant Behavior*, *33*(1), 1-25.

Rigby, K., & Smith, P. K. (2011). Is school bullying really on the rise?. *Social Psychology of Education*, *14*(4), 441-455.

Roberti, J. C. (2004). Cyberbullying: A review of behavioral and biological correlates of sensation seeking. *Journal of research in personality*, *38*(3), 256-279.

Roberts, L. D., & Allen, P. J. (2015). Exploring ethical issues associated with using online surveys in educational research. *Educational Research and Evaluation*, *21*(2), 95-108.

Roberts, B., Jackson, J. J., Fayard, J. V., Edmonds, G., & Meints, J. (2009). Conscientiousness.

Ross, C., Orr, E. S., Sisic, M., Arseneault, J. M., Simmering, M. G., & Orr, R. R. (2009). Personality and motivations associated with Facebook use. *Computers in human behavior*, *25*(2), 578-586.

Ruiperez, M., Ibáñez, M. I., Lorente, E., Moro, M., & Ortet, G. (2001). Psychometric properties of the Spanish version of the BSI: Contributions to the relationship between personality and psychopathology. *European Journal of Psychological Assessment*, *17*(3), 241.

Ryan, T., & Xenos, S. (2011). Who uses Facebook? An investigation into the relationship between the Big Five, shyness, narcissism, loneliness, and Facebook usage. *Computers in human behavior*, *27*(5), 1658-1664.

Salmivalli, C., Lagerspetz, K., Björkqvist, K., Österman, K., & Kaukiainen, A. (1996). Bullying as a group process: Participant roles and their relations to social status within the group. *Aggressive behavior*, *22*(1), 1-15.

UNIVERSITY of NICOSIA

Sánchez, F. C., Navarro-Zaragoza, J., Ruiz-Cabello, A. L., Romero, M. F., & Maldonado, A. L. (2017). Association between bullying victimization and substance use among college students in Spain. *Adicciones*, *29*(1).

Santos, V., Egidio Nardi, A., & Lucia Spear King, A. (2015). Treatment of internet addiction in patient with panic disorder and obsessive-compulsive disorder: a case report. *CNS & Neurological Disorders-Drug Targets (Formerly Current Drug Targets-CNS & Neurological Disorders)*, *14*(3), 341-344.

Santrock, J. W. (2009). Psikologi pendidikan educational psychology. *Jakarta Selatan: Salemba Humanika*.

Shaffer, D. R. (2008). Social and personality development (. Belmont, CA: Wadsworth.). *Thomson learning*.

Schafer, J. L., & Graham, J., (2002). Missing data: our view of the state of the art. *Psychological methods*, *7*(2), 147.

Schenk, A. M., & Fremouw, J. (2012). Prevalence, psychological impact, and coping of cyberbully victims among college students. *Journal of School Violence*, *11*(1), 21-37.

Schenk, A. M., Fremouw, J., & Keelan, C. M. (2013). Characteristics of college perpetrators of cyberbullying. *Computers in Human Behavior*, *29*(6), 2320-2327.

Schultze-Krumbholz, A., & Scheithauer, (2009). Social-behavioral correlates of cyberbullying in a German student sample. *Zeitschrift für psychologie/Journal of Psychology*, *217*(4), 224-226.

Selkie, E. M., Kota, R., Chan, F., & Moreno, M. (2015). Cyberbullying, depression, and problem alcohol use in female college students: a multisite study. *Cyberpsychology, Behavior, and Social Networking*, *18*(2), 79-86.

UNIVERSITY of NICOSIA

Sesar, K., Šimić, N., & Barišić, M. (2011). Roles in bullying behavior and Eysenck's personality dimensions in elementary school children. *Paediatrics Today*, *7*(1), 26-36.

Shamay-Tsoory, S. G., Aharon-Peretz, J., & Perry, D. (2009). Two systems for empathy: a double dissociation between emotional and cognitive empathy in inferior frontal gyrus versus ventromedial prefrontal lesions. *Brain*, *132*(3), 617-627.

Shariff, S. (2008). Cyber-bullying: Issues and solutions for the school, the classroom and the home. Routledge.

Silverman, D., & Marvasti, A. (2008). *Doing qualitative research: A comprehensive guide*. Sage.

Singh, P., & Bussey, K. (2011). Peer victimization and psychological maladjustment: The mediating role of coping self-efficacy. *Journal of Research on Adolescence*, *21*(2), 420-433.

Slee, P. T., & Rigby, K. (1993). The relationship of Eysenck's personality factors and self-esteem to perpetrator-victim behaviour in Australian schoolboys. *Personality and individual differences*, *14*(2), 371-373.

Slonje, R., & Smith, P. K. (2008). Cyberbullying: Another main type of bullying?. *Scandinavian journal of psychology*, *49*(2), 147-154.

Smith, P. K. (2016). Bullying: Definition, types, causes, consequences and intervention. *Social and Personality Psychology Compass*, *10*(9), 519-532.

Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: Its nature and impact in secondary school pupils. *Journal of child psychology and psychiatry*, *49*(4), 376-385.

UNIVERSITY of NICOSIA

Smith, J., & Yoon, J. (2013). Cyberbullying presence, extent, and forms in a Midwestern post-secondary institution. *Information Systems Education Journal*, *11*(3), 52.

Snakenborg, J., Van Acker, R., & Gable, R. A. (2011). Cyberbullying: Prevention and intervention to protect our children and youth. *Preventing School Failure: Alternative Education for Children and Youth*, *55*(2), 88-95.

Sontag, L. M., Clemans, K., Graber, J. A., & Lyndon, S. T. (2011). Traditional and cyber aggressors and victims: A comparison of psychosocial characteristics. *Journal of youth and adolescence*, *40*(4), 392-404.

Sourander, A., Jensen, P., Rönning, J. A., Niemelä, S., Helenius, Sillanmäki, L., ... & Almqvist, F. (2007). What is the early adulthood outcome of boys who perpetrator or are bullied in childhood? The Finnish "From a Boy to a Man" study. *Pediatrics*, *120*(2), 397-404.

Srabstein, J. C., & Leventhal, B. L. (2010). Prevention of bullying-related morbidity and mortality: a call for public health policies.

SPSS, I. (2013). IBM SPSS statistics 22. *New York: IBM Corp*.

Stapinski, L. A., Bowes, L., Wolke, D., Pearson, R. M., Mahedy, L., Button, K. S., ... & Araya, R. (2014). Peer victimization during adolescence and risk for anxiety disorders in adulthood: a prospective cohort study. *Depression and anxiety*, *31*(7), 574-582.

Stavrinides, P., Paradisiotou, A., Tziogouros, C., & Lazarou, C. (2010). Prevalence of Bullying Among Cyprus Elementary and High School Students. *International Journal of violence and School, 11,* 114-128.

Steffgen, G., König, A., Pfetsch, J., & Melzer, A. (2011). Are perpetrators of cyberbullyingless empathic? Adolescents' cyberbullying behavior and empathic

responsiveness. *Cyberpsychology, Behavior, and Social Networking*, *14*(11), 643-648.

Storch, E. A., Heidgerken, A. D., Adkins, J, Cole, M., Murphy, T. K., & Geffken, G. R. (2005). Peer victimization and the development of obsessive–compulsive disorder in adolescence. *Depression and anxiety*, *21*(1), 41-44.

Strom, P., & Strom, R. (2012). Growing up with social networks and online communities. *The Education Digest*, *78*(1), 48.

Sumrall, T. (2016). Lethal words: The harmful impact of cyberbullying and the need for federal criminalization. *Houston law review*, *53*(5), 3966.

Tani, F., Greenman, P. S., Schneider, B, & Fregoso, M. (2003). Bullying and the Big Five: A study of childhood personality and participant roles in bullying incidents. *School Psychology International*, *24*(2), 131-146.

The Status of Cyberbullying in America Today. (May 21, 2015). In *NoBullying.com*. Retrieved from https://nobullying.com/cyber-bullying-in-america/

Thomas, S. P. (2006). From the editor—The phenomenon of cyberbullying. *Issues in mental health nursing*, *27*(10), 1015-1016.

Thomas, K. M., & McGee, C. D. (2012). The only thing we have to fear is… 120 characters. *TechTrends*, *56*(1), 19-33.

Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in Human Behavior, 26,* 277–287.

Topçu, Ç., Erdur-Baker, Ö., & Çapa-Aydin (2008). Examination of cyberbullying experiences among Turkish students from different school types. *CyberPsychology & Behavior*, *11*(6), 643-648.

UNIVERSITY of NICOSIA

Topcu, Ç., & Erdur-Baker, Ö. (2010). The revised cyber bullying inventory (RCBI): Validity and reliability studies. *Procedia-Social and Behavioral Sciences*, *5*, 660-664.

Topcu, Ç., Yıldırım, A., & Erdur-Baker, Ö. (2013). Cyber Bullying@ Schools: What do Turkish Adolescents Think?. *International Journal for the Advancement of Counselling*, *35*(2), 139-151.

Tuten, T. L., & Bosnjak, M. (2001). Understanding differences in web usage: The role of need for cognition and the five-factor model of personality. *Social Behavior and Personality: an international journal*, *29*(4), 391-398.

Urbanski, J., & Permuth, S. (2009). *The truth about bullying: What educators and parents must know and do*. R&L Education.

Vaillancourt, T., Faris, R., & Mishna, F. (2017). Cyberbullying in children and youth: Implications for health and clinical practice. *The Canadian Journal of Psychiatry*, *62*(6), 368-373.

van Geel, M., Goemans, A., Toprak, F., & Vedder, P. (2017). Which personality traits are related to traditional bullying and cyberbullying? A study with the Big Five, Dark Triad and sadism. *Personality and Individual Differences*, *106*, 231-235.

van Manen, M. (1990). Researching Lived Experience: Human Science for an Action Sensitive Pedagogy. [Albany NY]: State University of New York Press, 1990. *Curriculum Inquiry*, *24*(2), 135-70.

van de Weijer, S. G., & Leukfeldt, E. R. (2017). Big Five personality traits of cybercrime victims. *Cyberpsychology, Behavior, and Social Networking*, *20*(7), 407-412.

UNIVERSITY of NICOSIA

Varjas, K., Henrich, C. C., & Meyers, J. (2009). Urban middle school students' perceptions of bullying, cyberbullying, and school safety. *Journal of School Violence*, *8*(2), 159-176.

Varjas, K., Talley, J., Meyers, J., Parris, L., & Cutts (2010). High school students' perceptions of motivations for cyberbullying: An exploratory study. *Western Journal of Emergency Medicine*, *11*(3), 269.

Volk, A. A., Schiralli, K., Xia, X., Zhao, J., & Dane, A. V. (2018). Adolescent bullying and personality: A cross-cultural approach. *Personality and Individual Differences*, *125*, 126-132.

Wachs, S. (2012). Moral disengagement and emotional and social difficulties in bullying and cyberbullying: Differences by participant role. *Emotional and Behavioural Difficulties*, *17*(3-4), 347-360.

Walker, C. M. (2014). Cyberbullying redefined: An analysis of intent and repetition. *International Journal of Education and Social Science*, *1*(5), 59-69.

Walker, C. M., Sockman, B. R., & Koehn, S. (2011). An exploratory study of cyberbullying with undergraduate university students. *TechTrends*, *55*(2), 31- *of Adolescent Health, 41(1)*, 14-21.

Walliman, N. (2017). *Research methods: The basics*. Routledge.

Wang, J., Iannotti, R. J., & Nansel, T. R. (2009). School bullying among adolescents in the United States: Physical, verbal, relational, and cyber. *Journal of Adolescent health*, *45*(4), 368-375.

Watts, L. K., Wagner, J., Velasquez, B., & Behrens, P. I. (2017). Cyberbullying in higher education: A literature review. *Computers in Human Behavior*, *69*, 268-274.

Weatherbee, T., & Kelloway, E. K. (2006). A Case of Cyberdeviancy: Cyberaggression in the Workplace.

UNIVERSITY of NICOSIA

Wendt, G. Appel-Silva, M., Kovas, & Bloniewski, T. (2018). Links Between Cyberbullying, Depression and Self-Esteem in a Sample of Brazilian Adolescents. *The European Proceedings of Social & Behavioural Sciences EpSBS*, *49*(90), 782-793.

Whittaker, E., & Kowalski, R. M. (2015). Cyberbullying via social media. *Journal of School Violence*, *14*(1), 11-29.

Wilcox, P., Sullivan, C. J., Jones, S., & Van Gelder, J. L. (2014). Personality and opportunity: An integrated approach to offending and victimization. *Criminal Justice and Behavior*, *41*(7), 880-901.

Willard, N. (2004). An educator's guide to cyberbullying and cyberthreats. Center for Safe and Responsible Use of the Internet. <new.csriu.org/perpetrator/docs/cbcteducator.pdf>

Willard, N. (2006). Flame Retardant: Cyberbullies Torment Their Victims of cyberbullying24/7: Here's How to Stop the Abuse. *School Library Journal*, *52*(4), 54.

Willard, N. E. (2007). *Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress*. Research Press.

Wolke, D., Copeland, E., Angold, A., & Costello, E. J. (2013). Impact of bullying in childhood on adult health, wealth, crime, and social outcomes. *Psychological science*, *24*(10), 1958-1970.

Wong-Lo, M., Bullock, L. M., & Gable, R. A. (2011). Cyber bullying: Practices to face digital aggression. *Emotional and Behavioural Difficulties*, *16*(3), 317-325.

Woodworth, M., & Porter, S. (2002). In cold blood: Characteristics of criminal homicides as a function of psychopathy. *Journal of abnormal psychology*, *111*(3), 436.

UNIVERSITY of NICOSIA

Woods, S., Wolke, D., Nowicki, S., & Hall, L. (2009). Emotion recognition abilities and empathy of victims of cyberbullyingof bullying. *Child abuse & neglect*, *33*(5), 307-311.

Wright, V., Burnham, J., Inman, T. C., & Ogorchock, N. (2009). Cyberbullying: Using virtual scenarios to educate and raise awareness. *Journal of Computing in Teacher Education*, *26*(1), 35-42.

Wright, M. F., & Li (2013). The association between cyber victimization and subsequent cyber aggression: The moderating effect of peer rejection. *Journal of youth and adolescence*, *42*(5), 662-674.

Ybarra, M. L., & Mitchell, K. J. (2004). Online aggressor/targets, aggressors, and targets: A comparison of associated youth characteristics. *Journal of child Psychology and Psychiatry*, *45*(7), 1308-1316.

Ybarra, M. L., & Mitchell, J., M. (2007). Prevalence and Frequency of Internet Harassment Instigation: Implications for Adolescent Health. *Journal of Adolescent Health 41,* 189–195.

You, S., & Lim, S. A. (2016). Longitudinal predictors of cyberbullying perpetration: Evidence from Korean middle school students. *Personality and Individual Differences*, *89*, 172-176

Zalaquett, C. P., & Chatters, S. J. (2014). Cyberbullying in college: Frequency, characteristics, and practical implications. *Sage Open*, *4*(1), 2158244014526721.

Zermatten, A., & Van der Linden, M. (2008). Impulsivity in non-clinical persons with obsessive-compulsive symptoms. *Personality and Individual Differences*, *44*(8), 1824-1830.

Zezulka, L. A., & Seigfried-Spellar, K. (2016). Differentiating Cyberbullies and Internet trolls by personality characteristics and self-esteem.

UNIVERSITY of NICOSIA

Zohrabi, M. (2013). Mixed Method Research: Instruments, Validity, Reliability and Reporting Findings. *Theory & practice in language studies*, *3*(2).

Zuckerman, M. (1979). *Sensation seeking*. John Wiley & Sons, Inc..

Zuckerman, M. (1994). *Behavioral expressions and biosocial bases of sensation seeking*. Cambridge university press.

Zych, I., Ortega-Ruiz, R., & Del Rey, R. (2015). Systematic review of theoretical studies on bullying and cyberbullying: Facts, knowledge, prevention, and intervention. *Aggression and Violent Behavior*, *23*, 1-21.

Zych, I., Baldry, A. C., Farrington, D. P., & Llorent, V. J. (2018). Are children involved in cyberbullying low on empathy? A systematic review and meta-analysis of research on empathy versus different cyberbullying roles. *Aggression and Violent Behavior*.

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APPENDICES

APPENDIX I

Recruitment Document

The Department of Psychology at the University of Nicosia supports the practice of protection of human participants in research. The following will provide you with information about the research that will help you in deciding whether or not you wish to participate. If you agree to participate, please be aware that you are free to withdraw at any point.

In this study we will ask you to fill in a questionnaire regarding your personality and any experiences you may have had with Cyberbullying or Cybervictimization. All information you provide will remain confidential and will not be associated with your name. Your participation in this study will require approximately 8 minutes. When this study is complete you will be provided with the results of the study if you request them, and you will be free to ask any questions. If you have any further questions concerning this study please feel free to contact us through the researchers email: louca.a@unic.ac.cy or the faculty supervisor Dr Marios Constantinou at constantinou.m@unic.aqc.cy .Please indicate with your signature on the space below that you understand your rights and agree to participate in the study.

Your participation is solicited, yet strictly voluntary. All information will be kept confidential and your name will not be associated with any research findings.

Summary: This research study will examine factors that are related to cyberbullying and cybervictimization among University students. If you agree to participate, you will be asked to answer survey questions that ask about your activity on the internet and social media as well as on your personality.

Your right to withdraw/discontinue: You are free to discontinue your participation at any time without penalty. You may also skip any survey questions that make you feel uncomfortable.

Benefits: Participation in this research study does not guarantee any benefits to you. However, possible benefits include the fact that you may learn something about how

research studies are conducted and you may learn something about this area of research (i.e., factors that are related to cyberbullying).

Additional information: You will be given additional information about the study after your participation is complete.

Time commitment: If you agree to participate in the study, it may take up to 8 minutes to complete the survey.

Guarantee of Confidentiality: All data from this study will be kept from inappropriate disclosure and will be accessible only to the researchers and their faculty advisor. Data collected in person will be kept in a locked file cabinet, separate from consent forms, and all materials will be destroyed after 3 years.

Risks: The present research is designed to reduce the possibility of any negative experiences as a result of participation. Risks to participants are kept to a minimum.

Researcher Contact Information: This research study is being conducted by Angela Lambrou-Louca. The faculty supervisor is Dr. Marios Constantinou School of Humanities, Department of Psychology University of Nicosia. If you have questions or concerns about your participation in this study, you may contact the researchers through Humanities at 22842200.

Personal Copy of Consent Form: You may print (*You will be provided with*) a blank, unsigned copy of this consent form at the beginning of the study.

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APPENDIX II

Information Regarding the Study

Summary: This research study will examine factors that are related to cyberbullying and cybervictimization among University students. If you agree to participate, you will be asked to answer survey questions that ask about your activity on the internet and social media as well as on your personality.

Your right to withdraw/discontinue: You are free to discontinue your participation at any time without penalty. You may also skip any survey questions that make you feel uncomfortable.

Benefits: Participation in this research study does not guarantee any benefits to you. However, possible benefits include the fact that you may learn something about how research studies are conducted and you may learn something about this area of research (i.e., factors that are related to cyberbullying).

Additional information: You will be given additional information about the study after your participation is complete.

Time commitment: If you agree to participate in the study, it may take up to 8 minutes to complete the survey.

Guarantee of Confidentiality: All data from this study will be kept from inappropriate disclosure and will be accessible only to the researchers and their faculty advisor. Data collected in person will be kept in a locked file cabinet, separate from consent forms, and all materials will be destroyed after 3 years.

Risks: The present research is designed to reduce the possibility of any negative experiences as a result of participation. Risks to participants are kept to a minimum.

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APPENDIX III

Informed Consent

The Department of Psychology at the University of Nicosia supports the practice of protection of human participants in research. The following will provide you with information about the research that will help you in deciding whether or not you wish to participate. If you agree to participate, please be aware that you are free to withdraw at any point.

In this study we will ask you to fill in a questionnaire regarding your personality and any experiences you may have had with Cyberbullying or Cybervictimization. All information you provide will remain confidential and will not be associated with your name. Your participation in this study will require approximately 8 minutes. When this study is complete you will be provided with the results of the study if you request them, and you will be free to ask any questions. If you have any further questions concerning this study please feel free to contact us through the researchers email: louca.a@unic.ac.cy or the faculty supervisor Dr Marios Constantinou at constantinou.m@unic.ac.cy. Please indicate with your signature on the space below that you understand your rights and agree to participate in the study.

Your participation is solicited, yet strictly voluntary. All information will be kept confidential and your name will not be associated with any research findings.

_____ _____

Signature of Participant Angela Louca- Investigator

_____

Dr Marios Constantinou – Supervisor

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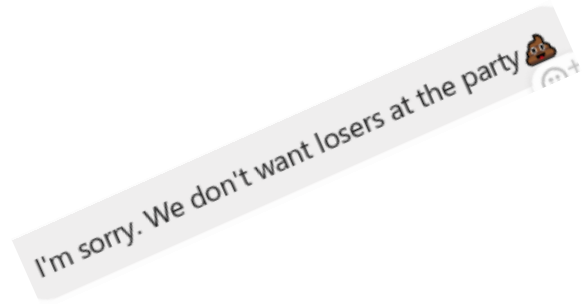
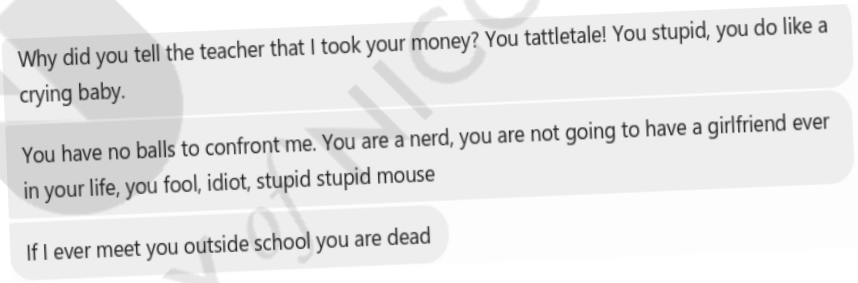
APPENDIX IV

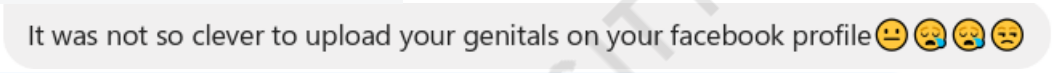
Recruitment Poster

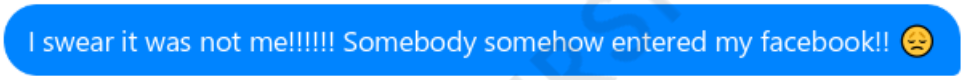


Are you a college student??

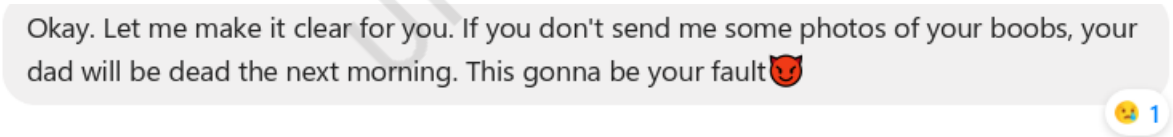
Have you ever experienced/done Cyber-bullying??







Participate in our survey anonymously. Help us to investigate this complex phenomenon.



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Are you a university student??

Scan me

Contact us through **email (louca.a@unic.ac.cy)** in order to make questions and get the link for the survey. **You can also enter the website by scanning this QR code with your phone.**

- For **android**: Download the application by writing QR code reader in play store
- For **iphone**: Open the camera app, switch it to camera mode and press the notification

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APPENDIX V

Questionnaire Study I

Demographics Questionnaire

Gender: Male ☐ Female ☐

Age: _____

You are now studying for your:

Diploma/certificate ☐

Bachelor's degree ☐

Master's degree ☐

Doctoral degree ☐

Other ☐

Ethnicity:

Cypriot ☐ Non-Cypriot ☐

Please fill out this form to reflect ***your*** views, even if other people might not agree. You need not spend a lot of time on any item. Feel free to print additional comments. ***Be sure to answer all items.***

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The Big Five Inventory (BFI)

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

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

I see Myself as Someone Who…

____1. Is talkative
____2. Tends to find fault with others
____3. Does a thorough job
____4. Is depressed, blue
____5. Is original, comes up with ideas
____6. Is reserved
____7. Is helpful and unselfish with others
____8. Can be somewhat careless
____9. Is relaxed, handles stress well
____10. Is curious about many different things
____11. Is full of energy
____12. Starts quarrels with others
____13. Is a reliable worker
____14. Can be tense
____15. Is ingenious, a deep thinker
____16. Generates a lot of enthusiasm
____17. Has a forgiving nature
____18. Tends to be disorganized
____19. Worries a lot
____20. Has an active imagination
____21. Tends to be quiet
____22. Is generally trusting
____23. Tends to be lazy
____24. Is emotionally stable, not easily upset
____25. Is inventive
____26. Has an assertive personality
____27. Can be cold and aloof
____28. Perseveres until the task is finished
____29. Can be moody
____30. Values artistic, aesthetic experiences
____31. Is sometimes shy, inhibited
____32. Is considerate and kind to almost everyone
___33. Does things efficiently
____34. Remains calm in tense situations
____35. Prefers work that is routine
____36. Is outgoing, sociable
____37. Is sometimes rude to others
____38. Makes plans and follows through with them
____39. Gets nervous easily
____40. Likes to reflect, play with ideas
____41. Has few artistic interests
____42. Likes to cooperate with others
____43. Is easily distracted

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44. Is sophisticated in art, music, or

literature

Revised Cyber Bullying Inventory- RCBI

Please read the items carefully. Please tell us how often the instances described below have happened to you and you have done them to others during the last six months. Tell us if and how often you have done this to others by marking the appropriate boxes in the "I did this" column. Tell us if and how often this has happened to you by marking the appropriate boxes in the "This happened to me" column.

	I Did This				This Happened to Me			
	Never	Once	Twice-Three Times	More than three times	Never	Once	Twice-Three Times	More than three times
1. Stealing of Personal Information from computer (like files, email addresses, pictures, IM messages, or Facebook info)								
2. Stealing of computer nicknames or screen names.								
3. Threatening in online forums (like chat rooms, Facebook, or twitter)								
4. Insulting in online forums (like chat rooms, Facebook, or twitter)								
5. Excluding in online forums by blocking others' comments or removing them.								
6. Slandering by posting fake photos on the internet.								
7. Sharing private internet conversations without the other's knowledge (such as chatting with a friend on								

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Skype with other (s) in room)								
8. Making fun of comments in online forums (such as Facebook)								
9. Sending threatening or hurtful comments through e-mail.								
10. Stealing email access (usernames and passwords) and blocking true owner's access.								
11. Stealing email access and reading personal messages.								
12. Sending threatening and /or hurtful text messages								
13. Misleading by pretending to be other gender (male/female)								
14. Published online an embarrassing photo without a permission.								

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APPENDIX VI

Questionnaire Study 2

Demographics Questionnaire

Gender: Male ☐ Female ☐

Age: _____

You are now studying for your:

Diploma/certificate ☐

Bachelor's degree ☐

Master's degree ☐

Doctoral degree ☐

Other ☐

Ethnicity:

Cypriot ☐ Non-Cypriot ☐

Please fill out this form to reflect ***your*** views, even if other people might not agree. You need not spend a lot of time on any item. Feel free to print additional comments. ***Be sure to answer all items.***

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ADULT SELF-REPORT FOR AGES 18-59

Below is a list of items that describe people. For each item, please circle *0, 1,* or *2* to describe yourself *over the past 6 months.* Please answer all items as well as you can, even if some do not seem to apply to you.

0 = Not True 1 = Somewhat or Sometimes True 2 = Very True or Often True

0	1	2	1. I am too forgetful	0	1		40. I hear sounds or voices that other people think aren't there (describe):
0	1	2	2. I make good use of my opportunities	2			
0	1	2	3. I argue a lot	0	1	2	_____
0	1	2	4. I work up to my ability				41. I am impulsive or act without thinking
0	1	2	5. I blame others for my problems	0	1		42. I would rather be alone than with others
0	1	2	6. I use drugs (other than alcohol and nicotine) for nonmedical purposes (describe):	2			43. I lie or cheat
				0	1		44. I feel overwhelmed by my responsibilities
				2			
0	1	2	_____	0	1		45. I am nervous or tense
0	1	2	7. I brag	2			46. Parts of my body twitch or make nervous
0	1	2	8. I have trouble concentrating or	0	1		movements (describe):
0	1	2	paying attention for long	2			_____
			9. I can't get my mind off certain	0	1		47. I lack self-confidence
0	1	2	thoughts (describe):	2			48. I am not liked by others
0	1	2	_____	0	1		49. I can do certain things better than other
0	1	2	10. I have trouble sitting still	2			people
0	1	2	11. I am too dependent on others				50. I am too fearful or anxious
0	1	2	12. I feel lonely	0	1		51. I feel dizzy or lightheaded
0	1	2	13. I feel confused or in a fog	2			52. I feel too guilty
0	1	2	14. I cry a lot	0	1		53. I have trouble planning for the future
0	1	2	15.I am pretty honest	2			54. I feel tired without good reason
0	1	2	16. I am mean to others	0	1		55. My moods swing between elation and
0	1	2	17. I day dream a lot	2			depression
0	1	2	18. I deliberately try to hurt or kill				56. Physical problems without known
0	1	2	myself	0	1		medical cause:
0	1	2	19. I try to get a lot of attention	2			a. Aches or pains (not stomach or headaches)
0	1	2	20. I try to get a lot of attention	0	1		b. Headaches
0	1	2	21. I damage or destroy things	2			c. Nausea, feel sick
0	1	2	belonging to others.	0	1		d. Problems with eyes (not if corrected by
0	1	2	22. I worry about my future	2			glasses) (describe):
0	1	2	23. I break rules at work or elsewhere	0	1		_____
0	1	2	24. I don't eat as well as I should	2			e. Rashes or other skin problems
0	1	2	25. I don't get al.,ong with other people	0	1		f. Stomachaches
0	1	2	26. I don't feel guilty after doing	2			g. Vomiting, throwing up
0	1	2	something I shouldn't	0	1		cyberbullying. Heart pounding or racing
			27. I am jealous of others	2			i. Numbness or tingling in body parts

			28. I get al.,ong badly with my family				57. I physically attack people
0	1	2	29. I am afraid of certain animals,	0	1		58. I pick my skin or other parts of my body
0	1	2	situations, or places	2			(describe):
0	1	2	(describe):_____				_____
			30. My relations with the opposite sex				59. I fail to finish things I should do
0	1	2	are pool.				60. There is very little that I enjoy
0	1	2	31. I am afraid I might think or do				61. My work performance is poor
0	1	2	something bad				62. I am poorly coordinated or clumsy
0	1	2	32. I feel that I have to be perfect				63. I would rather be with older people than
0	1	2	33. I feel that no one loves me				with people of my own age
0	1	2	34. I feel that others are out to get me				64. I have trouble setting priorities
0	1	2	35. I feel worthless or inferior				65. I refuse to talk
0	1	2	36. I accidentally get hurt a lot				66. I repeat certain acts over and over
			37. I get in many fights				(describe): _____
0	1	2	38. My relations with neighbors are				67. I have trouble making or keeping friends
0	1	2	poor	0	1		
0	1	2	39. I hang around people who get in	2			104. I am louder than others
			trouble	0	1		105. People think I am disorganized
			68. I scream or yell a lot	2			106. I try to be fair to others
0	1	2	69. I am secretive or keep things to				107. feel that I can't succeed
			myself				108. I tend to lose things
0	1	2	70. I see things that other people think	0	1		109. I like to try new things
0	1	2	aren't there (describe): _____	2			110. I wish I were of the opposite sex
0	1	2	_____	0	1		111.I keep from getting involved with others
0	1	2	71. I am self-conscious or easily	2			112. I worry a lot
0	1	2	embarrass	0	1		113.I worry about my relations with the
0	1	2	72. I worry about my family	2			opposite sex
			73. I meet my responsibilities to my	0	1		114. I fail to pay my debts or meet other
			family	2			financial responsibilities
0	1	2	74. I show off or clown	0	1		115. I feel restless or fidgety
0	1	2	75. I am too shy or timid	2			116. I get upset too easily
			76. My behavior is irresponsible				117. I have trouble managing money or credit
0	1	2	77. I sleep more than most other people	0	1		cards
0	1	2	during day and/or night	2			118. I am too impatient
0	1	2	(describe):_____	0	1		119. I am not good at details
0	1	2	78. I have trouble making decisions	2			120. I drive too fast
0	1	2	79. I have a speech problem (describe):	0	1		121. I tend to be late for appointments
			_____	2			122. I have trouble keeping a job
0	1	2	80. I stand up for my rights				123. In the past 6 months, about how many
			81.My behavior is very changeable	0	1		times per day did you use tobacco (including
			82.I steal	2			smokeless tobacco)? _____ times per
0	1	2	83. I am easily bored				day.
0	1	2	84. I do things that other people think	0	1		124. In the past 6 months, on how many days
			are strange (describe):	2			were you drunk? _____ days.
0	1	2	_____	0	1		125. In the past 6 months, on how many days
0	1	2	85. I have thoughts that other people	2			did you use drugs for nonmedical purposes
			would think are strange (describe):	0	1		(including marijuana, cocaine, and other
			_____	2			drugs, except alcohol and nicotine)?
			86. I am stubborn, sullen, or irritable				_____ days

0 1 2	87. My moods or feelings change suddenly	0 1 2	
0 1 2	88. I enjoy being with people	0 1 2	
0 1 2	89. I rush into things without considering the risks		
0 1 2	90.I drink too much alcohol or get drunk		
0 1 2	91. I think about killing myself		
0 1 2	92. I do things that may cause me trouble with the law (describe): _____		
0 1 2	93. I talk too much		
0 1 2	94.I tease others a lot		
0 1 2	95. I have a hot temper		
0 1 2	96.I think about sex too much		
0 1 2	97.I threaten to hurt people		
0 1 2	98. I like to help others		
0 1 2	99. I dislike staying in one place for very long		
	100. I have trouble sleeping (describe): _____ __		
	101. I stay away from my job even when I'm not sick and not on vacation		
	102. I don't have much energy		
	103. I am unhappy, sad, or depressed		

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Revised Cyber Bullying Inventory- RCBI

Please read the items carefully. Please tell us how often the instances described below have happened to you and you have done them to others during the last six months. Tell us if and how often you have done this to others by marking the appropriate boxes in the "I did this" column. Tell us if and how often this has happened to you by marking the appropriate boxes in the "This happened to me" column.

	I Did This				This Happened to Me			
	Never	Once	Twice-Three Times	More than three times	Never	Once	Twice-Three Times	More than three times
1. Stealing of Personal Information from computer (like files, email addresses, pictures, IM messages, or Facebook info)								
2. Stealing of computer nicknames or screen names.								
3. Threatening in online forums (like chat rooms, Facebook, or twitter)								
4. Insulting in online forums (like chat rooms, Facebook, or twitter)								
5. Excluding in online forums by blocking others' comments or removing them.								
6. Slandering by posting fake photos on the internet.								
7. Sharing private internet conversations without the other's knowledge (such as chatting with a friend on Skype with other (s) in room)								

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8. Making fun of comments in online forums (such as Facebook)								
9. Sending threatening or hurtful comments through e-mail.								
10. Stealing email access (usernames and passwords) and blocking true owner's access.								
11. Stealing email access and reading personal messages.								
12. Sending threatening and /or hurtful text messages								
13. Misleading by pretending to be other gender (male/female)								
14. Published online an embarrassing photo without a permission.								

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APPENDIX VII

Questionnaire Study 3:

This study explores the newest form of bullying, that is cyber bullying, basically which includes bullying via email, text messages, phone calls and video clips/picture.

You may omit the questions that you do not wish to answer. All the information that you will provide shall remain confidential. You need not put your name on the questionnaire.

Your age: _____

1.You have access to which of the equipment mentioned below?

a) Personal computer

Yes/ No

b) Simple Cell phone

Yes/ No

c) Smart phone

Yes/ No

d) Camera

Yes/ No

2. Do you have internet access in your room separate from the family that you can use independently?

Yes /No

Cyber bullying is when one or more individual repeatedly adopt hostile behavior, which is intended to harm others by using communication and information technologies (via Facebook, Twitter, SMS, MMS, Instagram etc.)

2.1 What do you consider to be Cyberbullying?

3. Do you know someone who has been cyber bullied?

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Yes /No

4. Have you ever been involved in cyber bullying someone?

Yes /No

5. Have you been cyber bullied? (Not just teasing but when some real damages were caused

to you)

Yes [ ] No [ ] Unsure [ ]

6. Has any of your friend or acquaintance been cyber bullied by any of the subsequent

means?

Via Mobile phone call [ ]

Text message [ ]

Mobile phone camera (images taken) [ ]

Instant messaging (e.g. Yahoo and MSN) [ ]

Chatrooms [ ]

Email [ ]

Webcam [ ]

Social networking sites (e.g. Facebook) [ ]

Other (please specify) _____ [ ]

7. Have you been victims of cyberbullying by any of the subsequent means?

Via Mobile phone call [ ]

Text message [ ]

Mobile phone camera (images taken) [ ]

Instant messaging (e.g. Yahoo and MSN) [ ]

Chatrooms [ ]

Email [ ]

Webcam [ ]

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Social networking sites (e.g. Facebook) [ ]

Other (please specify) _____ [ ]

8.In case if you were cyber bullied, do you know who did it? Someone from

School [ ]

Home [ ]

Other (please specify) _____ [ ]

9.Why were you cyber bullied?

_____

_____

_____

_____

10.Why was your friend cyber bullied?

_____

_____

_____

_____

11.Explain briefly what someone said or write about

You

_____

_____

Your friend

_____

11.1 How did you feel when you were victims of cyberbullying?

11.2 How did your friend feel when they were victims of cyberbullying?

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12. During your lesson at school has cyber bullying ever discussed?

a. Yes [ ]

b. No [ ]

13.The person(s) who cyber bullied you was...

a. Female [ ]

b. Male [ ]

c. Both [ ]

14.The person(s) who cyber bullied your friend was...

a. Female [ ]

b. Male [ ]

c. Both [ ]

15. The person(s) whom you cyber bullied was...

a. Female [ ]

b. Male [ ]

c. Both [ ]

15. What do you think the characteristics of a person who cyberbullies?

15.1 What do you think the characteristics of a victim are?

16. Why do you think someone would bully another person? Possible Reasons.

17. What methods or strategies do you think should be used to prevent Cyberbullying in University?

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APPENDIX VIII

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The University of Vermont

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Research Center for Children, Youth & Families, Inc.,/ASEBA,
A Non-Profit Corporation
1 South Prospect Street, St Joseph's Wing (Room #3207), Burlington, VT 05401
Telephone: (802)656-5130
Email: mail@aseba.org / Website: http://cyberbullying.aseba.org

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Accepted and Agreed to:

LICENSOR:

Thomas M. Achenbach, Ph.D.

Signature: _____
Title: President, Research Center for

Children, Youth & Families, Inc.

Date: _____

For License # 1754-07-02-18
Accepted and Agreed to:

LICENSEE:

Angela Lambrou-Loucas

Signature: A.Louca

Print name: Angela Lambrou-Louca

Title: Clinical Pschologist

Address: 46 Makedonitissis Street, 2054, Nicosia Cyprus

Date: 03/07/2018

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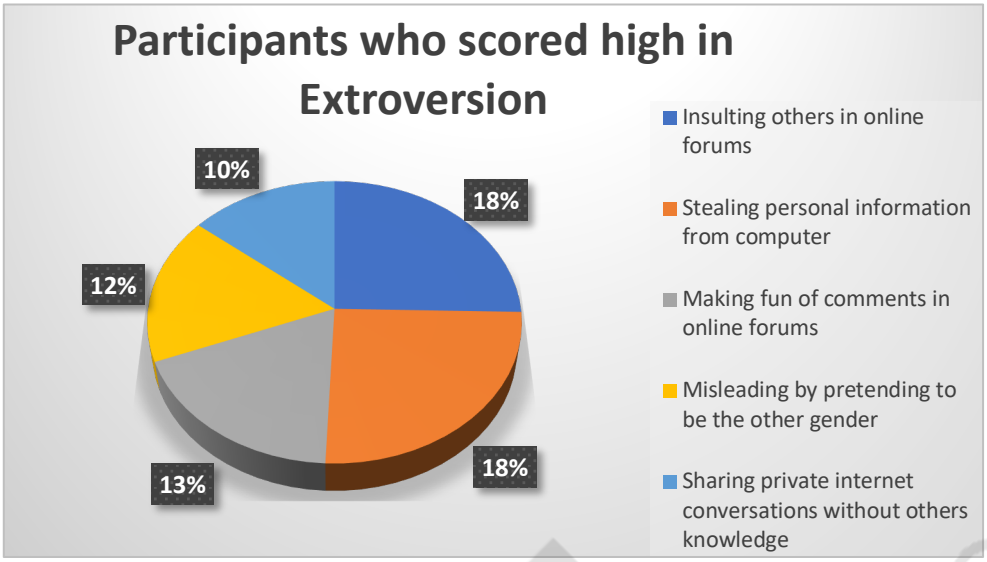
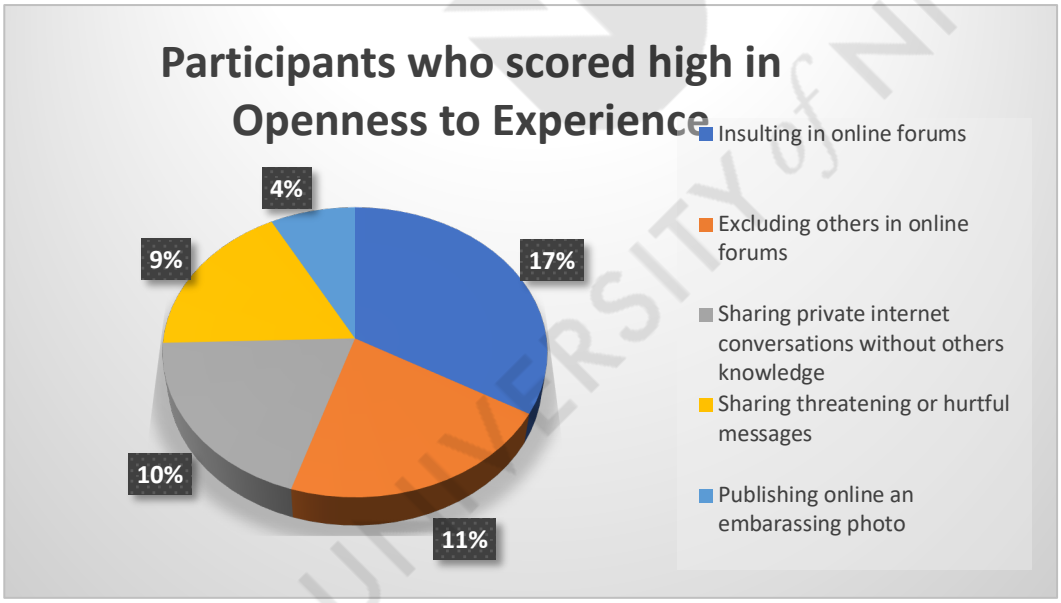
Additional Tables and Charts





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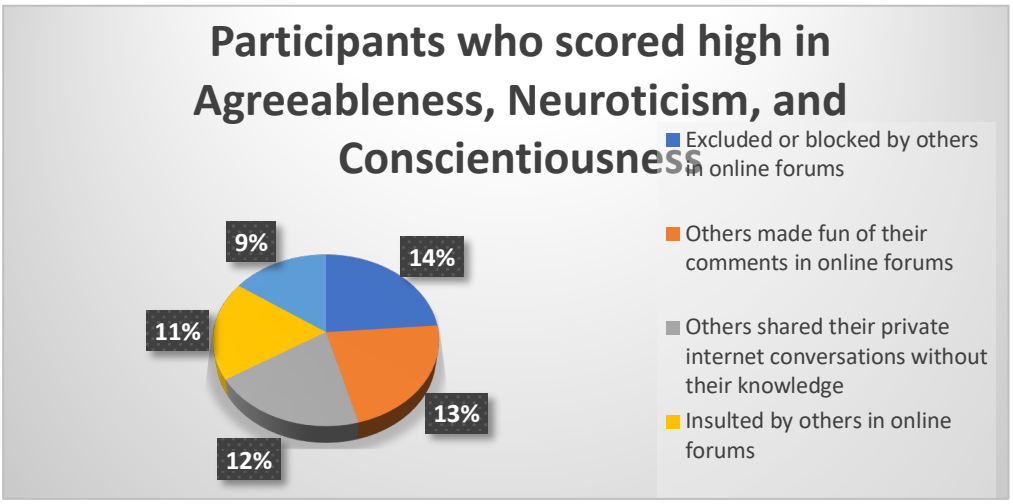

Behaviors that were tested
1. Stealing of Personal Information from computer
2. Stealing of computer nicknames or screen names.
3.Threatening in online forums
4. Insulting in online forums
5. Excluding in online forums by blocking others' comments or removing them.
6. Excluding in online forums by blocking others' comments or removing them.
7. Sharing private internet conversations without the other's knowledge
8. Making fun of comments in online forums
9. Sending threatening or hurtful comments through e-mail.
10. Stealing email access and blocking true owner's access
11. Stealing email access and reading personal messages.
12. Sending threatening and /or hurtful text messages
13. Misleading by pretending to be other gender
14. Published online an embarrassing photo without a permission.

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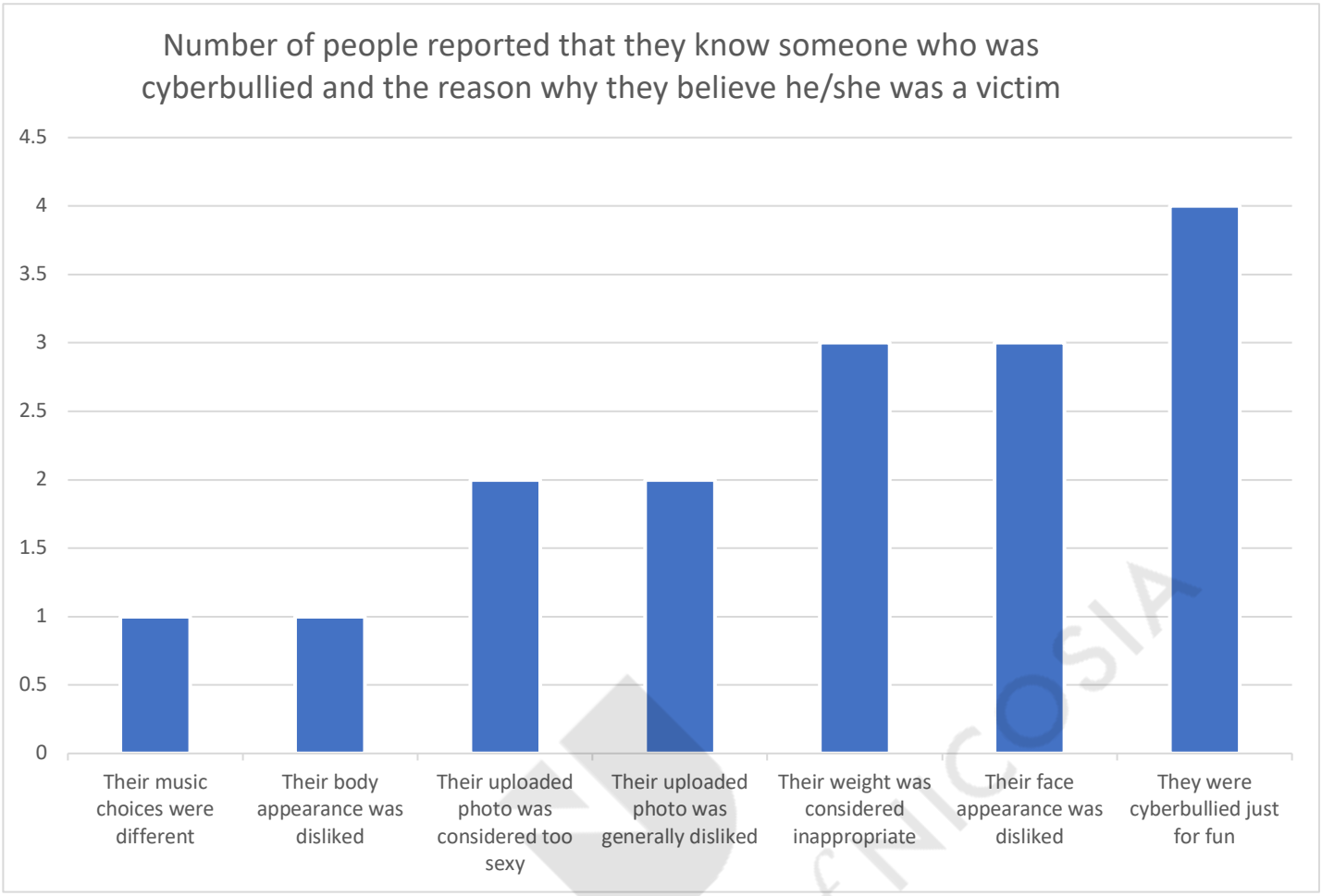

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