EXPLORING THE RELATIONSHIP BETWEEN PERSONALITY TRAITS, CYBERBULLYING VICTIMISATION AND COPING STYLES AMONG ADULTS

By

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Exploring the relationship between personality traits, cyberbullying victimisation and coping styles among adults

I declare that the above dissertation/thesis is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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ABSTRACT

The aim of this study was to gain insight into the relationship between personality and cyberbullying victimisation using a sample of 107 adult participants. The participants were found using the social media site Facebook in particular and assessed by means of the Big Five Inventory and a cyberbullying measure developed by the researcher. The study also explored the relationship between personality and coping behaviours using the COPE Inventory. The study findings indicate that neuroticism and cyberbullying victimisation are correlated, albeit weakly, with the largest correlation being between neuroticism and online impersonation and harassment. In addition, the study found a weak correlation between openness to experience and online impersonation. Coping and personality were moderately correlated; with neurotic individuals and victims of cyberbullying often resorting to maladaptive coping strategies. These results may suggest that there are other, more significant risk factors in the cyberbullying field that merit further exploration, while the relationships highlighted in the study also require further investigation.

Keywords: bullying, cyberbullying, adult victimisation, personality, Big Five Inventory, COPE Inventory, coping, cyberbullying questionnaire, General Aggression Model (GAM), social media.

LIST OF TECHNICAL TERMS

Affect: Refers to emotion.

Arousal: Excitation, both physically and emotionally.

Cognition: A thought, perception or understanding of something.

Emotion-focused coping: Coping that involves attempts to alter one's emotions towards a stressor.

Epistemology: A perspective referring to understanding reality and distinguishing it from belief.

Maladaptive: Unhealthy or abnormal.

Non-parametric: Data that does not fit parametric assumptions such as not being normally distributed.

Ontology: Distinguishing reality from appearance, either objectively or subjectively.

Problem-focused coping: Coping focused on resolving a problem by targeting the stressor directly.

Schemas: Knowledge about a concept and its attributes.

Scripts: Knowledge based on the way in which an individual should behave in different circumstances.

Proximal: Close

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CHAPTER 1: INTRODUCTION

Cyberbullying is a serious problem in the world today and efforts are being made to understand and put an end to it. In South Africa, where the number of cyberbullying cases is growing at an exponential rate, the problem is of particular interest. However, despite this interest, awareness of the issue in South Africa is lagging behind in comparison to the rest of the world.

1.1 THE RESEARCH PROBLEM: CYBERBULLYING

Cyberbullying is a new and dangerous form of bullying which is executed online and is difficult for a victim to avoid. Although the world has benefited significantly from the digital revolution and the popularisation of social media platforms, the world did not expect or prepare for the consequences of these developments.

1.2 THE START OF THE DIGITAL REVOLUTION AND ITS CONSEQUENCES

The digital revolution is believed to have started sometime between 1968 and 1978, with the introduction of the first personal computer – the MITS Altair 8800 in 1975 (Knight, 2014) – and the invention of the first mobile phone in 1973 by Martin Cooper (Ramasubramanian, 2010).

The last decade of the 20th century was characterised by the advent of the world wide web, the internet and email. Between 1998 and 2008, web-based communication gained immense popularity, as did text messaging and mobile computing. In June 2017, it was estimated that there were over 3.9 billion internet users in the world (MMG, 2017).

It is difficult to imagine a world without the home computer, the internet and the mobile phone. However, despite the fact that these developments have impacted positively on the way in which we communicate; there have also been a number of negative consequences, including cyberbullying.

1.3 DEFINITION OF CYBERBULLYING AND ITS DEFINING CHARACTERISTICS

Cyberbullying is defined as "[a]n aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time, against a victim who cannot easily defend him or herself" (Smith, Mahdavi, Carvalho, Fisher, Russell and Tippett, 2008, p. 376). Cyberbullying is commonly perpetrated via mobile phones, computers, SMS (short message services), social media (e.g. Facebook), email or gaming platforms (Kowalski, Agatson, & Limber, 2012).

Certain characteristics of cyberbullying render it more distinct and dangerous as compared to traditional bullying. The seven characteristics relevant to the purposes of this discussion are evaluated below.

In traditional bullying, it is usually possible to identify and avoid the bully, as this form of bullying is generally face-to-face. However, cyberbullies are often anonymous, which not only makes it extremely distressing but also more difficult for the victim to avoid (Kowalski et al., 2012). Kowalski et al. (2012) suggest that the fact that cyberbullying is often anonymous may result in individuals engaging in behaviours they would not normally carry out in person.

While traditional bullying only occurs during a specific time period, such as during school or work hours, cyberbullying may occur at any time of the day because of the medium through which it is perpetrated. Thus, the second characteristic is accessibility (Kowalski et al., 2012).

The victims of traditional bullying often do not report being victimised because of their fear that they will punished by the bullies as a consequence of reporting their behaviour. However, the victims of cyberbullying are often fearful that their technology will be taken away. This is referred to as "punitive fears" (Giumetti & Kowalski, 2015).

Bystanders are also an important characteristic of cyberbullying. The bystanders of cyberbullying may number thousands in a few minutes after the cyberbullying has taken place. According to Brody and Vangelisti (2016), the non-intervention on the part of such bystanders often exacerbates the cyberbullying and its effects on the victim.

According to Patchin and Hinduja (2015), an imbalance of power and the intent to cause harm also characterise cyberbullying. Much like traditional bullying, perpetrators of cyberbullying often target those that are unable to defend themselves.

Finally, repetition is an important criterion for cyberbullying and, in fact, it is what distinguishes cyberbullying from cyber aggression. Cyber aggression refers to aggressive behaviour towards an individual, which takes place online on a sole occasion only. On the other hand, cyberbullying is aggressive behaviour which is directed towards an individual in a repetitive manner for the purpose of causing distress to that individual (Kowalski et al., 2012).

The characteristics of cyberbullying, as discussed above, indicate that it is as dangerous, possibly even more so than traditional bullying and, therefore, it merits more attention than it is currently receiving.

1.4 EFFECTS OF CYBERBULLYING

There are a number of consequences of cyberbullying, including somatic effects (such as sleep disturbances) as well as mental health issues and self- harming behaviours, which may, potentially, prove fatal. The effects of cyberbullying on the victim are briefly discussed below.

The victims of cyberbullying often experience loneliness, low self-esteem (Patchin & Hinduja, 2010), social issues (Kowalski & Limber, 2013), and peer rejection (Patchin & Hinduja, 2010). Their academic abilities may also be negatively affected as a result of the bullying (Kowalski & Limber, 2013). In addition, the victims also tend to experience lower family relationship quality (Tokunaga, 2010, cited in Sticca & Perren, 2013).

The victims of cyberbullying often suffer from poor mental health (Patchin & Hinduja, 2010). As a result, they are more susceptible to becoming paranoid, anxious and depressed which may often lead to substance abuse and, in severe cases, may result in self-harming behaviours and even suicide.

There was one particularly devastating and widely publicised case that demonstrated the severity of cyberbullying as well as the tragedy of suicide as a result of continuous cyberbullying. The suicide of Tyler Clementi is an example of a young man who chose to end his life as a result of cyberbullying (Suicide of Tyler Clementi, 2015). Without Clementi's knowledge, his roommate, Darhun Ravi, had switched on both the webcam in their room and the webcam of friend, Molly Wei, who stayed in the dormitory across the hall from them. While the cameras were on, Ravi and Wei saw Clementi kissing another man. Then Ravi attempted to persuade friends and Twitter followers to watch Clementi via his webcam although it is said that this viewing never occurred (Suicide of Tyler Clementi, 2015). A few days later, Tyler Clementi's body was recovered from the Hudson River. Many individuals such as Tyler have lost their lives as a consequence of cyberbullying.

Public suicides via Facebook Live are becoming more common where individuals publicly commit suicide as a result of cyberbullying. The result of such an action is devastating for both the family and friends that the victim leaves behind. In addition, this devastation is exacerbated because individuals may not only watch the suicide as it is happening in real time but they may also re-watch the video at a later stage (Bever, 2017).

The repercussions of cyberbullying impact not only the victim but also the cyberbully in many cases. In 2016, a Grade 8 student from Cape Town, Laeeqah Jade Ryklief, posted a

video on social media in which she made violent threats against another student at her school. A radio presenter shared this video on his Facebook page and, within just over two hours, there had been 9000 shares of the video and 250 000 views. According to Cape Town Lately (2016), the video was deleted by the presenter a few hours later but, by this time, the damage was irreparable. Gamez-Guadix et al. (2016) and Den Hamer and Konijn (2015, cited in Tomczyk, 2017) explain that the online activities of an individual tend to define them over a longer period of time.

Cyberbullying may prove devastating to both the victim and the perpetrator and, it is therefore important to focus attention on this issue so that cases such as those referred to above may be prevented in the future.

1.5 PREVALENCE OF CYBERBULLYING GLOBALLY

Cyberbullying is prevalent around the world. The statistics on cyberbullying on a global scale at the time of the study are presented below.

According to Reuters (2012), it appeared that India has one of the highest incidence of cyberbullying rates as well as the highest cyberbullying awareness rates. On the other hand, Reuters (2012) found France and Spain to have the lowest incidence of cyberbullying while Portugal, Italy and Turkey have also been found to have the lowest incidence of cyberbullying (Lampert & Donoso, 2012, cited in Bayraktar, 2015). It is, however, prevalent in other European countries and, according to Bayraktar (2015), particularly high in countries such as Estonia, Romania and Sweden.

It has been found that, in South Africa, 37% of young people have admitted to having experienced some form of cyber aggression (Burton & Mutongwizo, 2009) while 10% of parents have suggested that their child has been cyberbullied and 30% claim to know of a child having been cyberbullied.

According to a recent study by Wakefield in 2017, Instagram appeared to be the most frequently used platform for cyberbullying as compared to other social media sites. The results of the study found that 7% of individuals had reported cyberbullying on Instagram, 6% on Facebook, 5% on Snapchat and 2% on Twitter and YouTube.

It is thus clear that cyberbullying is a worldwide problem, which is evident in most countries with access to the internet and social media, with the problem being expected to grow in the future.

1.6 ADULT CYBERBULLYING STATISTICS

At the time of this study there had been limited cyberbullying research conducted on adult samples in either the college or the workplace environment. Nevertheless, recent cyberbullying statistics have demonstrated that the cyberbullying phenomenon is prevalent primarily among adults.

A study based in Turkey examined the prevalence rate of cyberbullying among 666 college students. The study found 55.3% had had experience of cyberbullying (Schenk & Fremouw, 2012).

Cyberbullying was found to be most prevalent among female college students; where more than 27% of students had experienced cyberbullying in their college years, either as a bully or a victim (Kilden, 2015). Researcher Hagen in Kilden (2015) adds that these figures are in line with the figures pertaining to both high schools and primary schools, which are as high.

A study by Mabika and Dube (2017) found cyberbullying to be prevalent among university students at the University of Venda. This cyberbullying was primarily via SMS because the majority of the participants had access only to basic handsets that were unable to connect to the internet.

Regarding workplace cyberbullying, a study by Privitera and Campbell (2009), as cited in Schenk and Fremouw (2012), found that 10.7% of male Australian manufacturing workers union employees had been cyberbullied. Similarly, New Zealand's hotline, NetSafe, found that over 75% of the individuals who had contacted them were over the age of 18 (RNZ, 2016).

According to a survey conducted by the Pew Research Center, 40% of American adults claim that they have been victimised online. More specifically, 32% of women and 22% of men have been called offensive names while 24% of women and 20% of men have been purposefully embarrassed online (Hegman, 2014). It is also important to note that a significant number of adult cyberbullying victims are homosexual (Henderson, 2015).

According to Odhiambo (2017), cyber harassment in Kenya is growing exponentially, with one in every five adult women having been harassed online. A good example of adult

cyberbullying in South Africa is the cyberbullying of rugby star, Siya Kolosi, and his wife, Rachel Kolosi. They have been the victim of much criticism over their mixed marriage over the years through social media and, according to Times Live (2017), are hoping for better legislative measures against cyberbullying in South Africa.

Although the majority of cyberbullying research has focused on children as the victims, there has clearly been an increase in adult cyberbullying, which is not receiving the attention it deserves.

1.7 WHAT HAS BEEN DONE SO FAR TO COMBAT CYBERBULLYING?

With the growing awareness of cyberbullying, the world is beginning to adapt to this phenomenon by implementing legislative measures against it and by campaigning and fundraising in an effort to combat it. Some countries are ahead of others in these developments.

The strongest cyberbullying law passed to date was passed in Canada. This law is known as the 'Under the Education Act' and results in suspension from school if an individual is caught cyberbullying (NoBullying, 2015). The aim of the US Federal Anti-Cyberstalking Law is to prosecute people who use electronic means in order to repeatedly harass or threaten someone (NoBullying, 2015). At the time of this study the US had been more successful in implementing legislative measures and campaigning against cyberbullying as compared to Europe.

Turton (2017) points out that China has implemented strict legislation against cyber harassment in the workplace while, in 2015, the Harmful Digital Communications Bill was passed in New Zealand in terms of which an individual found cyberbullying faces 2 years of imprisonment or, alternatively, a $50 000 fine.

1.7.1 Foundations, organisations and campaigns against cyberbullying

The Tyler Clementi Institute for internet Safety was launched in 2015 at a New York law school and aims to provide legal protection to individuals being cyberbullied. According to Wichert (2015) this institute is the first of its kind. Wichert (2015) explains that the "TCIIS will also hold conferences, workshops, and symposia focused on education and research, and host a hotline where victims of harassment can learn about their rights and seek justice".

Cyberbullying awareness campaigns have become popular around the world, particularly in the USA, Canada and Spain (Hertzog, 2015). CyberSmile is an international cyberbullying awareness campaign which was launched in 2010 and which targets all forms of online abuse by providing support to the victims of cyberbullying by means of social media interaction. The Foundation Alia 2 in Spain has held a number of awareness campaigns, providing support to the victims of cyberbullying. In 2006 the United States, more specifically, PACER.org, announced a yearly week-long campaign known as the National Bullying Prevention Awareness Month (Hertzog, 2015).

However, while it would seem that the rest of the world has been focusing increased attention on the cyberbullying problem, South Africa and the rest of Africa appear to be lagging behind with such initiatives.

1.8 WHAT HAS BEEN DONE IN SOUTH AFRICA?

Although South Africa appears to be behind in terms of legislative measures and organisations against cyberbullying, the next section will highlight the current laws and private sector contributions, which aim to put an end to cyberbullying in the country.

1.8.1 Legislative measures against cyberbullying

Despite the fact that cyberbullying is a serious problem in South Africa, at the time of the study there was minimal legal protection provided for victims (Popovac & Leoschut, 2012). There is, however, the Film and Publications Act, which evaluates the media in respect of its suitability for various audiences. In addition, the Film and Publications Board is now in the process of creating awareness programmes related to cyberbullying.

Based on the Protection from Harassment Act (2011), the victims of cyberbullying in South Africa may apply for a protection order at the nearest magistrate's court. At the time of the study an individual could be legally charged with crimen injuria, which refers to the serious violation of the dignity and privacy of a person as well as criminal defamation which refers to the unlawful publication of information relating to another individual and which damages his or her reputation (Burton & Mutongwizo, 2009). The perpetrator may also be sued (IBID).

The Hate Speech Bill, which was approved in 2016, "aims to curb racist utterances and other criminal conduct motivated by bias, prejudice or intolerance" (Davis, 2016). According to Davis (2016), there is a need to protect those who are the victims of racism, sexism, homophobia and xenophobia.

The Cybercrimes and Cybersecurity Bill was published in January 2017. According to Ensor (2016), "[t]he bill aims to establish the capacity to deal with cybersecurity and to protect critical information infrastructures". For example, service providers and financial institutions will be fined up to R50000 if an incident of cyberbullying is not timeously reported (Pierce, 2017).

1.8.2 Private sector contributions

The private sector has made attempts to combat cyberbullying of its own initiative. For example, mobile service providers, MTN, Cell C and Vodacom, blocked access to 'Outoilet' – a site often used for cyberbullying (Popovac & Leoschut, 2012). According to Gontsana (2013), 'outoilet' means 'old toilet' in Afrikaans. This site was said to have been directed mainly at the Cape Flats youth – a population beset by special socioeconomic problems.

There has also been a growth in non-profit organisations in South Africa dedicated to combating the problem. SaveTNet is a leading organisation of its kind in the country, which aims to create an awareness of responsible digital engagement. In addition, SaveTNet work with partners in support of the victims of cybercrime and cyberbullying.

Despite the fact that the rest of the world appears to be targeting cyberbullying at a faster rate than South Africa, it is nevertheless believed that a greater awareness of this issue may be achieved.

1.9 WHAT SOCIAL MEDIA PLATFORMS ARE DOING TO STOP CYBERBULLYING

Social media sites such as Facebook, Snapchat, Twitter and Instagram have all developed safety measures that target cyberbullying.

Parent24 (2016) highlights that, in 2016, Facebook released both a new safety centre and a bully prevention hub which includes safety precautions such as locking down your login, informing Facebook about anything that is abusive by nature, understanding with whom one is sharing, checking who is able to tag you in posts and reviewing your privacy and security settings. In addition, in November 2016, Facebook created a 'mute' button, which a user may utilise to block tweets based on certain keywords and phrases (Sadam, 2016).

The CEO and founder of Facebook, Mark Zuckerberg, made a public announcement promising to create better prevention tools against online suicide and self-harm. Zuckerberg believes that artificial intelligence may help with this and suggests that these systems will "scan for posts as well as comments that indicate suicidal ideation and report them to the community operations team for review and possible intervention" (Bever, 2017). Suicide prevention tools also extend to Facebook Live, with those individuals who need help receiving live chat support (Bever, 2017).

Twitter is making it difficult for permanently banned trolls to sign up using different usernames while a safe search option will be implemented with the aim of eliminating potentially harmful content. In addition, Twitter has promised to begin "identifying and

collapsing potentially abusive and low-quality replies" (Harp, 2017). Furthermore, in October 2017, Fingas reported that Twitter has plans to take action in relation to violent tweets and hate imagery in an effort to ban and suspend hate groups. It also plans to eliminate sexual harassment and non-consensual nudity, allowing bystanders to report such actions.

Social networks and technological companies in the UK are now required to pledge that they will stop trolling, sexting and cyberbullying on their platforms. According to Nash (2017), refusal to accept these new conditions may lead to 'government sanctions'.

It is thus clear that social media platforms are taking serious measures in order to put an end to the cyberbullying problem. The joint effort on the part of all these sectors should, potentially, result in a decline of both cyberbullying as well as the devastating suicide rate in the near future.

1.10 OPERATIONAL DEFINITION OF PERSONALITY

Personality is a psychological construct that cannot be directly measured. It is measured through observation in a number of manners. The current study focuses on the Big Five Inventory, and through the lens of this model, your personality is determined by the way in which you act toward certain situations and circumstances. This inventory is explained in detail in the chapters that follow. These principles are shared with the Trait Theory of Personality by Raymond Catell, where your personality is defined by how you act- your traits. However, Catells' 16 personality factors cover a wider variety of personality traits from abstractedness, to perfectionism, to self-reliance – measured on a Likert-type scale that includes statements that the participant rates based on applicability to them (Cherry, 2018). However, it must be noted that these descriptions and traits are not fixed- the Big Five and

other trait theories are dimensions of personality, and an individual often encompasses all of these characteristics to a greater or lesser extent. On the other hand, there are behavioural theories to understanding personality, which view personality as deriving from learned behaviours and experiences- an example of this is Skinners Theory of Personality (Sincero, 2012).

1.12 PURPOSE OF THE STUDY

The literature has shown that personality is highly correlated with both bullying behaviour and victimisation (Rigby 2007). However, significantly less is known about whether this also applies to that of the cyberbullying paradigm.

It is hoped that a better understanding of the relationship between personality and cyberbullying may enable professionals, teachers and parents to target this problem from a new perspective. While interventions and research are usually aimed at the bullies themselves, constructing a profile of those who are most likely to become the victims of cyberbullying may be invaluable in the development of future interventions and preventative measures.

There is also little mention of the relationship between personality and coping with cyberbullying in the literature. A better understanding of this relationship may play an important role in enabling professionals to target those individuals who are likely to adopt maladaptive coping styles and to devise interventions to mitigate such strategies. It is felt that an understanding of cyberbullying in its totality is vital in bringing it to an end.

1.13 OBJECTIVES OF THE STUDY

This study aims to achieve the following five objectives, namely, exploring the dimensions and patterns in the personality traits of cyberbullied victims, and comparing the cluster of personality traits – neuroticism, agreeableness, openness to experience, extraversion and conscientiousness – with the cluster of cyberbullying subtypes – harassment, denigration, cyberstalking, exclusion and impersonation. In addition, the study aims to determine the relationship between personality profile and type of cyberbullying victimisation, exploring whether the victims of cyberbullying share common personality traits and providing a framework in terms of which risk may be assessed and the appropriate coping strategies taught.

1.14 RESEARCH QUESTIONS

This proposed research project will attempt to answer the following four research questions:

Research Question 1): Is there a relationship between personality and cyberbullying victimisation?

Research Question 2): Is there a strong positive relationship between neuroticism and type of cyberbullying victimisation?

Research Question 3): Is there a relationship between personality and coping with cyberbullying?

Research Question 4): Is there a strong positive relationship between neuroticism and maladaptive coping strategies?

These questions are explored using Spearman's Correlation Coefficient and Cluster Analysis, which should, potentially, provide a clearer indication as to whether these relationships exist than is currently the case. With the literature review underlined in chapter two, the results are likely to indicate a correlation particularly between personality trait neuroticism, and cyberbullying. In addition, an in accordance with literature overviewed in chapter 2, the results are likely to indicate a correlation between neuroticism and maladaptive coping styles and strategies.

1.15 SUMMARY

This chapter provided a discussion on the defining characteristics of cyberbullying as well as the devastating consequences of cyberbullying and magnitude of the problem worldwide. This was followed by an overview of the statistics on cyberbullying in general worldwide, as well as among adult victims. In addition, the chapter focused on legislative measures, private sector contributions and social media efforts to end cyberbullying. A brief overview of the operational definition of personality is highlighted. Finally, the purpose of the study, the research objectives and the research questions were underlined.

Chapter two will evaluate the theoretical background of the cyberbullying phenomenon, discuss the types of cyberbullying and present a critical overview of the General Aggression Model. This is followed by a critical discussion of the Big Five Inventory of personality. A review of the literature available on personality and cyberbullying follows. Chapter 3 provides an overview of the research design used while Chapter 4 presents a report of the study's results. The final chapter discusses relevant findings in conjunction with supporting literature. This is followed by a brief overview of the implications of the

study as well as its limitations and recommendations for future research. The study is then concluded.

It is believed that a greater understanding of this issue will enable all sectors to be more effective in putting an end to cyberbullying. This study aims to gain a clearer understanding of the victim's perspective, as research in this regard is limited. More specifically, it is of particular interest to the study to understand the potential risk factors involved in victimisation, for example, personality.

CHAPTER 2: THEORETICAL BACKGROUND AND LITERATURE REVIEW

There has recently been a marked growth in the research into cyberbullying. However, there is still uncertainty with regard to the theoretical basis of the phenomenon of cyberbullying. A number of theories have been proposed in an effort to gain a clearer understanding of the phenomenon. Current theory focuses predominantly on the link between the perpetration of cyberbullying and victimisation. However, only one theory thus far has attempted to understand the impact of personality on this dynamic, namely, the General Aggression Model.

Chapter two begins with a discussion of the methods used in the study to review existing literature on cyberbullying together with a brief overview of the five types of cyberbullying relevant to this study. This is followed by an evaluation of the key principles of the General Aggression Model, and a critical discussion of this theoretical framework.

The chapter then provides an overview of the Big Five Inventory, as well as the key assumptions underpinning this particular method of assessment along with a critical evaluation of the Big Five Inventory. In addition, current research on personality and cyberbullying is assessed.

Finally, the COPE Inventory is briefly discussed in terms of its key assumptions and drawbacks. Current research on personality and coping with cyberbullying is also outlined and evaluated.

2.1 METHOD

Existing literature and journal articles were consulted using Google Scholar, Mendeley and the UNISA online library. The online searches were conducted using a number of relevant keywords such as cyberbullying victimisation, cyberbullying and personality, cyberbullying and coping, and adult cyberbullying. In addition, relevant literature was also sourced from Google Books.

2.2 TYPES OF CYBERBULLYING

This study focuses on the five specific types of cyberbullying because they are the five widely accepted types of cyberbullying, which are frequently cited in literature on cyberbullying (Willard, 2007).

Harassment is referred to as the repeated sending of rude, offensive and insulting messages to an individual (Chadwick, 2014). Cyberstalking is defined as "Repeatedly sending messages which include threats of harm or are highly intimidating, or engaging in other online activities which make a person afraid of his or her safety" (Chadwick, 2014, p. 5). It has been found that the majority of cyber stalkers are college students (Kemp, 2016). Exclusion refers to cases where an individual or group of people intentionally excludes someone from an online group (Willard, 2007). Denigration is referred to as "Sending or posting gossip or rumours about a person to damage his or her reputation or friendships" (Willard, 2007). Finally, impersonation refers to instances where an individual pretends to be another individual, and sends or posts information to another individual in order to get him/her into trouble or destroy his or her friendships (Willard, 2007).

Specific personality traits may place an individual at a greater risk of cyberbullying victimisation. The General Aggression Model outlined below highlights the theory underlying this assertion.

2.3 THE GENERAL AGGRESSION MODEL

While the theory of cyberbullying is still in the process of being constructed (Bauman & Yoon, 2014), there was, nevertheless, a single model available on which to base this study. This model is the only model, which has been proposed to theorise how personality may influence the perpetration of cyberbullying and victimisation.

According to the General Aggression Model, cyberbullying behaviours stem from social, cognitive, personality, developmental and biological factors which influence cognition, feelings and arousal with the latter then influencing the appraisal and decision making processes and thus affecting behavioural outcomes (Allen, Anderson, & Bushman, 2017).

The GAM has been found to be a theory of cyberbullying, which is frequently cited and widely supported, therefore suggesting that it is a "comprehensive, integrative, framework for understanding aggression" (Allen et al., 2017, p. 3).

The GAM includes elements from a number of domain-specific theories of aggression, including cognitive neo-association theory, social learning theory, script theory, excitation transfer theory, and social interaction theory, which "helps in understanding aggression from a wide variety of contexts" (Allen et al., 2017, p. 246)

The GAM has been used in a variety of areas in research including understanding aggression in contexts such as domestic violence, intergroup violence, media violence effects, suicide, and personality disorders (Allen et al., 2017). However, the area which has recently been the main focus of attention is the application of the GAM to the cyberbullying phenomenon.

2.3.1 Key principles of the GAM applied to cyberbullying

The GAM consists of cognitive knowledge structures known as scripts or schemas. Scripts are referred to as "knowledge structures that contain information about how people (or objects) behave under varying circumstances" while schemas are defined as "knowledge structures that represent substantial information about a concept, its attributes, and its relationships to other concepts" (Baumeister & Bushman, 2014, p. 154). Allen et al. (2017, p. 3) explain that "GAM posits that human aggression is heavily influenced by knowledge structures, which affect a wide variety of social-cognitive phenomena including perception, interpretation, decision, and behaviours".

The GAM comprises: 1) person and situational factors (inputs), 2) cognitive, affective and arousal routes, and 3) the appraisal and decision-making processes that result in behaviours (outcomes) (Kowalski, Giumetti, Schroeder, & Lattanner, 2014). These are all outlined below.

2.3.1.1 Person factors

Person factors refer to the various factors and characteristics of an individual that may influence or contribute to cyberbullying behaviours or the victimisation of the individual.

2.3.1.2 Gender

Kowalski et al. (2014) suggest that girls are more likely than boys to experience cyberbullying, both as the victims and as the perpetrators. However, some studies suggest that boys are more likely than girls to perpetrate cyberbullying (Li, 2006, cited in Kowalski et al., 2014). On the other hand, a study by Sourander et al. (2010), as cited in Kowalski et al. (2014) suggests that girls are more likely to be targets of cyberbullying. It is thus clear that views are mixed with other researchers, such as Hinduja and Patchin (2008, cited in Kowalski et al., 2014), suggesting that there is no gender difference.

2.3.1.3 Age

Research suggests that cyberbullying incidents often peak during middle school (cited by Varjas et al., in Kowalski et al., 2014). However, other research studies suggest that the age differences depend on the cyberbullying method used. In their study Kowalski, Giumetti, Schroeder and Reese (2012) found that over 30% of college student respondents indicated that their first experience of cyberbullying had been in college.

2.3.1.4 Motives

Dooley et al. (2009, cited in Kowalski et al., 2014) suggest that some people may engage in cyberbullying in retaliation to their having been bullied themselves while others may engage in cyberbullying in order to demonstrate technological skill, for fun or to feel powerful. Gradinger, Strohmeier, and Spiel (2012, cited in Kowalski et al., 2014) found that the most common motive was anger.

2.3.1.5 Personality

Person factors refer to individual differences, which influence the way in which a person may respond to a particular situation. Allen et al. (2017 p. 76) explain that, "These factors tend to be fairly stable over time and across situations as long as the person consistently uses the same knowledge structures. Through this lens, personality can be considered the summary of a person's knowledge structures".

According to Allen et al. (2017), unstable high self-esteem, narcissism, aggressive behavioural scripts, high trait anger- or otherwise known as frequent anger differing in intensity (Siegman & Smith, 1994), certain personality disorders, high neuroticism, low agreeableness, and low conscientiousness are all person factors which are considered as risk factors in relation to aggression. On the other hand, low neuroticism, high agreeableness, and high conscientiousness are all also seen as protective factors, thus making aggressive behaviours less likely (Allen et al., 2017).

Allen et al. (2017) explain that episodes of aggression or non-aggression may influence the development of the aggressive knowledge structures, which may, eventually, influence personality.

2.3.1.6 Psychological states

Both the victims and the perpetrators of cyberbullying often score higher in depression and anxiety. Kowalski et al. (2014, p. 1112) suggest that, "One issue with these correlations, however, is that, whereas problems such as depression and anxiety may be

predictors of involvement in cyberbullying, they may also be consequences of the behaviour".

2.3.1.7 Socioeconomic status and technology use

Wang, Iannotti, and Nansel (2009, cited in Kowalski et al., 2014) found a positive relationship between SES and cyberbullying perpetration and victimisation. It is suggested that people of a higher SES have access to technology and also spend more time using it. Kowalski et al. (2014, p. 1112) explain that "[i]ndividuals who spend more time on the internet will (a) develop greater expertise with the use of technology and (b) probabilistically be more likely to become involved with cyberbullying as victim or perpetrator".

2.3.1.8 Values and perceptions

The perpetrators of cyberbullying may engage in moral disengagement. This is referred to as "reframing their aggressive actions as more benign in intent, as less harmful in their consequences or as emanating from reprehensible conduct on the part of the victim" (Almeida, Correia, Marinho, & Garcia, 2012; Bandura, 1999; Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Bauman, 2010; Lazuras, Barkoukis, Ourda, & Tsorbatzoudis, 2013, cited in Kowalski et al., 2014, p. 1113).

High levels of hostile attributional bias have been said to increase the likelihood of an individual becoming a victim of cyberbullying (Almeida et al., 2012, cited in Kowalski et al., 2014). Hostile attributional bias is referred to as often interpreting others' behaviours as having hostile intent.

2.3.1.9 Other maladaptive behaviour

In a study by Ybarra and Mitchell (2014, as cited in Kowalski et al., 2014), online bullies/victims reported more frequent alcohol and tobacco use in comparison to non-involved individuals. These individuals also engaged in damaging property, experienced trouble with law enforcement, assaulted people and stole. According to Hinduja and Patchin (2008, cited in Kowalski et al., 2014), victims of cyberbullying are often absent from school, and it is suggested that fighting is also linked to cybervictimisation.

2.3.2 Situational factors pertaining to cyberbullying

Situational factors influencing cyberbullying include provocation and perceived support, parental involvement, school climate and perceived anonymity. These factors are discussed below.

2.3.2.1 Provocation and perceived support

In a study by Kowalski, Morgan, and Limber (2012, cited in Kowalski et al., 2014), it was found that higher rates of involvement as either the victim or perpetrator of traditional bullying were linked to higher rates of involvement as either a victim or perpetrator of cyberbullying.

Fanti et al. (2012, cited in Kowalski et al., 2014) found that social support plays a vital role in whether or not an individual engaged in cyberbullying behaviours with cyber victimisation being found to be negatively correlated with social support. Thus, social support is clearly an important preventative factor with regard to cyberbullying.

2.3.2.2 Parental involvement

Ybarra and Mitchell (2004, cited in Kowalski et al. 2014) found parental involvement to be an important factor with regard to whether or not an individual engaged in cyberbullying behaviours with cyberbully perpetrators often reporting weak emotional bonds with their parents, frequent discipline and less frequent or no monitoring of their online activities. Aoyama, Utsumi, and Hasegawa (2012, cited in Kowalski et al. 2014) found a negative relationship between the monitoring of online activities and cyber victimisation.

2.3.2.3 School climate

An individual who perceives the school climate to be trusting, fair and supportive has been found to have less chance of engaging in cyber bullying behaviours because these behaviours often result from frustration as opposed to his or her counterparts (Williams & Guerra, 2007, cited in Kowalski et al., 2014).

2.3.2.4 Perceived anonymity

It would appear that perceived anonymity increases the number of individuals who consider engaging in cyberbullying behaviours. Kowalski et al. (2014) suggest that perceived anonymity often leads to a 'disinhibition effect', suggesting that people may say things that they normally would not say when speaking directly with an individual.

2.3.3 Distal processes

Distal processes refer to the way in which biological and environmental factors influence personality through changes in the knowledge structures (Allen et al., 2017).

Biological aspects that may increase the likelihood of an aggressive personality developing include: ADHD, impaired executive functioning, hormone imbalances, low serotonin and low arousal (Anderson & Carnagey, 2014, cited in DeWall, Anderson, & Bushman, 2011).

On the other hand, environmental factors include cultural norms which support violence, maladaptive families or parenting, difficult life conditions, deprivation, victimisation, violent neighbourhoods, violent or antisocial peer groups, group conflict, diffusion of responsibility and chronic exposure to violent media (Anderson & Carnagey, 2014, cited in DeWall et al., 2011).

Person and situational inputs influence cognitive, social, emotional and behavioural outcomes via three routes, namely, cognition, affect and arousal (DeWall et al., 2011). Cognition is otherwise understood as thoughts, whereas affect is referred to as mood and emotion where input variables may play a role in altering an individual's emotions (Allen et al., 2017). Arousal, on the other hand, is defined as a change in psychological and physical states (Allen et al., 2017).

2.3.4 Routes

These three routes are responsible for an individual's current internal state and emotions and alterations in these variables may result in aggressive behaviours. However, Allen et al. (2017) explain that these three variables may also influence one another. For example, anger may encourage hostile thoughts and increase arousal. In addition, Allen et al. (2017) indicate that some factors may influence aggression primarily through one route –

"For example, weapons increase aggression by priming aggressive thoughts" (Allen et al., 2017, p. 77).

2.3.5 Proximal processes

Anderson and Bushman (2002, p. 40), as cited in Kowalski et al., (2014, p.1114), define proximal processes as follows: "Results from the inputs enter into the appraisal and decision processes through their effects on cognition, affect, and arousal".

2.3.5.1 Proximal process and cyber victimisation

Person and situational factors such as, for example, high neuroticism may predispose an individual to cyberbullying with these person and situational factors influencing the internal states of an individual. Thus, after a cyberbullying encounter an individual may create internal states in response to the encounter such as worried thoughts and heightened arousal. Kowalski et al. (2014) highlight that the internal states of the victim will be influenced only after the event has occurred. The individual concerned then engages in appraisal and decision-making processes based on his or her internal states.

Accordingly, if the victim perceives the encounter as stressful and beyond his or her control, this would often result in the victim engaging in impulsive behaviour and maladaptive coping such as substance abuse (victim profile). However, according to Menesini and Spiel (2012), repeated exposure to violence often contributes to the development of aggression, making aggressive cognitions and memory chronically accessible and difficult to change (victim/bully profile). The reason for this is that the input variable personality or "knowledge structures" have changed, thus affecting any subsequent

cyberbullying encounter. However, if the victim feels that he or she possesses sufficient cognitive and emotional resources to cope, this may result in a more controlled or thoughtful behavioural response, thus having a positive impact on future encounters.

2.3.5.2 Proximal processes and the perpetration of cyberbullying

The same principles as discussed above apply to cyberbullying perpetration with person factors and situational factors influencing the internal state of the individual. Should the individual not possess sufficient emotional and/or cognitive resources, "the behavioural script that was activated during immediate appraisal is enacted, with little or no awareness of a decision having been made" (Kowalski et al., 2014, p. 1115). In other words, the individual engages in bullying without much forethought. Kowalski et al. (2014, p. 1115) suggest that "Once reappraisal has occurred, the person decides on and carries out a thoughtful action, which can be aggressive or nonaggressive" while Allen et al. (2017, p. 77) explain that "[e]ach cycle of the proximate processes serves as a learning trial that affects the development and accessibility of aggressive knowledge structures".
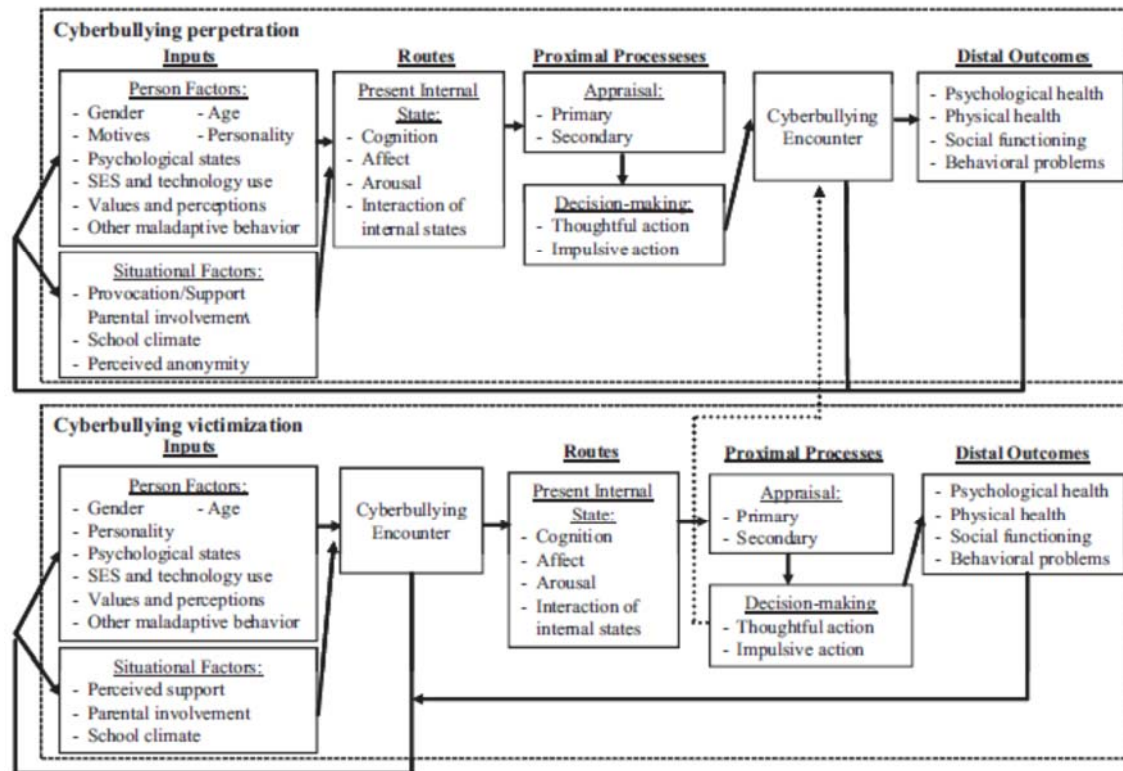
Figure 2.1. Cyberbullying and the GAM

Source: Kowalski et al. (2014).

2.3.6 Critique of the General Aggression Model

Despite the fact the GAM is based on comprehensive and well-researched theory, it has been

criticised. DeWall et al. (2011) explain that the GAM offers a comprehensive perspective of

human aggression on a general level, thus suggesting that domain-specific theories may be

better able to predict specific behaviours as compared to the GAM. They elaborate that "[t]he

disadvantage of domain-specific aggression theories, however, is that they cannot capture the

complexity of human aggression and violence" (DeWall et al., 2011, p. 255). DeWall et al.

(2011, p. 10) suggest that "[n]ew research is needed to further develop GAM as a

comprehensive model of human aggression and violence".

Nevertheless, even though cyberbullying theory is in its early stages of theory building (Bauman & Yoon, 2014), the GAM effectively reflects on the role of personality in cyber-victimisation and perpetration, unlike any other proposed cyberbullying theory.

2.4 MODELS OF PERSONALITY

Although there are a number of personality models and theories available, the Big Five model of personality was deemed to be the most appropriate to the purposes of this study. The section that follows highlights the key aspects of the Big Five model, provides a brief explanation of the HEXACO personality model, discusses the historical development and presents a critique of the Big Five.

2.4.1 The Big Five Model of personality

The Big Five Model of personality suggests that personality is divided into 5 main traits, namely; openness to experience, conscientiousness, extraversion, agreeableness and neuroticism, all of which individuals possess at varying degrees. The five factors of this model are briefly outlined below.

2.4.1.1 Openness to experience

The first factor in the Big Five, namely, 'openness to experience', refers to "people that are curious and demonstrate a need for variety" (Brislin & Lo, 2006, p. 1998). It is said that this factor changes significantly with age as people develop a variety of interests throughout the years which lead to increased openness to experience (Brislin & Lo, 2006).

Individuals that are more open to experience are imaginative, artistic, excitable and unconventional (John & Srivastava, 1999).

2.4.1.2 Conscientiousness

Conscientiousness refers to a trait, which characterises people who are organised and tend towards order to a certain degree (Brislin & Lo, 2006). Individuals that score high on this trait are often disciplined and persistent and are usually high achievers (Brislin & Lo, 2006). In addition, conscientious individuals are often efficient and dutiful and are not impulsive (John & Srivastava, 1999).

2.4.1.3 Extraversion

Extraversion is said to be the most debated personality factor in the Big Five Inventory (Brislin & Lo, 2006). Lucas and colleagues (2000, cited in Brislin & Lo, 2006) found that an extraverted individual's sociable nature is a by-product of reward sensitivity with such an individual engaging in social behaviour in order to satisfy this need for reward. However, McCrae and John (1992, cited in Brislin & Lo, 2006) claim that highly extraverted individuals are sociable, warm and assertive and also often dominating. They are also said to seek excitement while they tend to often experience positive emotions (Brislin & Lo, 2006). These individuals are also energetic by nature (John & Srivastava, 1999).

2.4.1.4 Agreeableness

Individuals that are higher in agreeableness often display sympathy and trust and tend to cooperate with others (Brislin & Lo, 2006). Brislin and Lo (2006) explain, however, that such individuals are not 'pushovers' or 'yes men' but, rather, that they seek harmony. In

addition, these individuals are straightforward, not demanding, warm, not stubborn and modest (John & Srivastava, 1999).

2.4.1.5 Neuroticism

Finally, 'neuroticism' is a factor, which is typical of "people with a predisposition to experience negative affects" (Brislin & Lo, 2006, p. 1998). Examples of such negative affects include anxiety, anger, depression, hostility, self-consciousness, impulsiveness and vulnerability (Brislin & Lo, 2006). Individuals that score high in neuroticism are also often shy and reserved (John & Srivastava, 1999).

The Big Five model is a widely accepted model of personality and is frequently cited in literature within the social sciences, although seeing a limited presence in the field of cyberbullying (Festl & Quandt, 2013). Recent research has pointed to a possible additional factor, namely, the honesty and humility factor, with this factor being an additional model of personality, which is known as the HEXECO model (Ashton, Lee, & De Vries, 2014).

2.4.2 HEXECO model of personality

The HEXACO model of personality includes all of the 5 traits of the Big Five model, with an additional trait known as the honesty-humility factor. Individuals that score high on this trait often avoid manipulating others or breaking rules and also do not consider themselves to be superior to others (Smith, 2016). The HEXACO model however is a recently developed model and is, therefore, not widely cited in the literature. The Big Five model was selected for use in this study in view of its wider presence and support in the literature as compared to the HEXACO model. Its inventory has been widely considered to

be a generally accepted measure of personality both in research and in practice within the social sciences field since the early 1980s (Ashton, 2017). In addition, there is only one recorded study, which examined the relationship between personality and cyberbullying using the HEXACO measure. Accordingly, for all of the reasons indicated above, the Big Five Inventory was deemed to be the most suitable model and measure for the purposes of this study.

2.4.3 Critique of the Big Five model of personality

The Big Five has been criticised for not including a sufficiently comprehensive theory due to its foundation being based on the findings of factor analysis (Block, 2010). However, John and Srivastava (1999) suggest that it was not created to be a comprehensive theory of personality, but rather "it was developed to account for the structural relations among personality traits" (Goldberg, 1993, cited in John & Srivastava, 1999, p. 124). John and Srivastava (1999) explain that the model is descriptive rather than explanatory, that it emphasises regularities in behaviour and that it focuses on variables.

2.4.4 Personality and cyberbullying research

Despite being a universally accepted measure of personality there is relatively little to be found about the Big Five Inventory in cyberbullying literature and it was, therefore, deemed important to explore this relationship more deeply.

Although there is limited research into cyberbullying there has been even less focus on the role of personality in cyberbullying victimisation and perpetration. It is hoped that a

better understanding of this relationship may help increase the understanding of the risk factors of cyberbullying, thus allowing for the development of improved interventions. Current research exploring the relationship between cyberbullying perpetration and victimisation using the Big Five Inventory is discussed in the section below.

2.4.4.1 Cyberbullying perpetration and the Big Five Inventory

Conscientiousness, extraversion and agreeableness are all significant predictors of cyberbullying (Peluchette, Karl, Wood, & Williams, 2015). A study conducted by Smith (2016) assessing the relationship between personality and cyberbullying using the HEXACO inventory found conscientiousness to significantly predict cyberbullying behaviours. Resett and Gámez-Guadix (2017) found that cyberaggressors scored lower in conscientiousness as compared to face-to-face bullies.

Kokkinos, Baltzidis, and Xynogala (2016) studied the personality correlates of Facebook bullying among undergraduate students using the Big Five Inventory. They found agreeableness to significantly predict cyberbullying behaviours. In other words, it would appear that cyberbullies score low on agreeableness, thus indicating less tolerant behaviours and a tendency to criticise others (Festl & Quandt, 2013). Festl and Quandt (2013) interestingly found that individuals who were both perpetrators and victims, as well as just victims or perpetrators, scored low in agreeableness, whereas individuals who had not engaged in cyberbullying in any way ranked 'positively' in this dimension. Similarly, Semerci (2017) found agreeableness to be the weakest positive predictor of bullying behaviour while a study by Van Geel, Goemans, Toprak, and Vedder (2017) found agreeableness to be positively correlated with cyberbullying behaviour.

On the other hand, Resett and Gámez-Guadix (2017) found cyberagressors to score higher in agreeableness as compared to traditional aggressors. Festl and Quandt (2013) found that cyberbullies scored higher in extroversion while a study by Semerci (2017) found extraversion to be a significant predictor of cyberbullying behaviour.

Cyberagressors have been found to score lower in neuroticism as compared to the perpetrators of traditional bullying (Resett & Guadix, 2017) while Celik, Atak, and Erguzen (2012) found neuroticism to be the leading predictor of cyberbullying behaviours. On the other hand, a study by Semerci (2017) found neuroticism to be the weakest predictor of cyber bullying behaviours.

In addition, Semerci (2017) found openness to experience to be the leading predictor of cyberbullying perpetration, stating that, "students who are open to experience, change and personal development, along with a creative, intellectual and imaginative personality, are less likely to become a cyberbully and be bullied" (p. 219).

2.4.4.2 The Big Five Inventory and cyberbullying victimisation

There is limited literature available on the relationship between personality and cyberbullying victimisation risk using the Big Five Inventory. The literature discussed below evaluates studies that measure this relationship by means of either the Big Five or instruments similar to it.

Extraversion and agreeableness were found to result in an individual being more prone to cyberbullying victimisation (Celik et al., 2012). Festl and Quandt (2013) found

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cyberbullying victims to be more reserved individuals. A study by Smith (2016) similarly found a significant relationship between victimisation and extroversion with cyberbullying victims scoring low in this domain. Similarly, Kwan, and Leung (2016) found a strong relationship between extraversion and cybervictimisation.

A study by Kowalski et al. (2012) similarly found those that are low in agreeableness to be more prone to victimisation. However, Festl and Quandt (2013) have found agreeableness to be a weak predictor of victimisation. Similarly, Kwan and Leung (2016) found a negative relationship between cyber victimisation and agreeableness.

Semerci (2017) found openness to experience to be the leading predictor of cybervictimisation, Peluchette et al. (2015) found openness to experience to be a significant predictor of cyberbullying victimisation while Festl and Quandt (2013) found that cyberbullying victims manifested a high degree of openness.

Smith (2016) found conscientiousness to significantly predict cybervictimisation while Kwan and Leung (2017) suggested that conscientiousness is one of the leading predictors of cyberbullying victimisation. More specifically, it has been found that cyberbullying victims have low levels of conscientiousness (Kowalski et al., 2012). Similarly, Smith (2016) found conscientiousness to be a significant predictor of victimisation, with cyberbullying victims scoring low on this trait. However, Celik et al. (2012) found conscientiousness to be a weak predictor of cyberbullying victimisation with this trait being found to prevent an individual from being bullied.

Finally, neuroticism is considered to be the leading predictor of cyberbullying victimisation (Celik et al., 2012) with both the victims of cyberbullying and the victims of traditional bullying displaying significantly higher ($p < 0.05$) neuroticism levels compared to those of students who had never been involved in any form of bullying (Corcoran, O'Moore, & Connolly, 2012). Kowalski et al. (2012) similarly found cyberbullying victims to have a higher level of neuroticism. In addition, Smith (2015) found a strong relationship between victimisation and neuroticism where victims scored higher on this trait. However, a study by Semerci (2017) found a weak relationship between neuroticism and cyberbullying victimisation.

These varied results and limited findings overall indicate a limited understanding of this relationship, indicating a significant gap in cyberbullying literature and meriting further exploration.

2.4.5 Critical review of relevant literature

The study most similar to this research study is the cyberbullying study of Festl and Quandt (2013). This study explored the individual and structural attributes of cyberbullies and cyberbullying victims, and explored the role of personality in cyberbullying victimisation by means of the short 10-item measure of the Big Five Model of personality by Rammstedt and John (cited in Festl & Quandt, 2013). However, the sample used in the study consisted of school children aged between 12 and 19 years rather than adult participants. In addition, the study was also limited to the German population.

An additional study that reflects certain similarities to the current study is that of Smith (2016) and which explored the personality traits of high school cyberbullying

perpetrators and victims using the HEXECO measure of personality. However, the study was limited to South Carolina.

Not one of the abovementioned studies directly measure cyberbullying victimisation by means of the 44-item Big Five Inventory of personality among adult victims not limited to a particular community. This further emphasised the importance of exploring the research questions stated above.

2.4.6 Summary

Overall, it was felt that the GAM was an effective model on which to base this study, as it is a comprehensive theory, which is capable of capturing the role of personality in cyberbullying behaviours and victimisation. In addition, The Big Five model is a sound model and theory of personality. This study aimed to fill the gap in cyberbullying literature by attempting to come to a better understanding of the role of personality in cyberbullying victimisation risk using an adult sample.

2.5 CYBERBULLYING, PERSONALITY AND COPING STUDIES

At the time of this study there was limited research into the relationship between personality and coping with cyberbullying. However, the relationship between personality and coping has been reasonably well researched, thus making it possible to draw certain conclusions from this.

2.5.1 The COPE

The COPE construct divides coping behaviours or strategies into problem-focused coping and emotion-focused coping. Problem-focused coping is referred to as coping which "seek[s] to alter the individual's relationship to a stressor" whereas emotion focused coping "serves to alter one's internal reactions to a stressor (Lester, Keefe, Rumble, & Labban, 2007, p. 50).

However, in critique of the COPE, despite Carver et al. (1989) ensuring its theoretical basis, Schwartzer and Schwartzer (1996) explain that the use of exploratory factor analysis is not suitable to test a theory. Thus, although the subdimensions of emotional and problem focused coping are acceptable, a further test of the two primary dimensions is required. Nevertheless, even though the COPE lacks a suitable theoretical basis, it has been able to effectively identify the various dimensions and subdimensions of coping, which have been widely cited in cyberbullying literature and in psychological practice.

In addition, there is also uncertainty as to whether traits or states of being should be accorded more weight in the assessment of coping. However, a study by Carver et al. (1989, p. 280) found that situational variability played less of a role than dispositional factors. They explained that, "It may be that the direct or indirect influence of such traits (personality) accounts for more outcome variance than situation-specific actual coping". Carver et al. (1986, p. 281) also highlighted that "[p]eople tend to adopt certain coping tactics as relatively stable preferences. Stable preferences may derive from personality".

2.5.2 Personality and coping research (Big Five Inventory)

It has been found that there is a relationship between an individual's personality, and the way in which they choose to cope in a stressful situation. The section below will discuss existing literature on this relationship.

Research has failed to find a significant relationship between openness to experience and coping (Celik et al., 2012). Nevertheless, some studies have found that the individuals who demonstrate higher openness to experience engage in problem-focused coping (Geisler, Wiedig-Allison, & Weber, 2009).

Coping has been found to be moderately related to extraversion (Watson & Hubbard, 1996) with extraverted individuals often Engaging in problem-focused coping strategies (Watson & Hubbard, 1996).

According to Watson and Hubbard (1996), agreeableness is moderately related to coping while Karimzade and Besharat (2011) found people high in agreeableness to engage in problem-focused coping and emotion-focused coping.

Finally, conscientiousness is considered to be a powerful predictor of coping (Medvedova, 1998) with individuals higher in conscientious often engaging in problem-focused response strategies (Connor-Smith & Flachsbart, 2007).

Individuals who are high in neuroticism are likely to engage in emotion focused coping strategies (Boyes & French, 2009). Contreras-Torres, Espinosa-Mendez, and Esguerra-Perez (2009) similarly found that high neuroticism often results in emotion-focused

coping although Murberg (2009) found neuroticism and coping to be moderately related to one another.

Although relationships between the five personality traits and coping strategies have been found to exist, Bradbury (2013, p. 52) suggests that, "longitudinal studies with different age groups from middle childhood to late adolescence are needed; looking for situational consistency in coping strategies, whilst assessing personality characteristics". Bradbury (2013) explains that this may help to understand the point at which personality influences coping strategies.

2.5.3 Personality and coping with cyberbullying

There is limited literature on the relationship between personality and coping with cyberbullying. Nevertheless, the literature most relevant to this study is briefly discussed below.

Cyberbullying victims often engage in emotion focused coping strategies such as self-blame. Tokunaga (2010) suggests that, although avoidance and emotion focused strategies are effective, more active coping strategies are usually more effective when the frequency and severity of cyberbullying increase.

A study by Jacobs, Dehue, Völlink, and Lechner (2014) examined all of the relevant variables involved in ineffective coping behaviour, and improvement in coping behaviour with regard to cyberbullying. The results found that environmental, psychological, personal, behavioural and socio- demographic factors played a role in either ineffective or effective coping. The study did not, however, directly examine the relationship between personality

and coping with cyberbullying although it was concluded that personality was one of the many determinants involved in coping with cyberbullying (Jacobs et al., 2014). Jacobs et al. (2014) did not include any further details as this was outside of the scope of the study.

A study by Kokkinos, Antoniadou, Dalara, Koufogazou, and Papatziki (2013). explored the relationship between personality (the Big Five), coping and cyberbully/victimisation. The results indicated that cyber victimisation may be predicted by maladaptive coping (Kokkinos et al., 2013). Kokkinos et al. (2013) maintained that "[a]lthough research on the role of personality traits and coping in cyberbullying is limited … cyber victims are generally being described as 'weak' (high depression, low self-esteem) and have tendencies to choose maladaptive coping" (Kokkinos et al., 2013, p. 1297).

The current study attempted to fill the noticeable gap in cyberbullying research by exploring whether personality plays a role in coping with cyberbullying. It was felt that a better understanding of this was pivotal to improving interventions for the victims of cyberbullying.

2.6 SUMMARY

In short, the COPE construct has proven to be a sound model of coping. Research supports the correlation between personality (Big 5) and coping strategies in that neuroticism is commonly related to emotion-focused coping. Thus, the victims/perpetrators of cyberbullying who are generally found to be neurotic are likely to select maladaptive coping strategies when coping with a stressful situation such as cyberbullying. In addition, the majority of the literature on cyberbullying and coping highlights the coping strategies of child

victims and thus it was felt that it would be interesting and worthwhile to explore the coping strategies of adult cyberbullying victims and the influence of personality on this dynamic.

2.7 CONCLUSION

Overall, the GAM suggests that personality traits are one of many possible input variables, which place an individual at greater risk of cyber victimisation or cyber perpetration. Existing research, although limited, has indicated that there is a correlation between the personality trait neuroticism and both cyberbullying victimisation and perpetration and coping styles. The coping styles of cyberbullying victims often indicate emotion-focused coping styles, which, according to Tokunaga (2010), may often be maladaptive in the long-term. However, the relationship between personality and coping with cyberbullying has not yet been explored.

Chapter three provides an overview of the methods and techniques employed in the study in order to explore and better understand whether there is a relationship between personality and cyberbullying victimisation, and personality and coping with cyberbullying respectively. The psychometric properties pertaining to the research instruments used are highlighted in the latter part of the chapter.

CHAPTER 3: RESEARCH METHODOLOGY

Chapter 3 outlines the research methodology implemented in order to answer the research questions. The research paradigm used for the purposes of this study is discussed. The chapter also provides a brief overview of and justification for the research design chosen. This is followed by a brief description of the analyses and a summary of the research aims and objectives and the research questions. The hypotheses formulated in the study are highlighted. The chapter then presents an overview of the population, sample and sampling techniques used. In addition, the data collection methods are outlined and the measuring instruments used in the study are evaluated with regard to their reliability and validity. Finally, ethical issues and concerns pertaining to the study are discussed.

3.1 RESEARCH PARADIGM

A positivist research paradigm and quantitative methods were used for the purposes of the study. According to Lyons (1999), the positivist research paradigm assumes that there is a reality that may be fully understood in an objective way. This is done by means of quantitative research methods, such as questionnaires, that involve the collection of numeric data (Johnson & Christensen, 2008). The numeric data for the study was collected by means of the Big Five Inventory, a questionnaire on cyberbullying, the Cope Inventory and a demographic questionnaire outlined below. The primary focus of the quantitative method is theory and hypothesis testing through experimentation and measurement with the data in the form of variables. The dependent variable in the study was cyberbullying victimisation and the independent variables were personality and coping.

The ontology or "the distinction between reality and appearance" (Coleman, 2009, p. 528) pertaining to this collection method is to be found in the fact that the methods of data collection are constructed objectively as opposed to the subjective nature of qualitative methods (Johnson & Christensen, 2012). According to Johnson and Christensen (2012), the epistemology or 'theory of knowledge' (Coleman, 2009) underpinning quantitative studies is grounded in universal scientific knowledge and standards that understand human behaviour as predictable in that the measures employed provide more definitive answers to the research questions. Qualitative research, in comparison is subject to a wide variety of interpretations.

Quantitative research methods were employed because the construct of cyberbullying was a quantifiable problem that the researcher wanted to generalise. It is difficult to make generalisations from qualitative data. Similarly, the psychological construct of personality and the Big Five are quantifiable – a further reason why quantitative research methods were deemed suitable to this research study.

3.2 RESEARCH DESIGN

According to Tuli (2011), the ontology and epistemology of the quantitative method determine the research design chosen. The research questions in this study required an exploratory and correlational research design. Sheskin (2008, p. 1254) explains that "[e]xploratory studies are usually undertaken when relatively little is known about a phenomenon". The goal of correlational research is to determine whether there is a correlation or relationship between the variables in question. The correlational research design was considered a suitable research design given that the aim of the study was to

determine whether there was a relationship between variables personality and cyberbullying victimisation, and personality and coping styles.

3.2.1 Limitations of correlational research

One limitation of correlational research is that this value does not imply the causation of variables (Sheskin, 2008). Thus, although it was anticipated that the results of this study would reflect a correlation coefficient that indicated whether one variable increased or decreased in relation to the other variable, this coefficient would not necessarily indicate that the one variable caused the other variable. However, a possible pattern in these correlations found in a number of studies may have indicated a common personality trait shared by the victims of cyberbullying, thus making it possible to draw possible inferences from this in terms of what this may mean for the victims of cyberbullying.

According to Thomas, Silverman and Nelson (2015), a further limitation of correlation research is that certain assessments are difficult to define and, therefore, as a consequence such assessments may be unreliable measures of a construct. Thomas et al. (2015) suggest that the easier it is to define a criterion operationally and reliably, the more effective this type of research. Although there are definitional and measurement issues in relation to the cyberbullying construct (Kowalski et al., 2015), the cyberbullying measure proved to be a reliable and valid measure during the pilot testing.

3.3 INFERENTIAL STATISTICAL METHODS

This study used inferential statistical methods in order to analyse the data, which had been collected with the aim of answering the research questions, which are restated below.

Inferential statistical methods were used for the study because the purpose of the study was to explore the correlation between two variables using survey data. In addition, as highlighted by Newman and McNeil (1998), the results obtained using such methods may be generalised to a wider population. Thus, the methods used were in line with the quantitative research paradigm and principles, as well as the aims of the study.

3.3.1 Spearman's correlation coefficient and cluster analysis

It was decided that Spearman's correlation coefficient would be the most appropriate method of analysis for the purposes of the study because it would calculate the strength of the association between the abovementioned variables. In addition, cluster analysis was used to indicate whether certain cyberbullying subtypes were clustered around particular personality types. Assumptions pertaining to each type of analysis were adhered to prior to proceeding with the data analysis, thus ensuring that the data collected was suitable for the type of analysis chosen. Chapter 4 contains detailed descriptions of these processes.

3.3.2 Alternative methods considered

A further non-parametric alternative is the Kendall Tau analyses. This method "evaluates the linkage by examining the proportion of discordant pairs in a sample, where pairs are considered discordant if the product of bivariate observations is negative" (Sheskin, 2008, p. 194). However, it was decided that Spearman's Rho was a more suitable choice for the study as compared to the Kendall-Tau analyses because it measures the strength of the association between variables rather than discordant pairs and the output data from this analysis would be more suitable for answering the research questions.

It was not possible to use experimental research, or research involving the manipulation of the independent variable (Cherry, 2017), in this study because the independent variable of personality was not a trait that may be manipulated due to the fact that individuals naturally fall into these categories. A quasi-experiment or, in other words, the manipulation of the treatment conditions in respect of two alternate groups (Schutt, 2011) was also not suitable for this study because the construct of cyberbullying is not a "treatment condition" that may be ethically simulated. In addition, it is virtually impossible to predict whether an individual will be cyberbullied in the future and thus assess the said individual both before and after the ordeal.

3.4 AIMS AND OBJECTIVES OF THE STUDY

This study aimed to explore the dimensions and patterns in the personality traits of cyberbullied victims. This included determining the relationship between personality profile and type of cyberbullying victimisation. A further objective was to compare the cluster of personality traits with the cluster of cyberbullying subtypes.

The second core objective was to explore whether personality traits are related to coping strategies and, more specifically, whether cyberbully victims appear to select coping strategies based on their personality profiles.

These aims and objectives were designed to help improve the understanding of the cyberbullying phenomenon and thus provide a framework in terms of which the risk of cyberbullying may be assessed and the appropriate coping strategies taught. With these objectives in mind, the research questions formulated in the study are summarised below.

3.5 SUMMARY OF RESEARCH QUESTIONS

The objectives of this study were expressed as four operational research questions:

Research Question 1): Is there a relationship between personality and cyberbullying victimisation?

Research Question 2): Is there a strong positive relationship between neuroticism and type of cyberbullying victimisation?

Research Question 3): Is there a relationship between personality and coping with cyberbullying?

Research Question 4): Is there a strong positive relationship between neuroticism and maladaptive coping strategies?

With the abovementioned research questions in mind, the hypotheses formulated for the purposes of the study are presented in the following section.

3.6 HYPOTHESES

Based on the findings in existing literature, it is hypothesised that:

There is a relationship between one or more personality traits, as measured by the Big Five Inventory and one or more subtypes of cyberbullying as measured by the cyberbullying questionnaire.

There is a relationship between one or more personality traits and one or more coping strategies as measured by the Big Five Inventory and the Cope Inventory respectively.

The research methods used to test these hypotheses are provided below.

3.7 POPULATION

The target population for the study included adult cyberbully victims, not limited to a particular geographic region and gathered primarily from cyberbullying help groups based internationally on the social media platform Facebook as well as certain residential areas based in South Africa. In a brief analysis, findings showed that 85% of the participants were female while the majority (84%) had self-identified as Caucasian. It was also found that 47% were between the ages of 18 and 29, although a surprising 23% were between the ages of 30 and 49 and primarily middle income earning. In addition, 17% referred to their sexual orientation as homosexual or bisexual. 73% were English speaking individuals, and 14% mentioned that they were disabled. The results of these analyses are contained in appendix A and are discussed further in Chapter 5.

As mentioned previously the cyberbullying phenomenon has not been widely explored using an adult sample and thus this warranted further investigation. In addition, existing cyberbullying and personality literature and research were limited to particular geographic regions and, therefore, it was essential for this study to ensure a wider demographic area with which to compare the results.

A total of 107 individuals participated in the study, of which 102 were found eligible for analysis. This was considered to be an appropriate sample size given a confidence level of 95% that these results would be repeated in future studies. The confidence interval was calculated on www. Calculator.net where a confidence level of 95%, a sample size of 102 and a 50% population produced a confidence interval of 9.7%. Similarly, the sample size was verified using the online calculator, with a 95% confidence level and a 9.7% confidence interval, at a 50% population proportion; whereby a sample of 102 or more would be required. In addition, it would have been difficult to achieve a larger sample size given the sensitivity of the research topic.

3.8 SAMPLING TECHNIQUE

The study used non-probability sampling. According to Henry (1990, p. 17), when non-probability sampling is used not all individuals have an equal chance of being selected, as is the case in random sampling, because non-probability sampling involves "subjective judgment" being exercised in the selection of the participants.

The homogeneous purposive sampling method was the sampling technique used for the current study. This method refers to a sample of people who are selected on the basis of shared characteristic(s), in this case cyberbullying victimisation (Crossman, 2017). The reason for selecting this method was because cyberbully victims are a difficult group to detect and they do not constitute a publicly visible population. There is no public directory or register listing the names of cyberbullying victims and thus it is only possible to find these victims if the victims volunteer to provide the information. This then is the reason why simple random sampling was not a viable option for the study.

Nevertheless, there are certain limitations to a self-selecting sample as the group of volunteer participants may not be a sample, which is true of the general cyberbullying population, and thus the sample may be biased (Basturkmen, 2010). It was possible that those individuals who had been severely cyberbullied may not have wished to participate in the study and discuss their feelings as openly as those individuals who had been cyberbullied to a lesser degree.

3.8.1 Purposive sampling: advantages and limitations

Several research projects have used simple random sampling in their exploration of the cyberbullying phenomenon. There are several advantages to purposive sampling as compared to random sampling. For example, the results from purposive sampling are more generalisable and selection bias is less likely than in random sampling (Daniel, 2011). Daniel explains that, in homogeneous purposive sampling, "matching may control for extraneous variables, thereby increasing internal validity" (2011, p. 92).

However, purposive samples are not free of limitations. Daniel (2011) explains that the limitations of this sampling strategy include the amount of time spent in collecting the data as well as the effort involved in the data collection. In addition, the researcher is required to be knowledgeable and up to date in respect of existing research regarding the population in question. It is also essential that the researcher has an extensive understanding of the population itself.

3.9 SAMPLING PROCEDURE

Cyberbully victims were targeted through advertisements on social media platforms such as Facebook and Twitter. In view of the fact that the cyberbullying phenomenon is executed online, it was considered appropriate to the nature of the research topic to carry out the study online. In addition, this was the most economical way in which to find participants internationally.

The study was advertised on Facebook cyberbullying support groups that were not limited to the South African population. These support groups are listed in appendix B. Other groups included 'Psychology Research', 'Social Sciences Research Group' and 'UNISA students'.

A large proportion of the data collected was from Facebook residential area groups based in the Gauteng, Mpumalanga, KwaZulu-Natal, Eastern Cape and North-West provinces. A full list of these groups is provided in appendix B. The residential areas were limited to South Africa because the study was based in South Africa.

In addition, nonprofit cyberbullying organisations such as SaveTNet, the Human Sciences Research Council (HSRC), MOBIEG and HIRE Education shared the study on their pages. The researcher also shared the study on the research-sharing site SurveyCircle.

3.10 DATA COLLECTION METHOD

Self-report online questionnaires were used for the purposes of the study. Self-report, online questionnaires are advantageous due to their cost effectiveness as well as the fact that they allow participants to complete the study at a time, which is convenient to them

(Bornstein, 2004). Accordingly, self-reporting, online questionnaires were deemed to be an appropriate tool for the data collection.

The participants first selected the link provided. An information sheet was provided that gave an overview of the study and contained an electronic consent form, which highlighted the possible risks involved in participation in the study. These are presented in appendix C and appendix D. This was followed by a basic demographics questionnaire and a cyberbullying questionnaire which was developed by the researcher and which evaluated the type of cyberbullying that had been experienced. The Big Five Inventory measure of personality then assessed personality while the final questionnaire measured coping styles by means of the COPE Inventory. The time taken to complete the questionnaires was approximately 20 minutes. All the responses were automatically recorded and saved on the free Google software 'Google Forms'.

3.11 MEASURING INSTRUMENTS

The measuring instruments used in the study included the Big Five Inventory, the COPE, and a cyberbullying measure developed by the researcher. These three measures are discussed below.

3.11.1 The Big Five Inventory

John and Srivastava (1999) developed the Big Five Inventory in order to create a shorter instrument based on the original Big Five developed by John, Donahue, and Kentle in 1991 through expert ratings as well as observer personality ratings. John and Srivastava

(1999) explain that the Big Five Inventory uses short phrases or adjectives in order to describe an individual. John and Srivastava (1999) suggest that, although each construct includes 8 to 10 items only, the Big Five Inventory has sound psychometric properties as well as good reliability and validity ratings – see 3.12.1.

The Big Five Inventory was selected for this study due to its sound psychometric properties and wide support in the social sciences for being a reputable measure of personality. Its clearly limited presence in cyberbullying research and literature has given motive and reason to assume that using a measure such as this will produce more reliable data on which to potentially generalise results in the near future and come closer to gaining a clearer understanding of whether there is a relationship between personality and cyberbullying victimisation. The five personality traits measured by the Big Five are common to a number of similar personality measures highlighted above, thereby making it possible to compare these results.

The Big Five Inventory assesses the following five personality traits, namely, openness to experience, agreeableness, neuroticism, conscientiousness and extraversion (explained in detail in section 2.12.1). It is a 44-item Likert-type assessment that requires individuals to choose between personality descriptors in the form of statements. A Likert-type scale is a scale that ranges from 1 to 5 (Disagree Strongly to Agree Strongly) (Breckler, Olson, & Wiggins, 2005). For example, the statements include "is talkative" for extroversion while there are also negatively scored items such as "is reserved" for extroversion, thus indicating that an individual who is not reserved is extroverted. This measure is presented in appendix E.

3.11.2 The COPE Inventory

The literature cited above clearly indicates that personality and coping with cyberbullying have not yet been extensively explored. Although Sticca, Machmutow, Stauber, Perren, Palladino, Nocentini, and Guckin, (2015) developed a Coping with Cyberbullying measure in 2015, the measure has not been explored and supported in literature to the same degree as the Cope Inventory which was developed in 1989. The Cope Inventory has proven to be a useful tool in assessing coping strategies and, therefore, it was chosen for this study (Carver et al., 1992). The psychometric properties of the COPE scale are effective and the scale has proven to be a reliable and valid measure of coping mechanisms (Carver, Scheier, & Pozo, 1992) - See 3.12.2.

According to Schwartzer and Schwartzer (1996, p. 121), "The COPE scale is conceived of as a more fine-grained dispositional measure of individual differences in coping than previous instruments, and it reflects a balanced view about the disposition versus situation issue".

The COPE Inventory is a 60-item Likert-type test, which was developed to assess a broad range of coping strategies. The COPE categorises people based on 15 types of coping strategies that, as explained in section 12.18.1, fall either under the categories 'problem focused coping' or 'emotion focused coping'. This measure is presented in appendix F.

3.11.3 Development of the cyberbullying measure

The cyberbullying measure was developed by the researcher because, at the time of the study, a standardised cyberbullying measure had not yet been developed. This was a problem because there was no universally accepted definition for the factors pertaining to cyberbullying. In addition, consensus among researchers has yet to be reached with regard to the number of items included per factor, as well as the frequency with which cyberbullying must take place, for example, 'very often' or 'once a month' (Kowalski et al., 2015).

The researcher developed the 17-item questionnaire based on the five types of cyberbullying most commonly cited in the literature, as well as the known characteristics of cyberbullying such as repetition. The types of cyberbullying assessed included Harassment as seen in items 2, 3, Denigration: 7, 8, Cyberstalking: 4, 5, 6, Exclusion: 11,12,13, Impersonation: 9,10 and other: 1, 14, 15, 16 and 17. The items referred to as 'other' are questions regarding how often the individual experienced being cyberbullied, whether their interpersonal relationships suffered as a result, and whether they engaged in self-harming behaviours. Questions 16 and 17 asked participants whether they have engaged in cyberbullying behaviours themselves, and if so- why? This measure is cited in appendix G.

The measure was sent for evaluation to Masa Popovac, a doctoral student in psychology and a lecturer in cyber psychology at the University of Buckingham in England. She has published numerous articles, such as 'Cyberbullying in South Africa – Impact and Responses', with her co-writer, Leoschut, in 2012, as mentioned in Chapter 2 (Popovac & Leoschut, 2012). Following minor adjustments as per Ms Popovac's suggestion, a pilot study was then conducted with 40 participants. This pilot study enabled the reliability and validity of the measure to be tested using the Statistical Package for the Social Sciences version 22, thus confirmed the measure as fit for use.

3.12 RELIABILITY AND VALIDITY OF SCALES

The following two measures, namely, the Big Five Inventory and the Cope Inventory, have been subjected to extensive reliability and validity testing and is a strong body of literature supporting their use. Although the cyberbullying measure requires further support, initial reliability and validity testing supports its effectiveness in measuring the cyberbullying victimisation construct.

3.12.1 The Big Five Inventory

A number of studies provide strong evidence of the reliability and validity of the Big Five measure. John and Srivastava (1999) found the coefficient alpha reliability for the Big Five measure to be an average of .83. In addition, Few, Miller, Morse, Yaggi, Reynolds, and Pilkonis (2010) found the inter-rater reliability coefficients to range from $-.31$ to .92 with a median coefficient of .58.

In addition, this assessment of personality demonstrates extremely good content validity (Ashton, 2013). According to John and Srivastava (1999), convergent and discriminant validity with other personality measures such as the TDA and NEO have also been shown.

3.12.2 The COPE Inventory

According to the developers of the COPE Inventory, Carver et al. (1989), the

Cronbach's alpha for the 15 scales of COPE ranges from .37 to .93. They add that, with the exception of the mental disengagement construct, the remainder of the alphas were, in the main, all above .70. These figures indicate good internal consistency.

3.12.3 Cyberbullying measure

The cyberbullying measure was found to be a reliable measure, with a Cronbach's alpha value of .86, which is considered to indicate good internal consistency (Watson, 2013). The cyberbullying measure also proved to be a valid measure. There was a total of 36 valid items (92 %) with three items being excluded. Overall, however, it was difficult to predict the construct validity of the abovementioned instrument because it has not been used and supported in literature. Ms Popovac examined the content validity of the measure, confirming that the content within the measure reflected all aspects relevant to the cyberbullying construct (McBurney & White, 2009). The relevant statistics are presented in table 3.1 below. The mean, variance and standard deviation of the cyberbullying measure are presented in table 3.2 below.

3.12.3.1 Reliability and validity statistics

Table 3.1. Reliability and validity statistics

Reliability Statistics

Cronbach's Alpha	Cronbach's alpha based on Standardised Items	No of Items
.86	.87	15

Case Processing Summary

		N	%
Cases	Valid	36	92
	Excluded[a]	3	8
	Total	39	100

a. Listwise deletion based on all variables in

the procedure.

3.12.3.2 Mean, variance and standard deviation

Table 3.2. Mean, variance and standard deviation

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
33.20	121.80	11.04	15

3.13 ETHICAL CONSIDERATIONS

The study passed the initial ethical review by the UNISA Ethics Committee. The ethical conditions include adhering to the principles of voluntary participation, informed consent, anonymity, confidentiality and the right of the participants to withdraw from the study.

The benefits and risks of participation were highlighted in the online information sheet before proceeding with the questionnaires. This includes the possibility of the cyberbullying questionnaire resulting in the participants contemplating their negative cyberbullying experiences. Thus, the participants were warned that the researcher would not be able to provide them with support. However, they were informed that they would be given a helpline where they could discuss these feelings.

The participants had the right not to respond to questions, which they felt uncomfortable answering. In addition, they were free to withdraw from the study at any point. The researcher explained that there would be no reimbursement or incentive for participating. The participants would be allowed to proceed with the questionnaires only after providing their formal consent and their agreement to and understanding of the information sheet provided by the researcher. Full anonymity was promised. Smith and Ahmad (1994) suggest that anonymous questionnaires are more valid than questionnaires, which require personal information to be provided. The researcher adhered to all ethical principles during the execution of this study. The ethical clearance from is attached in appendix H.

3.14 SUMMARY

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This study explored the research questions using a quantitative research paradigm and a correlational research design. The core objective of the study was to determine the relationship between cyberbullying and personality and coping and personality using reliable and validated measures. Adult cyberbullying victims were targeted predominantly via the social media platform Facebook. Ethical conditions were adhered to throughout the study. Chapter 4 contains a detailed description of the steps taken during the data analyses as well as the results of these analyses.

CHAPTER 4: ANALYSIS AND FINDINGS

This chapter begins with an overview of both the research questions and the research hypotheses. The data cleaning and organising process is then described. Tests of normality were conducted in order to ascertain which data analysis method would be the most suitable for the study. This was followed by a discussion on the assumptions pertaining to the Spearman's Rank Order Correlation, which initially required testing for the presence of a monotonic relationship between variables. The methods used throughout the analysis are then highlighted and the study findings briefly discussed. Additional methods of analyses are outlined and provide further information on the cyberbullying phenomenon. Hierarchical cluster analysis was used as an alternative for the Spearman's Rho and thus the hierarchical cluster analysis method was described and the findings arising from the analysis highlighted. In addition, the methods used to analyse the demographic data are explained and a brief overview of these findings provided.

4.1 RESEARCH QUESTIONS RESTATED

The research questions relevant to the study are restated below.

Research Question 1): Is there a relationship between personality and cyberbullying victimisation?

Research Question 2): Is there a strong positive relationship between neuroticism and type of cyberbullying victimisation?

Research Question 3): Is there a relationship between personality and coping with cyberbullying?

Research Question 4): Is there a strong positive relationship between neuroticism and maladaptive coping strategies?

4.2 HYPOTHESES RESTATED

The two relevant hypotheses that were tested are outlined below.

Hypothesis 1: There is a relationship between one or more personality traits as measured by the Big Five and one or more subtypes of cyberbullying as measured by the cyberbullying questionnaire.

Hypothesis 2: There is a relationship between one or more personality traits, and one or more coping strategies as measured by the Big Five Inventory and the Cope Inventory respectively.

With the aim of answering the above research questions and testing the research hypotheses, the data analysis began with data cleaning and preparation.

4.3 DATA CLEANING AND PREPARATION

Before embarking on the data analysis, the raw data had to be reverse scored and averaged. This was done using the Statistical Package for the Social Sciences version 22 software.

4.3.1 Reverse scoring

It was necessary to reverse score all negatively keyed items from the Big Five Inventory by means of SPSS function. For example, item 6 – "Is reserved" – is a reverse scored item for extraversion. Reverse scoring involves subtracting the answer given by the participants from 6. The reversed questions and items are reflected in appendix E and are denoted with an R. The new variables were calculated and renamed accordingly. Item 13 in the cyberbullying measure – "I have always been included in online groups" – was reverse scored in a similar manner. These items are reflected in appendix G. Items from the COPE Inventory did not require reverse scoring.

4.3.2 Averaging scores

The items for each Big Five trait were averaged using the SPSS function, resulting in a scale score for each participant for each personality trait. The single items for each cyberbullying construct were similarly averaged for each participant and placed beneath the appropriate renamed column.

Each coping strategy in the COPE inventory consisted of four items. The sums of these items were calculated for each participant. These new variables and scores were then renamed according to the appropriate coping strategy. The items relevant to each coping strategy are presented in the appendix F.

4.4 OUTLIERS

Prior to the data analysis it is of the utmost importance to consider both the presence and the impact of an outlier. According to Grubbs (1969, p. 9), an outlier may be described as "an observation point that is distant from other observations". In this case, the outliers were

individuals who had not been cyberbullied. These were the individuals who unanimously scored 1 (Never) on all the items of the cyberbullying measure with 5 out of 107 likely outliers or individuals being identified in excel. It was not clear why these individuals had participated in the study as it had been clearly indicated that the participants had to have had some experience of cyberbullying. It is possible that these individuals did not feel that the cyberbullying categories applied to them. It is also possible that there may have been a shared misunderstanding of the items amongst these particular participants. The scores of these participants were deleted on SPSS and excluded from the analysis. It is suggested that future studies could ask individuals to describe their cyberbullying experiences in their own words in order to avoid such issues.

4.5 TESTING NORMALITY

Before proceeding with the data analysis a test of normality with the Shapiro-Wilk test was executed in SPSS. The Kolmogorov Smirnov results were not noted as this measure has been highly criticised for having low power and it has been recommended that the Shapiro-Wilk measure be used instead (Ghasemi & Zahediasl, 2012).

It is essential to test the normality of the data distribution to ensure that the most appropriate analysis strategy is selected. The data from all three assessments was tested, and the resulting tables and histograms examined in order to determine the normality of the distributions.

Generally, the results of the Shapiro-Wilk measure demonstrated a significance level of less than .05. According to Sen and Srivastava (2012), for the data to be normally distributed, the significance level is required to be more than .05. The only measure, which

demonstrated levels higher than .05, was the Big Five measure. Both the cyberbullying

measure and the COPE Inventory produced non-parametric distributions. These results are

presented in tables 4.1 and 4.2. The resulting histograms of all three measures also reflected a

non-parametric distribution of data. The histograms for the cyberbullying measure are

presented in appendix I.

4.5.1 Normality tests

The tables below present the non-parametric distribution of the scores from the

cyberbullying measure, Big Five Inventory and the COPE Inventory.

Table 4.1. Cyberbulling measure

Cyberbullying measure

Tests of Normality

	Shapiro-Wilk		
	Statistic	df	Sig.
Harassment	.93	102	.000
Cyberstalking	.68	102	.000
Impersonation	.77	102	.000
Denigration	.84	102	.000
Exclusion	.89	102	.000

Table 4.2. The Big Five Inventory

The Big Five Inventory

Tests of Normality

	Shapiro-Wilk		
	Statistic	df	Sig.
BFI extraversion scale score	.98	101	.13
BFI agreeableness scale score	.97	101	.03
BFI openness scale score	.98	101	.10
BFI neuroticism scale score	.98	101	.22
BFI conscientiousness scale score	.99	101	.75

Table 4.3. The COPE Inventory

The COPE Inventory

Tests of Normality

	Shapiro-Wilk		
	Statistic	df	Sig.
Positive reinterpretation	.96	87	.01

Mental disengagement	.96	87	.01
Focus on and venting of emotions	.96	87	.01
Active coping	.97	87	.03
Instrumental social support	.95	87	.00
Denial	.92	87	.00
Religious coping	.81	87	.00
Humour	.94	87	.00
Behavioural disengagement	.93	87	.00
Restraint	.96	87	.01
Emotional support	.94	87	.00
Substance use	.67	87	.00
Acceptance	.97	87	.03
Suppression of competing activities	.97	87	.07
Planning	.96	87	.00

4.6 ANALYSIS

In view of the non-parametric distribution of the data, a non-parametric measure, namely Spearman's rho, was preferred. The Spearman's rho measures the strength and

direction of an association between two variables measured on an ordinal scale (Mendes, 2007).

4.6.1 Assumptions of the Spearman's rho measure

Certain assumptions had to be taken into account before proceeding with the Spearman's rho analysis. The first assumption of the Spearman's rho correlation is that the scale is ordinal, interval or ratio (Mendes, 2008). The Likert-type scales of all measures included in this study were ordinal.

According to the second assumption, there should be a monotonic relationship between the two variables (Chalmer, 1987). A monotonic relationship refers to two variables that either increase or decrease in value together (Gravetter & Wallnau, 2014).

4.6.1.1 Testing monotonicity

A matrix scatter dot graph was executed using the organised results from the cyberbullying, coping and personality measures. Curvature in the scatterplot and a joint upward or downward movement is used in the interpretation of a scatter dot graph (Schaw, 2000). This indicates that the variables are either increasing or decreasing in value together and, therefore, that a monotonic relationship exists between the variables personality and cyberbullying, and personality and coping. Figure 4.4 and 4.5 illustrate a joint upward movement, thus suggesting that there was a positive monotonic relationship between the variables cyberbullying, coping and personality.
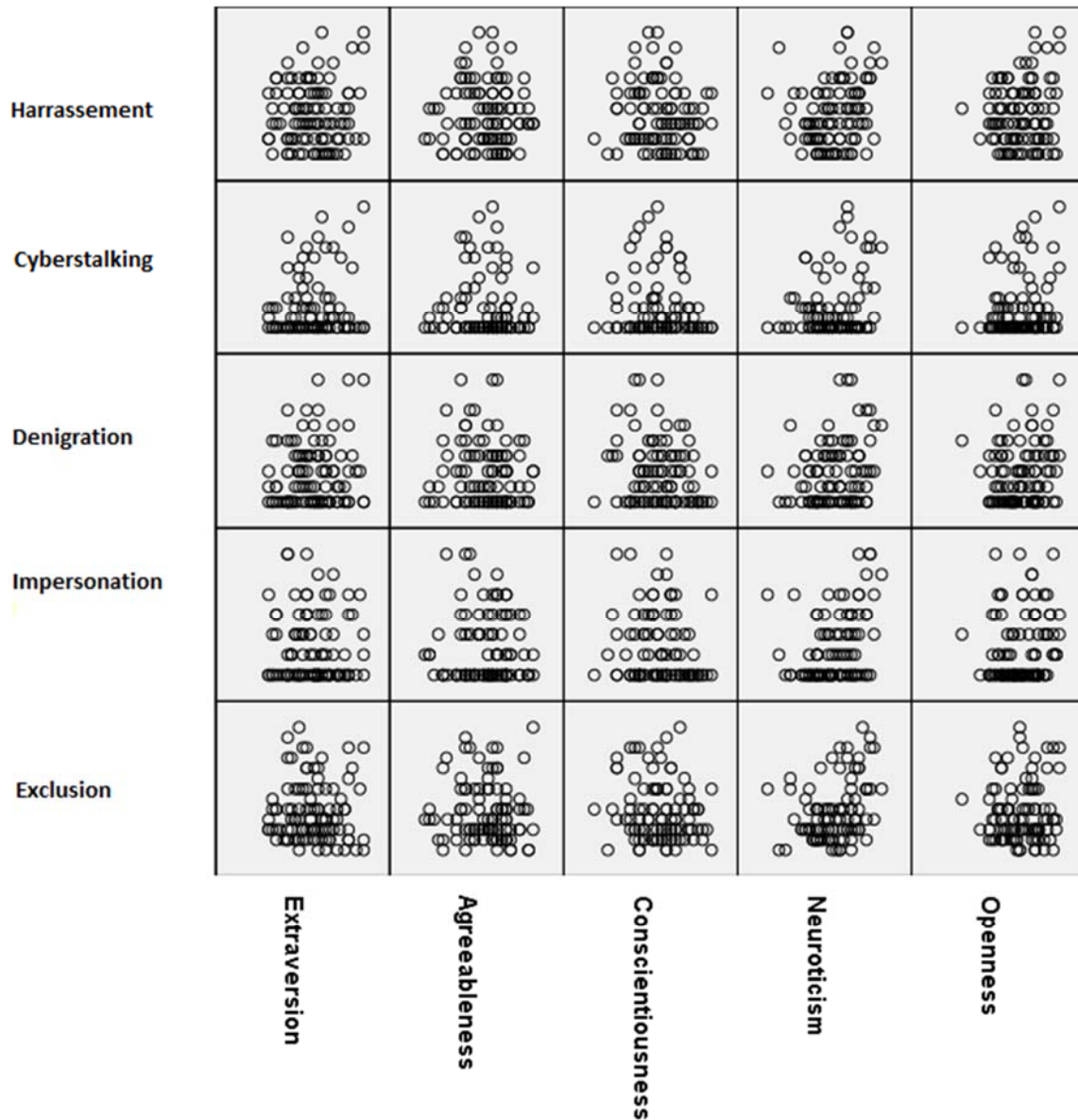
Figure 4.4. Monotonic Scatter Dot Graph of Cyberbullying and Personality
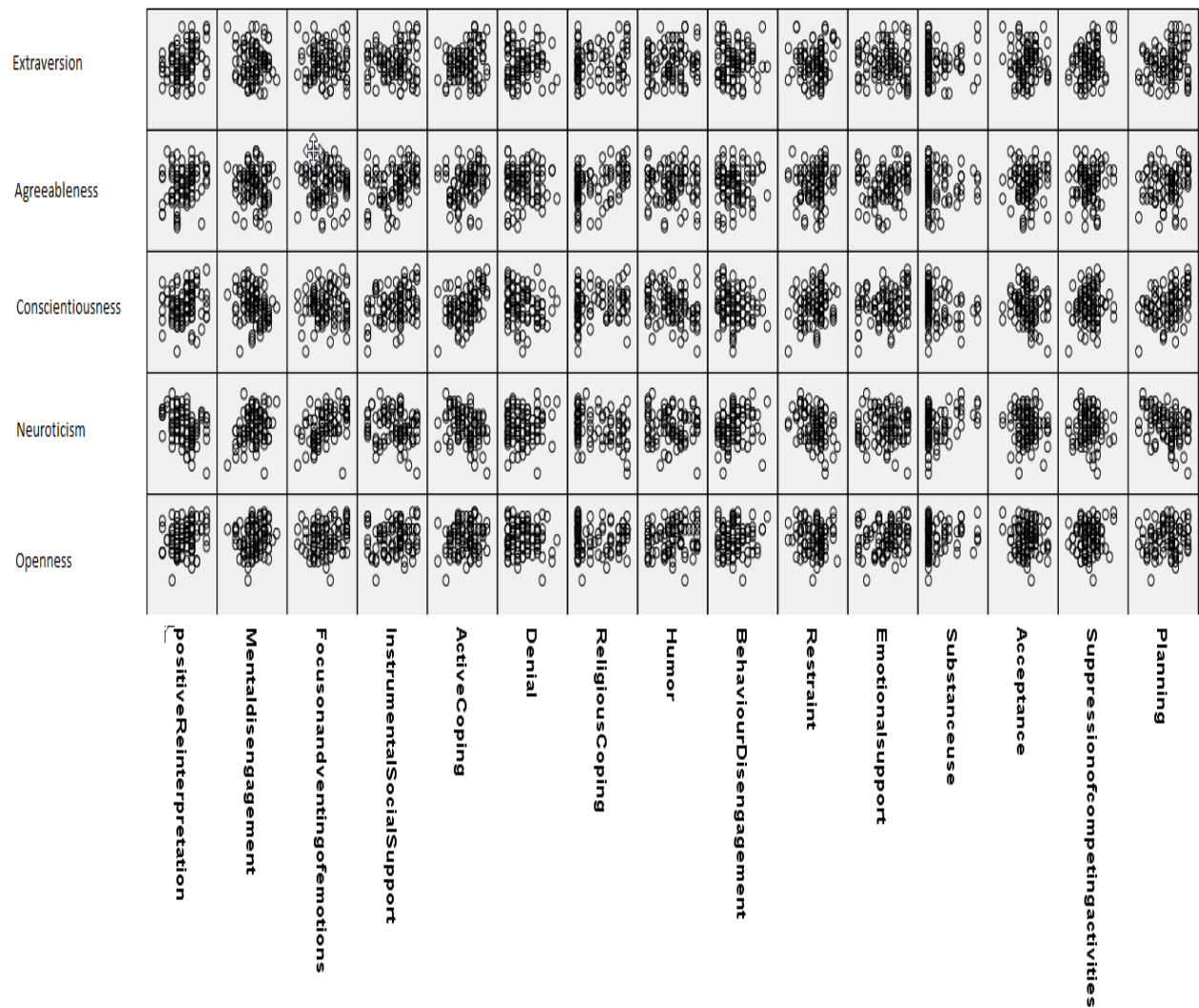
Figure 4.5. Monotonic Scatter Dot Graph of Personality and Coping

4.7 METHOD OF DATA ANALYSIS

Once the assumptions underlying the statistical procedures had been met, the researcher proceeded with the data analysis. The details of the methods of data analysis used are presented below.

4.7.1 Spearman's rho

The final datasets were analysed by first selecting a two-tail test of significance. According to Kent State University Libraries (2017), a two-tailed significance tests assumes:

H_0: $\rho = 0$ (The population correlation coefficient is 0; there is no association)

H_1: $\rho \neq 0$ (The population correlation coefficient is not 0; a nonzero correlation could exist)

A non-directional, two-tailed test was used because one-tailed, directional tests require prior knowledge of the direction of the variables and the correlation between them. A two-tailed test, on the other hand, allows for the equal probability of the results moving one way or the other, due to the uncertainty of the direction (Jones, 2010). The aim of this study was to ascertain whether there was a correlation between personality, cyberbullying type and coping strategies. In view of the fact that there was uncertainty about whether such a correlation existed, as well as the direction of such a relationship, a non-directional test was deemed to be the most suitable.

The test was conducted at an Alpha level 0.05 significance, which is the standard used in the behavioural sciences. This level of significance indicates a 5% probability of the null hypothesis being incorrectly rejected, otherwise referred to as a Type 1 Error (Kumar, 2002) while the ρ values are compared to the alpha value of 0.05 with a higher ρ value indicating that a correlation exists, thereby resulting in the null hypothesis being rejected (Minitab, 2016).

However, since 2015 the journal for *Basic and Applied Social Psychology* has banned the use of the ρ value in their psychology journals, claiming that it is "too easy" to achieve

significant results and that it "sometimes serves as an excuse for lower quality research" (Trafimow & Marks, 2015, p.1). Articles therefore featured on journal *Basic and Applied Social Psychology* continue to be published, albeit without the p value (Trafimow & Marks, 2015). However, p values were included in this study because it is still common practice in the social sciences and these values still have relevance and meaning within this field. For example, these values would be both essential and beneficial for researchers wanting to replicate this study as well as those who wish to compare statistics. This ban has only recently been imposed and thus it is still open for discussion. Overall, it is recommended that greater emphasis should be placed on the magnitude of the correlations, as there are considerably more important than the ρ value.

4.7.2 Interpreting results

The Spearman's correlation is represented by r_s, and formula $-1 < r_s < 1$ in which -/+ indicates the direction of the relationship. A - symbol denotes a negative relationship where as one variable decreases, the other increases while a + symbol indicates a positive relationship in which both variables increase in value together. The strength of the relationship ranges between .00 and .19, which is regarded, as very weak, and between .80 and 1.0, which is regarded as a very strong correlation (Ho, 2014). Those in between are seen as moderate to medium strength (Ho, 2014).

4.8 FINDINGS

The findings and results pertaining to the research questions and research hypotheses are presented below in the form of both tables and essential statistics.

4.8.1 Correlations between personality and cyberbullying victimisation

Table 4.6 depicts a weak, positive correlation between neuroticism and impersonation with r_s =. 37, ρ <. 001 and with the average scores for impersonation being 1.67 out of a maximum of 5. There is also a weak, positive correlation between neuroticism and exclusion with r_s =. 35, ρ <. 001 and with the average score for exclusion being 2.24 out of 5, thus indicating that the participants experienced moderate exclusion. Accordingly, as the variable neuroticism increases, so do the variables impersonation and exclusion. The average level of neuroticism among the participants was 3.32 out of 5, indicating moderate neuroticism.

A weak, positive correlation, r_s =. 29, ρ < .001, was found between neuroticism and harassment with the average score for harassment being 2.31 out of 5. There was also a weak, positive correlation between neuroticism and denigration with r_s =. 25 ρ < .05 and with the average score for denigration being 1.91 out of 5.

There appeared to be a weak, positive correlation between openness to experience and impersonation with r_s =. 21, ρ < .05. The average level of openness was 3.76 out of 5, thus suggesting that the participants were moderately open.

Table 4.6. Correlations between personality and cyberbullying victimisation

		Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
Harassment	Correlation Coefficient	-.01	-.01	-.15	.29**	.05

	Sig. (2-tailed)	.96	.90	.14	.00	.63
	N	101	101	101	101	101
Cyberstalking	Correlation Coefficient	.05	-.07	-.06	.07	.07
	Sig. (2-tailed)	.62	.50	.57	.48	.46
	N	101	101	101	101	101
Denigration	Correlation Coefficient	.06	-.11	-.16	$.25^*$	.13
	Sig. (2-tailed)	.53	.29	.10	.01	.19
	N	101	101	101	101	101
Impersonation	Correlation Coefficient	-.03	.01	-.14	$.37^{**}$	$.20^*$
	Sig. (2-tailed)	.75	.91	.17	.000	.04
	N	101	101	101	101	101
Exclusion	Correlation Coefficient	-.06	-.12	-.11	$.35^{**}$	.00
	Sig. (2-tailed)	.54	.24	.28	.000	.97
	N	101	101	101	101	101

The significant correlations are flagged with an asterisk.

**Correlation is significant at the 0.01 level

* Correlation is significant at the 0.05 level

4.9 HIERARCHICAL CLUSTER ANALYSIS

In order to further explore the relationship between personality and cyberbullying, hierarchical cluster analysis was employed with the aim of identifying both visually and in terms of a dendrogram whether certain personality traits clustered toward particular types of cyberbullying victimisation. According to IBM (2017), "this procedure attempts to identify relatively homogeneous groups of cases (or variables) based on selected characteristics, using an algorithm that starts with each case (or variable) in a separate cluster and combines clusters until only one is left". More specifically, average linkage between groups was selected for the purposes of this study because the aim of this method is to determine the average similarity of all individuals within a cluster.

4.9.1 Assumptions of hierarchical cluster analysis

The assumptions underlying cluster analysis require data to be either nominal, ordinal or interval, the variables to be independent from one another and the scales to be standardised (IBM, 2017). The above organised and cleaned data met these requirements.

4.9.2 Method of analysis

The data that had previously been organised was analysed by running a hierarchical cluster analysis in SPSS at a chi-squared distance recommended for ordinal data (McNabb, 2015). The agglomerative schedule reflected the formation of clusters at every stage of the analysis.

4.9.3 Findings

4.9.3.1 Personality and cyberbullying clusters

Table 4.7 presents the number of clusters formed during the analysis. The table shows n = 102 being transformed into nine clusters.

Table 4.7. Agglomeration Schedule

Agglomeration Schedule

	Cluster Combined			Stage Cluster First Appears		
Stage	Cluster 1	Cluster 2	Coefficients	Cluster 1	Cluster 2	Next Stage
1	2	3	2.74	0	0	2
2	2	5	3.46	1	0	3
3	1	2	3.74	0	2	7
4	7	8	4.14	0	0	6
5	9	10	4.28	0	0	6
6	7	9	4.37	4	5	8
7	1	4	4.37	3	0	9
8	6	7	4.74	0	6	9
9	1	6	5.53	7	8	0

The horizontal axis of the dendrogram in Figure 4.8 represents distance between the clusters while the vertical axis represents the clusters (James, Witten, Hastie, & Tibshirani, 2013). When interpreting dendrograms, the smaller the distance the closer the similarity.

Variables bfia, bfic, bfio, bfie and bfin referred to the variables agreeableness,

conscientiousness, openness to experience, extraversion and neuroticism respectively.
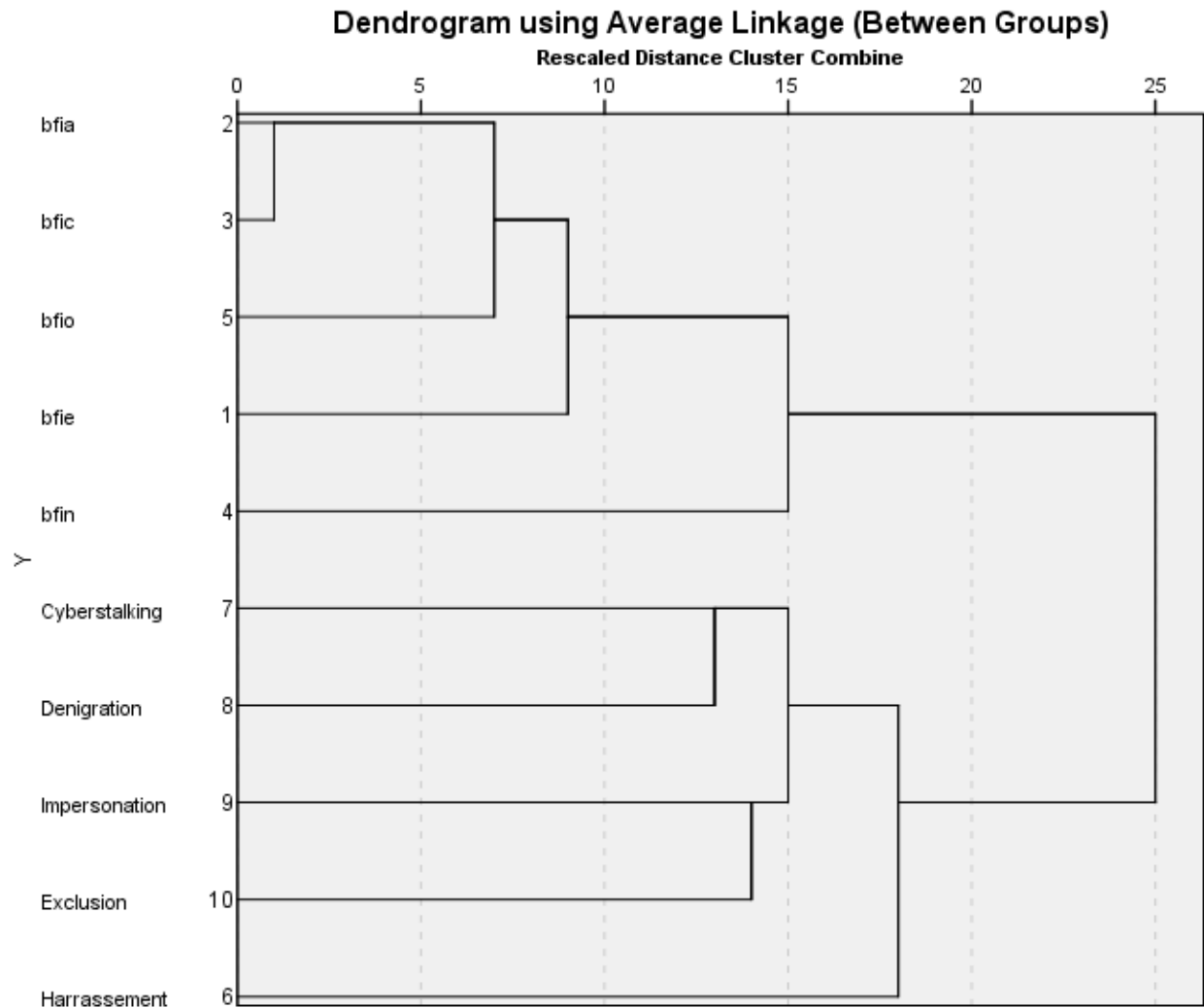

 Figure 4.8. Dendrogram

Figure 4.8 shows that agreeableness and conscientiousness were clustered together as

were denigration and cyberstalking. With regard to personality and cyberbullying, figure 4.8

suggested that neuroticism and harassment were the largest cluster, closest to one another,

followed by neuroticism and impersonation, exclusion, denigration and, finally,

cyberstalking. These results reflected similar correlations to the results of the Spearman's rho measure.

4.10 ADDITIONAL CYBERBULLYING ANALYSIS

To understand the inferential statistics and the context of cyberbullying better, additional descriptive statistics and analyses were conducted to gain a clearer understanding of the cyberbullying phenomenon.

4.10.1 Method

The three questions on the cyberbullying assessment were general questions and not specific to a certain cyberbullying type. These questions related to whether or not the individual had cyberbullied others and, if so, why, whether the consequences of cyberbullying had resulted in problems within friendships, and whether individuals had engaged in self-harm in response to cyberbullying.

4.10.2 Findings

The previously organised cyberbullying data was exported from SPSS into Excel, where the scores were summed using Excel formulas.

Figure 4.9 showed that the majority of the participants had not themselves engaged in cyberbullying. However, 13% had cyberbullied others.

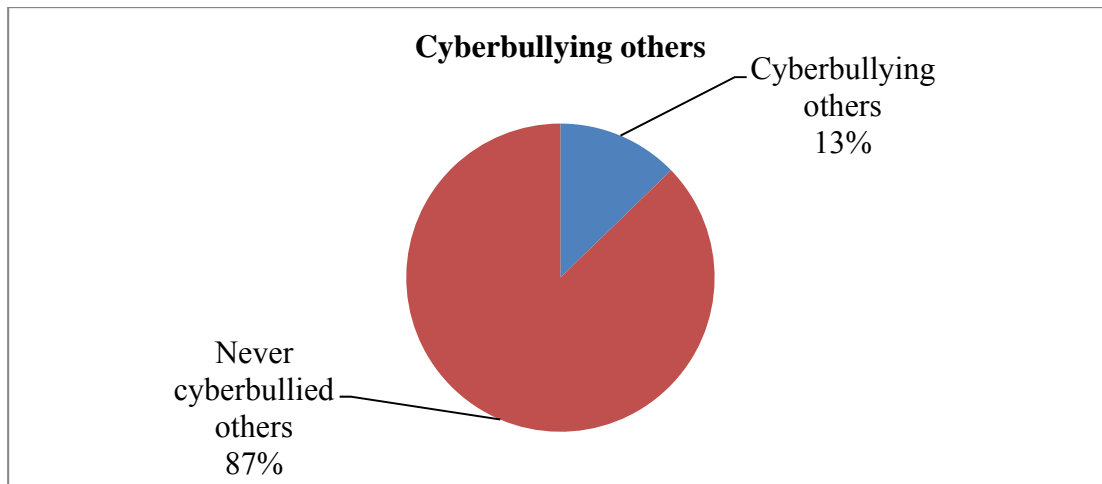Figure 4.9. Cyberbullying others

Figure 4.10 showed that 53% of individuals had not struggled with friendships as a result of cyberbullying although 47% had, to a certain degree, struggled with friendships.
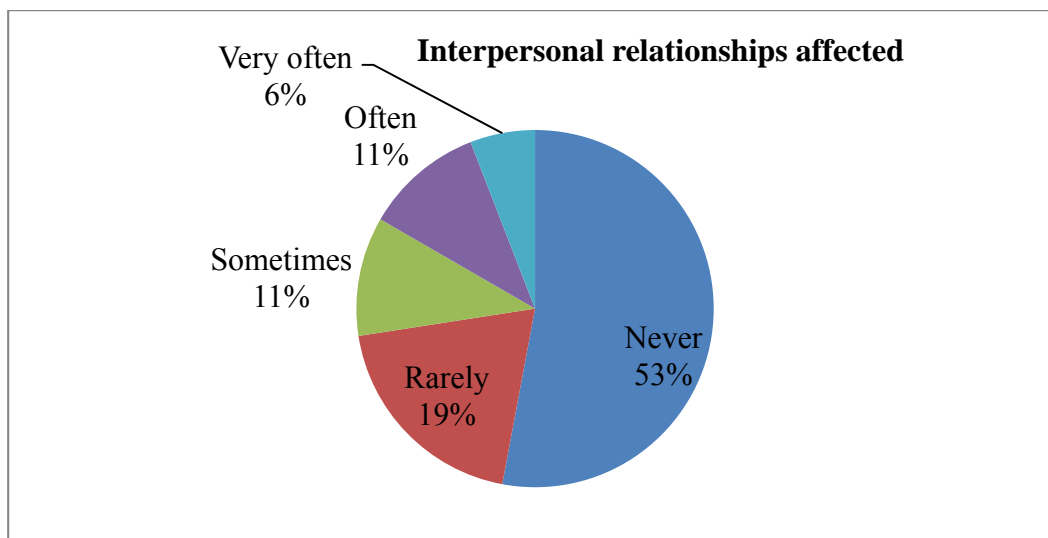
Figure 4.10. Interpersonal relationships affected

Figure 4.11 showed that a large proportion of the participants had not engaged in self-harming behaviours although 12% admitted to doing so.
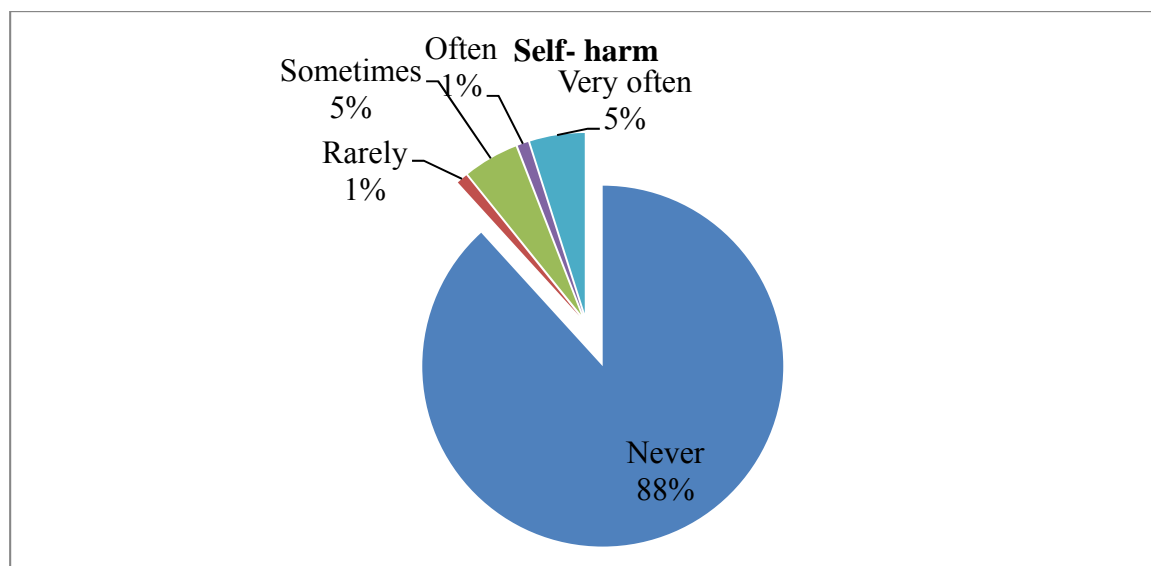
Figure 4.11. Self-harm

4.11 CORRELATIONS BETWEEN PERSONALITY AND COPING

Table 4.12 reflects all the relevant correlations between personality and coping styles. Table 4.12 depicts a moderate, positive correlation between neuroticism and the focusing on and venting of emotions with $r_s =. 41 \; \rho <. 001$, thus suggesting that as the variable neuroticism increased, so did the focusing on and venting of emotions. The average score for the focusing on and venting of emotions was 10.75 out of a total of 16, thus suggesting that individuals often resorted to this coping strategy. The 'focusing on and venting of emotions' is referred to as "the tendency to focus on whatever distress or upset one is experiencing and to ventilate those feelings" (Scheff, 1979, as cited in Carver et al., 1989, p. 268). However, Carver et al. (1989, p. 269) suggest that "[t]here is reason to suspect, however, that focusing on these emotions (particularly for long periods) can impede adjustment".

There was a weak, negative correlation between neuroticism and positive reinterpretation with $r_s =-.35 \; \rho <. 001$, thus suggesting that, as neuroticism increased,

positive reinterpretation decreased. The average score for positive reinterpretation was 11.39 out of a total of 16. Positive reinterpretation is referred to as "[a] type of emotion focused coping: coping aimed at managing distress emotions rather than at dealing with the stressor per se" (Carver et al., 1989, p. 270). Carver et al. (1989) explain that emotion focused coping strategies, such as positive reinterpretation, are often seen as maladaptive because there is nothing being done in order to resolve the stressor.

There was a weak positive correlation between neuroticism and behavioural disengagement $r_s =. 32 \; \rho < .001$, which indicates that the more neurotic an individual is, the more likely he or she is to avoid the problem. The average score for behavioural disengagement was 7.33 out of a total of 16 (Carver et al., 1989). There was also a weak negative correlation between neuroticism and active coping $r_s =-.31 \; \rho <. 001$, indicating that the more neurotic an individual is, the less he is likely to actively attempt to cope. The average score for active coping was 10.77 out of a total of 16. In addition, there was a weak negative correlation between neuroticism and planning $r_s =-.31 \; \rho <. 001$, which indicates that the more neurotic an individual is, the less likely he or she is to engage in actively planning to resolve the issue. The average score for planning was 10.91 out of a total of 16. There was a weak negative correlation between neuroticism and restraint $r_s =-.30 \; \rho <. 001$, which indicates that the less neurotic an individual is, the more likely he or she is to not act prematurely and show restraint (Carver et al., 1989). The average score for restraint was 10.29 out of a total of 16.

There was a weak positive correlation between neuroticism and substance use $r_s =.28 \; \rho < .001$, where the more neurotic an individual is, the more he or she is likely to use substances to cope with cyberbullying. The average score for substance use was

6.18 out of a total of 16. There was also a weak positive correlation between neuroticism and mental disengagement $r_s =. 26 \rho <. 001$, which suggests that the more neurotic an individual is, the more likely he or she is to distract him or herself from the issue (Carver et al., 1989). The average score for mental disengagement was 10.41 out of a total of 16. In addition, there was a weak negative relationship between neuroticism and religious coping $r_s =-.22 \rho <. 05$, where the more neurotic an individual is, the less likely he is to select religious coping strategies. The average score for religious coping was 8.33 out of a total of 16.

Finally, the results indicate a weak positive correlation between openness to experience and positive reinterpretation $r_s =. 26 \rho <. 001$, and a weak positive correlation between openness to experience and mental disengagement $r_s =.21 \rho < .05$.

Other correlations are depicted in Table 4.12

Table 4.12. Correlations between personality and coping

	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
Positive reinterpretation	.33[**]	.21[*]	0.14	-.35[**]	.26[**]
Mental disengagement	-0.01	-0.07	-.31[**]	.26[**]	.21[*]
Focus on and venting of emotions	0.01	-0.05	-0.01	.41[**]	0.16
Instrumental social	0.08	.27[**]	.24[*]	-0.12	0.13

support

Active coping	.25*	.24*	.38**	-.31**	0.15
Denial	0.05	0.01	-.21*	0.07	-0.02
Religious coping	0.11	.36**	0.19	-.22*	-0.02
Humour	0.06	-0.01	-.32**	0.02	0.15
Behavioural disengagement	-0.03	-0.05	-.23*	.32**	-0.01
Restraint	0.12	0.17	0.18	-.30**	0.01
Emotional support	-0.02	0.16	.21*	-0.02	0.19
Substance use	0.01	-0.11	-.26**	.28**	0.18
Acceptance	0.09	-0.01	-0.18	-0.07	-0.00
Suppression of competing activities	.26**	-0.01	0.09	-0.09	0.09
Planning	0.19	0.17	.31**	-.31**	0.15

The significant correlations are flagged with an asterisk.

**Correlation is significant at the 0.01 level

* Correlation is significant at the 0.05 level

4.12 ANALYSIS OF THE DEMOGRAPHIC RESULTS

The results from the demographic questionnaire were analysed in order to gain a clearer understanding of the background of the participants as well as whether their backgrounds may have had a significant impact on the results. The data was organised, totalled and placed in pie charts.

4.12.1 Organising the data

The raw data was initially exported from SPSS into Excel, and organised manually by the researcher who classified the participants into the appropriate age groups, racial categories, socioeconomic status (Hunter, 2016), religious affiliations, sexual orientation, languages, gender, and the presence of a disability. The sum of each category or group was calculated using Excel formulas. The pie charts with these results are depicted in appendix A.

4.13 SUMMARY

In short, the study findings confirmed that a correlation existed between cyberbullying, coping and personality. However, the results did not imply that cyberbullying victimisation is caused by the personality trait neuroticism but, rather, that cyberbully victims are often neurotic, and that these individuals often fall victim to online impersonation. In addition, neurotic individuals often resort to maladaptive coping. The results of the analyses also provided further information in relation to the consequences of cyberbullying victimisation, and cyber bullying perpetration. Furthermore, the findings provided interesting information in the overall demographic of victims of cyberbullying. The following chapter critically discusses these findings as well as their implications for future cyberbullying research.

CHAPTER 5: DISCUSSION OF RESULTS AND CONCLUSION

Chapter 5 begins with an overview of the study. This is followed by a critical evaluation of the relevant results supported by existing literature, as well as possible alternative explanations for the findings. The limitations of the study are highlighted, and suggestions for future research and possible interventions provided. There is a brief overview of the contributions of the study and, finally, the study is concluded.

5.1 OVERVIEW OF THE STUDY

The aim of this study was to gain an insight into the relationship between the personality profile and cyberbullying victimisation type. This aim was realised by administering both the Big Five Personality Inventory and a cyberbullying measure developed by the researcher with scores being obtained on each measure. The Spearman's rho correlation between the two sets of scores was then examined. In addition, cluster analysis was used in conjunction with the Spearman's rho measure in order to compare the results.

A further objective of the study was to explore the relationship between personality traits and coping strategies by means of the COPE Inventory. This aim was realised by measuring the correlation between sets of personality scores and coping scores using the Spearman's rho measure. The General Aggression Model was used as a basis for understanding the role played by personality in cyberbullying victimisation and maladaptive coping.

The sample comprised 102 individuals who had been cyberbullied over the age of 18, gathered online and limited to no particular geographic region.

5.2 GENERAL DISCUSSION OF RESULTS

The overwhelming proportion of the participants (85%) were female. Although existing research supports this finding, suggesting that women are often cyber-victimised and men are often the perpetrators of the bullying (Kowalski & Limber, 2013), a number of factors may also have contributed to this gender disparity.

Firstly, it is entirely plausible that the 85% statistic was due to there being a larger proportion of women in the Facebook groups that participated in the study. Current statistics suggest that 83% of females use Facebook, as compared to 75% of males (York, 2017).

An alternative explanation for the gender disparity may be the higher levels of neuroticism in females (Cavarella, Passerini, & Pepe, 2013). The stress reported by women tends to be focused on others whereas men are likely to be stressed by individual/ performance based factors (Williams & Gunn, 2006). Williams and Gunn (2006, p. 438) suggest that "[w]omen appear more reactive when their social networks are disrupted". In addition, neuroticism is also related to frequent social media use (Correa, Hinsley, & De Zuniga, 2010) and emotional disclosure, according to Seidman (2013). This would explain the greater female presence on social media sites, such as Facebook and which exposes them to a greater risk of cybervictimisation as compared to men.

It is also important to highlight that the average level of neuroticism found by the researcher through Excel function between the genders in this study was 3.33 for women and 3.23 for men – a relatively minor difference. In addition, the study found no difference in the degree of impersonation, with both groups averaging 1.67. These results may suggest that the personality trait neuroticism may not be a significant risk factor in cyberbullying victimisation as it is a consequence of cyber bullying; because if females are said to generally score higher on neuroticism, and males scored the same in this study, this may well provide support for the fact that these individuals may have become neurotic as a result of ongoing cybervictimisation.

The findings of this study are supported by existing research that neuroticism is correlated with cyberbullying victimisation to a certain degree (Celik et al., 2012; Smith, 2016), and that the victims of cyberbullying often score high on this trait (Corcoran et al., 2012; Kowalski et al., 2012). Although the participants scored moderately on neuroticism, it must be noted that this current study found weak correlations between neuroticism and cyberbullying. This finding is in line with the findings of Semerci's (2017) study although other studies have found moderate to strong correlations. In addition, the study found a weak, positive correlation between openness to experience and impersonation, with individuals averaging 3.76 on openness. Festl and Quandt (2013) similarly found victims of cyberbullying to score high on openness while studies by Semerci (2017) and Peluchette et al. (2015) found openness to experience to be a significant predictor of victimisation.

There are too few studies on this particular research topic in order to draw definitive conclusions although the disparity may have arisen from a number of factors such as sample or measurement differences. Celik et al. (2013) focused their study on university students

whereas Smith (2016) focused his study on school children. The participants in both studies were drawn from particular demographic locations. Furthermore, the studies by Semerci (2017) and Peluchette et al. (2015) also used a younger sample from particular demographic regions, and varying versions of the Big Five measure and cyberbullying measures. This makes it difficult to generalise the results from these studies.

In addition, this study not directly measure vulnerability, thus all that may be concluded with the results is that the victims of cyberbullying are often neurotic. However, the extent and role of this trait with regard to vulnerability is less clear. Although there are no existing studies which investigated the correlation between neuroticism and particular cyberbullying subtypes, it is no surprise, given the emotional lability of the cyberbully victim, that this individual may be at risk of being impersonated, excluded and harassed and experiences denigration online. Victims of traditional bullying have similarly been found to score higher on neuroticism as compared to non- involved individuals (Mynard & Joseph, 1997). It is interesting to note that the data suggests that neurotic individuals often tend to be impersonated online. This may be because more neurotic individuals appear as easy targets to impersonate and will not easily retaliate. The same is true for all cyberbullying subtypes. Furthermore, it is interesting to note that both the Spearman's rho measure and the cluster analysis did not find a statistically significant correlation between personality and cyberstalking. However, it is not possible to draw conclusions from this because it is likely that this group of individuals had simply not experienced this cyberbullying subtype.

Research suggests that neuroticism in women appears to decline with age (Srivastava, John, Gosling, & Potter, 2003). This may help to explain the moderate scores on neuroticism. However, this study provided evidence that cyberbullying does place among adult

individuals, thus suggesting that there may be other potential contributors to victimisation. A brief analysis indicated that the level of neuroticism had actually increased at a minimal rate between the age groups, ranging between 3.76 and 3.80 between the ages 18 and 69. In view of the fact that personality is supposed to remain relatively stable with age (GAM), and neuroticism should decrease with age, it is possible that this statistic may be demonstrating adapted neurotic personality. An adapted neurotic personality would refer to continuous cyberbullying that has resulted in a change in personality. Much like the GAM refers to the development of an aggressive personality due to persistent cyberbullying, it may be possible or worth exploring an adapted neurotic personality due to persistent cyberbullying. It appears fully plausible to assume that just as persistent cyberbullying victimisation may cause an individual to become more aggressive, as it may also cause an individual to withdraw, become depressed, anxious and so forth. Furthermore, the average degree of impersonation appeared to decrease with age, from 1.74 to 1.50 respectively between ages 18-69. It may, thus, be that this statistic be a result of something other than neuroticism.

It is worth noting that the highest scores on cyberbullying were on harassment, averaging 2.31. Selkie et al. (2016) and Hegmen (2014) similarly found that college students and individuals in the workplace most commonly experienced cyberharassment. The average level of harassment in this study according to age group appeared to increase from 2.28 to 2.46 for age groups 18 to 29 and 30 to 49 respectively. This may suggest that, although the nature of cyberbullying may change and adapt with age, cyberbullying is evident among adult individuals over the age of 30 and, contrary to belief, does not decline in severity with age and neuroticism.

Current statistics suggest that Caucasians are reportedly connected to Facebook more so than individuals of colour (Pew Research Centre, 2017). This study found that 85% of individuals self-identified as Caucasian. A possible explanation for this disparity may be the fact that the Facebook residential group areas chosen for this study were predominantly Caucasian. The residential areas approached were of a relatively high socio economic status because lower income areas do not commonly have these types of groups available to them. According to a study by Deniz (2015), SES has been shown to increase the likelihood of cyberbullying as students of a higher SES have increased access to technological devices such as computers, the internet and mobile phones and, consequently, use these devices on a frequent basis. It must, however, not be forgotten that those of a lower SES are still at a risk of cyberbullying through SMS. This may also help to explain why the individuals of a lower SES were not available for this study (Mabika & Dube, 2017). A study by Edwards, Kontostathis, and Fisher (2016) found that Caucasian individuals were at greater risk of cyberbullying victimisation, perhaps due to their overall higher SES.

Another fact worth noting is that the sample used in this study was disproportionally homosexual with 17% of the participants self-identifying as LGBT. This was extremely interesting because, in South Africa, self-identified LGBT individuals comprise 1.4% of the total population and 1.2% worldwide, averaging at the 2% level (Writer, 2016). It is interesting to note that these individuals were comfortable about disclosing their identities, as the low statistic, which usually stems from a hesitancy to do so. The Pew Research Centre conducted a survey, which found the American community to be largely accepting of LGBT individuals whereas South Africans, on the other hand, generally do not accept them (61%) (Pew Research Centre, 2013). It is thus surprising, given this statistic, how many individuals were comfortable responding to the question on their sexual orientation. Henderson (2015)

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suggests that cyberbullying is extremely prevalent among the LGBT community. This may, in fact, be worth investigating in the future.

The sample also included "disabled" individuals (14% of the overall sample). These particular participants frequently mentioned that they struggled with mood disorders, such as depression and anxiety. This was, however, not a surprising statistic as the SADAG (n.d.) has reported that 16.5% of South African individuals suffer from mental health issues such as depression and anxiety. In the context of the study, issues with depression and anxiety may either be a consequence of the cyberbullying or a reason for targeting the victim. Kowalski et al. (2014) suggests that, "whereas problems such as depression and anxiety may be predictors of involvement in cyberbullying, they may also be consequences of the behaviour"

Ptacek, Smith, and Zanas (1992) suggest that there are gender differences in respect of the coping styles adopted with men being said to use problem focused strategies while women commonly engage in emotion focused coping strategies. An analysis of the coping strategies of males and females found that both genders obtained similar averages in respect of maladaptive coping styles, positive reinterpretation and the focusing on and venting of emotions, thus suggesting that this may be a predictor of victimisation. More specifically, males and females scored highly on positive reinterpretation at averages of 11.43 for females, and 11.20 for males. It is interesting to note that males scored slightly lower on the focusing on and venting of emotions with scores averaging 9.00, and with 11.60 for females.

The results of this study appear to be supported by existing literature in that those individuals who are high in neuroticism are likely to engage in emotion focused coping

strategies (Boyes & French, 2009, Contreras-Torres et al., 2009). It is to be expected that an

individual who is neurotic would be unable to effectively select rational and adaptive coping

strategies (Gunthert, Cohen, & Armeli, 1999). In line with this, 12% of the participants

admitted to self-harming behaviours in attempts to cope with cyberbullying. In addition, there

was a correlation albeit weak between neuroticism and substance use, which suggests that

neurotic individuals are more likely to use substances to cope. These are both maladaptive

coping behaviours frequently displayed by victims of cyberbullying (Patchin and Hinduja,

2010). Furthermore, and in line with the stipulations of the GAM, an individual who does not

possess sufficient emotional resources will often resort to maladaptive ways of coping with

cyberbullying. In addition, a large proportion of individuals (47%) indicated that their

friendships suffered as a consequence of cyberbullying. Victims of cyberbullying are often

said to experience lower quality of relationships as a result of cyberbullying (Tokunaga,

2010, cited in Sticca & Perren, 2013).

In view of the high scores on both coping styles, as well as a moderate correlation

between neuroticism and coping, the results may suggest that cyberbullying may be the result

of maladaptive coping. The study by Kokkinos et al. (2013, cited in section 2) supports this

conclusion. It may be that cyberbullying which, is in its nature repetitive-is successful only in

respect of people who do not have the emotional resources and effective coping strategies

that would enable them to effectively deal with the issue.

It is, therefore unclear as to whether it is neuroticism that places an individual at risk

of victimisation or whether a neurotic individual is at higher risk due to the likelihood of his

or her coping maladaptively in stressful situations. Alternatively, it is unclear as to whether

this may be an "adapted" personality resulting from persistent cyberbullying, thus leaving the question open as to what then places an individual at greater risk of victimisation. The answer probably lies in a number of factors that vary from one individual to another – as seen in the GAM. It is, thus, clear that the cyberbullying phenomenon requires extensive research and understanding in order to ensure a clearer understanding of it.

5.3 ALTERNATIVE EXPLANATIONS FOR THE RESULTS

Alternative explanations for the results of the study are provided below. These explanations pertain primarily to possible research design factors that may have influenced the final results.

5.3.1 Language

Of the participants in the study 74% cited English as their first language. It is, therefore, possible that other 26% may have experienced problems interpreting questions with this affecting the overall results.

5.3.2 Sample size

There was a confidence level of 95 % for the sample of 102 individuals. This means that the confidence values were at +/- 5% of the population mean, indicating a 5% margin of error. However, a larger sample size was difficult given the nature of the research topic.

Although a sample of 102 participants was considered appropriate for an exploratory study, it is, nevertheless, possible that this sample size did not produce sufficient statistical power, therefore rendering the results ungeneralisable.

5.3.3 Likert-type cyberbullying scale

The fact that the data was not normally distributed may have been a result of the subjective nature of the questionnaires. The cyberbullying measure was a Likert-type measure, and a limitation of these measures lies in various interpretations of the scale (Beins, 2000). For this reason, it was difficult to determine the true severity or incidence of cyberbullying experienced by the participants and this may have influenced the interpretation of the overall results. Although objective studies are more reliable (Miller & Lovler, 2016), it was felt that the subjective responses to the research questions posed in this study would be of greater importance and value.

5.3.4 Environmental factors

The fact that the study was executed online meant that the researcher had minimal control over possible distractions, such as noise, which may have influenced the way in which the participants responded.

5.4 SUMMARY

Overall, the results of the study did not provide definitive answers to the research questions, although the results were in line with existing knowledge in that neuroticism is correlated with both cyberbullying victimisation and maladaptive coping. However, it is

important to note that a number of factors may have influenced the results. The section that follows discusses the limitations of the study and offers recommendations for future research. The study is then concluded.

5.5 LIMITATIONS OF THE STUDY

The section that follows highlights the possible limitations of the study. This is followed by a list of recommendations for the improvement of future cyberbullying studies similar to the current study.

5.5.1 Measurement validity and reliability of the instruments

Overall the cyberbullying measure was found to be reliable, with a Cronbach's alpha value of .859, which is deemed to denote good internal consistency. However, it is difficult to predict the construct validity of a new measure because it has not been used and supported in existing literature. Efforts were made to confirm the content validity of the measure, thus ensuring that the cyberbullying measure was, in fact, measuring the construct in question. Please refer back to section 3.9.3 for a more detailed overview of the validity and reliability statistics pertaining to the cyberbullying measure.

5.5.2 Measurement and definitional issues, and questions of honesty

Although the cyberbullying measure proved to be both reliable and valid, it is hoped that, in the near future, a standardised measure of cyberbullying will be implemented. This would render the results from cyberbullying research more comparable and, thus, more valid.

In addition, there was not a 100% certainty that all of the participants would have been cyberbullied. A brief definition of cyberbullying was, however, provided at the start of the questionnaire, and the "outliers" or individuals who scored 1 on all of the items were removed from the data before it was analysed.

Finally, it is possible that the participants may not have been truthful in their responses, which may have affected the overall validity of all four of the questionnaires. Participants were, however, encouraged to answer truthfully.

5.5.3 The nature of cyberbullying

It must be noted that participants did not claim to have been 'severely' cyberbullied. For example, the highest average score was 2.31 on harassment. Festl and Quandt (2013) suggest that victims often do not fully disclose their cyberbullying experiences and that, although their cyberbullying experience may have been severe, victims often underplay the severity of the situation. It may, therefore, have been more beneficial to investigate this particular topic by means of a mixed method approach.

5.5.4 Sampling bias

It is clear that there was an overrepresentation of Caucasian individuals from higher income neighbourhoods, and that the proportion of males to females and various age groups was skewed. This made it difficult to generalise the results to the overall population.

5.5.5 Lack of control group

The lack of a control group to replicate the study is a potential pitfall. It would have been interesting to note the level of neuroticism of individuals who had not been cyberbullied and compare this to the levels of neuroticism of cyberbullied individuals. However, people do not generally self-identify, as non-bully victims- thus it was unclear as to how to sample a control group in this context. Therefore, due to the methodological issues previously stated, a control group was not possible.

5.6 RECOMMENDATIONS

Possible suggestions for future studies are reflected below.

5.6.1 Mixed method approach

Future studies may benefit from using a mixed method approach. An advantage of a qualitative study would be the possibility of gathering additional information about the participants. Conducting interviews with the participants may provide greater insight into the victims' perspectives and stories. A formal introduction may also result in more sincere and honest results because it would help to ensure a level of comfort or familiarity between the researcher and participant.

The researcher would generally have more control in such a setting, thus allowing the researcher to ensure that there are limited external factors influencing respondents and also to explain and assist those who may not have understood a particular question.

5.6.2 Longitudinal study

A longitudinal study would probably prove beneficial in understanding this relatively new phenomenon, and it would provide more insight into the direction of effects over time.

5.6.3 Future areas of study

Personality and cyberbullying by type should be further explored using an adult sample. In addition, the relationship between personality and coping among cyberbullying victims should be investigated further as should the relationship between cyberbullying victimisation and perpetration.

Furthermore, demographic particulars should be gathered and scrutinised in cyberbullying research so as to determine the extent of the role, which they play in cybervictimisation. Finally, the relationship between traditional bullying and cyberbullying should also be further explored.

5.6.4 Possible future interventions

Possible future interventions could include educating the victims of cyberbullying on adaptive coping strategies. Whether coping is partly the cause of victimisation or not, it is clear from the results of this study that the victims of cyberbullying are often engaging in maladaptive coping strategies. Such education may, potentially, reduce the overwhelming cyberbullying and suicide statistic by helping the victims to build up resilience and strength.

The Cybersmile Foundation provides cyberbullying victims with suggestions on healthier, adaptive ways of coping. In addition, the Tyler Clementi #day1 campaign toolkit similarly provides victims with effective preventative cybersafety and coping tools. With the

help of non-profit organisations, campaigns and a deeper knowledge of this phenomenon, guidelines should be implemented on adaptive coping strategies for cyberbullying victims. The focus should be on providing victims with the necessary emotional and cognitive resources to cope effectively with cyberbullying. In addition, and in line with the principles of the GAM, this would also serve as an effective preventative strategy against the development of an aggressive personality, as a significant 13% of the participants admitted to having engaged in cyberbullying themselves. This would potentially help to end the vicious cyberbullying cycle.

5.7 CONCLUSION

This study aimed to gain a clearer understanding of the role of personality in cyberbullying victimisation, as well as its role in coping with cyberbullying. It may be said that the study achieved its desired aims in part and that it provided further evidence of the correlation between neurotic personality traits, and cyberbullying victimisation. It was also the first study of its kind to examine the relationship between personality and cyberbullying victimisation risk by type. It was interesting to note that the study found a significant correlation between neuroticism and online impersonation. However, it was unclear whether neuroticism is a key determinant in victimisation, and whether the participants of this study were neurotic prior to victimisation.

In addition, the study further provided evidence of the role of personality and neuroticism in the maladaptive coping of cyberbully victims. The high scores on these coping styles may be an indication that maladaptive coping behaviours place individuals at a greater risk of cybervictimisation.

To conclude, it is clear that the cyberbullying phenomenon is a global problem, which affects individuals of all ages and backgrounds. It is also evident that there is still much to learn about this growing phenomenon, as well as the risk factors involved. In order to bring it to an end, a deeper knowledge and understanding of the phenomenon is vital.

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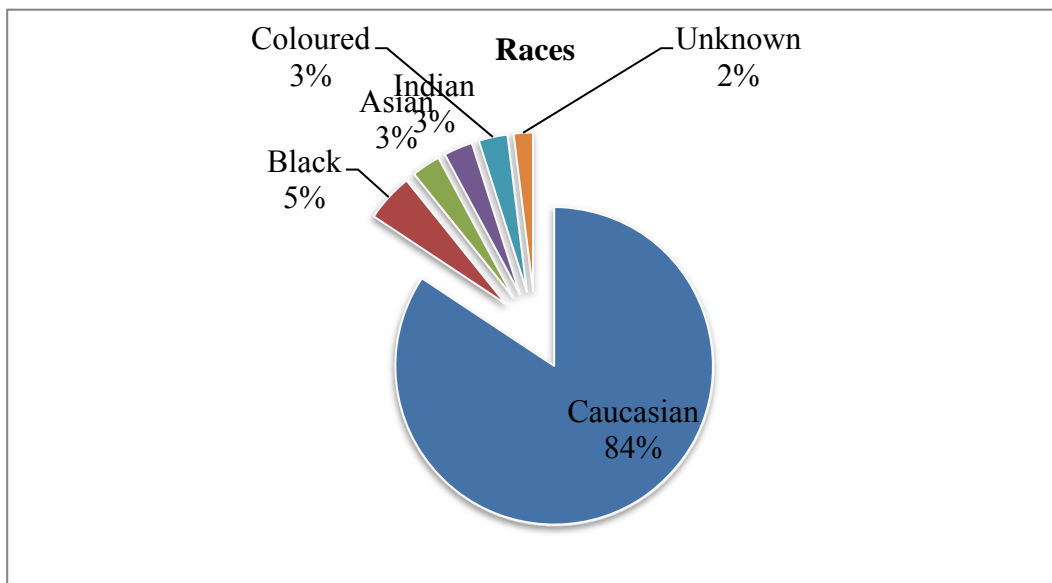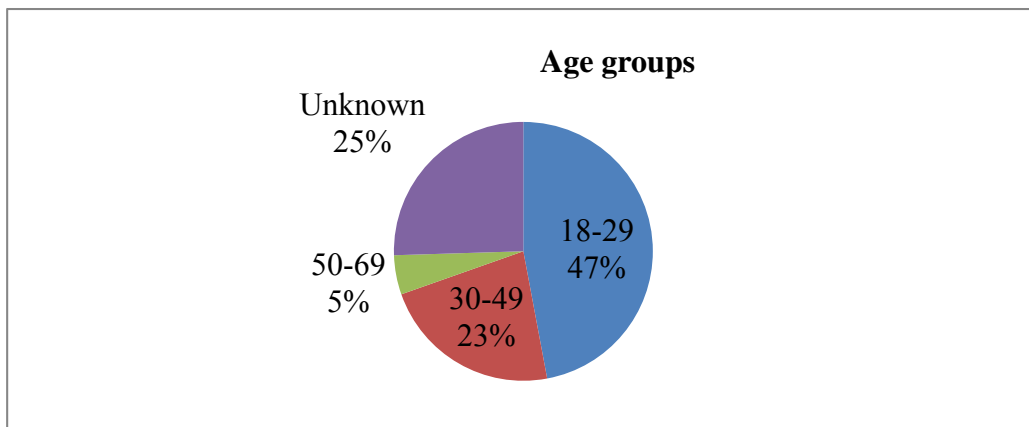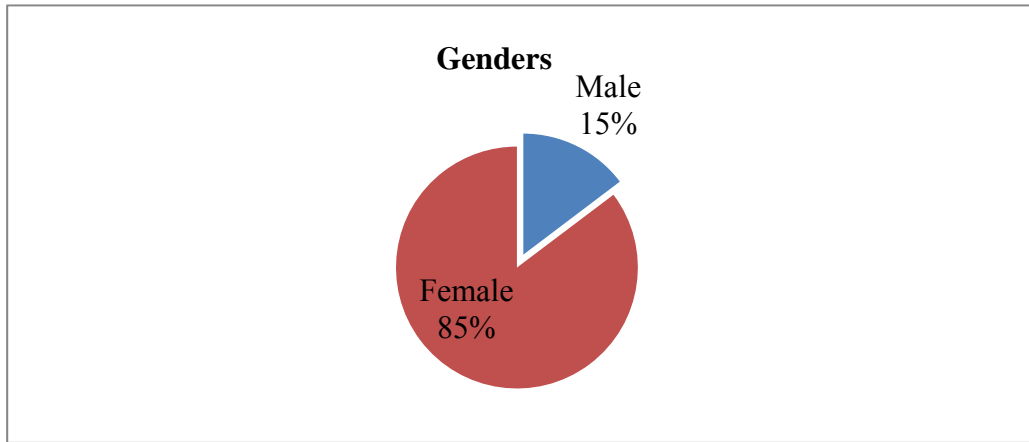
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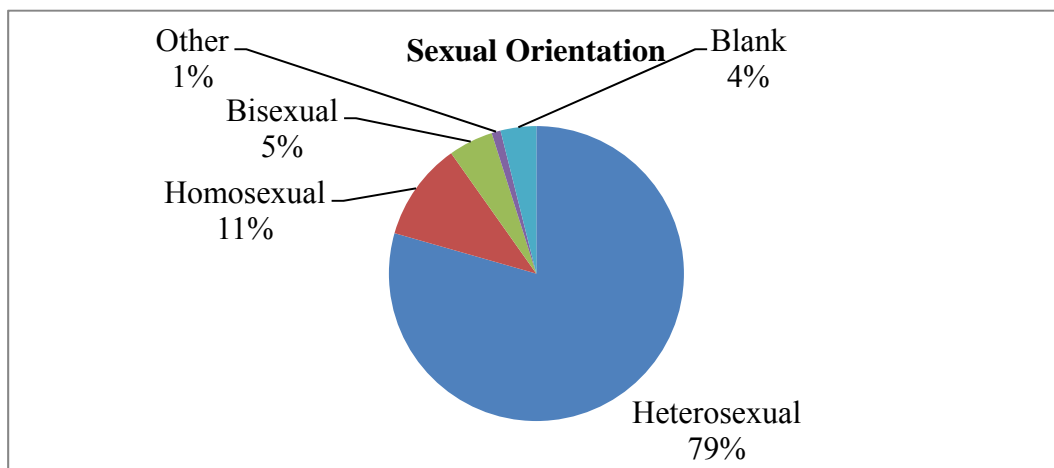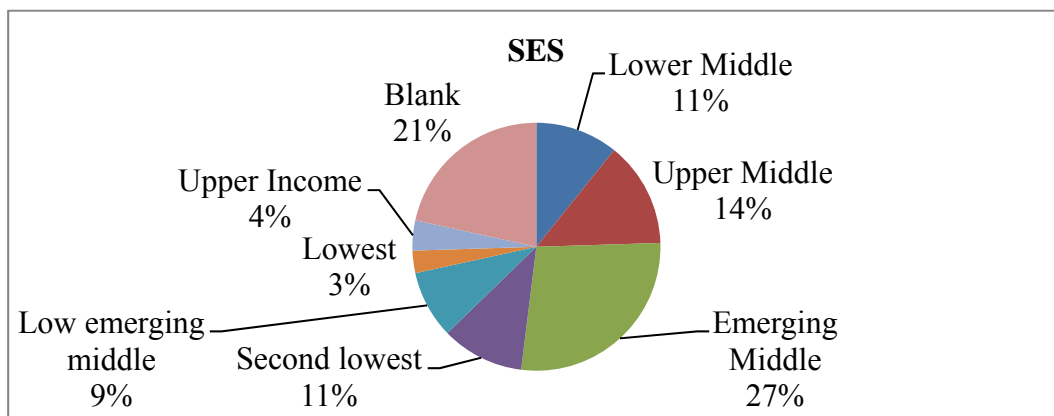
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APPENDIX A: POPULATION (DEMOGRAPHIC RESULTS)

Genders

Male
15%

Female
85%

Age groups

Unknown
25%

50-69
5%

30-49
23%

18-29
47%

Races

Coloured
3%

Indian
3%

Asian
3%

Unknown
2%

Black
5%

Caucasian
84%

First language

Other
6%

Venda
2%

Xhosa
2%

Afrikaans
17%

English
73%

SES

Lower Middle
11%

Blank
21%

Upper Middle
14%

Upper Income
4%

Lowest
3%

Low emerging
middle
9%

Second lowest
11%

Emerging
Middle
27%

Sexual Orientation

Other
1%

Blank
4%

Bisexual
5%

Homosexual
11%

Heterosexual
79%

Disability

Missing
9%

Yes
(Disabilities)
14%

No
disabilities
77%

APPENDIX B: CYBERBULLYING FACEBOOK GROUPS

Cyberbullying Facebook Groups

Silence is Screaming
Stop Bullying!
Stop Workplace Bullying!
Bullying and Harassment in the Workplace
Cyberbullying Awareness Group
Anti-bullying and Cyberbullying Support Group
Cyberbullying Everyplace

Residential Areas Facebook

Gauteng

Ruimsig	Benoni	Honeydew	Blairgowrie
Randburg	Victory Park	Sandton	Douglasdale
Westrand	Edenvale	Lenasia	Bryanston
Fourways	Muldersdrift	Roodepoort	Victory Park

Fairland	Greenside	Emmarentia	Melville
Primrose	Cosmo City	Germiston	Wadeville
Randpark Ridge	Kempton Park	Glen Marais	Illovo
Kensington	Parkhurst	Northriding	Roosevelt Park
Westcliff	Morningside	Westdene	Delta Park
Saxonwold	Parkwood	Fairland	Dainfern
Sunninghill	Parkview	Craighall	Northcliff
Ruimsig	Kempton Park	Albertville	Roosevelt Park
Fontainebleau	Olivedale	Jukskei Park.	Robindale/ Robin Hills

Other

Tongaat	Pietermaritzburg	Nelspruit	
Verulam	Rustenburg	Grahamstown	

APPENDIX C: INFORMATION SHEET

Dear Participant,

My name is Hana Muftic-Globisch and I am a Psychology master's student at the University of South Africa. As part of my studies I am conducting research on the issue of cyberbullying.

I would really appreciate it if you decide to participate in this research study. It aims to give us a clearer understanding of the link between personality and cyberbullying. Hopefully what we learn from this study could help to prevent future cyberbullying to some degree with the aim to potentially help mitigate this problem in the future.

Why are we doing this research?

Because we want a better understanding of how cyberbullying works. We could use that knowledge to figure out ways of preventing it from happening in the first place or how to deal with it when it does happen.

What you would have to do if you agree to take part?

1) Complete the basic demographic questionnaire online. This will include questions about your age, religion, race, gender, and socioeconomic status, for example.

2) Complete the cyberbullying questionnaire. This will assess the type of cyberbullying you have experienced. You will be given a number of statements where you would have to indicate how much you agree with them.

3) Complete the personality measure. You will be given a number of statements, where you have to indicate how much you agree with them.

4) Complete the coping assessment. With this assessment we are attempting to understand the coping methods cyberbullied victims often use. Here you would also rate your agreements with the statements.

5) Send these back to the researcher by clicking 'send'.

There will be no feedback of results, or release of results.

Please note that the assessments will take approximately 20 minutes to complete

Confidentiality: Full anonymity will be ensured, as no names are required to complete or consent to participation. The data you provide will only be used for research purposes.

Advantages of taking part: Helping create a better insight into the problem of cyberbullying, potentially preventing others from becoming victims, or providing victims with the necessary tools to overcome the challenges they face with cyberbullying victimisation.

Disadvantages of taking part: The cyberbullying questionnaire may have you thinking about your own cyberbullying experience. We have provided you with the number of a helpline so that should this problem arise, you will have the necessary support available to you.

Participation: As much as your participation would be appreciated and very beneficial to this study, your participation is entirely voluntary, and should it happen that you would not like to carry on with the study, you may withdraw from the study at any point prior to clicking, 'send'. You may also refuse to answer or respond to any question you do not feel comfortable answering.

What happens now?: Attached is a consent form which, if you are to participate, must be read before proceeding with the study.

APPENDIX D: CONSENT FORM

Dear Prospective Participant,

You are invited to participate in a survey conducted by Hana Muftic-Globisch under the supervision of Sydney Louw Butler, an instructional technologist for the Academy for Teaching Technology and Innovation (MA) at the University of South Africa.

The survey you have received has been designed to study the relationship between personality and cyberbullying victimisation. You were selected to participate in this survey because, as victims of cyberbullying, your experiences could help us understand the cyberbullying problem better in the hope of potentially mitigating the cyberbullying problem in the future. You will not be eligible to complete the survey if you are younger than 18 years. By completing this survey, you agree that the information you provide may be used for research purposes, including dissemination through peer-reviewed publications and conference proceedings.

It is anticipated that the information we gain from this survey will help us to understand the cyberbullying phenomenon better and, thus in the near future, create better intervention and prevention strategies. You are, however, under no obligation to complete the survey and you may withdraw from the study prior to submitting the survey. The survey is intended to be anonymous, meaning that we will have no way of connecting the information that you provide to you personally. Consequently, you will not be able to withdraw from the study once you have clicked the send button. If you choose to participate in this survey it will take up no more than 20 minutes of your time. You will not benefit from your participation as an individual, however, it is envisioned that the findings of this study will help create a better

insight into the problem of cyberbullying, potentially preventing others from becoming victims, or providing victims with the necessary tools to overcome the challenges they face with cyberbullying victimisation. We foresee the following consequences to completing the survey: The cyberbullying questionnaire may have you thinking about your own cyberbullying experience. We have provided you with the number of a helpline so that, should this problem arise, you will have the necessary support available to you.

The researcher undertakes to keep any information provided herein confidential, not to let it out of her possession and to report on the findings from the perspective of the participating group and not from the perspective of an individual.

The records will be kept for five years for audit purposes whereafter they will be permanently destroyed. Electronic versions will be permanently deleted from the hard drive of the computer. You will not be reimbursed or receive any incentives for your participation in the survey.

The research was reviewed and approved by the Unisa Ethics Committee. The primary researcher, Hana, may be contacted during office hours at +2776199453. The study leader, Sydney, may be contacted during office hours at +27828434356. Should you have any questions regarding the ethical aspects of the study, you may contact the chairperson of the Unisa Ethics Committee, Professor Piet Kruger at +27124296235. Alternatively, you may report any serious unethical behaviour on the University's Toll Free Hotline 0800 86 96 93.

You are making a decision whether or not to participate by continuing to the next page. You are free to withdraw from the study at any time prior to clicking the send button.

Helpline:

SADAG (SOUTH) AFRICA: 0800121314

*If your country has not been mentioned above, the standard cyberbullying hotline number

is: 1-800-420-1479*

APPENDIX E: THE BIG FIVE INVENTORY

APPENDIX: 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.

1. Disagree strongly
2. Disagree a little
3. Neither agree nor disagree
4. Agree a little
5. Agree strongly

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 new 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
___44. Is sophisticated in art, music, or literature

Please check: Did you write a number in front of each statement?

BFI scale scoring ("R" denotes reverse-scored items):

Extraversion: 1, 6R, 11, 16, 21R, 26, 31R, 36; Agreeableness: 2R, 7, 12R, 17, 22, 27R, 32, 37R, 42; Conscientiousness: 3, 8R, 13, 18R, 23R, 28, 33, 38, 43R; Neuroticism: 4, 9R, 14, 19, 24R, 29, 34R, 39; Openness: 5, 10, 15, 20, 25, 30, 35R, 40, 41R, 44

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