CYBERBULLYING IN THE WORKPLACE- AN INVISIBLE FIST “HITS” THE HARDEST

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ABSTRACT

Cyberbullying is a very serious and pressing recent phenomenon, however very little research covers the scope of cyberbullying amongst employees. The purpose of this study has been to determine the extent to which workplace cyberbullying is prevalent in South-African organisations, some risk factor associated with it, whether it has a negative psychological effect and performance effect on employees, and whether coping mechanisms help to alleviate the negative effects.

A descriptive, diagnostic and quantitative research design was followed and a sample of employees (N = 152) was drawn from a big public utility provider, where they completed an online survey. It was found cyberbullying is prevalent, where it co-occurs with traditional bullying.

This study found that there were differences in the psychological characteristics of (a) perceived stress, (b) ICT demands, and (c) the extent of behavioural experiences of bullying when considering the psychological effects of cyberbullying on the individual. Additional emotional reactions to cyberbullying were lowered trust levels, anger, humiliation and emotional exhaustion. In terms of the effects on performance, the overall experience of bullying, rather than specific cyberbullying events, was found to likely to decrease an individual's performance, whereas no support for the effects on organisational outcomes was found.

Possible coping mechanisms were found to have varying degrees of effectiveness for alleviating the effects of bullying on perceived stress. Interestingly, coping mechanisms used specifically for cyberbullying increased the adverse effects on ICT demands. This finding indicates that additional coping mechanisms to deal with ICT demands should also be considered.

From these results, one can see that cyberbullying is prevalent in the workplace and that it poses a problem in addition to that of traditional bullying.

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TABLE OF CONTENTS

Stellenbosch University https://scholar.sun.ac.za

Stellenbosch University https://scholar.sun.ac.za

Stellenbosch University https://scholar.sun.ac.za

Stellenbosch University https://scholar.sun.ac.za

LIST OF TABLES

Stellenbosch University https://scholar.sun.ac.za

Stellenbosch University https://scholar.sun.ac.za

Stellenbosch University https://scholar.sun.ac.za

Stellenbosch University https://scholar.sun.ac.za

LIST OF FIGURES

Stellenbosch University https://scholar.sun.ac.za

Stellenbosch University https://scholar.sun.ac.za

Stellenbosch University https://scholar.sun.ac.za

CHAPTER 1
INTRODUCTION

1.1 Purpose of this study

1.1.1 Introduction

> I messed up, but why follow me. I left your guy's city. I am constantly crying now. Every day I think why am I still here… I'm really depressed. I'm on anti -depressants now and counselling and a month ago this summer. I overdosed in hospital for two days. I'm stuck, what's left of me now… nothing stops. I have no-one. I need someone (Todd, 2012).

Cyberbullying is a recent and very pressing phenomenon. This is evident from the opening iteration by the adolescent Amanda Todd, which is in one of her last online messages, before successfully committing suicide because of cyber-bullies (Teitel, 2012). On February 22, 2014, the effects of cyberbullying among adults came to the spotlight with the suicide of Charlotte Dawson, a well-known television personality and model (ABC News, 2014). While many of suicide cases related to cyber-bullies have been adolescents and students, the case of Charlotte Dawson provides a demonstration that adults can just as easily be susceptible to the cruelty of bullies who make use of communication and information technology.

1.1.2 Cyberbullying and what it is

Cyberbullying has been defined as intentionally aggressive behaviour of a perpetrator, as an individual or group, using electronic communication technology (regularly abbreviated as ICTs) to extend their reach beyond the physical setting (Von Marées & Petermann, 2012). This is done towards a defenceless individual by directly or indirectly sending derogatory or threatening messages; forwarding personal communication or images of the victim for viewing by other persons or posting vilifying messages in the public domain (Campbell, 2005; Kiriakidis & Kavoura 2010; Privitera & Campbell 2009; Ryan & Curwen, 2013; Smith et al., 2008). It entails an exchange of messages between two or more people using ITCs, where at least one party attacks the self-concept of the other person to psychologically hurt the person (Weatherbee & Kelloway, 2006). This implies that there is negative intent.

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According to Campbell (2005), the source of the cyberbully's power lies in the value that the victim places on information shared with a wide audience of bystanders. Peer bystanders play an important role in perpetuating the cycle of bullying (Coyne, Gopaul, Campbell, Pankasz, Garland, & Cousans, 2019; Madden & Loh, 2018). Cyberbullying can, therefore, be viewed as a social problem that needs to be solved in the social context (Campbell, 2005).

1.1.3 Reasons for considering cyberbullying in the workplace

Organisations in the 21st century have to achieve a set of complex results and compete in the global market if they want to remain competitive in this global village. Companies have become technologically driven to increase their productivity and efficiency through enhanced job performance to achieve this complex result (D'Cruz & Norontha, 2013). As the mobility of communication technology and the prevalence of multinational organisations have increased, the use of communication technology has become imperative for modern society (Valencia, 2014; Yamamoto & Ananou, 2015).

The evolution of communication technology can be viewed as the foundation shoulders on which the phenomenon of cyberbullying has been built (Hendricks, Lumadue, & Waller, 2012). In historic society, initially, communication relied upon letters, later telegraphs and telephones and eventually evolved to the use of mobile phones. The introduction of the internet furthered these advances and modern society, in which organisations and individuals find themselves, is aptly referred to as a "global village" (Global village, n.d.). As the mobility of communication technology increased, so has the reliance on these modes of communication and have moved beyond their main purpose and serve as a social status symbol (Patchin & Hinduja, 2006). This evolution of electronic communication is the result of a need for people in geographically dispersed places to keep in contact. The ultimate purpose of communication technology is communication; a source of knowledge for individuals; increased productivity and achievement of outputs for organisations.

While the purpose of these devices remains pure – there are various nefarious aspects to their increased use. The increased use of communication both inside and outside the

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organisation has affected individuals being inseparable from their information technology and communication devices (Piotrowski, 2012; Vranjes et al., 2018[a]).

Kraut et al. (1998) did a longitudinal study that examined the effects of the internet on psychological well-being and social involvement. They found extensive use of the internet for communication purposes. However, contrary to what one would expect, they found greater use of the internet is not concomitant with an increase in respondents' communication with family members in the household. It is rather associated with a decrease of such communication, declines in the size of their social circle and their levels of loneliness and depression increased (Kraut et al., 1998).

Specifically, in the workplace, Stich, Tarafdar, and Cooper (2018) also note that employees face technostress with the use of workplace communication. This technostress could include technology overload, interruptions and a negative influence on work-life balance.

Social media is also increasingly being used by companies to achieve a set of complex results through brand marketing (Wu, Sun, & Tan, 2013). Online social media could include platforms like Facebook, LinkedIn, Reddit, Youtube and topically related online forums (Kuzma, 2013; Valencia, 2014). These platforms can be accessed on laptops and computers, but also more mobile modes of communication technology like cell phones and tablets.

The emergence and use of social media have been linked to both an increase in business outcomes in the form of growth in sales (Kumar, Bhaskaran, Mirchandani, & Shah, 2013) and increased firm equity value (Luo, Zhang, & Duan, 2013). Wu (2013) did an experimental study using a social networking tool. The study indicates that where networks are characterised with both a plethora of information and social media use, both work performance and job security can be driven.

The use of social media by organisations and their employees is also not without negative consequences (Demek, Raschke, Janvrin, & Dilla, 2018; Kraut et al., 1998; Kuzma, 2013; Schimmel & Nicholls, 2014). In a global survey of 4000 adults, by the online security company AVG, 9% of respondents revealed incidents in which managers gathered

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information from a social media service and used it to the respondent's detriment (Byron, 2013). In the same survey, 10% of the respondents discovered secret discussions about them, initiated by fellow employees and 11% report finding embarrassing photos or videos on online social media sites. Another negative consequence, one which has had a large impact on employees, is that of cyberbullying.

Despite the increase of technology in the workplace and the accompanying reprehensible aspects, very little literature covers the domain of cyberbullying in the workplace (D'Cruz & Nohorona, 2013; Forssell, 2016; Piotrowski, 2012; Privitera & Campbell, 2009; Weatherbee & Kelloway, 2006).

Global research with regards to cyberbullying has recently focussed on the dynamics of the causes and effects on adolescents and students and less on adults, especially adults in the workplace (Kuzma, 2013). Piotrowski (2012) ascribes this to the lack of top management's appreciation for the impact that cyber abuse has on the employees. Schimmel and Nicholls (2014) suggest that there is an increase in the incidence of workplace cyberbullying and it should not be surprising since the adolescents who grew up using new technologies are entering the workplace. The organisation's view which disregards the incidence of cyberbullying supports the notion that cyberbullying effects are the same as or even inferior to that of traditional workplace bullying (Weatherbee & Kelloway, 2006).

Glomb and Liao (2003) suggest that the focus on traditional workplace bullying is because the investment in research leans towards problems of dramatic and serious nature and not necessarily the subtler yet prevalent forms of aggression. Organisations' views should be reassessed due to the increase in incidents of the subtle yet prevalent form of aggression of cyberbullying, that not only harm the wellbeing of their employees but could also portray a negative brand image (Kuzma, 2013; Weatherbee & Kelloway, 2006).

While there is little research on workplace cyberbullying specifically, interest in the necessity of looking into the phenomenon is increasing. This can be seen in the incline of recent studies being published on the topic (for example, Coyne et al., 2019; Coyne et al., 2017; Forssell, 2018; Kowalski, Toth, & Morgan, 2018; Muhonen, Jönsson, & Bäckström, 2017; Vranjes, Baillien, Vandebosch, Erreygers, & De Witte, 2017; Vranjes,

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Baillien, Vandebosch, Erreygers, & De Witte, 2018[a] ; Vranjes, Baillien, Vandebosch, Erreygers, & De Witte, 2018[b]).

1.1.4 Comparing traditional workplace and cyberbullying and their effects

Hong, Chien-Hou, Hwang, Hu, and Chen (2014) view workplace cyberbullying as traditional bullying that came from the cyber world. Several correlational research studies like that of Raskauskas and Stoltz (2007) and Li (2006) indicated that cyberbullying is an extension of traditional bullying. To analyse this shared view among various researchers, one can look at the definitions of both traditional and cyberbullying.

Traditional workplace bullying can be defined as repeated and persistent negative or hostile actions enacted by one or more people that unfold over a prolonged period of time towards one or more other people at work, resulting in psychological, physiological or social stress (Leymann, 1990; Notelaers, & Van der Heijden, 2019).

In terms of cyberbullying, it seems as if the hostile and negative actions in the definition of workplace bullying has been specified to be via electronic means. Some researchers assert that cyberbullying should not be differentiated from traditional bullying, because it is often significantly correlated (Tokunaga, 2010). Both cyberbullying and traditional bullying is about relationships, power and control (Privitera & Campbell 2009), but cyberbullying has both distinctive and similar features and effects to that of traditional bullying (Dilmac, 2009; Mason, 2008; Menesini, Calussi, & Nocentini, 2012). It should, therefore, be regarded as a phenomenon on its own.

Similarities in the effects of cyber and traditional bullying include general development of psychological distress, increased depression and increased psychosomatic symptoms (Coyne et al., 2017; Hinduja & Patchin, 2008; Kowalski et al., 2018; Mason, 2008; Menesini et al., 2012; Muhonen et al., 2017; Schenk & Fremouw, 2012). Even in the similarities between cyber and traditional bullying, there are distinctive features. In both cases, the repetition of the bullying action is needed. The repetitions associated with traditional bullying are much easier to determine since a single harmful cyberbullying act can constitute countless repetitions, by bystanders viewing the bullying act numerous times. The reason for this is that text messages can be resent, reread and photos and videos can be reviewed.

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In both cyber and traditional bullying there is an imbalance of power between the bully and victim (Ševčíková, Šmahel, & Otavová, 2012). According to Lee and Brotheridge (2006), a cyber-bully could also be the prey of traditional bullying and then use the power of anonymity to retaliate. Research confirms that cyberbullying and traditional bullying co-occur (Privitera & Campbell 2009; Smith et al., 2008), and this is known to deepen the effects of bullying (Ševčíková et al., 2012).

The distinctive features of cyber to traditional bullying should also be noted. Consequences of the effects of cyberbullying on the victim include anonymity which leads to feelings of inescapability (D'Cruz & Noronha, 2013; Dilmac, 2009; Kiriakidis & Kavoura, 2010). Cyberbullying has been appropriately termed the "invisible fist" (Hong et al., 2014), indicating that the anonymity, which accompanies it, can make the blow of negative effects harder on the victim. The anonymity and invisibility of the cyberbullying make it less likely that bullies will inhibit emotions leading to disinhibition (Erdur-Baker, 2010; Ybarra & Mitchell, 2004). Researchers have also found boundarylessness in terms of time and the number of people that can be reached (D'Cruz & Noronha, 2013; Hong et al., 2014; Patchin & Hinduja, 2006). Unlike traditional bullying which is confined to the workplace or school, cyberbullying is boundaryless and will follow the target home (D'Cruz & Noronha, 2013; Dilmac, 2009; Patchin & Hinduja, 2006).

The additional effects of cyberbullying can cause distress to the individual's well-being. Distress places additional demands on the employee, which could hinder reaching performance goals successfully and may eventually lead to strain or burnout (Bakker, Demerouti, & Verbeke, 2004; Bakker, Demerouti, & Euwema, 2005; Balducci, Fraccarolib, & Schaufelic, 2011; Schaufeli & Taris, 2014). Excessive amounts of strain or burnout can lead to increased turnover or absenteeism (Du Toit, 2013; Foxcroft & Roodt, 2013; Schreuder & Coetzee, 2016). Companies can potentially lose out on very positive work from employees.

1.1.5 Workplace cyberbullying in South-Africa

As seen from the above information on the potential negative effects of cyberbullying, research on workplace cyberbullying is of utmost importance for individuals and organisations.

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While research on the prevalence of workplace cyberbullying is in its infancy globally, research on the phenomenon in the South-African context is even before conception, as no research has been done regarding cyberbullying in the South African workplace context. While not all employees in the South-African workplace have equal exposure to or literacy in the use of ICT's in the workplace (Prinsloo, 2005), the increase in multinational organisations and the need for South-African organisations to compete in the global market, has caused South-African organisations to be similarly reliant on ICT's.

This study aims to examine the prevalence of workplace cyberbullying in the South-African organisational context. Focus is placed on the dynamics of the additional causes and effects of cyberbullying to that of traditional bullying in the workplace on the wellbeing of employees. Should it be found that cyberbullying is present and that it negatively impacts individual and organisational performance, due to the nefarious effects, organisations will be required to act upon the evidence.

1.2 Research question

Given the findings mentioned above, it will be worthwhile to look at the problem of cyberbullying. The research question thus is:

What is the nature and prevalence of exposure to and the effects of cyberbullying for employees and organisations?

1.3 Research objectives

The researcher attempts to address the gap in the literature by attempting to obtain the objectives through theoretical and empirical investigation and integration. To examine the given research problem, a comprehensive descriptive investigation into the prevalence with some enabling factors and the effects of cyberbullying in the workplace is needed. The researcher diagnostically investigates the level of cyberbullying exposure and the effects thereof for organisations and its employees. In descriptively and diagnostically considering cyberbullying in the workplace, the research aims to provide a stepping stone for organisations to realise that cyberbullying is occurring, and it has a negative effect, so they might consider remedial action.

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Considering this, the study will aim to reach the following objectives:

- To determine whether workplace cyberbullying does occur in the South-African workplace
- To determine whether workplace cyberbullying has a negative psychological effect, above that of traditional workplace bullying, on individual employees.
- To determine whether workplace cyberbullying has a negative effect, above that of traditional workplace bullying, on the performance abilities of individual employees.
- To determine whether workplace cyberbullying negatively effects organisational outcomes

1.4 Overview of the study

The following offers a summary of the chapters included in this study:

- In Chapter One, the significance of addressing problems related to the rise of cyberbullying in the workplace due to organisations' increased reliance on information and communication technology is discussed. The research problem is defined along with objectives for determining the possible scope of addressing the problem. A gap in the literature is identified in that there is a lack of knowledge of the prevalence of workplace cyberbullying and the effects thereof on the individual employees and the organisational outcomes.
- In Chapter Two, the researcher reviews existing research with regards to the definition of cyberbullying in the workplace and exploring some of the differences between cyber and traditional bullying. The workplace as a possible context for the prevalence of cyberbullying is explored by examining the role of competitive advantage in organisations; technology (especially information and communication technology (ICT's)); traditional workplace bullying; the increase of youth into the workplace and elements specific to the South-African context. The effects of the cyberbullying phenomenon on the individual and eventually on the organisation are explored. Based on existing literature, hypotheses are generated to be tested on the workplace cyberbullying phenomenon in South-Africa.
- The purpose of Chapter three is to give an account and justification for the chosen research methodology. An explanation of the population and sample, as well as

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sampling techniques and data collection methods, are delivered. The researcher gives an in-depth account of the research instrument and the procedure for data collection is given. Finally, details on the validity and reliability of the study are presented along with some ethical consideration.

- The purpose of Chapter four is to present the analysis and the results of the study. This includes looking at the psychometric properties of the questionnaires used; giving descriptive statistics of the total sample; explaining results on the prevalence of workplace cyberbullying and exploring the effect of cyberbullying. The prevalence of the total sample is also split up by different factors that might explain the prevalence in the South African context, which includes prevalence given the increased use of technology in a highly competitive environment; prevalence given the presence of workplace bullying; prevalence given the increase in youth exposed to cyberbullying entering the workplace; and prevalence given the characteristics of the South-African workplace. In terms of the effect of cyberbullying, results are presented as the psychological effects of cyberbullying on the individual employees; the negative effects of cyberbullying on the performance abilities of individual employees; negative effect of cyberbullying on organisational outcomes; and the effect of how coping mechanisms could influence the organisational outcomes.
- The purpose of Chapter five is to discuss the results of the current study by exploring both the prevalence and the effects of cyberbullying.
- The purpose of Chapter six is to conclude the study, note any limitations and to give recommendations. For the recommendations, both practical implications and recommendations for future research are explored.

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CHAPTER 2
LITERATURE REVIEW

2.1 Introduction

In this chapter the researcher outlines some previous research that has explored the phenomena of traditional workplace and cyberbullying. It is important to understand how others have defined cyberbullying and to start to understand how the phenomena came to be by looking at protective and aggravating factors along with placing it in the South-African context. To understand more about the prevalence of cyberbullying in the workplace, the researcher then explores certain characteristics and contextual factors in the 21st century could play a role in the prevalence. The effects of the cyberbullying phenomenon on the individual and eventually on the organisation are explored. Based on existing literature, hypotheses are generated to be tested on the workplace cyberbullying phenomenon in South-Africa.

2.2 Defining cyberbullying

The term bully has been documented since as early as 1530 (Aalsma & Brown, 2008). Despite the long-time notion that bullying is an issue for which action should be taken and is a cause for concern, systematic research on bullying only really started sprouting in the late 1970s (Farley, n.d.). The earlier definitions for the term bullying merely stated that there is an existence of a power imbalance between the bully and victim. Olweus (2013) revised the definition to include three fundamental elements in a bullying relationship which includes intentionally painful behaviour, where there is a format of repetition, and it is difficult for the target to defend him or herself (imbalance of power). The imbalance of power is what distinguishes bullying from other acts of aggression (Smith et al., 2008).

Some researchers believe that the increase in technology significantly impacts the bullying relationship (Patchin & Hinduja, 2006; Smith et al., 2008). Individuals are reliant on technological devices for different purposes, including as a means of communication. The ultimate purpose of using technological devices for communication is to connect people who are geographically dispersed. As people became increasingly geographically dispersed and yet needed a manner of connection, increased reliance on communication devices resulted. People became inseparable from these means of communication (D'Cruz & Noronha, 2013).

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As noted in the introduction to this study, cyberbullying can be defined as deliberate aggressive behaviour of an individual or group of perpetrators, using electronic communication technology to extend their reach beyond the physical setting, towards a defenceless individual by directly or indirectly sending derogatory or threatening messages, forwarding personal and communication or images of the victim for others to see or publicly posting vilifying messages (Campbell, 2005; Kiriakidis & Kavoura, 2010; Privitera & Campbell, 2009; Ryan & Curwen, 2013; Smith et al., 2008).

Within this definition lie the fundamental elements of the traditional bullying as behaviourally defined by Olewus (2013). The intentional aggressive behaviour implies that there is intentional hurtful behaviour, the defencelessness of the individual being bullied implies there is an imbalance of power and repetition lies in the multiple sending of the messages and it being viewed multiple times.

However, cyberbullying is not an easily definable construct. There has been some controversy among its researchers whether it should be defined as a mere extension of traditional bullying (for example, Hong et al., 2014), where technology meets bullying. This controversy occurs because of characteristics that are generally more prevalent amongst cyberbullying and not found among traditional forms of bullying (Kowalski, Giumetti, Schroeder, & Lattanner, 2014).

Even when looking at cyberbullying in terms of its similarities with the characteristics of traditional bullying, there are distinguishable features. When one considers the imbalance of power within the cyberbullying relationship, the imbalance may be rather on the value that the victim places on information shared with a wide audience of bystanders. Peer bystanders play an essential part in preserving the cycle of bullying (Campbell, 2005; Madden & Loh, 2018).

Bystanders come in different forms. Cyberbullying bystanders can be defined as those who witness cyberbullying, either within or outside their social network(s) and who could respond towards the intentional negative act either by inaction or could choose to intervene (Jones, 2014). If the cyberbully's power lies in the value the victim places on the information shared, some of the imbalance in power can be removed. This premise

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only stands should bystanders' conduct be more towards intervention and not inaction (Coyne et al., 2019; Jones, 2014; Madden & Loh, 2018). In an experimental study, Madden and Loh (2018) found that bystanders were more likely to intervene based on a social relationship with the cyberbully victim (that is, work friend compared to just work colleague) and perceived number of bystanders (that is, the more bystanders, the more likely to intervene). This could indicate the importance of using social relationships to counteract cyberbullying by bystander intervention.

The element of repetition can also be distinguished from that of traditional bullying in the concreteness of the negative acts through the medium which the cyberbully uses. In traditional bullying verbal aggression is often used (Weatherbee & Kelloway, 2006). Verbal aggression can be defined as behaviour in the form of verbal communication, where one individual intends to harm the other person (Bushman, 2019; Infante & Wigley, 1986). Weatherbee and Kelloway (2006) suggest an extension of the definition of verbal aggression to include aggression expressed in a communication between two or more people using ICTs, like where one or more persons aggress another to inflict harm. In this sense, cyber-aggression can be used as a construct related to cyberbullying. However, when using ICTs, the difference lies in the fact that when verbal aggression is used the exchange of the aggression could be repetitive. This lies in the fact that the aggressive action could be viewed multiple times, not only by the victim but by bystanders as well.

There are various other characteristics of cyberbullying that distinguish cyberbullying from traditional bullying. Using a phenomenological design, D'Cruz and Noronha (2013), identified some distinctive features of cyberbullying compared to traditional bullying in the workplace among India's information technology (IT) sectors. In these sectors, exposure to information and communication is particularly prominent. They identified that cyberbullying is characterised by boundarylessness, invisibility and anonymity, concreteness and permanence (D'Cruz & Noronha, 2013). Kowalski et al. (2014), similarly pointed out that the role of retaliation in traditional and cyberbullying could differentiate cyber from traditional bullying.

Concreteness and permanence play a role in terms of the imbalance of power in the cyberbullying relationship; the value that is placed on the information shared with bystanders and the increased complication with repetition. According to Tokunaga (2010),

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the fact that the attack is media-based means that the material that is used can be accessed again and again. The information that has been intended to cause the harm can be saved and continued to be used after the initial posting.

Accessibility of the target can be related to cyberbullying being boundaryless (Patchin & Hinduja, 2006; Schimmel & Nicholls, 2014). Cyberbullying can be regarded as more pervasive in that cyberbullying can occur anywhere that the aggressor has access to electronic communications. In traditional accounts of bullying, the aggressive behaviours generally occur during academic or work hours and stop once all parties return to their residence. Therefore, cyberbullying is viewed as far more inescapable in victims' lives (D'Cruz & Noronha, 2013). Bullies can reach victims daily at any time through their computers, cellular phones, and instant messengers (Schimmel & Nicholls, 2014). The boundarylessness of cyberbullying acts is exemplified in that society necessitates the increased use of information and communication technology (ICTs). The possibility of spatially containing the bullying act in the place of its source declines and therefore increased possibilities exist for pervasiveness.

The impersonal nature of exchanges using ICTs along with the lack of face to face contact implies that there is a lack of immediate feedback from the victim (Schimmel & Nicholls, 2014). Normal cues are not available when there is a lack of face to face contact. These cues occur in face to face interpersonal communication and would create a parameter to indicate that a line has been crossed. Batterbee (2014) found in a recent South-African study on cyberbullying in school settings that bullies are regularly unaware of the impact that they have on the lives of their victims. This has been referred to as the disinhibition effect (Batterbee, 2014). This, therefore, implicates that cyber-bullies continue to bully their victims unrestrained.

The disinhibition effect is present, because of anonymity and the lack of availability of an in-person reaction of the victim. Disinhibition on the internet can be defined as any behaviour where there is a neglect of self-presentation because of the perception that judgment by others is reduced (Campbell & Bauman, 2018; Joinson, 1998). The cyberbully can freely express themselves and their negative acts tend to be harsher than were it is part of traditional bullying (Ybarra & Mitchel, 2004).

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In terms of the online disinhibition effect, there exists two types of disinhibition – benign and toxic disinhibition (Suler, 2004). Benign disinhibition refers to where individuals will show unusual acts of kindness or share personal information such as secret desires or fears. Benign disinhibition can act as a salutary mechanism. In contrast, toxic disinhibition refers to the unsolicited use of punitive criticism, portraying of anger and hatred, use of vulgar language, threats and even criminalistics online activities such as cyber theft or pornography. While benign disinhibition often leads to personal growth and toxic disinhibition is viewed as a fruitless catharsis, there might be more ambiguous outcomes of benign and toxic disinhibition. What seems benign disinhibition in one case, might lead to platonic exchanges with a toxic outcome and what seems to be toxic words in a chat encounter could be therapeutic development for some individuals (Suler, 2004).

Suler (2004) found that six interacting factors exist that create an online disinhibition effect. First, personality variables influence the magnitude of disinhibition because personality styles fluctuate in the predisposition towards expression or inhibition. For instance, people with narcissistic styles tend to be more expressive, whereas compulsive people are more reserved. These personality variables and the online disinhibition effect interact. With some individuals' online behaviour there is a small aberration from the person's offline behaviour, while in other cases causing significant changes because of these changes.

Dissociative anonymity is one of the primary elements of online disinhibition. When people can detach online actions from their in-person lifestyle and identity, they feel less vulnerable about self-disclosure. When considering it from a psychodynamic perspective Suler (2004) mentions that the person can forfend responsibility for toxic behaviours, "almost as if superego restrictions and moral cognitive processes have been temporarily suspended from the online psyche (p. 322)".

In terms of invisibility, while seemingly the same as anonymity, there are distinctions. Invisibility does not imply that the identity of the text communicator is unknown. The sender and receiver may know each other, but physical presence is absent and neither party can see or hear each other. To be physically invisible amplifies the disinhibition effect as facial expressions and body language can inhibit what people are willing to express, which is not present with communication devices (Suler, 2004).

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This is also the premise of traditional psychoanalytic therapy. To remain physically indistinct, the therapist sits behind the patient. In this manner the therapist reveals no body language or facial expression, enabling the patient to give discourse of what he or she wants without feeling inhibited. A similar situation of no eye contact and face-to-face visibility is present with text communication, which disinhibits people (Suler, 2004).

Pujazon-Zazik and Park (2010) suggest that this invisibility and anonymity can create a free-fire zone for rants and incivility. The target may not know who is responsible for the attack. However, this is not always the case. Both Kowalski and Limber (2007) and Wolak, Mitchell and Finkelhor (2007) found that at least 40–50% of cyberbullying victimised adolescents and students know the perpetrator's identity. This could be indicative that anonymity might be a driving force in the use of ICT's but is not always used (Tokunaga, 2010). Batterbee (2014) also report empirical findings that anonymity is not always present when cyberbullying penetration is used since 28.5% of participating learners had been cyber-bullied by a friend and 38.5% of learner participants knew who threatened them.

Asynchronicity, implying that text communication does not occur in real-time, is another factor that may disinhibit people, as the sender does not need to deal with the receiver's immediate reaction (Suler, 2004). Communication occurs in an unremitting feedback loop that reinforces some behaviours and smothers others. In face to face communication, in the moment responses strongly shape the continuing flow of self-disclosure and behavioural expression, usually conforming to social norms. In communication with ICTs, with delayed feedback, people's expressions may be towards deeper expressions of disinhibition that obviate social norms. Kali Munro, an online psychotherapist, appropriately states that the asonchrysity of online communications may imply that they are running away in that he states that the person may be participating in an “emotional hit and run” (Suler, 2004, p. 323).

Solipsistic introjection is the fourth factor Suler (2004) considers, which implies that disinhibition is higher where the receiver may feel that their mind and that of the sender has combined. Reading the sender's message could be experienced as a voice within one's head as if that person's psychological presence is integrated into one's psyche.

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People feel that their imagination is a safe place where they can say and do things they would not in reality. Online text communication can evolve into an environment where the individual intertwines these fantasy role-plays, usually unconsciously and with considerable disinhibition.

Dissociative imagination is another factor that might lead to higher disinhibition in that consciously or unconsciously the individual's and other's online identities live in an imaginary dimension, isolated from the demands and responsibilities of the real world. Offline-fact and online-fiction are made indistinguishable. Studies suggest that some people see their online activities as a game with rules and norms different from that of everyday living. They relinquish their responsibility for what happens in a make-believe play world that has nothing to do with reality, which increases the disinhibition effect (Suler, 2004).

Lastly, the minimization of authority plays a significant role in increasing the disinhibition effect. Authority figures rely upon their dress, body language, and in the accessories of their environmental settings as an expression of their status and power. These cues are often absent in online text environments, which decreases their authoritative impact. The authority figure's offline status may be known, but that elevated position may have less of an effect on the person's online presence. In many online environments, everyone has an equal opportunity to voice him or herself. Although one's identity in the outside world ultimately may shape power in cyberspace, what mostly determines the influence on others is one's skill in communicating. Also, with the appearance of authority minimized it may feel like more of a peer relationship with online communication, implicating that individuals are much more willing to say what they think compared to when they physically stand before an authority figure (Suler, 2004).

One should especially consider this latter factor as it could be influenced by the power mechanisms where supervisors and subordinates are involved. It could also implicate the cyberbullying victimisation and perpetration cycles. Kowalski et al. (2014) found that cyberbullying victimisation and perpetration cannot be separated, and similarly traditional bullying has been found to co-occur in many studies. This indicates that many individuals who engage in cyberbullying also use traditional forms of bullying and that victims of

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traditional bullying are regularly also exposed to cyberbullying victimisation (Olewus, 2013).

While the co-occurrence of traditional and cyberbullying has led to the belief among many scholars (for example, Hong et al., 2014) that cyberbullying is a mere subtype of traditional bullying, the difference in the use of power suggests otherwise. The possibility of being anonymous can give a traditionally bullied victim a sense of power, giving rise to the notion that traditional victimisation will not only lead to cyber-bully victimisation but could also lead to cyberbullying perpetration.

This is not only prevalent among adolescents and students, but also in a large (n= 3371) and recent workplace study (Forssell, 2016). Forssell (2016) found that supervisors and males have greater vulnerability to being cyberbullied when compared to employees in non-supervisory positions and females respectively. This finding relates to power imbalance, where cyberbully perpetrators feel empowered by the lack of face to face contact.

Similar to that of traditional bullying's correlation with cyberbullying, Weatherbee and Kelloway (2006), as well as Kowalski et al. (2014), have noticed, the effects of being victimised as a cyber-bully can be interlinked to cyberbullying perpetration. A cyber-bullied victim can also use the anonymity of ICT's as a mechanism of power to retaliate and the victim can become the bully.

To help clarify the latter distinctive feature of cyberbullying, one can look at cyberbullying from a theoretical cyber aggression perspective. Grigg (2010) notes the cyberbullying term should extend to that of cyber aggression. Participants in the qualitative focus group study found that the term cyberbullying is too vague and restrictive to be a useful term to accurately capture the broadness of negative acts that occur using ICT devices (Grigg, 2010). With this finding, it might be useful describing cyberbullying acts as repeated forms of aggression (Monks, Smith & Swettenham, 2005).

Human aggression can be defined as "any behaviour directed toward another individual that is carried out with the proximate (immediate) intent to cause harm" (Anderson & Bushman, 2002, p. 28). Another requirement for aggression is that the aggressor must

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perceive that his or her conduct will be destructive for the target, and there is motivation in the target to avoid aggressive behaviour. Cyber aggression can be understood as a form of aggression delivered using electronic means directed towards another individual or the organisation (Weatherbee & Kelloway, 2006).

2.2.1 Understanding protective and aggravating factors of cyberbullying perpetration and victimisation

To fully understand some of the risk and protective factors associated with cyberbullying perpetration and victimisation one can frame these as processes specifically within the general aggression model (Kowalski et al., 2014; Weatherbee & Kelloway, 2006). With this model, domain-specific theories of aggression are integrated and can be used as a comprehensive framework (Anderson & Bushman, 2002).

The basic premise is that person and situational factors act as knowledge structure inputs. These inputs act through the route of a person's internal state, represented by the interaction between emotion, cognition and arousal. This influences the appraisal and decision-making processes as outcomes.

Kowalski et al. (2014) applied the GAM as created by Anderson and Bushman (2002) to that of cyberbullying by doing a meta-analysis using 131 research studies among youthful persons. They applied the model by evaluating the different stages of the GAM depending on whether someone is a cyber-bullied victim or a perpetrator. For this study, the integrated model by Kowalski et al. (2014) can be used to understand some of the antecedents, outcomes and distinctive features of cyberbullying.

With regards to the outcomes of the model, results from the inputs enter through their effects on cognition, affect and arousal. Based on the person’s present internal state an immediate appraisal will be made in a social encounter. Should the individual perceive that he or she has enough resources available and that the outcome of the decision to take action is important and unsatisfying, he or she will engage in reappraisal processes and take thoughtful action. If the individual should have a perception that he or she does not have enough resources to handle the situation an impulsive action will follow. Impulsive action will also follow should there be the perception that resources are enough, but the outcome is unimportant and satisfying (Anderson & Bushman, 2002).

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When applying the GAM model to both cyberbullying perpetration and victimisation processes, Kowalski et al. (2014) give the following example of how the cyberbullying encounter can affect the proximal process of appraisal and decision making:

> If a cyberbullying encounter is perceived as stressful on the basis of the internal state of the victim, and an individual does not have sufficient resources (cognitive, emotional, or otherwise) to deal with the situation, he or she may then engage in an impulsive (i.e., automatic) response to the situation, such as sending a cyberbullying message back to the perpetrator. If, on the other hand, the individual feels there are sufficient resources available, he or she may give a more thoughtful (i.e., controlled) behavioural response. As such, differences in reappraisal strategies may account for variations in behavioural responses. That is, it may help explain why some individuals do nothing or call for help when a person cyber-bullies them, whereas others respond by engaging in cyberbullying in response to victimisation (p. 42).

The impulsive or thoughtful action will then be directed towards the social encounter and this then influences the person and situational input features. Person factors can include all the features a person brings to a situation which could include personality traits, gender, beliefs, attitudes, values and long-term goals. Negative situational factors could include: aggressive cues, pain and discomfort, drugs, frustration; and such positive factors could be something like incentives (Kowalski et al., 2014).

For the cyberbully perpetrator, the risk factors represent the person and situational factors. In terms of personal factors, empathy is identified as a protective factor against perpetration. Some gender inconsistent findings are reported, with some stating that girls report higher rates of perpetration and victimisation and others found no difference between genders in terms of perpetration (for example, Hinduja & Patchin, 2008; Slonje & Smith, 2008; Sourander et al., 2010).

In terms of age, there is a large body of evidence that indicates that cyberbullying perpetration increases over time (Hinduja & Patchin, 2007& 2008; Ryan & Curwen 2013). In many studies amongst college and university students, participants indicated that even

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those individuals who had been bullied in their younger years, a large proportion of students reported that most cyberbullying experiences had occurred during their college years (Kowalski, Giumetti, Schroeder & Reese, 2012).

In terms of motives, cyberbullying perpetration may be geared towards retaliation of traditional bullying. Other motives may include psychological needs for the cyber-bully depending on their status as pure bullies or bully-victims. Bully victims report less empathy than victims who have not been previously bullied (Dilmac, 2009). According to Dilmac (2009), endurance is a person factor that protected an individual against cyberbullying perpetration.

Other person-related factors that have been identified include social-economic status, technology use and exposure. A direct relationship is reported among high social-economic, technological expertise and exposure (Wang, Iannotti, & Nansel, 2009; Ybarra & Mitchell, 2004). This will become especially important in the South-African work context, as the lack of technological exposure in rural settings (Herselman, 2003) as well as high unemployment rates, which increased from 27.6% in the first quarter to 29% in the second quarter of 2019, (Statistics South Africa, 2019) lead to a context of low socioeconomic status among a large group of the South-African population. As time on the internet increases, so does the risk of becoming a cyber-bully victim or perpetrator.

Along with empathy that acts as a value to protect against cyberbullying perpetration, moral disengagement can have the opposite effect (Almeida, Correia, Marinho, & Garcia, 2012). Moral disengagement can be defined as the process that perpetrators use to reframe their aggressive actions with more good intentions and perceive that there will be less harmful consequences. The perpetrators can also justify their behaviour by regarding the previous behaviour of the victim as worse than their aggressive actions (Almeida et al., 2012; Hymel, Rocke-Henderson, & Bonanno, 2005).

Situational factors for cyberbullying perpetration include exposure to traditional bullying, which is found to lead to higher levels of aggression (Dilmac, 2009; Kowalski et al., 2014). Having engaged in previous cyber aggression is also found to positively correlate to cyberbullying perpetration in the future. Previous experience as a victim of traditional bullying can create a feeling of being provoked. This is related to the person characteristic

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of moral disengagement and justification (Vandebosch & Van Cleemput, 2009; Ybarra & Mitchell, 2004).

One risk factor could be that a cyberbullying episode could be perceived as severe (Camacho Ahumada, 2015). It is relevant to assess the perceived severity of a cyberbullying episode given that the perspective of a victim is critical to understand the impacts of the episode on her/his psychosocial functioning, which can influence the impact on performance. Perceived cyberbullying severity (PCS) is a victim's appraisal of a cyberbullying episode, which is reliant upon how individuals evaluate whether the cyberbullying episode is relevant to their goals and well-being.

Camacho Ahumada (2015) hypothesised that perceived cyberbullying severity is positively related to strain and anger and negatively related to the enjoyment of the use of the ICT medium associated with the cyberbullying episode. Some of the antecedents of the perceived cyberbullying severity are considered.

Firstly, the antecedent of message harshness includes the salience of the message (videos and pictures carry more salience than insulting messages), sensitivity of the information in the message (threats of humiliation or privacy violations), frequency of episodes and offensiveness (rude, vulgar messages or physical threats). Message harshness is hypothesised to relate positively to cyberbullying severity (Camacho Ahumada, 2015).

Relating to the medium used, perceived importance of the cyberbullying medium to the victim is positively related to his/her perceived cyberbullying severity along with awareness of provision of recourse mechanisms for victims of cyberbullying is negatively related to their perceived cyberbullying severity. That is, being able to block messages from the bully (Camacho Ahumada, 2015).

Personality traits that relate to self-evaluations (neuroticism and self-esteem) are also hypothesised to be related to PCS. Neuroticism, the predisposition to and poor coping with psychological distress, is hypothesised to be positively related to PCS. Self-esteem, the subjective evaluation of an individual's own worth, is hypothesised positively related to one's own worth. Knowing the bully as well as an audience witnessing a cyberbullying

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episode is hypothesised to be positively related to perceived cyberbullying severity (Camacho Ahumada, 2015).

Most of the hypotheses are supported except for awareness of provision of recourse mechanisms for victims of cyberbullying being negatively related to their perceived cyberbullying severity and neuroticism and having an audience being positively related to perceived cyberbullying severity. However, all the consequences of perceived cyberbullying severity in terms of strain and anger and reduced usefulness and enjoyment of the use of the ICT medium associated with the cyberbullying episode Therefore, should a cyberbullying episode be perceived as severe, it could negatively impact the individual, which might ultimately impact upon performance (Camacho Ahumada, 2015).

Perceived support from peers and family members has been found in some instances to be a protective factor (albeit sometimes indirect) against both cyberbullying perpetration and cyberbullying victimisation (Forssell, 2018, Muhonen et al., 2017). The important role that bystanders play in the power imbalance should be noted (Jones, 2014; Madden & Loh, 2018). If the cyber-bully perpetrator or the victim perceives that the bystanders will support the cyber victim, the likelihood of a cyber-bully encounter decrease (Fanti, Demetriou, & Hawa, 2012).

Among scholars and students, school climate can act as a protective factor against cyberbullying perpetration and victimisation. In the context of cyberbullying amongst adults in the workplace, Hong et al. (2014) found that perceived organisational innovation climate decreased cyberbullying perpetration and victimisation. Similarly, in the workplace, using structural equation modelling, Mohonen et al., (2017) found that there is an indirect relationship between cyberbullying and outcomes (like health, intention to quit and work engagement), mediated by social organisational climate, where social support from superiors and colleagues influences the social organisational climate and not cyberbullying directly.

Emotions have also been studied as part of protective or aggravating factors for cyberbullying victimisation and perpetration with workplace cyberbullying (Vranjes et al., 2017; Vranjes, 2018; Vranjes et al., 2018[a]; Vranjes et al., 2018[b]). Vranjes (2018) found that fear and sadness from work stressors make people vulnerable to become cyber-bully

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victims. This is however mediated by how well a person can regulate their emotions. Emotional regulation could, therefore, be considered as a protective factor against victimisation.

2.2.2 Cyberbullying in the South-African context

Cyberbullying has been studied in various contexts, but most often it is studied among adolescents, school children and college students in their academic contexts (Schimmel & Nicholls, 2014). Most studies have been done in the Western world with a large amount of research being done in the United States of America, Europe and Australia. According to Popovac and Leoschut (2012) limited studies have been done on the effects of cyberbullying within the South-African schooling system (see Batterbee, 2014; Burton & Mutongwizo, 2009; De Lange & Von Solms, 2011), but the causes and effects among adults, the South-African context and in the workplace remains largely unexplored.

The population of South African employees can be found with the public or private sector of the economy. A large part of the South-African employees is employed by the public sector. According to the Quarterly Employment Survey (QES) of the second quarter of 2013, public sector employment has increased by 11.1% since 2008, while private sector employment has decreased by 4.4% (Duncan, 2013).

Public sector employment can refer to all forms of employment where employees are employed by the government (Lewis, n.d.). The public sector refers to organisations that provide various government and public services. These include services that will advantage the whole society of a given governmental organisation rather than just the individual who uses the service according to Lewis (n.d.).

All other forms of employment will then be from the private sector, which includes all organisations which exist to earn a profit for its shareholders (Lewis, n.d.). The multinational competitive organisations will fall within this category of employment.

While the public and private sectors form part of the context where the workplace is situated, there is the possibility that certain other contextual factors can also influence the occurrence of cyberbullying. Kowalski et al. (2014) found that the effects of cyberbullying perpetration and victimisation could be moderated by the geographical context. Higher

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incidences of cyberbullying cases are found amongst studies done in the United States of America than those found in European and Australian countries. The outcomes and the risk factors of cyberbullying are also found to be of higher extent in the United States. Most studies have been done in Western countries, where there is more affluence among people, than other countries (Kowalski et al., 2014).

South Africa is characterised by high unemployment and poverty rates (Alexandra, 2014; Mayer et al., 2011; Statistics South Africa, 2019), low quality primary and secondary schooling system (Wilkinson, 2013) which results in an inadequately educated workforce, restricted labour regulations and high levels of corruption, crime and theft (Schwab, Sala-i-Martin, & Brende, 2013). All these factors can influence the use of technology for cyberbullying.

The quality of the schooling system is thought to be low (Wilkinson, 2013), which could be influencing the knowledge and understanding of the use of communication systems in South Africa. The low quality can be evaluated by the literacy and numeracy of learners and accessibility of good quality schools. Wilkinson (2013) report that only 71.2% of children that should be in grade six are literate and only 58.6% are numerate. In terms of access to the schooling system, about 98% of South-African children have access and complete their schooling until the grade 9 level, but after that the dropout rate is estimated to be about 20% annually, which is thought to be due to high poverty rates (Mayer et al., 2011; Wilkinson, 2013). For secondary schools, trends show that only 10% of young people have access to high-quality schools, the remainder of the pupils attend schools who produce students of lower cognitive skills, making them less employable (Mayer et al., 2011).

The low quality of the schooling system is especially prevalent in the rural areas of South-Africa (Wilkinson, 2013). Schools in rural areas are experiencing communication drawbacks, which include a lack of telephone facilities, computer hardware and software and technical training (Herselman, 2003). The latter could imply that individuals in rural schools will not receive adequate computer literacy and internet usage skills (Herselman, 2003). This South-African rural contextual factor could influence the prevalence of cyberbullying in that there will be a reluctance to engage in cyberbullying and it could also influence the coping mechanisms of individuals dealing with cyberbullying victimisation.

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Scholtz and Prinsloo (2001) reported in a study on South African illiteracy of computer technology that there is resistance to the use of certain types of technology among South African workers, who regard themselves as poor. In the study, there is an account of a conversation between a shop steward and the team regarding the necessity of using the computer to do work-related tasks. The shop steward notes that the workers do not want to use the computer since they are poor, and they prefer more traditional methods of doing work. The supervisor replies by saying that "You are stupid, having a computer is not part of being poor (laughter from other delegates). It is not kwaai (glamorous) to have a pc today; it is part of the furniture" (Scholtz & Prinsloo, 2001, p. 710).

In this specific example, the work required a high-performance environment. This could be the result of the pressure of international competition (Prinsloo, 2005). This international competition requires that these high-performance organisations should: ensure flattened management hierarchies, use self-directed work teams, employ empowered workers and ensure flattened management hierarchies, engage in partnerships with workers to enhance competitiveness in such restructured workplaces. This could be indicative that the adoption of information and communication technology devices also be essential in the South – African business context.

Despite the increase in reluctance towards the use of ICT's among certain groupings, the use thereof is on the rise among the younger South-African population (Batterbee, 2014) and within organisations in general. Alexandra (2014) reported that there has been a very big increase in the use of the internet between 2000 and 2011 within the continent of Africa wherein South African organisations find themselves.

In conjunction with the African information technology revolution, the demand for smartphones has accumulated to such an extent that Africa is currently the world's fastest-growing market for mobile phones, including smartphones (Alexandra, 2014; Burton & Mutongwizo, 2009). When the counties on the continent are ranked in terms of use of mobiles for social media, South African users are one of the highest users. In the country, nine out of ten people between the ages of 12 and 24 either owning or having access to a mobile phone (Popovac & Leoschut, 2012).

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Accessibility of smartphones is increasing due to the improvement of infrastructure causing a decline in data costs (Popovac & Leoschut, 2012). Smartphones create major opportunities for using social media with rates of 27% of the African population using Facebook (Alexandra, 2014). It has also been estimated that among student populations in South Africa, most use some form of social media or messaging applications as the costs are lower than that of voice calling. The messaging application market among South-African young people has been estimated to be dominated by WhatsApp (79%), followed by BlackBerry Messenger (57%), Apple's iMessenger (45%), and Mxit (28%) (Potgieter, 2014).

As the proliferation of the use of these messaging applications has increased, so worries about its social impacts. In a study by Dlodlo (2015), it is investigated whether mobile instant messaging addiction as a form of technology-based addiction exists among 297 tertiary institution students in Southern Gauteng. Their ages range between 16 and 24 years of age and given their stage in the South African education system are on the brink of starting their careers and entering the workplace. The term mobile instant messaging takes its form as part of computer-mediated communication using ICTs, which include short message service (SMS), emailing and messaging applications.

Dlodlo (2015) identified four addictive tendencies, should there be an overreliance on mobile instant messaging using factor analyses on the measuring instrument. The first factor is named withdrawal, which is the psychological response of users when detached from messaging services. Where withdrawal is present, the fear of being disconnected from the virtual world is related to their emotional well-being and being vulnerable can lead to destructive moods and behaviours.

Another factor is compulsion, which is the unhealthy attachment to mobile instant messaging that builds up to dependent behaviour and attitudes, as messaging devices are a source of contact comfort. Control disorder is the factor that indicates the assiduous engagement in mobile instant messaging. It is regarded as more than intended given that the individual is unable to regulate their engagement therein. Lastly, lifestyle disturbance refers to life instability that results from the problematic use of mobile instant messaging. This includes, but is not limited to reduced concentration and focus, increased

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procrastination, missing academic deadlines and getting less than necessary sleep (Dlodlo, 2015).

The results indicated two types of problematic users of MIM, namely, moderate users (88% of the sample) and excessive users (12% of the sample). No significant differences between the gender groups could be found on any of the four addiction dimensions. In terms of age-related differences, statistically significant differences are found among the 20–22 years ($p < .05$) and 22–24 years ($p < .05$) age cohorts concerning the withdrawal and compulsive dimensions, with older cohorts showing less withdrawal and compulsions only. It is suggested that there is a gravitational shift from messenger applications like Mxit that serve as mere contact comfort and more towards social networking applications like LinkedIn and WhatsApp where the possibility exists for building career profiles (Dlodlo, 2015).

These findings have important implications for the current study in that it indicates that at least 12% of the prospective employees are at risk for exhibiting mobile instant messaging addiction tendencies. These tendencies might reduce employee productivity and increase the effect of cyberbullying should it occur in the South-African workplace. This is given that, like many Westernised countries, South African organisations are receiving new employees to their organisations that are using ICTs for career and a myriad of other purposes. Organisations in the modern era have an ideal opportunity to reach the South-African population using platforms such as online social media and the use of other information technology and communication devices like that of international trends.

2.3 Descriptive cyberbullying hypothesis

Based on the conceptualisation of cyberbullying and its relatively unexplored nature in the South African workplace, one should descriptively explore how the current state of cyberbullying is for those experiencing the phenomenon. To this end, this research will employ a descriptive design about the nature of the status quo and how the existing response deviates from the ideal one. Therefore, a descriptive hypothesis on the reaction of employees in response to cyberbullying in the workplace will subsequently be formulated. The current situation with employees in the workplace is hypothesised to be where cyberbullying is occurring in the workplace and the negative effects thereof are affecting employee and organisational wellbeing and performance.

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Organisations and researchers alike should understand why cyberbullying could be causing deviance from the ideal in the workplace. Certain characteristics and contextual factors in the 21st century could play a role in the prevalence of cyberbullying. Should cyberbullying be found to be present in the modern organisation and these effects be of such a nature that it decreases the health and wellbeing of employees and that it has a detrimental effect on the outcomes of the organisation, impetus could be given for concern over the cyberbullying phenomenon in the workplace. Some of the risk factors for increased prevalence in the modern organisation could be the increased use of technology in the workplace; more of the youth that has cyberbullying perpetration and victimisation experience entering the workplace and the need for competitive advantage.

2.3.1 The role of technology (ICT's) and competitive advantage in the workplace

In the organisation of the 21st century, the use of technology is essential for survival. There are different mediums of technology that can be used by organisations to achieve a complex set of results. These include computers, accompanied by the internet and the use of mobile phones and new forms of communication devices can collectively be referred to as information technology and communication devices (D'Cruz & Noronha, 2013).

The purpose of ICT's in the workplace is to provide the organisation with increased possibilities to achieve effectiveness and efficiency. In the South-African context, like international contexts, ICT's have a revolutionary impact on the way business is done; people survive in a world with a complicated structure and gather and retain new information. This is according to the ICT Research Priorities for the South African National Research Foundation (Herselman, 2003).

The term 'information systems' is synonymous with ICT's. It describes a class of automated business tools used by managers. The term now includes using a systematic arrangement that is computer-based to provide a defined group of people with information for purposeful action (Weatherbee & Kelloway, 2006).

The introduction of these systems is radically changing communication in the workplace (Straub & Watson, 2001). Sproull (as cited by Weatherbee and Kelloway, 2006) identified

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three capabilities of the use of information technology and communication devices that enable organisations to achieve complex results. The first capability is the ease of use from the systems that have become so user-friendly that different types of employees (managerial, administrative, professional and line personnel) can use the information systems. The second capability is the multipath connectivity of the systems which enable the removal of practical boundaries between organisational personnel. The last capability is the potential of mass reach, which gives the individual the capability to have interactions with a multitude of people (Sproull as cited in Weatherbee & Kelloway, 2006).

The introduction of the internet brought with it interconnectivity among people and these information systems. These systems can reach across organisational boundaries and into different spheres of employees' lives. These systems do not exist in isolation and some of the information systems that modern organisations use tend to overlap with the personal sphere of individual's lives.

Organisations use instant messaging on computers, emails and social media platforms that are used by employees for personal and professional purposes. This inseparability of the professional and personal can imply that the potential misuse of ICT's in terms of cyber deviance and cyber aggression is large (Lyytinen & Yoo, 2002). This can be viewed as a second-order effect of the implementation of technological changes (Constant, Sproull & Kiesler, 1994; Stuber, 2018). First-order effects are the expected impact of the use of technological innovations as tools, whereas second-order effects are resultant unintended by-products that are associated with the implementation of first-order effects. Second-order effects are usually unforeseen and social in nature and misuse of ICT's for cyber deviancy purposes might be considered as a second-order effect.

Very little research has been done about the possibility of the nefarious second-order effects of ICT's in the workplace context (Piotrowski, 2012; Schimmel & Nicholls, 2014). The little research that is available on the effects of ICT devices on workplace bullying, gives some evidence that the presence of ICT devices on traditional workplace bullying influences the prevalence thereof.

To indicate how integrated technology has become in modern society, concepts to define the current society characterised by the merge of communication and information

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technology have been termed. Some of the popular terms include the Information Age, Knowledge Era, the Information Society and the New Economy (Herselman, 2003). The latter implies that the innovation of ICT's has influenced the business, economic and social context, but the inverse is also true. One can, for instance, examine the effect that the school environment as a competitive social context has had on bullying.

Schaaf (2014) indicates that the bully phenomenon is a side effect of the competitive nature of U.S. schools. In the American school context, children are taught that they should become the best they can be. In this pursuit, corruption can start influencing the behaviour of individuals at a very young age. The individuals often find fraudulent ways to get ahead in the highly competitive educational and social environments presented in such a school context (Donegan, 2012). In a sense, this corruption is socialized into the child's repertoire and they carry this over from school to college and even to the workplace (Schimmel & Nicholls, 2014).

The competitive nature of the schools is similarly present in the modern workplace. Organisations exist to make money, to generate profit in growth towards serving the society in managing its scarce resources. As a man-made invention, organisations exist for survival. To survive, adaptation is regularly needed. As the age-old saying goes, change is the only constant and innovation often happens because of humankind finding better ways to survive and adapt to his environment. To survive the management of resources become essential (Theron, 2009).

The increased presence of information and communication technology can be viewed as an outcome of the need for man to achieve better results through innovations. Implied by the definition of cyberbullying, the use of information and communication technology is needed for cyberbullying to occur. Reliance on such technologies could implicate that the prevalence of cyberbullying would increase.

D'Cruz and Noronha (2013) indicate where organisations depend on being competitive to survive in the current business context and employees are dependent upon ICT's for work, boundaries of space and time-based boundaries are regularly disregarded. A possible reason for this could be the expectation that employees should unremittingly be available for work-related contact or activities. This augments the possibilities for

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exposure to cyberbullying. In the earlier mentioned study on cyberbullying, supervisors had a higher vulnerability to cyberbullying, but also reported more frequent use of digital devices in their daily work tasks which could contribute to their higher vulnerability.

2.3.2. Where workplace bullying and technology meet

Within the workplace, traditional bullying has been studied as workplace bullying. Traditional workplace bullying can be defined as repetitive in frequency and persistent hostile actions towards one or more individuals that involve a perception that there is an imbalance of power. The negative conduct results in the form of a hostile work environment and could also result in severe stress reactions for the exposed party (Balducci et al., 2011).

Some of the hostile actions that have been associated with workplace bullying could include verbal aggression like spreading of rumours; excessive criticism of work (Salin, 2003); withholding information from an individual about important factors of one's work or excluding others (Brotheridge, 2013). Physical acts of violence have also been reported in the workplace (Hershcovis, 2011).

Various researchers within the scope of cyberbullying among younger cohorts (like Gradinger, Strohmeier, & Spiel, 2009; Raskauskas & Stoltz, 2007; Smith et al., 2008) found that most of the cyber-victims are at the same time traditional bullying victims, which indicate an overlapping nature of traditional and cyber-forms of victimisation. This implies the necessity of concurrently considering traditional and cyber-victimisation. Bullies that retaliated as victims, similarly most often displayed behaviour in both cyberspace and face-to-face modalities (Gradinger et al., 2009).

Studies concerned with cyberbullying in the workplace (for example, Forssell, 2016; Privitera & Campbell, 2009; D'Cruz & Noronha, 2013) have also indicated that large amounts of parallels between cyberbullying and traditional bullying exist. This includes similarities in: behaviours expressed, results, the involvement of different levels of organisation and provenance of bullying. Privitera and Campbell (2009) found in their study that 34% of respondents experience traditional bullying and 10.7% are cyber-bullied. Of the proportion that experienced cyberbullying, there is an overlap with all victims of cyberbullying also experienced traditional bullying.

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As an illustration, one participant revealed incidences where traditional and cyberbullying coincided (D'Cruz & Noronha, 2013). The person experienced interpersonal bullying from different levels – his superiors (managers) and also later some human resource personnel. The negative behaviour continued for a period of eight months and emerged as a result of work-related interpersonal differences. The victim perceived both bullying methods as endeavours to force the victim to resign. The perpetrators displayed bullying behaviour in both public and private fashion. It involved landlines (office phone) and mobile phones. It traversed outside of the office facilities and work hours. This illustration of one individual's experience serves as a confirmation that the literature is not mere theory, but practically experienced by its victims and perpetrators.

In terms of the sequence where traditional and cyberbullying meet, cyberbullying can follow traditional bullying or cyberbullying can occur first and result in traditional bullying as well (Kowalski et al., 2014). As an illustration of the latter, D'Cruz and Noronha (2013) found that one of the female cyber-bully victims in their study was bullied by a colleague who tried to get her to engage in romantic meetings after work-time. In an attempt to preserve her reputation, the participant stored the bully's phone number, changing the caller identity. She tried to prohibit her subordinates from getting the wrong impression. The participant refused the colleague's advances and confronted him. This resulted in his retaliation through the use of traditional workplace bullying.

2.3.3. Increase in youth into the workplace

The research that is done on adolescents and college students can prove to be helpful to understand cyber-bullies in the workplace context, as many of the youth that has been exposed to cyberbullying are moving into the workplace (Schimmel & Nicholls, 2014). Some examples of the prevalence of cyberbullying among adolescents include various studies done in different populations (Kowalski et al., 2014).

In the South-African context, cyberbullying is found among school children when one considers the study by Batterbee (2014). Of the participants in the study, 32.5% of participating learners indicated that they had been threatened by text messages (Short Message Service or SMS). Over and above this 26.6% of learner participants had also

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been bullied via the Internet. In the college population, Schenk and Fremouw (2012) found that 8.6% of victims are cyber-bullied with increased negative psychological impact.

In a study done by Brewer, Cave, Massey, Vurdelja, and Freeman (2012) rates of cyberbullying among the university population are like the trends observed on bullying in childhood, but at the lower end of this range. That is, about 8% of university students report cyber victimisation. They also observe that a large majority of students use communication devices, especially computers, the internet and cell phones. The latter is used in most of the cyberbullying episodes. Cyberbullying episodes in high school are found to lead to cyberbullying after high school, leading into university and other post-secondary school environments.

This could be evidence for the opinion of Schimmel and Nicholls (2014) that it is inevitable that cyberbullying is going to be prevalent in the workplace where the youth that has been greatly exposed to cyber aggression, enter the workplace. Given this trend, it is important to regard what the impact of the youth in the labour force is.

According to the International Labour Organisation Convention, an individual should be able to do light work from the age of thirteen as long as it does not interfere with the individual's education (UNICEF, n.d). The Convention on the Rights of the Child does, however, make it clear that individuals under eighteen years should not have to do work that harms or exploits the individual. 'Child labour' is the term used for work that does not meet those standards.

Having noted the international trends in the age that individuals are allowed to enter the workforce, it should be noted that different countries have different requirements for the legal age that individuals have to be to enter the workforce. In the South-African context, the legal age for commencing with work is fifteen years of age (Statistics South Africa, 2014). The different age groups of the working-age population that is employed in the South African labour market can be categorised according to different generational characteristics.

There is proof to suggest that there are generational differences in the use of ICT’s (Weatherbee & Kelloway, 2006). The characteristics ascribed to demographics that are

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defined by age, regularly reflect their contextual influence. These features can influence trends in business as different generations learn from each other (Meier, 2010).

The different generations that are represented in the current workforce include the Baby Boomers (53-64 years of age), Generation X (36-52 years of age) and Generation Y (15-35 years of age). According to the employment statistics, Generation Y makes up more than 40% of the current workforce followed by Generation X which makes up a little more than 30% of the population (Meier, 2010).

Generation Y (born between 1980 and 2000) are currently moving into the workforce. Their predecessors, Generation X grew up during the beginning of the technology era when home computers started becoming widely used in households everywhere (Nagle, 1999). Generation Y was born into the technology and often knows more about the usage of digital devices and the use of technology becomes second nature to them (Meier, 2010).

While older generations prefer the more traditional forms of technological communication, like emails, younger generations have found a greater liking in the use of instant messaging (IM), which is increasingly being adopted within organisations. Instant messaging is, however, also reported to be used to an even greater extent than that of online social media for cyberbullying purposes (Navarro & Jasinki, 2011).

2.4 Determining the effects of cyberbullying

Should it be established that cyberbullying does occur in the modern organisation, the effects thereof on the productivity and wellbeing as well as stress levels should be established to establish what the effect thereof would be on the organisation. In light of this, one should descriptively consider what the ideal response for individuals in the workplace should be and what in turn the current situation looks like. The effects of cyberbullying can be viewed in terms of effects on the individual, team and organisational level.

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2.4.1 Effects of cyberbullying on the individual employee

On an individual level, much has been said for well-being in a general subjective (for example Costa & McCrea, 1980; Diener, 2000; Diener, Oishi, & Tay, 2018) and psychological, but also in a work-related sense (for example, Mostert & Rothman, 2006).

Subjective well-being can be considered as to how individuals react differently to the same circumstances. They evaluate conditions on their unique expectations, values and previous experiences (Schreuder & Coetzee, 2016). Therefore, something that affects one person's well-being might not have the same effect on another individual. Psychological well-being involves the content and processes involved in living well and eudaimonic well-being refers to the quality of life resultant of the development of a person's best potential and how this potential is applied to fulfil personal goals (Schreuder & Coetzee, 2016). Work-related well-being has been associated with high levels of positive job attitudes like job satisfaction, work engagement and organisational commitment. Psychological, eudaimonic and work-related well-being can be influenced by subjective well-being.

In the ideal workplace, individual employees will perceive that they have the autonomy, environmental mastery, personal growth, positive relations, self-acceptance, perceive that they are developing their best potentials, sense of purpose and meaning in life, be involved in and enjoy personally expressive activities. They might also enjoy job satisfaction, work engagement and organisational commitment.

In terms of personal well-being, cyberbullying will have a detrimental effect on the individual depending on his or her perception of its severity and frequency (Camacho Ahumada, 2015; Farley, n.d.). Therefore, it affects the individual's subjective well-being, which could ultimately influence levels of psychological and eudaimonic well-being. Amongst cyberbullying research, for the younger generations, some of the effects of cyberbullying have been reported to be behavioural and psychological. Behavioural effects include increased absenteeism (Katzer, Fetchenhauer, & Belschak, 2009; Beran & Li, 2008; Privitera & Campbell, 2009) and lower academic achievement in terms of learning and concentration (Beran & Li, 2008; Mason, 2008).

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Cyberbullying also has a range of psychological effects. These include social anxiety (Juvonen & Gross, 2008), lower self-esteem (Katzer et al., 2009; Mason, 2008), depression (Didden et al., 2009), suicide ideation (Hinduja & Patchin, 2010), along with psychological distress (Mason, 2008). The latter psychological outcome of cyberbullying victimisation has been reported among student experiencing cyberbullying (Batterbee, 2014) and amongst employees in the workplace (Privitera & Campbell, 2009).

Distress can be defined as "stress resulting from chronically demanding situations that produce negative health outcomes" (Schreuder & Coetzee, 2016, p.384). Distress places additional demands on the employee, which could hinder the successful reaching of a performance goal and may eventually lead to strain or burnout (Bakker et al., 2004; Balducci et al., 2011; Glomb & Cortina, 2006). Occupational stress is the product of an imbalance between environmental demands and individual capabilities. Cyberbullying, as an environmental demand, can lead to occupational stress should the individual be unable to fully cope using their current resources. It could, therefore, be fruitful in determining the level of stress of those who experience cyberbullying in the workplace to determine the impact on individual performance.

When looking at the distal outcomes within the general aggression model, Kowalski et al. (2014) found that the outcomes of cyberbullying perpetration included increased levels of depression, anxiety, loneliness, drug and alcohol and decreased levels of self-esteem, academic achievement and life satisfaction. These effects and some additional effects are found for cyberbullying victimisation including stress, conduct and emotional problems, as well as somatic symptoms. The distinguishing characteristic of inescapability due to the boundarylessness of cyberbullying encounters could be a possible reason for this occurrence.

If one is to descriptively define how the effects of cyberbullying can influence individual well-being, one should also note how the distinctive characteristics of cyberbullying to that of traditional bullying can cause that the effects of cyberbullying be different and more adverse than that of traditional bullying (D’Cruz & Noronha, 2013).

The effects of traditional workplace bullying on the individual employee have been well researched and have been found to include a decline in physical health as well as

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emotional well-being (Vartia, 2001). Many of these effects of the traditional workplace and school bullying have been linked to that of both traditional and cyberbullying (Mason, 2008). These include some of the behavioural and psychological effects as reported earlier, like increased depression, absenteeism and a decline in academic performance.

Related to the decline in academic performance, in terms of workplace cyberbullying Privitera and Campbell (2009) and Piotrowski (2012) found that cyberbullying can lead to a decline in job performance. Individual performance in the workplace can be negatively affected by the effect on task performance of employees. This can occur through micromanagement of victims during work time (DCruz & Noronha, 2013) and the systematic non-response of emails (Forsell, 2016).

DCruz and Noronha (2013) qualitatively noted the effect of micromanagement on employees during the hours of work. Three of their participants noted how supervisory personnel continuously monitored their work. Sometimes employees had to simultaneously attend to supervisor's and customer queries or work was checked at small time intervals via emails and phone calls. This necessitated that employees divide their time and focus which led to feelings of emotional distress.

Forssell (2016) reports that the most recurring online negative acts of cyberbullying in the workplace are the systematic non-responses to emails or text messages sent to supervisors, co-worker or subordinates, not receiving necessary work-related information by not being included in email lists. These acts disinhibit the cyberbullied victim from completing their work promptly, which will put a strain on their own, team and organisational performance.

An additional factor that could influence the individual's work performance is that of the increased demands experienced from the use of ICTs in the workplace. It has been said that ICTs increase the demands on employees in that they feel obliged to be available beyond work hours, it increases perception of workload, lack of control over which technologies can be used, increased opportunities for miscommunication, feeling obliged to keep abreast of the latest developments and feeling monitored (Day, Paquet, Scott & Hambley, 2012). These potential demands place additional strain on employees and can lead to distress. If employees experience cyberbullying through ICTs, they might

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experience these devices as more demanding, than their counterparts that only experience the normal strain that ICTs bring. This could lead to more distress and eventual burnout and might take away from the benefits that these devices are intended to bring.

2.4.2 Effect of cyberbullying for organisational outcomes

Workplace bullying could have an impact on organisations including an impact on the morale, culture and productivity. The impact of workplace cyberbullying on productivity could be on more than the aggressor and the aggressed – the whole could be greater than the summation of the individual parts. The impact could infiltrate the productivity of the entire organisation (Schimmel & Nicholls, 2014).

If the distress levels of individuals increase and the well-being of the individual employees decrease, organisational performance might decline. Excessive amounts of strain or burnout can lead to increased turnover or absenteeism (Foxcoft & Roodt, 2013; Schreuder & Coetzee, 2016; Du Toit, 2013). Like that of workplace bullying, it will be possible to find that victims take continuous sick leave because of the decline of physical health and being bullied at work. This could also be related to individual employees' intention to quit.

For the most part, turnover is of interest for organisations, especially should it be voluntary turnover. This could result in losing key employees and have cost implications for the recruitment and retraining of new personnel (Porter & Steers, 1973; Tam & Khoa, 2018). However, it is not always possible to gain access to those individuals who have resigned and intention to quit is said to be another strong indicator of such behaviour. Job stressors can contribute to people's intention to quit their jobs (Firth, Mellor, Moore, & Loquet, 2004).

On the other hand, absenteeism can also negatively influence organisational outcomes. Absenteeism can be defined as unscheduled or unauthorized absence from work (Pizam & Thornburg, 2000). In this light employee performance declines in that, they are not present to complete their work. Often those that are troubled by cyberbullying from colleagues, try to escape by staying away from work. However, this might seem

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ineffective in that cyberbullying can follow the victim to any context (D'Cruz & Noronha, 2013).

The acts of cyberbully episodes can also contribute to a decline in organisational outcomes through decreased abilities in task performance. This was discussed in the previous section on individual performance with regards to findings of micromanagement during office hours (D'Cruz & Noronha, 2013) and the systematic non-response of emails (Forssell, 2016).

Bystanders might also be affected by cyberbullying perpetration, which could result in a decline in employee morale, which could create a high staff turnover which could directly result in monetary recruitment costs and costs for retraining (Privitera & Campbell, 2009). This could indirectly hamper the reputation of the organisation (Hoel, Sheehan, Cooper, & Einarsen, 2011).

2.4.3. Coping mechanisms that might affect the individual and organisational performance

The adoption of certain coping mechanisms might guard against the intensity of the effects, while others might enhance it (Smith et al, 2008). Current coping mechanisms to that of traditional bullying could include novel strategies (Camacho Ahumada, 2015; Farley, n.d.). Some of the technological strategies stated in the adolescent and student cyberbullying literature include filibustering perpetrators and changing login passwords, online identities and phone numbers (Slonje, Smith, & Frisen, 2013; Schenk & Fremouw, 2012).

It has been suggested that effective coping strategies, may differ for cyber and traditional strategies. It is suggested that to ignore the cyberbullying act and therefore use avoidance strategies, may be more appropriate in contesting cyberbullying (Smith et al, 2008). However, while avoidance strategies might be feasible and effective strategies for teenagers or students, these strategies might not be feasible in the work situation. A possible reason may be that there could be a dependent or interdependent relationship between the cyber-bully and the victim since quite often the cyber-bully perpetrator is a supervisor or a team member (Privitera & Campbell, 2009; D'Cruz & Noronha, 2013).

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In another illustration as given in a qualitative interview, a male participant reported interpersonal cyberbullying from his superior for a period of 13 months (D'Cruz & Noronha, 2013). In his case, bullying took place on an individual and group level with both cyber and traditional forms of bullying involving the office and mobile phones, text messages and emails. Like with the first illustrated example in this literature review, the bullying took place regardless of place and work hours. In this and the first illustrated case, changing phone numbers or blocking superiors from electronic communication would not be feasible. This is given since there is no absolute anonymity and these bullied employees still need to communicate with their superiors to be productive.

Another, similar reason why it would not be feasible to use an avoidance strategy is because of the interwoven nature of performance in the modern work context and the use of ICT devices (D'Ambra & Rice, 1994; Weatherbee & Kelloway, 2006). One cannot avoid instant messaging, emails or online social media since it is essential to being productive in the workplace (Weatherbee & Kelloway, 2006). As the team leader in the conversation with the shop steward noted, "computers are part of the furniture" (Scholtz & Prinsloo, 2001, p. 710).

Specifically, in the workplace, one form of coping could include using company policy and legal redress to stop the victimisation and perpetration cycle. In terms of legal redress, Langos and Giancaspro (2017) note that in Australia for example, employees can use the Fair Work Act (2009), which indirectly protects against bullying behaviour. In January 2014, anti-bullying additions came into play. Workers can use the Fair Work Commission to mediate and adjudicate matters of workplace bullying. While it is not specifically stated, it includes both traditional and cyber-workplace bullying.

Having a lack of effective coping mechanisms to cyberbullying in the workplace, cyberbullied victims may turn to retaliation, but should that not work, they might remove themselves from the work situation to cope, by engaging in absenteeism or quitting their current job in hopes of stopping the cyberbullying victimisation cycle. This could be detrimental to the organisation's performance in that they might lose good employees and experience a high voluntary turnover.

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2.5 Diagnostic Cyberbullying Hypotheses

In summary, this chapter highlights how the current state of using internet and communication technology as a means of workplace tool is deviating from the ideal situation in that employees are often victims to cyberbullying. The ideal situation would be where employees are not exposed to cyberbullying in the workplace or despite exposure, are optimally performing and have positive wellbeing. However, this is thought to be very different when one considers the current status quo where individuals are exposed or a bystander to cyberbullying and often concurrent traditional bullying, which is negatively impacting on individual employees, but also the culture of the organisation.

One needs to consider the severity of the problem symptoms, which is determined by the magnitude of the deviation in actual and ideal conditions and responses (Theron, 2015). This severity needs to be based on (a) the prevalence and occurrence of cyberbullying exposure and also the (b) negative effect on the wellbeing and performance of employees and organisations in the Western Cape.

Twenty-first-century organisations must achieve complex results and compete in the global market. Given this requirement *information and communication technology use* is employed by organisations as a means of communication, source of knowledge for individuals and increased productivity and achievement of outputs for organisations. While the purpose of these devices remains pure, there are reprehensible aspects to their increased use like the prevalence of cyberbullying.

The striving toward competitive goals results in a *competitive environment that interacts with the use of information and communication technology.* Individuals are socialised into a primary, secondary and tertiary education environment that is competitive, which flows into the naturally competitive public or private work environment. Given that technology enables the boundaries of space and time-based boundaries can be disregarded, employees are often expected to be always available.

Traditional workplace bullying often occurs alongside cyberbullying with different combinations of traditional bullying, cyberbullying interactions. The value of considering cyberbullying in addition to traditional bullying in terms of its repetitions where traditional

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bullying is easier to determine, anonymity and visibility, which leads to feelings of inescapability and the boundarylessness, implicating leading the victim home.

Youthful persons are increasingly going into the workplace, with the majority of the employees belonging to generation X or Y (Statistics South Africa, 2019). For both these groupings they are socialised into the technology era and for especially generation Y, technology use is second nature to them.

These factors are hypothesised to increase the level of deviation from the ideal of no cyberbullying exposure.

As part of the ideal scenario, individuals would have a positive sense of wellbeing as well as perform optimally, enabling organisational performance to flourish. This could occur where there is no cyberbullying exposure, but also should individuals have enough levels of buffering mechanisms to guard against being negatively affected by the bullying experience.

In terms of *negative effects on individuals*, cyberbullying can have a detrimental effect on the individual depending on his or her perception of its severity and frequency. This can implicate behavioural effects (like absenteeism or drug and alcohol abuse) and psychological effects (like depression, social anxiety, decline in general well-being).

For *organisational performance negative effects*, cyberbullying can have an impact on the morale, culture and productivity of the entire organisation, given the involvement of bystanders. Cyberbullying might also infiltrate the productivity of cyberbullied victims where bullies do not reply to emails or text messages or not receiving necessary work-related information by not being included in email lists.

Buffering mechanisms can exist in terms of *coping mechanisms*. Given that it has been found that using avoidance strategies may be more appropriate in contesting cyberbullying in teenagers or students, but this is not feasible in the workplace given the nature between the individuals as supervisors, team members and colleagues. Individuals cannot avoid instant messaging, emails or online social media since it is essential to being productive in the workplace. Cyberbullied victims may turn to retaliation,

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absenteeism or quitting their current job in hopes of stopping the cyberbullying victimisation cycle since there is a lack of effective coping strategies.

2.6 Conclusion

The above-mentioned determining factors of cyberbullying prevalence and effect factors is hypothesised to be collectively responsible for the hypothesised exposure of and experience of negative effects on employees and organisations in the Western Cape. To determine and describe the prevalence and effects of cyberbullying as outlined in the descriptive and diagnostic hypotheses in this chapter, a research methodology needs to be determined, which is described in the subsequent chapter.

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CHAPTER 3
RESEARCH METHODOLOGY

3.1 Introduction

In any given study one of the most important considerations is that of methodology. Babbie (2010) conceptualises methodology as a subfield of epistemology, which is defined as the science of knowing. Essentially, should the science of finding out using a proposed research methodology be flawed, the results could be proven unfruitful.

To systematically address the research hypotheses using an appropriate research design - appropriate research techniques, sampling design (using a representative sample of employees in South-Africa), procedure for data collection and measuring instruments - need to be used (Loseke, 2013). All the above-mentioned aspects for the current study is discussed in this chapter.

3.2 Research Design

Babbie, Mouton, Vorster, and Prozesky (2007) suggest that an appropriate research design is dependent upon the objectives of the study, the nature of the investigated phenomenon and the expectations of the investigator. The amount of preceding research is also suggested as a determining factor of the chosen research design.

While it is exploratory in nature, the current study is a descriptive diagnostic research study. Such a study's main objective is to evaluate descriptive and diagnostic hypotheses that could account for the deviation that is expected to exist between the current reaction and the ideal reaction of units of analysis in terms of a specific phenomenon (Babbie & Mouton, 1998). In the case of the current study, the descriptive hypothesis with regards to the enabling factors for prevalence and the effects of exposure need to be evaluated along with diagnostic hypotheses explaining the higher levels of exposure and the lower levels of wellbeing and performance because of exposure to cyberbullying.

To evaluate the diagnostic hypotheses, it essentially involves describing the current level of a set of variables that are assumed to be (a) enabling factors of exposure to cyberbullying; and (b) the variables that cause an effect on individual and organisational wellbeing and performance due to the exposure. The relationships between the proposed

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enabling factors and cyberbullying or the proposed effect factors and cyberbullying have not been evaluated in detail, as this falls outside the scope of the current study, given the lack of preceding research. This is however explored on an exploratory level and there is value, should cyberbullying exposure explain significant variance in any of the effect factors.

In terms of data collection, a quantitative research design is used to reach the research objectives of this study. A quantitative non-experimental ex-post facto design can be used to address all the research hypotheses for this study. Given the fact that there is no predecessor South-African study on cyberbullying in the workplace, this design can assist in understanding the scope of the problem, especially in understanding the negative effect on the psychological state and performance abilities of individual employees.

With the use of the quantitative research design, emphasis is placed on the quantification of constructs (Bless, Higson-Smith, & Sithole, 2013). The rationale behind the quantitative approach is that measuring the properties of a phenomenon should be through quantitative measurement, which implies assigning numbers to the perceived qualities of things (Babbie & Mouton, 1998).

The strength of the quantitative approach could be that the data can be collected from a large representative sample within a short time frame, since an inorganic instrument can be used which assures anonymity for respondents. Analysis of data collected using a quantitative instrument will provide a comprehensive answer with the minimisation of biases and subjective judgment of the researcher (Babbie & Mouton, 1998).

3.3 Population and sample

The population that is considered for this study are employees in South-African workplaces. The population consists of employees in organisations in the public and the private sector. The former consists of organisations, which provides public services, while the latter consists of profit striving organisations and charitable non-profit searching organisations. A detailed discussion of the target population, sample and sampling design follows.

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3.3.1 Population

A population can be viewed as the total group of individuals that possess certain characteristics to fulfil criteria that conforms them to a group that makes them of interest to be studied by the researcher (Kalamdien, 2013; Trochim, 2006[a]; Bless et al., 2013). One should be able to generalise the results onto that of the population being studied. For the purpose of this research study, the target population is employees within a South-African organisation with the possibility of exposure to cyberbullying victimisation. The target population group can be operationally defined in terms of their status of different bullying victimisation exposure. Members of the target population can firstly be divided into two groups, where one group has been exposed to bullying and the other group not.

Employees with no exposure to bullying victimisation are included as part of the target population, because they can be used as a comparison group for the effects of bullying and the influence of coping mechanisms. One shortcoming with including this group is that one might expect a lesser response rate from individuals who receive a questionnaire on a phenomenon that does not directly affect them (Loseke, 2013).

The formerly mentioned group can be divided into four different sub-groups: cyber-bully victim; traditionally bullied victim; victim of both forms of bullying and bystander to either form or combination of bullying victimisation. A pictorial depiction of the population in terms of exposure group classification is given below as Figure 1.

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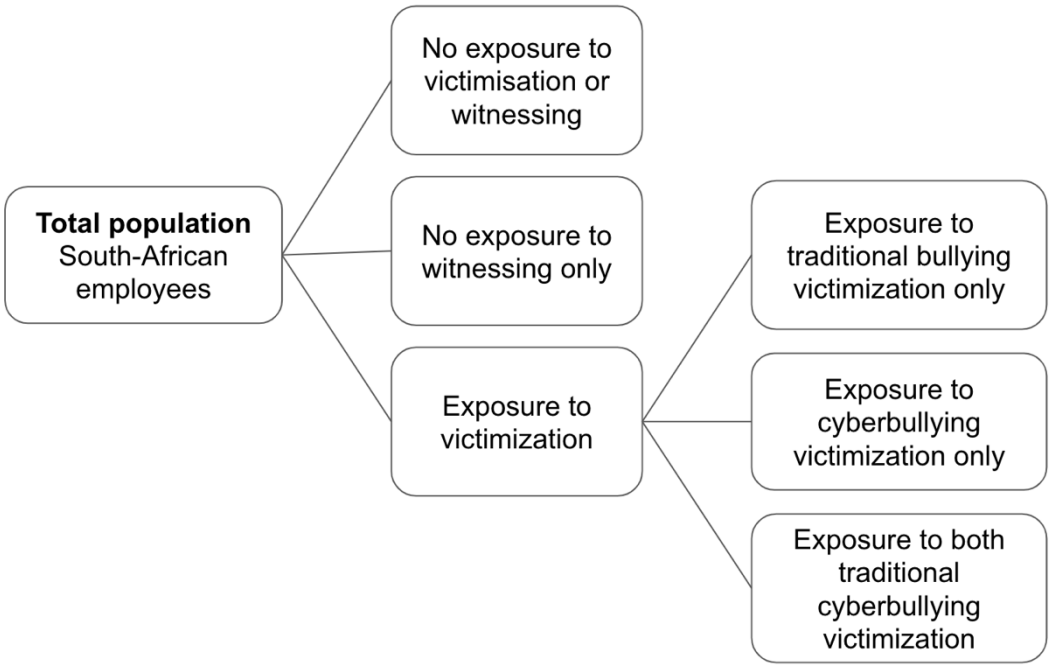

Figure 1. Study population in terms of bully victimisation exposure

3.3.2 Sampling design

A sampling design can be viewed as a roadmap for obtaining a representative sample from a given population before any data are collected (Bless et al., 2013). Given the sampling and data collection sequence that has been applied in this study, an embedded sampling design has been used. A pictorial depiction of the embedded sampling design is given in Figure 2.

Purposive non-probability sampling involves drawing a sample based upon a set of desired criteria (Bless et al., 2013; Trochim, 2006[b]). There are two reasons this sampling method is chosen. Even though the purposive sampling of context undermines the external validity to a certain extent, it is used for practical reasons. The current study is for a phenomenon that has not been studied. It would therefore be impractical to begin to understand the phenomenon, should the scope of contexts be too big. One public organisation has been used as context, where more details have been provided in section 3.3.3.

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Figure 2. Illustration of the proposed study sampling design

Within the participating organisation, their employees are the primary units of analysis, especially with regards to determining the prevalence, nature and effects of cyberbullying on individual employees within organisations. The survey (modified and combined from previous instruments) has been distributed to a group of employees at the respondent organisation.

Given that the surveys have been distributed to a group of employees, availability sampling is used. All employees have been asked to voluntarily participate in the study. Availability or convenience sampling can be viewed as non-probability sampling on the basis of ease of access for data collection. For the purposes of this study, this sampling type has also been termed volunteering sampling (Jupp, 2011; Tashakkori & Teddlie, 1998).

Availability sampling brings a few shortcomings to the study, especially given its status as a non-probability sampling technique (Bless et al., 2013). With probability sampling the relationship between the sample and the population where it is drawn from is not known (Creswell, 2014). It could be that the respondents that avail themselves are not in fact representative of the general population of South-African employees

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3.3.3 Sample

The sample has been drawn within a utility provider in the public sector in South Africa. Due to fear of public retaliation, the organisation has chosen not to disclose their name in this study.

3.4 Data collection

A representative at the participating organisation that acts in the role as industrial psychologist was contacted to potentially participate in the study. A proposal presentation was presented to the representative and organisational consent was obtained.

The researcher drafted communication around the participation in the study, which the representative organised to send to a group of their employees, with a link embedded that takes the respondents to the online self-report measure.

The first page within that online measure is an informed consent form, that the respondents electronically signed. This informed consent form detailed that the survey is about a pressing business problem, but no mention is made of cyberbullying. This is for methodological concerns in that where specific issues are involved, people affected by a pressing issue are more likely to respond (Miller, Gluck, & Wendler, 2008).

For the purpose of this study it is necessary to gain data on the levels of different variables for different exposure groups and not just cyber-bullied victims. That being said, the last page of the online measure is a debrief form where the full purpose of the study was described, and respondents were asked to give a second round of consent. A more in-depth discussion to follow in the section on ethical considerations.

3.5 Research instrument

The type of quantitative measure that has been used in this study is a self-report measure. It has been given to individual employees in the form of a survey to account for their individual perceptions of cyberbullying experiences. The research instrument aims to explore both prevalence and effects of cyberbullying.

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In order to provide an answer to the research aims a survey of 123 items has been generated. The origin of the items come from (a) measures used in previous studies, (b) adaptation from previous studies, and (c) ad hoc self-generated items.

The self-report measure can be broken into 11 sections, split across several pages within the online measure. The flow of the self-report measure (in other words, the order in which the items appear), has been designed to be from more general in the constructs they measure, to more specific to bullying and cyberbullying.

It should be noted that not all respondents were required to answer all of the questions in the research instrument. Where items specifically relate to the effects of cyberbullying, those items were set to be conditional. This conditionality implies that only where an individual indicated that they have some form of exposure to cyberbullying, did that individual answer questions on the effects of cyberbullying.

The compilation of the self-report measure has been added as Appendix A. A discussion on this measure now follows, where the sections of the self-report measure is explored in terms of how whether they are aimed at (a) establishing contextual information, (b) establishing prevalence, or (3) establishing the effect on the individual or organisational outcomes.

3.5.1 Scales and items to establish contextual information

In this study scales and items used to establish contextual information include the demographic information asked and some self-generated items on the use of technology. The demographic information that is asked to aid in establishing whether prevalence differ in terms of contextual factors like gender, ethnicity or tenure. The use of technology items is used to see whether contextual factors on how technology is used could act as risk factors for the prevalence of cyberbullying.

3.5.1.1 Biographical information

This section has been used to determine and analyse differences amongst individuals that are subject to workplace cyberbullying. The prevalence of cyberbullying can be analysed according to: gender, age, ethnicity, employment status, job title, type of employment status, tenure, line of work, and the extent of communication (especially of

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geographically disperse colleagues, supervisors and subordinates). In terms of employment status, the participating organisation specifically requested for information cut demographically by whether the role of the employee is supervisory, non-supervisory, managerial or non-managerial.

In addition, to address the research objective of determining the effect of cyberbullying on organisational outcomes, employees were also asked on the regularity of their sick-leave. An open-ended question has also been given on the general reasons for all the accounts of sick leave during the previous six (6) months.

3.5.1.2 Use of technology

Five items relating to the use of technology have been generated specifically for this study. The purpose of all these items are to explore how and for which purposes respondents use technology.

The first item looks at what the age was that individuals first started using information and communication devices for personal use. There is a possibility that, the more familiar an individual is with the use of ICTs from a younger age, the less likely it will have an effect on them as they get older. The next item asks respondents whether their company has a policy on information and communication technology (ICT's).

This is followed by an item using a 7-point Likert scale asking respondents to rate how often they use any information and communication devices for work purposes. The next item asks respondents whether their company has a policy on information and communication technology (ICT's).

The following item asks of respondents which ICT's they use for work related purposes. Answers for this item include cell phones and landlines - for text messages (SMS – short message service) or other instant messaging or phone calls; mobile tablets and computers- for emails, other online communication, emails, forums, blogs or social media. Respondents could select more than one of these.

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The last item asks of respondents with whom they use ICTs to communicate for work purposes. Answers could be supervisors, colleagues, customers, none of these or different combinations of the preceding answers.

3.5.2 Scales and items to establish prevalence

When considering measures for establishing prevalence of bullying, Nielsen, Matthiesen, and Einarsen (2010), who did a meta-analysis on the impact of methodological moderators on prevalence rates, suggest that there are three types of measurement methods used to determine prevalence. These methods are (a) using a self-labelled victimisation method where respondents declare whether they were exposed to bullying or not based on a definition of what bullying is; (2) using a self-labelled victimisation method without a definition; and (3) a behavioural measure, which uses an inventory of bullying behaviours with a statistical cut-off criterion.

In this study both the self-labelled method with definition and behavioural method is used for establishing prevalence. The behavioural method instruments used in this study include the Negative Acts Questionnaire (NAQ-R) (Einarsen, Hoel, & Notelaers, 2009) and the newly created items based on a qualitative study by D'Cruz and Noronha (2013) named the Cyberbullying in the Workplace Questionnaire (CBIWQ). The self-labelled items are combined and called the Regularity of Bullying Victimisation and Witnessing scale (ROBVW).

In this study prevalence is determined by the self-labelled method items, with the behavioural measures being used to add colour to the findings on prevalence, along with helping with validation.

3.5.2.1 Negative Acts Questionnaire (NAQ-R)

The Negative Acts Questionnaire (NAQ-R) is used to measure exposure to bullying in the workplace. Originally consisting of 29 items, the questionnaire is revised by means of focus groups and refined from the original 23 items to be a 22-item measure (Einarsen et al., 2009). The instrument consists of possible responses on a 5-point Likert scale. The scale point of 1 represents 'never' and growth in regularity as scale points increase with the scale point of 5 indicating daily exposure to the item.

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After factor analysis, Einarsen et al. (2009) found that the questionnaire has three factors. These factors are: personal bullying, work-related bullying and physical forms of bullying. It should be noted that while the original 29 items were asked in this study, and only the 22 that loaded onto the three factors in the study by Einarsen et al. (2009) has been used for analysis.

A previous South-African study on the prevalence of workplace bullying in South-African organisations, reported a reliability coefficient of .93, using the unmodified NAQ-R (Kalamdien, 2013). While, Privitera and Campbell (2009) who used the NAQ-R to measure cyberbullying prevalence modified the NAQ-R to a measure of workplace cyberbullying (by incorporating modalities of e-mail, SMS and mobile and landline telephone calls in addition to the traditional modality). The current study has used it in its original format to establish the prevalence of traditional bullying.

3.5.2.2 Cyberbullying in the workplace questionnaire (based on D'Cruz & Noronha, 2013)

D'Cruz and Noronha (2013) explored the concept of cyberbullying in the workplace from a qualitative view in terms of the effect of cyberbullying episodes on employees. They conducted interviews with 16 different respondents that had cyberbullying exposure and identified the following themes: being pursued, receiving a settled score, feeling "haunted" and "hemmed in" and drawing advantage.

Based off these themes and the scenarios explained by the study respondents, the current researcher created 10 items that could describe cyberbullying episodes for individuals. These items are hypotheses for experiences that individuals could have that render them cyberbullying victims. These items have been used to inform the prevalence of cyberbullying as well as a stepping stone for the items in the effects of cyberbullying in the workplace questionnaire, which starts to look at the effect of cyberbullying on the individual. Respondents are asked to indicate how much they agree or disagree with the item statements on a 7-point Likert scale.

Given that these are newly generated quantitative items, reliability and validity analyses have been conducted.

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3.5.2.3 Regularity of Bullying Victimisation and Witnessing scale (ROBVW)

The Regularity of Bullying Victimisation and Witnessing scale (ROBVW) is a self-generated scale based on the self-labelling methodology used by different previous studies (for example, Giorgi, Ando, Arenas, Shoss, & Leon-Perez, 2013; Nielsen et al., 2009).

Respondents were asked to read a definition (based off of previous research) of both traditional workplace bullying and cyberbullying and indicate whether they feel they have been victim of these in the previous 6 months as well as whether they have been witness to either or both, where responses were initially recorded as yes or no answers. The definition for traditional bullying was given as:

> Repetitive and persistent hostile actions towards one or more individuals that involve a perception that there is an imbalance of power and the negative conduct results in a form of hostile work environment (for example, Balducci et al., 2011).

The definition for cyberbullying was given as:

> The deliberate aggressive behaviour of an individual or group of perpetrators, using electronic communication technology to extend their reach beyond the physical setting, toward a defenceless individual by directly or indirectly sending derogatory or threatening messages, forwarding personal and communication or images of the victim for others to see or publicly posting vilifying messages (Smith et al., 2008; Campbell, 2005; Privitera & Campbell, 2009; Kiriakidis & Kavoura 2010; Ryan & Curwen, 2013).

Using these definitions as guidelines, respondents were then asked about the frequency of exposure, based on a five-point Likert scale: never; now and then; daily; weekly or monthly. These frequency items have been combined as the ROBVW scale.

While these items are based on a previously used methodology, these specific items have not been studied and the researcher will explore both reliability and validity of these items.

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3.5.3 Scales and items to establish the effects on the individual or organisational outcomes.

Both established and new scales were used to try to establish whether cyberbullying has (a) an effect on psychological factors of individuals, (b) an effect on the performance capabilities of individuals, (c) an effect on organisational outcomes, and (d) whether coping mechanisms mediate whether traditional and cyberbullying influences individual psychological factors and performance abilities.

To measure the psychological factors of individuals the following measures were used: the Perceived Stress Scale - Revised (PSS) (Cohen, Kamarck, & Mermelstein, 1983), the Single-Item Self-Esteem Scale (Robins, Hendin, & Trzesniewski, 2001), the ICT Demands scale (Day et al., 2012) and the effects of cyberbullying in the workplace questionnaire (EOCB) (based on D'Cruz and Noronha, 2013).

To measure the effect on the performance capabilities of individuals, two items in the EOCB was used to ask whether a specific cyberbullying event resulted in an inability to work, along with one item in the same section as the self-labelled prevalence items on whether bullying in general caused an inability to work

To measure the organisational outcomes, one item in the demographic items asks about whether respondents took sick leave and the Intention to Quit (Wayne, Shore, & Liden, 1997) Scale was used.

Lastly, to measure whether coping mechanisms are used, self-generated items on whether respondents used coping mechanisms along with some potential types are used. To measure whether cyberbullying episodes were perceived as severe, the Perceived Cyberbullying Severity (PCS) (Camacho Ahumada, 2015) was used.

3.5.3.1 The Perceived Stress Scale - Revised (PSS) (Cohen et al., 1983)

The Perceived Stress Scale – Revised is based on the fourteen-item Perceived Stress Scale (Cohen et al., 1983) and developed to assess psychological processes related to perceptions of stress.

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Wickrama et al. (2013) identified two factors within the Perceived Stress Scale (Cohen et al., 1983), which they reduced to twelve items, where five items represent psychological competency and seven items represent psychological vulnerability. The sample for the revision is older African Americans and the reliability coefficients for these scales are between .80 and .85, respectively. Good discriminant validity is shown for the two factors (Wickrama et al., 2013).

For this study the items have been used to measure the psychological competency and the psychological vulnerability of respondents. The reliability of the items for the current study have been determined.

3.5.3.2 The Single-Item Self-Esteem Scale (SISES) (Robins et al., 2001)

The Single-Item Self-Esteem Scale (Robins et al., 2001) is a measure to determine the extent of self-esteem based on a single item. This scale is based on the Rosenberg Self-esteem Scale (Rosenberg, 1979).

In the study by Robins et al. (2001), it showed high convergent validity for both students and community members. This measure utilises a 5-point scale ranging from 1 (not very true of me) to 5 (very true of me). To determine the internal consistency coefficient for a single-item measure an estimate of the reliability can be calculated by examining the pattern of correlations over three points in time. For the pilot study, using a sample of college students, Heise reliability estimate for the SISES is .75; this is however lower than the Heise reliability estimate for the multiple item Rosenberg Self-Esteem Scale (.88). In the pilot study, it is still adequately high, and the findings of the pilot study support the reliability and validity of the SISE. The SISE can therefore be a feasible alternative to the RSE in adult samples, especially in terms of its pragmatism.

For the present study, the SISES scale has been used to estimate if cyberbullying has a detrimental effect on the self-esteem of employees.

3.5.3.4 Intention to quit (Wayne et al., 1997)

The scale used to measure whether employees intend to leave their organisations have been measured with a five-item scale used by Wayne et al. (1997). Respondents

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responded on a seven-point scale from 1 = strongly disagree to 7 = strongly agree. The five intention to quit items had a reliability coefficient of .89.

3.5.3.5 ICT Demands scale (Day, et al., 2012)

The ICT Demands scale (Day et al., 2012) is included in the current study to determine how the use of information and communication technology place demands on employee wellbeing with and without relation to cyberbullying.

The scale consists of twenty-seven items representing eight theorised areas of ICT-related demands: (a) Response expectations; (b) 24/7 Availability; (c) Ineffective communication; (d) Lack of control over ICT; (e) Hassles using ICT; (f) Employee monitoring; (g) ICT Learning Expectations; and (h) Workload. Exploratory structural equation modelling (SEM) provided support for the 8 ICT demands. The reliability coefficients ranged from .70 to .79. Each item significantly loaded on its intended factor.

For the purposes of this study, twelve items were selected due to the length and time constraints on the respondents. The following subfactors are covered by these 12 items: (a) Response expectations; (b) 24/7 Availability; (c) Ineffective communication; (d) Lack of control over ICT; (e) Employee monitoring; (f) ICT Learning Expectations; and (g) Workload.

3.5.3.6 The effects of cyberbullying in the workplace questionnaire (based on D'Cruz and Noronha, 2013)

The items that were generated based on D'Cruz and Noronha (2013) to explore the prevalence of cyberbullying in the workplace (the Cyberbullying In the Workplace Questionnaire (CBIWQ) discussed earlier), were supplemented with possible consequences that each item could have on the individual. By using conditional settings, where an individual indicated that they experienced any of the 10 items in the preceding section of the questionnaire, they were asked follow-up questions that indicated possible effects thereof.

This is best illustrated by an example. One of the items in the preceding section includes:

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I am being called up by a supervisor, co-worker or subordinate beyond office hours and premises (e.g. during late night; on leave days or public holidays) using emails, instant messages and phone calls.

If the person indicated on the Likert scale that they do experience cyberbullying (a score of 2 or higher), they are prompted to indicate how much they agree or disagree with the item statements on a seven-point Likert scale, the possible effect that this experience had on them in two new items

When I am being called up by a supervisor, co-worker or subordinate beyond office hours and premises using emails, instant messages and phone calls, I feel trapped and stressed out.

When I am being called up by a supervisor, co-worker or subordinate beyond office hours and premises using emails, instant messages and phone calls, I feel physical symptoms like stomach pain, cannot sleep or high blood pressure.

Table B1 in Appendix B indicates how items in the EOCB relate to the CBWIQ. Given that these are newly generated quantitative items, reliability and validity analyses have been conducted.

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3.5.3.7 Perceived Cyberbullying Severity (PCS) (Camacho Ahumada, 2015)

To further determine the effect of cyberbullying on the individual, the perceived severity of cyberbullying episodes should be determined. Items measuring the construct of perceived cyberbullying severity (PCS) in the study by Camacho Ahumada (2015) have been used.

In the study by Camacho Ahumada (2015), the scale for PCS is measured during the pilot test with a combination of items from two existing scales that referred to the severity of a disease and the seriousness of a computer threat (Johnston & Warkentin, 2010). The final set of seven items for the PCS construct assesses a respondent's perception of the seriousness of a cyberbullying episode, the consequences for the individual and the image that other people may have of her/him because of the cyberbullying episode.

Camacho Ahumada (2015) evaluated the psychometric properties and found good item reliability by assessing the item loadings and corrected item-total correlations.

3.5.3.8 Coping and effect on work performance

Where respondents indicated that they experienced cyberbullying, they were asked whether they used any coping mechanisms. Some questions are asked on whether they employed specific coping mechanisms: reported being victim; attempted to change their passwords or block out the cyber-bully; and/or attempted to ignore the traditional workplace bully.

The last item explores the effect of bullying on individual work performance by asking: "Have you felt that you feel unable to complete your normal work duties, because of being bullied?"

3.6 Data analysis and interpretation

A large part of quantitative data analysis has been for drawing comparisons between different factors as proposed in the research study. However, it should be noted, for the data analysis of the current study no statistical hypotheses have been derived. The reason is that this study is a descriptive diagnostic study (Blaikie, 2003). Such studies are concerned with description and ask "what?" questions. These questions can be answered

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using univariate, basic bivariate or basic multivariate descriptive statistical analyses (Blaikie, 2003).

The specific types of statistical analyses used for this study will be discussed in terms of each research objective, and which statistical analyses will be used to establish sound psychometric properties of the items in the research instrument discussed above.

3.6.1 Data analysis of research objective 1

The first part of addressing research objective 1 was to establish whether cyberbullying does occur. To do this the ROBVW items were used to split the sample into exposure groups. Respondents could fall into one of five potential exposure groups (a) those respondents with no exposure to bullying victimisation or witnessing of cyberbullying, (b) those respondents who indicate witnessing of either cyber or traditional workplace bullying, but not personally victim to either type of bullying, (c) respondents that only indicate victimisation to traditional bullying, (d) respondents that only indicated victimisation to workplace cyberbullying, or (e) respondents that indicated both victimisation to workplace cyberbullying bullying and traditional bullying. This has been visualised in Figure 3, which corresponds with the visual breakdown of the population in the context of this study in Figure 2.

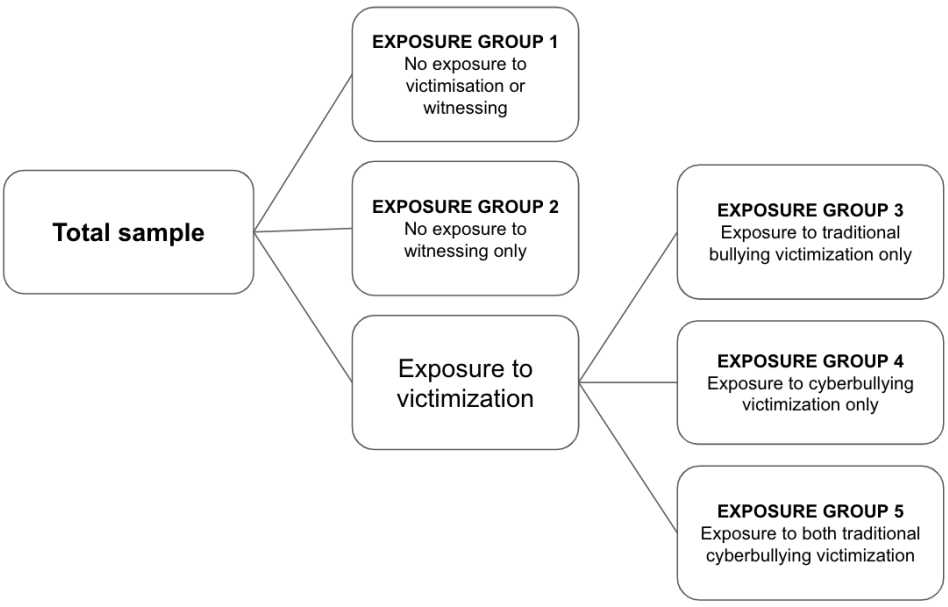

Figure 3. Visual depiction of exposure group status

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To form part of exposure group 1, respondents indicated never having been exposed to either type of bullying victimisation or witnessing in the previous 6 months, but does not meet the criteria for exposure group 3, 4 or 5. (OFTEN_CB_VIC=1 and OFTEN_TRAD_VIC=1 and OFTEN_CB_WIT=1 [where not part of exposure groups 3-5] and OFTEN_TRAD_WIT=1 [where not part of exposure groups 3-5]). Readers should note there are a group of respondents that were exposed to bullying victimisation and were not witnesses to others being bullied, but they were not included as part of the exposure groups to ensure mutual exclusivity.

To form part of exposure group 2, respondents indicated that they have at least witnessed cyberbullying or traditional workplace bullying now and then but does not meet the criteria for exposure group 3, 4 or 5 (OFTEN_CB_WIT ≥ 2 [where not part of exposure groups 3-5] and OFTEN_TRAD_WIT ≥ 2 [where not part of exposure groups 3-5]. Therefore, there are a group of respondents that were exposed to bullying victimisation and were witnesses to others being bullied, but they were not included as part of the exposure groups to ensure mutual exclusivity.

To form part of exposure group 3, respondents indicated never being exposed to cyberbullying victimisation, but at least now and then being exposed to traditional bullying victimisation (OFTEN_CB_VIC = 1 and OFTEN_TRAD_VIC ≥ 2).

Respondents indicated never being exposed to traditional workplace bullying victimisation, but at least now and then being exposed to cyberbullying victimisation (OFTEN_CB_VIC ≥ 2 and OFTEN_TRAD_VIC = 1), to qualify as part of exposure group 4.

Lastly, respondents who indicated at least now and then being exposed to both cyberbullying victimisation and traditional workplace bullying victimisation (OFTEN_CB_VIC ≥ 2 and OFTEN_TRAD_VIC ≥ 2), formed part of exposure group 5.

These different exposure groups were used as variables in the comparative analyses of analysis of variance (ANOVA) and cross-tabulation used in the study.

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Analysis of variance is a statistical technique, where F-tests are done to assess whether statistically significant differences in the means of two variables (where each variable is measured using continuous data) can be observed (Everitt & Skrondal, 2010). While the direction of influence cannot necessarily be established using this analysis technique, this technique has helped to infer whether variables differ in terms exposure group status. One can therefore start to determine where exposure group status does or does not influence a variable or a variable does or does not influence exposure group status.

Cross-tabulation, or contingency tables is similar to the analysis of variance technique in that assess whether or not statistically significant differences in the means of two variables can be observed. However, it differs in that both variables considered are not measured using continuous data, but one or both are measured with categorical data. Instead of considering the F-test, one considers the chi-squared statistic to establish whether the differences in means are statistically significant (Everitt & Skrondal, 2010).

The second part of addressing the first research objective is to consider whether certain hypothesised factors increase exposure to bullying.

Firstly, to evaluate whether workplace cyberbullying does occur in the South-African workplace given the increased use of technology in a highly competitive environment, the perceived use of technology has been compared based on exposure group status using analyses of variance.

To evaluate whether workplace cyberbullying does occur in the workplace given the presence of traditional workplace bullying, exposure group 3 (traditional bullying only), exposure group 4 (cyberbullying victim only) and exposure group 5 (both traditional and cyberbullying victim exposure) have been compared as exposure groups.

Lastly, one can analyse the effect of the youth in the workplace by statistically analysing the number of incidences of cyberbullying among younger and older employees. More specifically, to determine whether the prevalence decreases with age, data has been divided according to age groups, age of first exposure and tenure. Both analysis of variance and cross tabulation is used to compare the data.

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3.6.2 Data analysis of research objective 2 and 3

To determine whether workplace cyberbullying has a negative psychological effects and negative effects on the performance abilities of individual employees above that of traditional workplace bullying, comparisons have been drawn between exposure groups. Data for analysis have been gathered from the Perceived Stress Scale, the Single Self-Esteem Scale, the Effects of Cyberbullying in the Workplace Questionnaire (EOCB), and the ICT demands scale. An analysis of variance has been done to determine how the different factors of the above-mentioned scales and questionnaires is influenced by exposure group status.

It should be noted that due to the conditional nature of responses, especially for the EOCB, different number of people responded to each effect item and therefore pooled means and standard deviations are calculated using the following formula:

$$M_{pooled} = \frac{\Sigma i\ ni\ mi}{\Sigma\ ni}$$

where

- *ni = sample size of group i (people who responded to EOCB items considering similar effects)*
- *mi = mean of group i (people who responded to EOCB items considering similar effects)*
- *sdi = the standard deviation of group i (people who responded to EOCB items considering similar effects)*

$$SD_{pooled} = \sqrt{\frac{\Sigma i\ (ni - 1)\ (sdi)2}{((\Sigma i\ ni) - T)}}$$

where

- T = Number of *treatment groups*

To determine the effect of bullying on performance, cross tabulation has been done based on the exposure status and the self-reported performance data represented by the item, “Have you felt that you feel unable to complete your normal work duties, because of being bullied?” Analysis of variance was also done between exposure group status and two

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items from the effects of cyberbullying in the workplace questionnaire (EOCB) that consider the inability to work because of specific cyberbullying episodes.

A possible shortcoming of using these self-report items as part of this proportion of the data analysis, is that the perception of decline in performance is measured, as opposed to actual decline in performance. This is, however, done to preserve the anonymity of the respondents.

To determine the effect of coping mechanisms specific to cyberbullying on organisational or individual performance was evaluated with two items asking respondents whether they used any coping mechanisms to deal with the cyberbullying and whether they tried to block the cyberbully. Items were also asked in terms of reporting either type of bullying incident and whether a traditional bully was ignored.

An analysis of variance was done between the four items on coping mechanisms and the scales considering individual psychological and performance where statistically significant differences could be reported between those scales and exposure group status.

3.6.3 Data analysis of research objective 4

In terms of determining the influence of the different forms of bullying on organisational outcomes, information on voluntary turnover (using the intention to quit measure) and self-reported sick-leave have been used. Comparisons have been drawn of the different exposure groups.

3.6.4 Statistical analyses used to establish the psychometric properties of items in research instrument.

Two types of psychometric properties are considered for items used in the current study, namely reliability and validity. Validity considers whether a measure measures what its intended to, while reliability considers whether the items in a measure is consistent across respondents (Everitt & Skrondal, 2010).

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3.6.4.1 Establishing reliability of items in the current study

To establish whether items consistently measure the same thing across respondents, internal consistency reliability was established for all continuous scales used in the current study. There are three reliability coefficients that have been used to establish this internal consistency, namely (a) the Cronbach's alpha (α), (b) the total-item correlation, and (c) whether the alpha would increase if the item is deleted.

When considering the Cronbach's alpha, Nunnally (1978), commonly cited to determine the threshold for sufficient reliability, posits that for preliminary research a sufficient reliability coefficient (like that of Cronbach's alpha) is .7, for basic research it is .8 and for applied research it is .9. Given that the current study is a preliminary research study, the .7 threshold is used.

The item-total correlation is the correlation coefficient of an individual item with the total scale and can be used a supplementary coefficient to the Cronbach alpha to check for internal consistency (Everitt & Skrondal, 2010). The threshold for an acceptable item-total correlation is .2, where items with lower correlations should be removed from the scale.

Related to the item-total correlation, is looking at how the alpha coefficient would increase or decrease if the item is deleted. Should the alpha increase if an item is deleted, then the internal consistency would increase.

For individual items, the item-total correlations and the whether the alpha would increase were considered together before a decision was made to remove items from further analyses.

3.6.4.2 Establishing validity for items on prevalence

In terms of validity, more than one scale was used to measure similar constructs for the prevalence of bullying, which implies that these items can be compared to start to establish convergent validity. Convergent validity is whether items from one measure are like the items of a measure considering the same construct (Krabbe, 2017).

One method to establish convergent validity is by looking at the correlation between the items of the two different measures measuring the same construct (Abma, Rovers, & van

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der Wees, 2016; Krabbe, 2017, Terwee et al., 2007). While there is no hard rule for how high correlation coefficients should be to establish convergent validity, some sources suggest that above .5 is sufficient, while using it as an absolute rule is not necessary (Abma et al., 2016; Terwee et al., 2007). For this study, correlations were drawn between the item in the ROBVW that was used to measure cyberbullying victimisation (OFTEN_CB_VIC) correlates with the CBIWQ, and how the item in the ROBVW that was used to measure traditional bullying victimisation (OFTEN_TRAD_VIC) correlates with the NAQR.

Another method to establish convergent validity is by using analysis of variance between the items of the two different measures measuring the same construct (Hinkin & Tracey, 1999). In the case of this study analysis of variance is done between the NAQR and exposure group status, and the CBIWQ and exposure group status. Exposure group status is determined by the items in the ROBVW that considers traditional and cyberbullying, therefore if statistically significant differences between the exposure groups are found based on the CBIWQ or the NAQR, it could give an indication that convergent validity is present.

3.7 Ensuring the quality of the data

In terms of quantitative research, the evaluation of measurement is done by means of ensuring reliability in the research process and external validity of the research process (Bless et al., 2013).

3.7.1 Establishing external validity

External validity can be defined as the approximate truth of conclusions based on generalising from the sample to the population. This is to say that high external validity occurs in studies where the conclusions in the study would hold for other persons, in other places and at other times (Trochim, 2006[c]).

To achieve high external validity, one should use a sampling design where generalisability is most likely. One shortcoming in this study is the use of availability and/or purposive sampling to draw the sample from.

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Another way in which external validity can be ensured is by conducting the current study across time. Conclusions have been drawn with the possibility of replication of the study.

3.7.2 Establishing reliability in the research process

Reliability can be defined as the degree to which an instrument produces equivalent results for repeated trials and the principle is concerned with the consistency of measures (Bless et al., 2013; Foxcroft & Roodt, 2013; Babbie & Mouton, 1998).

Similar to the improvement of external validity, external reliability could be ensured by means of conducting a replication study to ensure that results do not vary because of differences in time.

3.8 Ethical considerations

There are several respondent burdens that need to be taken into consideration especially with social science research (Yoshikawa, Weisner, Kalil, & Way, 2008), like the proposed study. There is the possibility of perceived vulnerability for the loss of anonymity, especially if the cyberbullying experience is where a victim is cyberbullied by a supervisor. In this regard, the respondent might fear that information shared with the researcher might reach the supervisor who could possibly retaliate. This might cause reluctance in respondents to take part in the study. To counteract the burden, respondents have been reassured that the quantitative data collection using the self-report measure has been done anonymously and their identities have been hidden.

Respondents have been reassured that the information that they share with the researcher has been dealt with utmost confidentiality and that their identities have not been made available in the study. The researcher has ensured that all the requirements of informed consent and confidentiality have been adhered to and each respondent has been given an electronic consent form. The study has also adhered to all other ethical standards set, as described by the Health Professions Council of South Africa as well as obtained permission and adhered to the standard operating procedure of the Research Ethics Committee for Human Research and from the Departmental Ethics Screening Committee (DESC) at Stellenbosch University for this research.

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In critical evaluation of the research, this chapter serves as a vehicle for giving supporting information to items on the application to the University of Stellenbosch Research Ethics Committee where risk for non-ethical clearance is higher or extra provisions are required.

3.8.1 Classification of the degree of risk according to the Research Ethics Committee

According to DESC (Departmental Ethics Screening Committee) there are four categories that represent the degree of risk. They include minimal or low, medium or high risk. For the current study there is a medium degree of risk for respondents. Medium risk is defined as (Stellenbosch University, 2012)

> Research in which the potential exists for a level of emotional or psychological distress and/or social stigmatisation, prosecution or persecution that could be harmful to the respondent if due care is not taken by the investigator, and could require mitigation, e.g. counselling or other forms of support (p.3).

This study is dealing with the potentially sensitive topic of cyberbullying in the workplace and the possibility of a loss of a job, as well as exposure to the exploration of emotional vulnerabilities, might increase the perceived risk. There is therefore an increased potential for emotional or psychological discomfort. Should there be a case of cyberbullying where the supervisor is the bully and his subordinate shares details about the cyberbullying events and the researcher negligently tells the supervisor, by not adhering to confidentiality provisions, it may be harmful for the respondents.

The topic of cyberbullying might pose a level of discomfort, in that it is a sensitive topic. The research respondent of the study might feel vulnerable and to address this, the researcher has made information available of a registered psychologist to engage in discussion, should they have needed it.

3.8.2 Steps to ensure established ethical standards are applied

This section elaborates on steps and practices that have been undertaken to ensure that ethical standards are adhered to.

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3.8.2.1 Informed consent and debriefing

Appropriate provision has been made for informed consent in that there is a consent form for participating organisations; a written informed consent form has been given to respondents. The informed consent form covers the scope of the purpose of the study (stated as the investigation of a pressing business problem), procedures, potential risks and discomforts, potential benefits to society, payment for participation, confidentiality, participation and withdrawal, identification of the investigators and counsellors, as well as the research subject's rights.

As indicated earlier, the initial informed consent form contains incomplete disclosure in terms of the purpose in that no mention of cyberbullying is made. This can create an ethical concern. Incomplete disclosure can be viewed as a form of deception (University of California, 2014). Deception has been defined as "deliberately misleading communication to prospective subjects about the purpose of the research and/or the nature of experimental procedures (Miller, Gluck, & Wendler, 2008, p. 236)." It is more common in experimental research, however incomplete disclosure as a form of deception can be used where non-response is expected from a sample. However, deception is regarded as disinhibiting informed consent that is a requirement for ethical social research (Tai, 2012). To counter this, debriefing has been suggested (Miller et al., 2008; University of California, 2014).

Debriefing involves informing subjects of the use of deception (incomplete disclosure), along with its rationale at the end of research participation (Miller et al., 2008). While this should not be viewed as magical ethical rectification, it is necessary when the research necessitates the use of deception. In this regard, the current research study made use of a debriefing form at the end of data collection, where the full purpose of the study is explained, and a second consent has been asked. The debriefing form example given by University of California (2014) has been used as basis.

The organisation invited to take part in the current study has been given an executive consent form indicating their permission that respondents may take part in the study. The informed consent and debriefing explanation were be made clear before the commencement of the study. In the executive consent form, the organisation taking part

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in the study disclosed that they did not want their organisation name to be disclosed in the study.

3.8.2.2 Voluntary participation

As part of the informed consent form, the respondents have been informed that they have the right to give a non-response on any of the items in the survey. Participation in the study is on a voluntary basis and no employee or company has been forced to take part in the study.

3.8.2.3 Privacy

Steps have been taken to ensure personal data of informants have been protected from unauthorised access. A secure web-portal has been used to distribute the quantitative surveys. Only the current proposed researcher, and her supervisor has access to the raw results of the survey on the web portal.

3.8.2.4 Confidentiality and anonymity

It has been emphasised on the informed consent form that all of the information has been kept strictly confidential to preserve the anonymity of the respondents and minimise the risks for respondents.

3.8.2.5 Mitigation of potential risk

As established in section 5.2 the current proposed research study might have an associated medium risk level for respondents. According to the DESC checklist and in accordance with the guidelines (Stellenbosch University, 2012), if the likelihood of risk is medium or high, mitigation of risk of harm to respondents is required is and appropriate steps have to be taken.

To ensure that employees do not suffer psychological damage because of the study, contact details of professionals who are trained in dealing with psychological phenomena such as cyberbullying has been made to employees. At the start of the research instruments (i.e. before commencement of the online survey) respondents are made aware of different helping professionals along with their contact details: (a) company specific employee assistance program; (b) LifeLineSA (24-hour crisis intervention

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service); and (c) the current researcher's research supervisor is also a registered psychologist (PS0095605) with the Health Professions Council of South-Africa.

3.9 Conclusion

This chapter focused on discussing the research context methodology that has been employed in this study. The rationale behind the self-report quantitative measure to gather data were explained. Issues in the regard of sampling, the research instruments, data analysis, reliability and validity as well as other ethical considerations were also discussed.

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CHAPTER 4
PRESENTATION OF RESULTS

4.1 Introduction

In this chapter, the researcher gives an account of the different statistical analyses that are used to address the various descriptive hypotheses. The chapter starts with the researcher discussing the psychometric properties of the continuous scales used in the study. Next, the researcher relays the overall descriptive statistics of the total sample.

The reported prevalence of traditional workplace bullying, and cyberbullying is discussed for the current sample to address the first research objective. The researcher explores the prevalence by exploring different exposure groups of both types of workplace bullying in the sample. To further explore possible reasons why workplace cyberbullying does occur, the different exposure groups are compared against the effect of technology on the individual (i.e. workplace cyberbullying does occur in the South-African workplace given the increased use of technology in a highly competitive environment); the co-occurrence of cyber and traditional bullying, and comparing the exposure groups by age, tenure and first exposure.

The researcher considers the next two research objectives by exploring the psychological effects of cyberbullying on the individual, as well as on individual job performance. Lastly, the researcher explores the effect on the organisational outcomes as well as the effect of how coping mechanisms could influence the organisational outcomes.

4.2 Psychometric properties of questionnaires used

In the following section, the researcher explores the psychometric properties of the scales and their subscales used in the online measure.

While in Chapter three the researcher discusses the different scales in terms of those addressing demographic information, those addressing prevalence and then those in terms of effects on individuals, here the researcher considers the psychometric properties of the established scales and items (besides the items that the researcher

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did not use due to the length of the online measure), and then the newly created items. Discussing it in these categories helps to distinguish between scales where the researcher considers reliability only and those scales where one needs to consider both the reliability, but also touching on their validity by looking at the convergent validity.

Readers should note that the researcher could not analyse some of the items on their psychometric properties due to their categorical nature. These items include all the items in the biographical section, the items created exploring the use of technology, the items on coping and the one item on the effect on work.

4.2.1 Original scales

In the online measure, six scales have been taken directly from previous studies. These include the Perceived Stress Scale-Revised (PSS) (Cohen et al., 1983), the Single Item Self Esteem Scale (SISES) (Robins et al., 2001), the Intention To Quit Scale (ITQ) (Wayne et al., 1997), the Negative Acts Questionnaire-Revised (NAQ-R) (Einarsen et al., 2009), the Information and Communication Technology Demands Scale (ICTDS) (Day et al., 2012) and the Perceived Cyberbullying Severity (PCS) Scale (Camacho Ahumada, 2015).

4.2.1.1 Perceived Stress Scale - Revised (PSS) (Cohen et al., 1983)

The reliability for the Perceived Stress Scale-Revised (PSS) (Cohen et al., 1983), can be explored for the total scale as well as for the subscales (i.e. psychological competencies and psychological vulnerabilities) separately.

The Cronbach's alpha is at the threshold of .7 (α = .72, 95% CI [0.58, 0.82]) for the overall PSS scale as depicted in Table C1 in Appendix C. The average inter-item correlations are .57, with both subscales having item-total correlations of .57, which is sufficient to keep them in the total scale.

The Cronbach's alpha is above the threshold of .7 (α = .83, 95% CI [0.77, 0.87]) for the subscale of psychological competencies as depicted in Table C2 in Appendix C. The average inter-item correlations are .50, with all the items having item-total correlations between .48 and .74, which is sufficient to keep them in the subscale.

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When considering whether the alpha would increase if an item deleted, none of them would increase the alpha if they were omitted as part of the scale. Therefore, all items are kept as part of the analysis.

In terms of the PSS subscale of psychological vulnerabilities, the Cronbach's alpha is above the threshold of .7 (α = .87, 95% CI [0.82, 0.90]) as depicted in Table C3 in Appendix C. The average inter-item correlations are .49, with all the items having item-total correlations between .45 and .75, which is sufficient to keep them in the subscale. When considering whether the alpha would increase if an item deleted, none of them would increase the alpha if they were omitted as part of the scale.

4.2.1.2 Single Item Self Esteem Scale (SISES) (Robins et al., 2001).

No reliability coefficients can be reported for the SISES as it is a single item scale, measured at only one point in time.

4.2.1.3 Intention to Quit scale (ITQ) (Wayne et al., 1997)

The Intention to Quit scale (ITQ) (Wayne et al., 1997), is a unidimensional scale with no subscale. Therefore, reliability coefficients can only be reported for the total scale. For the total ITQ scale, Cronbach's alpha is above the threshold of .7 (α = .91, 95% CI [0.87, 0.93]) as depicted in Table C4 in Appendix C. The average inter-item correlations are .71, with all of the items having item-total correlations between .49 and .86, which is sufficient to keep them in the scale.

When considering whether the alpha would increase if an item deleted, none of them would increase the alpha if they were omitted as part of the scale, except for ITQ5. The increase in alpha would be from .91 to .94. However, its item-total correlation is .49, which is above the acceptable threshold of .2. Therefore, the item is kept as part of the analysis.

4.2.1.4 Negative Acts Questionnaire - Revised (NAQ-R) (Einarsen et al., 2009)

Like with the PSS scale, the reliability for the Negative Acts Questionnaire-Revised (NAQ-R) (Einarsen et al., 2009), can be explored for the total scale as well as for its three subscales (that is, work-related bullying, person-related bullying and physically intimidating bullying) separately.

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The Cronbach's alpha is above the threshold of .7 (α =.97, 95% CI [0.95, 0.98]) for the overall NAQ-R scale as depicted in Table C5 in Appendix C. The average inter-item correlations are .53, with all of the items having item-total correlations between .44 and .83, which is sufficient to keep them in the total scale. When considering whether the alpha would increase if an item deleted, none of them would increase the alpha if they were omitted as part of the scale; therefore, no items are deleted for analyses.

For the first subscale, the Cronbach's alpha is above the threshold of .7 (α = .88, 95% CI [0.84, 0.91]) for the subscale of work-related bullying as depicted in Table C6 in Appendix C. The average inter-item correlations are .53, with all the items having item-total correlations between .49 and .74, which is sufficient to keep them in the subscale. When considering whether the alpha would increase if an item deleted, none of them would increase the alpha if they were omitted as part of the scale, except for NAQR1. The increase in alpha, however, would be negligible (ranging from .88 to .89) and its item-total correlation is .49, which is above the acceptable threshold of .2. Therefore, the item is kept as part of the analysis.

The Cronbach's alpha is above the threshold of .7 (α = .95, 95% CI [0.93, 0.96]) for the subscale of person-related bullying as depicted in Table C7 in Appendix C. The average inter-item correlations are .62, with all the items having item-total correlations between .62 and .83, which is sufficient to keep them in the subscale. When considering whether the alpha would increase if an item deleted, none of them would increase the alpha if they were omitted as part of the scale.

When considering the physically intimidating bullying subscale of the NAQ-R, the Cronbach's alpha is above the threshold of .7 (α = .85, 95% CI [0.76, 0.90]) as depicted in Table C8 in Appendix C. The average inter-item correlations are .68, with all of the items having item-total correlations between .67 and .80, which is sufficient to keep them in the subscale. When considering whether the alpha would increase if an item deleted, none of them would increase the alpha if they were omitted as part of the scale.

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4.2.1.5 Information and Communication Technology Demands scale (ICTDS) (Day et al., 2012)

Like with the PSS and NAQR scales, the reliability for the Information and Communication Technology Demands scale (ICTDS) (Day et al., 2012), can be explored for the total scale as well as for its seven subscales (i.e. response expectations, availability, poor communication, lack of control, monitor, learn and workload) separately. Readers should, however, note that two of these subscales only have one item each and no reliability coefficients can be reported, given that the measure was only used at one point in time. Therefore, patterns of correlations over time cannot be estimated. These two subscales are response expectations (ICTDS1) and monitor (ICTDS8). The other five subscales, along with the total scale, are explored in more detail in terms of reliability.

Another note to be made when looking at the ICTDS scale is that missing values played a role here. Three of the subscales had missing values (availability, n = 151; lack of control, n = 150; poor communication, n = 150), which resulted in a smaller sample size for the total scale (n = 143).

In terms of the total ICTDS scale, Cronbach's alpha is above the threshold of .7 (α = .83, 95% CI [0.77, 0.86]) as depicted in Table C9 in Appendix C. The average inter-item correlations are .3, with all the items having item-total correlations between .31 and .64, which is sufficient to keep them in the subscale. When considering whether the alpha would increase if an item deleted, none of them would increase the alpha if they were omitted as part of the scale.

The first subscale is that of availability that has a sufficiently high Cronbach's alpha to establish reliability (α = .81, 95% CI [0.73, 0.88]) as depicted in Table C10 in Appendix C. The average inter-item correlations are .69, with both of the items in the subscale having item-total correlations of .69, which is sufficient to keep them in the subscale. Given that there are only two items considered as part of the subscale, no estimation of whether the alpha would increase if an item deleted is given. Therefore, based only on the item-total correlations, both items are kept.

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The next subscale is poor communication where the Cronbach's alpha is α = .79 (95% CI [0.70, 0.87]) as depicted in Table C11 in Appendix C. This Cronbach's alpha is sufficient for the subscale to be reliable. The average inter-item correlations are .67, with both of the items in the subscale having item-total correlations of .67, which is sufficient to keep them in the subscale. Given that there are only two items considered as part of the subscale, no estimation of whether the alpha would increase if an item deleted is given. Therefore, based only on the item-total correlations, both items are kept.

In the case of the subscale of lack of control, the Cronbach's alpha is below the threshold of .7 (α = .53, 95% CI [0.35, 0.67]) as depicted in Table C12 in Appendix C. However, the average inter-item correlations are .36, with both of the items in the subscale having item-total correlations of .36, which is sufficient to keep them in the subscale. Given that there are only two items considered as part of the subscale, no estimation of whether the alpha would increase if an item deleted is given.

When looking at the items in this subscale compared to the total scale, for both item ICTDS6 and ICTDS7, the alpha would decrease if they were removed to .83 and .82 respectively. For both these items, their item-total correlation is above .2 at .31 and .45 respectively. For those reasons, the items are kept in the scale. However, given the questionability of the reliability findings for the subscale of lack of control (that is, the alpha indicates insufficient reliability, but the average inter-item correlation indicates marginally sufficient reliability), caution should be used when interpreting the subscale on its own.

Also, in the case of the subscale of learning, the Cronbach's alpha is below the threshold of .7 (α = .64, 95% CI [0.47, 0.76]) as depicted in Table C13 in Appendix C. However, the average inter-item correlations are .48, with both items in the subscale having item-total correlations of .48, which is sufficient to keep them in the subscale. Given that there are only two items considered as part of the subscale, no estimation of whether the alpha would increase if an item deleted is given.

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When looking at the items in this subscale compared to the total scale, for both item ICTDS9 and ICTDS10, the alpha would decrease if they were removed to .81 in both cases. For both these items, their item-total correlation is above .2 at .47 and .51 respectively. For those reasons, the items are kept in the scale. However, given the questionability of the reliability findings for the subscale of learning (that is, the alpha indicates insufficient reliability, but the average inter-item correlation indicates marginally sufficient reliability), caution should be used when interpreting the subscale on its own.

The Cronbach's alpha is above the threshold of .7 (α = .75, 95% CI [0.63, 0.83]) for the subscale of workload as depicted in Table C14 in Appendix C. The average inter-item correlations are .60, with both of the items in the subscale having item-total correlations of .60, which is sufficient to keep them in the subscale. Given that there are only two items considered as part of the subscale, no estimation of whether the alpha would increase if an item deleted is given. Therefore, based only on the item-total correlations, both items are kept.

4.2.1.6 Perceived Cyberbullying Severity (PCS) (Camacho Ahumada, 2015)

In this study, the Perceived Cyberbullying Severity scale was asked as a conditional set of items, given responses to the self-labelled cyberbullying definition and the frequency question from the Regularity of Bullying Victimisation and Witnessing scale (ROBVW). Respondents had to have answered yes to the self-label definition and scored at least a score of 2 on the frequency of cyberbullying experience question from the ROBVW.

However, all of the items seemed to have missing values, despite some respondents meeting the requirements. This scale could, therefore, not be used for further analysis, and no reliability analyses are reported.

4.2.2 Adapted and new scales

The researcher designed three scales for this study (a) the Cyberbullying in the Workplace Questionnaire (CBIWQ), (b) the Effects of Cyberbullying Scale (EOCB), and (c) the Regularity of Bullying Victimisation and Witnessing Scale (ROBVW).

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For the CBIWQ and the ROBVW, reliability estimates, and elementary validity estimates are explored, whereas, for the EOCB, only reliability analysis is explored given that a similar enough scale was not asked in the current study.

4.2.2.1 Cyberbullying in the Workplace Questionnaire (CBIWQ)

In terms of reliability, the Cyberbullying in the Workplace Questionnaire (CBIWQ), is a unidimensional scale with no subscale; therefore, reliability coefficients can only be reported for the total scale. For the overall CBIWQ scale, Cronbach's alpha is above the threshold of .7 (α = .86, 95% CI [0.75, 0.91]) as depicted in Table C15 in Appendix C. The average inter-item correlations are .41, with all the items having item-total correlations between .46 and .69, which is sufficient to keep them in the subscale. When considering whether the alpha would increase if an item deleted, none of them would increase the alpha if they were omitted as part of the scale.

In terms of considering validity, one can explore convergent validity by looking at two different analyses. The first one is the analysis of variance per exposure group for the CBIWQ to see if people who responded to the Regularity of Bullying Victimisation and Witnessing scale (ROBVW) in such a way to form part of the group that has cyberbullying exposure, also scored higher on the CBIWQ. The second one is the correlational analysis between the items in the ROBVW that measured cyberbullying victimisation correlates with the CBIWQ.

When looking at the analysis of variance in terms of exposure groups, the mean for the total CBIWQ scale is M = 1.49 (SD = 0.59) as depicted in Table C16 in Appendix C. One can observe that there are statistically significant differences between them, $F(3, 144) = 11.87$, $p \leq 0.01$ as depicted in Figure C1 in Appendix C.

When looking at the least significant difference test in Table C17 in Appendix C, one can observe that the mean for exposure group 5 (M = 2.02, SD = 0.65) is significantly higher than all of the other groups that can be reported on (exposure group 1 [M = 1.29, SD = 0.55, p = 0]; exposure group 2 [M = 1.54, SD = 0.43, p = 0]; exposure group 3 [M = 1.50, SD = 0.39, p = 0). Therefore, those individuals that had exposure to cyberbullying, albeit also exposure to traditional bullying, according to the self-labelled method scored significantly higher on the behavioural measure of cyberbullying used

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than groups who did not indicate exposure to cyberbullying based on the self-labelled method.

On the other hand statistically significant differences cannot be reported between all the other groups. This includes between exposure group 1 (M = 1.29, SD = 0.55) and exposure group 2 (M = 1.54, SD = 0.43, p = .08), between exposure group 1 (M = 1.29, SD = 0.55) and exposure group 3 (M = 1.50, SD = 0.39, p = .07), or between exposure group 2 (M = 1.54, SD = 0.43) and exposure group 3 (M = 1.50, SD = 0.39, p = .83).

The above results show that only for exposure group 5 is the mean significantly higher on the CBWIQ, possibly indicating that cyberbullying is being measured by both the CBWIQ and by the method used to determine exposure group status (see section 4.4 for further explanation).

To corroborate the findings from the analysis of variance in exploring convergent validity, one can look at how the item in the ROBVW that was used to measure cyberbullying victimisation (OFTEN_CB_VIC) correlates with the CBIWQ as depicted in Table C18 in Appendix C.

The Pearson correlation coefficient between the item OFTEN_CB_VIC and the CBIWQ is r =.49 (p < .01). In this case, .49 is very close to the .5 threshold; therefore, one can conclude moderate convergent validity between the two constructs.

4.2.2.2 Effects of Cyberbullying Scale (EOCB)

The reliability for the Effects of Cyberbullying Scale (EOCB), can be explored for the ten subscales linked to the items in the CBIWQ. The ten subscales are micromanaging, unreasonable hours, involving loved ones, future career threat, sexual harassment, left out, not responding, personal details, mixed interactions and retaliation from feedback.

In the case of the current study, one cannot look at the reliability of the total scale, as due to the conditional nature of the questions not enough respondents responded to

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all the questions to do the analysis. Therefore, the subscales are viewed descriptively on their own.

Additionally, readers should, however, note that three of these subscales only have one item each and no reliability coefficients can be reported, given that the measure was only used at one point in time and patterns of correlations over time cannot be estimated. These three subscales are micromanaging (EOCB1), future career threat (EOCB6) and personal details (EOCB15). The other seven subscales, along with the total scale, are explored in more detail in terms of reliability. Readers should note that given that the researcher used conditional settings, the sample size for each subscale in the EOCB is smaller than that of the total sample.

For the subscale of unreasonable hours, the Cronbach's alpha is above the threshold of .7 (α = .83, 95% CI [0.72, 0.91]) as depicted in Table C19 in Appendix C. The average inter-item correlations are .71, with both of the items in the subscale having item-total correlations of .71, which is sufficient to keep them in the subscale. Given that there are only two items considered as part of the subscale, no estimation of whether the alpha would increase if an item deleted is given. Therefore, based only on the item-total correlations, both items are kept.

For the next subscale of involving loved ones, the Cronbach's alpha is above the threshold of .7 (α = .89, 95% CI [0.75, 0.98]) as depicted in Table C20 in Appendix C. The average inter-item correlations are .82, with both items in the subscale having item-total correlations of .82, which is sufficient to keep them in the subscale. Given that there are only two items considered as part of the subscale, no estimation of whether the alpha would increase if an item deleted is given. Therefore, based only on the item-total correlations, both items are kept.

From Table C21 in Appendix C, one can see that the subscale of sexual harassment has a Cronbach's alpha value of α = .94 (95% CI [0.86, 0.98]), which is above the threshold of .7. The average inter-item correlations are .85, with all the items having item-total correlations between .85 and .92, which is sufficient to keep them in the

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subscale. When considering whether the alpha would increase if an item deleted, none of them would increase the alpha if they were omitted as part of the scale.

The Cronbach's alpha is above the threshold of .7 (α = .90, 95% CI [0.82, 0.95]) for the subscale of left out, as depicted in Table C22 in Appendix C. The average inter-item correlations are .82, with both items in the subscale having item-total correlations of .82, which is sufficient to keep them in the subscale. Given that there are only two items considered as part of the subscale, no estimation of whether the alpha would increase if an item deleted is given. Therefore, based only on the item-total correlations, both items are kept.

The Cronbach's alpha is above the threshold of .7 (α = .82, 95% CI [0.71, 0.89]) for the subscale of not responding as depicted in Table C23 in Appendix C. The average inter-item correlations are .61, with all of the items having item-total correlations between .61 and .71, which is sufficient to keep them in the subscale. When considering whether the alpha would increase if an item deleted, none of them would increase the alpha if they were omitted as part of the scale.

The next subscale of mixed interactions has a Cronbach's alpha below the threshold of .7 (α = .54, 95% CI [0.00, 0.85]) as depicted in Table C24 in Appendix C. However, the average inter-item correlations are .37, with both items in the subscale having item-total correlations of .37, which is sufficient to keep them in the subscale. Given that there are only two items considered as part of the subscale, no estimation of whether the alpha would increase if an item deleted is given.

Given the questionability of the reliability findings for the subscale of mixed interactions (i.e. the alpha indicates insufficient reliability, but the average inter-item correlation indicates marginally sufficient reliability), caution should be used when interpreting the subscale on its own.

Lastly, for the EOCB, the subscale of retaliation from feedback has a Cronbach's alpha above the threshold of .7 (α = .97, 95% CI [0.92, 0.99]) as depicted in Table C25 in Appendix C. The average inter-item correlations are .94, with both items in the

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subscale having item-total correlations of .94, which is sufficient to keep them in the subscale. Given that there are only two items considered as part of the subscale, no estimation of whether the alpha would increase if an item deleted is given. Therefore, based only on the item-total correlations, both items are kept.

4.2.2.3 Regularity of Bullying Victimisation and Witnessing scale (ROBVW)

The reliability for the Regularity of Bullying Victimisation and Witnessing scale (ROBVW), can be explored for the total scale. Cronbach's alpha is above the threshold of .7 (α = .85, 95% CI [0.77, 0.91]) as shown in Table C26 in Appendix C. The average inter-item correlations are .63, with all the items having item-total correlations between .67 and .79, which is sufficient to keep them in the subscale. When considering whether the alpha would increase if an item deleted, none of them would increase the alpha if they were omitted as part of the scale.

In terms of considering the validity, as mentioned in Chapter three, one can explore convergent validity by looking at how the NAQR and CBIWQ respectively correlate with the items in the ROBVW that measured both types of victimisation (OFTEN_CB_VIC; OFTEN_TRAD_VIC).

Like discussed earlier (see Table C18), the Pearson correlation coefficient between the item OFTEN_CB_VIC and the CBIWQ is r = .49 (p < .01) and one could conclude moderate convergent validity between the two scales. In the case of OFTEN_TRAD_VIC and the NAQR, the Pearson correlation is higher at r = .69 (p < .01), indicating sufficient convergent validity between the two scales.

4.3 Descriptive statistics for the total sample

The total number of respondents that completed the quantitative research instrument until the end is 163. Following the introduction, six respondents did not give consent for their data to be used, leaving the sample at 157 respondents. Of those, five respondents indicated they do not give consent following a debriefing session of the actual purpose of the study which was disclosed at the end of the study. Therefore, the total sample for the current study is N = 152 participants.

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In terms of gender, 44% (*n* = 67) of the participants were female, while 56% (*n* = 85) of the respondents were male as seen in Figure D1 in Appendix D. The mean age of the sample group was 44.69 years (*SD* = 10.84), where the respondent's ages ranged between 22 and 63 years as seen in Figure D2 in Appendix D. The ethnic groups of the sample is 45% (*n* = 68) Caucasian/White, 33% (*n* = 50) Coloured, 15% (*n* = 23) African, 3% (*n* = 5) Indian and 1% (*n* = 1) Asian with 3% (*n* = 5) identifying as other ethnic group as seen in Figure D3 in Appendix D.

The majority of the sample group had been with their current organisation for more than 15 years (49%, *n* = 75). The other respondents had been with their organisation for 1-5 years (11%, *n* = 17), 6-10 years (27%, *n* = 41) or 11-15 years (13%, *n* = 19) respectively as seen in Figure D4 in Appendix D

In terms of the type of job that the respondents were in, most of the sample were in maintenance and operations (45%, *n* = 69), with the next highest job group being those in asset creation (22%, *n* = 34) as seen in Figure D5 in Appendix D. Other job groups in the sample include services (for example, HR, Finance, SHEQ, et cetera) (16%, n = 25), customer service (12%, *n* = 18), administration (1%, *n* = 1), information technology (3%, *n* = 4) and group commercial (1%, *n* = 1).

4.4 Reported prevalence of workplace cyberbullying for the total sample

As outlined in Chapter three, the ROBVW scale is used to classify respondents in the sample into different exposure groups, which is visually depicted in Figure D6 in Appendix D.

The first exposure group are those respondents with no exposure to bullying victimisation or witnessing of cyberbullying. In the current study exposure group 1 consists of 49% (*n* = 75) of the sample.

The second exposure group are respondents who indicate witnessing of either cyber or traditional workplace bullying, but not personally victim to either type of bullying. In the current study exposure group 2 consists of 13% (*n* = 19) of the sample.

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The third exposure group includes respondents that only indicate victimisation to traditional bullying. In the current study exposure group 3 consists of 19% (*n* = 29) of the sample.

The fourth exposure group includes respondents that only indicated victimisation to workplace cyberbullying. In the current study exposure group 4 consists of 3% (*n* = 4) of the sample.

The fifth exposure group includes respondents that indicated both victimisation to workplace cyberbullying bullying and traditional bullying. In the current study exposure group 5 consists of 16% (*n* = 25) of the sample.

4.4.1 Descriptive statistics for the different exposure group

The descriptive statistics for each exposure group is explored below in terms of age, gender, ethnic group and tenure. Table D1 to Table D4 in Appendix D can be used to accompany the descriptive statistics for the different exposure groups.

The descriptive statistics for gender and ethnicity are given here both in terms of (a) how many respondents that belong to each demographic group (for example, females for gender) for the total sample are split according to exposure group status, and (b) within each exposure group, what the demographic make-up is. The descriptive statistics for age and tenure is given in terms of the mean and standard deviation.

4.4.1.1 Descriptive statistics for exposure group 1

The respondents that have no exposure to workplace bullying (traditional or cyber) victimisation or witnessing are 49.25% (*n* = 33) of all females in the sample group and 49.41% (*n* = 42) of all males (see Table D1). In terms of the total of respondents within exposure group 1, 49% (*n* = 33) are female, and 49% (*n* = 42) are male.

In terms of ethnicity, 50% (*n* = 34) of all Caucasian/White respondents in the sample group are in exposure group 1, 48% (*n* = 24) Coloured and 52.17% (*n* = 12) African are in exposure group 1 (see Table D3). The split between the Indian, Asian and Other ethnic groups are not given here, given their small size. In terms of the total of respondents within exposure group 1, the ethnic groups of the sample are 45.33% (*n*

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= 34) Caucasian/White, 32% (*n* = 24) Coloured and 16% (*n* = 12) African. The remaining five respondents (6.67%) are the Indian, Asian and other ethnic group members.

The mean age of exposure group 1 is 44.95 years (*SD* = 10.67) (see Table D2). The mean tenure for exposure group 1 is 12.55 years (*SD* = 5.14) (see Table D4).

4.4.1.2 Descriptive statistics for exposure group 2

The respondents that have no exposure to workplace bullying victimisation (traditional or cyber), but to witnessing workplace bullying are 11.94% (*n* = 8) of all females in the sample group and 12.94% (*n* = 11) of all males (see Table D1). In terms of the total of respondents within exposure group 2, 42.11% (*n* = 8) are female, and 57.89% (*n* = 11) are male.

In terms of ethnicity, 11.76% (*n* = 8) of all Caucasian/White respondents in the sample group are in exposure group 2, 6% (*n* = 3) of all Coloured respondents and 17.39% (*n* = 4) of all African respondents are in exposure group 2 (see Table D3). The split between the Indian, Asian and Other ethnic groups are not given here, given their small size. In terms of the total of respondents within exposure group 2, the ethnic groups of the sample are 42.11% (*n* = 8) Caucasian/White, 15.79% (*n* = 3) Coloured and 21.05% (*n* = 4) African. The remaining four respondents (21.05%) are the Indian, Asian and other ethnic group members combined.

The mean age of exposure group 2 is 46.53 years (*SD* = 11.73) (see Table D2). The mean tenure for exposure group 2 is 12.53 years (*SD* = 5.08) (see Table D4).

4.4.1.3 Descriptive statistics for exposure group 3

The respondents that have exposure to traditional workplace bullying victimisation only are 26.87% (*n* = 18) of all females in the sample group and 12.94% (*n* = 11) of all males (see Table D1). In terms of the total of respondents within exposure group 3, 62.07% (*n* = 18) are female and 37.93% (*n* = 11) are male.

In terms of ethnicity, 26.47% (*n* = 18) of all Caucasian/White respondents in the sample group are in exposure group 3, 16% (*n* = 8) of all Coloured respondents and

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13.04% (*n* = 3) of all African respondents are in exposure group 3 (see Table D3). In terms of the total of respondents within exposure group 3, the ethnic groups of the sample are 62.07% (*n* = 18) Caucasian/White, 27.59% (*n* = 8) Coloured and 10.34% (*n* = 3) African. None of the respondents in group 3 is Indian, Asian and other ethnic group members.

The mean age of exposure group 3 is 43.97 years (*SD* = 12.77) (see Table D2). The mean tenure for exposure group 3 is 12.38 years (*SD* = 5.50) (see Table D4).

4.4.1.4 Descriptive statistics for exposure group 4

As mentioned earlier, the number of respondents in exposure group 4 in that they are only four respondents. For this reason, it is not possible to use this exposure group as part of comparative analyses. Therefore, not all the descriptive statistics for exposure group 4 is available, and the mean age and tenure is not reported.

The respondents that have exposure to workplace cyberbullying only are 0% (*n* = 0) of all females in the sample group and 4.71% (*n* = 4) of all males (see Table D1). Therefore, all the respondents within exposure group 4 are male.

In terms of ethnicity, 2.94% (*n* = 2) of all Caucasian/White respondents in the sample group are in exposure group 4, 0% (*n* = 0) Coloured and 8.7% (*n* = 2) African are in exposure group 4 (see Table D3). In terms of the total of respondents within exposure group 4, the ethnic groups of the sample are 50% (*n* = 2) Caucasian/White, and 50% (*n* = 2) African. None of the respondents in group 4 is Coloured, Indian, Asian or other ethnic group members.

4.4.1.5 Descriptive statistics for exposure group 5

The respondents that have exposure to both forms of workplace bullying (traditional and cyber) victimisation are 11.94% (*n* = 8) of all females in the sample group and 20% (*n* = 17) of all males (see Table D1). In terms of the total of respondents within exposure group 5, 32% (*n* = 8) are female and 68% (*n* = 17) are male.

In terms of ethnicity, 8.82% (*n* = 6) of all Caucasian/White respondents in the sample group are in exposure group 5, 30% (*n* = 15) Coloured and 8.7% (*n* = 2) African are in

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exposure group 5 (see Table D3). The split between the Indian, Asian and Other ethnic groups are not given here, given their small size. In terms of the total of respondents within exposure group 5, the ethnic groups of the sample are 24% (*n* = 6) Caucasian/ White, 60% (*n* = 15) Coloured and 8% (*n* = 2) African. The remaining *n* = 2 (8%) are the Indian, Asian and other ethnic group members combined.

The mean age of exposure group 5 is 42.76 years (*SD* = 9.02) (see Table D2). The mean tenure for exposure group 5 is 11.8 years (*SD* = 4.67) (see Table D4).

4.4.2 Differences between exposure groups in terms of demographics

One can consider whether the demographic statistics above actually constitute statistically significant differences in terms of exposure group status.

4.4.2.1 Gender and exposure group status

There are statistically significant differences between exposure group status and gender $\chi^2(4) = 9.99$, $p = .04$, which is reflected in Table D1 and Figure D7 in Appendix D. For exposure group 1 (no exposure) and exposure group 2 (witnessing only), there is a similar percentage of males and females. In the traditional bullying only group, there are more females than males. There are only males in cyberbullying only group and more males than females in the group with both traditional and cyberbullying. Therefore, more males are exposed to both traditional and cyberbullying or cyberbullying on its own, where more females are exposed to traditional bullying only.

4.4.2.2 Ethnicity and exposure group status

There are statistically significant differences between exposure group status and ethnicity $\chi^2(8) = 17.51$, $p = .03$, which is reflected in Table D3 and Figure D8 in Appendix D. In terms of exposure group 1, the percentage of Caucasian/ White, Coloured and African respondents are similar. For exposure group 2, the Coloured group is lower (6%), than the Caucasian/White (12%) and African (17%) groups, where the African group is the highest. For exposure group 3, the African group is lower (13%), than the Coloured (16%) and the White group (26%), where the White group is the highest. For exposure group 4, none of the respondents is part of the Coloured group, and the African group (9%) is higher than the White group (3%). In

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terms of exposure group 5, the White (9%) and African (9%) group are lower than the Coloured group (30%).

Therefore, where bullying victimisation is concerned, traditional bullying only is more prevalent among White respondents, whereas both traditional and cyberbullying victimisation is more prevalent among Coloured respondents. Witnessing of either form of bullying is more prevalent among African respondents.

4.4.2.3 Age and exposure group status

Statistically significant differences between exposure group status and age cannot be concluded $F(3, 144) = 0.48$, $p = .69$. Therefore, the differences in age did not influence the differences in exposure group status or the other way around.

4.4.2.4 Tenure and exposure group status

Statistically significant differences between exposure group status and age cannot be concluded $F(3, 144) = 0.14$, $p = .94$. Therefore, the differences in tenure did not influence the differences in exposure group status or the other way around.

4.4.2.5 Job line (type of job) and exposure group status

Statistically significant differences between exposure group status and age cannot be concluded $\chi^2(12) = 14.89$, $p = .25$. Therefore, the differences in the type of job did not influence the differences in exposure group status or the other way around.

4.4.3 Exploring the potential risk factors for prevalence

There are potential risk factors that could influence the prevalence of cyberbullying. The results in terms of that are explored.

4.4.3.1 Prevalence given the increased use of technology in a highly competitive environment

One can start to explore the exposure and the effect of increased technology in the workplace.

When looking at the total sample in Figure D9 and Figure D10 in Appendix D, it becomes evident that ICTs are being used in the workplace 82% ($n = 124$) of respondents indicate that they need to communicate with colleagues in different

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locations, in other words, different cities (55%, *n* = 68), different province (44%, *n* = 55) or different continent (1%, *n* = 1). In Figure D11 in Appendix D, one can see that, of the respondents that indicate that they need to communicate with colleagues in different locations, 98% (*n* = 122) indicate that they use ICTs to communicate with those colleagues.

In terms of types of technology used, 71.05% (*n* = 108) of the total sample makes use of texting on cell phones, which seems to be the most popular mode of communication technology. In terms of the next most popular communication technology, they include tablets to check emails (22.37%, *n* = 34) and using social media (20.39%, n = 31). Lesser popular communication technologies include blogs or forums on the internet (15.79%, *n* = 24) or blogs or forums on the intranet (9.87%, *n* = 15) or using instant messaging platforms (10.53%, *n* = 16).

In terms of whom is communicated with using communication technology, 90.79% (*n* = 138) of the respondents use ICTs to communicate with their supervisors, 42.76% (n = 65) with their subordinates and 69.08% (*n* = 105) with customers.

Readers should note that there are no statistical differences between the different exposure groups and the type of technology used (cell phones for text messaging $\chi^2(4) = 3.92$, $p = .42$; mobile tablets for email $\chi^2(4) = 1.42$, $p = .84$; internet blogs or forums $\chi^2(4) = 8.07$, $p = .09$; intranet blogs or forums $\chi^2(4) = 0.99$, $p = .91$; instant messaging $\chi^2(4) = 0.85$, $p = .93$; and social media $\chi^2(4) = 2.49$, $p = .65$). That indicates that respondents make use of similar types of communication technology, despite bullying exposure group status.

Furthermore, there are no statistical differences between the different exposure groups and with whom is communicated with using communication technology (supervisors $\chi^2(4) = 5.41$, $p = .25$; subordinates $\chi^2(4) = 6.16$, $p = .19$; and customers $\chi^2(4) = 7.21$, $p = .13$). This finding indicates that with whom is communicated, does not influence exposure group status.

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4.4.3.2 Prevalence given the presence of workplace bullying

One possible reason for the increase in workplace cyberbullying is that traditional bullying is present.

One can consider the different exposure groups that have been exposed to some form of bullying victimisation. As noted in Figure D6, 19% of respondents form part of the group that had only been exposed to traditional bullying victimisation. Interestingly, a tiny group only had exposure to cyberbullying victimisation only (3%). Where most of the sample sits with cyberbullying exposure, is in the group with both traditional and cyberbullying (16%).

One could also consider whether the mean on the Negative Acts Questionnaire (NAQ-R) differed based on exposure group status. In this study, statistical differences can be seen based on exposure group status $F(3, 144) = 29.2$, $p \leq .01$ as depicted in Figure D12 in Appendix D.

When considering the least significant differences that is given across Table D5 and Table D6 in Appendix D, one can observe that only the difference between the means of exposure group 1 ($M = 39.79$, $SD = 14.97$) and exposure group 2 ($M = 47.79$, $SD = 15.49$, $p = .09$) is not statistically significant. Statistically, significant differences can be observed between all other groups.

The mean of exposure group 3 ($M = 60.24$, $SD = 18.46$) is statistically significantly higher than both that of exposure group 1 ($M = 39.79$, $SD = 14.97$, $p = 0$) and exposure group 2 ($M = 47.79$, $SD = 15.49$, $p = .02$). Additionally, the mean of exposure group 5 ($M = 77.24$, $SD = 27.2$) is statistically significantly higher than both that of exposure group 1 ($M = 39.79$, $SD = 14.97$, $p = 0$), exposure group 2 ($M = 47.79$, $SD = 15.49$, $p = 0$) and exposure group 3 ($M = 60.24$, $SD = 18.46$, $p = 0$).

The above findings indicate that where traditional and cyberbullying coincide, the perceived experience of bullying is higher than traditional bullying only being experienced. These findings also indicate that where cyberbullying does occur, it is likely to co-occur with traditional bullying.

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4.4.3.3 Prevalence given the increase in youth exposed to cyberbullying entering the workplace

Another possible reason for cyberbullying occurring in the workplace is the increase in youth moving into the workplace.

According to the current study, no statistically significant differences between exposure groups can be drawn based on the current age of participants, $F(3, 144) = 0.48$, $p = .69$. In addition, no statistical differences can be reported between exposure groups based on tenure, $F(3, 144) = 0.14$, $p = .94$.

In terms of age at which respondents started using ICTs, there also seems to be no differences between exposure groups, $F(3, 144) = 0.31$, $p = .82$. Therefore, no matter the age at which participants familiarised themselves with the use of communication devices, bullying victimisation could happen.

4.5 Effect of traditional and cyberbullying

In the current study, the potential psychological effects, along with the adverse effects of cyberbullying on the performance abilities of the individual employee, are explored. The researcher also considers the adverse effects of cyberbullying on organisational outcomes along with whether or not coping mechanisms potentially mediates whether or not cyberbullying has a psychological effect on the individual or an effect on individual and organisational performance.

4.5.1 Psychological effects of cyberbullying on the individual employees

Bullying victimisation could have a psychological influence on the individual employees exposed to it. To study the results of this, one could look at differences between all exposure groups based on general psychological effects, and by considering the effects of specific cyberbullying acts on those with exposure to cyberbullying.

One of the general adverse psychological effects could include increased psychological stress on the victims. In this study, the perceived stress scale (Cohen et al., 1983) was used to determine whether there were differences between exposure

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groups. From this scale, one can distinguish between two processes that could influence the psychological stress of the victims, psychological competency and psychological vulnerability (Wickrama et al., 2013).

4.5.1.1 Psychological effect on perceived psychological stress

When looking at the perceived stress overall, the mean for the total sample was *M* = 2.82 (*SD* = 0.69). When using analysis of variance, statistically significant differences can be observed between the exposure groups $F(3, 144) = 5.45$, $p \leq .01$ as depicted in Figure D13 in Appendix D.

When looking at the least significant difference test that is given across Table D7 and Table D8 in Appendix D, one can observe that the mean for exposure group 5 (*M* = 3.22, *SD* = 0.54) is significantly higher than that of exposure group 1 (*M* = 2.69, *SD* = 0.72, p = 0) and exposure group 2 (*M* = 2.6, *SD* = 0.6, *p* = 0). This finding means that the group that had exposure to both traditional and cyberbullying had significantly more overall perceived psychological stress than those with no exposure or only witnessing bullying victimisation. Additionally, the mean for exposure group 3 (*M* = 2.98, *SD* = 0.6) is significantly higher than that of exposure group 2 (*M* = 2.6, *SD* = 0.6, *p* =.05) and exposure group 1 (*M* = 2.69, *SD* = 0.72, *p* = .04). Therefore, those individuals that had exposure to traditional bullying only had significantly more perceived psychological stress than those who only witnessed bullying victimisation or no exposure to bullying victimisation.

On the other hand statistically significant differences cannot be reported between exposure group 1 (*M* = 2.69, *SD* = 0.72) and exposure group 2 (*M* = 2.6, *SD* = 0.6, *p* = .61) or between exposure group 3 (*M* = 2.98, *SD* = 0.6) and exposure group 5 (*M* = 3.22, *SD* = 0.54, *p* = .17). This finding means that despite the means indicating this, one cannot conclude that the group exposed to witnessing of bullying have less perceived stress than those with no exposure. Additionally, one cannot say that those with only traditional bullying exposure has less perceived stress than those who had both traditional and cyberbullying exposure.

In terms of psychological competency, the mean for the total sample is *M* = 3.50 (*SD* = 0.74). When using analysis of variance, statistically significant differences can be

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observed between the exposure groups $F(3, 144) = 5.56$, $p \leq .01$ that is depicted in Figure D14.

When looking at the least significant difference test that is given across Table D9 and Table D10, one can observe that the mean for exposure group 5 ($M = 3.05$, $SD = 0.6$) is significantly lower than that of group 1 ($M = 3.62$, $SD = 0.78$, $p = 0$) and exposure group 2 ($M = 3.8$, $SD = 0.54$, $p = 0$). This finding shows that the group that had exposure to both traditional and cyberbullying had significantly less psychological competencies to deal with stress than those with no exposure or only witnessing bullying victimisation. Additionally, the mean for exposure group 3 ($M = 3.38$, $SD = 0.66$) is significantly lower than that of exposure group 2 ($M = 3.8$, $SD = 0.54$, $p = .05$). Therefore, those individuals that had exposure to traditional bullying only had significantly less psychological competencies to deal with stress than those who only witnessed bullying victimisation.

On the other hand statistically significant differences cannot be reported between exposure group 1 ($M = 3.62$, $SD = 0.78$) and exposure group 2 ($M = 3.8$, $SD = 0.54$, $p = .32$), between exposure group 1 ($M = 3.62$, $SD = 0.78$) and exposure group 3 ($M = 3.38$, $SD = 0.66$, $p = .12$), or between exposure group 3 ($M = 3.38$, $SD = 0.66$) and exposure group 5 ($M = 3.05$, $SD = 0.6$, $p = .09$). This finding indicates that despite the means indicating so, one cannot conclude that the group exposed to witnessing of bullying have more psychological competency than those with no exposure. This observation is similar between the group with no exposure and the group with traditional bullying victimisation exposure only. Additionally, one cannot say that those with only traditional bullying exposure has more psychological competencies than those who had both traditional and cyberbullying exposure.

In terms of psychological vulnerability, the mean for the total sample was 3.15 (SD= 0.8). When using analysis of variance, statistically significant differences can be observed between the exposure groups $F(3, 144) = 3.4$, $p = .02$ as depicted in Figure D15 in Appendix D.

When looking at the least significant difference test as given across Table D11 and Table D12 in Appendix D, one can observe that the mean for exposure group 5 ($M =$

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3.5, *SD* = 0.68) is significantly higher than that of exposure group 1 (*M* = 3, *SD* = 0.85, *p* = .01) and exposure group 2 (*M* = 3.01, *SD* = 0.82, *p* = .04). This finding means that the group that had exposure to both traditional and cyberbullying had significantly more psychological vulnerabilities to deal with stress than those with no exposure or only witnessing bullying victimisation. Additionally, the mean for exposure group 3 (*M* = 3.34, *SD* = 0.65) is significantly higher than that of exposure group 1 (*M* = 3, *SD* = 0.85, *p* = .04). Therefore, those individuals that had exposure to traditional bullying only had significantly more psychological vulnerabilities to deal with stress than those who did not experience any bullying victimisation.

On the other hand statistically significant differences cannot be reported between exposure group 1 (*M* = 3, *SD* = 0.85) and exposure group 2 (*M* = 3.01, *SD* = 0.82, *p* = .96), between exposure group 2 (*M* = 3.01, *SD* = 0.82) and exposure group 3 (*M* = 3.34, *SD* = 0.65, *p* = .15), or between exposure group 3 (*M* = 3.34, *SD* = 0.64) and exposure group 5 (*M* = 3.5, *SD* = 0.68, *p* = 0.48). This finding means that one cannot conclude that the group exposed to witnessing of bullying have more psychological vulnerability than those with no exposure. What is more, the group that has been exposed to traditional bullying only does not have significantly more psychological vulnerability than the group who have only witnessed either form of bullying. Additionally, one cannot say that those with only traditional bullying exposure has less psychological vulnerabilities than those who had both traditional and cyberbullying exposure.

4.5.1.2 Psychological effect on self-esteem

Additionally, as argued in this study, some of the general adverse psychological effects could also include a decrease in self-esteem. However, in the current study, no statistically significant differences can be observed between exposure groups *F*(3, 144) = 1.85, *p* = 0.14. Therefore, one cannot conclude that bullying exposure had any effect on the self-esteem of respondents.

4.5.1.3 Psychological effect on perceived demands from information and technological communication devices

Another general psychological effect on the victims could include that individuals experience more demands on themselves from using information and technological

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communication devices (ICTS). In the current study, the ICT Demands Scale (Day et al., 2012) is used to determine if there are differences between the exposure groups.

In terms of the total scale, there seem to be statistically significant differences between exposure groups [$F(3, 139) = 3.45$, $p = .02$] as depicted in Figure D16 in Appendix D. When looking at the subscales of the ICT Demands scale, two of them show that exposure groups differ statistically significantly, wherewith the other five subscales, the exposure groups do not differ statistically significantly. The five subscales where no differences can be shown are availability [$F(3, 143) = 2.02$, $p = .11$], lack of control [$F(3, 142) = 1.28$, $p = .28$], feeling monitored [$F(3, 144) = 0.17$, $p = .92$], learning expectations [$F(3, 144) = 1.31$, $p = .27$], and workload [$F(3, 149) = 0.8$, $p = .5$].

The two subscales where differences can be shown are response expectations [$F(3, 144) = 4.25$, $p \leq .01$] as depicted in Figure D17 and poor communication [$F(3, 142) = 9.25$, $p \leq .01$] as depicted in Figure D18 in Appendix D. It is worthwhile to explore further the total scale and the subscales where differences between groups are statistically significant.

When considering the total scale, the mean is $M = 2.72$ ($SD = 0.68$). When looking at the least significant difference test as given across Table D13 and Table D14 in Appendix D, one can observe that the mean for exposure group 1 ($M = 2.56$, $SD = 0.68$) is statistically significantly lower than exposure group 5 ($M = 2.99$, $SD = 0.76$, $p = .01$) and exposure group 2 ($M = 2.94$, $SD = 0.52$, $p = .03$). This finding means that those with no exposure to either form of bullying experiences fewer demands from using ICTs than those who witnessed bullying only or who had exposure to both traditional and cyberbullying.

On the other hand, one cannot conclude that the mean of those in exposure group 2 ($M = 2.94$, $SD = 0.52$) is higher than exposure group 3 ($M = 2.72$, $SD = 0.62$, $p = .27$) or lower than exposure group 5 ($M = 2.99$, $SD = 0.76$, $p = .8$). Therefore, those who witnessed bullying victimisation does not experience more demands from ICTs than those who were exposed to traditional bullying only, or fewer demands than those who experienced both traditional and cyberbullying. Additionally, those in exposure group 3 ($M = 2.72$, $SD = 0.62$) do not have a higher mean than those in exposure group 1

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(*M* = 2.56, *SD* = 0.68, *p* = .28) or a lower mean than those in exposure group 5 (*M* = 2.99, *SD* = 0.76, *p* = .14). Therefore, those who were exposed to traditional bullying only does not experience more demands from ICTs than those with no bullying exposure, or fewer demands than those who experienced both traditional and cyberbullying.

When considering the subscale of response expectations, the mean is *M* = 2.11 (*SD* = 1.19). When looking at the least significant difference test as given across Table D15 and Table D16 in Appendix D, one can observe that the mean for exposure group 5 (*M* = 2.8, *SD* = 1.47) is statistically significantly higher than that of exposure group 1 (*M* = 1.87, *SD* = 1.09, *p* = 0) and exposure group 3 (*M* = 2.07, *SD* = 1.03, *p* = .02). This finding means that those who had exposure to both traditional and cyberbullying experiences statistically significantly more expectations to respond on ICTs than those with no exposure to either form of bullying or those who had exposure to traditional bullying only.

On the other hand, one cannot conclude that the mean of those in exposure group 2 (*M* = 2.26, *SD* = 1.05) is higher than exposure group 3 (*M* = 2.07, *SD* = 1.03, *p* = .57) or lower than exposure group 5 (*M* = 2.8, *SD* = 1.47, *p* = .13). Therefore, those who witnessed bullying victimisation does not experience more expectations to respond on ICTs than those who were exposed to traditional bullying only, or fewer expectations to respond on ICTs than those who experienced both traditional and cyberbullying. Additionally, those in exposure group 1 (*M* = 1.87, *SD* = 1.09) do not have a lower mean than those in exposure group 2 (*M* = 2.26, *SD* = 1.05, *p* = .18) or exposure group 3 (*M* = 2.07, *SD* = 1.03, *p* = .42). Therefore, those with no bullying exposure, do not experience fewer expectations to respond on ICTs than those who only witnessed either traditional and cyberbullying or traditional bullying only.

When considering the subscale of poor communication, the mean is *M* = 1.82 (*SD* = 0.81). When looking at the least significant difference test as shown across Table D17 and Table D18 in Appendix D, one can observe that the mean for exposure group 5 (*M* = 2.44, *SD* = 0.79) is statistically significantly higher than that of exposure group 1 (*M* = 1.55, *SD* = 0.67, *p* = 0) and exposure group 3 (*M* = 1.88, *SD* = 0.87, *p* = .01). This finding means that those who had exposure to both traditional and cyberbullying

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experiences statistically significantly more perceptions of poor communication than those with no exposure to either form of bullying or those who had exposure to traditional bullying only.

One can also observe statistically significant differences between the mean of exposure group 1 (M = 1.55, SD = 0.67) and exposure group 2 (M = 2.03, SD = 0.77, p = .02) and exposure group 3 (M = 1.88, SD = 0.87, p = .05), where the mean of exposure group 1 is lower than both exposure group 2 and exposure group 3. In other words, those with no exposure to either form of bullying experience significantly fewer perceptions of poor communication as a result of ICTs than those who witnessed either form of bullying and those who experienced traditional bullying only.

On the other hand, one cannot conclude that the mean of those in exposure group 2 (M = 2.03, SD = 0.77) is higher than exposure group 3 (M = 1.88, SD = 0.87, p = .51) or lower than exposure group 5 (M = 2.44, SD = 0.79, p = .07). Therefore, those who witnessed bullying victimisation does not experience more perceptions of poor communication as a result of ICTs than those who were exposed to traditional bullying only, or fewer perceptions of poor communication as a result of ICTs than those who experienced both traditional and cyberbullying.

4.5.1.4 Psychological effect on individuals from specific cyberbullying events

Besides general psychological effects, there could also be specific psychological effects of cyberbullying on individuals. In the current study, two related questionnaires were used. The Cyberbullying in the Workplace Questionnaire (CBIWQ) gives statements of potential interactions that could constitute cyberbullying. Where respondents indicated exposure to a specific episode, a question was asked on the potential effect of that episode.

In Table D19 in Appendix D, the means and standard deviations of each of the items in the EOCB are shown. Each item outlines a type of potential effect/ reaction to a potential specific cyberbullying event also outlined in Table D19. To descriptively explore the potential effects of cyberbullying events, one can use these means to see which reactions/effects scored the highest.

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What can also be observed from Table D19 is that different items in the EOCB test the potential response to different cyberbullying events, where while the event is different, a similar response might be yielded. For example, for items EOCB5, EOCB8, EOCB14, or EOCB18 the potential effect/reaction is anger, but it is anger in response to different cyberbullying events (for example, anger from involving loved ones, or anger from sexual harassment).

Given that not all respondents will have experienced each of the specific cyberbullying events, not all respondents would have completed all items on the effects thereof. Therefore, the sample sizes for the items within the EOCB differ.

In order to explore the overall potential effects, one could look at the types of reactions considered together. In Table D20 in Appendix D the means, and standard deviations of the types of reactions/ effects of cyberbullying episodes are given. Where more than one item in EOCB considers this potential effect of/ reaction to a cyberbullying event and different sample sizes responded, pooled means and standard deviations are calculated (see Appendix E for calculations).

From Table D20 in Appendix D, one can see that most of the means are above 4, except for experiencing physical symptoms (M = 2.88, SD = 1.99). The four effects with the highest means are feeling that they cannot trust the cyberbully (M = 4.85, SD = 2.06), feeling humiliated (M = 4.63, SD = 1.96), feeling angry (M = 4.49, SD = 1.83), and feeling emotionally tired (M = 4.4, SD = 2.12).

These findings give a potential descriptive view of what the effects of cyberbullying could have on individuals.

4.5.2 Negative effects of cyberbullying on the performance abilities of individual employees

Besides cyberbullying hurting the psychological capabilities of individuals, it could also potentially harm an individual's performance capabilities.

There are three items in the online measure of the current study that considers the perceived impact on an individual's performance. Two of the items are in the EOCB,

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which ask about the effects in relation to specific types of cyberbullying events (EOCB10 and EOCB12, combined together as Cannot do job in Table D20 in Appendix D) and the other item is a yes/no response item to evaluate the perceived impact on an individual's performance in a more general sense (NOT WORK_Y).

In terms of EOCB10 and EOCB12, their respective means are M = 3.77 (SD = 2.03) for EOCB10 and *M* = 4.49 (*SD* = 1.96) for EOCB12. Their pooled mean (as seen in Table D20) is *M* = 4.13 (*SD* = 2). In terms of the descriptive statistics for NOT WORK_Y, 84.21% (*n* = 128) respondents indicated that they did not experience an inability to work as a result of bullying and 15.79% (*n* = 24) indicated that they felt they could not work due to bullying.

An analysis of variance between exposure group status and EOCB10 and EOCB12 combined as the potential negative effect on individual job performance indicates that statistical differences between exposure groups cannot be concluded based on items EOCB10 and EOCB12, F (3, 59) = 2.24, p = .09.

When considering the difference between exposure group status and the item of NOT WORK_Y using cross-tabulation, one can observe that statistically significant differences can be observed $\chi 2(4) = 46.93$, $p = 0$ as seen in Table D21 and Figure D19.

For the two groups with no direct bullying victimisation, almost all respondents indicated that they did not experience an inability to work as a result of bullying (exposure group 1 = 1.33% (*n* = 1) and exposure group 2=0% (*n* = 0)).

In terms of the groups that had direct exposure to bullying victimisation, for the group that had exposure to traditional bullying only, 31.03% (*n* = 9) indicated that bullying influenced their ability to work. For the group that had exposure to cyberbullying only 25% (*n* = 1) indicated that bullying influenced their ability to work. Lastly, the group that had exposure to both traditional and cyberbullying victimisation 52% (*n* = 13) indicated that bullying influenced their ability to work.

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4.5.3 Negative effect of cyberbullying on organisational outcomes

One possible negative outcome on organisational outcomes include high turnover. In this study, turnover intention (intention to quit) is considered to estimate turnover. Overall the mean for the ITQ scale is M = 3.39 (SD = 1.84).

When then comparing the exposure groups in terms of their means for intention to quit, statistically significant differences cannot be confirmed $F(3, 144) = 1{,}97$, $p = .12$. This finding implies that one cannot confirm that being exposed to bullying influences someone's intention to quit.

Another possible negative effect on organisational outcomes is that of high rates of absenteeism. In this current study, respondents were asked about their sick leave to determine possible absenteeism.

When comparing differences between exposure groups based on sick leave, one can observe that no statistically significant differences can be concluded $F(3, 144) = 0.46$, $p = .71$. Therefore, exposure group status does not cause differences in sick leave.

From the above findings, one can observe that if absenteeism and turnover are considered as organisational outcomes, the current study cannot confirm that bullying influences these organisational outcomes.

4.5.4 How coping mechanisms could influence individual and organisational outcomes

In terms of coping mechanisms, the current study considered whether respondents reported making use of coping mechanisms to deal with cyberbullying episodes. In the current study, 95% (n = 145) of total respondents did not make use of coping mechanisms, and 5% (n = 7) made use of coping mechanisms specific for cyberbullying as seen in Figure D20 in Appendix D.

One could note that in the current sample there are 29 respondents who reported cyberbullying victimisation, either cyberbullying only or a combination of cyberbullying and traditional bullying (exposure group 4 and exposure group 5 combined as shown

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in Figure 11). Of those in the sample with cyberbullying victimisation exposure, 24% made use of a coping mechanism for cyberbullying.

Respondents were asked to describe the coping mechanism that they used. The responses of the seven respondents who did indicate making use of such coping mechanisms is outlined in Table D22.

In terms of types of coping mechanisms for cyberbullying and traditional bullying, respondents were asked whether or not they reported the bullying incident (could be either traditional or cyber), whether they ignored the bully if it was a traditional and/or whether they tried to block the bully if it was a cyberbully. From Figure D21 one can see that in this study 11% (n = 17) reported a bullying incident, from Figure D22 one can see that 3% (n = 5) tried to block a cyberbully and from Figure D23 one can see that 25% (n = 38) tried to ignore the traditional bully.

One can consider whether victims used coping mechanisms and whether or not the researcher can report statistically significant different responses in terms of the potential psychological effect and effects on individual performance that may result from bullying.

4.5.4.1 The influence of coping mechanisms on whether traditional and cyberbullying influences individual psychological characteristics

When looking at bullying exposure and its potential effect on general psychological characteristics, perceived psychological stress and demands from using ICTs was statistically significantly higher based on exposure group status, while differences in self-esteem could not be established.

When then considering the influence of using coping mechanisms for cyberbullying on perceived stress, no statistically significant differences can be reported between general cyberbullying coping and perceived stress $F(1, 150) = 0.37$, $p = .55$. However, statistically significant differences can be reported between perceived stress and reporting a bullying incident $F(1, 150) = 11.1$, $p \leq .01$(see Figure D24), blocking a cyberbully $F(1, 150) = 7.24$, $p \leq .01$ (see Figure D25), as well as trying to ignore a traditional bully $F(1, 150) = 21.71$, $p \leq .01$ (see Figure D26).

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When looking at the differences between respondents in terms of reporting a bullying incident and perceived stress, the overall mean is *M* = 3.19 (*SD* = 0.68) as shown in Table D23 in Appendix D. Respondents who indicated that they did report a bullying incident scored significantly lower on perceived stress (*M* = 2.68, *SD* = 0.66) than those who did not report (*M* = 3.25, *SD* = 0.66).

When looking at the differences between respondents in terms of attempting to block a cyberbully and perceived stress, the overall mean is *M* = 3.19 (*SD* = 0.68) as shown in Table D24 in Appendix D. Respondents who indicated that they did attempt to block a cyberbully scored significantly lower on perceived stress (*M* = 2.39, *SD* = 0.72) than those who did not attempt to block a cyberbully (*M* = 3.21, *SD* = 0.67).

When looking at the differences between respondents in terms of attempting to ignore a traditional bully and perceived stress, the overall mean is *M* = 3.19 (*SD* = 0.68) as shown in Table D25 in Appendix D. Respondents who indicated that they did attempt to ignore a traditional bully scored significantly lower on perceived stress (*M* = 2.77, *SD* = 0.58) than those who did not attempt to ignore a traditional bully (*M* = 3.33, *SD* = 0.66).

When then considering the influence of coping on demands from using ICTs, no statistically significant differences can be reported between experiences of demands from using ICTs based on ignoring a traditional bully $F(1, 145) = 3.05$, $p = .08$ as well as between experiences of demands from using ICTs based on reporting a bullying incident $F(1, 145) = 3.68$, $p = .06$. Therefore, whether someone ignored the traditional bully or reported a bullying incident, did not cause an increase or decrease in experiencing demands from using ICTs.

However, statistically, significant differences can be reported between experiences of demands from using ICTs based on blocking a cyberbully $F(1, 145) = 8.96$, $p \leq .01$ (see Figure D27), as well as experiences of demands from using ICTs based on using coping mechanisms for cyberbullying victimisation $F(1, 145) = 7.59$, $p \leq .01$ (see Figure D28).

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When looking at the differences between respondents in terms of using coping mechanisms for cyberbullying and demands from using ICTs, the overall mean is *M* = 2.73 (*SD* = 0.68) as seen in Table D26 in Appendix D. Respondents who indicated that they used coping mechanisms for cyberbullying scored significantly higher on demands from using ICTs (*M* = 3.4, *SD* = 0.76) than those who did not use coping mechanisms for cyberbullying (*M* = 2.7, *SD* = 0.66).

When looking at the differences between respondents in terms of attempting to block a cyberbully and demands from using ICTs, the overall mean is *M* = 2.73 (*SD* = 0.68) as seen in Table D27 in Appendix D. Respondents who indicated that they did attempt to block a cyberbully scored significantly higher on demands from using ICTs (*M* = 3.6, *SD* = 0.9) than those who did not attempt to block a cyberbully (*M* = 2.7, *SD* = 0.65).

4.5.4.2 The influence of coping mechanisms on whether traditional and cyberbullying influences individual performance capabilities

When looking at bullying exposure and its potential effect on individual performance capabilities, the item on whether bullying in general influenced individual performance capabilities was statistically significantly higher based on exposure group status, while differences in the inability to work due to specific cyberbullying events (EOCB10 and EOCB12) could not be established.

When then considering the influence of coping on inability to perform, no statistically significant differences can be reported inability to perform based on using coping mechanisms for cyberbullying $\chi^2(1) = 3.08, p = .08$. Therefore, whether someone used coping mechanisms for cyberbullying, did not cause an increase or decrease in the inability to perform.

However, statistically significant differences can be reported between the inability to perform based on blocking a cyberbully $\chi^2(1) = 19.41, p \leq .01$ (See Figure D29 in Appendix D), and the inability to perform based on reporting the bullying incident $\chi^2(1) = 24.96, p = 0$ (See Figure D30 in Appendix D), as well as the inability to perform based on ignoring the traditional bully $\chi^2(1) = 24.96, p = 0$ (See Figure D31 in Appendix D).

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In terms of those that indicated that bullying did not influence their performance abilities, none of them indicated that they tried to block the cyberbully (100%, *n* = 128) as shown in Table D28 in Appendix D. For those where bullying influenced their performance abilities, 79.17% (*n* = 19) of them did not try to block the cyberbully, whereas 20.83% (*n* = 5) did.

In terms of those that indicated that bullying did not influence their performance abilities, 95.31% (*n* = 122) tried to report the bullying incident, whereas 4.69% (*n* = 6) did as shown in Table D29 in Appendix D. For those where bullying influenced their performance abilities, 54.17% (*n* = 13) tried to report the bullying incident, whereas 45.83% (*n* = 11) did.

Lastly, in terms of those that indicated that bullying did not influence their performance abilities, 87.5% (*n* = 112) tried to ignore the traditional bully, whereas 12.5% (*n* = 16) did as shown in Table D30 in Appendix D. For those where bullying influenced their performance abilities, 8.33% (*n* = 2) tried to ignore the traditional bully, whereas 91.67% (*n* = 22) did.

4.5.4.3 The influence of coping mechanisms on whether traditional and cyberbullying influences organisational outcomes

Given that no statistically significant differences can be reported between exposure group status and the organisational outcomes measured in the current study, the effect of whether coping mechanisms influences whether traditional and cyberbullying influences organisational outcomes, is not reported.

4.6 Chapter conclusion

In this chapter the researcher explored the results of this study by exploring different statistical analyses and the interpretation thereof. Firstly, some psychometric properties of all the items used as part of the online data collection measure. All scales and subscales were found to have sufficient reliability, and where possible validity.

Analysis of variance was the main statistical technique employed and it was used to determine whether bullying exposure caused differences in other variables and in some instances whether other variables caused differences in bullying exposure. The

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influence of coping on some of the potential effects of bullying was also explored in a similar way.

In the next chapter the results outlined in this chapter is explored in the context of other literature and the research objectives of this study.

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CHAPTER 5
DISCUSSION OF RESEARCH RESULTS

5.1 Introduction

The findings of this study need to be interpreted in the context of previous literature. They should also be explored in terms of how they relate to the research aim and question.

The main research question is: What is the nature and prevalence of exposure to and the effects of cyberbullying for employees and organisations? In order to answer the question, the researcher created the following research objectives for this study:

- To determine whether workplace cyberbullying does occur in the South-African workplace
- To determine whether workplace cyberbullying has a negative psychological effect, above that of traditional workplace bullying, on individual employees.
- To determine whether workplace cyberbullying has a negative effect, above that of traditional workplace bullying, on the performance abilities of individual employees
- To determine whether workplace cyberbullying hurts organisational outcomes

The researcher then uses this chapter to explore the results of this study descriptively, as outlined in Chapter four in the context of these research aims. This is done by considering the findings compared to those of other studies on traditional and cyberbullying. Also, the researcher explores how it relates to theory and possible reasons why the findings of this study match or deviates from other findings in the literature.

5.2 Prevalence of cyberbullying

To determine whether workplace cyberbullying does occur in the South-African workplace, one can start by considering how the overall prevalence of the different types of bullying, especially then cyberbullying, in this study compares to others in the field of bullying victimisation.

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When looking at cyberbullying victimisation, in the total sample, 19% had exposure to both cyberbullying and traditional bullying, where only a tiny group (3%) had exposure to cyberbullying on its own. Most respondents who had exposure to cyberbullying also had exposure to traditional bullying (16%). When looking at traditional bullying victimisation, 35% had exposure to traditional bullying, where more of the sample had exposure to traditional bullying only (19%) than those with exposure to both cyberbullying and traditional bullying.

As mentioned in the literature review of this study, other researchers have done many studies on cyberbullying in schools and universities. Studies on cyberbullying in those samples can act as a good starting point for comparison. For two of the studies mentioned earlier, cyberbullying in these types of samples ranged around 8 - 8.6% (Brewer et al., 2012, Schenk & Fremouw, 2012). Those two studies used international samples, whereas Batterbee (2014) found a much higher prevalence in South-African schools at 32.5%. Modecki, Minchin, Harbaugh, Guerra, and Runions (2014) did a meta-analysis on traditional and cyberbullying victimisation in adolescents and found prevalence rates of 35% for being involved in traditional bullying and 15% for being involved in cyberbullying. The findings in this study are then in line with the means found in the meta-analysis.

This being said, while dealing with the subject of cyberbullying and traditional bullying, the contexts and sample groups differ from this study for studies on cyber and traditional bullying in school and university. A more accurate comparison would be comparing against studies looking at other studies considering bullying in adulthood and workplace settings.

There are a few studies on cyberbullying in the workplace that has found similar prevalence to this study. Privitera and Campbell (2009), mentioned earlier, found in their study that 34% of respondents experience traditional bullying, and 10.7% are cyberbullied. Additionally, in Coyne et al. (2017), 18% (n = 20) of respondents experienced cyberbullying perpetration, and 79.3% (n = 88) were exposed to at least one harmful act of traditional bullying.

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In the latter study mentioned, one can note that for some studies, very high prevalences were noted. This finding can also be seen in the finding of Farley, Coyne, Sprigg, Axtell, and Subramanian (2015) reporting a prevalence of 45% for cyberbullying victimisation. One possible reason for this is the difference in method and criterion selected for classifying prevalence. For studies using the behavioural method where the criterion for being bullied as experiencing at least one harmful act, the prevalence rate is likely to be reported as higher than those with more stringent criteria (Nielsen et al., 2010).

As mentioned earlier, in this study, more respondents were exposed to traditional bullying compared to cyberbullying. This finding is in line with a lot of other studies on cyberbullying in the workplace (for example, Coyne et al., 2017, Privitera & Campbell, 2009), but contrasts with a recent large study (N = 3699) by Kowalski, Toth, and Morgan (2018). In their study 19.4% (n = 710) of respondents had their most recent experience of traditional bullying in adulthood, where 7.5% (n = 277) had the majority of their traditional bullying experiences in adulthood. This finding is opposed to 24.2% (n = 889) of respondents had their most recent experience of cyberbullying in adulthood, where 20.1% (n = 739) had the majority of their traditional bullying experiences in adulthood. Differences between the current and their study could be because of differences in the geographical contexts and the mean age of respondents.

5.2.1 Differences in demographics based on exposure group status

When considering the prevalence of cyberbullying and traditional bullying, one can consider how the prevalence differs between different demographic groups.

In the current study, statistically significant differences between males and females based on exposure group status were found. More males were exposed to both traditional and cyberbullying or cyberbullying on its own, where more females were exposed to traditional bullying only. This finding is in line with some studies. Gradinger et al. (2009) found gender to be an essential factor when examining the relationship between traditional bullying and cyberbullying in adolescents. They found more than expected male bullies who use both formats of traditional and cyberbullying and fewer expected female cyberbullies. Similarly, in some cyberbullying in the workplace studies, researchers have found that males have greater vulnerability to being

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cyberbullied when compared to females (Akbulut, Sahin, & Eristi, 2010; Forssell, 2016).

However, readers should note that mixed results have been reported in the literature for the co-occurrence of traditional and cyberbullying when considering the influence of gender on cyberbullying. In some younger samples, females have reported higher rates of perpetration and victimisation. In other samples, no difference between genders have been found (for example, Hinduja & Patchin, 2008; Slonje & Smith, 2008; Sourander et al., 2010).

Other studies, for example, Zsila, Urbán, Griffiths, and Demetrovics (2018), have found that males are more likely than females to engage in cyberbullying perpetration and often become victims of cyberbullying, in that their bullying victims retaliate against them using cyberbullying. While cyberbullying perpetration is not considered in this study, it might be that male respondents in this study were perpetrators of either type of bullying.

In addition to the finding of differences between gender, statistically significant differences between ethnicity based on exposure group status were found. Traditional bullying was more prevalent among Caucasian respondents compared to the other groups, exposure to both traditional and cyberbullying more prevalent for Coloured respondents and witnessing for Africans.

In a study by Cassidy, Faucher, and Jackson (2014), they found that being in a racial minority increased the likelihood of cyberbullying victimisation for employees at a university. In their study, 80% of respondents were Caucasian. For the Caucasian population, 8% of respondents experienced cyberbullying, where non-Caucasian respondents experienced 24% more cyberbullying. What is interesting in this study is that while the majority of respondents were Caucasian (45%) and Coloured (33%) in this study, they are considered as minority racial groups compared to Africans in the total South-African context. Population statistics, specifically in the economically active population in Quarter 1 of 2019, indicate that of the total population of White people are 8.8%, Coloured individuals are 9.8%, as opposed to 78.8% that are African (Statistics South Africa, 2019). When considering it, then in that sense the White and

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Coloured groups that experienced more direct bullying victimisation were also part of the minority racial group.

Another factor to consider when considering ethnicity is a cultural difference. Different ethnic groups have different cultural characteristics. The most common cited cultural characteristics are those created by Hofstede (2001) to examine differences in national cultures.

There are five dimensions that Hofstede (2001) identified. The first is power distance, which has to do with preferences for hierarchy and authority, where those high on power distance accept hierarchy and those low on power distance do not like it. The next one is individualism, which indicates the degree of interdependence that people within a culture prefer. For those high on individualism, the focus is placed on looking after themselves and their immediate families. Those lower on individualism have a more collectivist mind-set, where the focus is placed on taking care of each other in a community.

The third dimension is masculinity, which has to do with the degree to which existential goals range from achievement to nurture and care. Those with a high score in masculinity value achievement, whereas those with a low score, called femininity, value quality of life in terms of caring for others. The next dimension is long-term orientation. This dimension is about how a culture handles the past and how they deal with challenges of the future. Those with a high long-term orientation score focus on dealing with the future, whereas those with a low score focus on maintaining traditions and achieving quick results. The last dimension is uncertainty avoidance, which is the degree to which people are intimidated by ambiguity and uncertainty. Those with a high score try to actively avoid uncertainty, whereas those with a low score is more tolerant of ambiguity and is more flexible (Hofstede, 2001).

These cultural dimensions can be explored in terms of national culture, but also in terms of specific ethnic groups, especially where there are multiple cultures within one country. While Hofstede (2001) explored many different countries in terms of these dimensions, including South-Africa, their analysis did not go into the nuances of the different cultures within South-Africa, and their predominant sample consists of

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Caucasian individuals. Thomas and Bendixen (2000), on the other hand, considered the differences on these dimensions based on different ethnic groups within South Africa among 586 managers. They found that for most of these dimensions, except for uncertainty avoidance, there were many similarities among the ethnic groups.

For the Caucasian group, uncertainty avoidance was low, for the Coloured group it was below average, and for the African group, it was very high. Therefore, while the Caucasian and Coloured group is comfortable with uncertainty, the African group will actively try to avoid it. What is interesting, is that in bullying literature in cultures with low uncertainty avoidance bullying tends to be more prevalent (Power et al., 2009; Zabrodska & Kveton, 2013). Differences between exposure to bullying due to ethnic status in this study could, therefore, be due to differences in preferences for uncertainty avoidance. This should be explored in further studies.

5.2.2 Risk factors for prevalence

To further explore whether workplace cyberbullying does occur in the South-African workplace, this study explored three potential risk factors for increased workplace cyberbullying. Most support was found for the co-occurrence of traditional and cyberbullying. Some support was found for the need for technology. However, limited support was found for the increase of youth into the workplace being a risk factor for cyberbullying. The findings for these risk factors should be contextualised.

5.2.2.1 The need for technology

One possible risk factor for increased exposure to workplace cyberbullying is the necessity of using ICTs for work and personal purposes, during most waking hours. The results of this study indicated that there is an increased use of ICTs in the workplace. Many respondents reported communicating with colleagues in different cities and provinces, where most employees needed to communicate with employees in remote places using ICTs to communicate. This finding confirms the notion of ICT capabilities adding value to organisations reaching their needed results (Sproull as cited in Weatherbee & Kelloway, 2006).

In terms of the type of technology used, most make use of texting on cell phones, with the next closest being using tablets to check mail and using social media. There are

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no statistically significant differences between the types of technology used based on exposure group status. Therefore, when respondents experienced cyberbullying; it could happen on any device. This finding is different to the finding by Akbulut et al., (2010) that found in a Turkish sample of 1470 members of an online social utility, that forum and blog use explained the most variance in victimisation scores. The difference between that study and this study could be due to the nature of the preferences of people belonging to a social utility being different from those that are more general employees.

In this study, most respondents communicate with supervisors, subordinates and customers. There are no statistically significant differences between whom is communicated with based on exposure group status. The finding of this study is then in line with that of Privitera and Campbell (2009) who found those in managerial roles were as likely to report perceived exposure to traditional bullying as non-supervisory workers. On the other hand, Forssell (2018) found that the use of ICTs has a positive correlation to exposure to cyberbullying for male managers and female general workers, but not for female managers or male general managers.

Overall, these findings indicated that communication technology is being used in the South-African workplace. People need to communicate with their supervisors, customers and subordinates that might be in different locations to them. However, the type of communication technology that they use and whom they communicate with does not influence whether they have been exposed to bullying or not.

5.2.2.2 Co-occurrence of traditional and cyberbullying

As shared before, most respondents who had been exposed to cyberbullying were also exposed to traditional bullying. Only a small number of respondents had exposure to cyberbullying only. This finding goes to show that where cyberbullying does occur; it is more likely to be accompanied by traditional bullying; however, traditional bullying is still reported to occur without cyberbullying being present.

The finding that cyberbullying happens alongside traditional workplace bullying is in line with other literature considering cyberbullying in the workplace (for example, Forssell, 2016; Privitera & Campbell, 2009; D'Cruz & Noronha, 2013). Farley, Coyne,

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Axtell, and Sprigg (2016) found a high correlation (r = 0.74) between cyberbullying and traditional bullying, indicating that there is much overlap in the behaviours experienced for both.

When looking at the NAQR, that behaviourally considers traditional bullying exposure, respondents in the current study with both types of bullying statistically significantly experience higher incidents than those with only traditional bullying. This finding further emphasised the co-occurrence of cyber and traditional bullying.

5.2.2.3 Youth entering the workplace

There were no statistically significant differences between age-based on exposure group status, between tenure and exposure group status nor between ages starting to use ICTs based on exposure group status. This finding contradicts some studies that were done on college and university students, where cyberbullying experiences were found to increase over time (for example, Kowalski et al., 2012; Ryan & Curwen, 2013).

What is worthwhile to note about this study is that the predominant age of participants was between 31 and 60 years old (84% n = 127), of which 29% (n = 44) was between 51 and 60 years old, and tenure of more than 15 years (49%, n = 75). This finding is different from other studies done on cyberbullying in the workplace. For example, for the study done by Farley et al. (2016), respondents had a mean tenure of M = 8.8 years (SD = 8.51), and respondents for study by Coyne et al. (2017) had a mean tenure of M = 9.4 years (SD = 6.6).

These results do not show that youth is entering into the workplace. This study possibly does not show differences between age groups due to generational differences of responding to the current study, along with the public sector utility services being a less lucrative work context for youthful persons.

When considering the predominant age of respondents of this study, one-third of them were between 51 and 60 years old, which places them in the Baby Boomer generation (Linnes & Metcalf, 2017). Differences in preferences for the use of ICTs have been reported between generations (Weatherbee & Kelloway, 2006). In terms of technology preferences, the Baby Boomer generation prefers physical meetings, followed by

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phone calls and lastly emails. However, Generation Y (born 1981-1995) prefer text messages and social media. Generation X (born 1961-1980) on the other hand, prefer emails or text messages to face-to-face meetings (Linnes & Metcalf, 2017).

Given then that many Baby Boomers responded to this study, their preferences might make them less susceptible cyberbullying victimisation. Additionally, they might not regard victimisation using ICTs as severe, and therefore, they have possibly not self-identified as cyberbullying victims.

One reason for the low response of youthful persons to this study is that the public sector is not a lucrative industry for youthful people to enter in. It was mentioned in the literature review that there was an increase in the public sector and a decrease in private sector employment across all employees from 2008 to 2013. That being said, according to a 2011 budget review, 7.2% of youth (aged 15-24 years) were employed by the public sector, and the private sector employed 86.2% of youth at the time (National Treasury Republic of South Africa, 2011). Therefore, while there might be an increase in people in the public sector, younger people might be more inclined to be employed in the private sector. This finding could imply that this study is not representing the full employment characteristics of employees in the South African employee population.

Given that all these findings are accurate, one cannot conclude from this study that age is a risk factor for the prevalence of cyberbullying in the workplace.

5.3 Effect of cyberbullying

The effects of cyberbullying have been explored in two categories: (a) the effects on the individual, and (b) the effects on the organisation. Within the effects on the individual, psychological effects and effects on the job performance are explored. In the current study, no evidence is found for the effects of bullying on organisational outcomes. These findings are contextualised.

5.3.1 Psychological effects on the individual

This study explored differences found between exposure groups in terms of perceived stress, levels of self-esteem, demands from ICTs, and some reactions to cyberbullying

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events, to determine whether workplace cyberbullying has a negative psychological effect, above that of traditional workplace bullying on individual employees.

5.3.1.1 The effects of bullying on perceived stress

Perceived stress has been linked to both traditional (for example, Nielsen, Hetland, Matthiesen, & Einarsen, 2012) and cyberbullying (for example, Privitera & Campbell, 2009; Snyman & Loh, 2015). According to Wickrama et al. (2013), two psychological processes underpin perceived stress, which is psychological competency and psychological vulnerability. Both of these processes have been explored in this study.

Firstly, one can then explore into perceived stress in terms of psychological competency to deal with stress. Psychological competency to deal with stress has to do with a sense of agency, control and mastery that an individual feels to be able to deal with stressors (Wickrama et al., 2013). In the sense of perceived stress, psychological competency reveals positive thoughts and feelings about life stressors despite how stressful situations are.

Similar to the finding on overall perceived stress, one cannot conclude that the group exposed to witnessing of bullying have more psychological competency than those with no exposure. Additionally, those with exposure to both types of bullying had less psychological competency to deal with stress than those with no exposure or who only witnessed bullying, where those with exposure to both types of bullying did not experience less psychological competency than those with traditional bullying only. One difference is that while those with exposure to traditional bullying only, had less psychological competency to deal with stress than those who had witnessed only, they did not have less psychological competency than those with no exposure.

The findings on psychological competency to deal with stress indicated that both traditional and cyberbullying reduced the respondents' competency to deal with stress when compared to those who only witness or experience no bullying. However, only when the two experiences are combined did they reduce the respondents' competency to deal with stress more than those who do not experience bullying at all. That is, one cannot conclude that the level of psychological competency differed for those with traditional bullying only and those with no exposure. That being said, similar than for

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overall perceived stress, the added experience of cyberbullying did not reduce the competency to deal with stress more than the experience of traditional bullying on its own.

It is interesting that those who had exposure to only traditional bullying did not necessarily have lesser perceptions of effective coping with and confidence in their control over stressful situations than those with no exposure to bullying, but indeed for those witnessing the experiences. This finding might show that while the traditional bullying experiences decrease the feelings of psychological control and agency more than those witnessing it, those with no exposure might experience other stressors that render similar feelings of coping and confidence to deal with stressors.

On the other hand, respondents with exposure to both types of bullying did experience lesser perceptions of confidence in their control over stressful situations than respondents with exposure to bullying and those witnessing the experiences. The lowered sense of agency and perceptions of control over stressful situations, in this case, could be due to the pervasive nature of the addition of cyberbullying in that the victim feels like he or she cannot escape (D'Cruz & Noronha, 2013; Privitera & Campbell, 2009). Therefore, when individuals do not experience bullying in both forms, they have greater feelings of agency compared to those that experience both.

The finding that psychological competency for exposure to only traditional bullying is not different to cyberbullying and traditional bullying combined, however still indicates that for both those groups the bullying experiences similarly affect their perception of control and agency.

One can also explore perceived stress in terms of psychological vulnerabilities to deal with stress. Psychological vulnerabilities, in this case, has to do with negative thoughts and feelings as reactions to perceived stress (Wickrama et al., 2013). Vulnerabilities could include then feelings of a lack of psychological competence or the extent to which both positive and negative stressors evoke adverse reactions. The adverse reactions could include feeling upset by unexpected events, feeling overwhelmed by difficulties, feeling angry by things out of a person's control.

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Similar to that of psychological competency, one cannot conclude that the group exposed to witnessing bullying had more psychological vulnerability than those with no exposure. This finding indicates that both these groups feel a similar lack of control and adverse reactions to stressors in their life. Given that none of these individuals experiences bullying in a profoundly personal way, this makes sense.

Also similar to that of psychological competency, the group that had exposure to both traditional and cyberbullying had significantly more psychological vulnerabilities to deal with stress than those with no exposure or only witnessing bullying victimisation. In this case, the group experiencing both types of bullying, experienced bullying on a deeply personal level in terms of physical modalities, but also on ICTs that not only follows the victim around but also in that associations with communications on ICTs have become closer to individuals' sense of identity as a social status symbol (Patchin & Hinduja, 2006).

What is more, one cannot say that those with only traditional bullying exposure has less psychological vulnerabilities than those who had both traditional and cyberbullying exposure. Therefore, only compared to groups with no bullying or witnessing bullying does the addition of cyberbullying have greater effects on the experience of negative thoughts and feelings on the individual.

On the other hand, individuals that had exposure to traditional bullying only had significantly more psychological vulnerabilities to deal with stress than those who had no exposure to bullying victimisation. Also, the group that has been exposed to traditional bullying only does not have significantly more psychological vulnerability than the group who have only witnessed either form of bullying.

Therefore, the experience of traditional bullying increases a feeling of lack of control compared to those who experience no bullying, but those who witness the bullying experience the same effects. Other studies in traditional workplace bullying have found that bystanders of bullying experience levels of distress and mental strain due to seeing others in a compromising position (for example, Lutgen-Sandvik, Tracy, & Alberts, 2007; Vartia, 2001), which is similar to the findings in this study.

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One can compare the findings of psychological competency and psychological vulnerabilities of perceived stress. While the group with exposure to both types of bullying did not differ significantly from those with only traditional bullying exposure for both psychological competency and psychological vulnerabilities, one can observe that there are slight differences.

The group with exposure to both traditional and cyberbullying has more psychological vulnerabilities and less psychological competencies to deal with stress than both those with no exposure and those with only exposure to witnessing. As for those with only traditional bullying exposure, they had less psychological competencies, but not more psychological vulnerabilities than the group who only witnessed. Additionally, those with exposure to only traditional bullying has more psychological vulnerabilities to those with no exposure to bullying, but not less psychological competencies.

These findings go to show that psychological vulnerabilities and psychological competencies do not necessarily merely function as opposed to one another when considered in terms of bullying experiences.

For the witness group, they have more psychological competencies, but the same psychological vulnerabilities when compared to the group with only traditional bullying exposure. The witnesses may be feeling a sense of helplessness to intervene, leading to similar negative perceptions of those experiencing traditional bullying.

In terms of the no exposure group, they have the same psychological competencies, but less psychological vulnerabilities when compared to the group with only traditional bullying exposure. Those with no exposure might experience fewer negative feelings of stressors, given that they do not personally experience bullying. The reason why they may have a similar sense of agency over stressors, and despite the witnesses experiencing greater vulnerabilities but more competencies, than those with traditional bullying, is that various other factors might increase a sense of mastery over stressors (Bui, Ituma, & Antonacopoulos, 2013). These factors could include self-rated health, personal values, perceived competence, personal vision, social participation, life satisfaction, and access to organisational training and development (Bui et al., 2013, Infurna, Gerstorf, Ram, Schupp & Wagner, 2011)

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What is interesting is that the group that experienced both traditional and cyberbullying was experiencing both greater vulnerabilities and lesser competencies compared to both the witnessing and the no exposure groups. However, there were mixed results for the traditional bullying only group when compared to the witnessing and the no exposure groups. These findings possibly indicate that the experience of both types of bullying is so stressful, that while it might cause stress for bystanders, respondents that personally experienced both types of bullying, experienced stressors as more stressful than witnesses.

When then combining these two underpinning psychological processes of perceived stress, one can observe how bullying affects overall perceived stress. In the current study, one cannot conclude that the group exposed to witnessing of bullying experienced more perceived stress than those with no exposure.

Respondents with exposure to both types of bullying and those with traditional bullying only exposure experience statistically significantly more overall perceived stress than those with no exposure to bullying victimisation or only exposure to witnessing of either type of bullying.

When considering the literature mentioned earlier on the effects of traditional bullying and cyberbullying respectively and perceived stress, these findings seem to make sense, and further examples can be cited.

In terms of traditional workplace bullying, Balducci et al., (2011) found a significantly positive relationship (β = .61) between workplace bullying and the PTSD symptoms of re-experiencing, avoidance and hyperarousal. Also, Vartia (2001) found in a sample of 949 municipal employees, that those being bullied had statistically significantly more general stress than those who were not.

Further exploring perceived stress and cyberbullying at work, Snyman and Loh (2015) found that when considering the direct relationship between cyberbullying and stress, it was significantly positive (β = .35) and that cyberbullying explained 10.5% of the

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variance in stress. Similarly, Farley et al. (2015) found that cyberbullying was positively related (r = .36) to mental strain.

What is still worthwhile to note is, those with exposure to both did not experience more perceived stress than those with traditional bullying only. Therefore, the added experience of cyberbullying did not make the experience more stressful than the experience of traditional bullying on its own. One study by Visinskaite (2015) found relationships between stress and cyberbullying and stress and traditional bullying respectively, and additionally found that victims of both cyber- and traditional bullying had higher levels of stress than those with only traditional bullying exposure. However, very little other evidence is present in literature that considers whether stress is higher for cyberbullying above traditional bullying in workplaces.

5.3.1.2 The effects of bullying on self-esteem

There were no statistically significant differences between respondents' self-esteem based on exposure group status. This finding contrast some of the findings of previous studies on cyberbullying that explored the role of cyberbullying on self-esteem in young adults (for example, Katzer et al., 2009; Mason, 2008).

In a study by Kowalski et al., (2018) on adults they found in both sub-studies that they ran that those who were exposed to cyberbullying had statistically significantly lower self-esteem than those who did not. In their second sub study, they found significantly lower self-esteem for cyberbullying victims but not traditionally bullied victims, whereas, in the first study, it was significant for both groups. When considering traditional workplace bullying, Vartia (2001) found that bullying increased feelings of low self-confidence.

There are, however, studies with similar findings to this study. One study on cyberbullying amongst young adults (17-25 years old) found similar levels of self-esteem among those who were exposed and those who were not (Brack & Caltabiano, 2014). Another study by Visinskaite (2015) found that statistically significant differences for self-esteem could not be established between those who had exposure to both forms of bullying and those with traditional bullying exposure only.

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What is possible is that there are other influencers of self-esteem that are stronger than the effects of bullying experiences pulling it down. Self-esteem is essentially an individual's perception and emotional evaluation of their self-worth (Bowling, Eschleman, Wang, Kirkendall, & Alarcon, 2010; Greenacre, Tung, & Chapman, 2014). In this study, a global measure of self-esteem was used and therefore considered respondent's most general sense of self-worth. It might be more accurate that bullying events influence individuals on a situational basis and not in their general self-esteem.

5.3.1.3 The effects of bullying on ICT Demands

The ICT demands experienced place additional strain on employees and can lead to distress. Day et al. (2012) found a statistically significant relationship between ICT demands and physical and psychological strain (β = .16) and ICT stress (β = .42), which makes it essential to consider.

In this study, statistically significant differences were found between exposure groups for overall ICT demands experienced and for two sub-components thereof, which is response expectations and poor communication.

Response expectations have to do with the expectation to respond to online messages as quickly as possible after receiving it, no matter the time of day (Stich, Farley, Cooper, & Tarafdar, 2015). In this study, those with experience of both types of bullying experienced more expectations to respond than those with no bullying exposure or exposure to only traditional bullying. On the other hand, those with only traditional bullying exposure did not experience more expectations to respond than those with no bullying exposure. This finding indicates that the presence of cyberbullying is necessary to experience increased expectations to respond using ICTs.

What is interesting is that experiences of cyberbullying increase the feeling that one needs to respond to incoming messages, despite that one would think that victims would want to avoid cyberbullying encounters. While the specific reasons are not clear, it might be that the victims fear retaliation from the cyberbully should they not immediately attend to incoming messages. Victims might want to gain a sense of control, given that they have already lowered sense psychological competency as discussed earlier, by frequently checking their ICTs. Therefore, while avoidance might

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be preferable for the victim, the need to gain control over the situation and still to be able to meet work-related tasks could increase the victim feeling there is an expectation to respond to incoming messages.

One can then also deep dive into demands of ICTs in terms of perceptions of poor communication. Poor communication, in this case, refers to lack of verbal and non-verbal cues in online written messages that could lead to misinterpretation of the content of such messages (Day et al., 2012; Stich et al., 2015; Heatherington & Coyne, 2014). One of the respondents in the study by Heatherington and Coyne (2014 p.175) for instance, stated: "you can make a request of somebody in person that as an email becomes a demand". These perceptions of poor communication could hinder the quality of interpersonal relationships and task performance (Stich et al., 2015).

In this study, those with no exposure to either type of bullying experience statistically significantly fewer perceptions of poor communication than those with exposure to witnessing or traditional bullying only. Those with experience of both cyberbullying and traditional bullying, experience statistically significantly more perceptions of poor communication than those with no exposure or exposure to traditional bullying only.

What is interesting here is that those who witnessed either type of bullying had higher perceptions of poor communication than those with no exposure, but not more than those with experience of both cyberbullying and traditional bullying. The bystanders could be seeing others being bullied and could become paranoid that online messages to them are ill-intended. This notion could implicate that both the victim's and those who witness the bullying acts' quality of work relationships are hindered.

The finding that the added experience of cyberbullying above that of traditional bullying increases perceptions of poor communication goes to show that online communication is removed from the cues used for sense-making that is used in face-to-face communication.

When comparing the expectations to respond using ICTs and perceptions of poor communication as a result of ICTs, in both cases, those with exposure to both types of bullying is higher than those with no bullying exposure and those with only traditional

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bullying exposure. Additionally, no difference can be observed between those who only witnessed bullying and those with only traditional bullying exposure; and those who only witnessed bullying and those with exposure to both types of bullying for either expectation to respond using ICTs or perceptions of poor communication as a result of ICTs. Also, one can only conclude that those with no bullying exposure is lower than those who only witnessed bullying and those with only traditional bullying exposure in terms of perceptions of poor communication as a result of ICTs, but not for expectations to respond using ICTs.

When then considering the overall demands from using ICTs, those with both types of bullying exposure experience more demands from using ICTs than those with no exposure or who only witnessed. In turn, those with traditional only exposure does not statistically significantly experience more demands than those with no exposure or who only witnessed.

What is interesting is that those with traditional bullying only does not statistically significantly experience fewer demands than those with experience of both types of bullying. What this shows is that the experience of cyberbullying increases response expectations and perceptions of poor communication but might not increase the other factors that make up ICT demands, which was found not to indicate significant differences in this study. These include perceptions of needing to be available after work hours, lack of control, feeling monitored, feeling the expectation of learning new ICT skills, and the degree to which ICTs increase employee workloads. What the findings from this study then suggest is that the adverse effects of response expectations and poor communication are likely to increase as a result of cyberbullying.

5.3.1.4 The descriptive effects of cyberbullying on specific cyberbullying events

The four effects with the highest means are feeling that they cannot trust the cyberbully (M = 4.85, SD = 2.06), feeling humiliated (M = 4.63, SD = 1.96), feeling angry (M = 4.49, SD = 1.83), and feeling emotionally tired (M = 4.4, SD = 2.12). These could descriptively be explored in the context of other literature to describe why participants felt these effects from cyberbullying experiences.

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Trust in the workplace is essential for building relationships in the workplace (Mayer, Davis, & Schoorman, 1995). To understand how cyberbullying experiences in the workplace could influence trust being broken, that is seen in the highest mean of the descriptive factors in this study; one could explore what trust is.

Trust is the willingness to be vulnerable based on the expectation that another will act in a certain way that does not stand in opposition of the trustee (Mayer et al., 1995). Primarily, when someone trusts another, they are judging the trustworthiness of that person (Bauer & Freitag, 2018). Three elements could make up trustworthiness. The first is task-related trust in the competence or ability of the other person. The second element is benevolence in the sense that the trustor believes that the other person has an inherent intention to help the trustor. The last element is integrity in that the trustor believes that the other person lives by acceptable principles (Roger et al., 1995).

Bullying experiences could then alter the perceptions of trustworthiness of the bully in the eyes of the victim. This notion is likely to be in line with the benevolence and integrity components of trustworthiness. One of the respondents in the study by Heatherington and Coyne (2014) explains that the lack of social talk and empathy that could be exchanged between her and her manager (that is, her cyberbully) due to the electronic nature of their relationship, stopped them from creating a trusting relationship. One could say that the cyberbullying episodes disinhibited the victim from getting the sense that the bully wanted to help the victim intentionally. As she later put it:

> I'd seen no warmth, even when we finished our meetings, even at the very beginning before any of this started, there was no like social talk or anything like that. So that's what made me, I think, think she was such an Iron Lady so to speak (Heatherington & Coyne, 2014 p. 191).

An example of how a lack of integrity can be observed is in the inconsistent actions of cyberbullies that act one way on face-to-face modalities, but completely different when communicating on ICTs. In the qualitative study by D'Cruz and Noronha (2013), three respondents described such interactions. One respondent said "Overtly, on the face, he (colleague) was very friendly…very nice…he would listen. However, on the phone,

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he was rough and abusive…he would raise his voice, his tone was rough" (D'Cruz & Noronha, 2013 p. 334). It could be that the inconsistency of actions is experienced as a lack of trustworthiness by the victim, and this could then hinder the trust relationship.

The next highest mean is that of feeling humiliated. Humiliation is an emotional reaction where the individual feels reduced in size, experiencing ridicule and then wanting to hide from others (McCauley, 2017). If the bully humiliates the victim, he or she exerts power over the individual by tarnishing their status (Burton, 2014). Humiliation has been associated with feelings of shame, loneliness and depression (Burton, 2014; Hartling & Lindner, 2016; Rokach & Philibert-Lignières, 2015).

In the study by Kowalski et al., (2018), they found that victims of both types of bullying reported feeling alone than those who do not. These feelings of loneliness and isolation could increase the already high feelings of isolation that come with the overuse of ICTs promoted by current society. This loneliness, combined with the distinguishing feature of cyberbullying being inescapable, could increase the adverse effects of stress associated with this distinguishing feature (Keskin, Akgun, Ayar, & Kayman, 2016).

When linking feelings of humiliation to feelings of shame, one should note that humiliation is a felt outcome that the individual believes is brought on by others. On the other hand, feelings of shame are the appraisal made by the individual that there is something wrong with themselves as a result of feeling that he or she has not measured up to a moral code. Feeling humiliated by others can tarnish the self-image of the individual, leading to feelings of shame (Burton, 2014).

In a qualitative study by Lewis (2004) on workplace bullying among university employees, one of the respondents notes that her worst day was when she was presenting a tutorial to students. She presented the tutorial in a library behind a screen, and she and her tutorial group could hear two of her colleagues plotting an attack against her. She then notes that she was not surprised by the actions of her colleagues. The author infers that it was the humiliation in front of the students and not the words themselves that caused the feelings of shame (Lewis, 2004).

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Another respondent noted how the repeated humiliation in front of others left permanent psychological scars. Another explained of the sheer terror when walking into previous bullies and wanting to avoid the bullies at all cost by, for instance, not going into the city centre for fear of seeing them. These indicate the damage that feelings of humiliation from bullying can bring (Lewis, 2004).

The adverse effects could be potentially worsened by the permanence of cyberbullying messages and the inescapability that characterises cyberbullying. Mainly, the cyberbullying messages can be repeatedly reviewed, and if sent through social media domains, the humiliation is in front of a much larger crowd (Campbell, 2005). Additionally, the victim cannot escape the bully by, for instance, not going into the city centre, as the bully could reach the victim at any time of day. One respondent in the study by D'Cruz and Noronha (2013 p. 329) notes:

> In the evenings, she (boss) will call for no reason or SMS…'Have you completed this? Have you seen that? Do this tomorrow…', she will say. But what is the need? It (the work) can be managed in the office the next day. So this kind of harassment goes on…in the office, outside the office…no peace or time-out is there.

These findings show that humiliation from bullying may have profound effects on individuals.

One can then consider the effect of anger. Anger is an outward-focused emotion resulting from stressful events (Vranjes et al., 2017). Anger has been associated with an emotional reaction to cyberbullying victimisation that could lead to cyberbullying perpetration (Kowalski et al., 2014). Zsila et al. (2018) considered the effect of anger from being a victim to cyberbullying both in terms of angry afterthoughts and angry memories. They found that victims, especially male ones, who tended to ruminate about past experiences, were more likely to become cyberbully perpetrators. These findings go to show how an anger reaction to cyberbullying could perpetuate the cyberbullying cycle.

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Two types of anger expression have been identified (Ak, Özdemir, & Kuzucu, 2015). Anger-in refers to feeling but not expressing it and rather keeping it under pressure. Anger-out is expressing felt anger through physical (e.g., hitting), and verbal (e.g., insulting others) means. Ak et al. (2015) explored whether anger-in and anger-out reactions to cyberbullying victimisation increased cyberbullying perpetration. They found that cyber-victimisation indirectly linked to perpetration via anger-in and not anger-out. This finding shows that the inability to express anger appropriately could lead to cyberbullying.

Feeling emotionally tired or emotional exhaustion is another effect with a high mean for respondents. Emotional exhaustion has been defined as a physically and emotionally depleted state of strain from excessive and chronic demands and work stressors (Cropanzano, Rupp, & Byrne, 2003; Wright & Cropanzano, 1998). Emotional exhaustion is an intensely negative response to stressors in that it has been associated with psychological and physical symptoms and is considered a component of burnout (Cropanzano et al., 2003; Day et al., 2012).

In a study by Farley et al. (2016) they explored the relationships between cyberbullying and emotional exhaustion, and between traditional bullying and emotional exhaustion using hierarchical regression analyses. They found significant relationships in the effect of traditional bullying on emotional exhaustion (B = 0.37) and in the effect of cyberbullying on emotional exhaustion (B = 0.24). Furthermore, they found that cyberbullying explained a small but significant amount of variance above other harassment variables in emotional exhaustion. These findings by Farley et al. (2016) solidifies how the current study found emotional exhaustion as an effect on employees.

The finding that in this study, cyberbullying increases demands experienced from using ICTs could further solidify why respondents experience high levels of emotional exhaustion as a result of cyberbullying. Day et al. (2012) found a statistically significant positive relationship between overall ICT demands and emotional exhaustion (B = .14). Given that cyberbullying increases ICT demands, this could, in turn, then further increase feelings of emotional exhaustion.

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The four effects explored here indicate that the experience of a cyberbullying event could have severe consequences on the psychological wellness of the employee.

5.3.1.5 The experience of traditional bullying when accompanied by cyberbullying

One unexpected finding of this study is that when considering the behavioural measure of traditional bullying, the means were higher in the group that had exposure to both traditional and cyberbullying than the group that had exposure to traditional bullying on its own. Therefore, when traditional bullying is accompanied by cyberbullying the experiences of traditional bullying was experienced as worse than when traditional bullying was experienced on its own.

5.3.2 Effects on individual job performance

To determine whether workplace cyberbullying has a negative effect, above that of traditional workplace bullying, on the performance abilities of individual employees, one can consider the differences in exposure group status in terms of perceptions of influence on job performance.

In terms of bullying experiences in general affecting job performance, 15.79% (*n* = 24) indicated that they felt they could not work due to bullying. When then considering how bullying experiences in general affect job performance, statistically significant differences between exposure groups can be found.

The most respondents that experienced an influence of bullying on their ability to perform are in the group with both traditional and cyberbullying, where more than half (52%, *n* = 13) of that group indicated an influence on job performance. In the group with exposure to traditional bullying only, 31.03% (*n* = 9) of respondents indicated an influence on job performance. For the group that only had exposure to cyberbullying, 25% (*n* = 1) of respondents indicated that bullying influenced their ability to work. The two groups with no direct bullying victimisation experienced very little to no inabilities to work as a result of bullying.

In terms of specific cyberbullying experiences affecting job performance, the pooled mean was *M* = 4.13 (*SD* = 2). No statistically significant difference can be reported

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between exposure groups based on specific cyberbullying experiences affecting job performance.

The findings above potentially show that people perceive that bullying in general influences performance abilities and not necessarily singular cyberbullying events. Also, given that cyberbullying is rarely experienced on its own, the combination of traditional and cyberbullying likely influences individuals' performance ability.

The results in the current study give some mixed messaging, which is also reflective of the results in the literature on the effects of cyberbullying on job performance. The statistically significant difference between the overall experience of cyberbullying and perceived lower performance mimics the findings by Privitera and Campbell (2009) and Piotrowski (2012). However, the lack of significant difference between the specific cyberbullying experience of and perceived lower performance mimics the findings by Kowalski et al. (2018), who found that for neither cyberbullying nor traditional bullying differences could be observed.

What is interesting is that in this study, it is the general experience of cyberbullying that causes perceived differences in performance and not specific events. A series of different events could be perceived as more severe than a single specific cyberbullying event. It is then the experience of cyberbullying in its totality that influences a decrease in performance.

5.3.3 Effects on organisational outcomes

This study considered organisational outcomes of turnover (where the turnover intention is an indirect indication of turnover) and absenteeism (where sick leave is an indirect indication of absenteeism), to determine whether workplace cyberbullying has a negative influence on organisational outcomes.

No direct link has been found between intention to quit and bullying, or sick leave and bullying. One possible reason for this finding is that the effect of bullying on those outcomes might be indirect in that bullying causes distress, which could lead to burnout, which could then cause an increase in intention to quit and sick leave (Du

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Toit, 2013; Foxcroft & Roodt, 2013; Schreuder & Coetzee, 2016). This notion has been shown in some previous research.

Djurkovic, McCormack, and Casimir (2003) for instance, found that there is an indirect link between workplace bullying and intention to leave via physical symptoms. In other words, the bullying caused physical symptoms, which in turn increased employees' intention to leave an organisation. Baruch (2005), on the other hand, did find a direct relationship between intention to leave and workplace cyberbullying, but not for absenteeism, for which they suggest there might be an indirect relationship. Additionally, Muhonen et al. (2017) found stronger indirect than direct relationships between workplace cyberbullying and intention to quit.

Therefore, the findings in this study suggest that one should target cyberbullying in the workplace to avoid the indirect effects on organisational outcomes.

5.3.4 Coping mechanisms that might affect the individual and organisational performance

Four types of coping mechanisms were quantitatively explored in this study: general use of coping mechanisms for cyberbullying specifically, reporting a bullying incident for either traditional or cyberbullying, trying to block the cyberbully and trying to ignore the traditional bully.

In the total sample, 5% (*n* = 7) of respondents made use of coping mechanisms specific for cyberbullying. When considering specifically the groups in the sample that had exposure to cyberbullying, albeit on its own (exposure group 4) or alongside traditional bullying (exposure group 5), then 24% (*n* = 7) of those respondents made use of a coping mechanism for cyberbullying.

In terms of types of coping mechanisms for cyberbullying and traditional bullying, 11% (*n* = 17) of respondents reported a bullying incident (traditional or cyber), 3% (*n* = 5) tried to block a cyberbully, and 25% (n = 38) tried to ignore the traditional bully.

For the general use of coping mechanisms specific to cyberbullying, respondents were also asked to describe these qualitatively. Some of the coping mechanisms that they

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described include (a) confronting the bully; (b) using the grievance process/ reporting the bully; (c) discussing it with colleagues/ friends; (d) speaking to the union; and (e) contacting EAP (employee assistance program) for help.

The qualitative comments respondents in this study indicate that not all possible coping mechanisms were quantitatively explored. The mention of discussing the bullying events with colleagues/ friends, speaking to the union and contacting EAP (employee assistance program) for help shows the importance of using social support as a coping mechanism like described in the literature review of this study (Forssell, 2018; Muhonen et al., 2017).

In terms of confronting the bully, Heatherington and Coyne (2014) found that four out of the five respondents used confrontation as a coping mechanism. Participants found that to be a high-risk strategy and could have negative consequences. One of the participants noted how he confronted his employer on receiving emails on his private account during a time on leave, whereby the employers stated that the respondent was threatening the employers. The respondent then realised that after the confrontation, they set up situations to make things worse. This realisation goes to show that confrontation on its own is not always an effective coping strategy.

The coping mechanisms that were then considered in this study can then be explored in terms of whether it helped to lessen the adverse psychological effects and effects on performance.

5.3.4.1 The influence of coping mechanism between bullying and the psychological characteristics of the individual

It is worthwhile exploring differences in the psychological characteristics based on coping mechanisms for the psychological characteristics where statistically significant differences have been found based on exposure group status (that is, perceived stress and demands from using ICTs).

In terms of perceived stress, statistically significant lower levels of perceived stress have been found for those who blocked the cyberbully, reported a bullying incident or ignored the traditional bully. However, no statistically significant differences have been

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found between experiences of perceived stress based on the general use of coping mechanisms for cyberbullying. Therefore, blocking a cyberbully, reporting bully or ignoring the traditional bully at least partially helped to reduce the adverse effects on perceived stress.

For demands from using ICTs, statistically significant higher levels of demands from using ICTs were found for in general coping mechanisms for cyberbullying victimisation and for blocking a cyberbully. However, whether someone ignored the traditional bully or reported a bullying incident, did not cause an increase or decrease in experiencing demands from using ICTs.

It could be considered an interesting finding that coping mechanisms had a negative influence (that is, more demands from ICTs) where the coping mechanisms were directed towards cyberbullying, and no influence when more unrelated to cyberbullying. This finding could show that using coping mechanisms adds to the demands of using ICTs instead of decreasing it. The respondents could have potentially felt that they had added demands given that they now had to monitor whether the coping mechanism was effective, knowing that the bully could retaliate at any time.

What these findings show is that while employing coping mechanisms could help to decrease stress, it might increase the perceived demands that come with the use of ICTs. Therefore, it might be necessary to employ additional coping mechanisms above those used to cope with bullying, to help decrease the perceived ICT use demands.

5.3.4.2 The influence of coping mechanism between bullying and the performance abilities of the individual

In terms of those that indicated that bullying did not influence their performance abilities, none of them indicated that they tried to block the cyberbully (100%, *n* = 128). For those where bullying influenced their performance abilities, 79.17% (*n* = 19) of them did not try to block the cyberbully, whereas 20.83% (*n* = 5) did.

In terms of those that indicated that bullying did not influence their performance abilities, 95.31% (*n* = 122) did not try to report the bullying incident, whereas 4.69% (*n*

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= 6) did. For those where bullying influenced their performance abilities, 54.17% (*n* = 13) did not try to report the bullying incident, whereas 45.83% (*n* = 11) did.

Lastly, in terms of those that indicated that bullying did not influence their performance abilities, 87.5% (*n* = 112) did not try to ignore the traditional bully, whereas 12.5% (*n* = 16) did. For those where bullying influenced their performance abilities, 8.33% (*n* = 2) tried to ignore the traditional bully, whereas 91.67% (*n* = 22) did.

These findings only start to explore the potential influence that coping mechanisms could have to influence whether cyberbullying does decrease individual performance. Very little research is available to show the link between coping mechanisms decreasing the negative effects of cyberbullying on performance.

5.3.4.3 The influence of coping mechanism between bullying and organisational outcomes

No statistically significant differences can be reported between exposure group status and organisational outcomes, therefore not explored in terms of coping mechanisms.

5.4 Chapter conclusion

This chapter was concerned with exploring the results of this study in the context of other literature as discussed in Chapter 2 of this study and further contextualised where findings were profound or not explored enough in the preceding chapters. Overall, support was found for the prevalence of cyberbullying in the workplace, especially in its co-occurrence with traditional bullying. Some support was found that cyberbullying adds additional effects above that of traditional bullying, and where not the effects of it in line with that of traditional bullying is still severe. The presence of coping mechanisms was also found to help lessen the effects of bullying on the psychological characteristics and performance abilities of the individual.

In the next chapter, an overall conclusion for the study is given. Some limitations, along with future research and practical implications, are explored.

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CHAPTER 6
LIMITATIONS, RECOMMENDATIONS AND CONCLUSION

6.1 Limitations

Like all research, there are some methodological limitations to this study that could hinder the generalisability of the findings.

For this study, one could first consider the characteristics of the sample and the sampling technique as a limitation. Given that purposive or availability sampling is used to identify the organisations in this study, there is the possibility of overweighting subgroups of organisations that contain the entire population, that is more readily accessible. Furthermore, only one organisation was used in this study to draw the sample. Therefore, the findings of this study might be more generalisable to public enterprise employees in the Western Cape and not necessarily all employees in the South-African population.

Next one can consider elements of the statistical analysis and its techniques as a potential limitation. This study made predominant use of analysis of variance to make inferences and interpret the data. For future research on this topic, regression analyses and structural equation modelling (SEM) techniques can be considered.

When interpreting the statistical differences of the analysis of variance findings, Fisher's least significant difference (LSD) test was used as a post hoc test to determine which exposure groups differed from one another during the different analyses. One widespread limitation with using this test is that unlike the Bonferroni, Tukey, Dunnett, and Holm methods, Fisher's LSD does not correct for multiple comparisons, which in turn adds a limitation to this study (GraphPad Software, n.d.).

Additionally, it is beyond the scope of the current study to look into all the psychometric properties of all scales used. While all of the scales used have reliability analyses done on the total and subscales, and some of them the validity having been done, more advanced analyses into each of the measures might be useful. For instance, a confirmatory factor analysis could be useful on the newly created scales (CBIWQ with

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the EOCB) and the ROBVW, if they are to be used as established measures of cyberbullying victimisation.

6.2 Recommendations for future research

In exploring the literature and the current findings on the topic of cyberbullying in the workplace, along with its co-occurrence with traditional bullying some topics not covered by this study have been identified to be explored by future research

Firstly, one can consider the proposed conceptual model as presented in Figure 4 for future research to explore. While differences in some of the variables have been explored, no path coefficients have been established. Additionally, some of the variables (like the outcomes of anger, humiliation, emotional exhaustion and trust) have only been descriptively explored; therefore, a more in-depth analysis in how they relate to bullying could prove useful. Additionally, some indirect relationships to cyberbullying (for example, turnover linked to perceived stress) have been suggested given that direct differences could not be established.

Besides considering the explored and unexplored relationships in the proposed conceptual model, other topics might be worthwhile investigating. The focus of the study has been mostly on the victims of cyber and traditional bullying. It might be useful to explore three other role players in the bullying cycle, which is the bully, the witness, and the social support circle of the victim.

It would be useful to explore the antecedents and prevalence and effects of cyberbullying on bullies or perpetrators. It will be harder to obtain them as a sample group given that perpetrators are generally not willing to partake in research (Kowalski et al., 2014; Lee, 1993). This issue will increase the size of the hidden population. However, further exploring them perpetration might help understand the cycle of bullying. In the workplace context, it might be especially helpful to understand the power dynamics of perpetration and victimisation between leaders and subordinates.

While this study briefly considered them, one could further explore the influence of the witness, given the importance of witnesses in the cyberbullying victimisation cycle (Kowalski et al., 2014) in that they could intervene and stop the cycle or perpetuate

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the cycle even further. Limited, but some support was found for the effects of bullying on the witnesses; it could therefore even be further explored.

In the literature review, perceived support from peers and family members was highlighted to be a protective factor against both cyberbullying perpetration and cyberbullying victimisation in some instances (Forssell, 2018; Muhonen et al, 2017). Seeking social support was also highlighted by respondents as a type of coping mechanism to help with victimisation. Therefore, the role of social support as a potential protective factor and coping mechanism could be explored.

Another coping mechanism that was qualitatively highlighted by respondents and not quantitatively explored is confronting the bully. Some evidence in the discussion shows that this might not be the best coping mechanism, but it might be worthwhile to explore this further.

This study looked predominantly at coping mechanisms as a protective factor for cyberbullying affecting individual and organisational factors. However, other protective factors can be systematically studied that other research has considered. These could include perceived organisational innovation climate (Hong et al., 2014) or other organisational culture factors, emotional regulation ability in both victims and bullies, higher levels of empathy (Dilmac, 2009), higher levels of optimism (Snyman & Loh, 2015).

Lastly, based on the descriptive discussion of results, the researcher proposes a conceptual model of the interaction between cyber- and traditional bullying in Figure 4 for future research to explore.

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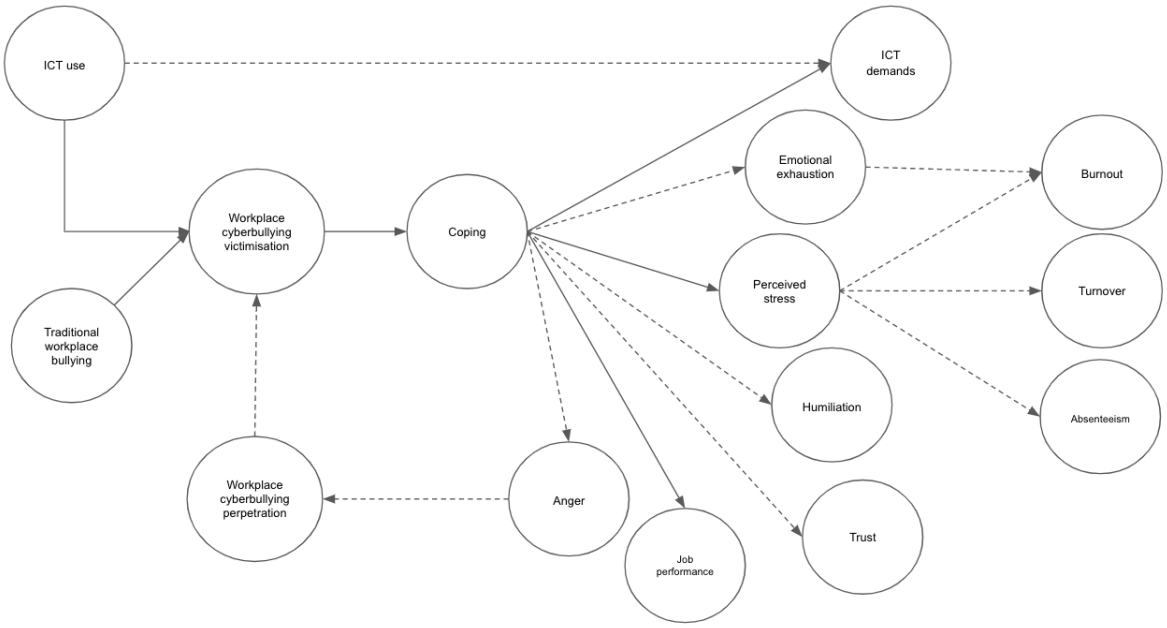

Figure 4. The proposed conceptual model of the effects of workplace traditional and cyberbullying.

In Figure 4, the dotted lines represent more unexplored relationships. In the current study, evidence for only two of the risk factors was found, and therefore only ICT use, and the presence of traditional workplace bullying is added as antecedents of workplace cyberbullying in this proposed model. It should be noted that traditional bullying may also have more direct pathways to the potential effects in this model. The researcher also proposes that ICT use will have a direct impact on ICT demands, given that increases in some of the ICT demands could not be associated with cyberbullying victimisation.

Based on the findings of this study, it is proposed that the effects of bullying get mediated by coping mechanisms. In this study it started being explored for the influence of bullying on ICT demands, perceived stress and job performance, while the psychological reactions of anger, decrease in trust, humiliation and emotional exhaustion was only descriptively explored. It is then proposed that coping would also mediate between bullying victimisation and these psychological reactions. Additionally, based on the discussion of these results, it is proposed that anger could lead to bullying perpetration, which could then lead back into bullying victimisation,

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perpetuating the bullying cycle. The psychological reaction of emotional exhaustion has been contextualised as a component of burnout; therefore, the researcher proposes that emotional exhaustion will lead to burnout, which is not explored in this study.

Workplace bullying did not cause significant differences in the organisational outcomes of turnover and absenteeism. Based on this finding and the contextualisation of the finding with literature, it is suggested that there is an indirect relationship to workplace bullying through perceived stress, and that perceived stress could also eventually lead to burnout.

It is beyond the scope of the current study to explore this conceptual model, but the researcher recommends this is done in future research.

6.3 Practical implications

Based on the findings of this study, some practical suggestions can be made to aid organisations in helping to address the problem of both traditional and cyberbullying.

Firstly, it is essential that top management cascade an attitude of non-tolerance for cyberbullying to employees. Codes of practice need to be updated to ensure that workplaces implement policies and procedures to address this issue. The human resource department and other managers need to be informed of the possible nefarious effects that are associated with cyberbullying in order to establish appropriate measures to redress the problem. Concerning the fact that the cyberbully's identity might be unknown, in such cases redressing the harmful acts of the bully might not be possible and the cyber-bullied victim needs to be helped to cope with the cyberbullying occurrences appropriately.

Organisations might want to attempt to remove some of the fears that are associated with cyberbullying experiences by providing employees with training concerning the use of information and communication devices. This study found that the general demands from ICTs along with cyberbullying need to be addressed. In this regard, organisations can implement some of the suggestions of individual and organisation-

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wide interventions to combat some of the demands of ICT use, as suggested by Stich et al. (2015).

They suggest that individuals increase their discipline in email checking and try to check emails at set intervals. Individuals should also try and increase their ability to detach from work after hours by engaging in activities unrelated to ICT use. For organisation-wide interventions, organisations could try to increase awareness of work-life issues, especially where norms of constant availability is present, with collective discussions, support groups and training. Organisations could also provide guidelines and training on limiting emails sent as well as helping employees write clearer emails and other online communication messages.

To further aid employees targeted by bullies, organisations can help them by providing a safe space to report bullying incidents. Victims must feel safe to report bullying to the organisation, given that high levels of fear of retaliation might exist, especially if the bully is the superior of the victim. Organisations can enable HR practitioners or establish an employee assistance program where employees can report such events.

Additionally, given the importance of social support as a coping mechanism, organisations can try to set up support groups for those who are victims or refer the victims to organisations they can reach out to, to get support.

6.4 Conclusion

Organisations in the 21st century have to achieve a set of complex results, and the use of communication technology has become imperative for modern society (Valencia, 2014). The increased use of communication both inside and outside the organisation has affected individuals being inseparable from their information technology and communication devices (Piotrowski, 2012). There has been an increase in the use of international competition, even though not all people have been equally exposed to ICT's in the workplace (Prinsloo, 2005). The increased reliance can have adverse effects.

Cyberbullying is one of the negative consequences of the increased use of ICTs. Cyberbullying is a very pressing phenomenon, which has been researched among adolescents and students extensively (Kuzma, 2013). It has also found by adults, even

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though very little research has been done. This study then sought to explore cyber and traditional bullying in terms of its prevalence and its effects on individuals and organisations.

From this study, one can conclude that cyberbullying is prevalent in South-African organisations, where it co-occurs with traditional bullying. Where traditional bullying could still occur on its own, cyberbullying seldom does, but instead accompanies traditional bullying.

This study started exploring the potential risk factors for becoming victim to cyberbullying. When considering demographic factors, some surprising findings came to light. Besides the explored risk factors, being male was found to be a risk factor. Also, being Caucasian increased the risk for traditional only bullying exposure, while being Coloured increased the risk for exposure to both types of bullying, and being African increased being a witness to either type of bullying.

When considering the other explored risk factors, increased use of ICTs for work-related purposes is found. However, exposure to bullying did not depend on which communication medium was used or with who was communicated. The presence of traditional bullying did seem to increase the prevalence of cyberbullying as they seemed to co-occur. The sample consisted of older individuals, and therefore, the increase of youth into the workplace was not found. No age-related differences in bullying exposure could be established, which could point to generational differences in ICT use and that youthful persons might prefer the private above the public sector.

This study found that there were differences in the psychological characteristics of (a) perceived stress, (b) demands experience because of ICT use, and (c) the extent of behavioural experiences of bullying when considering the psychological effects of cyberbullying on the individual. Cyberbullying caused additional effects above that of traditional bullying in terms of ICT demands and the extent of behavioural experiences of bullying. While the perceived stress was similar between respondents with traditional only bullying exposure and respondents with exposure to both types, the effects of bullying on stress was still severe.

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Additional psychological effects of cyberbullying were descriptively explored. The emotional reactions with the highest means were lowered trust levels, anger, humiliation and emotional exhaustion. Different cyberbullying events could cause individuals to have lesser perceptions of the trustworthiness of their bully, which could lead to poorer workplace relationships. Cyberbullying could also lead to higher levels of humiliation, which could lead to higher feelings of shame on the part of the victim. The cyberbullying events could also lead to feelings of anger, which if not adequately expressed, could lead to cyberbullying perpetration in that the victim becomes the bully. This potential transition from victim to bully perpetuates the cycle of cyberbullying. Additionally, cyberbullying victimisation could lead to emotional exhaustion, which could lead to eventual burnout.

In terms of the effects on performance, the overall experience of bullying, rather than specific cyberbullying events, is likely to decrease an individual's performance. When then considering the effects on organisational outcomes, exposure group status does not seem to influence differences in intention to quit or absenteeism. It could be that there is instead an indirect relationship at play. The increased stress and potential burnout caused by bullying experiences could influence the intention to quit and absenteeism.

When looking at the coping mechanisms of the general use of coping mechanisms for cyberbullying, reporting a bully, blocking a cyberbully and ignoring a traditional bully, all of them were used in varying degrees. These coping mechanisms also had varying degrees of effectiveness for alleviating the effects of bullying on perceived stress. Interestingly, coping mechanisms used specifically for cyberbullying increased the adverse effects on ICT demands. This finding indicates that additional coping mechanisms to deal with ICT demands should also be considered.

From these results, one can see that cyberbullying is prevalent in the workplace and that it poses a problem in addition to that of traditional bullying. This finding causes concern for employees on an individual level, but also organisational outcomes. To address these concerns, organisations should adopt an uncompromising attitude opposing cyberbullying and should invest in further research to understand the phenomenon. Organisations should create both preventative and corrective intervention aimed specifically on cyberbullying and not merely traditional bullying interventions as this will not fully cover the scope of the effects of cyberbullying.

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REFERENCES

Aalsma, M. C., & Brown, J. R. (2008). What is bullying? *Journal of Adolescent Health*, *43*(2), 101-102. doi: 10.1016/j.jadohealth.2008.06.001

ABC News. (2014). *Charlotte Dawson's death puts cyber-bullying back in spotlight*. *ABC News*. Retrieved from http://www.abc.net.au/news/2014-02-23/charlotte-dawson-death-puts-focus-on-cyber-bullying/5277904

Abma, I. L., Rovers, M., & van der Wees, P. J. (2016). Appraising convergent validity of patient-reported outcome measures in systematic reviews: constructing hypotheses and interpreting outcomes. *BMC research notes, 9*(1), 226. doi: 10.1186/s13104-016-2034-2

Ak, Ş., Özdemir, Y., & Kuzucu, Y. (2015). Cybervictimization and cyberbullying: The mediating role of anger, don't anger me! *Computers in Human Behavior*, *49*, 437-443. doi: 10.1016/j.chb.2015.03.030

Akbulut, Y., Sahin, Y. L., & Eristi, B. (2010). Cyberbullying victimization among Turkish online social utility members. *Journal of Educational Technology & Society*, *13*(4), 192-201.

Alexandra, S. (2014). *The ZAZI campaign´ s Facebook page: A field study of the use of Facebook in the ZAZI campaign in South Africa.* Retrieved from www.diva-portal.org/smash/get/diva2:722473/FULLTEXT01.pdf

Almeida, A., Correia, I., Marinho, S., & Garcia, D. (2012). Virtual but not Less Real: A Study of Cyber-bullying and Its Relations to Moral Disengagement and Empathy. In Li, Q. Cross, D., Smith, P.K. (Eds.), *Cyber-bullying in the global playground: Research from international perspectives*. (pp. 223-244). West Sussex: Wiley-Blackwell

Anderson, C.J., & Bushman, B.J. (2002). Human aggression. *Annual Review of Psychology*, 53, 27–51. Retrieved from https://tinyurl.com/yxcpvch4

Stellenbosch University https://scholar.sun.ac.za

Babbie, E. (2010). The Practice of Social Research-12. *Belmont: Wadsworth*.

Babbie, E., & Mouton, J. (1998). *The Practice of Social Research.* Oxford University Press: Cape Town.

Babbie, E., Mouton, J., Vorster, P., & Prozesky, B. (2007). *The Practice of Social Research: South African Edition*. Cape Town: Oxford University Press.

Bakker, A. B., Demerouti, E., & Euwema, M. C. (2005). Job resources buffer the impact of job demands on burnout. *Journal of Occupational Health Psychology, 10,* 170–180. doi: http://dx.doi.org/10.1037/1076-8998.10.2.170

Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the job demands-resources model to predict burnout and performance. *Human Resource Management, 43*, 83–104. doi: https://doi.org/10.1002/hrm.20004

Balducci, C., Fraccarolib, F., & Schaufelic, W.B. (2011). Workplace bullying and its relation with work characteristics, personality, and post-traumatic stress symptoms: an integrated model. *Anxiety, Stress, & Coping, 24*(5), 499-513. doi: 10.1080/10615806.2011.555533

Batterbee, W. A. (2014). *Cyber bullying: bare schools filling the legal gap.* (Doctoral dissertation, North-West University, Potchefstroom, South Africa). Retrieved from http://hdl.handle.net/10394/10651

Bauer, P. C., & Freitag, M. (2018). Measuring trust. *The Oxford Handbook of Social and Political Trust*, *15*.

Beran, T., & Li, Q. (2008). The relationship between cyber-bullying and school bullying. *The Journal of Student Wellbeing*, *1*(2), 16-33. doi: 10.21913/JSW.v1i2.172

Blaikie, N. (2003). *Analyzing Quantitative Data*. London: Sage Publishers

Stellenbosch University https://scholar.sun.ac.za

Bless, C., Higson-Smith, C., & Sithole, S. (2013). *Fundamentals of Social Research Methods: An African Perspective.* Juta & Company Ltd: Cape Town.

Bowling, N. A., Eschleman, K. J., Wang, Q., Kirkendall, C., & Alarcon, G. (2010). A meta-analysis of the predictors and consequences of organization-based self-esteem. *Journal of Occupational and Organizational Psychology*, *83*(3), 601-626. doi: https://doi.org/10.1348/096317909X454382

Brack, K., & Caltabiano, N. (2014). Cyberbullying and self-esteem in Australian adults. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, *8*. doi: 10.5817/CP2014-2-7

Brewer, B., Cave, A., Massey, A., Vurdelja, A., & Freeman, J. (2014). Cyber Bullying Among Female College Students: An Exploratory Study. *Californian Journal of Health Promotion, 12*(1), 40-51. doi: 10.32398/cjhp.v12i1.1554

Brotheridge, C.M. (2013). Explaining bullying: using theory to answer practical questions. *Team Performance Management*, *19*(3/4), 185-200. doi: 10.1108/TPM-07-2012-0023

Bui, H. T., Ituma, A., & Antonacopoulou, E. (2013). Antecedents and outcomes of personal mastery: cross-country evidence in Higher Education. *The International Journal of Human Resource Management*, *24*(1), 167-194. doi: 10.1080/09585192.2012.669781

Burton, N. (2014). *The Psychology of Humiliation. What is humiliation and can it ever be justified?.* Psychology Today. [Online]. Retrieved from https://www.psychologytoday.com/us/blog/hide-and-seek/201408/the-psychology-humiliation

Burton, P., & Mutongwizo, T. (2009). *Inescapable violence: Cyber bullying and*

Stellenbosch University https://scholar.sun.ac.za

electronic violence against young people in South Africa. Centre for Justice and Crime Prevention. CJCP Issue Paper, No. 8. [Online]. Retrieved from http://www.cjcp.org.za/uploads/2/7/8/4/27845461/issue_paper_8.pdf

Bushman, B. J. (2019). Aggression and Violence Defined. *Advanced Social Psychology: The State of the Science*.

Byron, A. (2013). *Cyberbullies creep into workplace, stalk ex-partners. USA Today.* Retrieved from https://www.pressreader.com/usa/usa-today-us-edition/20130219/282140698782315

Camacho Ahumada, S. (2015). *Cyberbullying impacts on users' satisfaction with information and communication technologies: the role of Perceived Cyberbullying Severity* (Doctoral dissertation, McMaster University, Ontario, Canada). Retrieved from https://macsphere.mcmaster.ca/bitstream/11375/16529/2/Camacho%20Ahumada%20Sonia%20-%20Thesis%20document.pdf

Campbell, M. A. (2005). Cyber Bullying: An Old Problem in a New Guise? *Australian Journal of Guidance and Counselling*, *15*(1), 68-76. doi: https://doi.org/10.1375/ajgc.15.1.68

Campbell, M., & Bauman, S. (2018). Cyberbullying: Definition, consequences, prevalence. In *Reducing Cyberbullying in Schools* (pp. 3-16). Academic Press. doi: https://doi.org/10.1016/B978-0-12-811423-0.00001-8

Cassidy, W., Faucher, C., & Jackson, M. (2014). The dark side of the ivory tower: Cyberbullying of university faculty and teaching personnel. Alberta Journal of Educational Research, *60*(2), 279-299. Retrieved from https://journalhosting.ucalgary.ca/index.php/ajer/article/view/55807

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of health and social behavior*, *24*(4), 385-396. doi: http://dx.doi.org/10.2307/2136404

Stellenbosch University https://scholar.sun.ac.za

Constant, D., Kiesler, S., & Sproull, L. (1994). What's mine is ours, or is it? A study of attitudes about information sharing. *Information systems research*, *5*(4). 400-421. doi: 10.1287/isre.5.4.400

Costa, P. T., & McCrae, R. R. (1980). Influence of extraversion and neuroticism on subjective well-being: happy and unhappy people. *Journal of Personality and Social Psychology*, *38*(4), 668-678. doi: 10.1037/0022-3514.38.4.668

Coyne, I., Farley, S., Axtell, C., Sprigg, C., Best, L., & Kwok, O. (2017). Understanding the relationship between experiencing workplace cyberbullying, employee mental strain and job satisfaction: A dysempowerment approach. *The International Journal of Human Resource Management*, *28*(7), 945-972. doi: https://doi.org/10.1080/09585192.2015.1116454

Coyne, I., Gopaul, A. M., Campbell, M., Pankász, A., Garland, R., & Cousans, F. (2019). Bystander responses to bullying at work: The role of mode, type and relationship to target. *Journal of Business Ethics, 157*(3)*,* 813-827. doi: 10.1007/s10551-017-3692-2

Creswell, J.W. (2014). *Research Design: Qualitative, Quantitative, & Mixed Methods Approaches.* Thousand Oaks, CA: Sage Publications.

Cropanzano, R., Rupp, D. E., & Byrne, Z. S. (2003). The relationship of emotional exhaustion to work attitudes, job performance, and organizational citizenship behaviors. *Journal of Applied Psychology*, *88*(1), 160-169. doi: http://dx.doi.org/10.1037/0021-9010.88.1.160

D'Ambra, J., & Rice, R. E. (1994). Multimethod approaches for the study of computer-mediated communication, equivocality, and media selection. *IEEE Transactions on Professional Communication, 37*(4), 231-239. doi: 10.1109/47.365170

Day, A., Paquet, S., Scott, N., & Hambley, L. (2012). Perceived information and

Stellenbosch University https://scholar.sun.ac.za

communication technology (ICT) demands on employee outcomes: the moderating effect of organizational ICT support. *Journal of occupational health psychology, 17*(4), 473-491. doi: 10.1037/a0029837

D'Cruz, P., & Noronha, E. (2013). Navigating the extended reach: Target experiences of cyber-bullying at work. *Information and Organization*, *23*(4), 324-343. doi: 10.1016/j.infoandorg.2013.09.001

De Lange, M., & Von Solms R. (2011). The importance of raising e-Safety awareness amongst children in South Africa. In Koch, A & van Brakel, P.A. (Eds.), *Proceedings of the 13th Annual Conference on world wide web applications.* Johannesburg, South Africa: Cape Peninsula University of Technology. Retrieved from http://www.zaw3.co.za/index.php/ZAWWW/2011/paper/viewFile/423/131

Demek, K. C., Raschke, R. L., Janvrin, D. J., & Dilla, W. N. (2018). Do organizations use a formalized risk management process to address social media risk?. *International Journal of Accounting Information Systems*, *28*, 31-44. doi: 10.1016/j.accinf.2017.12.004

Didden, R., Scholte, R. H., Korzilius, H., De Moor, J. M., Vermeulen, A., O'Reilly, M., & Lancioni, G. E. (2009). Cyber-bullying among students with intellectual and developmental disability in special education settings. *Developmental Neurorehabilitation*, *12*(3), 146-151. doi: https://doi.org/10.1080/17518420902971356

Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, *55*(1), 34-43. doi: 10.1037/0003-066X.55.1.34

Diener, E., Oishi, S., & Tay, L. (2018). Advances in subjective well-being research. *Nature Human Behaviour*, *2*(4), 253. doi:10.1038/s41562-018-0307-6

Dilmac, B. (2009). Psychological needs as a predictor of cyber bullying: A

Stellenbosch University https://scholar.sun.ac.za

preliminary report on college students. *Educational sciences: Theory and practice, 9*(3). 1307-1325. Retrieved from https://files.eric.ed.gov/fulltext/EJ858926.pdf

Djurkovic, N., McCormack, D., & Casimir, G. (2003). The physical and psychological effects of workplace bullying and their relationship to intention to leave: A test of the psychosomatic and disability hypotheses. *International Journal of Organization Theory & Behavior*, *7*(4), 469-497. doi: 10.1108/IJOTB-07-04-2004-B001

Dlodlo, N. (2015). Salient indicators of mobile instant messaging addiction with selected socio-demographic attributes among tertiary students in South Africa. *South African Journal of Psychology*, *45*(2), 207-222. doi: 10.1177/0081246314566022

Donegan, R. (2012). Bullying and cyberbullying: History, statistics, law, prevention and analysis. *The Elon Journal of Undergraduate Research in Communications, 3*(1), 33-42. Retrieved from https://www.elon.edu/u/academics/communications/journal/wp-content/uploads/sites/153/2017/06/04DoneganEJSpring12.pdf

Duncan, F. (2013). Employment trends: A hard look at the numbers. *MoneyWeb.* [Online]. Retrieved from http://www.moneyweb.co.za/moneyweb-the-burning-question/employment-trends-a-hard-look-at-the-numbers

Du Toit, J. (2013). *The scope of bullying among nurses in a public hospital in the Free State: a mixed-method study*. (Masters dissertation, Stellenbosch University, Stellenbosch South-Africa). Retrieved from http://hdl.handle.net/10019.1/80304

Einarsen, S., Hoel, H., & Notelaers, G. (2009). Measuring exposure to bullying and harassment at work: Validity, factor structure and psychometric properties of the Negative Acts Questionnaire-Revised. *Work & Stress*, *23*(1), 24-44. doi: 10.1080/02678370902815673

Erdur-Baker, Ö. (2010). Cyber-bullying and its correlation to traditional bullying,

Stellenbosch University https://scholar.sun.ac.za

gender and frequent and risky usage of internet-mediated communication tools. *New Media & Society*, *12*(1), 109-125. doi: 10.1177/1461444809341260

Everitt, B.S., & Skrondal, A. (2010). The Cambridge Dictionary of Statistics. *Cambridge*. Cambridge.

Fanti, K. A., Demetriou, A. G., & Hawa, V. V. (2012). A longitudinal study of cyberbullying: Examining risk and protective factors. *European Journal of Developmental Psychology*, *9*(2), 168-181. doi: 10.1080/17405629.2011.643169

Farley, S., Coyne, I., Axtell, C., & Sprigg, C. (2016). Design, development and validation of a workplace cyberbullying measure, the WCM. *Work & Stress*, *30*(4), 293-317. doi: 10.1080/02678373.2016.1255998

Farley, S., Coyne, I., Sprigg, C., Axtell, C., & Subramanian, G. (2015). Exploring the impact of workplace cyberbullying on trainee doctors. *Medical education*, *49*(4), 436-443. doi: http://dx.doi.org/10.1111/medu.12666

Farley, S. (n.d.). *Cyber-bullying in the Workplace*. Retrieved from http://www.cybersmile.org/resources/127/SheffieldUniPaper.pdf

Firth, L., Mellor, D. J., Moore, K. A., & Loquet, C. (2004). How can managers reduce employee intention to quit? *Journal of managerial psychology*, *19*(2), 170-187. doi: 10.1108/02683940410526127

Forssell, R. (2016). Exploring cyberbullying and face-to-face bullying in working life–Prevalence, targets and expressions. *Computers in Human Behavior*, *58*, 454-460. doi: 10.1016/j.chb.2016.01.003

Forssell, R. C. (2018). Gender and organisational position: predicting victimisation of cyberbullying behaviour in working life. *The International Journal of Human Resource Management*, 1-20. doi: https://doi.org/10.1080/09585192.2018.1424018

Stellenbosch University https://scholar.sun.ac.za

Foxcroft, C., & Roodt, G. (2013). *Introduction to psychological assessment in the South African context*. Oxford University Press Southern Africa: Cape Town.

Giorgi, G., Ando, M., Arenas, A., Shoss, M. K., & Leon-Perez, J. M. (2013). Exploring personal and organizational determinants of workplace bullying and its prevalence in a Japanese sample. *Psychology of Violence*, *3*(2), 185 - 197. doi: 10.1037/a0028049

Global village. (n.d.). In *Collins* online dictionary. Retrieved from https://www.collinsdictionary.com/dictionary/english/global-village

Glomb, T.M., & Cortina, L.M. (2006). The Experience of Victims: Using Theories of Traumatic and Chronic Stress to understand Individual Outcomes of Workplace Abuse. In Kelloway, K.E., Barling, J., & Hurrell, J.J. (Eds.), *Handbook of Workplace Violence* (pp. 517-534). Thousand Oaks, California: Sage publications. doi: 10.4135/9781412976947.n22

Glomb, T. M., & Liao, H. (2003). Interpersonal aggression in work groups: Social influence, reciprocal, and individual effects. *Academy of Management journal*, *46*(4), 486-496. doi: https://doi.org/10.5465/30040640

Gradinger, P., Strohmeier, D., & Spiel, C. (2009). Traditional bullying and cyberbullying: Identification of risk groups for adjustment problems. *Zeitschrift für Psychologie/Journal of Psychology*, *217*(4), 205-213. doi: 10.1027/0044-3409.217.4.205

GraphPad Software. (n.d.). *GraphPad Statistics Guide. Fisher's Least Significant Difference (LSD).* [Online]. Retrieved from https://www.graphpad.com/guides/prism/7/statistics/stat_fishers_lsd.htm?toc=0&printWindow

Greenacre, L., Tung, N. M., & Chapman, T. (2014). Self-confidence, and the ability to influence. *Academy of Marketing Studies Journal*, *18*(2), 169-180. Retrieved from https://www.abacademies.org/articles/amsjvol18no22014.pdf#page=176

Stellenbosch University https://scholar.sun.ac.za

Grigg, D. W. (2010). Cyber-Aggression: Definition and Concept of Cyberbullying. *Australian Journal of Guidance and Counselling*, *20*(2), 143-156. doi: 10.1375/ajgc.20.2.143

Hartling, L. M., & Lindner, E. G. (2016). Healing humiliation: From reaction to creative action. *Journal of Counseling & Development*, *94*(4), 383-390. doi: https://doi.org/10.1002/jcad.12096

Heatherington, W., & Coyne Coyne, I. (2014). Understanding individual experiences of cyberbullying encountered through work. *International Journal of Organization Theory & Behavior*, *17*(2), 163-192. Retrieved from https://dspace.lboro.ac.uk/2134/22449

Hendricks, L., Lumadue, R., & Waller, L. R. (2012). The evolution of bullying to cyber bullying: an overview of the best methods for implementing a cyber bullying preventive program. *National Forum Journal of Counselling and Addiction, 1*(1). Retrieved from https://tinyurl.com/anlq7qs

Herselman, M. E. (2003). ICT in rural areas in South Africa: various case studies. *Informing Science Proceedings*, 945-955. doi: https://doi.org/10.28945/2680

Hershcovis, M. S. (2011). “Incivility, social undermining, bullying… oh my!”: A call to reconcile constructs within workplace aggression research. *Journal of Organizational Behavior*, *32*(3), 499-519. doi: https://doi.org/10.1002/job.689

Hinkin, T. R., & Tracey, J. B. (1999). An analysis of variance approach to content validation. *Organizational Research Methods, 2*(2), 175-186. doi: https://doi.org/10.1177/109442819922004

Hinduja, S., & Patchin, J. (2007). Offline Consequences of Online Victimization. *Journal of School Violence*, *6*, 89–112. doi: https://doi.org/10.1300/J202v06n03_06

Stellenbosch University https://scholar.sun.ac.za

Hinduja, S., & Patchin, J. W. (2008). Cyber-bullying: An exploratory analysis of factors related to offending and victimization. *Deviant behavior*, *29*(2), 129-156. doi: https://doi.org/10.1080/01639620701457816

Hinduja, S., & Patchin, J. (2010). Bullying, Cyber-bullying, and Suicide. *Archives of Suicide Research*, *14*, 206–221. doi: https://doi.org/10.1080/13811118.2010.494133

Hoel, H., Sheehan, M. J., Cooper, C. L., & Einarsen, S. (2011). Organisational effects of workplace bullying. *Bullying and harassment in the workplace: Developments in theory, research, and practice*, 129-148. doi: 10.1201/EBK1439804896-8

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Sage publications.

Hong, J. C., Chien-Hou, L., Hwang, M. Y., Hu, R. P., & Chen, Y. L. (2014). Positive affect predicting worker psychological response to cyber-bullying in the high-tech industry in Northern Taiwan. *Computers in Human Behavior*, *30*, 307-314. doi: https://doi.org/10.1016/j.chb.2013.09.011

Hymel, S., Rocke-Henderson, N., & Bonanno, R. A. (2005). Moral disengagement: A framework for understanding bullying among adolescents. *Journal of Social Sciences*, *8*(1), 1-11. doi: https://doi.org/10.1080/00405841.2014.947219

Infante, D. A., & Wigley III, C. J. (1986). Verbal aggressiveness: An interpersonal model and measure. *Communications Monographs*, *53*(1), 61-69. doi: https://doi.org/10.1080/03637758609376126

Infurna, F. J., Gerstorf, D., Ram, N., Schupp, J., & Wagner, G. G. (2011). Long-term antecedents and outcomes of perceived control. *Psychology and aging*, *26*(3), 559. doi: http://dx.doi.org/10.1037/a0022890

Johnston, A. C., & Warkentin, M. (2010). Fear appeals and information security

Stellenbosch University https://scholar.sun.ac.za

behaviors: an empirical study. *MIS quarterly*, 549-566. Retrieved from https://tinyurl.com/y5v6e8ra

Joinson, A. (1998). Causes and implications of disinhibited behavior on the Internet. In Gackenbach, J. (Ed) *Psychology and the Internet: Intrapersonal, interpersonal, and transpersonal implications*. (pp. 43-60). San Diego, CA, US: Academic Press.

Jones, S. E. (2014). *Examining Cyber-bullying Bystander Behavior Using a Multiple Goals Perspective*. (Masters Dissertation, University of Kentucky, Lexington, USA). Retrieved from https://tinyurl.com/y2g96css

Jupp, V. (2011). Volunteer Sampling. *The Sage Dictionary of Social Research Methods.* [Online]. Retrieved from: https://methods.sagepub.com/reference/the-sage-dictionary-of-social-research-methods/n223.xml

Juvonen, J., & Gross, E. F. (2008). Extending the school grounds? —Bullying experiences in cyberspace. *Journal of School Health*, *78*(9), 496-505. doi: https://doi.org/10.1111/j.1746-1561.2008.00335.x

Kalamdien, D. J. (2013). *The nature and prevalence of workplace bullying in the Western Cape - A South African study*. (Masters dissertation, Stellenbosch University, Stellenbosch, South Africa). Retrieved from http://hdl.handle.net/10019.1/85750

Katzer, C., Fetchenhauer, D., & Belschak, F. (2009). Cyber-bullying: Who are the victims? A comparison of victimization in Internet chatrooms and victimization in school. *Journal of Media Psychology*, *21*, 25–36. doi: http://dx.doi.org/10.1027/1864-1105.21.1.25

Kiriakidis, S. P., & Kavoura, A. (2010). Cyber-bullying: a review of the literature on harassment through the internet and other electronic means. *Family & community health*, *33*(2), 82-93. doi: https://doi.org/10.1080/10926771003788979

Stellenbosch University https://scholar.sun.ac.za

Kowalski, R. M., & Limber, P. (2007). Electronic bullying among middle school students. *Journal of Adolescent Health*, *41*, 22–30. doi: https://doi.org/10.1016/j.jadohealth.2007.08.017

Kowalski, R. M., Giumetti, G. W., Schroeder, A. N., & Lattanner, M. R. (2014). Bullying in the Digital Age: A Critical Review and Meta-Analysis of Cyber-Bullying Research among Youth. *Psychological Bulletin,* 1-65. doi: http://dx.doi.org/10.1037/a0035618

Kowalski, R. M., Giumetti, G. W., Schroeder, A. N., & Reese, H. (2012). Cyberbullying among college students: Evidence from multiple domains of college life. In C. Wankel & L. Wankel (Eds.), *Misbehavior online in higher education* (pp. 293–321). Bingley, United Kingdom: Emerald.

Kowalski, R. M., Toth, A., & Morgan, M. (2018). Bullying and cyberbullying in adulthood and the workplace. *The Journal of social psychology*, *158*(1), 64-81. doi: https://doi.org/10.1080/00224545.2017.1302402

Krabbe, P. (2017). *The measurement of health and health status: concepts, methods and applications from a multidisciplinary perspective*. Academic Press: Amsterdam.

Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukophadhyay, T., & Scherlis, W. (1998). Internet paradox: A social technology that reduces social involvement and psychological well-being? *American Psychologist, 53*(9), 1017-1031. Retrieved from https://tinyurl.com/yy7moxtz

Kumar, V., Bhaskaran, V., Mirchandani, R., & Shah, M. (2013). Practice prize winner - creating a measurable social media marketing strategy: increasing the value and ROI of intangibles and tangibles for hokey pokey. *Marketing Science*, *32*(2), 194-212. doi: https://doi.org/10.1287/mksc.1120.0768

Kuzma, J. (2013). Empirical study of cyber harassment among social networks.

Stellenbosch University https://scholar.sun.ac.za

International Journal of Technology and Human Interaction (IJTHI), *9*(2), 53-65. doi: http://dx.doi.org/10.4018/jthi.2013040104

Langos, C., & Giancaspro, M. (2017). Empowering Workers: Avenues of Legal Redress for Victims of Workplace Cyberbullying. *Australian Business Law Review, 45*. Retrieved from https://tinyurl.com/y6zdw3ef

Lee, R. M. (1993). *Doing Research on Sensitive Topics.* London: Sage Publishers

Lee, R.T., & Brotheridge, C.M. (2006). When prey turns predatory: workplace bullying as a predictor of counter aggression/bullying, coping, and well-being. *European Journal of Work and Organizational Psychology*, 15(3). 352-377. doi: https://doi.org/10.1080/13594320600636531

Lewis, D. (2004). Bullying at work: The impact of shame among university and college lecturers. *British Journal of Guidance & Counselling*, *32*(3), 281-299. doi: http://dx.doi.org/10.1080/03069880410001723521

Lewis, J. (n.d.). *What Are the Fundamental Differences between Public and Private Sector Financial Management?* [Online]. Retrieved from http://smallbusiness.chron.com/fundamental-differences-between-public-private-sector-financial-management-37395.html

Leymann, H. (1990). Mobbing and Psychological terror at Workplaces. *Violence and Victims*, *5*(2), 119-126. Retrieved from http://www.mobbingportal.com/LeymannV%26V1990(3).pdf

Li, Q. (2006). Cyberbullying in schools a research of gender differences. *School psychology international*, *27*(2), 157-170. doi: https://doi.org/10.1177/0143034306064547

Linnes, C., & Metcalf, B. (2017). iGeneration And Their Acceptance of Technology. *International Journal of Management & Information Systems (IJMIS)*, *21*(2), 11-26. doi: https://doi.org/10.19030/ijmis.v21i2.10073

Stellenbosch University https://scholar.sun.ac.za

Loseke, D.R. (2013). *Methodological Thinking: Basic Principles of Social Research Design.* Thousand Oaks, CA: Sage Publications.

Luo, X., Zhang, J., & Duan, W. (2013). Social media and firm equity value. *Information Systems Research*. *24*(1). 146-163. doi: https://doi.org/10.1287/isre.1120.0462

Lutgen-Sandvik, P., Tracy, S. J., & Alberts, J. K. (2007). Burned by bullying in the American workplace: Prevalence, perception, degree and impact. *Journal of Management Studies*, *44*(6), 837-862. doi: https://doi.org/10.1111/j.1467-6486.2007.00715.x

Lyytinen, K., & Yoo, Y. (2002). Ubiquitous computing. *Communications of the ACM, 45*(12), 63-96. Retrieved from https://pdfs.semanticscholar.org/c56c/4923ac6880e2b98983c1f875b5a28559f357.pdf

Madden, C., & Loh, J. (2018). Workplace cyberbullying and bystander helping behaviour. *The International Journal of Human Resource Management*, 1-25. doi: https://doi.org/10.1080/09585192.2018.1449130

Mason, K.L. (2008). Cyber-bullying: A preliminary assessment for school personnel. *Psychology in the schools*, *45*(4), 323–348. doi: https://doi.org/10.1002/pits.20301

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of management review*, *20*(3), 709-734. doi: http://dx.doi.org/10.2307/258792

Mayer, M.J., Gordhan, S., Manxeba, R., Hughes, C., Foley, P., Maroc, C., Lolwana, P., & Nell, M. (2011). *Development Planning Division Working Paper Series No. 28: Towards a youth employment strategy for South Africa. Development Bank of Southern Africa Limited.* [Online]. Retrieved from

Stellenbosch University https://scholar.sun.ac.za

http://www.africaneconomicoutlook.org/fileadmin/uploads/aeo/PDF/DPD%20No28.pdf

Meier, J. (2010). Generation Y in the Workforce: Managerial Challenges. *The Journal of Human Resource and Adult Learning,* 6(1), 68-78. Retrieved from http://www.hraljournal.com/Page/8%20Justin%20Meier.pdf

Menesini, E., Calussi, P., & Nocentini, A. (2012). Cyber-bullying and Traditional bullying: Unique, Additive, and Synergistic Effects on Psychological Health Symptoms. In Li, Q. Cross, D., Smith, P.K. (Eds.), *Cyber-bullying in the global playground, research from international perspectives*. (pp. 245-262). West Sussex: Wiley Blackwell.

Miller, F. G., Gluck Jr, J. P., & Wendler, D. (2008). Debriefing and accountability in deceptive research. *Kennedy Institute of Ethics Journal*, *18*(3), 235-251. doi: https://doi.org/10.1353/ken.0.0196

Modecki, K. L., Minchin, J., Harbaugh, A. G., Guerra, N. G., & Runions, K. C. (2014). Bullying prevalence across contexts: A meta-analysis measuring cyber and traditional bullying. *Journal of Adolescent Health*, *55*(5), 602-611. doi: https://doi.org/10.1016/j.jadohealth.2014.06.007

Monks, C.P., Smith, K.P., & Swettenham, J. (2005). Psychological correlates of peer victimisation in preschool: Social cognitive skills, executive function and attachment profiles. *Journal of Aggressive Behaviour, 31,* 571–588. doi: http://dx.doi.org/10.1002/ab.20099

Mostert, K., & Rothmann, S. (2006). Work-related well-being in the South African Police Service. *Journal of Criminal Justice*, *34*(5), 479-491. doi: http://dx.doi.org/10.1016/j.jcrimjus.2006.09.003

Muhonen, T., Jönsson, S., & Bäckström, M. (2017). Consequences of cyberbullying

Stellenbosch University https://scholar.sun.ac.za

behaviour in working life: the mediating roles of social support and social organisational climate. *International journal of workplace health management*, *10*(5), 376-390. doi: https://doi.org/10.1108/IJWHM-10-2016-0075

Nagle, T. (1999). *Coaching Generation X. Centre for Coaching and Mentoring*. [Online] Retrieved from http://www.coachingandmentoring.com/Articles/x's.html

National Treasury Republic of South Africa. (2011). 2011 Budget Review. Retrieved from http://www.treasury.gov.za/documents/national%20budget/2011/review/Budget%20Review.pdf

Navarro, J.N., & Jasinski, J.L. (2012). Going Cyber: Using Routine Activities Theory to Predict Cyber-bullying Experiences. *Sociological Spectrum*, *32*(1), 81-94. doi: https://doi.org/10.1080/02732173.2012.628560

Nielsen, M. B., Hetland, J., Matthiesen, S. B., & Einarsen, S. (2012). Longitudinal relationships between workplace bullying and psychological distress. *Scandinavian journal of work, environment & health*, 38-46. doi: https://doi.org/10.5271/sjweh.3178

Nielsen, M. B., Matthiesen, S. B., & Einarsen, S. (2010). The impact of methodological moderators on prevalence rates of workplace bullying. A meta-analysis. *Journal of Occupational and Organizational Psychology, 83*(4), 955-979.

Nielsen, M. B., Skogstad, A., Matthiesen, S. B., Glasø, L., Aasland, M. S., Notelaers, G., & Einarsen, S. (2009). Prevalence of workplace bullying in Norway: Comparisons across time and estimation methods. *European Journal of Work and Organizational Psychology*, *18*(1), 81-101. doi: http://dx.doi.org/10.1348/096317909X481256

Notelaers, G., & Van der Heijden, B. I. J. M. (2019). Construct validity in workplace

Stellenbosch University https://scholar.sun.ac.za

bullying and harassment research. *D'Cruz, P.; Noronha, E.; Notelaers, G.(ed.), Concepts, Approaches and Methods. Handbooks of Workplace Bullying, Emotional Abuse and Harassment 1*.

Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.

Olweus, D. (2013). School bullying: Development and some important challenges. *Annual review of clinical psychology*, *9*, 751-780. doi: https://doi.org/10.1146/annurev-clinpsy-050212-185516

Patchin, J. W., & Hinduja, S. (2006). Bullies move beyond the schoolyard a preliminary look at cyber-bullying. *Youth violence and juvenile justice*, *4*(2), 148-169. doi: https://doi.org/10.1177/1541204006286288

Piotrowski, C. (2012). From Workplace Bullying to Cyber-bullying: The Enigma of E-Harassment in Modern Organizations. *Organization Development Journal*, *30*(4). Retrieved from https://tinyurl.com/y2el5vj9

Pizam, A., & Thornburg, S. W. (2000). Absenteeism and voluntary turnover in Central Florida hotels: a pilot study. *International Journal of Hospitality Management*, *19*(2), 211-217. doi: https://doi.org/10.1016/S0278-4319(00)00011-6

Popovac, M., & Leoschut, L. (2012). Cyber bullying in South Africa: Impact and responses. *Centre for justice and crime prevention*, 13 Retrieved from http://www.cjcp.org.za/uploads/2/7/8/4/27845461/issuepaper13-cyberbullyingsa-impact_responses.pdf

Porter, L. W., & Steers, R. M. (1973). Organizational, work, and personal factors in employee turnover and absenteeism. *Psychological bulletin*, *80*(2), 151. doi: http://dx.doi.org/10.1037/h0034829

Potgieter, F. (2014). The mass market engages with mobile: Marketing Mobile

Stellenbosch University https://scholar.sun.ac.za

Association. Retrieved from http://www.bizcommunity.com/Print.aspx?l=196&;c=11&ct=1&ci=107704

Power, J., Brotheridge, C. M., Monserrat, S. I., Mayoral, L., Jordan, C., Ruiz-Gutiérrez, J. A., ... & Vico, A. G. (2009, June). How acceptable is bullying? Cultural differences in 15 countries. *ASAC, 30*(29). Retrieved from https://www.academia.edu/30906269/How_Acceptable_is_Bullying_Cultural_Differences_in_15_Countries

Prinsloo, M. (2005). The new literacies as placed resources: research: information and communication technologies. *Perspectives in Education: Research on ICTs and Education in South Africa: Special Issue, 4*(23), 87-98. Retrieved from http://www.cetap.uct.ac.za/sites/default/files/image_tool/images/104/05thenewliteracies.pdf

Privitera, C., & Campbell, M. A. (2009). Cyber-bullying: The new face of workplace bullying? *CyberPsychology & Behavior*, *12*(4), 395-400. doi: https://doi.org/10.1089/cpb.2009.0025

Pujazon-Zazik, M., & Park, M. J. (2010). To tweet, or not to tweet: gender differences and potential positive and negative health outcomes of adolescents' social internet use. American journal of men's health, *4*(1), 77-85. doi: https://doi.org/10.1177/1557988309360819

Raskauskas, J., & Stoltz, A. D. (2007). Involvement in traditional and electronic bullying among adolescents. *Developmental psychology*, *43*(3), 564. doi: http://dx.doi.org/10.1037/0012-1649.43.3.564

Robins, R. W., Hendin, H. M., & Trzesniewski, K. H. (2001). Measuring global self-esteem: Construct validation of a single-item measure and the Rosenberg Self-Esteem Scale. *Personality and social psychology bulletin*, *27*(2), 151-161. doi: https://doi.org/10.1177/0146167201272002

Rokach, A., & Philibert-Lignières, G. (2015). Intimacy, loneliness & infidelity. *The*

Stellenbosch University https://scholar.sun.ac.za

Open Psychology Journal, *8*(1). doi: https://doi.org/10.2174/1874350101508010071

Rosenberg, M. (1979). *Conceiving the Self*. New York: Basic Books.

Ryan, K.N., & Curwen, T. (2013). *Cyber-Victimized Students Incidence, Impact and Intervention.* Sage Open, *3*(4). doi: https://doi.org/10.1177/2158244013516772

Salin, D. (2003). Ways of explaining workplace bullying: A review of enabling, motivating and precipitating structures and processes in the work environment. *Human relations*, *56*(10), 1213-1232. doi: https://doi.org/10.1177/00187267035610003

Schaaf, R. (2014). Cyber-bullying: Policy for Digital Protection. *New Horizons for* Learning, *11*(1), 1-7. doi: https://pdfs.semanticscholar.org/a658/d08b8e11ab1fea609281e9410ed2ae03631e.pdf

Schaufeli, W. B., & Taris, T. W. (2014). A critical review of the Job Demands-Resources Model: Implications for improving work and health. In *Bridging occupational, organizational and public health* (pp. 43-68). Netherlands: Springer. Retrieved from http://www.wilmarschaufeli.nl/publications/Schaufeli/411.pdf

Schenk, A.M., & Fremouw, W.J. (2012). Prevalence, Psychological Impact, and Coping of Cyberbully Victims among College Students. *Journal of School Violence*, *11*(1), 21-37. doi: https://doi.org/10.1080/15388220.2011.630310

Schimmel, K., & Nicholls, J. (2014). Workplace Cyber Bullying: A Research Agenda. In Lipinski, J. & Crothers, L.M (Eds.), *Bullying in the Workplace: Causes, Symptoms, and Remedies*. (pp. 223 – 236). East Sussex: Routledge.

Scholtz, S., & Prinsloo, M. (2001). New workplaces, new literacies, new identities.

Stellenbosch University https://scholar.sun.ac.za

Journal of Adolescent & Adult Literacy, 710-713. Retrieved from https://www.jstor.org/stable/40018743?seq=1#page_scan_tab_contents

Schreuder, A.M.G., & Coetzee, M. (2016). *Careers an organisational perspective*. Juta and Company Ltd: Claremont.

Schwab, K., Sala-i-Martin, X., & Brende, B. (2013). *The Global Competitiveness Report 2013-2014.* Geneva: World Economic Forum. Retrieved from http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2013-14.pdf

Ševčíková, A., Šmahel, D., & Otavová, M. (2012). The perception of cyber-bullying in adolescent victims. *Emotional and behavioural difficulties*, *17*(3-4), 319-328. Retrieved from https://cyberpsychology.eu/article/view/4248/3294

Slonje, R., & Smith, P. K. (2008). Cyber-bullying: Another main type of bullying? *Scandinavian journal of psychology*, *49*(2), 147-154. doi: https://doi.org/10.1111/j.1467-9450.2007.00611.x

Slonje, R., Smith, P. K., & Frisén, A. (2013). The nature of cyber-bullying, and strategies for prevention. *Computers in Human Behavior, 29*(1), 26-32. doi: https://doi.org/10.1016/j.chb.2012.05.024

Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyber-bullying: Its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry*, *49*(4), 376-385. doi: https://doi.org/10.1111/j.1469-7610.2007.01846.x

Snyman, R., & Loh, J. M. (2015). Cyberbullying at work: The mediating role of optimism between cyberbullying and job outcomes. *Computers in Human Behavior*, *53*, 161-168. doi: https://doi.org/10.1016/j.chb.2015.06.050

Sourander, A., Klomek, A. B., Ikonen, M., Lindroos, J., Luntamo, T., Koskelainen, M.,

Stellenbosch University https://scholar.sun.ac.za

... & Helenius, H. (2010). Psychosocial risk factors associated with cyberbullying among adolescents: A population-based study. *Archives of general psychiatry*, *67*(7), 720-728. doi: https://doi.org/10.1001/archgenpsychiatry.2010.79

Statistics South Africa*. (2014). Quarterly Labour Force Survey Quarter 4, 2013.* [Online]. Retrieved from http://beta2.statssa.gov.za/publications/P0211/P02114thQuarter2013.pdf

Statistics South Africa. (2019) *Quarterly Labour Force Survey Quarter 2, 2019*. [Online]. Retrieved from http://www.statssa.gov.za/?page_id=1854&PPN=P0211

Stellenbosch University. (2012). Departmental Ethics Screening Committee (DESC) *Guideline.* Retrieved from https://www.sun.ac.za/english/research-innovation/Research-Development/Documents/Human%20Research%20Ethics%20(Humanities)/DESC/DESC_Guidelines_Sept2012.pdf

Stich, J. F., Farley, S., Cooper, C., & Tarafdar, M. (2015). Information and communication technology demands: outcomes and interventions. *Journal of Organizational Effectiveness: People and Performance*, *2*(4), 327-345. doi: https://doi.org/10.1108/JOEPP-09-2015-0031

Stich, J. F., Tarafdar, M., & Cooper, C. L. (2018). Electronic communication in the workplace: boon or bane?. *Journal of Organizational Effectiveness: People and Performance*, *5*(1), 98-106. doi: https://doi.org/10.1108/JOEPP-05-2017-0046

Stuber, J. (2018). *How to think about second order effects.* Retrieved from https://jamesstuber.com/second-order-effects/

Straub, D. W., & Watson, R. T. (2001). Research commentary: Transformational issues in researching IS and net-enabled organizations. *Information Systems Research*, *12*(4), 337-345. doi: https://doi.org/10.1287/isre.12.4.337.9706

Suler, J. (2004). The online disinhibition effect. *Cyberpsychology & behavior*, *7*(3),

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321-326. doi: https://doi.org/10.1089/1094931041291295

Tam, V. W., & Khoa, N. L. (2018). Power spectral and bispectral study of factors affecting employee turnover. *Organization, technology & management in construction: an international journal*, *10*(1), 1727-1734. doi: https://doi.org/10.2478/otmcj-2018-0006

Tashakkori, A., & Teddlie, C. (1998). *Mixed Methodology Combining Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage Publications

Tai, M. C. T. (2012). Deception and informed consent in social, behavioral, and educational research (SBER). *Tzu Chi Medical Journal*, *24*(4), 218-222. doi: https://doi.org/10.1016/j.tcmj.2012.05.003

Teitel, E. (2012, October 29). Bullied to death: Amanda Todd didn't do anything online that most others of her generation haven't done. That's what's so disturbing. *World History in Context*. Retrieved from http://archive.macleans.ca/article/2012/10/29/bullied-to-death

Terwee, C. B., Bot, S. D., de Boer, M. R., van der Windt, D. A., Knol, D. L., Dekker, J., ... & de Vet, H. C. (2007). Quality criteria were proposed for measurement properties of health status questionnaires. *Journal of Clinical Epidemiology, 60*(1), 34-42. doi: https://doi.org/10.1016/j.jclinepi.2006.03.012

Theron, C. (2009). The diversity-validity dilemma: In search of minimum adverse impact and maximum utility. *SA Journal of Industrial Psychology*, *35*(1), 183-195. doi: https://doi.org/10.4102/sajip.v35i1.765

Theron, C. (2015). *Lecture series 1: General Orientation To Research Methodology.* [Lecture Notes]. Stellenbosch University

Todd, A. [TheSomebodytoknow]. (2012, September 07). *My story: Struggling, bullying, suicide, self-harm.* [Video file]. Retrieved from https://www.youtube.com/watch?v=vOHXGNx-E7E

Stellenbosch University https://scholar.sun.ac.za

Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of research on cyber-bullying victimization. *Computers in Human Behavior*, *26*(3), 277-287. doi: https://doi.org/10.1016/j.chb.2009.11.014

Trochim, W.M.K. (2006[a]). *Sampling.* Research Methods Knowledge Base. Retrieved from http://www.socialresearchmethods.net/kb/samp.php

Trochim, W.M.K. (2006[b]). *Non-probability Sampling.* Research Methods Knowledge Base. Retrieved from http://www.socialresearchmethods.net/kb/sampnon.php

Trochim, W.M.K. (2006[c]). *External Validity*. Research Methods Knowledge Base. Retrieved from http://www.socialresearchmethods.net/kb/external.php

UNICEF. (n.d.) *Are you old enough?* Retrieved from http://www.unicef.org/rightsite/433_457.htm

University of California. (2014). *CPHS Guidelines – Deception and Incomplete Disclosure.* Retrieved from http://cphs.berkeley.edu/deception.pdf

Valencia, P.L.V. (2014). A Review on the Ethical Issues of Online Social Networking. *Asian Journal of Social Sciences & Humanities*, *3*(2), 11 – 21. doi: https://doi.org/10.1016/j.sbspro.2014.08.317

Vandebosch, H., & Van Cleemput, K. (2009). Cyberbullying among youngsters: Profiles of bullies and victims. *New media & society*, *11*(8), 1349-1371. doi: https://doi.org/10.1177/1461444809341263

Vartia, M. A. (2001). Consequences of workplace bullying with respect to the well-being of its targets and the observers of bullying. *Scandinavian journal of work, environment & health*, *27*(1), 63-69. doi: http://dx.doi.org/10.5271/sjweh.588

Visinskaite, V. (2015). *Workplace Bullying: in relation to Self-Esteem, Stress, Life*

Stellenbosch University https://scholar.sun.ac.za

Satisfaction and Cyberbullying. (Honors Dissertation, Dublin Business School, Dublin, Ireland). Retrieved from http://hdl.handle.net/10788/2818

Von Marées, N., & Petermann, F. (2012). Cyberbullying: An increasing challenge for schools. *School Psychology International*, *33*(5), 467-476. doi: https://doi.org/10.1177/0143034312445241

Vranjes, I., Baillien, E., Vandebosch, H., Erreygers, S., & De Witte, H. (2017). The dark side of working online: Towards a definition and an Emotion Reaction model of workplace cyberbullying. *Computers in Human Behavior*, *69*, 324-334. doi: https://doi.org/10.1016/j.chb.2016.12.055

Vranjes, I. (2018). *Understanding workplace cyberbullying: more than just an old problem in a new guise.* (Doctoral dissertation, University of Antwerp, Antwerp, Belgium). Retrieved from https://lirias.kuleuven.be/1990170?limo=0

Vranjes, I., Baillien, E., Vandebosch, H., Erreygers, S., & De Witte, H. (2018[a]). When workplace bullying goes online: construction and validation of the Inventory of Cyberbullying Acts at Work (ICA-W). European Journal of Work and Organizational Psychology, *27*(1), 28-39. doi: https://doi.org/10.1080/1359432X.2017.1363185

Vranjes, I., Baillien, E., Vandebosch, H., Erreygers, S., & De Witte, H. (2018[b]). Kicking someone in cyberspace when they are down: Testing the role of stressor evoked emotions on exposure to workplace cyberbullying. *Work & Stress*, *32*(4), 379-399. doi: https://doi.org/10.1080/02678373.2018.1437233

Wang, J., Iannotti, R. J., & Nansel, T. R. (2009). School bullying among adolescents in the United States: Physical, verbal, relational, and cyber. *Journal of Adolescent Health*, *45*(4), 368-375. doi: https://doi.org/10.1016/j.jadohealth.2009.03.021

Wayne, S. J., Shore, L. M., & Liden, R. C. (1997). Perceived organizational support and leader-member exchange: A social exchange perspective. *Academy of Management Journal*, *40*(1), 82-111. doi: https://doi.org/10.2307/257021

Stellenbosch University https://scholar.sun.ac.za

Weatherbee, T., & Kelloway, K.E. (2006). A Case of Cyber-deviancy: Cyberagression in the Workplace. In Kelloway, K.E., Barling, J., & Hurrell, J.J. (Eds.), Handbook *of Workplace Violence*. (pp. 445 – 487). Thousand Oaks, California: Sage publications.

Wickrama, K. A. S., Ralston, P. A., O'Neal, C. W., Ilich, J. Z., Harris, C. M., Coccia, C., & Lemacks, J. (2013). Linking life dissatisfaction to health behaviors of older African Americans through psychological competency and vulnerability. *Research on Aging*, *35*(5), 591-611. doi: https://doi.org/10.1177/0164027512449473

Wilkinson, K. (2013). Is SA's education system the worst in Africa? Not according to the data. Retrieved from http://africacheck.org/reports/is-sas-education-system-the-worst-in-africa-not-according-to-the-data/

Wolak, J., Mitchell, K., & Finkelhor, D. (2007). Does online harassment constitute bullying? An exploration of online harassment by known peers and online-only contacts. *Journal of Adolescent Health*, *41*, 51–58. doi: https://doi.org/10.1016/j.jadohealth.2007.08.019

Wright, T. A., & Cropanzano, R. (1998). Emotional exhaustion as a predictor of job performance and voluntary turnover. *Journal of applied psychology*, *83*(3), 486. doi: http://dx.doi.org/10.1037/0021-9010.83.3.486

Wu, L. (2013). Social Network Effects on Productivity and Job Security: Evidence From the Adoption of a Social Networking Tool. *Information Systems Research*, *24*(1), 1-51. doi: http://dx.doi.org/10.1287/isre.1120.0465

Wu, J., Sun, H., & Tan, Y. (2013). Social media research: A review. *Journal of Systems Science and Systems Engineering*, *22*(3). 257-282. Retrieved from https://link.springer.com/article/10.1007/s11518-013-5225-6

Yamamoto, J., & Ananou, S. (2015). Humanity in Digital Age: Cognitive, Social,

Stellenbosch University https://scholar.sun.ac.za

Emotional, and Ethical Implications. *Contemporary Educational Technology*, *6*(1), 1-18. Retrieved from https://files.eric.ed.gov/fulltext/EJ1105609.pdf

Ybarra, M. L., & Mitchell, K. J. (2004). Online aggressor/targets, aggressors, and targets: A comparison of associated youth characteristics. *Journal of Child Psychology and Psychiatry*, 45, 1308–1316. doi: https://doi.org/10.1111/j.1469-7610.2004.00328.x

Yoshikawa, H., Weisner, T. S., Kalil, A., & Way, N. (2008). Mixing qualitative and quantitative research in developmental science: uses and methodological choices. *Developmental Psychology*, *44*(2), 344. doi: http://dx.doi.org/10.1037/2326-3598.1.S.3

Zabrodska, K., & Kveton, P. (2013). Prevalence and forms of workplace bullying among university employees. *Employee Responsibilities and Rights Journal*, *25*(2), 89-108. doi: https://doi.org/10.1016/j.shaw.2017.11.003

Zsila, Á., Urbán, R., Griffiths, M. D., & Demetrovics, Z. (2018). Gender differences in the association between cyberbullying victimization and perpetration: The role of anger rumination and traditional bullying experiences. *International Journal of Mental Health and Addiction*, 1-16. doi: https://doi.org/10.1007/s11469-018-9893-9

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APPENDIX A
QUANTITATIVE QUESTIONNAIRE

Section 1 - Biographical Information

1. Gender
    - Female
    - Male

2. Ethnic Group
    - African
    - White
    - Coloured
    - Asian
    - Indian
    - Other

3. Age
    - 18-25
    - 25-30
    - 30-40
    - 40-50
    - 50-60
    - 60-65
    - 65+

4. Job Title

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5. Employment Status

    - Part time
    - Full time

    5.1 If full time - bargaining unit (T05 - T13/P13)

- Supervisory
- Non-supervisory

    5.2 If full time - Managerial (M/P/G 14 - EEE)

- Managerial (direct reports)
- Non-managerial

6. In what sector is your organisation

    - Public Sector
    - Private Sector

7. How long have you been with the company

    - Less than 6 months
    - 6months to 1 year
    - 1 – 5 years
    - 6-10 years
    - 11-15 years
    - 15 + years

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8. Your line of work is in:

- Asset creation
- Customer service
- Information technology
- Services (eg. HR, Finance, SHEQ, ect.)
- Maintenance and operations
- Other. Please specify_____

9. Do you have colleagues, supervisors or subordinates from work in other geographic locations?

- Yes
- No

9.1 Where are the colleagues, supervisors or subordinates situated (if previous answer was yes)?

- Different city, but the same province
- Different province, but the same country
- Different country but the same continent
- Different continent

9.2 Do you use information and communication technology to communicate with the colleagues, supervisors or subordinates in different geographic locations?

- Yes
- No

10. How often are you taken sick leave in the last 6 months

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- Never
- 1 - 5 days
- Between 6 - 14 days
- More than 14 days

11. What are some of the general reasons that you were absent during the past 6 months

_____

_____

_____

Section 2 - Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983)

Please indicate how often you experienced each question or statement in the past 6 months

How often have you...

0	1	2	3	4
Never				Very Often

1.	...felt that you were effectively coping with important changes that were occurring in your life?
2.	...felt confident about your ability to handle your personal problems?
3.	...felt things were going your way?
4.	...been able to control the irritations in your life?
5.	...been able to control the way you spend your time?
6.	...been upset because of something that happened unexpectedly?
7.	...felt that you were unable to control the important things in your life?
8.	...felt nervous and stressed?
9.	…found that you could not cope with all the things that you had to do?
10.	…been angered because of things that happened outside of your control?

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11.	...found yourself thinking about things that you have to accomplish?
12.	...felt difficulties were piling up so high that you could not overcome them?

Section 3 - Single Item Self Esteem Scale

Please indicate how true the following statement is of you if you think back over the past 6 months:

1	2	3	4	5
Not very true of me				Very true of me

1.	I have high self-esteem

Section 4 – Intention to quit (Wayne, Shore, & Liden, 1997)

Please indicate how much you agree or disagree with each of the following statements by selecting the appropriate number. Please remember that all responses are confidential

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Do not agree or disagree	Slightly Agree	Moderately Agree	Strongly Agree

1.	I am actively looking for a job outside [company name]
2.	As soon as I can find a job I'll leave [company name]
3.	I am seriously thinking about quitting my job
4.	I often think about quitting my job at [company name]
5.	I think I will be working at [company name] five years from now (reverse scored)

Section 5 - Technology

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1. What age were you when you first started using information and communication devices for personal use like cell-phones, tablets or computers for interpersonal communication?

- 12 years old or younger
- 13 - 18 years old
- 19 - 25 years old
- 26 - 35 years old
- 36 - 40 years old
- 41 - 50 years old
- 51 - 60 years old

2. Does your company have a policy on information and communication technology?

- Yes
- No

3. How often do you use any information and communication devices for work purposes?

Almost Never	Once in a while	Monthly	Weekly	Daily	A few times a day	Hourly

4. What information and communication technology do you use for work?

- Cell phones and Landlines for phone calls
- Cell phones for text messages (SMS) or other instant messaging (e.g. WhatsApp)
- Mobile Tablets for emails, instant messaging and other online communication
- Emails
- Forums or blogs on Intranet
- Forums or blogs on Internet
- Instant messaging (e.g. MSN/Skype/Connector)
- Social media (e.g. Facebook, Twitter) on computer, cell phone or tablet computer

5. With whom do you use information and communication devices to communicate for work purposes for? (Please select all that apply)

- Supervisors
- Subordinates

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- Colleagues
- Customers
- None of the above

Section 6 - Revised Negative Acts Questionnaire (Einarsen, Hoel, & Notelaers, 2009)

Please indicate how often you experienced each question or statement during face to face interaction in the past 6 months.

1	2	3	4	5
Never	Now and Then	Monthly	Weekly	Daily

1.	Someone withholding information which affects your performance
2.	Unwanted sexual attention
3.	Being humiliated or ridiculed in connection with your work
4.	Being ordered to do work below your level of competence
5.	Having key areas of responsibility removed or replaced with more trivial or unpleasant tasks
6.	Spreading of gossip and rumours about you
7.	Being ignored, excluded or being „sent to Coventry"
8.	Having insulting or offensive remarks made about your person (i.e. habits and background), your attitudes or your private life
9.	Being shouted at or being the target of spontaneous anger (or rage)
10.	Intimidating behaviour such as finger-pointing, invasion of personal space, shoving, blocking/barring the way
11.	Hints or signals from others that you should quit your job
12.	Threats of violence or physical abuse
13.	Repeated reminders of your errors or mistakes
14.	Being ignored or facing a hostile reaction when you approach
15.	Persistent criticism of your work and effort
16.	Having your opinions and views ignored

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17.	Insulting messages, telephone calls or e-mails
18.	Practical jokes carried out by people you don't get on with
19.	Systematically being required to carry out tasks which clearly fall outside your job descriptions, e.g. private errands
20.	Being given tasks with unreasonable or impossible targets or deadlines
21.	Having allegations made against you
22.	Excessive monitoring of your work
23.	Offensive remarks or behaviour with reference to your race or ethnicity
24.	Pressure not to claim something which by right you are entitled to (e.g. sick leave, holiday entitlement, travel expenses)
25.	Being the subject of excessive teasing and sarcasm
26.	Threats of making your life difficult, e.g. over-time, night work, unpopular tasks
27.	Attempts to find fault with your work
28.	Being exposed to an unmanageable workload
29.	Being moved or transferred against your will

Section 7 - ICT Demands Scale (Day, Paquet, Scott, & Hambley, 2012)

Please indicate how often you experienced each question or statement in the past 6 months.

0	1	2	3	4	5
Never			Sometimes		Almost always

1.	I am expected to respond to e-mail messages immediately even outside the office.
2.	I am expected to be accessible at all times (e.g., through pager, cell phone, instant messaging).
3.	I'm contacted about work-related issues outside of regular work hours.
4.	People misinterpret my e-mail messages.
5.	I have misinterpreted the tone of my incoming e-mail messages.
6.	I have control over how I use technology at work. (R)

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7.	Technology allows me the flexibility to do my job when and where I want. (R)
8.	My organization monitors my internet usage, e-mails and/or phone calls.
9.	I am expected to stay current with technological advances related to my work.
10.	The technology I use changes at a rapid pace.
11.	Technology creates more work for me.
12.	As a result of technology, I work longer hours at and away from the office.

Section 8 - Cyberbullying in the workplace questionnaire (based on D'Cruz & Noronha, 2013)

How often has the following happened to you in the past 6 months?

Never	It has only happened to me once or twice	Two to three times a month	About once a week	Several times in a week
1	2	3	4	5

1.	I am micromanaged by my supervisor during office hours by excessive phone calls and emails
2.	I am being called up by a supervisor, co-worker or subordinate beyond office hours and premises (eg. during late night; on leave days or public holidays) using emails, instant messages and phone calls
3.	I feel like a supervisor, co-worker or subordinate is involving my family members or friends in work related matters
4.	I have been threatened that my future career will be damaged if I speak up of inappropriate behaviours of a supervisor, co-worker or subordinate using electronic means
5.	A supervisor, co-worker or subordinate has tried to use emails, instant messages and phone calls to turn a professional relationship into a personal relationship

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6.	A supervisor, co-worker or subordinate or work team has left me out of an email group
7.	I feel like a supervisor, co-worker or subordinate or work team has intentionally not responded to my emails and I could not complete my work
8.	An employee whom you do not know at the company you work for, has found your personal details on the office network
9.	Someone who uses electronic means to send you inappropriate messages, are neutral or positive when you interact with them face to face
10.	A subordinate distributed negative messages or inappropriate online posts about me using social media, email, instant messages or other electronic communication after I gave him or her negative feedback

Section 9 - The effects of cyberbullying in the workplace questionnaire (EOCB) (based on D'Cruz & Noronha, 2013)

Please indicate how much you agree or disagree with the following statements

1	2	3	4	5	6	7
Strongly Disagree			Neither agree nor disagree			Strongly Agree

1.	When I am micromanaged by my supervisor during office hours by excessive phone calls and emails, I feel very stressed out
2.	When I am being called up by a supervisor, co-worker or subordinate beyond office hours and premises using emails, instant messages and phone calls, I feel trapped and stressed out

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3.	When I am being called up by a supervisor, co-worker or subordinate beyond office hours and premises using emails, instant messages and phone calls, I feel physical symptoms like stomach pain, cannot sleep or high blood pressure
4.	When a supervisor, co-worker or subordinate is involving my family members or friends in work related matters, I feel humiliated
5.	When a supervisor, co-worker or subordinate is involving my family members or friends in work related matters, I feel angry
6.	When I am threatened that my future career will be damaged if I speak up of inappropriate behaviours of a supervisor, co-worker or subordinate using electronic means, I feel stressed and scared
7.	When a supervisor, co-worker or subordinate tries to use emails, instant messages and phone calls into a personal relationship, I feel emotionally tired
8.	When a supervisor, co-worker or subordinate tries to use emails, instant messages and phone calls into a personal relationship, I feel angry
9.	When a supervisor, co-worker or subordinate tries to use emails, instant messages and phone calls into a personal relationship, I feel scared
10	When a supervisor, co-worker, subordinate or work team has left me out of an email group, I felt like I could not do my job
11	When a supervisor, co-worker, subordinate or work team has left me out of an email group, I felt isolated
12	When I felt like a supervisor, co-worker or subordinate or work team has intentionally not responded to my emails, I felt like I could not complete my work
13	When I felt like a supervisor, co-worker or subordinate or work team has intentionally not responded to my emails, I felt stressed
14	When I felt like a supervisor, co-worker or subordinate or work team has intentionally not responded to my emails, I felt angry

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15.	When an employee whom you do not know at the company I work for found your personal details on the office network, I felt violated
16.	When someone who uses electronic means to send me inappropriate messages, are neutral or positive when I interact with them face to face, I feel confused
17.	When someone who uses electronic means to send you inappropriate messages, are neutral or positive when you interact with them face to face, I feel I cannot trust that person
18.	When a subordinate distributed negative messages or inappropriate online posts about me using social media, email, instant messages or other electronic communication after I gave him or her negative feedback, I felt angry
19	When a subordinate distributed negative messages or inappropriate online posts about me using social media, email, instant messages or other electronic communication after I gave him or her negative feedback, I felt humiliated

Section 10 - Perceived Cyberbullying Severity (Ahumada, 2014)

Please indicate how much you agree or disagree with each of the following statements

1	2	3	4	5	6	7
Strongly Disagree			Neither agree nor disagree			Strongly Agree

At the time when the cyberbullying episode was at its worst point, the cyberbullying episode

1.	… was a severe serious situation
2.	… had major consequences on my life
3.	… caused difficulties for those close to me

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4.	… the cyberbullying episode did not have much effect on my life

Section 11 – Regularity of Bullying Victimisation and Witnessing scale (ROBVW) and the use of coping mechanisms.

1. Please indicate if you have been a victim of ***traditional workplace bullying*** during the past 6 months, if it is defined by the following definition:

Repetitive and persistent hostile actions towards one or more individuals that involve a perception that there is an imbalance of power and the negative conduct results in a form of hostile work environment (Balduccia et al., 2011).

- Yes
- No

2. Please indicate if you have been a victim of ***cyberbullying in the workplace*** during the past 6 months, if it is defined by the following definition:

The deliberate aggressive behaviour of an individual or group of perpetrators, using electronic communication technology to extend their reach beyond the physical setting, toward a defenceless individual by directly or indirectly sending derogatory or threatening messages, forwarding personal and communication or images of the victim for others to see or publicly posting vilifying messages (Smith et al., 2008; Campbell, 2005; Privitera & Campbell 2009; Kiriakidis & Kavoura 2010; Ryan & Curwen, 2013).

- Yes
- No

3. Using the definition in question 1 on this page, have you ever witnessed traditional bullying in the workplace during the past 6 months

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- Yes
- No

4. Using the definition in question 2 on this page, have you ever witnessed a colleague, supervisor, subordinate or other employee be witness of a cyberbullying experience?

Using the scale below and taking the definitions into account, how often have you:

1	2	3	4	5
Never	Now and Then	Daily	Weekly	Monthly

4.1	Been a victim of cyberbullying
4.2	Been a victim of traditional bullying
4.3	Been a witness to cyberbullying
4.4	Been a witness to traditional bullying

5. At the time when the cyberbullying was at its worst point, did you use any coping mechanism(s)?

Coping mechanisms refer to the responses adopted by individuals with the intention of reducing the effects of negative events such as cyberbullying or with face to face traditional bullying (e.g. telling the bully to stop, blocking the bully's contact, asking a friend for help, talking to someone you trust about your feelings, etc.).

- Yes
- No

5.1 Please describe briefly the coping mechanisms you invoked (if any) to deal with the cyberbullying episode (e.g. blocking the bully’s contact, talking to a friend).

_____

_____

_____

_____

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_____

_____

6. Have reported being victim to either form of bullying?

- Yes
- No

6.1. If you answered yes to the previous question, how often this has occurred (if yes to previous question)?

- Once
- Some of the times
- All of the times
- Other. Please specify

7. Have you attempted to change their passwords or block out the cyber-bully?

- Yes
- No

8. Have attempted to ignore the traditional workplace bully?

- Yes
- No

9. Have you felt that you feel unable to complete your normal work duties, because of being bullied

- Yes
- No

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APPENDIX B

HOW ITEMS IN THE EOCB CORRESPOND WITH ITEMS IN THE CBWIQ

Table B1

Items in the EOCB and How They Correspond with Items in the CBWIQ

Items in the CBIWQ		**Corresponding items in the EOCB**	
Item name	**Item wording**	**Item name**	**Item wording**
CBIWQ1	I am micromanaged by my supervisor during office hours by excessive phone calls and emails	EOCB1	When I am micromanaged by my supervisor during office hours by excessive phone calls and emails, I feel very stressed out
CBIWQ2	I am being called up by a supervisor, co-worker or subordinate beyond office hours and premises (eg. During late night; on leave days or public holidays) using emails, instant messages and phone calls	EOCB2	When I am being called up by a supervisor, co-worker or subordinate beyond office hours and premises (eg. During late night; on leave days or public holidays) using emails, instant messages and phone calls, I feel trapped and stressed out

(continued)

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Table B1

Items in the EOCB and How They Correspond with Items in the CBWIQ (continued)

Items in the CBIWQ		**Corresponding items in the EOCB**	
Item name	**Item wording**	**Item name**	**Item wording**
CBIWQ2	I am being called up by a supervisor, co-worker or subordinate beyond office hours and premises (eg. During late night; on leave days or public holidays) using emails, instant messages and phone calls	EOCB3	When I am being called up by a supervisor, co-worker or subordinate beyond office hours and premises (eg. During late night; on leave days or public holidays) using emails, instant messages and phone calls, I feel physical symptoms like stomach pain, cannot sleep or high blood pressure
CBIWQ3	I feel like a supervisor, co-worker or subordinate is involving my family members or friends in work related matters	EOCB4	When I feel like a supervisor, co-worker or subordinate is involving my family members or friends in work related matters, I feel humiliated

(continued)

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Table B1

Items in the EOCB and How They Correspond with Items in the CBWIQ (continued)

Items in the CBIWQ		Corresponding items in the EOCB	
Item name	**Item wording**	**Item name**	**Item wording**
CBIWQ3	I feel like a supervisor, co-worker or subordinate is involving my family members or friends in work related matters	EOCB5	When I feel like a supervisor, co-worker or subordinate is involving my family members or friends in work related matters, I feel angry
CBIWQ4	I have been threatened that my future career will be damaged if I speak up of inappropriate behaviours of a supervisor, co-worker or subordinate using electronic means	EOCB6	When I have been threatened that my future career will be damaged if I speak up of inappropriate behaviours of a supervisor, co-worker or subordinate using electronic means, I feel stressed and scared

(continued)

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Table B1

Items in the EOCB and How They Correspond with Items in the CBWIQ (continued)

Items in the CBIWQ		**Corresponding items in the EOCB**	
Item name	**Item wording**	**Item name**	**Item wording**
CBIWQ5	A supervisor, co-worker or subordinate has tried to use emails, instant messages and phone calls to turn a professional relationship into a personal relationship	EOCB7	When a supervisor, co-worker or subordinate has tried to use emails, instant messages and phone calls to turn a professional relationship into a personal relationship, I feel emotionally tired
CBIWQ5	A supervisor, co-worker or subordinate has tried to use emails, instant messages and phone calls to turn a professional relationship into a personal relationship	EOCB8	When a supervisor, co-worker or subordinate has tried to use emails, instant messages and phone calls to turn a professional relationship into a personal relationship, I feel angry

(continued)

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Table B1

Items in the EOCB and How They Correspond with Items in the CBWIQ (continued)

Items in the CBIWQ		**Corresponding items in the EOCB**	
Item name	**Item wording**	**Item name**	**Item wording**
CBIWQ5	A supervisor, co-worker or subordinate has tried to use emails, instant messages and phone calls to turn a professional relationship into a personal relationship	EOCB9	When a supervisor, co-worker or subordinate has tried to use emails, instant messages and phone calls to turn a professional relationship into a personal relationship, I feel scared
CBIWQ6	A supervisor, co-worker or subordinate or work team has left me out of an email group	EOCB10	When a supervisor, co-worker or subordinate or work team has left me out of an email group, I felt like I cannot do my job
CBIWQ6	A supervisor, co-worker or subordinate or work team has left me out of an email group	EOCB11	When a supervisor, co-worker or subordinate or work team has left me out of an email group, I felt isolated

(continued)

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Table B1

Items in the EOCB and How They Correspond with Items in the CBWIQ (continued)

Items in the CBIWQ		**Corresponding items in the EOCB**	
Item name	**Item wording**	**Item name**	**Item wording**
CBIWQ7	I feel like a supervisor, co-worker or subordinate or work team has intentionally not responded to my emails	EOCB12	When I feel like a supervisor, co-worker or subordinate or work team has intentionally not responded to my emails, I felt like I could not complete my work
CBIWQ7	I feel like a supervisor, co-worker or subordinate or work team has intentionally not responded to my emails	EOCB13	When I feel like a supervisor, co-worker or subordinate or work team has intentionally not responded to my emails, I felt stressed
CBIWQ7	I feel like a supervisor, co-worker or subordinate or work team has intentionally not responded to my emails	EOCB14	When I feel like a supervisor, co-worker or subordinate or work team has intentionally not responded to my emails, I felt angry

(continued)

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Table B1

Items in the EOCB and How They Correspond with Items in the CBWIQ (continued)

Items in the CBIWQ		Corresponding items in the EOCB	
Item name	**Item wording**	**Item name**	**Item wording**
CBIWQ8	An employee whom you do not know at the company you work for, has found your personal details on the office network	EOCB15	When an employee whom you do not know at the company you work for, has found your personal details on the office network, I felt violated
CBIWQ9	Someone who uses electronic means to send you inappropriate messages, are neutral or positive when you interact with them face to face	EOCB16	When someone who uses electronic means to send you inappropriate messages, are neutral or positive when you interact with them face to face, I feel confused
CBIWQ9	Someone who uses electronic means to send you inappropriate messages, are neutral or positive when you interact with them face to face	EOCB17	When someone who uses electronic means to send you inappropriate messages, are neutral or positive when you interact with them face to face, I feel I cannot trust that person

(continued)

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Table B1

Items in the EOCB and How They Correspond with Items in the CBWIQ (continued)

Items in the CBIWQ		**Corresponding items in the EOCB**	
Item name	**Item wording**	**Item name**	**Item wording**
CBIWQ10	A subordinate distributed negative messages or inappropriate online posts about me using social media, email, instant messages or other electronic communication after I gave him or her negative feedback	EOCB18	When a subordinate distributed negative messages or inappropriate online posts about me using social media, email, instant messages or other electronic communication after I gave him or her negative feedback, I felt angry
CBIWQ10	A subordinate distributed negative messages or inappropriate online posts about me using social media, email, instant messages or other electronic communication after I gave him or her negative feedback	EOCB19	When a subordinate distributed negative messages or inappropriate online posts about me using social media, email, instant messages or other electronic communication after I gave him or her negative feedback, I felt humiliated

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APPENDIX C
STATISTICAL TABLES AND FIGURES TO ACCOMPANY PSYCHOMETRIC ANALYSES OF QUESTIONNAIRES USED

1. Tables and figures that accompany exploring the Perceived Stress Scale - Revised (PSS) (Cohen et al., 1983)

Table C1.

Reliability Coefficients for the overall Perceived Stress Scale (PSS)

Summary for scale						
Cronbach's α = .72, 95% CI [0.58, 0.82] *M* = 6.37; *SD* = 1.37; *N* = 152; Standardized α = .72; Average inter-item *r* = .57						
Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	α if deleted
Psychological competencies	2.87	0.65	0.80	.57	.32	
Psychological vulnerabilities	3.50	0.54	0.73	.57	.32	

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Table C2.

Reliability Coefficients for the Psychological Competencies Subscale of the PSS

Summary for scale
Cronbach's α = .83, 95% CI [0.77, 0.87]; *M* = 17.49; *SD* =3.67; *N* = 152; Standardized α = .83 Average inter-item *r* = 0.5

Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	α if deleted
PSS1	13.89	9.05	3.01	.57	.45	.81
PSS2	13.71	8.40	2.90	.74	.59	.76
PSS3	14.20	8.79	2.97	.66	.48	.78
PSS4	14.20	8.83	2.97	.66	.51	.78
PSS5	13.97	9.69	3.11	.48	.26	.83

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Table C3.

Reliability Coefficients for the Psychological Vulnerabilities Subscale of the PSS

Summary for scale						
Cronbach's α = .87, 95% CI [0.82, 0.90]; *M* = 21.89; *SD* = 5.65; *N* = 152; Standardized α = .87; Average inter-item *r* = .49						
Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	α if deleted
PSS6	18.71	24.90	4.99	.60	.45	.85
PSS7	19.05	23.17	4.81	.65	.47	.85
PSS8	18.62	23.60	4.86	.70	.54	.84
PSS9	18.99	23.63	4.86	.62	.51	.85
PSS10	18.68	22.72	4.77	.72	.53	.84
PSS11	18.16	26.19	5.12	.45	.24	.87
PSS12	19.15	22.29	4.72	.75	.65	.83

2. Tables and figures that accompany exploring the Intention To Quit scale (ITQ) (Wayne et al., 1997)

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Table C4.

Reliability Coefficients for the Intention to Quit (ITQ) Scale

Summary for scale						
Cronbach's α = .91, 95% CI [0.87, 0.93]; *M* = 17.03; SD =9.10; *N* = 152; Standardized α = .91; Average inter-item *r* = .71						
Variable	M if deleted	Var. if deleted	SD if deleted	Itm-Totl *r*	R^2	α if deleted
ITQ1	13.58	51.31	7.16	.85	.82	.87
ITQ2	13.52	51.39	7.17	.83	.79	.87
ITQ3	13.99	53.17	7.29	.86	.84	.87
ITQ4	13.76	52.33	7.23	.84	.83	.87
ITQ5 (R)	13.26	61.47	7.84	.49	.25	.94

3. Tables and figures that accompany exploring the Negative Acts Questionnaire - Revised (NAQ-R) (Einarsen et al., 2009)

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Table C5.

Reliability Coefficients for the overall NAQ-R Scale

Summary for scale						
Cronbach's α = .97, 95% CI [0.95, 0.98], *M* = 51.13, *SD* = 22.72, *N* = 152, Standardized α: .97, Average inter-item *r* = .53						
Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	α if deleted
NAQR1	48.52	483.33	21.98	.51	.42	.97
NAQR2	49.85	499.22	22.34	.44	.47	.97
NAQR3	49.18	470.71	21.70	.82	.77	.97
NAQR4	48.98	474.39	21.78	.67	.73	.97
NAQR5	49.13	471.33	21.71	.77	.79	.97
NAQR6	49.05	470.89	21.70	.74	.78	.97
NAQR7	48.63	467.84	21.63	.75	.79	.97
NAQR8	49.16	471.19	21.71	.75	.77	.97
NAQR9	49.41	477.33	21.85	.75	.78	.97
NAQR10	49.58	479.91	21.91	.79	.80	.97
NAQR11	49.59	480.80	21.93	.74	.72	.97
NAQR12	49.89	491.86	22.18	.69	.80	.97
NAQR13	49.39	475.75	21.81	.75	.78	.97
NAQR14	49.28	468.94	21.66	.82	.84	.97
NAQR15	49.39	475.83	21.81	.81	.81	.97
NAQR16	48.88	470.03	21.68	.76	.75	.97
NAQR17	49.71	487.17	22.07	.72	.65	.97
NAQR18	49.66	484.47	22.01	.66	.69	.97
NAQR19	49.48	481.20	21.94	.63	.62	.97
NAQR20	49.27	481.16	21.94	.66	.75	.97
NAQR21	49.43	476.97	21.84	.76	.74	.97
NAQR22	49.32	473.09	21.75	.74	.75	.97

(continued)

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Table C5.

Reliability Coefficients for the overall NAQ-R Scale (continued)

Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	α if deleted
NAQR23	49.51	485.55	22.04	.55	.51	.97
NAQR24	49.40	473.36	21.76	.73	.73	.97
NAQR25	49.58	475.59	21.81	.82	.81	.97
NAQR26	49.76	485.54	22.03	.72	.76	.97
NAQR27	49.38	470.97	21.70	.83	.80	.97
NAQR28	49.26	477.00	21.84	.63	.71	.97
NAQR29	49.84	495.37	22.26	.51	.54	.97

Table C6.

Reliability Coefficients for the Work-Related Bullying Subscale of the NAQ-R

Summary for scale
Cronbach's α = .88, 95% CI [0.84, 0.91]; *M* = 14.24; *SD* = 6.45; *N* = 152; Standardized α: 0.88; Average inter-item *r* = .53

Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	α if deleted
NAQR1	11.64	32.86	5.73	.49	.31	.89
NAQR4	12.10	30.46	5.52	.68	.49	.86
NAQR16	11.99	29.85	5.46	.73	.55	.86
NAQR20	12.39	31.54	5.62	.74	.65	.86
NAQR22	12.44	30.85	5.55	.70	.58	.86
NAQR24	12.52	31.03	5.57	.67	.54	.86
NAQR28	12.38	30.42	5.52	.69	.61	.86

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Table C7.

Reliability Coefficients for the Person-Related Bullying Subscale of the NAQ-R

Summary for scale						
Cronbach's α = .95, 95% CI [0.93, 0.96]; *M* = 22.03; *SD* = 10.84; *N* = 152, Standardized α = .95, Average inter-item *r* = .62						
Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	α if deleted
NAQR3	20.09	96.74	9.84	.83	.70	.94
NAQR5	20.03	98.79	9.94	.69	.55	.95
NAQR6	19.95	96.03	9.80	.78	.71	.95
NAQR7	19.53	95.34	9.76	.76	.70	.95
NAQR8	20.07	96.42	9.82	.78	.66	.95
NAQR11	20.49	101.70	10.08	.73	.57	.95
NAQR13	20.30	98.72	9.94	.78	.73	.95
NAQR14	20.19	95.75	9.79	.83	.76	.94
NAQR15	20.30	99.58	9.98	.80	.72	.94
NAQR18	20.57	103.90	10.19	.62	.59	.95
NAQR21	20.34	99.70	9.98	.77	.66	.95
NAQR25	20.49	99.45	9.97	.81	.77	.94

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Table C8.

Reliability Coefficients for the Physically Intimidating Bullying Subscale of the NAQ-R

Summary for scale						
Cronbach's α = .85, 95% CI [0.76, 0.90]; *M* = 4.5; SD = 2.35; N = 152; Standardized α = .86; Average inter-item *r* = .68						
Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	$\boldsymbol{\alpha}$ if deleted
NAQR9	2.78	2.13	1.46	.74	.57	.78
NAQR10	2.95	2.35	1.53	.80	.65	.70
NAQR12	3.26	3.38	1.84	.67	.47	.85

4. Tables and figures that accompany exploring the Information and Communication Technology Demands scale (ICTDS) (Day et al., 2012)

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Table C9.

Reliability Coefficients for the overall ICT Demands Scale (ICTDS)

Summary for scale						
Cronbach's α = .83, 95% CI [0.77, 0.86], *M* = 32.76; *SD* = 8.15; *N* = 147; Standardized α = 0.83 Average inter-item *r* = .30						
variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	α if deleted
ICTDS1	30.62	54.09	7.35	.60	.62	.80
ICTDS2	30.29	51.42	7.17	.64	.64	.80
ICTDS3	30.41	52.84	7.27	.64	.56	.80
ICTDS4	30.86	58.39	7.64	.44	.51	.82
ICTDS5	30.97	59.47	7.71	.48	.58	.81
ICTDS6	29.15	58.24	7.63	.31	.20	.83
ICTDS7	29.44	55.57	7.45	.45	.37	.82
ICTDS8	28.50	59.22	7.70	.33	.25	.82
ICTDS9	29.10	56.10	7.49	.47	.40	.81
ICTDS10	29.81	56.03	7.49	.51	.36	.81
ICTDS11	30.41	57.37	7.57	.45	.44	.81
ICTDS12	30.82	56.42	7.51	.49	.49	.81

Table C10.

Reliability Coefficients for the Availability Subscale of the ICTDS

Summary of scale						
Cronbach's α = .81, 95% CI [0.73, 0.88]; M = 4.77; *SD* = 2.41 *N* = 151; Standardized α = 0.82; Average inter-item *r* = .69						
Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	$\boldsymbol{\alpha}$ if deleted
ICTDS2	2.34	1.52	1.23	.69	.48	
ICTDS3	2.44	1.89	1.37	.69	.48	

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Table C11.

Reliability Coefficients for the Poor Communication Subscale of the ICT Demands Scale (ICTDS)

Summary for scale						
Cronbach's α = .79, 95% CI [0.70, 0.87]; *M* = 3.68; *SD* =1.61; *N* = 150; Standardized α = .80 Average inter-item *r* = .67						
Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	*α* if deleted
ICTDS4	1.79	0.62	0.79	.67	.45	
ICTDS5	1.89	0.94	0.97	.67	.45	

Table C12.

Reliability Coefficients for the Lack of Control Subscale of the ICT Demands Scale (ICTDS)

Summary for scale						
Cronbach's α = .53, 95% CI [0.35, 0.67]; *M* = 6.9; *SD* = 2.14; *N* = 150 Standardized α = .53; Average inter-item *r* = .36						
Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	***α*** if deleted
ICTDS6	3.30	1.70	1.31	.36	.13	
ICTDS7	3.60	1.63	1.28	.36	.13	

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Table C13.

Reliability Coefficients for the Learning Subscale of the ICT Demands Scale (ICTDS)

Summary for scale						
Cronbach's α = .64, 95% CI [0.47, 0.76]; *M* = 6.64; *SD* = 2.03; *N* = 152; Standardized α = .64 Average inter-item *r* = .48						
Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	α if deleted
ICTDS9	2.98	1.32	1.15	.48	.23	
ICTDS10	3.66	1.45	1.20	.48	.23	

Table C14.

Reliability Coefficients for the Workload Subscale of the ICT Demands Scale (ICTDS)

Summary for scale						
Cronbach's α = .75, 95% CI [0.63 , 0.83], *M* = 4.28; *SD* = 1.96; *N* = 152; Standardized α = .75 Average inter-item r = .60						
Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	α if deleted
ICTDS11	1.93	1.23	1.11	.60	.36	
ICTDS12	2.34	1.16	1.08	.60	.36	

5. Tables and figures that accompany exploring the Cyberbullying In the Workplace Questionnaire (CBIWQ)

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Table C15.

Reliability Coefficients for the Total CBIWQ scale

Summary for scale						
Cronbach's α = .86; 95% CI [0.75, 0.91]; *M* = 15.02; SD = 5.88; N = 152; Standardized α: .87; Average inter-item *r* = .41						
Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	α if deleted
CBIWQ1	13.36	27.43	5.24	.50	.28	.85
CBIWQ2	13.24	28.09	5.30	.46	.38	.85
CBIWQ3	13.80	30.32	5.51	.49	.44	.85
CBIWQ4	13.70	28.72	5.36	.57	.50	.84
CBIWQ5	13.76	28.67	5.35	.68	.60	.83
CBIWQ6	13.13	25.78	5.08	.69	.72	.83
CBIWQ7	13.01	25.36	5.04	.63	.66	.84
CBIWQ8	13.63	28.06	5.30	.64	.50	.84
CBIWQ9	13.72	30.02	5.48	.55	.50	.84
CBIWQ10	13.84	30.36	5.51	.59	.48	.84

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Table C16.

Descriptive Statistics from Analysis of Variance Between Exposure Group Status and the CBIWQ

Level of Factor	*N*	*M*	*SD*	*SE*	95% CI	
					LL	UL
	148	1.49	0.5	0.05	1.39	1.59
group1	75	1.29	0.55	0.06	1.17	1.42
group2	19	1.54	0.43	0.1	1.33	1.74
group3	29	1.50	0.39	0.07	1.35	1.65
group5	25	2.02	0.65	0.13	1.75	2.29

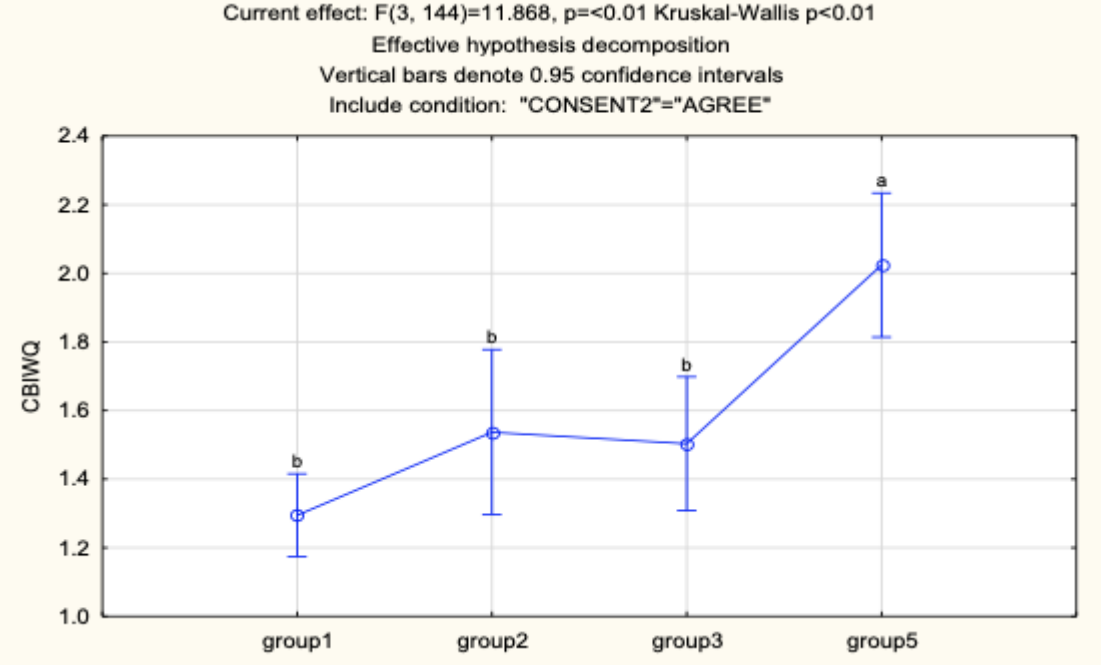

Figure C1. Analysis of variance plot graph between exposure group status and the CBIWQ.

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Table C17.

Least Significant Difference Test Coefficients Between Exposure Group Status and the CBIWQ

Probabilities for Post Hoc Tests Error: Between MS = .28193. df = 144					
	group1	group2	group3	group5	*M*
group1	-	.08	.07	.00	1.29
group2	.08	-	.83	.00	1.54
group3	.07	.83	-	.00	1.50
group5	.00	.00	.00	-	2.02

Table C18.

Correlational Analysis for Convergent Validity

Variable 1	Variable 2	Pearson	Pearson *p*	Spearman	Spearman *p*	N
OFTEN_TRAD_VIC	NAQR	.69	<0.01	.64	<0.01	152
OFTEN_CB_VIC	CBIWQ	.49	<0.01	.46	<0.01	152

6. Tables and figures that accompany exploring the Effects Of Cyberbullying scale (EOCB)

Table C19.

Reliability coefficients for the unreasonable hours subscale of the EOCB.

Summary for scale						
Cronbach's α = .83, 95% CI [0.72, 0.91]; *M* = 6.6; *SD* = 3.64; *N* = 72 Standardized α = .83; Average inter-item *r* = .71						
Variable	M if deleted	Var. if deleted	SD if deleted	Itm-Totl *r*	R^2	α if deleted
EOCB2	2.88	3.89	1.97	.71	.51	
EOCB3	3.72	3.73	1.93	.71	.51	

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Table C20.

Reliability coefficients for the involving loved ones subscale of the EOCB.

Summary for scale						
Cronbach's α = .89, 95% CI [0.75, 0.98]; *M* = 9.14; *SD* = 3.93; *N* = 21; Standardized α = .90 Average inter-item *r* = .82						
Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	α if deleted
EOCB4	4.76	3.42	1.85	.82	.67	
EOCB5	4.38	4.71	2.17	.82	.67	

Table C21.

Reliability Coefficients for the Sexual Harassment Subscale of the EOCB

Summary for scale						
Cronbach's α = .94, 95% CI [0.86, 0.98]; *M* = 13.44; *SD* = 5.49; *N* = 23 Standardized α = .94 Average inter-item *r* = .85						
Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	α if deleted
EOCB7	8.87	11.77	3.43	.92	.85	.88
EOCB8	8.74	13.67	3.70	.86	.77	.93
EOCB9	9.26	14.19	3.77	.85	.76	.93

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Table C22.

Reliability coefficients for the left out subscale of the EOCB

Summary for scale						
Cronbach's α = .9, 95% CI [0.82, 0.95]; *M* = 7.96; *SD* = 3.93; *N* = 82; Standardized α = .9; Average inter-item *r* = .82						
Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	α if deleted
EOCB10	4.23	4.35	2.09	.82	.68	
EOCB11	3.73	4.03	2.01	.82	.68	

Table C23.

Reliability coefficients for the not responding subscale of the EOCB

Summary for scale						
Cronbach's α = .82, 95% CI [0.71, 0.89]; *M* = 12.78; *SD* = 4.98; *N* = 82 Standardized α = .82; Average inter-item *r* = .61						
Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	α if deleted
EOCB12	8.24	11.36	3.37	.71	.54	.71
EOCB13	8.73	12.17	3.49	.61	.37	.82
EOCB14	8.59	12.07	3.47	.71	.53	.72

Table C24.

Reliability coefficients for the mixed interactions subscale of the EOCB

Summary for scale						
Cronbach's α = .54, 95% CI [0.00, 0.85]; *M* = 9.18; *SD* = 3.32; *N* = 33; Standardized α = .54 Average inter-item *r* = .37						
Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	α if deleted
EOCB16	4.85	4.13	2.03	.37	.14	
EOCB17	4.33	3.68	1.92	.37	.14	

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Table C25.

Reliability coefficients for the retaliation from feedback subscale of the EOCB

Summary for scale						
Cronbach's α = .97, 95% CI [0.92, 0.99] *M* = 10.1; *SD* = 3.21; *N* = 20; Standardized α = .97 Average inter-item *r* = .94						
Variable	M if deleted	Var. if deleted	SD if deleted	Itm-Totl *r*	R^2	α if deleted
EOCB18	4.90	2.59	1.61	.94	.88	
EOCB19	5.20	2.46	1.57	.94	.88	

7. Tables and figures that accompany exploring the ROBVW scale

Table C26.

Reliability coefficients for the ROBVW scale

Summary for scale						
Cronbach's α = .85, 95% CI [0.77, 0.91]; *M* = 6.19; *SD* = 3.23; *N* = 152; Standardized α = .86 Average inter-item *r* = .63						
Variable	*M* if deleted	Var. if deleted	*SD* if deleted	Itm-Totl *r*	R^2	α if deleted
OFTEN_CB_VIC	4.89	7.23	2.69	.67	.56	.84
OFTEN_TRAD_VIC	4.51	5.42	2.33	.73	.65	.81
OFTEN_CB_WIT	4.79	6.80	2.61	.68	.60	.83
OFTEN_TRAD_WIT	4.38	4.95	2.22	.79	.70	.78

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APPENDIX D

STATISTICAL TABLES AND FIGURES TO ACCOMPANY DATA ANALYSIS

1. Tables and figures that accompany the descriptive statistics

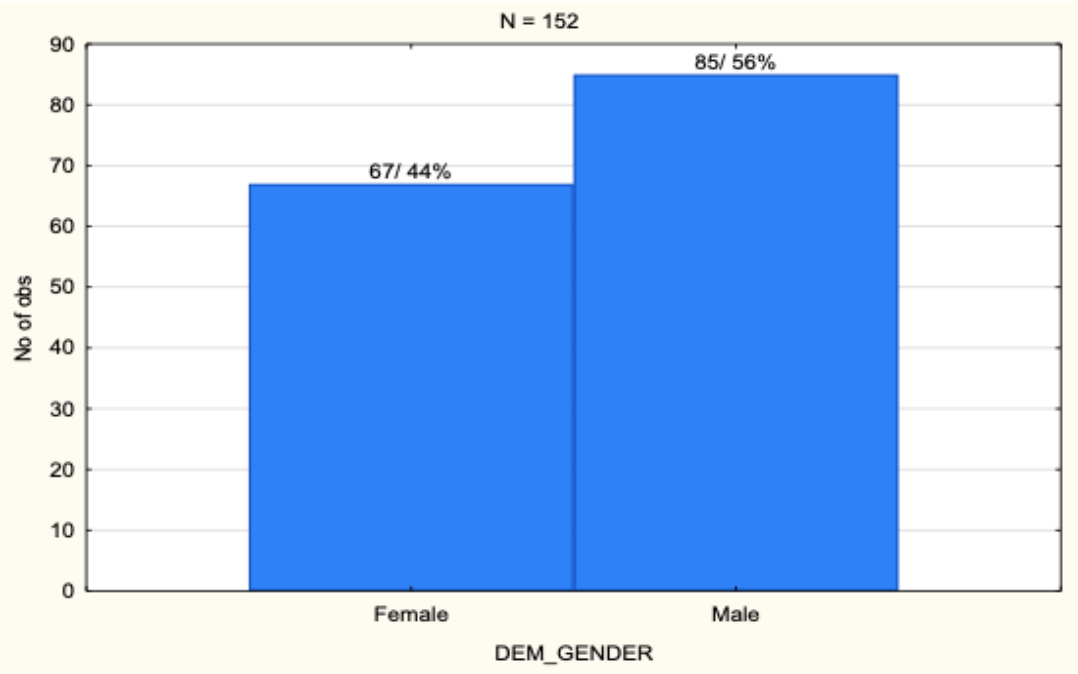

Figure D1. Distribution of the gender of respondents in the total sample.

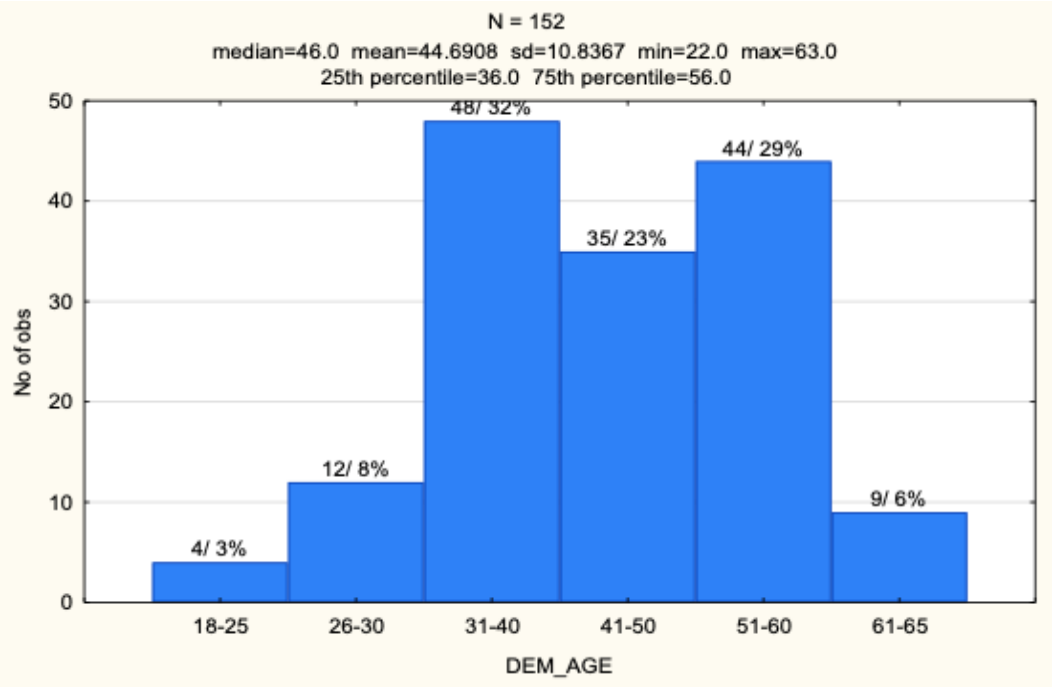

Figure D2. Distribution of the age of respondents in the total sample

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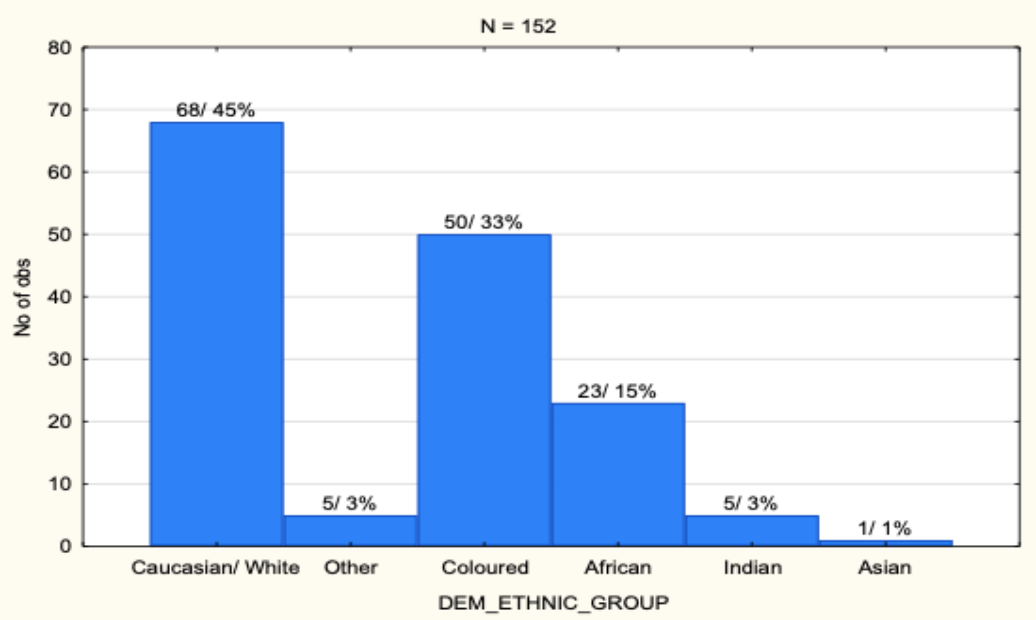

Figure D3. Distribution of the ethnic group status of respondents in the total sample.

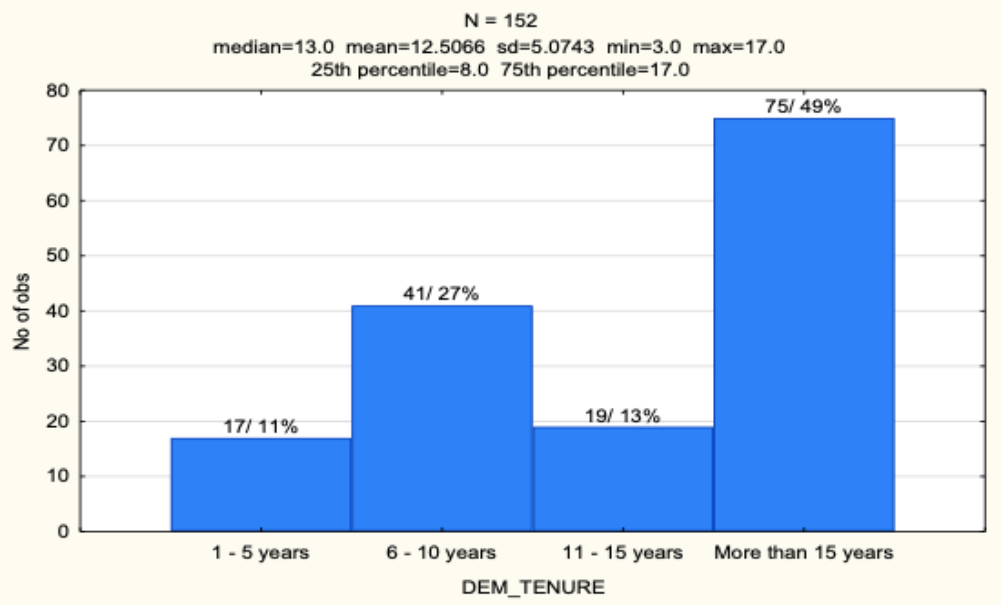

Figure D4. Distribution of the tenure of respondents in the total sample

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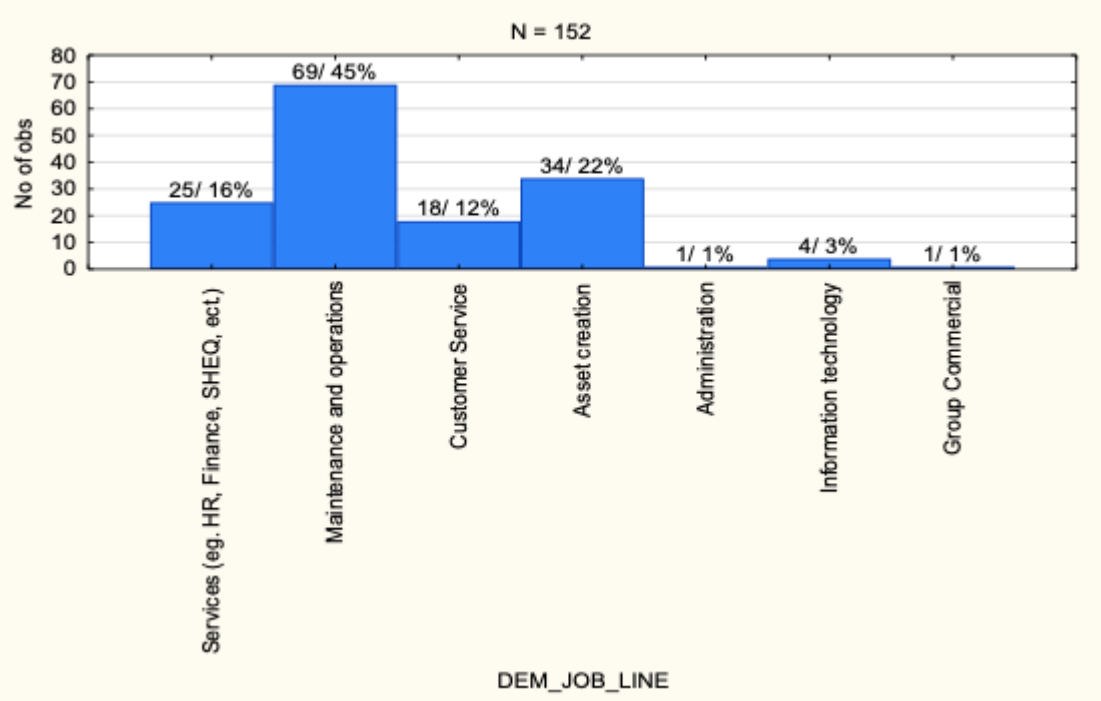

Figure D5. Distribution of the types of jobs of respondents in the total sample

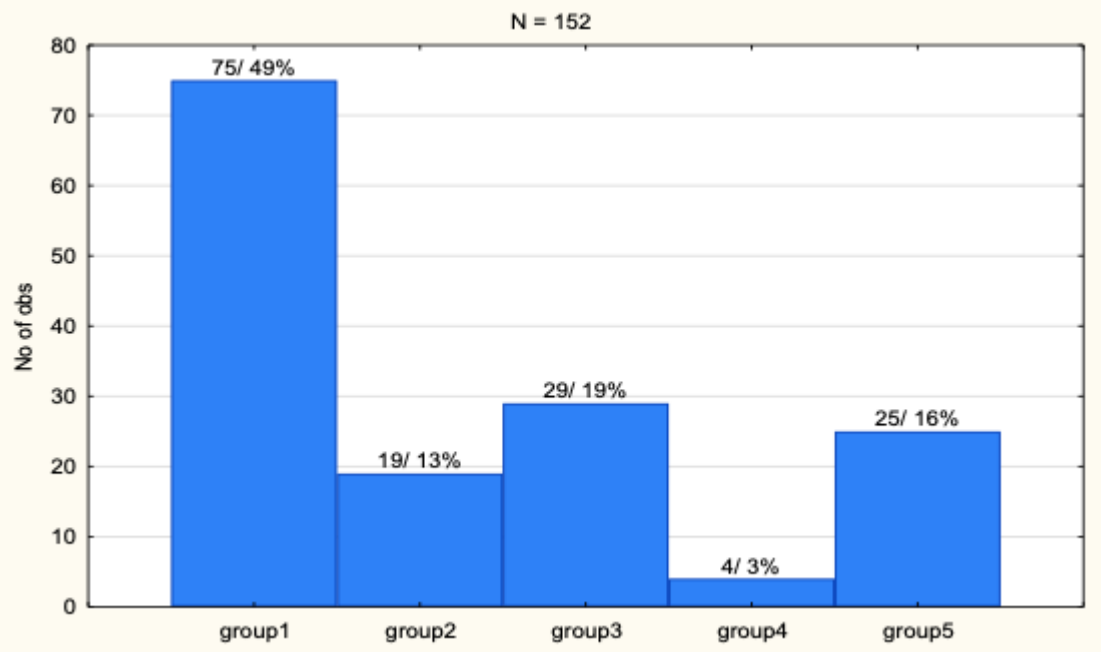

Figure D6. Distribution of exposure group status in the sample

2. Tables and figures that accompany the descriptive statistics for the different exposure group

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Table D1.

Descriptive Statistics of Exposure Groups by Gender

Marked cells have counts > 10. Chi-square (df = 4) = 9.99. *p* = .04 Fisher Exact(r x c) *p* = .08						
GENDER	Exposure group status					Row Totals
	group1	group2	group3	group4	group5	
Female	33	8	18	0	8	67
Row %	49.25%	11.94%	26.87%	0.00%	11.94%	
Male	42	11	11	4	17	85
Row %	49.41%	12.94%	12.94%	4.71%	20.00%	
Totals	75	19	29	4	25	152

Table D2.

Descriptive Statistics of Exposure Groups by Age

Exposure group status	*N*	Age	
		M	*SD*
	148	44.59	10.94
group1	75	44.95	10.67
group2	19	46.53	11.73
group3	29	43.97	12.77
group5	25	42.76	9.02

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Table D3.

Descriptive Statistics of Exposure Groups by Ethnic Group

Marked cells have counts > 10. Chi-square (df = 8) = 17.51, p =.03 Fisher Exact(r x c) p = .03						
	Exposure group status					Row
ETHNIC GROUP	group1	group2	group3	group4	group5	Totals
Caucasian / White	34	8	18	2	6	68
Row %	50.00%	11.76%	26.47%	2.94%	8.82%	
Coloured	24	3	8	0	15	50
Row %	48.00%	6.00%	16.00%	0.00%	30.00%	
African	12	4	3	2	2	23
Row %	52.17%	17.39%	13.04%	8.70%	8.70%	
Totals	70	15	29	4	23	141

Table D4.

Descriptive Statistics of Exposure Groups by Tenure

		Tenure	
Exposure group status	*N*	*M*	*SD*
	148	12.39	5.09
group1	75	12.55	5.14
group2	19	12.53	5.08
group3	29	12.38	5.50
group5	25	11.80	4.67

3. Tables and figures that accompany the differences between exposure groups in terms of demographics

3.1 Tables and figures that accompany the differences between gender and exposure group status

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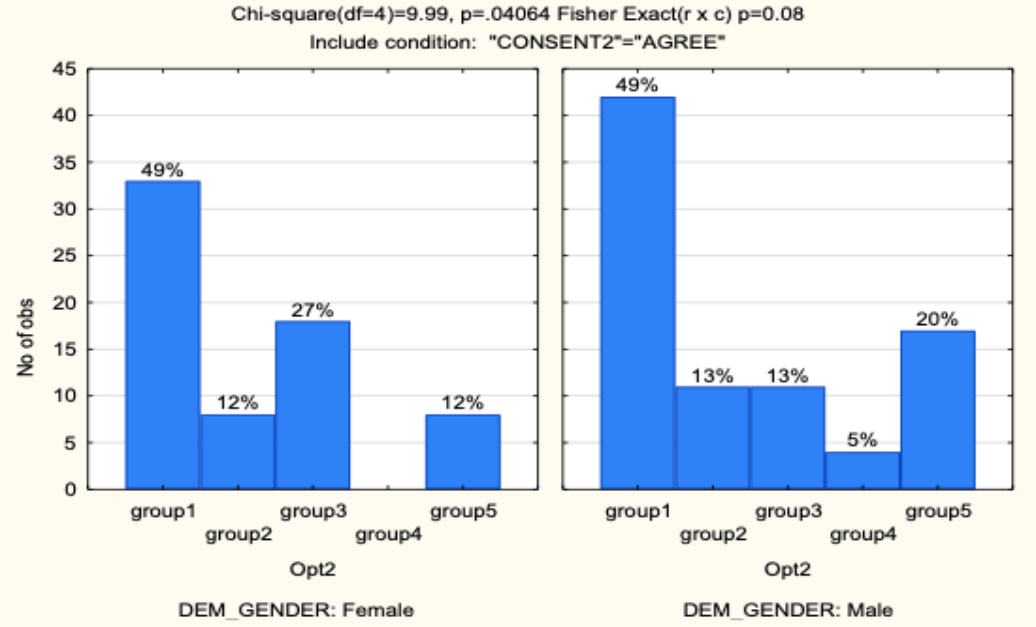

Figure D7. Distribution of genders by exposure group status

3.2 Tables and figures that accompany the differences between ethnicity and exposure group status

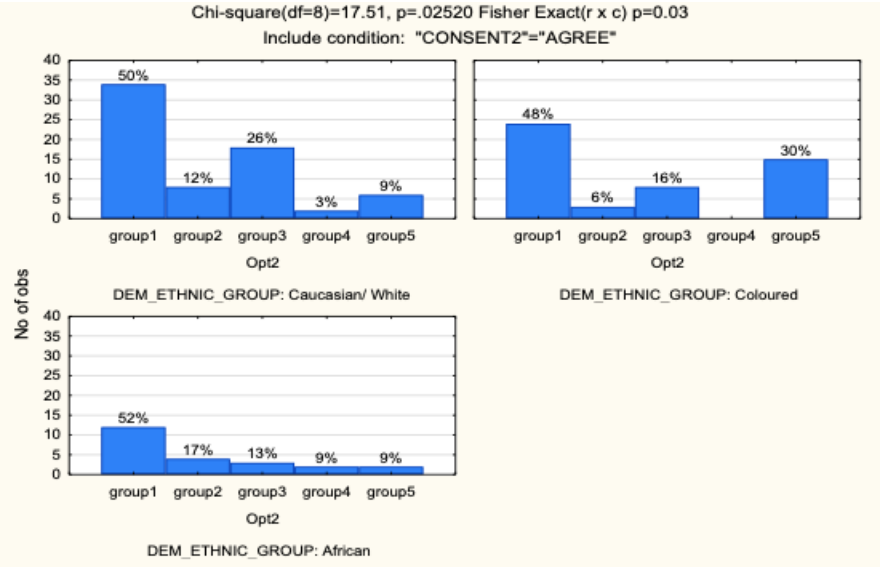

Figure D8. Distribution of ethnic groups by exposure group status

4. Tables and figures that accompany exploring the potential risk factors for prevalence

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4.1 Tables and figures that accompany the prevalence given the increased use of technology in a highly competitive environment

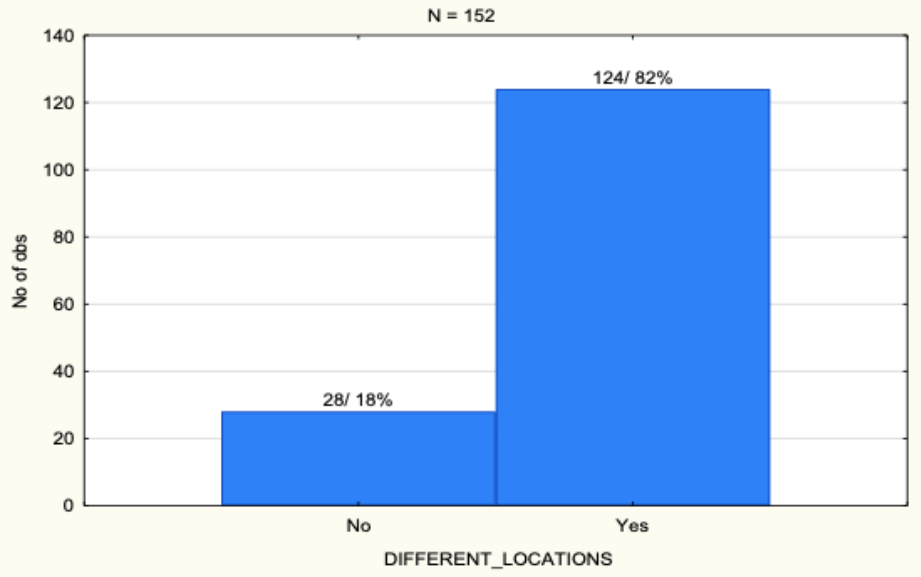

Figure D9. Descriptive statistics of the sample by whether respondents communicate across locations

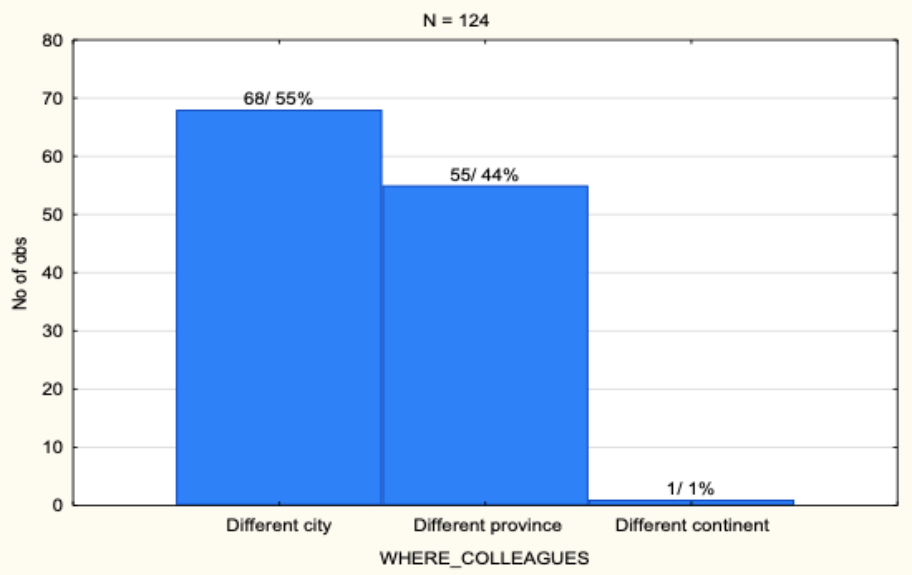

Figure D10. Descriptive statistics of where colleagues are located that respondents communicate with across locations

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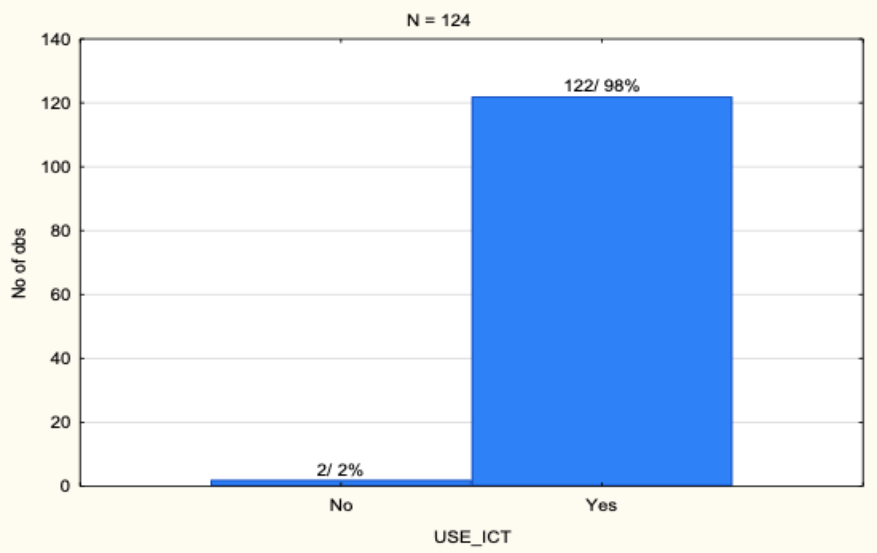

Figure D11. Descriptive statistics of whether respondents make use of ICTs

4.2 Tables and figures that accompany the prevalence given the presence of workplace bullying

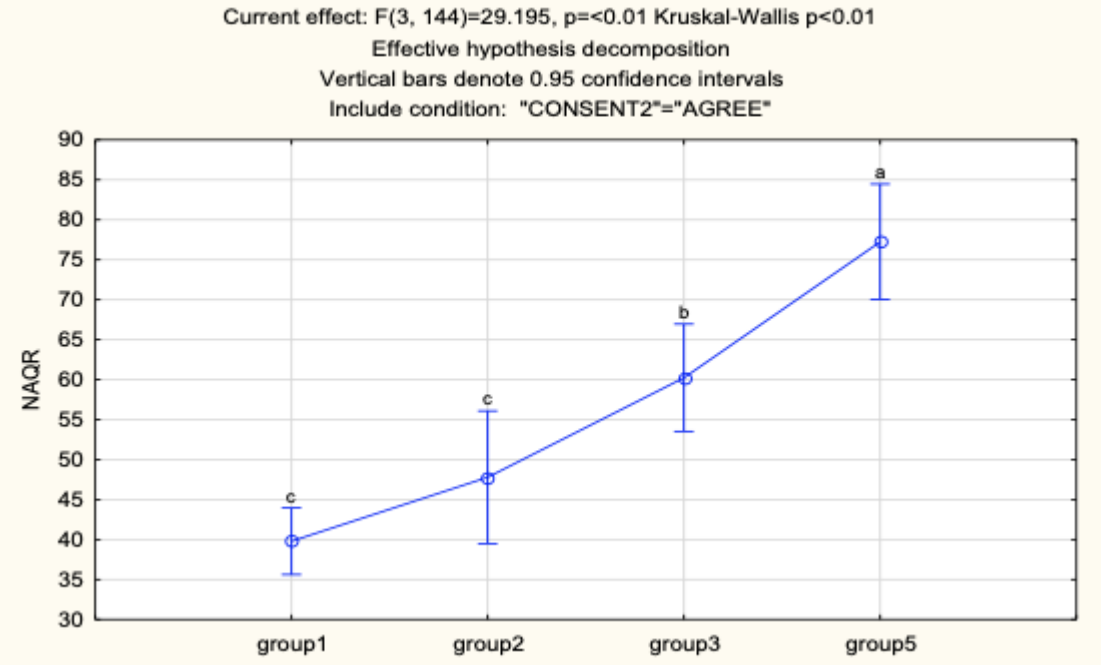

Figure D12. Least significant means plot between exposure group status and the NAQ-R

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Table D5.

Least Significant Difference Test Coefficients Between Exposure Group Status and the NAQ-R

Probabilities for Post Hoc Tests Error: Between MS = 334.68. df = 144.00					
Exposure group status	group1	group2	group3	group5	*M*
group1		.09	.00	.00	39.79
group2	.09		.02	.00	47.79
group3	.00	.02		.00	60.24
group5	.00	.00	.00		77.24

Table D6.

Descriptive Statistics for the Exposure Groups based on the NAQ-R

		NAQR	
Exposure group status	*N*	*M*	*SD*
	148	51.15	22.96
group1	75	39.79	14.97
group2	19	47.79	15.49
group3	29	60.24	18.46
group5	25	77.24	27.20

5. Tables and figures that accompany exploring the effect of traditional and cyberbullying

5.1 Tables and figures that accompany exploring the psychological effects of cyberbullying on the individual employees

5.1.1 Tables and figures that accompany exploring the psychological effect on perceived psychological stress

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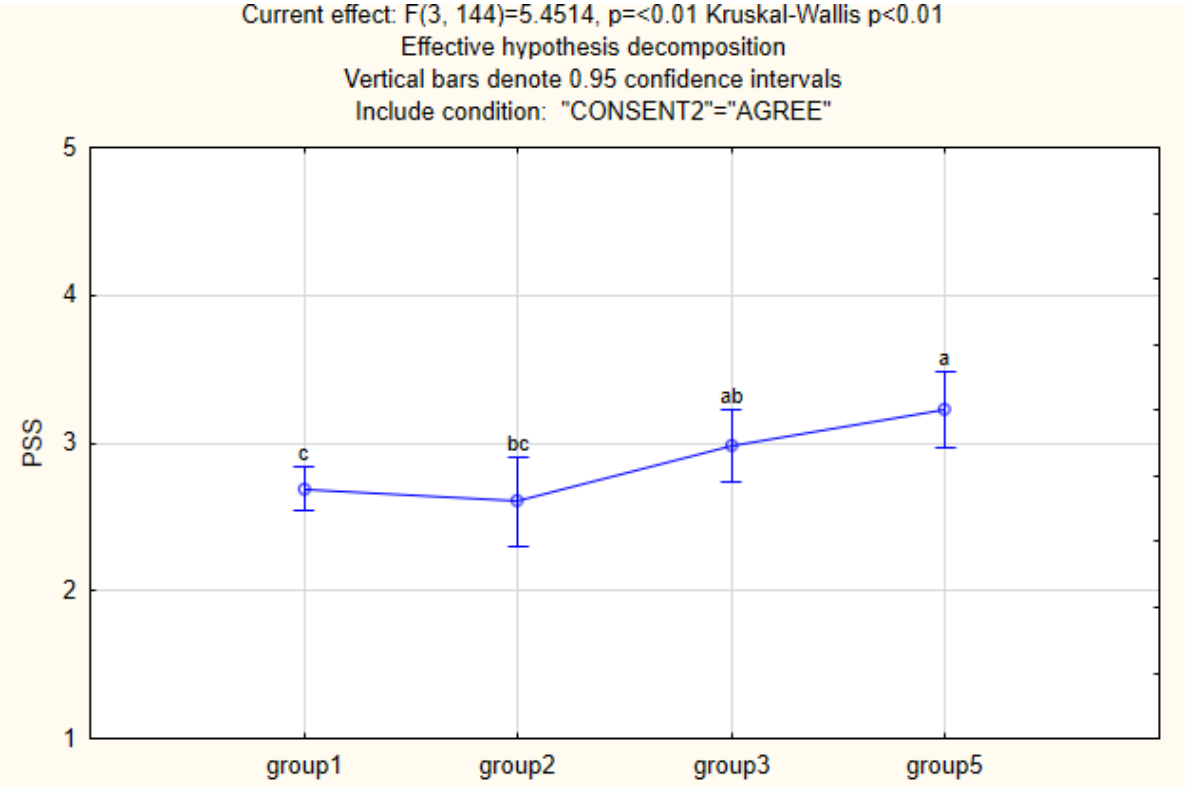

Figure D13. Least significant means plot between exposure group status and the overall PSS scale

Table D7.

Least Significant Difference Test Coefficients Between Exposure Group Status and the overall PSS scale

Probabilities for Post Hoc Tests Error: Between MS = .43017. df = 144.00					
Exposure group status	group1	group2	group3	group5	*M*
group1	-	.61	.04	.00	2.69
group2	.61	-	.05	.00	2.6
group3	.04	.05	-	.18	2.98
group5	.00	.00	.18	-	3.22

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Table D8.

Descriptive Statistics for the Exposure Groups based on the overall PSS scale

Exposure group status	*N*	Overall PSS	
		M	*SD*
	148	2.83	0.69
group1	75	2.69	0.72
group2	19	2.6	0.6
group3	29	2.98	0.6
group5	25	3.22	0.54

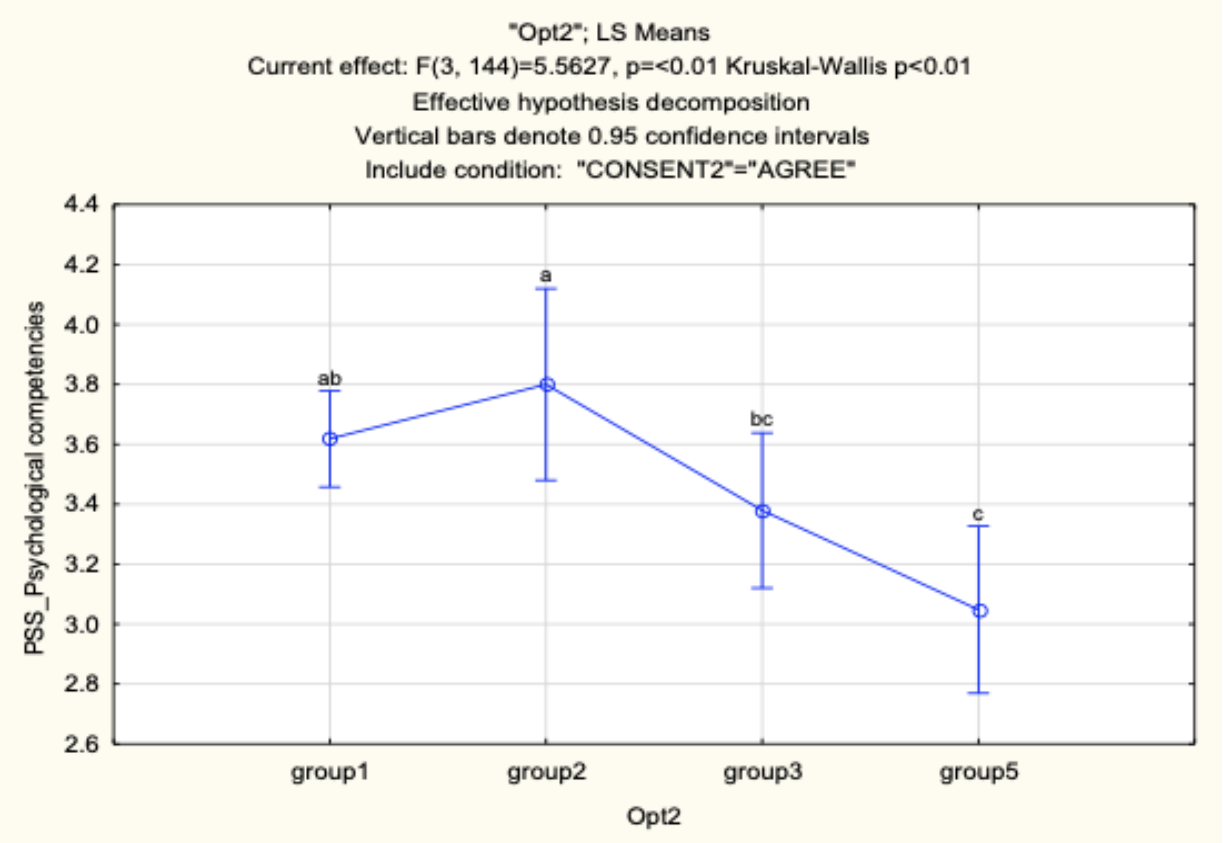

Figure D14. Least significant means plot between exposure group status and the psychological competencies subscale of the PSS scale

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Table D9.

Least Significant Difference Test Coefficients Between Exposure Group Status and the Psychological Competencies subscale of the PSS scale

Probabilities for Post Hoc Tests Error: Between MS = .49711. df = 144.00					
Exposure group status	group1	group2	group3	group5	*M*
group1		.32	.12	.00	3.62
group2	.32		.05	.00	3.8
group3	.12	.05		.09	3.38
group5	.00	.00	.09		3.05

Table D10.

Descriptive Statistics for the Exposure Groups based on the Psychological Competencies subscale of the PSS scale

	PSS Psychological competencies		
Level of Factor	*N*	*M*	*SD*
	148	3.5	0.74
group1	75	3.62	0.78
group2	19	3.8	0.54
group3	29	3.38	0.66
group5	25	3.05	0.60

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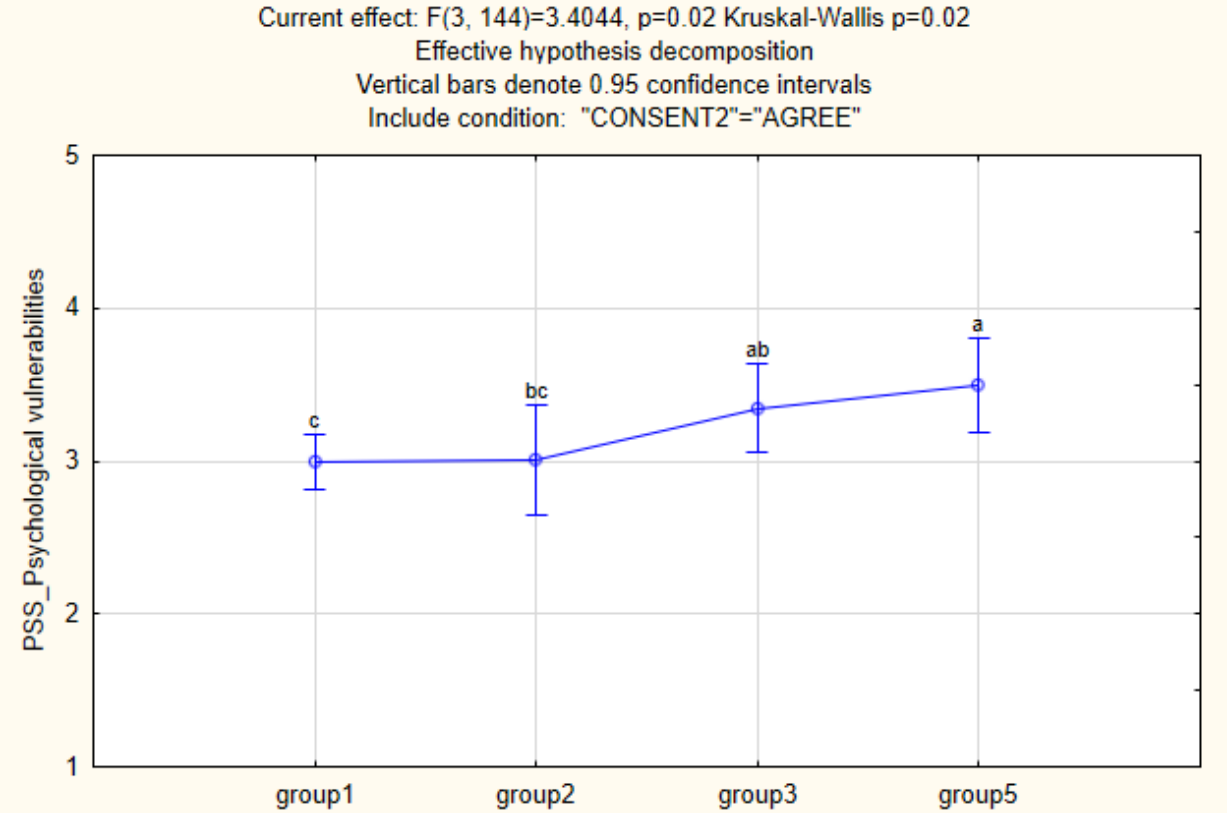

Figure D15. Least significant means plot between exposure group status and the psychological vulnerabilities subscale of the PSS scale

Table D11.

Least Significant Difference Test Coefficients Between Exposure Group Status and the Psychological Vulnerabilities subscale of the PSS scale

Probabilities for Post Hoc Tests Error: Between MS = .61425. df = 144.00					
Exposure group status	group1	group2	group3	group5	*M*
group1		.96	.04	.01	3.00
group2	.96		.15	.04	3.01
group3	.04	.15		.48	3.35
group5	.01	.04	.48		3.5

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Table D12.

Descriptive Statistics for the Exposure Groups based on the Psychological Vulnerabilities subscale of the PSS scale

Exposure group status	*N*	Psychological vulnerabilities	
		M	*SD*
	148	3.15	0.8
group1	75	3.00	0.85
group2	19	3.01	0.82
group3	29	3.35	0.65
group5	25	3.5	0.68

5.1.2 Tables and figures that accompany exploring the psychological effect on perceived demands from information and technological communication devices

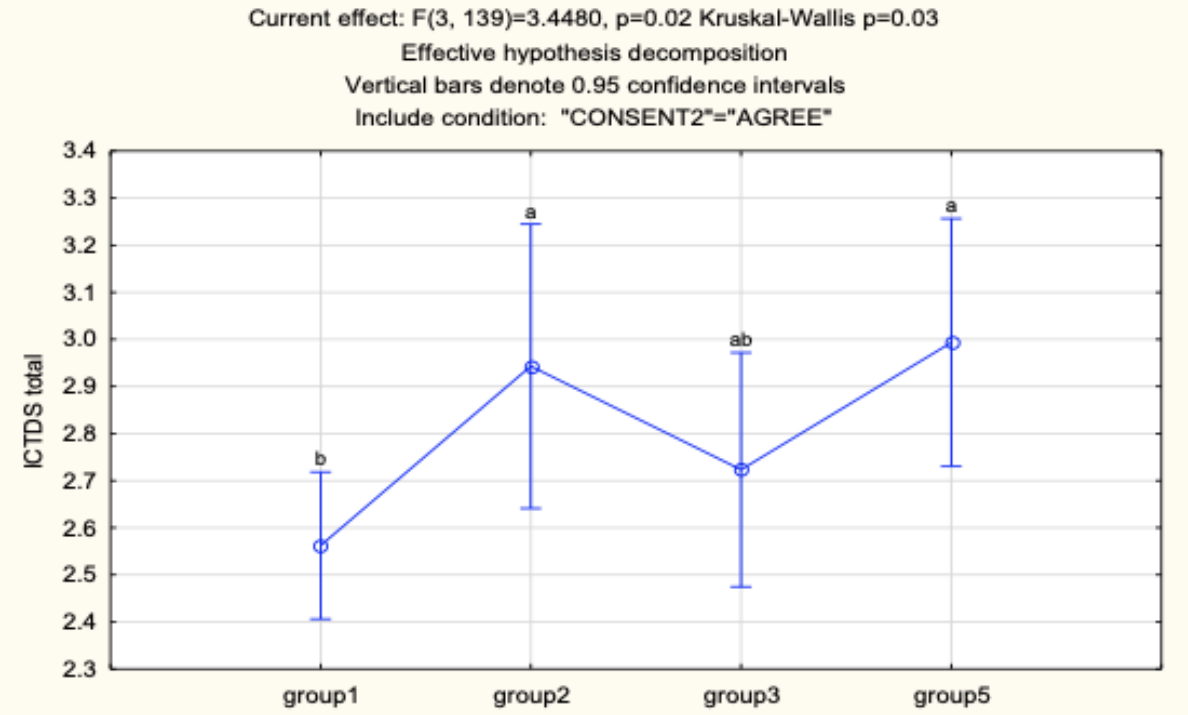

Figure D16. Least significant means plot between exposure group status and the overall ICT demands scale

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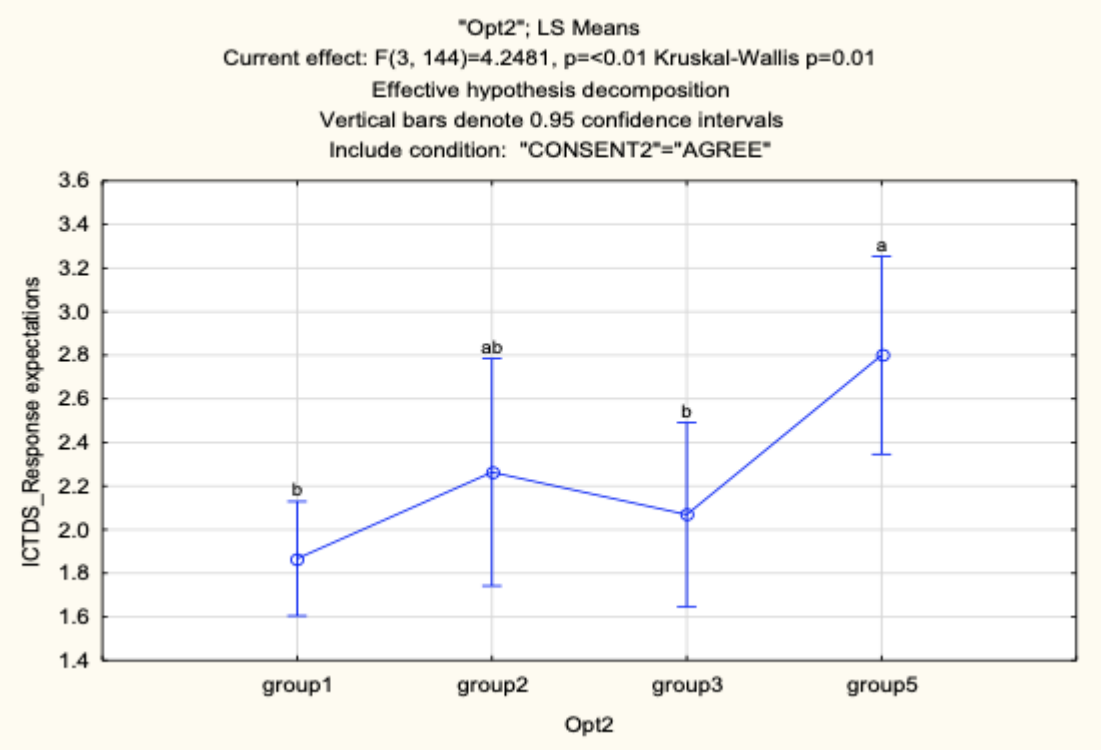

Figure D17. Least significant means plot between exposure group status and the response expectations subscale of the ICT demands scale

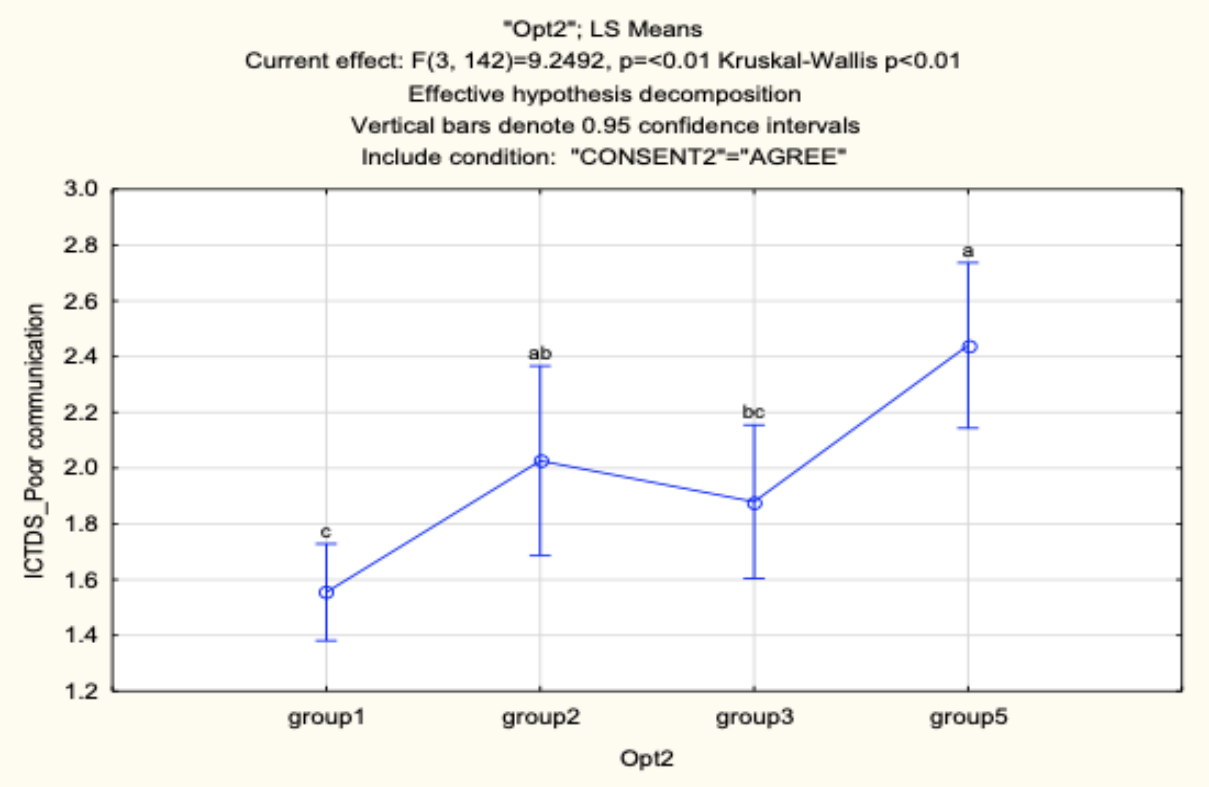

Figure D18. Least significant means plot between exposure group status and the poor communication subscale of the ICT demands scale

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Table D13.

Least Significant Difference Test Coefficients Between Exposure Group Status and the ICT Demands scale

Probabilities for Post Hoc Tests Error: Between MS = .44282. df = 139.00					
Exposure group status	group1	group2	group3	group5	*M*
group1		.03	.28	.01	2.56
group2	.03		.27	.80	2.94
group3	.28	.27		.14	2.72
group5	.01	.80	.14		2.99

Table D14.

Descriptive Statistics for the Exposure Groups based on the ICT Demands scale

		Overall ICTDS	
Exposure group status	N	M	SD
	143	2.72	0.68
group1	71	2.56	0.68
group2	19	2.94	0.52
group3	28	2.72	0.62
group5	25	2.99	0.76

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Table D15.

Least Significant Difference Test Coefficients Between Exposure Group Status and the Response Expectations subscale of the ICT demands scale

Probabilities for Post Hoc Tests Error: Between MS = 1.3209. df = 144.00					
Exposure group status	group1	group2	group3	group5	*M*
group1		.18	.42	.00	1.87
group2	.18		.57	.13	2.26
group3	.42	.57		.02	2.07
group5	.00	.13	.02		2.8

Table D16.

Descriptive Statistics for the Exposure Groups based on the Response Expectations subscale of the ICT demands scale

Level of Factor	*N*	Response expectations	
		M	*SD*
	148	2.11	1.19
group1	75	1.87	1.09
group2	19	2.26	1.05
group3	29	2.07	1.03
group5	25	2.80	1.47

Table D17.

Least Significant Difference Test Coefficients Between Exposure Group Status and the Poor Communication subscale of the ICT demands scale

Probabilities for Post Hoc Tests Error: Between MS = .56342. df = 142.00					
Exposure group status	group1	group2	group3	group5	*M*
group1		.02	.05	.00	1.55
group2	.02		.51	.07	2.03
group3	.05	.51		.01	1.88
group5	.00	.07	.01		2.44

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Table D18.

Descriptive Statistics for the Exposure Groups based on the Poor Communication subscale of the ICT demands scale

Exposure group status	*N*	Poor communication	
		M	*SD*
	146	1.83	0.81
group1	73	1.55	0.67
group2	19	2.03	0.77
group3	29	1.88	0.87
group5	25	2.44	0.79

5.1.3 Tables and figures that accompany exploring the psychological effect on individuals from specific cyberbullying events

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Table D19

Descriptive Statistics for all the items in the EOCB and how they link to Specific Cyberbullying Events and Types of Reactions

Item	*N*	EOCB		Type of reaction	Specific cyberbullying event
		M	*SD*		
EOCB 1	57	4.44	1.96	Stressed out	Being micromanaged
EOCB 2	72	3.72	1.94	Trapped and stressed out	Called up during unreasonable hours
EOCB 3	72	2.88	1.99	Physical symptoms	Called up during unreasonable hours
EOCB 4	21	4.38	2.22	Humiliated	Involving loved ones
EOCB 5	21	4.76	1.89	Angry	Involving loved ones
EOCB 6	30	4.93	1.86	Stressed and scared	Future career threatened
EOCB 7	25	4.40	2.12	Emotionally tired	Sexual harassment
EOCB 8	23	4.70	1.89	Angry	Sexual harassment
EOCB 9	24	4.04	1.90	Scared	Sexual harassment
EOCB 10	84	3.77	2.03	Cannot do my job	Left out of email group
EOCB 11	83	4.19	2.12	Isolated	Left out of email group
EOCB 12	85	4.49	1.96	Cannot do my job	Intentionally not responding to emails
EOCB 13	84	4.08	2.00	Stressed	Intentionally not responding to emails
EOCB 14	86	4.20	1.85	Angry	Intentionally not responding to emails
EOCB 15	39	4.36	1.98	Violated	Found personal details on office network
EOCB 16	34	4.32	1.92	Confused	Mixed electronic and face to face interactions
EOCB 17	33	4.85	2.06	Cannot trust	Mixed electronic and face to face interactions

(continued)

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Table D19

Descriptive Statistics for all the items in the EOCB and how they link to Specific Cyberbullying Events and Types of Reactions (continued)

Item	*N*	EOCB		Type of reaction	Specific cyberbullying event
		M	SD		
EOCB 18	20	5.20	1.61	Angry	Retaliated from negative feedback
EOCB 19	20	4.90	1.65	Humiliated	Retaliated from negative feedback

Table D20

Descriptive Statistics for the Types of Reactions considered in the EOCB

	EOCB	
Effect	*M*	*SD*
Angry*	4.49	1.83
Cannot do job*	4.13	2.00
Cannot trust	4.85	2.06
Confused	4.32	1.92
Emotionally tired	4.40	2.12
Humiliated*	4.63	1.96
Isolated	4.19	2.12
Physical symptoms	2.88	1.99
Scared	4.04	1.90
Stressed*	4.16	1.96
Violated	4.36	1.98

Note: * more than one item in EOCB considers this potential effect of/ reaction to a cyberbullying event and different sample sizes responded, pooled means and standard deviations are calculated (see Appendix E for calculations)

5.1.4 Tables and figures that accompany exploring the negative effects of cyberbullying on the performance abilities of individual employees

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Table D21.

Descriptive Statistics of Exposure Groups by whether bullying influenced ability to work

Marked cells have counts > 10. Chi-square(df=4)=46.93. p=.00000 Fisher Exact(r x c) p=p<0.01

Exposure group status	NOT WORK_Y 0	NOT WORK_Y 1	Row Totals
group1	74	1	75
Row %	98.67%	1.33%	
group2	19	0	19
Row %	100.00%	0.00%	
group3	20	9	29
Row %	68.97%	31.03%	
group4	3	1	4
Row %	75.00%	25.00%	
group5	12	13	25
Row %	48.00%	52.00%	
Totals	128	24	152

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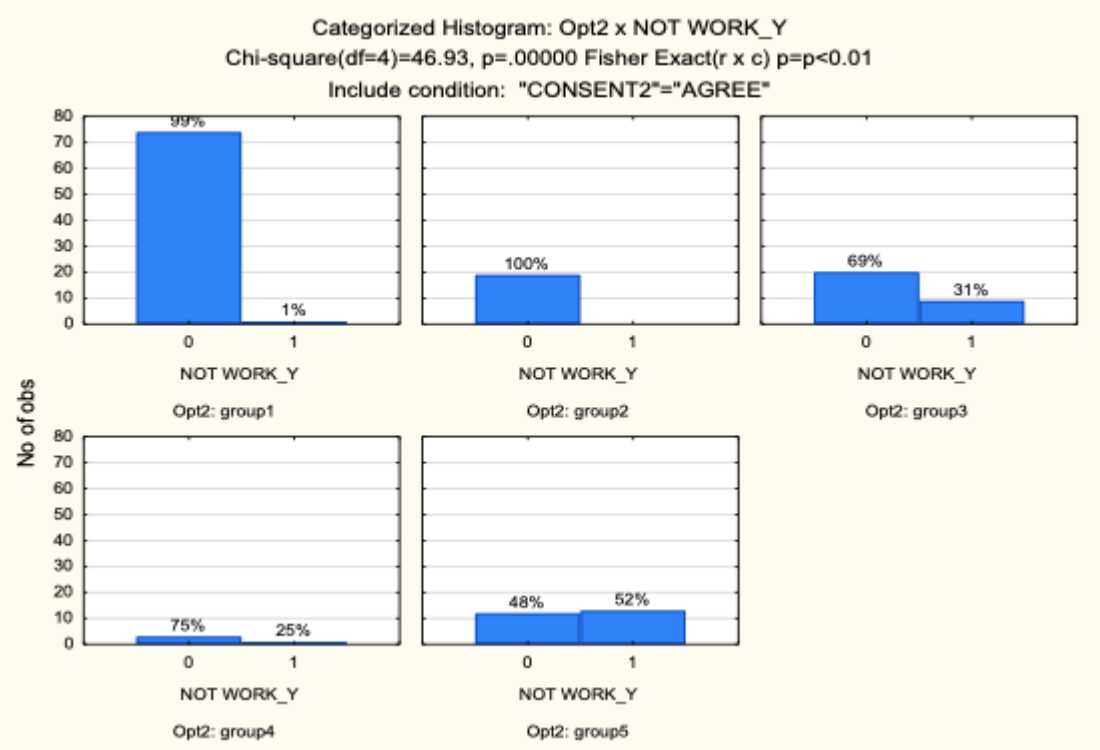

Figure D19. Distribution of exposure group status by whether or not bullying influenced ability to work

6. Tables and figures that accompany exploring how coping mechanisms could influence individual and organisational outcomes

Table D22

Descriptive responses of respondents who used cyberbullying coping mechanisms

Qualitative comments by respondents
Confronting the bully Reporting the bully
Discussed with a colleague
Grievance procedure was followed
Grievance process
I contacted EAP for help
I did take it to the union and ask what I must do
Speak with a friend

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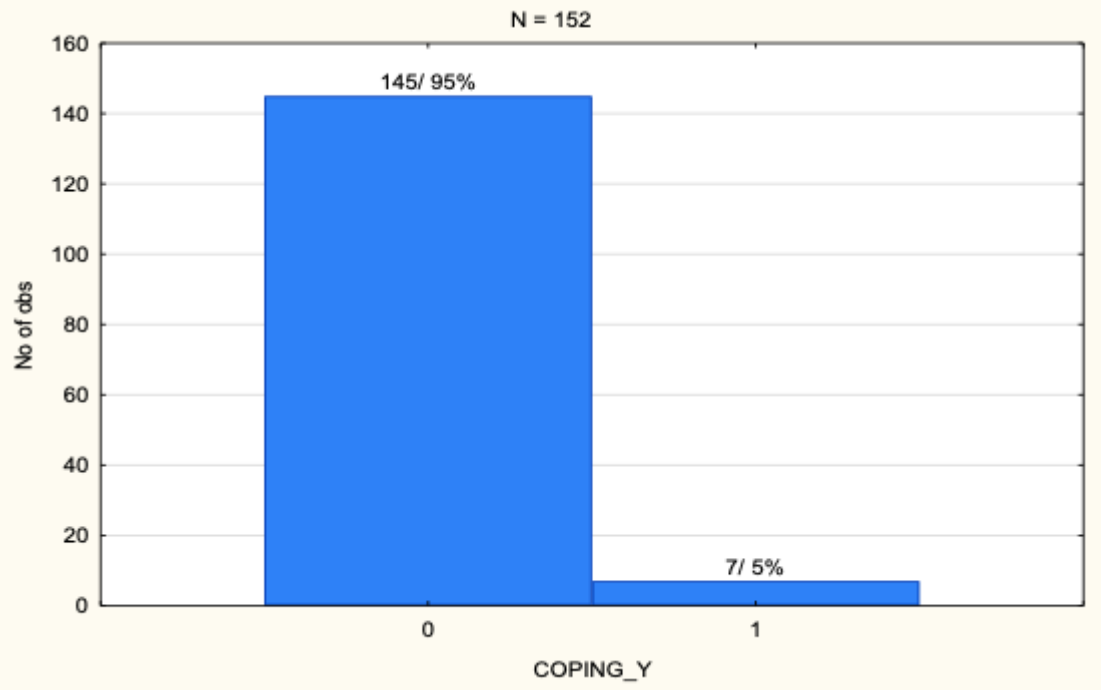

Figure D20. Distribution of the sample by whether or not coping mechanisms for cyberbullying was used.

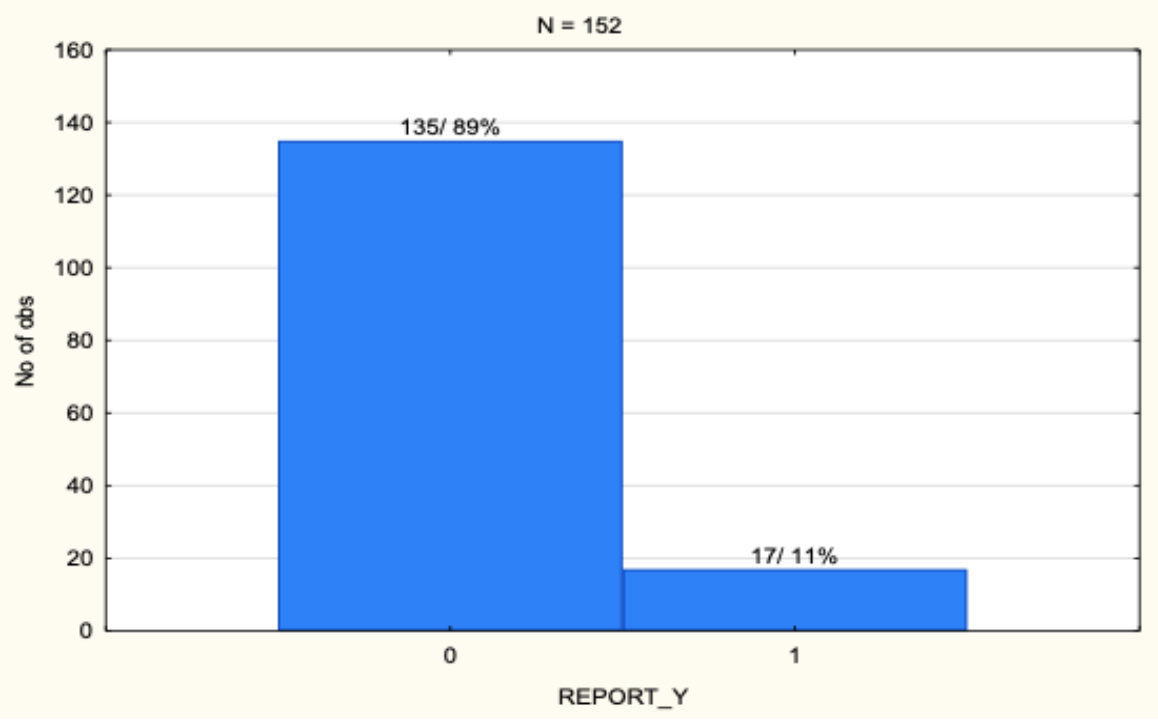

Figure D21. Distribution of the sample by whether or not bullying was reported.

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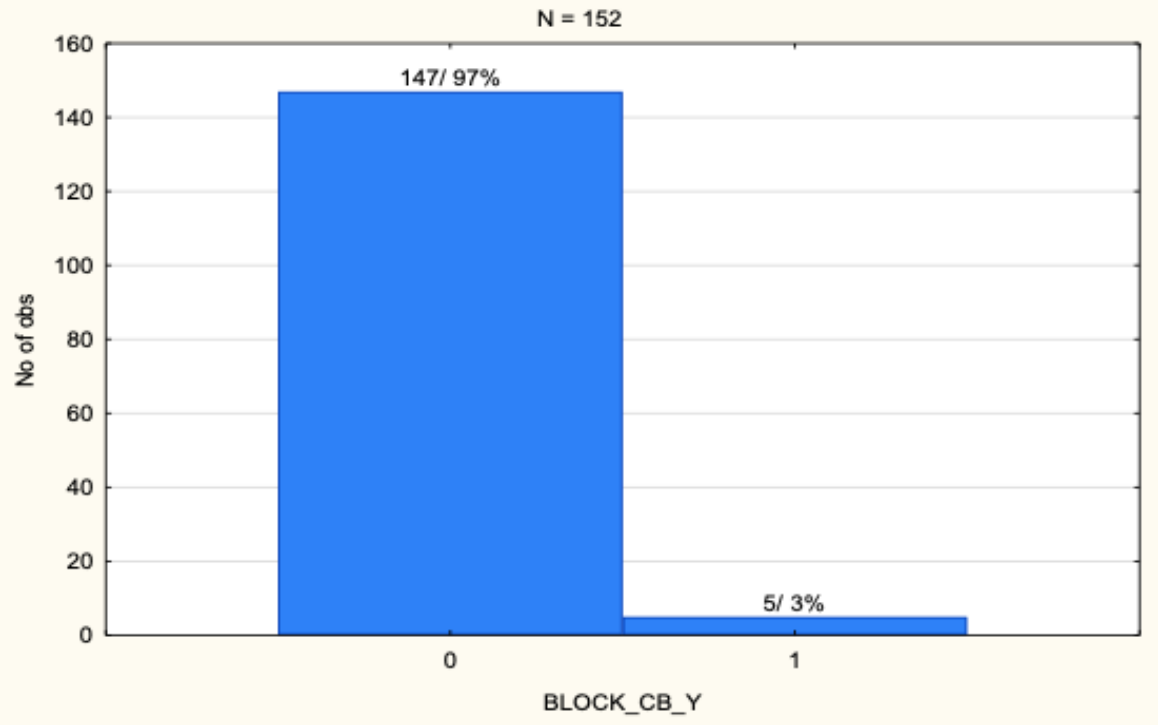

Figure D22. Distribution of the sample by whether or not the cyberbully was blocked

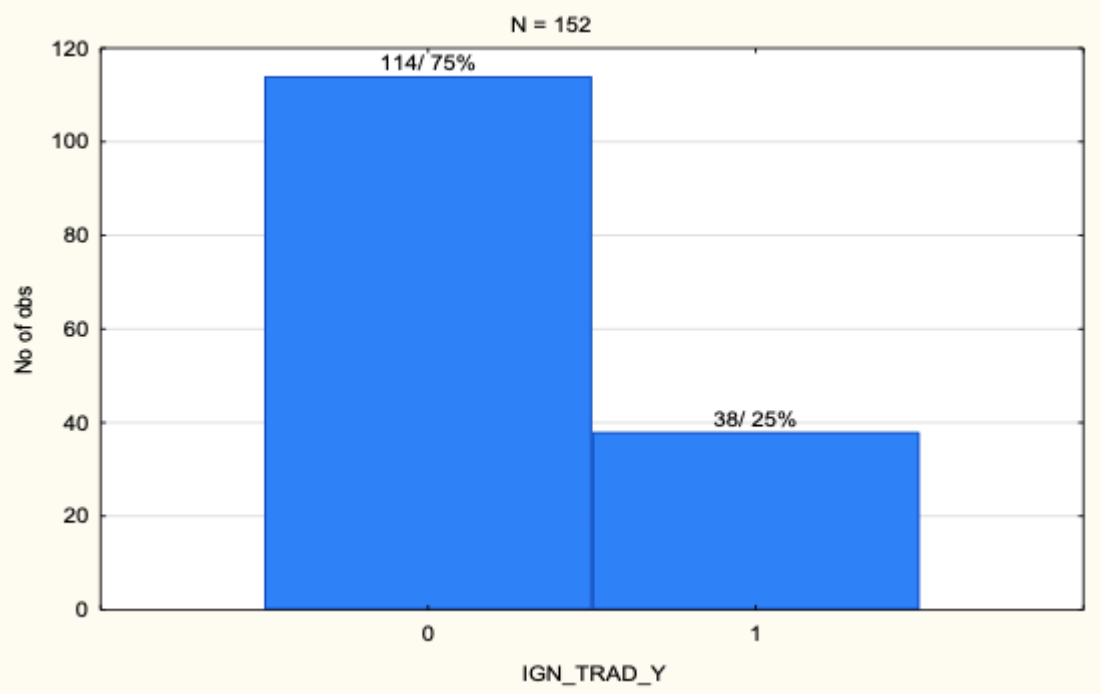

Figure D23. Distribution of the sample by whether or not the traditional bully was ignored.

The influence of coping mechanisms on whether traditional and cyberbullying influences individual psychological characteristics

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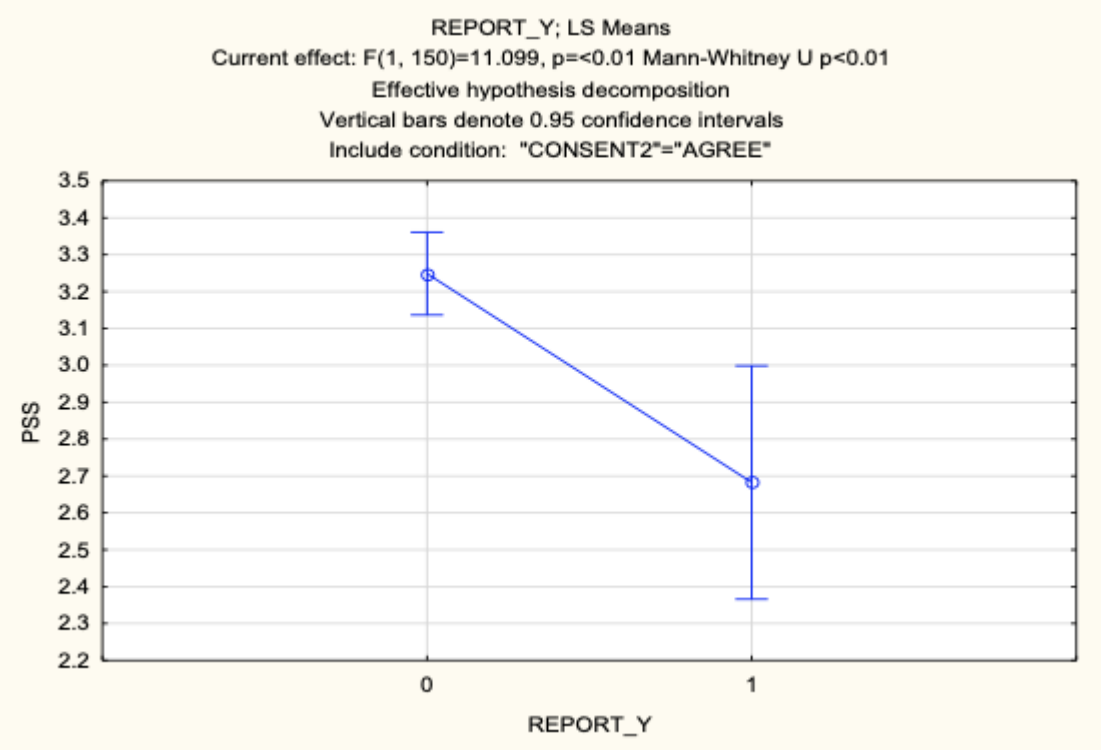

Figure D24. Least significant means plot between individuals' score on the PSS scale based on whether they reported the bullying incident.

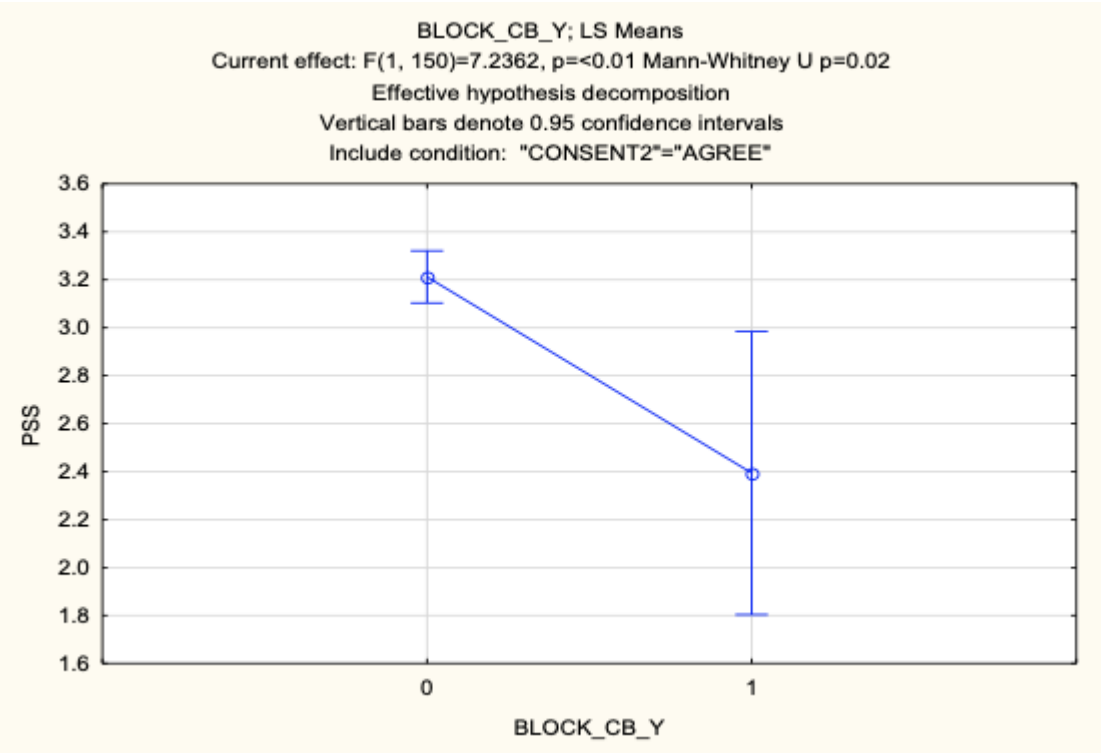

Figure D25. Least significant means plot between individuals' score on the PSS scale based on whether they blocked the cyberbully.

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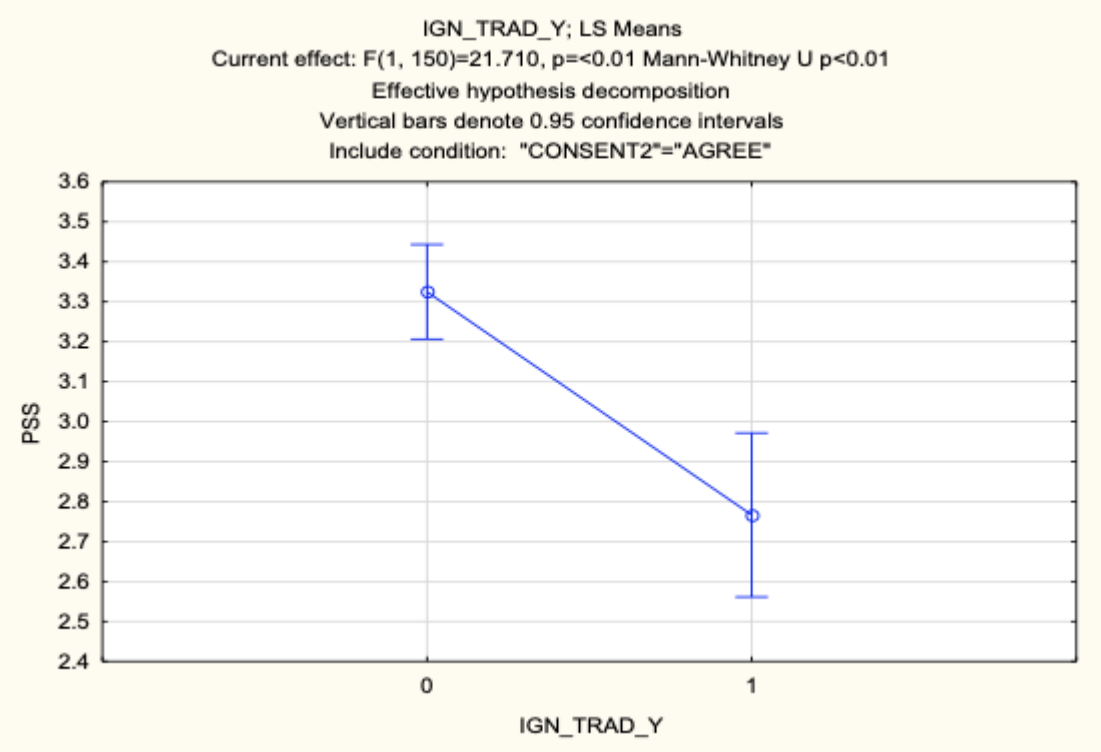

Figure D26. Least significant means plot between individuals' score on the PSS scale based on whether they ignored the traditional bully.

6.1 Tables and figures that accompany exploring the influence of coping mechanisms on whether traditional and cyberbullying influences individual psychological characteristics

Table D23

Descriptive Statistics for the Scores of the Sample in terms of the PSS based on whether they Reported the Bullying Incident

Effect	Level of Factor	*N*	PSS	
			M	*SD*
Total		152	3.19	0.68
REPORT_Y	0	135	3.25	0.66
REPORT_Y	1	17	2.68	0.66

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Table D24

Descriptive Statistics for the Scores of the Sample in terms of the PSS based on whether they Blocked the Cyberbully

Effect	Level of Factor	*N*	PSS	
			M	*SD*
Total		152	3.19	0.68
BLOCK_CB_Y	0	147	3.21	0.67
BLOCK_CB_Y	1	5	2.39	0.72

Table D25

Descriptive Statistics for the Scores of the Sample in terms of the PSS based on whether they Ignored the Traditional Bully

Effect	Level of Factor	*N*	PSS	
			M	*SD*
Total		152	3.19	0.68
IGN_TRAD_Y	0	114	3.33	0.66
IGN_TRAD_Y	1	38	2.77	0.58

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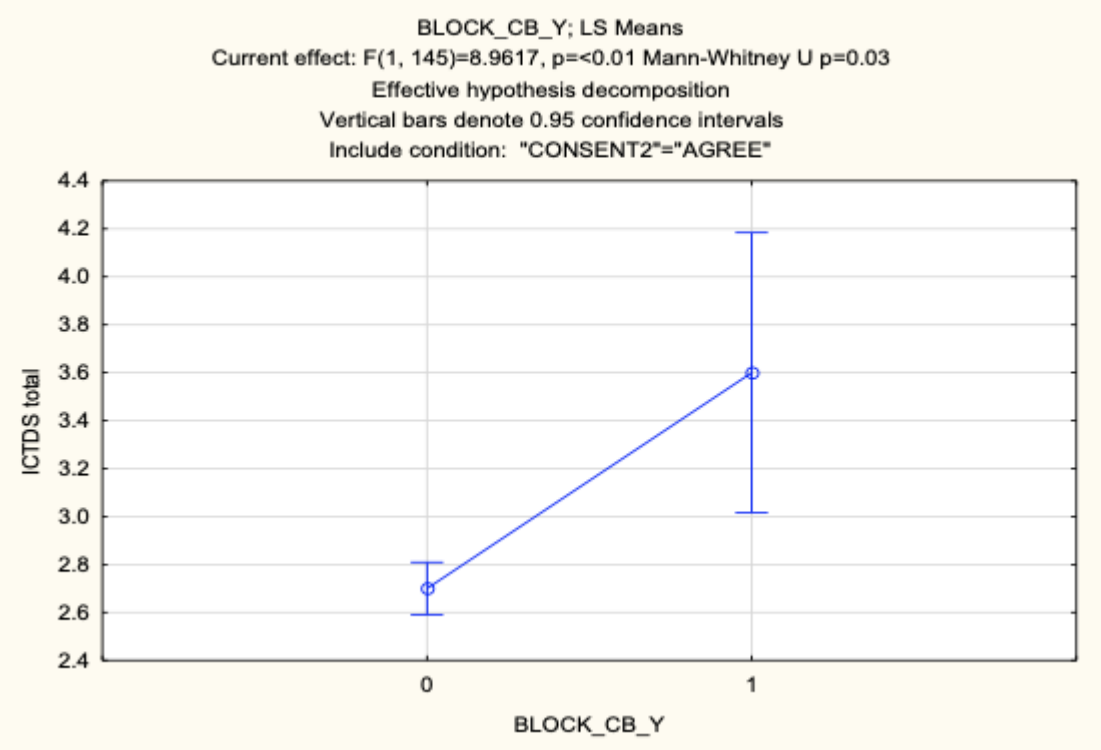

Figure D27. Least significant means plot between individuals' score on the ICT Demands scale based on whether they blocked the cyberbully

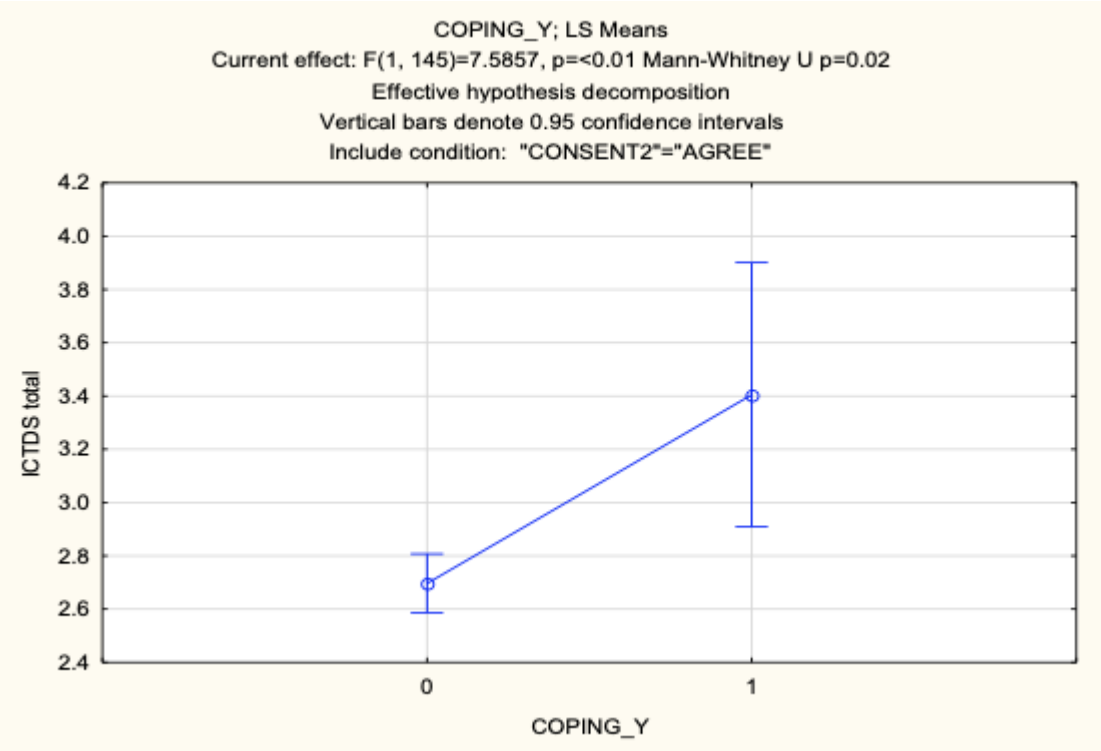

Figure D28. Least significant means plot between individuals' score on the PSS scale based on whether they used general coping mechanisms

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Table D26

Descriptive Statistics for the Scores of the Sample in terms of the ICT Demands scale based on whether they used a Coping Mechanism to combat Cyberbullying

Effect	Level of Factor	*N*	ICT Demands	
			M	*SD*
Total		147	2.73	0.68
COPING_Y	0	140	2.7	0.66
COPING_Y	1	7	3.4	0.76

Table D27

Descriptive Statistics for the Scores of the Sample in terms of the ICT Demands scale based on whether they Blocked the Cyberbully

Effect	Level of Factor	*N*	ICT Demands	
			M	*SD*
Total		147	2.73	0.68
BLOCK_CB_Y	0	142	2.70	0.65
BLOCK_CB_Y	1	5	3.60	0.90

6.2 Tables and figures that accompany exploring the influence of coping mechanisms on whether traditional and cyberbullying influences individual performance capabilities

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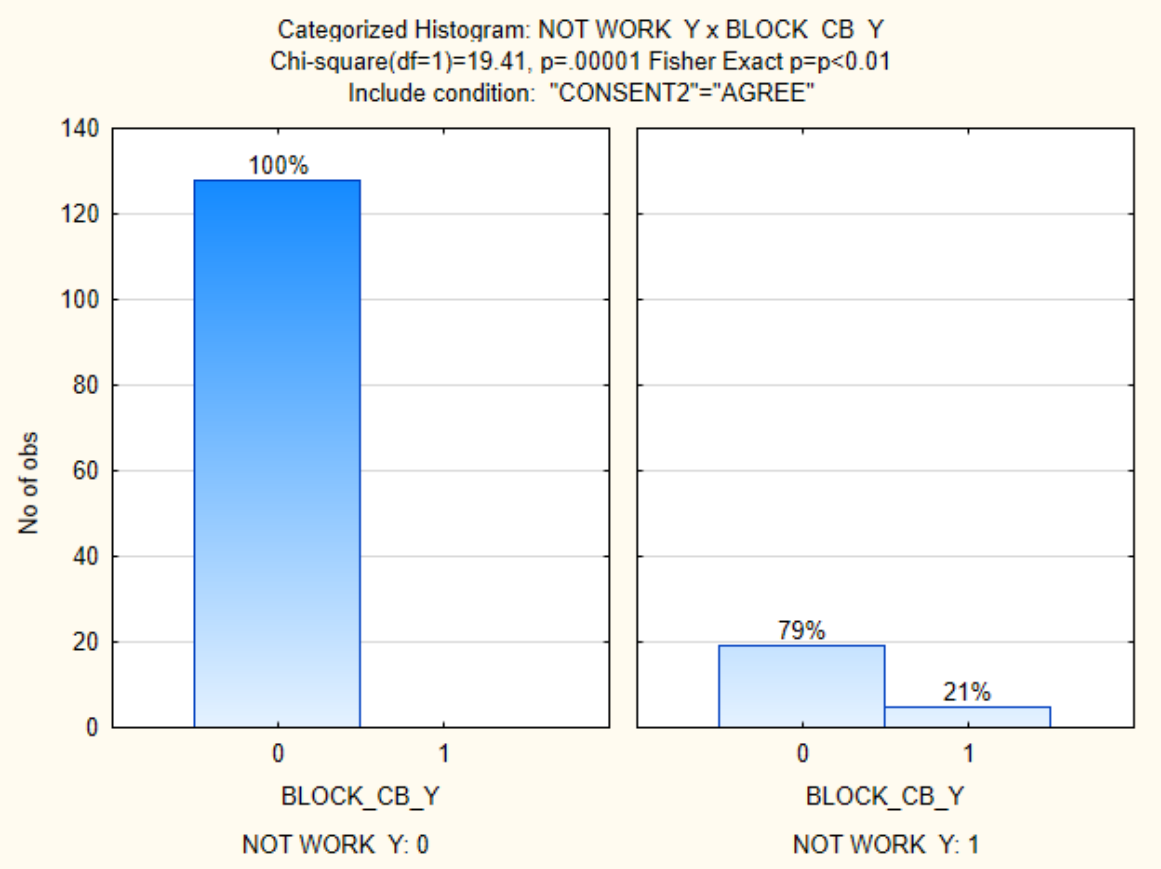

Figure D29. Least significant means plot between whether bullying influenced performance abilities based on whether they blocked the cyberbully

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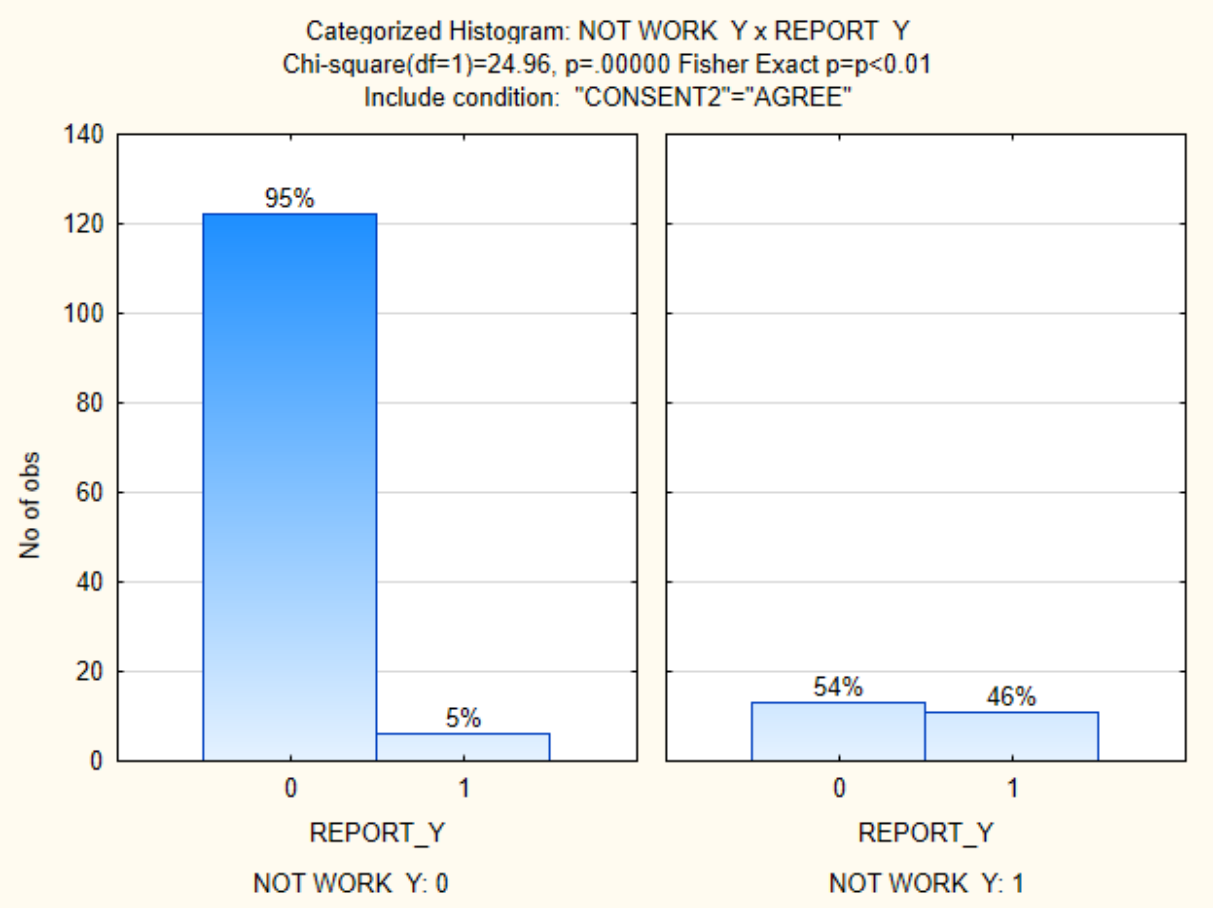

Figure D30. Least significant means plot between whether bullying influenced performance abilities based on whether they reported the bullying incident

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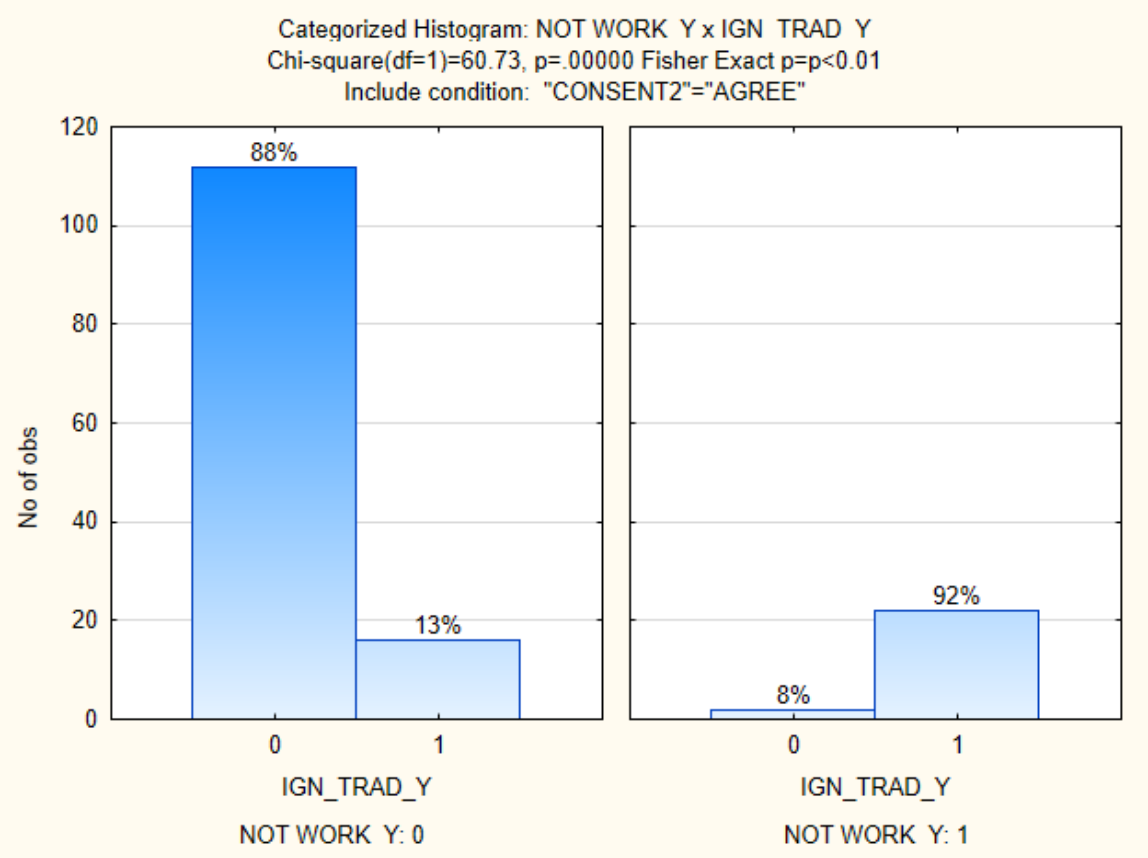

Figure D31. Least significant means plot between whether bullying influenced performance abilities based on whether they ignored the traditional bully

Table D28.

Descriptive Statistics for the Scores of the Sample in terms of whether bullying influenced performance abilities based on whether they Blocked the Cyberbully

Marked cells have counts > 10. Chi-square (df=1)=19.41. p=.00001 Fisher Exact p=p<0.01			
NOT WORK_Y	BLOCK_CB_Y		Row Totals
	0	1	
0	128	0	128
Row %	100.00%	0.00%	
1	19	5	24
Row %	79.17%	20.83%	
Totals	147	5	152

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Table D29.

Descriptive Statistics for the Scores of the Sample in terms of whether bullying influenced performance abilities based on whether they Reported the Bullying Incident

Marked cells have counts > 10. Chi-square (df=1)=24.96. p=.00000 Fisher Exact p=p<0.01

NOT WORK_Y	REPORT_Y		Row Totals
	0	1	
0	122	6	128
Row %	95.31%	4.69%	
1	13	11	24
Row %	54.17%	45.83%	
Totals	135	17	152

Table D30.

Descriptive Statistics for the Scores of the Sample in terms of whether bullying influenced performance abilities based on whether they Ignored the Traditional Bully

Marked cells have counts > 10. Chi-square (df=1)=60.73. p=.00000 Fisher Exact p=p<0.01

NOT WORK_Y	IGN_TRAD_Y		Row Totals
	0	1	
0	112	16	128
Row %	87.50%	12.50%	
1	2	22	24
Row %	8.33%	91.67%	
Totals	114	38	152

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APPENDIX E

POOLED MEANS AND STANDARD DEVIATIONS OF THE EOCB

Calculations of the pooled means and standard deviations where different items consider the same effects

$$M_{pooled\ anger} = \frac{\Sigma i\ ni\ mi}{\Sigma\ ni}$$

$$= \frac{(20*5.2)+(21*4.76)+(23*4.7)+(86*4.2)}{(20+21+23+86)}$$

$$= \frac{673.26}{150}$$

$$= 4.49$$

$$SD_{pooled\ anger} = \frac{\Sigma i\ (ni - 1)\ (sdi)2}{((\Sigma i\ ni) - T)}$$

$$= \frac{((20-1)(1.61)2+(21-1)(1.89)2+(23-1)(1.85)2+(86-1)(1.85)2}{(20+21+23+86) - 4}$$

$$= \frac{49.2499+ 71.442+ 75.295 + 290.9125}{146}$$

$$= \frac{486.8994}{146}$$

$$= 1.83$$

$$M_{pooled\ cannot\ do\ job} = \frac{\Sigma i\ ni\ mi}{\Sigma\ ni}$$

$$= \frac{(85*4.49)+(84*3.77)}{(85+84)}$$

$$= \frac{698.33}{169}$$

$$= 4.13$$

$$SD_{pooled\ cannot\ do\ job} = \frac{\Sigma i\ (ni - 1)\ (sdi)2}{((\Sigma i\ ni) - T)}$$

$$= \frac{((85-1)(1.61)2+(84-1)(1.89)2}{(85+84) - 2}$$

$$= \frac{328.62144 + 342.0347}{167}$$

$$= \frac{670.65614}{167}$$

$$= 2.00$$

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Mpooled cannot do job $= \frac{\Sigma i\ ni\ mi}{\Sigma\ ni}$

$= \frac{(85*4.49)+(84*3.77)}{(85+84)}$

$= \frac{698.33}{169}$

$= 4.13$

*SD*pooled cannot do job$= \frac{\Sigma i\ (ni - 1)\ (sdi)2}{((\Sigma i\ ni) - T)}$

$= \frac{((85-1)(1.61)2+(84-1)(1.89)2}{(85+84) - 2}$

$= \frac{328.62144 + 342.0347}{167}$

$= \frac{670.65614}{167}$

$= 2.00$

Mpooled humiliated $= \frac{\Sigma i\ ni\ mi}{\Sigma\ ni}$

$= \frac{(20*4.9)+(21*4.38)}{(20+21)}$

$= \frac{189.98}{41}$

$= 4.63$

*SD*pooled humiliated $= \frac{\Sigma i\ (ni - 1)\ (sdi)2}{((\Sigma i\ ni) - T)}$

$= \frac{((20-1)(1.65)2+(21-1)(2.22)2}{(20+21) - 2}$

$= \frac{51.7275 + 98.568}{39}$

$= \frac{150.2955}{39}$

$= 1.96$

Mpooled stressed $= \frac{\Sigma i\ ni\ mi}{\Sigma\ ni}$

$= \frac{(84*4.08)+(30*4.93)+(57*4.44)+(72*3.72)}{(84+30+57+72)}$

$= \frac{1011.54}{243}$

$= 4.16$

SDpooled stressed$= \frac{\Sigma i\ (ni - 1)\ (sdi)2}{}$

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$$= \frac{((\Sigma i\, ni) - T)}{((84-1)(2.00)2+(30-1)(1.86)2+(57-1)(1.96)2+(72-1)(1.94)2}{(84+30+57+72) - 4}$$

$$= \frac{332 + 100.3284 + 215.1296 + 267.2156}{239}$$

$$= \frac{914.6736}{239}$$

$$= 1.96$$