INVESTIGATING THE NATURE AND PREVALENCE OF MOBILE BULLYING IN THE RURAL EASTERN CAPE PROVINCE OF SOUTH AFRICA

A Dissertation presented to the

Department of Information Systems

University of Cape Town

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In partial fulfillment of the requirements for the
Masters degree in Information Systems 2021

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ABSTRACT

Limited studies have examined mobile bullying in South African schools in general and in rural schools in particular. The focus on rural schools is important to our understanding of the nature and forms of bullying. Studies conducted in other parts of the world suggest that bullying differs among urban, suburban, and rural schools. Evidence from studies on physical violence suggests that violence also takes place in many rural schools. Since rural areas are reported to have the highest level of mobile phone usage in South Africa, it is possible that mobile bullying may be more predominant in the rural communities and its implications severe. Using a survey of 984 students, the present study investigated the nature of mobile bullying in 7 rural high schools of the Eastern Cape Province of South Africa. It sought to identify the factors that mainly predict this aggression and the data was analysed using quantitative methods. The findings show that males are more involved in mobile bullying than females. Gender, mobile victimization, frequent usage of the mobile phone and retaliation were the main predictors of mobile bullying. This study also revealed that the influence of anonymity of the bully on mobile bullying is not necessarily direct. This influence is moderated by other factors such as the safety risk and the economic environment of school.

Keywords: Mobile bullying, Predictors, South Africa, Rural Schools

ACKNOWLEDGEMENTS

To my supervisor, Prof. Michael Kyobe: Thank you for your patience, support, guidance and dedication towards this project. Thank you for believing in me even when I didn't believe in myself. I am eternally grateful.

To my parents and family: Thank you for your love and support, it carried me through one of the greatest battles I have ever had to fight.

To the school principals: Thank you for opening your doors to me and allowing me to work with your schools, for the success of this project.

Table of Contents

CHAPTER 1 : INTRODUCTION

1.1 Background

Technology, particularly the internet and mobile phones have proven to be a great benefit to adolescents. Mobile phones enable adolescents to stay in contact with their parents and friends and to facilitate their school work (W. Hong et al., 2021; Van Ouytsel, 2021; Vaterlaus et al., 2021; Xie et al., 2020). However, regardless of these benefits mobile phones have a "dark side" that can negatively impact its users. Mobile phones have given birth to safety risks such as cyberbullying, stranger engagements and breach of privacy (Gao et al., 2020; Ojeda et al., 2019; L. Wang & Ngai, 2021; Yang et al., 2021). A recent alarming aggression in the past few years has been mobile bullying. Mobile bullying is a component of cyberbullying that refers to the use of a mobile phone to deliberately cause psychological harm to an individual or a group of pupils through sexting, email or distribution of one's pictures online or to others without their consent (Kowalski & Limber, 2007).

This form of bullying is a new phenomenon which has been found to be escalating at a rapid scale among adolescents (Nicol & Fleming, 2010; Hardell, 2018; Méndez et al., 2020). Global Digital Report 2019 reported that there are 3.484 billion global social media users and these increase by 9% annually (Rasheed et al., 2020). According to (Chun, Lee, Kim and Lee, 2020) cyberbullying victimization among 9-16 year old adolescents increased from 8% to 12% in various European Union states, 7–50% of adolescents in the United States and Canada agreed to have experienced cyberbullying and 30.3% of Korean adolescents also report cyberbullying.

However, despite its escalation, mobile bullying has not been given much attention in South Africa (Badenhorst, 2011). While studies have been conducted these have sought to investigate cyberbullying in a holistic view rather than the different types of cyberbullying considering that according to literature, different types of technology have different effects of bullying and these ought to be studied separately (Smith, Mahdavi, Carvalho, Fisher, Russell & Tippett, 2008). Additionally, the few cyberbullying studies conducted in South Africa so far have focused primarily on studying this aggression in urban areas and little is known about cyberbullying in rural communities.

The focus on rural schools is important to our understanding of the nature and forms of bullying. Studies conducted in other parts of the world suggest that bullying differs among urban, suburban and rural schools (Olsen, 2010). Understanding the nature of bullying in

different environments would contribute greatly to finding solutions to this form of aggression and also allow for comparison of behaviour in different contexts. A long cherished belief is that bullying is a vicious practice of the urban areas and in contrast, rural areas are peaceful, untroubled and crime free (Smokowski et al., 2013). However, evidence from studies on physical violence suggests otherwise - violence takes place in a majority of rural schools (Badenhorst, 2011; Burton & Mutongwizo, 2009). In fact, compared to urban and suburban youth, rural youth are most likely to engage in smoking, use of alcohol and drugs and carrying weapons to school (Smokowski et al., 2013). Challenges such as poverty, unemployment, loneliness and stress which are predominant in rural areas have been associated with anti-social behaviour (Burton & Leoschut, 2013). Furthermore, Woolley (2010) found that youth in the rural areas have access to the internet and are active participants in on-line activities, therefore are also exposed to cyber risks. It is therefore possible that mobile bullying may be predominant in the rural communities than is anticipated.

There is limited research that has focused on mobile bullying although South Africa is one of the leading developing countries that has the biggest population of mobile phone adopters. While some researchers perceive the effects of cyberbullying technologies (e.g. the internet and mobile technology) to be similar, research suggests that each type of electronic media has its own unique characteristics and it is important to study these separately (Smith et al, 2008). Smith et al. (2008) further argues, different types of cyberbullying are likely to differ in impact, age and gender, therefore researchers should consider studying the different types of cyberbullying. The purpose of this research therefore is to investigate the nature and prevalence of mobile bullying in rural high schools in the Eastern Cape Province, South Africa. Research also shows that rural areas have the highest level of mobile phone use in South Africa (Willard, 2004). It is therefore possible that mobile bullying may be more predominant in the rural communities and its implications for learners, schools and the nation are severe.

Various key concepts were identified in literature as factors that influence cyber and mobile bullying, namely, behaviour and attitude factors, technological factors and other factors such as age and the environment of the individual. Theories such as strain theory, self-control theory and socio cultural theory have been found to be instrumental in broadening our understanding of the nature of this aggression and these are further discussed in chapter 2.

1.2 Problem Statement

While cyberbullying and mobile bullying, in particular, has not been vastly studied in South Africa (Preez & Prinsloo, 2017), it has been found that this aggression does exist (Chukwuere & Chukwuere, 2017; Reyneke & Jacobs, 2018). A number of young South African youth have voiced their agitation regarding cyberbullying in their schools (Edberg et al., 2017). The South African school violence national survey reported a high rate of school violence including cyberbullying among high school students (Khuzwayo et al., 2018). Similarly, a cyber-safety survey conducted across all South African provinces showed that 65% of high school learners knew of cyberbullying activities in their schools and 7.5% agreed to have been cyber victims (Kritzinger, 2017a). Leoschut and Kafaar (2017) also found 17% of school learners have experienced cyberbullying in their cross country South African study.
33% of the learners in Gauteng stated that they have been victims of cyberbullying (Preez & Prinsloo, 2017). In another study done in Gauteng, 8.8% of the learners indicated that they had perpetrated cyberbullying behavior (Govender & Young, 2018a). In their study of mobile bullying and victimization in Western Cape high schools, Kyobe and Oosterwyk (2016) report that 144 of 3,621 learners were perpetrators while 247 were victims of mobile bullying. A similar finding of 29% of cyberbullying perpetrators was reported by Scholtz, Turha and Johnston (2017) in Cape Town.

78% of students were found to be exposed to cyberbullying in a cyber-crime awareness survey done in South African schools (Kritzinger, 2017a). In a rural study in KZN, 32% of the respondents admitted to being victimized through the cellphone and 14% agreed to be perpetrators (Ncube & Dube, 2016). In two studies done in rural Limpopo, Motswi and Mashegoane (2017) identified 8% and Farhangpour, Maluleke, Mutshaeni, Africa and Mutshaeni (2016) found 50% of the students involved in cyberbullying. Similarly, more than half of the respondents agreed to experiencing cyberbullying in a study in the rural Eastern Cape (Alberts & Kheswa, 2017).

1.3 Rationale and Motivation

Cyberbullying in South Africa continues to escalate and its prevalence remains unknown (Alberts & Kheswa, 2017; Chukwuere & Chukwuere, 2017; Popovac & Hadlington, 2019). In a national school violence survey, cyberbullying was listed amongst the high rated offences in South African schools Kritzinger (2017) yet there is scant research on this phenomenon in South Africa.

Given the change and growth in technology usage, there is a need to study the evolving nature of cyberbullying (Hesselink, 2017). Mobile phones have become the common medium to carry out cyberbullying (Semerci, 2016) and a better understanding of this mobile aggression is important in the context of South African youth (Apostolides, 2017). There is a lag of research on the habits of social media usage among rural South African youth (Preez & Prinsloo, 2017; Shava & Chinyamurindi, 2018). Edberg et al (2017) who investigated child violence in South Africa identified types of offences, classifying these as dominant either in rural or urban areas, however as it stands, little is known on the classification of cyberbullying due to lack of literature in South Africa especially from the rural context. Adding to this Harger (2016), states that school context is important in gaining an understanding of bullying. Moreover, apart from the likelihood of different prevalence rates between urban and rural areas, the required prevention and intervention policies might also be unique (R. Kowalski et al., 2017).

Text messaging ranks as the most preferred method of communication telephonically, especially with young people (George et al., 2018; Rudisill et al., 2018). Online deviant activities are dominant on mobile media platforms than computers due to phones being portable and allowing immediate and private communication (Madigan et al., 2018a).

There is limited knowledge about the different contexts in which cyberbullying occurs and this has resulted in criticism of bullying research (Harger, 2016). Beyond the prevalence differences that might be existing between the different contexts, the strategies to address this phenomenon may also differ (R. Kowalski et al., 2017). In a South African bullying study, findings suggested that it is necessary to gain an understanding of the nature and prevalence of bullying across school contexts and environments (Juan et al., 2018a). There is scarce research in South Africa focusing on bullying in different school contexts and factors associated with this aggression (Juan et al., 2018a; Preez & Prinsloo, 2017).

1.4 Research Question and Objectives

The research question is:

- What is the nature and prevalence of mobile bullying in rural Eastern Cape high Schools?

The objectives of the study are:

- To investigate the nature of mobile bullying in rural schools of the Eastern Cape Province.
- To identify the factors that mainly predict this aggression in the rural schools

1.5 Conclusion

Although mobile phones come with numerous advantages, these devices have proven to be a medium of a seemingly ongoing aggression over the past few years-cyberbullying. Cyberbullying has been labeled as a global problem amongst adolescents who are the majority of mobile phone users. While this is a global problem, little is known about cyberbullying and particularly mobile bullying in South Africa. This study seeks to understand the nature and prevalence of mobile bullying amongst rural adolescents in the Eastern Cape Province.

A search for peer-reviewed research reports published on mobile and cyberbullying was conducted. Electronic databases such as EbscoHost, JSTOR and Elsevier were used to gather Journal articles from various fields of study such as psychology, information systems and education. Google scholar was also used as a source to find additional publications. Search terms included" mobile bullying", "cyberbullying" and "rural areas AND mobile bullying". Reference sections of different reports were also searched for any publications that may be applicable to this study. Literature search resulted in more than 50 unique citations.

In the following section the researchers present the literature review. The section begins by distinguishing between conventional, cyber and mobile bullying. Various factors influencing cyberbullying are discussed and a conceptual model is developed to guide the study. The data collection process is presented and the findings are presented and analysed. The results are discussed and conclusions are finally drawn.

CHAPTER 2 : LITERATURE REVIEW

2.1.Introduction

The literature discussed in this section explains conventional, cyber and mobile bullying. The differences between these types of bullying are investigated, significance of studying mobile bullying explained, the theoretical framework that underlies bullying, the factors that influence bullying, its implication and what legal measures are used in South Africa to fight against mobile bullying. This section also discusses the conceptual model, propositions and closes by identifying the gaps in literature. The section starts by a definition of terms, and then discusses the above mentioned concepts as they relate to this study.

Bullying is an old aggressive behaviour that has existed since the 70s (Twardowska-staszek, Zych, Ortega-ruiz, & Ignatianum, 2018). While Antoniadou and Kokkinos (2015) argues is has been there as early as 1885. It is still widespread even today (Twardowska-staszek et al., 2018), prevalent in primary, high and tertiary schools, threatening the educational development and wellbeing of students (Rosalba Manna, Samuele Calzone, Paola Adinolfi, 2019). In the past few years, bullying has evolved in the manner in which it transpires. Technology, especially the internet and mobile phones, have become the new platform for this aggression (Lucas-molina, Pérez-albéniz, & Fonseca-pedrero, 2018;Choi, Earl, Ree, & Cho, 2019).

Various studies have often found correlations between traditional, cyber and mobile bullying. Similar to traditional bullying, roles such as cyber bully, cyber victim and cyber bully-victim are identified in cyberbullying (Wachs, Junger, & Sittichai, 2015). Students involved in traditional bullying are also partakers of cyberbullying. In their findings, Twardowska-staszek et.al (2018) discovered that both cyber victims and cyber perpetrators were traditional bullies or victims.

Bully/victims get exposed to the same negative effects of bullying with other bullies or victims and suffer from mental health issues, low school grades or suicidal attempts (Lazuras et al., 2017).

Research however has also found that there are differences between these forms of bullying. For example, while repetition and imbalance of power are regarded as characteristics of traditional bullying, these can’t be easily applied to cyberbullying (Slonje, Smith, & Frisén, 2013). According to Slonje et.al (2013), with cyberbullying, repetition of the aggression can

be carried out by the audience and not particularly the perpetrator. Physical strength has no substance, cyberbullies can be weaker than their victims (Eden, Heiman, & Olenik-shemesh, 2016). It is for this reason that these types of bullying need to be studied separately.

While numerous studies have been conducted on cyberbullying, there exist many gaps in knowledge that still need to be addressed (Asher et al., 2017; Maunder & Crafter, 2018). With the growth and use of mobile phones by adolescents, mobile bullying has become an important research area. Our lack of understanding the rural context makes it difficult to know the prevalence of this aggression. It is important to study cyberbullying across various geographic areas (Twardowska-staszek et al., 2018). The study in rural communities is important (Eden et al., 2016). Research has shown that bullying differs between rural and urban areas and is likely to be more prevalent in rural communities (Salmon et al., 2018). Asher et al. (2017) who sought to understand the difference between traditional and electronic bullying found that there are differences in emotional and behavioural responses between the two.

2.2 Traditional bullying, cyberbullying and mobile bullying

2.2.1 Traditional bullying

This is the form of bullying that is carried out either directly, though physical fights or indirectly through name calling and spreading rumors (Rezapour et al., 2019; Salmon et al., 2018; Twardowska-staszek et al., 2018). Research studies in the field define it as an aggressive behaviour with three characteristics: (a) it aims to cause harm to the target, (b) it is repetitive and (c) there is an imbalance of power between the perpetrator and the target making it difficult for the victim to stand up for themselves against the attacks (Lazuras et al., 2017; Smith et al., 2018).

2.2.2 Cyberbullying

Unlike traditional bullying, cyberbullying cannot be explicitly defined (K. Choi et al., 2019), as a result, there are many definitions used in literature with the attempt to define this phenomenon (Maunder & Crafter, 2018). In spite of the lack of a universal definition, a consensus among scholars is that this aggression is the digitized traditional bullying that has become predominant among adolescent who for the lack of fear of being caught gain control over their victims with the intention to cause them harm through technologies such as cellphones, email, websites and chat rooms (Hood & Duffy, 2018; Rosalba Manna, Samuele Calzone, Paola Adinolfi, 2019).

Though the two forms of bullying seem similar, there are unique aspects of cyberbullying that are more likely to differentiate the experience of cyber victims from traditional bullying victims (Asher et al., 2017). Contrary to traditional bullying that ends when the perpetrator and victim part ways, cyberbullying, due to its technological features, continues even when the victim is in their 'safe' environment, at home (K. Choi et al., 2019; Maunder & Crafter, 2018). Cyberbullying has a wider audience, fostering a quick spread of rumors (Şentürk & Bayat, 2016a).

With cyberbullying, the perpetrator communicates anonymously without fear of retaliation. Anonymity or an absence of direct contact lessens the possibility of withdrawal from devious acts, remorsefulness, sympathy and bystander intervention (Graf, Spiel & Yanagida, 2019; Cuadrado-Gordillo & Fernández-Antelo, 2019; Livazovic & Ham, 2019). Poor social interactions and bonds can lead individuals feeling morally disengaged and therefore more likely to engage in antisocial behaviour (Paullet & Pinchot, 2019). Holt, Fitzgerald, Bossler and Chee (2016) reported internet access was significantly associated with high rates of cyberbullying victimization, while mobile phone ownership was associated with mobile phone harassment (Furrer,Huang,Radford &Singh, 2017).

2.2.3 Mobile bullying

With the evolution of society and technology, bullying has also not remained static (K. Choi et al., 2019). New methods of bullying have been identified and as a result, bullying needs to be studied and understood in its current form and how the kind of impact it has on people (Maunder & Crafter, 2018). While these forms of bullying appear to have common attributes, they however differ in various aspects such as occurrence circumstances, nature and impact, therefore a study of these various forms separately can increase our understanding about their occurrence circumstances (Rezapour et al., 2019). While cyberbullying and school bullying tend to overlap to some extent, the correlation between them however still remains unclear (Rosalba Manna, Samuele Calzone, Paola Adinolfi, 2019).

One of the emerging bullying trends over the past few years is mobile bullying. Mobile bullying is studied within the scope of cyberbullying (Semerci, 2016) and refers to bullying that is covertly carried out using mobile technology. For instance, this includes mobile phone features such as calls, text messages, chat rooms and sending inappropriate pictures or video clips (K. Choi et al., 2019; Şentürk & Bayat, 2016b). Pabian and Vandebosch (2016) further

describe it as using a mobile to send unkind messages, distribute hurtful images, post offensive things or spread rumors.

Within cyberbullying, mobile phones and the internet are considered the most dreadful (Antoniadou & Kokkinos, 2015). In their study, Antoniadou and Kokkinos (2015) and Pabian and Vandebosch (2016) consider cyberbullying through the internet separately from cyberbullying through the mobile phone and therefore investigated and measured these as unique constructs as opposed to one. Tackling the problem by addressing specific forms of the concepts can help bridge the knowledge gap (Jiansheng Li et al., 2018). Investigating the various types of cyberbullying across different technologies can expand our understanding of cyberbullying among adolescents (Betts et al., 2016).

Mobile bullying can occur without the internet, for instance, pictures can be sent using Bluetooth and rumors are spread via a text message (sms or please call me) or social network chat application such as whatsapp that can operate using airtime. The two are different, especially in the context of South African rural areas where there is an emergence of phones but not internet use. The characteristics of technology differ from offline bullying and the experience of bullying through these is likely to differ (Asher et al., 2017).
Mobile bullying has become a predominant cyber aggression amongst young people and is expected to increase in future. Possession of a mobile phone has proven to amplify the chances of adolescent exposure to cyberbullying either as bullies or victims (Eden et al., 2016; Şentürk & Bayat, 2016b). In their study, Şentürk and Bayat (2016) found that a majority of learners owned and spent most of their time using mobile phones. Attesting to this, Semerci (2016) found that amongst young people, mobile phones are a better preference than the traditional computers or television possibly due to the diversity and features of mobile phones applications (Jiansheng Li et al., 2018).

According to Independent Communications Authority of South Africa (ICASA), an organization responsible for the collection of statistics on the progress of ICT in South Africa, approximately 88% of South Africans are active subscribers of one or more network operators and majority of these are youth (Gillwald et al., 2017). In their study of cyberbullying in a rural area in kwazulu Natal South Africa, Ncube and Dube (2016) found that 45% of the rural youth sampled owned cell phones. Shava and Chinyamurindi (2018) who conducted a study on the usage of mobile devices in a rural part of the Eastern Cape

Province of South Africa found that there is a frequent culture of social media consumption among the rural youth that were surveyed. As a result of increased use and ownership of mobile devices in rural areas in South Africa, internet use has almost doubled from 21 percent in 2012 to 39 percent in 2017 (Gillwald et al., 2017). Usage of mobile phones in Africa is expected to increase in the coming years. Researchers argue that with the increase of mobile phone accessibility, cyberbullying prevalence is likely to also increase (Semerci, 2016). Considering adolescent's high mobile usage, mobile bullying stands a relevant study in South Africa.

Previous studies have reported on the different factors that influence cyberbullying. On the premise that mobile bullying is a form of cyberbullying, the researcher assumes that literature on bullying and cyberbullying can help to explain mobile bullying. Factors discussed in this study mainly relate to the nature of the technology and how it is used, the habits of adolescents and their social and physical environment. In the following section the researchers discuss these factors.

2.3 Factors influencing Cyber & Mobile Bullying

2.3.1 Behaviour and attitude Factors

2.3.1.1 Lack of Self-Control

Gottfredson and Hirschi's (1990) self-control theory, posits that high self-control limits the possibility of criminal behaviour and persons who embody this trait are less likely to participate in criminal acts while the opposite is true. Addiction to technology has become the challenge facing a lot of adolescents (Arnavut et al., 2018). This group is physically attached to their mobile phones and feels incomplete without it (George et al., 2018; Semerci, 2016). Rural youth have been found to be similarly addicted to their phones such that they feel compelled to engage in Facebook activities even under undue circumstances (Shava & Chinyamurindi, 2018). Fear of missing out (FOMO) is a trait among adolescents, resulting in them being addicted to their phones (Popovac & Hadlington, 2019).

The advantageous properties of mobile phones such as ease of communication, building and maintaining relationships can cause people to be addicted to their phones and these signs of addiction are prevalent among adolescents (Durak, 2018). The main cause of addiction is lack of self-control (Jesintha & Karthiga, 2018; H. Kim et al., 2018). Adding to this, Mitchell and Hussain (2018) states, addiction manifested by addictive patterns of phone usage are associated with high impulsive behavior such as low self-control.

As an individual's self-control drops, their likelihood to engage in antisocial behaviour increases (Boccio & Beaver, 2018; Chen et al., 2019; Schwartz et al., 2017). Similarly Vazsonyi, Miku, and Kelley (2017) and Vazsonyi & Jiskrova, (2018) found a strong reliability link between low self-control and crime involvement. Young people faced with low self-control tend to be self-centered, lack sympathy, unkind towards others and prefer to opt for activities that are risky and delinquent rather than cautious and educational (Connolly et al., 2017). On the contrary, high self-controlled adolescents often make good decisions, have a better socioeconomic status and are less likely to be involved in crime (Orkibi et al., 2018; Strömbäck et al., 2017). High self-control among adolescents has been regarded as a remedy to many issues facing societies (Uziel, 2018). A number of studies have reported a significant association between low self-control and cyberbullying (S. Cho et al., 2017; S. Cho & Lee, 2018; Mitchell & Hussain, 2018; Ren, 2017; Vazsonyi, Jiskrova, et al., 2017).

Self-Control theory further proposes that low self-control is associated with: (a) the type of relationship parents have with their children and (b) the extent to which parents monitor their children's behaviour. In the absence of a solid parent-child relationship and parental monitoring, adolescents may find it hard to learn self-control and empathizing with others (S. Cho et al., 2017).

In the case of cyberbullying, the internet lacks guardianship, making it difficult for cyberbullying behaviour to be monitored or punished (Luiz et al., 2018). Infrequent parental supervision is a risk factor for bullying as it exposes adolescents to deviant equals (J. Kim & Kim, 2019). Cyber bullies reported having poor emotional relationships with their parents and minimal parental monitoring of their online behaviour (Choon et al., 2019). Mesch (2018) suggests that children who relate with their parents as social media friends are less exposed to cyberbullying victimization as this connection embodies a form of protection. Students with strong bonds with their parents are less likely to be victimized (Ren, 2017). Parental monitoring strategies which guide children's online behaviour might decrease their cyberbullying involvement (Meter & Bauman, 2018).

2.3.1.2 Strain

Research to date suggests that youth who report strain are more likely to engage in cyberbullying (Hinduja & Patchi, 2010; Fryling & Rivituso, 2009). According to the General Strain Theory (GST) of Agnew (1992), experiencing situations that are unfavorable can lead a person to engage in criminal activities. Examples of strain include environmental variables,

economic inequality, unemployment, lack of income and education and school exclusion. People who experience strain which tends to manifest itself in attitudes like anger or frustration, are more likely to commit negative behaviours (Jr & Graham, 2018; Mccuddy & Esbensen, 2017).

The Eastern Cape Province is characterized by strains such as unemployment, poverty, high crime and violence rate. Adolescents from environments subjected to strain are more likely to commit anti-social behavior (Fan et al., 2019b; G. Lee & Sanchez, 2018). These learners externalize their strain through cyberbullying their peers (M. Cho et al., 2017; G. Lee & Sanchez, 2018).

Cyberbullying is one of the corrective measures employed by strain victims as this behaviour provides the bully with a sense of power and control. Cyberbullying meets some conditions that define strain, for example: (a) cyberbullying is unjust because it often infringes the norms of justice, (b) cyberbullying lacks social control as it usually occurs in the absence of adult supervision and (c) it creates incentive for involvement in criminal behaviour (Hay et al., 2010).

2.3.2 Technological Factors

2.3.2.1 Anonymity

Anonymity is an attempt to reveal the identity of online anonymous offenders (Patterson et al., 2017) Cyberbullying in its nature is concealable and invasive. Unlike traditional bullying, technology fosters an environment for bullies to disguise their actions without fear of being caught (Vaillancourt et al., 2017). When online, bullies tend to feel more authority and less afraid because they can easily create fake accounts using false names (Byrne et al., 2018; Ferrara et al., 2018) and have their real identity hidden (E. B. Lee, 2017; Tanrikulu & Erdur-baker, 2019; Zsa et al., 2017). Although victims can block bullies, bullies can change their account details or create new accounts so their hurtful messages reach the target.

Anonymity is a risk factor that contributes to cyberbullying (J. Lee et al., 2017; Peled, 2019) because of its potential to create perpetrators and victims (Patterson et al., 2017). Anonymous attacks can spread wide and far, attracting more potential bullies (Musharraf & Anis-ul-Haque, 2018). In a study done in four countries, it was found that anonymity evoked feelings of fear and anxiousness among adolescents (Palladino et al., 2017).

According to the social presence and social context cues theories, social context cues (verbal talks, gestures, physical appearance) govern people's behaviour, making them more cautious and thoughtful towards others (Collins, 1992). However, the virtual environment lacks social context cues, causing people to become cold and say things they would not say to others face to face (Alhajji et al., 2019; Patterson et al., 2017; Tanrikulu & Erdur-baker, 2019; Wright et al., 2019). Lack of social cues lead to little or no remorse for offensive actions towards the victim which would normally be there outside cyberspace (Forssell, 2018; P. Wang & Wang, 2019).

2.3.2.2 Accessibility

Access and ownership of mobile phones is on a rapid rise (Kothgassner & Felnhofer, 2019) and by 2019 cellphone subscribers are expected to be above 5 billion (Mitchell & Hussain, 2018). A global survey of 24 countries showed that between 53% and 95% of people aged 18–29 owned mobile phones and 83% of these were youth (Ippoliti & Engle, 2017). Young people continue to be at the forefront of mobile phone ownership (Domoff et al., 2019; Vally & El, 2019). A study by the University of South Africa showed that 98% of South African high school students owned a mobile phone (Choung & Manamela, 2018) while Uys et al. (2016) in a different South African study revealed that an average of 51% adolescents possess their own phones.

93% of the adolescents in Tanzania agreed to have access and also use mobile phones (Muhanga, 2017). Shava and Chinyamurindi (2018) in a rural study in Eastern Cape, found that rural youth have access and are regular users of mobile phones. In rural Limpopo, Farhangpour et al. (2019) discovered 87% of the respondents owned a cell phone and had access to the internet. Adding to this Porter et al. (2016) who did a study in 3 African countries- Ghana, Malawi and South Africa, reported that even youth in remote rural areas own or have access to mobile phones. To adolescents, a phone is more of a need than a want (Jesintha & Karthiga, 2018) due to the number of possibilities and features that come with it. This group prefers their mobile phones as a form of entertainment, a sense of freedom and a tool to connect with the real world (Arnavut et al., 2018).

The impact of the mobile phone can be better understood in the context of Mobile Added Values (MAV) which include: ubiquity- sending and receiving information anytime and anywhere, context sensitivity- determining the location of the user, identifying functions and

command- authentication of the device to a certain network and control functions- ability to choose between several applications (Pousttchi, Turowski, & Weizmann, 2003).

However, MAV and ownership of mobile phones are linked to adolescent involvement in mobile bullying (Choung & Manamela, 2018; Domoff et al., 2019; Jesintha & Karthiga, 2018; Motswi & Mashegoane, 2017; Prasad et al., 2017; Scholtz et al., 2017; Vally & El, 2019). For instance, due to ubiquity of mobile phones, mobile bullies have no geographic limitations but can send the victim hurtful messages anytime and anywhere, following them even in a "safe" environment- at home, with the assurance that the message will get to them (Charaschanya & Blauw, 2018; Madigan et al., 2018b; Souza et al., 2017).

South Africa is ranked as one of the continent's top countries with high app downloads, often a sign of high smartphone adoption. Mobile phones were easily accessible to students with technological tools in place already (Ngesi et al., 2018).

2.3.2.3 Frequent mobile phone usage

Mobile phones form an integral part of the everyday lives of adolescents, as a result, this group has been deemed the most frequent and heavy users of mobile phones (Domoff et al., 2019; Durak, 2018; Haverila, 2018; Kritzinger, 2017b). In their study, Li et al. (2018) found a huge difference in the amount of time this group spends on the mobile phone compared to other technologies. Similarly, South African children have been identified as heavy users of social media and above the recommended 2 hours of screen time a day rather averaging 2.7 hours daily (Uys et al., 2016). In a Sub-Saharan survey done in South Africa, Ghana and Malawi, 27% of adolescents in Malawi and 57% in South Africa admitted that their regular phone usage interrupted their sleep (Porter et al., 2016). Porter et al. (2016) adds, the intensity of mobile usage is of no exception in rural areas.

In the rural Eastern Cape, Shava and Chinyamurindi (2018) and Marongw, Billey and Kasumba (2017) found a habitual use of phones among young people. Lack of network coverage, battery life or absence of their phones causes students to feel anxious and distressed (Prasad et al., 2017). Mitchell and Hussain (2018) suggest frequent usage as a result of an ongoing feeling to create and maintain relationships, talk to others, and a consistent longing for stimulation.

Frequency of mobile phone usage has however been found to enhance the likelihood of adolescents experiencing cyberbullying (Preez & Prinsloo, 2017; Semerci, 2016). Chukwuere

and Chukwuere (2017) add that the increase in cyberbullying is a result of adolescents devoting a lot of their time to excessive internet and phone usage. In rural areas, of 80% of students who agreed to frequent mobile phone usage, 50% were victims of cyberbullying, and 20% experienced it often (Farhangpour et al., 2019). In their act of trying to keep in touch with the world, adolescents expose themselves to anti-social behaviours such as cyberbullying (Mitchell & Hussain, 2018).

2.3.3 Other Factors

2.3.3.1 Age

Age is one of the demographic risk factors which have a potential to lead to cyberbullying (Athanasiou et al., 2018; Singh & Jose, 2017). Literature on age and engagement in cyberbullying still remain inconsistent across existing studies. For example some researchers found that cyberbullying increases with age (D. Moreno et al., 2019; Wachs et al., 2018) this is likely because as individuals grow older they own mobile phones and have access to the internet. Some studies found no association with age and cyberbullying (Arafa & Senosy, 2018; Barlett et al., 2019; Graf et al., 2019). While some studies found this association (Yuchang et al., 2019).

Considering these inconsistencies, more research is needed to address this matter. Moreover, recent studies suggest studying the relationship between age and cyberbullying provides insights with regards to the phase in which cyberbullying mostly occurs and guidance on how the resources aimed at combating cyberbullying in schools can be used to achieve the most efficient responses (Kowalski, Limber, & McCord, 2018; Wachs et al., 2018).

2.3.3.2 Gender

An understanding of the role of gender in cyberbullying and the impact cyberbullying has on different genders is important in cyberbullying research (Elçi & Seçkin, 2019). Gender is a determining factor when cyberbullies choose a victim (Zsa et al., 2017). Similar to age, literature contains mixed views on gender differences and cyberbullying involvement. Some studies reported that males and females were equally likely to bully others (Cammaerts et al., 2015; Keskin, 2018; Zsila et al., 2018). On the other hand, other studies report that males are more likely to engage in cyberbullying compared to females (Ballard & Welch, 2017; Kenny et al., 2018) while some believe the opposite is true (Brochado et al., 2017; Wright, 2017).

Gender is a high risk factor of cyberbullying yet its impact on cyberbullying has not been given enough attention (Olga et al., 2018). They further suggest influences of cyberbullying affect males and females differently and perhaps gender specific strategies are needed (John et al., 2018). While Fan, Chu, Zhang and Zhou (2019) say gender differences can be a result of cultural differences. These views and inconsistencies in current literature are evidence that there is a need for more research that will investigate gender differences (Aizenkot, 2018; Chukwuere & Chukwuere, 2017; Olga et al., 2018). Intervention strategies to combat cyberbullying need to include and consider gender (Antoniadou & Kokkinos, 2015; Salmon et al., 2018).

In South Africa, offline bullying was found to differ widely based on gender (Govender & Young, 2018a). It is assumed that because there are similar characteristics between offline and online bullying, this finding will also be the same for online bullying.

2.3.3.3 Location

Though the issue of child violence has been studied in the past decades, it lacks to take into account the local community and cultural context in which the violence takes place (Edberg et al., 2017). Community violence and the school location are risk factors of adolescent antisocial behavior (Edberg et al., 2017; Olga et al., 2018) making it necessary to unpack these when addressing child violence.

Research on location suggests that bullying differs in urban and rural areas and is most likely predominant in rural areas (Salmon et al., 2018). They further argue that geographic location is a predictor of the prevalent types of bullying. However, few studies report on the prevalence of bullying from the perspective of rural areas (Reason et al., 2016).

Crime has been found to be prominent in locations with higher levels of poverty, unemployment and violence (Khuzwayo et al., 2016). South Africa has a high rate of unemployment, affecting to a great degree the youth and rural residents (Booi et al., 2019). In South Africa contributing factors to victimization are, but not limited to, family structure, witnessing violence at home, being a member of a dysfunctional community, lack of parental guidance and parental absence as a result of work, sickness or death (Leoschut & Kafaar, 2017).

Sociocultural theory can be used to broaden our understanding of the importance of contextualized bullying. This theory posits that bullying ought to be analysed in the scope of cultural context such as family, schools and friends because these have an influence in a

persons' social interactions, character and views (Hartman et al., 2017; J. S. Hong et al., 2018; Maunder & Crafter, 2018). Cultural context contributes to how people use technology (Q. Li & Literat, 2017). A positive school culture or climate is strongly linked with minimal bullying activities and the opposite of this is also true (Evans, 2015).

In their study, Şentürk and Bayat (2016) found that when socio-cultural level is high, students display less forms of aggressive behaviour while low or negative cultural levels like low family income were reported to produce cyber perpetrators or victims. This then explains the reason for the different analyses of the bullying phenomenon, why bullying changes as society evolves and why this aggression can affect the same group and class of people but the responses differ (Maunder & Crafter, 2018). Studies that have investigated bullying in South African schools which differ in context and economic status, highlight the urge to explore the prevalence of cyberbullying in different school environments (Juan et al., 2018b; Maunder & Crafter, 2018).

2.4 Context of the Study

Cybercrime is among the high criminal acts facing South Africa to date, with the country listed in the top 10 nations dominant in cybercrime (Toit et al., 2018). Cyberbullying is one of the cybercrimes that has become prevalent in South African schools. To implement and maintain intervention strategies to address cyberbullying in South African schools, stakeholders need an understanding of the nature and prevalence of this aggression (Harger, 2016). However little is known about this phenomenon in the South African rural school context, making it difficult for policy makers to achieve the goal to set up prevention strategies against cyberbullying.

Due to different school environments, community cultures and social constraints, cyberbullying differs between rural and urban areas (Ronis & Slaunwhite, 2019). This study seeks to fill the gap in literature by investigating the nature and prevalence of mobile bullying in rural high schools in the Eastern Cape of South Africa. The Eastern Cape Province is among the largest provinces in South Africa yet one of the poorest in the country (Bhembe et al., 2017; Sisulu et al., 2017), where rural life is predominant (Fernandez, 2018; Otterbach & Rogan, 2019). Development indicators show a very low socioeconomic status in the province compared to other provinces in South Africa. Family situations in the Eastern Cape Province rapidly differ from those of the developed world or cities- unemployment, poverty, poor/lack of education and dysfunctional families are a norm in a majority of the Eastern Cape areas

(Chari et al., 2017; Gender, 2019; Manomano & Tanga, 2018; Pasmansa & Hebinck, 2017; Sewell et al., 2019) and these economic factors have been found to be associated with crime (Andersson et al., 2018).

Job opportunities in the Eastern Cape are limited leading to a majority of parents migrating to urban towns to pursue better jobs (Connor & Mtwana, 2018; Hall & Posel, 2019; Ngorima & Shackleton, 2019; Rheeder et al., 2017). The province has the highest rate of migration in South Africa (Mlambo, 2018; Njwambe et al., 2019; Pasmansa & Hebinck, 2017). This has a negative strain on families, as parents may leave their children behind with relatives or non-kin (Seepamore, 2016).

The Eastern Cape is one of the provinces that is known for crime and violence (Manu et al., 2017; Petrus & Kinnes, 2019). Research suggests that violent societies are likely to have a high exposure to bullying behaviour (K. Choi et al., 2019; Hendricks, 2018). This is because adolescents tend to respond to violence by retaliating violence (Govender & Young, 2018b).

The Eastern Cape is one of the provinces that have the highest level of mobile ownership in the country. Intuitively, one might conclude that if the ownership of cell phones is high in the province, especially among adolescents, the likelihood of the existence of mobile bullying is high. The challenges faced by the Eastern Cape and its high ownership of mobile phones make the province an appropriate area to study mobile bullying.

A conceptual model which illustrates the different factors that influence mobile bullying was developed. These factors are underpinned by different theories from literature as discussed above. The conceptual model is shown below:

2.5 Conceptual Model and Propositions

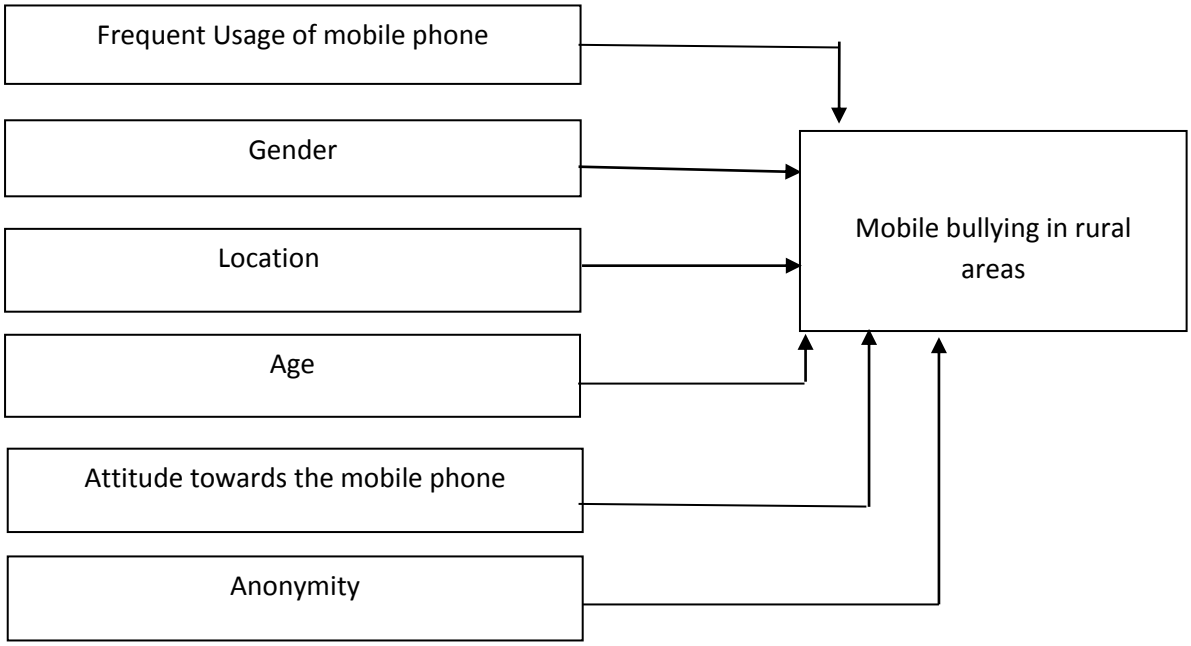


Figure 1: Conceptual Model on mobile bullying in the rural areas

Based on the literature discussed, the following propositions constitute this study:

Proposition 1: An individual's frequent usage of the mobile phone will result in involvement of mobile bullying.

Pupils who spend a significant amount of time on their phones are exposed to the negative outcomes of mobile phone activities (Popovac & Hadlington, 2019; Scheerder et al., 2019). Heavy mobile phone users are more likely to engage in bullying behaviours (Savage & Tokunaga, 2017; Thi et al., 2017; Usta, 2017) compared to infrequent users.

Proposition 2: Males will engage in mobile bullying more than females.

As mentioned earlier, the Eastern Cape is one of the South African provinces that have the highest stats on crime and violence. Adolescents from disadvantaged communities in South Africa are at risk of various crimes (Romero, Hall, Cluver, & Meinck, 2018; Romero, Hall, & Cluver, 2019). Most violent crimes in South Africa to a very large extent are male related (Popovac & Hadlington, 2019). Kheswa (2017) who did a study in the rural Eastern Cape found it common for male youth to express anger and violent behaviour. Moreover, current studies identify traditional bullying as a male conduct (Charaschanya & Blauw, 2018; Masilo,

2018; Scroll & For, 2019). Sequentially, this study proposes that mobile bullying will be predominantly carried out by males as compared to females.

Proposition 3: Individuals who cannot control their usage of a mobile phone will result in mobile bullying or being bullied.

As a person's self-control decreases, their likelihood of cyberbullying engagement increases (Kagan & Kokkinos, 2019). Antoniadou, Kokkinos and Fanti (2019) further suggest, lack of self-control on the part of the victim in response to this cyberbullying will result in the victim carrying out the cyberbullying as well.

Proposition 4: Individuals who come from low socioeconomic and violent areas are more likely to be mobile bullying perpetrators.

Socioeconomic status is one of the significant predictors of cyberbullying (Livazovi & Ham, 2019; Priegue, 2019) as this influences an individuals' behaviour. In South Africa, it was found that adolescents from low income homes faced violent risks (Sommer et al., 2017) and schools in this environment had high bullying stats (Juan et al., 2018b). Similarly, an association exists between school environment and involvement in cyberbullying (Thi et al., 2017). South African youth exposed to violence are often inclined to aggressive behaviour (Sommer et al., 2017). Adolescents tend to imitate the violent behaviour they are surrounded by and exhibit aggressiveness as a coping mechanism in such environments (Masilo, 2018).

Proposition 5: Anonymity will have a positive influence on mobile bullying

Anonymity–the freedom from surveillance, accountability and disguising true identity (Bayne et al., 2019), is one of the major reasons for the prevalence of cyberbullying (Charaschanya & Blauw, 2018). Anonymity is a severe phone feature as it enables those who engage in cyberbullying others to remain anonymous (Furrer, Huang, Radford &Singh, 2017; Paullet & Pinchot, 2019).

CHAPTER 3 : RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This study attempted to quantitatively investigate and understand the nature and prevalence of mobile bullying in rural high schools in the Eastern Cape Province from a positivism philosophical approach. Questionnaires were distributed to learners from 7 high schools in the rural Eastern Cape Province, South Africa. This chapter discusses the research design used in this study, sampling approach, data collection techniques and the analysis and interpretation of the data. The employed ethical guidelines, the reliability and validity of the study are also discussed.

3.2 Research Philosophy

Methodology also known as epistemology refers to an array of beliefs, positions or worldviews which serve as a lens to a research study (Cibangu & Hepworth, 2016; Peffer & Kyle, 2018). Methodology explores one's approach in undertaking the research report and seeks to answer: how do we know what we know, what type of data was gathered by the researcher, where the data was collected and how the researcher intends to analyse the data (Collis & Hussey, 2003;Peffer & Kyle, 2018). Information Systems (IS) is an interdisciplinary field with roots in different fields of study such as social sciences, computer science and business studies (Mkansi & Acheampong, 2012). As a result, several research philosophies are used within the IS field but the two major philosophical approaches that have been used for a number of years are positivism and interpretivism and these are the two that will be discussed in this paper.

Interpretivists focus on peoples' experiences, opinions, understanding and views (Van Manen, 1977; Daher, Carré, Jaramillo, Olivares, & Tomicic, 2017). Interpretivists seek to understand a social phenomenon by taking into account an array of feelings, observations and ideas associated with the phenomenon (Amaratunga, Baldry, Sarshar & Newton 2002; Mohajan, 2018), however acknowledging the complexity of human behaviour due to the various factors that incorporate it which can be difficult to detect (Collis & Hussey, 2003). Interpretivism is also known as the bottom-up approach because it begins with observation and ends with generalizing or a theory (Khaldi, 2017).

In contrast, the positivist philosophy is based upon the approaches of natural sciences (Pawlikowski et al., 2018). Natural science suggests that the world is an objective unit, separate from the mind of the observer and can be studied and understood in all aspects

(Burrell & Morgan, 2005; Porta & Keating, 2008). Further, natural science holds the stance that there is only one truth, (Sale, Lohfeld, & Brazil, 2002) and it can be studied through observation and explained with logical analysis (Kaboub, 2008) rather than human views. Positivists within the social science realm believe any social science phenomenon can be studied through natural science methodologies (Kura, 2012; Ali & Chowdhury, 2015). Like natural science, social science research can be separated from values and take the form of causal laws when explaining social norms and practices (Shanks & Parr, 2003). The researcher only has to describe and analyse this truth (Porta & Keating, 2008).

Positivism further holds that a phenomenon is independent of social factors but rather it is a stable reality (Kothari, 2004). A stable reality can be observed, is objective and repetitive (Kura, 2012). Not only is the phenomenon free from social reality but the the researcher should also be separated of the subject being studied, this minimizes the likelihood of tempering with the data collected (Amarathunga, Baldry, Sarshar, & Newton 2002; Vildåsen, Keitsch, & Fet, 2017). Researchers who adopt this paradigm are concerned with facts instead of feelings (Saunders et al., 2009). Positivism follows a top-down approach, first establishing hypotheses based on existing literature or theories and then testing the hypothesis to decide whether or not to accept it (Ali & Qaisar, 2018; Khaldi, 2017). Quantitative and statistical methods to test hypotheses are prevalent among positivist researchers (Amarathunga et al., 2002; Chirkov & Anderson, 2018).

This study adapts the positivist philosophy. According to Cibangu and Hepworth (2016), employing quantitative methods to understand social constructs is likely to provide the researcher with more knowledge of the phenomenon. This study aimed to understand the prevalence of mobile bullying in the rural schools of the Eastern Cape Province and according to Amaratunga et al. (2002), the positivist philosophy is the philosophy that seeks to measure quantities and frequencies and use statistical analysis to verify the reliability of data. Positivism is the ideal approach for cyberbullying studies due to the nature of this topic and this philosophy is able to "answer questions about relationships among measured variables with the purpose of explaining, predicting, and controlling phenomena" (Zhang, Dick, Pek, & Land, 2010 pg 6).

3.3 Research Methodology

3.3.1 Strategy

Survey is a research strategy that involves collecting the same data from different individuals (Creswell, 2003). Mathiyazhagan and Nandan (2010) further define survey research as a procedure in which primary data is gathered either through verbal or written communication from a targeted group of people. Studying the whole population is impossible, therefore in studying a selected group of people the survey approach aims to determine any common relationships between variables and provide generalizable findings about the phenomenon (Gable, 1994). Surveys provide an understanding of controversial themes (Rindermann et al., 2017) and due to their confidential nature, respondents are more likely to give sincere responses (Rindermanna et al., 2020). The advantage of surveys is gathering data from a large population, increasing the validity and quality of the object of study (Huia et al., 2019; Ison, 2017). This study used surveys to collect data.

Due to its ability to reach a large group of people, surveys make an impactful contribution to scientific research (Kashy-Rosenbaum & Aizenkot, 2020). Surveys follow a quantitative procedure during data collection (De Leeuw, Hox, & Dillman, 2008; Ambrose, Goodchild, & O'Flaherty, 2017). In social sciences, surveys are frequently used in exploratory stages of research after the discovery of a new (Tokunaga, 2010) or complex phenomenon (Mohajan, 2018) to gain an understanding of human behaviour (Ponto, 2015).

Research states that cyberbullying, moreover mobile bullying is still at it infancy in South Africa. As mentioned earlier, these have not been given much attention in the South African context. Therefore, as a new phenomenon, a survey is the suitable strategy to use for this nature of research. Through the survey, a large group of adolescents can be studied and any common relationships between variables can be established. The survey can also assist in expanding our knowledge on the controversial and ongoing debatable themes in cyberbullying studies such as age, gender and the universal definition of cyberbullying. There are other research methods that exist such as (however not limited to) experiments, case studies, history and interviews (Mohajan, 2018).

3.3.2 Targeted population

Although cyberbullying has also been discovered to be an existing behaviour in the workplace (Kowalski et al., 2018; Vranjes et al., 2018), research suggests that this aggression

is more predominant among adolescents (Jie et al., 2020; Myers & Cowie, 2019) given that they are the most heavy users of the internet and mobile phones (Domoff, Borgen, Foley, & Maffett, 2019; Cárthaigh Mac, Griffin, & Perry, 2020; Mac Cárthaigh, 2020) which exposes one to being a victim or bully.

In South Africa, many homes have access to a mobile phone (Harling et al., 2020; Lund & Cois, 2018). 42 percent of the population have internet access and 100 out of 150 people are phone subscribers in South Africa (Chetty-mhlanga et al., 2020), with adolescents as the highest group of users (Merrill et al., 2018). A study conducted in two rural towns in the Eastern Cape where a number of households are dependent on child support grants, found that mobile phones were among the items that were considered valuable and worth spending the grant money on (Hajdu et al., 2020).

While cyberbullying has been reported to have effects such as stress, less productivity, low self-esteem and depression on the victim (Fortunatus et al., 2020; Turliuc et al., 2020; Helfrich et al., 2020), these effects have been reported immensely on adolescents than other group of victims (Oksanen et al., 2020). Globally more than 100 million adolescents are estimated to be involved in bullying each year (Volk, Camilleri, Dane, & Marini, 2012; Wang et al., 2019; Salmon et al., 2018). In South Africa, cyberbullying is prevalent amongst this age group (Chetty-mhlanga et al., 2020).

The few cyberbullying studies conducted in South Africa so far have focused primarily on studying this aggression in urban areas and little is known about cyberbullying in rural communities. The focus on rural schools is important to our understanding of the nature and forms of bullying. As mentioned earlier, previous studies suggest that bullying differs among urban, suburban and rural environments. Understanding the nature of bullying in different environments would contribute greatly in testing the applicability of current theories, relevance of current prevention programs and also allow for comparison of behaviour in different contexts.

Therefore the targeted population for this study were adolescents in South African rural high schools. This study adopts a definition of adolescents as teenagers between the ages 12-19 (Popvac & Leoschut, 2012).

3.3.3 Sample

It is impossible for the researcher to study the population in its entirety due to issues such as time and cost, resulting in researchers studying only a subset of the population and this is referred to as sampling (Saunders, Lewis, & Thornhill 2009). Sampling techniques enable the researcher to reduce the amount of data collected by considering only a group of individuals rather than all possible cases of the population (Latham, 2007; Schmidt et al., 2018). There are two main groups of sample techniques: probability and non-probability sampling. Probability sampling refers to a process of selecting a sample randomly, in contrast, non-probability sampling is non-random-it involves selecting a sample based on certain characteristics chosen by the researcher (Kothari, 2004; Rahi, 2017). Both techniques have a range of methods that can be employed when gathering data from a sample. Non-probability sampling methods include: convenience, purposive, quota and snowball sampling, while probability methods among others are: simple random, cluster, systematic and stratified sampling (Saunders et al., 2009; Al-Noumani et al., 2019). This study adopted the non-probability sampling and used the purposive sampling method.

Non-probability sampling is relevant for research that involves human beings as these are seldom random (Memon et al., 2017). Purposive sampling is also known as judgmental sampling. Purposive sampling is a process where the researcher selects a sample "on the basis of their own knowledge of the population, its elements and the nature of the research aims" (Latham, 2007). Purposive sampling has four main categories of sampling techniques (Teddlie & Yu, 2007), namely:

- Sampling to achieve representativeness-this involves choosing a sample that resembles the bigger group of cases or is appropriate to use to make comparisons among various kinds of cases.
- Sampling special or unique cases-is used when cases are the main focus of the research, not the phenomenon.
- Sequential sampling-is effective for studies looking into theory development or the sample evolves in the process of data collection.
- Sampling using multiple purposive techniques—this is when multiple techniques are employed in the same study.

Saunders et al. (2009) suggests that the sample size should neither be too big or too small but should be fair. An ideal sample meets the requirements of efficiency, representativeness,

reliability and flexibility (Saunders et al., 2009). According to Zalaquett and Chatters (2014) and Tokunaga (2010) there are variations in sample size and methodologies among cyberbullying research. The table below, from Tokunaga (2010) shows the different sample sizes among cyberbullying research:

Study	**N**
Aricak et al. (2008)	269
Beran and Li (2007)	432
Dehue et al. (2008)	1211
Didden et al. (2009)	114
Hinduja and Patchin (2008)	1378
Juvoven and Gross (2008)	1444
Katzer et al. (2009)	1700
Kowalski and Limber (2007)	3767
Li (2006)	264
Li (2007a)	461
Li (2007b)	177
Li (2008)	359
Patchin and Hinduja (2006)	577
Sharples, Graber, Harrison and Logan (2009)	2611
Slonje and Smith (2007)	360
Smith et al. (2008)	92
Topcu et al. (2008)	183
Varjas et al. (2009)	437
Williams and Guerra (2007)	3339
Wolak et al. (2007)	1500
Ybarra (2004)d	1501
Ybarra and Mitchell (2004)d	1501
Ybarra and Mitchell (2008)	1588
Ybarra et al. (2006)d	1500
Ybarra et al. (2007)	1515

Table 1: Variations in Sample Size

For the purpose of this research a sample size of 1500 was used, to allow a good representation of the population and generalizability of the findings. Out of the 1500, 984 pupils filled in the survey completely and clearly. Only these were used in this study while any survey that was incomplete or unreadable was discarded.

3.3.4 Unit of Analysis

As stated earlier, there is limited research on cyberbullying in South Africa generally. Existing studies that have been done in South Africa have invested much focus on urban and model c schools. Research to date has discovered there is limited research in the rural communities (Reason et al., 2016). Therefore the sample for this study were high school

learners in the Rural Eastern Cape Province. The learners constituted both gender, grade 8-12 and aged 13-19.

3.3.5 Data variables

Due to the dearth research on cyberbullying in the rural areas, this study employed primary data sources when collecting the data. This was done through distributing a self-administered questionnaire to students in rural schools in the Eastern Cape Province.

3.3.6 Data Collection

3.3.6.1 Pilot *Study*

Pilot studies enable the researcher to be aware of potential problems in the research instrument (such as whether the questions asked are unambiguous and easily understood by the reader), to determine the reliability of the instrument used and valid measures of the constructs of interest (Bhattacherjee, 2012). In conducting a pilot study, the researcher is able to improve the questionnaire if need be so that the targeted sample will not face challenges in responding to the questions and there will be no problems in recording the data (Saunders et al., 2009. The pilot study consists of a small sub-group of the target population (Saunders et al., 2009).

The pilot testing was conducted in the Eastern Cape Province with 2 schools, one in a high risk area and one in a low risk area. This involved a small representative group of students from two grades (8 & 10) to ensure that the questions were well understood by the potential respondents from different grades and there were no ambiguities in questions or wording of the questions. Before completing the questionnaire, the researcher did a short presentation to explain the study to the participants to ensure that they understood the concepts and provided relevant answers.

3.3.6.2 Questionnaire

As mentioned earlier, this study adopted the survey strategy. Surveys allow the use of different types of data collection sources, data can be collected through documents, interviews, observations and questionnaires (Mathiyazhagan, 2010). Blaxter, Hughes and Tight (2006) further add, questionnaires and interviews are techniques which are embedded in the survey approach. For the purpose of this study, a questionnaire was used. It is important to note that this study has adopted an existing questionnaire (Oosterwyk, 2013) which was approved by the ethics committee in the University of Cape Town. The questionnaire can be found in Appendix A.

Several cyberbullying studies have also used questionnaires and interviews (O'Brien & Moules, 2010; Kowalski & Limber, 2007; Akbulut & Eristi, 2011; Li, 2006; Veenstra, 2009; Burton & Mutongwizo, 2009) although questionnaires have been the most predominant technique among these studies. A questionnaire is defined as a list of questions to which answers are being sought (Akbayrak, 2000). Compared to other techniques of data collection, questionnaires are able to collect information from a wider sample. The information gathered using a questionnaire can be valuable and where facts or opinions are stated clearly, a questionnaire can explore the similarities that apply among the respondents (Akbayrak, 2000).

Two types of questionnaires exist- the mail and self-administered questionnaires. Mail questionnaires are questionnaires that are sent electronically to respondents whereas self-administered questionnaires refer to those presented to the respondents by the researcher. Self-administered questionnaires have an advantage of a high response rate and lack biasness (Akbayrak, 2000) while the possibilities of low response rate are high when making use of mail questionnaires (Psacharopoulos, 1980). The aim of this study was to determine the prevalence rate of mobile bullying in the Eastern Cape Province and to achieve this, a wide representative sample was needed to ensure a reasonable response rate of respondents. Therefore this study made use of the self-administered questionnaires. Additionally, a self-administered questionnaire was also deemed appropriate for this study as many schools in the rural Eastern Cape have no access to computers and students have been found to be computer illiterate. Therefore an online survey would not be possible for this study.

3.3.6.3 Procedure

Consent was requested from the school principals prior the learners took part in the study. Principal and school consent was regarded as parental consent. A similar approach was taken by Megan (2003) because schools regarded the study as an educational and awareness project about a common anti-social behavior in society. Caution was taken during the questionnaire design to ensure if there be any, no victims will be re-traumatized and contact details for the South African Police Services are provided at the end of the questionnaire as means of support towards the respondents.

Prior to completing the questionnaire, the researcher did a short presentation (about 10 minutes) to explain the concepts to the participants to ensure that they understood the concepts. Also, a definition of mobile bullying has been included at the beginning of the

questionnaire to help the respondents' understanding of the study at hand. The researcher gathered all learners in one central place (e.g school hall) and completion of the questionnaire was done individually by the learners. The allocated time was between 20-35 minutes. Respondents were between ages 13-19 years old. The schools were located in Butterworth, a rural area in the Eastern Cape Province. Data was collected in 2015 and some things could have changed between now and when the data was collected, leading to a limitation in generalizing the findings of this study.

3.3.7 Ethical Issues

The researcher received approval from the ethics committee in the University of the Cape Town. This study guaranteed respondents' confidentiality and anonymity in the final report. This was done by not requesting learners' names or contact details and a final analysis of the data report was offered to be sent out to any participant who requested it. Respondents were told and ensured of their anonymity before they participated in the study. Respondents were invited to take part in the study and assured that they are not obliged to do so, allowing individuals who for instance are in traumatic situations or having communication disorders the freewill not to take part in the study. Besides the ethical issues addressed above, there were other ethical concerns which were identified by the researcher as being victims among the respondents.

Cyberbullying has been regarded as a sensitive issue that can be very hurtful especially to the victim (Dinakar, Jones, Havasi, Lieberman, & Picard, 2012). Therefore the researcher was aware that cyberbullying victims are potential vulnerable categories in this study. As a form of protective measure, the researcher ensured that at least one teacher was available in the process of collecting the data. The teacher was not involved in the data collection process but was just present in the classroom to assist the learners in the event of any breakdowns.

3.3.8 Timeline

Timeline refers to the amount of time in which the research will be carried out. There are two types of timelines, cross-sectional and longitudinal. Longitudinal research involves studying change and development of a phenomenon over a long period of time (Saunders et al., 2009), while cross-sectional studies provide a snapshot of a phenomenon in a short period of time (Cohen, Lawrence, & Morrison, 2007). Cross-sectional research is constrained by time (Greener, 2008), hence the independent and dependent variables are measured simultaneously

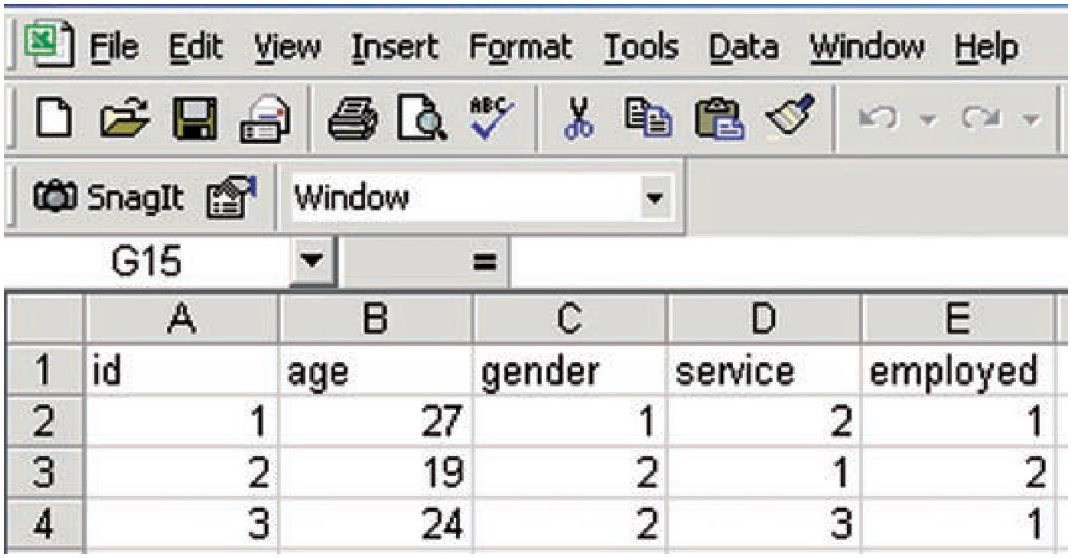
while in longitudinal studies the dependent variables are measured separately and at a later period than the independent variables (Bhattacherjee, 2012).

While longitudinal studies can be perceived as the rich source of data, Cohen et al. (2007) suggests that cross-sectional studies also have various characteristics of longitudinal research, such as the ability to study parallel group (e.g different student ages groups) although cross-sectional studies will not yield the same weight of results as the longitudinal study carried out over a long period of time. According to Cohen et al. (2007) longitudinal studies have two main disadvantages: (1) they are demanding in terms of time and costs as the researcher is obliged to wait for growth data to accumulate, (2) sample mortality is a challenge, due to the long period involved in conducting the study, the is high potential for respondents losing interest in the study, being lost or refusing further cooperation. This could lead to unreliable data and results of the study as the sample might have changed.

For the purpose of this study cross sectional research was used. This is because academic courses are often constrained by a fixed period of time and some courses do not allow necessary time for longitudinal research (Saunders et al., 2009). Saunders et al. (2009) further argues that even with time constrained research it is possible to incorporate a longitudinal element through re-analysing published data that has been collected over a period of time. However there is dearth research on cyberbullying in the South African rural context, particularly the rural communities and a longitudinal study would not suit this research.

3.3.9 Data Analysis

Analysis, with regards to surveys, refers to the value estimation of unknown parameters of the population and testing of hypotheses for drawing conclusions (Kothari, 2004). Before analyzing the data, the researcher created a data set by inputting all the data into an excel spreadsheet. Data sets enable data manipulation and easy readability of the data (Walliman, 2011). In a data set spreadsheet, each row contains the respondents' answers and the column represents the variable. An example of a data set is shown in figure 1 below.



	A	B	C	D	E
1	id	age	gender	service	employed
2	1	27	1	2	1
3	2	19	2	1	2
4	3	24	2	3	1

Figure 2: Data Set

According to Amarathunga et al., (2002) several quantitative analyses involve searching for data patterns to establish hypothetical relationships. Statistica, a data analysis and visualization software tool was used to analyse the data for this study. Using this tool, different statistical analyses were performed. The different analyses that are applicable to this study and some that the researcher made use of are discussed below:

- Descriptive analysis: this involves the description and presentation of variables statistically (Bhattacherjee, 2012). Descriptive analysis provides results on the distribution of variables and characteristics of the variables such as size (Kothari, 2004).This study determined the number of learners involved in mobile bullying through the use of descriptive analysis. Descriptive analysis also helped to determine the mean and standard deviation of the variables.

- Regression Analysis: measures the construct/s which influences the dependent variable the most (Bauman, 2009). This study aimed to identify factors that influence mobile bullying and determine which factor/s influence mobile bullying the most. In order to achieve this, a regression test was required hence this analysis was employed in this study.

- T-Test: this involves testing the difference between two means and determining whether the difference between the means is significant (Patchin & Hinduja, 2010). Debatable issues in cyberbullying literature currently include the issue of age and gender. The conflicting views are that males bully more than females and as adolescents grow older they bully less while some researchers hold that the opposite

of this is true. Some of the hypotheses formed in this study included age and gender and this study aimed to test whether or not there is a difference between the means of such variables particularly in the rural context and if this is so, how significant it is. Therefore a t-test was appropriate and necessary in the analysis of the data of this study.

- Factor Analysis: reduces the different variables to a range of factors so that the underlying relationships between these variables can be assessed easily (Blaxter, 2006). For the purpose of this study, the factor analysis was used to test whether items measuring a construct were all loaded on the same factor or not. This was important for ensuring reliability and accuracy of the questions asked in the instrument.

- Correlation analysis: tests the degree and direction of relationship between variables (Porta & Keating, 2008).

- Analysis of variance (Anova) and Multivariate analysis of variance (Manova): Anova measures how two independent variables interact and both influence the dependent variable while manova is used when there is more than one dependent variable (Blaxter, 2006). This study intended to analyse how certain variables (e.g age and gender) influence the dependent variable mobile bullying.

3.3.10 Instrument

The research questionnaire used in this study was adopted from the work of Oosterwyk (2013). The questionnaire is a likert scale with 33 questions and divided into 6 Sections: demographics, internet accessibility, frequent use of mobile applications, level of competency in using a mobile phone, traditional and mobile bullying and mobile victimization. The questionnaire includes a brief definition of mobile bullying at the top front page, this is to provide the participant with better understanding of the topic and guide their responses and the closing section provides students with a child line free number in the form of support.

The six sections are listed below (as outlined in Appendix A):

- Section A consists of demographics information about student
- Section B contains information Mobile Phone Internet Accessibility and Usage and the level of Frequent usage of the mobile phone and different applications by the student
- Section C addresses the technology competence of the student

- Section D deals with of mobile bullying questions
- Section E deals with of traditional bullying questions
- Section F deals with mobile bullying victimization

Learners were asked to indicate their agreement or disagreement with statements concerning their mobile bullying involvement and knowledge. The students were asked to rate their answers on a scale of 1-5. The researcher adopted two five-point Likert scale as illustrated in the table below. This allowed students to select a range of answers including the possibility of "uncertainty" (Saunders et al., 2003).

Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1	2	3	4	5

(a)

Never	**Rarely**	**Sometimes**	**Often**	**Always**
1	2	3	4	5

(b)

Table 2: Five-point Likert Scale

3.3.11 Validity and Reliability

Reliability involves the degree to which data collection or analysis methods will generate consistent findings (Amarathunga et al., 2002), whilst validity is the extent to which the findings are accurate (Saunders et al., 2009). Validity can be assessed using manipulation, elimination, inclusion, statistical control and randomization (Bhattacherjee, 2012).

3.4 Conclusion

This chapter discussed the research methodology which was adopted by this research. The positivism philosophy was used to guide this research. This is because of its capability to collect data from a wide range of respondents and generalizability of the findings. A questionnaire served as a research instrument to gather this information from students in the rural Eastern Cape. The data collected was analysed using statistica software. The next chapter discusses the findings of the data.

CHAPTER 4 : RESEARCH ANALYSIS, FINDINGS AND DISCUSSION

The research analysis and findings are discussed in this chapter. This chapter seeks to answer the research questions, support or dispute the propositions of this study as well as meet the objectives of the study. In this chapter, the demographic information of the learners is presented and analysed. The different contributing factors of mobile bullying are presented and analysed. Lastly, the report on mobile victimisation and predictors of mobile bullying involvement are discussed.

4.1 Descriptive Data

Demographic Description of Sample (N=984)			
		N	**%**
Gender			
	Female	559	56.81
	Male	425	43.19
Age			
	14 & Younger	23	2.34
	15	114	11.59
	16	212	21.54
	17	275	27.95
	18 & Older	360	36.59
School			
	H	207	21.04
	I	107	10.87
	J	48	4.88
	K	64	6.50
	L	184	18.70
	M	58	5.89
	N	316	32.11

Table 1: Descriptive Data

4.2 Frequent usage of a mobile phone

Using descriptive statistics, frequent usage of mobile phones and its impact on the involvement of mobile bullying was tested between two groups - frequent and less frequent users. The results (table 2 below) shows that the most used mobile applications by the respondents are SMSs, chatrooms and social networks, while the latter is more predominant. While both groups use these applications, the frequent users are found to slightly use their phone applications more (mean=2.775, sd=1.573) than the less frequent users (mean=2.200, sd=1.396), especially chat rooms.

The findings further suggest that although both groups engage with their phones in a similar manner, the frequent users are however found to be involved in mobile bullying, as both bullies and victims compared to the less frequent users. Frequent users' involvement in mobile bullying was found to be particularly through teasing others using online groups (mean=3.794, sd=0.926), while this group was also victimized by receiving insulting messages (mean=2.598, sd=1.299).

Males were found to be more likely to use social networks (mean=3.88) than girls (mean=3.77), while females make use of SMSs (mean=2.93) more than males (mean=2.79). Further analysis was done by schools and the schools with the highest usage of social networks were school L (mean=4.18) and school I (mean= 4.17). Majority of the other schools also relatively had a high usage of social networks, having a mean above 3.5. However school J had the lowest usage of social networks (mean=2.76) but highest usage of SMSs (mean=3.53).

When asked the amount of time respondents spend online, frequent users indicated that they are uncertain (mean=2.627, sd=1.014) while less frequent users said they spend roughly 2-3 hours online (mean=2.446, sd=1.180). With regards to schools, the schools with the highest amount of time spent on line reported between 3-5 hours and these included school L (mean=2.61), school I (mean=2.53) and School N (mean=2.52).

	Frequent Users					Less Frequent Users				
	N	Mean	Min	Max	SD	N	Mean	Min	Max	SD
Hours Spent Online	102	2.627	1	5	1.014	882	2.446	1	5	1.180
SMS Usage	102	2.931	1	5	1.037	882	2.847	1	5	1.003
Chatrooms Usage	102	2.775	1	5	1.573	882	2.200	1	5	1.396
Social Networks Usage	102	4.010	1	5	1.486	882	3.907	1	5	1.353
Part of online group that teases others	102	3.794	3	5	0.926	882	1.044	1	2	0.206
I like threatening others using my phone	102	2.196	1	5	1.350	882	1.180	1	5	0.623
Spread Rumours through my phone	102	2.127	1	5	1.248	882	1.246	1	5	0.682
Influence people to dislike others	102	1.784	1	5	1.224	882	1.173	1	5	0.558
Mobile Bullying AVG	102	2.465	1	5	0.658	882	1.229	1	4	0.375
In a group that excludes others from joining	102	2.422	1	5	1.301	882	1.499	1	5	0.976
Received insulting messages	102	2.598	1	5	1.299	882	1.650	1	5	0.976
Received threatening calls	102	2.098	1	5	1.346	882	1.474	1	5	0.881
Received Frightening Messages	102	2.284	1	5	1.164	882	1.669	1	5	0.919
Mobile Victimization AVG	102	2.327	1	5	0.956	882	1.598	1	4	0.663

Table 2: Frequent usage of a mobile phone and involvement in mobile bullying and victimization

*(N=102 N882 *1-5 Scale: 1=Never; 2=Rarely; 3=Sometimes; 4=Often; 5 = Always)*

*(**1-5 Scale: 1=0-2 hrs; 2=3-5 hrs; 3=Not sure; 4=6-8 hrs; 5=8 or more)*

A correlation (table 3 below) was further done to discover if there is an association between frequent usage of mobile phones and engagement in mobile bullying activities. Only the most used applications were considered. The results suggest that there is a relationship between the frequent use of a mobile phone and engagement in mobile bullying-either as a bully or a victim. As a result, we conclude that proposition 1 of this study is supported.

	Spearman Rank Order Correlations (Sheet1 in real Descriptive Analysis - with edits) MD pairwise deleted Marked correlations are significant at p <.05000											
	Hours Spent Online	SMS Usage	Chatrooms Usage	Social Networks Usage	Received insulting messages	Received threatening calls	In a group that excludes others from joining	Part of online group that teases others	I like threatening others using my phone	Spread Rumours through my phone	Influence people to dislike others	Received Frightening Messages
Hours Spent Online	1.000000	-0.000773	0.083717	0.350160	0.076829	0.023273	0.092065	0.069652	0.050742	0.092291	0.040090	0.053669
SMS Usage	-0.000773	1.000000	0.126652	0.089715	0.078716	0.109722	0.088722	0.038958	0.014353	0.024748	0.046577	0.077293
Chatrooms Usage	0.083717	0.126652	1.000000	0.283032	0.092534	0.054997	0.193099	0.122839	0.111938	0.123597	0.087565	0.101508
Social Networks Usage	0.350160	0.089715	0.283032	1.000000	0.097611	-0.023097	0.148776	0.027603	0.009122	0.058858	0.027620	0.066930
Received insulting messages	0.076829	0.078716	0.092534	0.097611	1.000000	0.354624	0.152257	0.272749	0.258929	0.238100	0.166271	0.314267
Received threatening calls	0.023273	0.109722	0.054997	-0.023097	0.354624	1.000000	0.085191	0.189580	0.166061	0.147322	0.141009	0.325012
In a group that excludes others from joining	0.092065	0.088722	0.193099	0.148776	0.152257	0.085191	1.000000	0.289256	0.194736	0.203640	0.209412	0.150531
Part of online group that teases others	0.069652	0.038958	0.122839	0.027603	0.272749	0.189580	0.289256	1.000000	0.450273	0.335615	0.272796	0.189305
I like threatening others using my phone	0.050742	0.014353	0.111938	0.009122	0.258929	0.166061	0.194736	0.450273	1.000000	0.250712	0.302997	0.193904
Spread Rumours through my phone	0.092291	0.024748	0.123597	0.058858	0.238100	0.147322	0.203640	0.335615	0.250712	1.000000	0.351972	0.259903
Influence people to dislike others	0.040090	0.046577	0.087565	0.027620	0.166271	0.141009	0.209412	0.272796	0.302997	0.351972	1.000000	0.238562
Received Frightening Messages	0.053669	0.077293	0.101508	0.066930	0.314267	0.325012	0.150531	0.189305	0.193904	0.259903	0.238562	1.000000

Table 3: Correlation of Frequent phone usage and involvement in mobile bullying

4.3 Gender

102 respondents reported to be involved in mobile bullying (table 4 below). Of these, 44 students were females and 58 were males. Mobile bullying was mainly carried out (mean=3.794, sd=0.926) through teasing others using social networks (i.e "*Are you part of an online group that teases others?*"). This form of mobile bullying was found to be slightly more prominent amongst males (mean=3.845, sd=0.951) than females (mean=3.727, sd=0.899). Males further dominated in spreading rumors (mean=2.138, sd=1.290) and excluding others from joining a group (mean=2.448, sd=1.327s). While females were the leaders in threatening others (mean=2.295, sd=1.374) and influencing people to dislike others through the mobile phone (mean=1.795, sd=0.741).

In table 5 below, a t-test was carried out to establish whether the difference in means between the two groups is significant for the most predominant form of mobile bullying above. The t-

test showed that while mobile bullying doesn't differ by gender for other forms of mobile bullying, it does differ by gender when it comes to teasing others through social networks online. We therefore conclude that Proposition 2 is supported - as males engage more in mobile bullying than females.

The exclusion of others from joining an online chat group came close to seemingly being evident amongst all bullies (mean=2.422, sd=1.301). While this and the other variables fell below a mean of 2.5, the average of mobile bullying was 2.5, signifying the existence and practice of mobile bullying amongst rural high school students.

	All Bullies					All females			All Males		
	Valid N	Mean	Min	Max	SD	Valid N	Mean	SD	Valid N	Mean	SD
Part of online group that teases others	102	3.794	3	5	0.926	44	3.727	0.899	58	3.845	0.951
I like threatening others using my phone	102	2.196	1	5	1.350	44	2.295	1.374	58	2.121	1.339
In a group that excludes others from joining	102	2.422	1	5	1.301	44	2.386	1.280	58	2.448	1.327
Spread Rumours through my phone	102	2.127	1	5	1.248	44	2.114	1.205	58	2.138	1.290
Influence people to dislike others	102	1.784	1	5	1.224	44	1.795	1.286	58	1.776	1.185
Mobile Bullying AVG	102	2.465	1	5	0.658	44	2.464	0.741	58	2.466	0.595

Table 4: The influence of gender on mobile bullying

*(*1-5 Scale: 1=Never; 2=Rarely; 3=Sometimes; 4=Often; 5 = Always)*

	T-tests; Grouping: Gender										
	Mean (F)	Mean (M)	t-value	df	p	Valid N	Valid N	SD	SD	F-ratio	p
Part of online group that teases others	1.254	1.429	-2.998	981	0.003	559	424	0.790	1.043	1.744	0.000
I like threatening others using my phone	1.258	1.323	-1.280	981	0.201	559	424	0.765	0.832	1.181	0.066
In a group that excludes others from joining	1.564	1.632	-1.013	981	0.311	559	424	1.026	1.084	1.115	0.230
Spread Rumours through my phone	1.311	1.373	-1.183	981	0.237	559	424	0.776	0.844	1.183	0.064
Influence people to dislike others	1.209	1.274	-1.460	981	0.145	559	424	0.637	0.741	1.353	0.001
Mobile Bullying AVG	1.319	1.406	-2.419	981	0.016	559	424	0.521	0.604	1.341	0.001

Table 5: t-test: The influence of gender on mobile bullying

Further analysis by school showed that 4 schools had the highest number of bullies: school N (n=24), school H (n=22) and school K (n=19) and school M (n=16), while the other schools had a relatively small number of bullies: school J (n=13), school I (n= 5) and school L (n=3). The two main forms of mobile bullying were found to be excluding others from joining a chatroom and teasing others through a mobile phone. Across all the schools, teasing others through a mobile phone was practiced and regarded as a behaviour that often occurred. School L (mean=4.333, sd=1.155), M (mean=4.000, sd=1.033) and J (mean=4.000, sd=1.000) firmly attested to the teasing of others while the other schools had a mean no less than 3.5. 71% of the schools agreed to exclude others from joining an online chat group which they were a member of. Of these, school I was the highest (mean=3.000, sd=1.225).

29% of the schools agreed to both threatening and spreading rumours about others through their mobile phones and none agreed to influencing people to dislike others.

Variable	School H			School I			School J			School k			School L			School M			School N		
	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
Part of online group that teases others	22	3.727	0.883	5	3.800	1.095	13	4.000	1.000	19	3.895	0.937	3	4.333	1.155	16	4.000	1.033	24	3.458	0.779
I like threatening others using my phone	22	2.727	1.420	5	2.600	1.517	13	2.308	1.377	19	1.895	1.449	3	1.000	0.000	16	2.000	0.966	24	2.083	1.381
In a group that excludes others from joining	22	2.545	1.335	5	3.000	1.225	13	1.692	1.109	19	2.684	1.416	3	2.667	2.082	16	2.625	1.088	24	2.208	1.285
Spread Rumours through my phone	22	1.818	1.140	5	2.800	1.304	13	1.846	1.405	19	2.474	1.219	3	1.000	0.000	16	2.375	1.360	24	2.125	1.191
Influence people to dislike others	22	1.818	1.332	5	2.400	1.342	13	1.769	1.301	19	1.895	1.197	3	1.000	0.000	16	1.625	1.258	24	1.750	1.189
Mobile Bullying AVG	22	2.527	0.820	5	2.920	0.460	13	2.323	0.603	19	2.568	0.697	3	2.000	0.529	16	2.525	0.521	24	2.325	0.601

Table 6: Mobile bullying by school

4.4 Age

Using a cluster analysis, the researcher investigated the impact of age on mobile bullying. The results (shown in table 7 below) show that almost across all the age groups, mobile bullying was carried out through excluding others from joining an online chat group; mostly carried out by 14 year olds (mean=4.500, sd=1.000). This form of mobile bullying was practiced from age 14 through 17. It is worth noting that except for spreading rumours and influencing people to dislike others through the mobile phone, all other mobile bullying behaviours are engaged in from the age of 14 and tend to decrease as the respondents grow older. Thus mobile bullying decreases with age.

However while it may decrease with age, it is also evident that bullies tend to change their style of mobile bullying. At age 18, bullies are likely to be part of an online group that teases others (mean=3.283, sd=1.367). Therefore patterns in bullying seem to change as age increases.

	Age=14		Age=15		Age=16		Age=17		Age=18	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
I like threatening others using my phone	4.000	1.155	2.059	1.298	1.705	1.131	1.534	1.080	2.417	1.381
Part of online group that teases others	3.750	1.500	2.412	1.326	1.885	1.279	2.052	1.549	3.283	1.367
In a group that excludes others from joining	4.500	1.000	3.765	0.831	2.869	0.991	3.207	1.120	2.217	1.236
Spread Rumours through my phone	2.750	1.258	2.471	1.505	1.607	1.069	1.862	1.131	2.283	1.290
Influence people to dislike others	1.500	1.000	2.118	1.269	1.557	1.009	1.483	0.995	2.067	1.274
Mobile Bullying AVG	3.300	0.600	2.565	0.840	1.925	0.510	2.028	0.642	2.453	0.539

Table 7: Mobile Bullies by Age

*(*1-5 Scale: 1= Strongly disagree; 2=Disagree; 3=Sometimes; 4=Agree; 5 = Strongly Agree)*

4.5 Attitude towards the mobile phone

Table 8 below shows students' responses to their attitudes towards their mobile phones. Majority of the students reported that they feel attached to their phones. In all the responses, the mean was above 2.5 meaning that the events occurred sometimes or often to them. The students indicated that they often think about their phones when not using them (mean=4.111, sd=1.342), feel distressed when they are without their phones (mean=3.266, sd=1.391), loose count of the time spent on their phones (mean=3.159, sd=1.284) and are unable to control their mobile phone usage (mean=2.905, sd=1.274).

Attitude towards the mobile phone was further analysed by 2 categories: bullies and gender. Analysis by gender showed that both males and females were found to agree to being attached to their phones although the females were slightly more attached to phones than the males. In addition to the attitudes mentioned above, bullies also agreed that they stop whatever they do when contacted on their phones (mean=3.059, sd=1.399) and find it difficult to reduce the amount of time they spend on their phones (mean=2.843, sd=1.288). Findings show that bullies have been found to be people who cannot easily detach from their mobile phones (mean=3.627, sd=1.342) (mean=2.598, sd=1.366) and feel distressed when without their phones (mean=3.392, sd=1.530). These lead to a support of proposition 3 of this study which states that one's attachment to their phone can result in mobile bullying.

	All Students					All Bullies					All Females					All Males				
	Valid N	Mean	Min	Max	SD	Valid N	Mean	Min	Max	SD	Valid N	Mean	Min	Max	SD	Valid N	Mean	Min	Max	SD
Often think about my phone when I am not using it	729	4.111	3	5	0.756	102	3.627	1	5	1.342	427	4.162	3	5	0.735	301	4.037	3	5	0.780
Often use my phone for no reason	729	2.727	1	5	1.355	102	2.598	1	5	1.366	427	2.817	1	5	1.346	301	2.605	1	5	1.359
I drop everything when contacted on my phone	729	2.974	1	5	1.299	102	3.059	1	5	1.399	427	3.122	1	5	1.291	301	2.764	1	5	1.286
loose count of time using my phone	729	3.159	1	5	1.284	102	2.971	1	5	1.331	427	3.185	1	5	1.275	301	3.116	1	5	1.295
Often distressed when I am without my phone	729	3.266	1	5	1.391	102	3.392	1	5	1.530	427	3.274	1	5	1.405	301	3.252	1	5	1.375
Unable to reduce my phone usage	729	2.905	1	5	1.274	102	2.843	1	5	1.288	427	2.895	1	5	1.295	301	2.920	1	5	1.249

Table 8: Attitude towards mobile phone by all student, bullies and sex

*(*1-5 Scale: 1= Strongly disagree; 2=Disagree; 3=Sometimes; 4=Agree; 5 = Strongly Agree)*

4.6 Anonymity

Cyberbullies are aware that their identity might be protected by the anonymity of cyberspace. This encourages the cyberbully to behave and act in a manner they wouldn't act in reality.

Victims of mobile bullying seemed to have an idea about the identity of their perpetrators. When asked who mobile bullied them, victims reported fellow peers from outside their school (mean=2.215, sd=0.899) and the gender of the perpetrator was said to be mostly males (mean=2.009, sd=0.640). Victims also reported they mostly experienced the aggression while

outside school premises than at school (mean=2.137, sd=0.640). This could be because some schools in the rural areas of Eastern Cape still don't allow students to carry their phones to school or use them during school hours. Additionally, bullies might fear their parents finding out about their behavior because parents are close to rural teachers who can report them to their parents.

Furthermore, victims agreed to have witnessed others being mobile bullied, although they were uncertain (mean=2.718, sd=1.266) of how often this has happened in the previous 3 months. The victims also suggested being uncertain as to whether or not they were likely to retaliate at the event of them being mobile bullied (mean=2.620, sd=1.277).

	N	Mean	Min	Max	SD
Anonymity	214	2.215	1.000	4.000	0.899
Location of Mobile Bullying	262	2.137	1.000	3.000	0.640
Gender of Perpetrator	224	2.009	1.000	4.000	0.918
Witness to Mobile Bullying	234	2.718	1.000	5.000	1.266
Retaliation	216	2.620	1.000	5.000	1.277
Mobile Victimization AVG	262	2.522	1.667	4.667	0.652

Table 9: Anonymity, gender and mobile bullying

*(*1-5 Scale: 1= Strongly disagree; 2=Disagree; 3=Sometimes; 4=Agree; 5 = Strongly Agree)*

4.7 Mobile Victimization

245 students reported to have experienced victimization (mean=3.13, sd=0.49). These were 147 females and 87 males and mostly 17 years of age. Mobile victimization mainly occurred through insulting messages (mean=3.37, sd=1.04) and threatening calls (mean=3.08, sd=1.15). The mobile bullying victims highlighted that they were also victims of traditional bullying (mean=2.28, sd=1.24). Except for frightening messages, females experienced other methods of victimization more than males. Males (mean=2.38, sd=1.31) were however more implicated by traditional bullying than females (mean=2.21, sd=1.21).

The number of victims differed across the schools. The number of victims found per school was: school N (n=72), school K and school H (n=50), school M (n= 27), school J (n= 21), school I (n=15) and school L (n=10). It is important to note that schools with the highest number of victims were found to be those with the highest number of bullies as well. All the schools asserted that the common method for victimization is primarily insulting messages while frightening messages were regarded as the least common method.

Variable	All Victims					Females			Males		
	N	M	Min	Max	SD	N	M	SD.	N	M	SD
Received insulting messages	238	3.37	1.00	5.00	1.04	143	3.41	1.02	85	3.29	1.11
Received threatening call	238	3.08	1.00	5.00	1.15	143	3.15	1.15	85	2.99	1.16
Victim of traditional bullying	227	2.28	1.00	5.00	1.24	140	2.21	1.21	76	2.38	1.31
Experienced mobile phone victimization	245	3.13	2.50	5.00	0.49	147	3.15	0.52	87	3.12	0.45
Received frightening messages	228	2.91	1.00	5.00	1.02	138	2.82	1.01	81	3.10	1.03

Table 10: Mobile Victimization

*(*1-5 Scale: 1=Never; 2=Rarely; 3=Sometimes; 4=Often; 5 = Always)*

4.8 Prediction of Likelihood of involvement in Mobile bullying

The researcher conducted a regression analysis to test which variables influenced the engagement of mobile bullying the most. Attitude towards the mobile phone, retaliation and threatening others online appeared to be the most significant variables that predict mobile bullying. While the other variables: competency, anonymity and the availability of an anti-bullying policy were found not to have any influence on mobile bullying.

N=678	Regression Summary for Dependent Variable: Mobile Bullying R= .42599029 R^2= .18146773 Adjusted R^2= .17043960 F(9,668)=16.455 p<0.0000 Std.Error of estimate: .57942					
	b*	Std.Err. (of b*)	b	Std.Err. (of b)	t(668)	p-value
Intercept			0.420201	0.178583	2.35298	0.018913
Age	-0.024375	0.036074	-0.013882	0.020545	-0.67570	0.499466
Gender	0.089672	0.035968	0.118055	0.047353	2.49307	0.012905
Frequent usage of mobile phone	0.093463	0.038301	0.088364	0.036212	2.44019	0.014938
Attitude towards mobile phone	0.057402	0.039893	0.050106	0.034823	1.43888	0.150654
Competency in using a mobile phone	-0.051164	0.037684	-0.035143	0.025884	-1.35772	0.175010
Mobile phone victimization	0.274765	0.036551	0.220469	0.029328	7.51727	0.000000
Retaliation	0.207010	0.036167	0.112029	0.019572	5.72378	0.000000
Anonymity	-0.024544	0.035418	-0.017938	0.025886	-0.69298	0.488566
School anti-bullying policy	0.059445	0.035245	0.045636	0.027058	1.68662	0.092143

Table 11: Most influencers of Mobile bullying

*(*1-5 Scale: 1= Strongly disagree; 2=Disagree; 3=Sometimes; 4=Agree; 5 = Strongly Agree)*

CHAPTER 5 : CONCLUSION AND RECOMMENDATIONS

This chapter states some of the main research findings and gives a summary of the study. The importance of the study is given and the researcher concludes with the recommendations and further pointers for future research.

5.1 Frequent Usage of mobile phones

Less frequent mobile phone respondents reported that they spent 3-5 hours on the internet while frequent users said they were uncertain of the duration they spent online. When asked about their most frequently used mobile applications, respondents indicated that they used social networks more often than others.

Although the internet has a relatively adequate prevalence in the rural Eastern Cape, it is evident that social networks and SMSs play a vital role in communication among adolescents. This is likely because computer and broadband internet use is low in South Africa, especially in the rural communities but access to mobile phones is high (UNICEF, 2011). Telecommunication infrastructure is one of the most developed facilities in Africa, with a number of rural families having cellphones but without proper water and electricity (Anstey Watkins et al., 2018; Meyer & Overen, 2021). In their study in rural Mpumalanga South Africa, (Anstey Watkins et al., 2018) found that 93% of the rural homes had mobile phones and signals in the area were quite efficient. Furthermore mobile phones were found to be the primary available form of ICT facility in rural Eastern Cape schools (Ojo & Adu, 2018).

Further analysis showed that victims were indifferent regarding usage of their mobile phones compared to the rest of the other students. Mobile bullying victims spent uncertain hours on the internet. Students were also asked about their attitude and feelings towards their mobile phones. Majority of mobile bullies and victims reported that they were unable to control their usage of mobile phones or reduce the time they spent using their phones Moreover, both parties agreed to drop whatever else they were engaged in when contacted on their mobile phones.

A number of previous studies have highlighted the concern of the growing frequent use and addiction of mobile phones among adolescents (Giordano et al., 2021; Kalkim & Emlek Sert, 2021; Jiayu Li et al., 2021). Mobile phone addiction has been identified most prevalent amongst adolescents than any other age group (R. M. Kowalski et al., 2019; Q. Liu et al., 2020). There is a lack of studies addressing the frequency of mobile phones in the Eastern

Cape. A study on e-media usage among rural adolescents in South Africa found that 24% of the respondents spend about 55 minutes on their mobile phones, while 21% spend more than 55 minutes on screen time per day (Chetty-Mhlanga et al., 2020). Furthermore 4.4% indicated that their sleep was interrupted at least once a week by incoming calls or text messages. A rural study in India found that mobile phones and social media play an important part in young peoples' lives, as a result, they often spend between 1-3 hours on whatsapp or facebook (Radhakrishnan et al., 2020). Adolescents from disadvantaged households tend to lack materialistic assets and emotional support as a result of limited resources, leading some to seek fulfillment of these desires from the online world governed by mobile phones (Bai et al., 2020; Q. Q. Liu et al., 2020). It's prevalent for South African rural adolescents to be raised by single parents, relatives or their grandparents (Jansen & Reid, 2020).

In this study, mobile applications that require the internet have been found to be less used, for example email was one of the least used applications by the students. A survey conducted by HDI Youth Marketers (2014) in South Africa, aimed at analyzing the influence of various technology products in the lives of South African youth and what they consider to be cool, discovered internet free social networks were rated top influential and cool. This might be because rural customers are low cost driven compared to urban customers (Hawthorne & Grzybowski, 2021).

Analysis by school showed that school N, which is one of the schools that had the highest number of bullies and victims, was also one of the schools that had students with the highest duration of time spent online. Moreover, school N was among the schools which had the highest victims who spent a lot of time online. This study also found that females who reported to be more victims than males, also happened to be more internet users than males. Thus, these findings revealed that adolescents who engage in frequent internet and mobile phone use are more likely to experience mobile phone bullying or victimization, supporting the proposition made in this study. This finding is consistent with previous research which also found frequent usage of mobile phone and internet will most likely result in cyberbullying or cyber victimization experiences (Erdur-Baker, 2010; Ybarra & Mitchell, 2004; Longobardi et al., 2020; Shafi et al., 2021). However, this was not the general case among all the schools. For example, school L had the lowest number of bullies and victims but one of the highest numbers of students who spent large amounts of time online.

5.2 Gender

Prevalence of mobile bullying by gender has been found to be determined by the form of mobile bullying. Males and females differ on how they carry out mobile bullying. This is also similar to findings from previous studies (Cao et al., 2020; Smith et al., 2019; Thun et al., 2021).

In this study both males and females mainly exercised mobile bullying by teasing others through their mobile phones, with males being more predominant in this regard. Males were also found to engage more in mobile bullying compared to females in a majority of other forms of mobile bullying tested in this study. This is consistent with findings from previous studies (Olweus & Limber, 2010; Slonje & Smith, 2008; Catone et al., 2020; De Pasquale et al., 2021; Eyuboglu et al., 2021). Similarly, in their rural study of cyberbullying, Smokowski et al (2013) found that males were bullying perpetrators more often than females.

While literature suggests that males are more involved in direct traditional bullying, this study has found that males can also engage heavily on cyberbullying compared to females. A study discovered that moral disengaged minors tend to be instigators of cyberbullying (Gao et al., 2020). Compared to girls, boys are more prone to display aggressive behavior and violence (Eyuboglu et al., 2021b). This could explain why it may not be a foreign concept to see them more involved in this aggression.

Schools with the highest number of mobile bullies (Table 6) also had the highest number of mobile victims. This is likely because mobile bullies in these schools are also mobile victims as found in previous studies O'Brien and Moules (2010). There were more female victims (n=143) than males (n=85) as shown in table 10 above. Results from the regression test showed gender has a significant predictive impact on mobile bullying- $p < 0.05$ (0.029764). This was similar to Guarin (2012) who found that gender was a predictor of mobile bullying (left-behind, Racial) but contrasted with findings from a traditional bullying study in the Eastern Cape Province (Mlisa et al., 2008). No gender differences were found by other studies (K. S. Choi et al., 2019; Ojeda et al., 2019)

5.3 Age

Although there is a growth in the number of cyberbullying studies, the issue of age and its impact on cyberbullying still remains unclear. There have been different schools of thoughts and findings on this topic in the last 10-15 years. Ybarra and Mitchell (2004) reported that most perpetrators were among 15 to 17 year-olds. A survey conducted by Pew/Internet

American Life Project (*N*=935) also reported girls aged 15 to 17 to be the most likely to be cyber bullied than other age groups (Lenhart, 2007). Similarly, some recent studies found that cyberbullying increased with age (De Pasquale et al., 2021; Pichel et al., 2021).

Smith et al. (2008) found that cyberbullying decreased between the ages 11- 16-years. Other studies likewise reported that cyberbullying is prevalent in the early years of adolescence and the levels drop as pupils grow older (Hinduja & Patchin, 2009; Kowalski & Limber, 2007).

Some studies found no difference in terms of age (M. A. Moreno et al., 2018). While some found that cyberbullying is prevalent in the early years of adolescence and the levels drop as pupils grow older (Camerini et al., 2020; R. M. Kowalski et al., 2019; Livazović & Ham, 2019). In this study, it was found that cyberbullying decreases with age.

5.4 Attitude towards the mobile phone

Findings show that students are attached to their mobiles phones. Students strongly agreed to often think about their mobile phones even when they were not using them and this appeared to be the main form of attachment. Students, mobile bullies and victims alike agreed to be distressed when they were without their cell phones and females indicated to be more frustrated than males. Self-control over the mobile phone has been found to be one of the challenges faced by the respondents and this trait has been discovered by previous studies, to have a direct association with cyberbullying (Camerini et al., 2020; S. Cho & Rustu, 2020; Q. Q. Liu et al., 2020). Thus the hypothesis proposed in this study was supported.

A correlation analysis of the attitude towards the mobile phone and involvement in mobile bullying was done. Attitudes such as lack of self-control in using the phone were found to be associated with ‘teasing others’, while ‘using the phone for no reason’ was associated with ‘spreading rumors’ about others, ‘teasing others’, ‘excluding others from joining a chat group’ and ‘influencing individuals to dislike others’.

5.5 Anonymity

In their study, Moreno et al., (2018) reported adolescents aged 15-17 years were members of anonymous texting apps. Anonymity encourages perpetrators to carry out dire aggressions with the hope that they won’t be caught (Aizenkot, 2020; Piccoli et al., 2020). In this study, schools located in areas which are considered to be high in violence and crime (school H, K and N), had the highest number of both bullies and victims and most victims from these schools were unable to identify their perpetrator. Anonymity has been discovered to be

somewhat influenced by other factors such as the kind of economic and social environment of the school.

Schools that are faced with violence are most likely at a greater risk of cyberbullying, especially with smartphones where the true identity of the perpetrator can be hidden. Anonymity has a direct and positive influence on the perpetuation of mobile bullying (Redmond et al., 2020). Schools need to aim towards a positive and crime free culture in schools and add cyberbullying in anti-bullying school rules (Kintonova et al., 2021). Creating and fostering good school culture can reduce aggressions such as cyberbullying (Llorent et al., 2021). Barnes (2012) investigated the impact school culture has on violence in schools of the Eastern Cape Province. The researcher found that high positive school culture and school climate results in lower levels of school violence while lack of school safety contributed to students experiencing violence at schools

Further analysis showed that in this study, some victims appeared to know their bullies. When asked about their perpetrators, victims often referred to males as their perpetrators rather than females. Females were victimized through insulting messages and threatening calls, while males received frightening messages. Majority of victims reported that their perpetrators were from outside school and the location for mobile bullying was also often outside school premises. This could be because most schools in the Eastern Cape have a 'no phone at school' policy. Smith et al. (2006) also reported cyberbullying in the UK as an act that takes place outside school premises. Similarly, Slonje and Smith (2008) found prevalence rates to be higher outside school for most types of cyberbullying cases. In contrast, Bauman (2009) conducted a study in a rural area and he found most youth engaged in their cyber activities at school. This was due to insufficient phone lines to support broadband and slow dialer service outside of the school location. Although victims appeared to know their bullies, when asked if they would retaliate, they responded "not sure" - males (mean= 2.94) and females (mean= 2.62).

5.6 Conclusion

The belief of rural areas to be peaceful and harmless has led to dearth of research in these areas. However, rural areas have been discovered to be the most likely communities involved in crime. Rural areas are characterized by socio economic issues and violence which are associated with several crimes. Mobile bullying is an alarming aggression that has been found among youth in recent years, however has been given little attention in South Africa despite the fact that South Africa is one of the countries with the biggest population of mobile phone adopters. This study had two aims: firstly to investigate the nature and prevalence of mobile bullying in South African rural high schools in the Eastern Cape Province.

This is important to understand because in order to fight this aggression, a comprehensive knowledge of the people it affects (urban, rural, and sub-urban etc) is needed. Previous studies have also shown that adolescents are the most at stake to suffer from negative influences of technology. Secondly, this study focused on investigating specifically mobile bullying- a subset of cyberbullying, because research has shown that mobile phones are the most used form of technology for bullying among adolescents today. Mobile bullying was found to affect adolescents in the rural Eastern Cape. Most of this behaviour was carried out by males through social networks. Males were also found to be victims, although females had a larger number of victims. The two groups however differed in ways of engaging in mobile bullying. While anonymity is often associated with the non-identification of the perpetrator, this study found that anonymity is also influenced by the environment in which the school is located and the level of school safety.

In this study, significant predictors of mobile bullying included gender, frequent usage of the mobile phone and mobile phone victimization. Mobile bullying was further discovered to increase with age. Current research suggests that females are more involved in indirect cyber behaviour than males, that was not supported in this study and future research is needed to address this aspect. The attitude which one has towards the mobile phone was found to be linked to mobile bullying and this aggression peaks up with age. While the internet seemed to have a presence in the rural areas, most of the mobile bullying was found to occur with applications that were internet free. More research is needed that will focus on the medium of technology used in the context of the study, this has potential to provide more understanding of mobile bullying and its nature. Cyberbullying has many different forms and cyberbullying has been proven to differ by ethnicity, geographical location, cultures and circumstances to name a few. Existing theories explaining cyberbullying and school policies might not be

applicable to all contexts. Future studies on mobile bullying in rural contexts are needed to expand the body of knowledge around this phenomenon. The study also revealed low reported levels of mobile bullying and victimization in some of the schools where adolescents spent more time online. This further highlights adolescents' motivation for going online. For example, adolescents who are responsible and spend more time online doing productive activities might be less likely to engage in mobile bullying and the vice versa may be true. Future studies can investigate how the motivation for going online relates to mobile bullying.

Limitation of this study was data collected in 2015 and some things could have changed between now and when the data was collected, leading to a limitation in generalizing the findings of this study. Secondly, the questionnaire was not translated to isiXhosa, which is the home language spoken and understood by most of the learners. English, though spoken and understood by rural learners, is not the most efficient way of communicating with them. Future studies can look into having a questionnaire in both English and isiXhosa.

REFERENCES

Aizenkot, D. (2018). Cyberbullying in WhatsApp Classroom Groups among Children and Adolescents : Exposure and Victimization. The Eurasia Proceedings of Educational & Social Sciences (EPESS), 10, 1–10.

Aizenkot, D. (2020). Social networking and online self-disclosure as predictors of cyberbullying victimization among children and youth. Children and Youth Services Review, 119(August), 105695. https://doi.org/10.1016/j.childyouth.2020.105695

Akbayrak, B. (2000). A Comparison Of Two Data Collecting Methods:Interviews And Questionnaires. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi* .

Alberts, C., & Kheswa, J. G. (2017). Social Network and Sexual Behaviour Amongst Adolescent Females in One Secondary School in Eastern Cape, South Africa. African Population Studies, 31.

Alhajji, M., Bass, S., & Dai, T. (2019). Cyberbullying , Mental Health , and Violence in Adolescents and Associations With Sex and Race : Data From the 2015 Youth Risk Behavior Survey. Global Pediatric Health, 6, 1– 9. https://doi.org/10.1177/2333794X19868887

Amarathunga, D., Baldry, D., Sarshar, M., & Newton, R. (2002). Quantitative and Qualitative research in built environment:apllication of "mixed" research approach. *Emerald , 51* (1), 17-31.

Andersson, L. M. C., Twum-antwi, A., Staland-nyman, C., Rm, D., Cur, V. R. B., Hons, B. C., & Cur, M. (2018). Prevalence and socioeconomic characteristics of alcohol disorders among men and women in the Eastern Cape Province , South Africa. Wiley, 143–153. https://doi.org/10.1111/hsc.12487

Anstey Watkins, J. O. T., Goudge, J., Gómez-Olivé, F. X., & Griffiths, F. (2018). Mobile phone use among patients and health workers to enhance primary healthcare: A qualitative study in rural South Africa. Social Science and Medicine, 198(August 2017), 139–147. https://doi.org/10.1016/j.socscimed.2018.01.011

Antoniadou, N., & Kokkinos, C. M. (2015). Cyber and school bullying : Same or different phenomena ? Aggression and Violent Behavior, 25, 363–372. https://doi.org/10.1016/j.avb.2015.09.013

Antoniadou, N., Kokkinos, C. M., & Fanti, K. A. (2019). Traditional and Cyber Bullying / Victimization Among Adolescents : Examining Their Psychosocial Profile Through Latent Profile Analysis. International Journal of Bullying Prevention, 1, 85–98.

Apostolides, A. (2017). Cyber bullying: Child and youth spirituality. HTS Teologiese Studies / Theological Studies, 73(3), 1–7. https://doi.org/10.4102/hts.v73i3.4692

Arafa, A. E., & Senosy, S. A. (2018). Pattern and correlates of cyberbullying victimization among Egyptian university students in Beni-Suef , Egypt. 107–115. https://doi.org/10.21608/EPX.2018.8948

Arnavut, A., Nuri, C., & Direktör, C. (2018). Examination of the relationship between phone usage and smartphone addiction based on certain variables. Annals of Psychology, 34, 446–450.

Asher, Y., Stark, A., & Fireman, G. D. (2017). Computers in Human Behavior Comparing electronic and traditional bullying in embarrassment and exclusion scenarios. Computers in Human Behavior, 76, 26–34. https://doi.org/10.1016/j.chb.2017.06.037

Athanasiou, K., Melegkovits, E., Andrie, E. K., Magoulas, C., Tzavara, C. K., Richardson, C., Greydanus, D., Tsolia, M., & Tsitsika, A. K. (2018). Cross-national aspects of cyberbullying victimization among 14 – 17-year-old adolescents across seven European countries. BMC Public Health.

Badenhorst, C. (2011). Legal responses to cyberbullying and sexting in South Africa. *Centre for justice and crime prevention , 10*.

Bai, C., Chen, X., & Han, K. (2020). Mobile phone addiction and school performance among Chinese adolescents from low-income families: A moderated mediation model. Children and Youth Services Review, 118(59), 105406. https://doi.org/10.1016/j.childyouth.2020.105406

Ballard, M. E., & Welch, K. M. (2017). Virtual Warfare : Cyberbullying and Cyber-Victimization in MMOG Play. Games and Culture, 12(5), 466–491. https://doi.org/10.1177/1555412015592473

Barlett, C. P., Madison, C. S., Heath, J. B., & Dewitt, C. C. (2019). Please browse responsibly : A correlational examination of technology access and time spent online in the Barlett Gentile Cyberbullying Model. Computers in Human Behavior, 92, 250–255. https://doi.org/10.1016/j.chb.2018.11.013

Bauman, S. (2009). Cyberbullying in a Rural Intermediate School:Exploratory Study. *The Journal of Early Adolescence OnlineFirst* , 1-31.

Bayne, S., Connelly, L., Grover, C., Osborne, N., Tobin, R., Beswick, E., Rouhani, L., Bayne, S., Connelly, L., Grover, C., & Osborne, N. (2019). The social value of anonymity on campus : a study of the decline of Yik Yak The social value of anonymity on campus : a study of the decline of. LEARNING, MEDIA AND TECHNOLOGY, 44(2), 92–107. https://doi.org/10.1080/17439884.2019.1583672

Beck, D., Black, E. W., Dawson, K., DiPietro, M., & Jink, S. (2007). The other side of the LMS:Considering implementation and use in the adoption of an LMS in online and blended learning environments. *51* (2).

Beringer, A. (2011). Teachers' Perception And Awareness Of Cyberbullying.

Betts, L., Gkimitzoudis, A., Spenser, K., & Baguley, T. (2016). Examining the roles young people fulfill in five types of cyber bullying. Journal of Social and Personal Relationships, 34.

Bhattacherjee, A. (2012). Social Science Research: Principles, Methods, and Practices. *USF Tampa Bay Open Access Textbooks Collection Book 3* .

Bhattacherjee, A. (2012). Social Science Research:Principles, Methods, And Practices.

Bhembe, N. L., Jaja, I. F., Nwodo, U. U., Okoh, A. I., & Green, E. (2017). International Journal of Infectious Diseases Prevalence of tuberculous lymphadenitis in slaughtered cattle in Eastern Cape , South Africa. International Journal of Infectious Diseases, 61, 27–37. https://doi.org/10.1016/j.ijid.2017.05.005

Blaxter, L., Hughes, C., & Tight, M. (2006). How to Research.

Boccio, C. M., & Beaver, K. M. (2018). The Influence of Psychopathic Personality Traits , Low Self-Control , and Nonshared Environmental Factors on Criminal Involvement. 16(1), 37–52. https://doi.org/10.1177/1541204016684176

Booi, S. L., Chigona, W., Maliwichi, P., Africa, S., & Kunene, K. (2019). The Influence of Telecentres on the Economic Empowerment of the Youth in Disadvantaged Communities of South Africa The influence of telecentres on the economic empowerment of the youth in disadvantaged communities of South Africa. April, 0–12. https://doi.org/10.1007/978-3-030-18400-1

Brochado, S., Fraga, S., Soares, S., & Ramos, E. (2017). Cyberbullying Among Adolescents : The Influence of Different Modes of Inquiry. Journal of Interpersonal Violence, 1–18. https://doi.org/10.1177/0886260517744182

Burrell , G., & Morgan, G. (2005). Sociological paradigms and organisational.

Burton, P., & Mutongwizo, T. (2009). Inescapable violence: Cyberbullying and electronic violence against people in South Africa. *Centre for Justice and Crime Prevention , 8*.

Byrne, E., Vessey, J. A., & Pfeifer, L. (2018). Cyberbullying and Social Media : Information and Interventions for School Nurses Working With Victims , Students , and Families. The Journal of School Nursing, 34(1), 38–50. https://doi.org/10.1177/1059840517740191

Camerini, A. L., Marciano, L., Carrara, A., & Schulz, P. J. (2020). Cyberbullying perpetration and victimization among children and adolescents: A systematic review of longitudinal studies. Telematics and Informatics, 49(January), 101362. https://doi.org/10.1016/j.tele.2020.101362

Cammaerts, E. B., Anstead, N., & Garland, R. (2015). Cyberbullying from a socio-ecological perspective : A contemporary synthesis of findings from EU Kids Online. MEDIA@LSE Working Paper Series, 36.

Campbell, M. (2005). Cyberbullying: An old problem in a new guise? *Australian Journal of Cyberbullying , 15* (1), 68-76.

Cao, Q., Xu, X., Xiang, H., Yang, Y., Peng, P., & Xu, S. (2020). Children and Youth Services Review Bullying victimization and suicidal ideation among Chinese left-behind children : Mediating e ff ect of loneliness and moderating e ff ect of gender. 111(November 2019). https://doi.org/10.1016/j.childyouth.2020.104848

Cassim, F. (2013). Formulating adequate legislation to address cyberbullying: Has the law kept pace with advancing technology. *South African Journal of Criminal Justice , 26* (1), 1-20.

Catone, G., Senese, V. P., Pisano, S., Siciliano, M., Russo, K., Muratori, P., Marotta, R., Pascotto, A., & Broome, M. R. (2020). The drawbacks of Information and Communication Technologies: Interplay and psychopathological risk of nomophobia and cyber-bullying, results from the bullying and youth mental health Naples study (BYMHNS). Computers in Human Behavior, 113(November 2019), 106496. https://doi.org/10.1016/j.chb.2020.106496

Charaschanya, A., & Blauw, J. (2018). A STUDY OF THE DIRECT AND INDIRECT RELATIONSHIPS BETWEEN ONLINE DISINHIBITION AND DEPRESSION AND STRESS BEING MEDIATED BY THE FREQUENCY OF CYBERBULLYING FROM VICTIM AND. JAMA Pediatrics, 275–301.

Chari, M. M., Hamandawana, H., & Zhou, L. (2017). Using geostatistical techniques to map adaptive capacities of resource-poor communities to climate change A case study of Nkonkobe Local Municipality, Eastern Cape Province, South Africa. International Journal of Climate Change Strategies and Management, 10(5). https://doi.org/10.1108/IJCCSM-03-2017-0071

Chaux, E., Molano, A. & Podlesky, P. (2009) 'Socio-Economic, Socio-Political and Socio-Emotional Variables Explaining School Bullying: A Country-Wide Multilevel Analysis'. *Aggressive Behaviour* 35(6): 520-529

Chen, X., Zhang, G., Yin, X., Li, Y., & Cao, G. (2019). The Relationship Between Self-Efficacy and Aggressive Behavior in Boxers : The Mediating Role of Self-Control. 10(February), 1–9. https://doi.org/10.3389/fpsyg.2019.00212

Chetty-Mhlanga, S., Fuhrimann, S., Eeftens, M., Basera, W., Hartinger, S., Dalvie, M. A., & Röösli, M. (2020). Different aspects of electronic media use, symptoms and neurocognitive outcomes of children and adolescents in the rural Western Cape region of South Africa. Environmental Research, 184(January), 109315. https://doi.org/10.1016/j.envres.2020.109315

Cho, M., Kim, M., & Shin, G. (2017). Effects of Cyberbullying Experience and Cyberbullying Tendency on School Violence in Early Adolescence. The Open Nursing Journal Content, 11, 98–107. https://doi.org/10.2174/1874434601711010098

Cho, S., & Lee, J. R. (2018). Impacts of Low Self-Control and Delinquent Peer Associations on Bullying Growth Trajectories Among Korean Youth : A Latent Growth Mixture Modeling Approach. https://doi.org/10.1177/0886260518786495

Cho, S., & Rustu, D. (2020). Examining the impacts of low self-control and online lifestyles on cyberbullying perpetration among Korean adolescents: Using parallel process latent growth curve modeling. Children and Youth Services Review, 117(March), 105288. https://doi.org/10.1016/j.childyouth.2020.105288

Cho, S., Hong, J. S., Sterzing, P. R., & Woo, Y. (2017). Parental Attachment and Bullying in South Korean Adolescents : Mediating Effects of Low Self-Control , Deviant Peer Associations , and Delinquency. https://doi.org/10.1177/0011128717714968

Choi, K. S., Earl, K., Lee, J. R., & Cho, S. (2019). Diagnosis of cyber and non-physical bullying victimization: A lifestyles and routine activities theory approach to constructing effective preventative measures. Computers in Human Behavior, 92(February 2018), 11–19. https://doi.org/10.1016/j.chb.2018.10.014

Choi, K., Earl, K., Ree, J., & Cho, S. (2019). Diagnosis of cyber and non-physical bullying victimization: A lifestyles and routine activities theory approach to constructing effective preventative measures. Computers in Human Behavior, 92(August 2018), 11–19. https://doi.org/10.1016/j.chb.2018.10.014

Choon, H., Chan, O., & Wong, D. S. W. (2019). Traditional School Bullying and

Cyberbullying Perpetration: Examining the Psychosocial Characteristics of Hong Kong Male and Female Adolescents. Youth & Society, 51(1), 3– 29. https://doi.org/10.1177/0044118X16658053

Choung, M. E., & Manamela, M. G. (2018). Digital Inequality in Rural and Urban settings : Challenges of Education and Information in South African Youth Context. 15(2), 186–197.

Chukwuere, J. E., & Chukwuere, P. C. (2017). Cyber Bullying Of Female Students: An Exploration Of Literature Study. 15(4), 9983–9995.

Chun, J. S., Lee, J., Kim, J., & Lee, S. (2020). An international systematic review of cyberbullying measurements. *Computers in Human Behavior*, *113*, 106485. https://doi.org/10.1016/j.chb.2020.106485

Cohen, L., Lawrence , M., & Morrison, K. (2007). Research Methods in Education,sixth edition.

Collis , J., & Hussey, R. (2003). *Business Research: a practical guide for undergraduate and postgraduate studentd* (2nd ed.). Basingstoke:Palgrave Macmillan.

Connolly, E. J., Al-ghamdi, M. S., Kobeisy, A. N., Alqurashi, F., Schwartz, J. A., & Beaver, K. M. (2017). Identifying Latent Classes of Antisocial Behavior Among Youth From Saudi Arabia : An Assessment of the Co-Occurrence Between Aggression , Psychopathy , Low Self-Control , and Delinquent Behavior. 15(3), 219–239. https://doi.org/10.1177/1541204016639349

Connor, T., & Mtwana, N. (2018). Vestige garden production and deagrarianization in three villages in the Eastern Cape , South Africa. South African Geographical Journal, 6245, 1–22. https://doi.org/10.1080/03736245.2017.1301268

Creswell, J. W. (2003). Research design: Qualitative, quantitative, and mixed method. *Sage Publications* .

De Leeuw, E. D., Hox, J. J., & Dillman, D. A. (2008). International Handbook of Survey Methodology.

De Pasquale, C., Martinelli, V., Sciacca, F., Mazzone, M., Chiappedi, M., Dinaro, C., & Hichy, Z. (2021). The role of mood states in cyberbullying and cybervictimization behaviors in adolescents. Psychiatry Research, 300(March), 113908. https://doi.org/10.1016/j.psychres.2021.113908

DeLisi, M. (2011). Self-control theory: The Tyrannosaurus rex of criminology is poised to devour criminal justice. *Journal of Criminal Justice* .

Dinakar, K., Jones, B., Havasi, C., Lieberman, H., & Picard, R. (2012). Common Sense Reasoning for Detection, Prevention,and Mitigation of Cyberbullying.

Domoff, S. E., Borgen, A. L., Foley, R. P., & Maffett, A. (2019). Excessive use of mobile devices and children ' s physical health. Wiley Periodicals, 169–175. https://doi.org/10.1002/hbe2.145

Durak, H. Y. (2018). What Would You Do Without Your Smartphone ? Adolescents ' Social Media Usage , Locus of Control , and Loneliness as a Predictor of Nomophobia. The

Turkish Journal on Addictions, 1–16.

Edberg, M., Shaikh, H., & Rimal, R. N. (2017). Development of a Communication Strategy to Reduce Violence against Children in South Africa : A Social-Ecological Approach. The African Journal of Information and Communication (AJIC), 20, 49–76.

Eden, S., Heiman, T., & Olenik-shemesh, D. (2016). Bully versus victim on the internet : The correlation with emotional-social characteristics. 699–713. https://doi.org/10.1007/s10639-014-9348-2

Elçi, A., & Seçkin, Z. (2019). Cyberbullying Awareness for Mitigating Consequences in Higher Education. Journal of Interpersonal Violence, 34(5), 946– 960. https://doi.org/10.1177/0886260516646095

Epstein, A., & Kazmierczak, J. (2007). Cyberbullying: What Teachers, Social Workers, and Administrators Should Know. *Illinois Child Welfare , 3* (2).

Evans, C. B. R. (2015). Theoretical Explanations for Bullying in School : How Ecological Processes Propagate Perpetration and Victimization Theoretical Explanations for Bullying in School : How Ecological Processes Propagate Perpetration and Victimization. Child and Adolescent Social Work Journal, November. https://doi.org/10.1007/s10560-015-0432-2

Express, M. (2014). Cyberbullying increases as students ageCyberbullying increases as students age.

Eyuboglu, M., Eyuboglu, D., Pala, S. C., Oktar, D., Demirtas, Z., Arslantas, D., & Unsal, A. (2021a). Traditional school bullying and cyberbullying: Prevalence, the effect on mental health problems and self-harm behavior. Psychiatry Research, 297(January), 113730. https://doi.org/10.1016/j.psychres.2021.113730

Eyuboglu, M., Eyuboglu, D., Pala, S. C., Oktar, D., Demirtas, Z., Arslantas, D., & Unsal, A. (2021b). Traditional school bullying and cyberbullying: Prevalence, the effect on mental health problems and self-harm behavior. Psychiatry Research, 297(June 2020), 113730. https://doi.org/10.1016/j.psychres.2021.113730

Fan, C., Chu, X., Zhang, M., & Zhou, Z. (2019a). Are Narcissists More Likely to Be Involved in Cyberbullying ? Examining the Mediating Role of Self-Esteem. Journal of Interpersonal Violence, 34(15), 3127– 3150. https://doi.org/10.1177/0886260516666531

Fan, C., Chu, X., Zhang, M., & Zhou, Z. (2019b). Are Narcissists More Likely to Be Involved in Cyberbullying? Examining the Mediating Role of Self-Esteem. Journal of Interpersonal Violence, 34(15), 3127 –3150. https://doi.org/10.1177/0886260516666531

Farhangpour, P., Maluleke, C., Mutshaeni, H. N., Africa, S., & Mutshaeni, H. (2019). Emotional and academic effects of cyberbullying on students in a rural high school in the Limpopo province , South Africa. South African Journal of Information Management, 21(1), 1–8.

Fernandez, S. (2018). University Student ' s Perspectives on Using Cell Phones in Classrooms - Are They Dialing up Disaster ? The Turkish Online Journal of Educational Technology, 17(1), 246–258.

Ferrara, P., Ianniello, F., Villani, A., & Corsello, G. (2018). Cyberbullying a modern form of

bullying : let ' s talk about this health and social problem. Italian Journal of Pediatrics, 1–3. https://doi.org/10.1186/s13052-018-0446-4

Forssell, R. C. (2018). Cyberbullying in a boundary blurred working life on social media. Qualitative Research in Organizations and Management. https://doi.org/10.1108/QROM-05-2018-1636

Gable, G. G. (1994). Integrating case study and survey research methods: an example in information. *European Journal of Information Systems , 3* (2), 112-126.

Gao, L., Liu, J., Wang, W., Yang, J., Wang, P., & Wang, X. (2020). Moral disengagement and adolescents' cyberbullying perpetration: Student-student relationship and gender as moderators. Children and Youth Services Review, 116(92), 105119. https://doi.org/10.1016/j.childyouth.2020.105119

Gautreau, C. (2011). Motivational Factors Affecting the Integration of a Learning Management System by Faculty. *The Journal of Educators Online , 8*.

Gender, J. O. F. (2019). Learner Performance in the Mpumalanga and the Eastern Cape Provinces , South Africa : Why Disaggregated Analysis? JOURNAL OF GENDER, INFORMATION AND DEVELOPMENT IN AFRICA (JGIDA), 8(2), 243–271.

George, M. J., Russell, M. A., Piontak, J. R., & Odgers, C. L. (2018). Concurrent and Subsequent Associations Between Daily Digital Technology Use and High-Risk Adolescents ' Mental Health Symptoms. 89(1), 78–88. https://doi.org/10.1111/cdev.12819

Gillwald, A., Mothobi, O., & Rademan, B. (2017). The State of ICT in South Africa.

Giordano, C., Lo Coco, G., Salerno, L., & Di Blasi, M. (2021). The role of emotion dysregulation in adolescents' problematic smartphone use: A study on adolescent/parents triads. Computers in Human Behavior, 115(February 2020), 106632. https://doi.org/10.1016/j.chb.2020.106632

Görzig, A., & Frumkin, L. A. (2013). Cyberbullying experiences on-the-go: When social media can become distressing. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace , 7* (1), 4.

Govender, C., & Young, K. (2018a). A comparison of gender , age , grade , and experiences of authoritarian parenting amongst traditional and cyberbullying perpetrators. South African Journal of Education, 38(1), 1–11.

Govender, C., & Young, K. (2018b). A comparison of gender , age , grade , and experiences of authoritarian parenting amongst traditional and cyberbullying perpetrators. South African Journal of Education, 38, 1–11.

Graf, D., Yanagida, T., & Spiel, C. (2019). Through the magnifying glass : Empathy ' s differential role in preventing and promoting traditional and cyberbullying. Computers in Human Behavior, 96, 186–195. https://doi.org/10.1016/j.chb.2019.02.007

Greener, S. (2008). Business Research Methods. *bookboon.com/en/introduction-to-research-methods-ebook* .

Hall, K., & Posel, D. (2019). Fragmenting the Family ? The Complexity of Household

Migration Strategies in Post-apartheid South Africa. Journal of Development and Migration, 10(4), 1–20.

Hammersley, M. (2000). *Unit 7 Case Study Case Studies And Surveys.* http://labspace.open.ac.uk/file.php/2538/!via/oucontent/course/167/deh313_1blk2.11.pdf .

Hardell, L. (2018). Effects of Mobile Phones on Children's and Adolescents' Health: A Commentary. Child Development, 89(1), 137–140. https://doi.org/10.1111/cdev.12831

Harger, B. (2016). You Say Bully, I Say Bullied: School Culture and Definitions of Bullying in Two Elementary Schools. Education and Youth Today.

Hartman, R. J., Johnston, E., & Hill, M. (2017). Empathetic Design : A Sustainable Approach to School Change. Discourse and Communication for Sustainable Education, 8(2), 38–56. https://doi.org/10.1515/dcse-2017-0014

Haverila, M. J. (2018). CONVERGENCE OF THE GLOBAL CELL PHONE MARKET AND UNIVERSAL CELL PHONE BEHAVIOURS. Academy of Marketing Studies Journal, 22(2), 1–26.

Hawthorne, R., & Grzybowski, L. (2021). Distribution of the benefits of regulation vs. competition: The case of mobile telephony in South Africa. International Journal of Industrial Organization, 74, 102673. https://doi.org/10.1016/j.ijindorg.2020.102673

Hendricks, E. A. (2018). The Influence of Gangs on the Extent of School Violence in South Africa : A Case Study of Sarah Baartman District Municipality , Eastern Cape Eleanor Alvira Hendricks , PhD. JOURNAL OF CONFLICT AND SOCIAL TRANSFORMATION, 7(2), 75–93.

Hesselink, A. (2017). An Overview Of Existing Criminological Research On School Violence And Bullying Behaviour: A Review Through Secondary Document Analysis. Southern African Journal of Criminology, 30(3), 27–36.

Hinduja, S., & Patchin, J. W. (2010). Bullying, Cyberbullying and Suicide. *Cyberbullying Research Center , 14* (3), 206-221.

Hong, J. S., Espelage, D. L., Hunter, S. C., & Allen-meares, P. (2018). Integrating multi-disciplinary social science theories and perspectives to understand school bullying and victimisation. The Routledge International Handbook of Human Aggression : Current Issues and Perspectives, 109–120.

Hong, W., Liu, R. De, Ding, Y., Jiang, R., Sun, Y., & Jiang, S. (2021). A time-lagged study of two possible routes from personal innovativeness to life satisfaction in adolescents: Learning and social interaction on mobile phones. Personality and Individual Differences, 182(19), 111075. https://doi.org/10.1016/j.paid.2021.111075

Hood, M., & Duffy, A. L. (2018). Understanding the relationship between cyber-victimisation and cyber-bullying on Social Network Sites : The role of moderating factors. Personality and Individual Differences, 133, 103–108. https://doi.org/10.1016/j.paid.2017.04.004

Ippoliti, N. B., & Engle, K. L. (2017). Meet us on the phone : mobile phone programs for adolescent sexual and reproductive health in low-to-middle income countries.

Reproductive Health, 1–8. https://doi.org/10.1186/s12978-016-0276-z

Jansen, R., & Reid, M. (2020). Interest in Communication Technology by Rural Caregivers of Adolescents with Mental Health Issues in South Africa: The Mmogo-Method®. Issues in Mental Health Nursing, 42(1), 1–14. https://doi.org/10.1080/01612840.2020.1774017

Jesintha, J. J., & Karthiga, K. (2018). IMPACT OF MOBILE PHONE ON TEENAGERS. Bodhi International Journal of Research in Humanities, Arts and Science, 2.

John, A., Glendenning, A. C., Marchant, A., Montgomery, P., Stewart, A., Wood, S., Lloyd, K., Hawton, K., & John, A. (2018). Self-Harm , Suicidal Behaviours , and Cyberbullying in Children and Young People : Systematic Review. JOURNAL OF MEDICAL INTERNET RESEARCH, 20(4). https://doi.org/10.2196/jmir.9044

Jr, F. R. W., & Graham, R. (2018). " Safe " and " At- Risk ": Cyberbullying Victimization and Deviant Health Risk Behaviors in Youth. Youth & Society, 1 –20. https://doi.org/10.1177/0044118X18810943

Juan, A., Zuze, L., & Hannan, S. (2018a). Bullies , victims and bully-victims in South African schools : Examining the risk factors. 38(October), 1–10.

Juan, A., Zuze, L., & Hannan, S. (2018b). Bullies , victims and bully-victims in South African schools : Examining the risk factors. South African Journal of Education, Volume, 38(1), 1–10.

Kaboub, F. (2008). Positivist paradigm. In F. Leong (Ed.), Encyclopedia of counseling. *Sage Publications , 2*, 786-787.

Kagan, K., & Kokkinos, C. M. (2019). Problematic Online Behaviors among Adolescents and Emerging Adults : Associations between Cyberbullying Perpetration , Problematic Social Media Use , and Psychosocial Factors. International Journal Mental Health Addiction, 891–908.

Kalkim, A., & Emlek Sert, Z. (2021). Internet addiction and affected factors in primary school students: School-based study. Archives of Psychiatric Nursing, 35(3), 271–276. https://doi.org/10.1016/j.apnu.2021.03.003

Kenny, U., Sullivan, L., Callaghan, M., Molcho, M., & Kelly, C. (2018). The relationship between cyberbullying and friendship dynamics on adolescent body dissatisfaction : A cross-sectional study. Journal of Health Psychology, 23(4), 629– 639. https://doi.org/10.1177/1359105316684939

Keskin, S. (2018). Investigating the Relationship between Cyberbullying and Perceived Family Support in Middle-School Students in Relation to Gender , Frequency of Internet. The Turkish Journal on Addictions, 5(2).

Kheswa, J. G. (2017). The Impact of Unemployment on the Sexual Behaviour of Male Youth in The Impact of Unemployment on the Sexual Behaviour of Male Youth in Quzini , Eastern Cape , South Africa : International Journal of Adolescence and Youth, September. https://doi.org/10.1177/0976343020170104

Khuzwayo, N., Taylor, M., & Connolly, C. (2016). Prevalence and correlates of violence among South African high school learners in uMgungundlovu District municipality ,

KwaZulu-Natal , South Africa. South African Medical Journal (SAMJ), 106(12), 1216–1221. https://doi.org/10.7196/SAMJ.2016.v106i12.10969

Khuzwayo, N., Taylor, M., & Connolly, C. (2018). High risk of suicide among high-school learners in uMgungundlovu District , KwaZulu-Natal Province , South Africa. 108(6), 517–523. https://doi.org/10.7196/SAMJ.2018.v108i6.12843

Kim, H., Min, J., Min, K., Lee, T., & Yoo, S. (2018). Relationship among family environment , self- control , friendship quality , and adolescents ' smartphone addiction in South Korea : Findings from nationwide data. 1–13.

Kim, J., & Kim, E. (2019). Bullied by Siblings and Peers : The Role of Rejecting / Neglecting Parenting and Friendship Quality Among Korean Children. https://doi.org/10.1177/0886260516659659

Kim, R. (2008). Factors Influencing the Acceptance of e-Learning Courses for Mainstream Faculty in Higher Institutions. *International Journal of Instructional Technology and Distance Learning , 5* (2).

Kintonova, A., Vasyaev, A., & Shestak, V. (2021). Cyberbullying and cyber-mobbing in developing countries. Information and Computer Security, 29(3), 435–456. https://doi.org/10.1108/ICS-02-2020-0031

Kothari, C. R. (2004). Research Methodology: Methods and Techniques. *New Age International* .

Kothgassner, L. F. O. D., & Felnhofer, A. (2019). Risk factors for problematic smartphone use in children and adolescents : a review of existing literature. Neuropsychiatr (, 33, 179–190. https://doi.org/10.1007/s40211-019-00319-8

Kowalski, R. M., Limber, S. P., & McCord, A. (2018). A developmental approach to cyberbullying: Prevalence and protective factors. Aggression and Violent Behavior.

Kowalski, R. M., Limber, S. P., & McCord, A. (2019). A developmental approach to cyberbullying: Prevalence and protective factors. Aggression and Violent Behavior, 45(November 2017), 20–32. https://doi.org/10.1016/j.avb.2018.02.009

Kowalski, R., Giumetti, G. W., & Limber, S. P. (2017). Bullying and Cyberbullying Among Rural Youth. Michael K., Jameson J. (Eds) Handbook of Rural School Mental Health.

Kozma, R., & Anderson, R. (2002). Qualitative case studies of innovative pedagogical practices using ICT. *Journal of Computer Assisted Learning , 18* (4), 387-394.

Kritzinger, E. (2017a). Cultivating a cyber-safety culture among school learners in South Africa. 14. https://doi.org/10.1080/18146627.2016.1224561

Kritzinger, E. (2017b). Growing a cyber-safety culture amongst school learners in South Africa through gaming. 29(October), 16–35.

Kura, S. B. (2012). Qualitative and Quantitative Approaches to the Study of Poverty: Taming the Tensions and Appreciating the Complementarities. *37* (1-19).

Kyobe, M. E., & Oosterwyk, G. W. (2016). The Nature Of Mobile Bullying & Victimisation In The Western Cape High Schools of South Africa. 8(2).

Latham, B. (2007). Sampling: What is it? Quantitative Research Methods.

Lazuras, L., Barkoukis, V., & Tsorbatzoudis, H. (2017). Technology in Society Face-to-face bullying and cyberbullying in adolescents : Trans- contextual effects and role overlap. Technology in Society, 48, 97–101. https://doi.org/10.1016/j.techsoc.2016.12.001

Lee, E. B. (2017). Cyberbullying : Prevalence and Predictors Among African American Young Adults. Journal of Black Studies, 48(1), 57– 73. https://doi.org/10.1177/0021934716678393

Lee, G., & Sanchez, M. (2018). Cyber Bullying Behaviors , Anonymity , and General Strain Theory : Study of Undergraduate Students at a South Eastern University in the United States. International Journal of Cyber Criminology, 12(1), 84–96. https://doi.org/10.5281/zenodo.1467846

Lee, J., Abell, N., & Holmes, J. L. (2017). Validation of Measures of Cyberbullying Perpetration and Victimization in Emerging Adulthood. Research on Social Work Practice, 27(4), 456–467. https://doi.org/10.1177/1049731515578535

Leoschut, L., & Kafaar, Z. (2017). The frequency and predictors of poly-victimisation of South African children and the role of schools in its prevention. Psychology, Health & Medicine, 8506, 1–13. https://doi.org/10.1080/13548506.2016.1273533

Li, Jiansheng, Luo, C., Lin, Y., & Shadiev, R. (2018). Exploring Chinese Youth ' s Internet Usage and Cyberbullying Behaviors and their Relationship. The Asia-Pacific Education Researcher, 27(5), 383–394. https://doi.org/10.1007/s40299-018-0397-y

Li, Jiayu, Zhan, D., Zhou, Y., & Gao, X. (2021). Loneliness and problematic mobile phone use among adolescents during the COVID-19 pandemic: The roles of escape motivation and self-control. Addictive Behaviors, 118(2), 106857. https://doi.org/10.1016/j.addbeh.2021.106857

Li, Q., & Literat, I. (2017). Misuse or misdesign? Yik Yak on college campuses and the moral dimensions of technology design. First Monday, 22.

Litwiller, B. J., & Brausch, A. M. (2013). Cyberbullying and Physical Bullying in Adolescent Suicide: The Role of Violent Behavior and Substance Use. *Journal of Youth and Adolescence* , *42* (5), 675-684.

Liu, Q. Q., Yang, X. J., Hu, Y. T., Zhang, C. Y., & Nie, Y. G. (2020). How and when is family dysfunction associated with adolescent mobile phone addiction? Testing a moderated mediation model. Children and Youth Services Review, 111(January), 104827. https://doi.org/10.1016/j.childyouth.2020.104827

Liu, Q., Huang, J., & Zhou, Z. (2020). Self-expansion via smartphone and smartphone addiction tendency among adolescents: A moderated mediation model. Children and Youth Services Review, 119(October), 105590. https://doi.org/10.1016/j.childyouth.2020.105590

Livazovi, G., & Ham, E. (2019). Heliyon Cyberbullying and emotional distress in adolescents : the importance of family , peers and school. Heliyon, 5.

Livazović, G., & Ham, E. (2019). Cyberbullying and emotional distress in adolescents: the importance of family, peers and school. Heliyon, 5(6).

https://doi.org/10.1016/j.heliyon.2019.e01992

Llorent, V. J., Farrington, D. P., & Zych, I. (2021). School climate policy and its relations with social and emotional competencies, bullying and cyberbullying in secondary education. Revista de Psicodidáctica (English Ed.), 26(1), 35–44. https://doi.org/10.1016/j.psicoe.2020.11.002

Longobardi, C., Settanni, M., Fabris, M. A., & Marengo, D. (2020). Follow or be followed: Exploring the links between Instagram popularity, social media addiction, cyber victimization, and subjective happiness in Italian adolescents. Children and Youth Services Review, 113(December 2019), 104955. https://doi.org/10.1016/j.childyouth.2020.104955

Luiz, J., Abadio, W., Ii, D. O., Monique, D., Ii, C., Aparecida, E., Iii, L., Iv, R. R., Angélica, M., Silva, I., Franca, U. D. F., & Paulo, S. (2018). Intervention in social skills and bullying. 71(3), 1085–1091.

Madigan, S., Ly, A., Rash, C. L., Ouytsel, J. Van, & Temple, J. R. (2018a). Prevalence of Multiple Forms of Sexting Behavior Among Youth: A Systematic Review and Meta-analysis. 172(4), 327–335. https://doi.org/10.1001/jamapediatrics.2017.5314

Madigan, S., Ly, A., Rash, C. L., Ouytsel, J. Van, & Temple, J. R. (2018b). Prevalence of Multiple Forms of Sexting Behavior Among Youth A Systematic Review and Meta-analysis. JAMA Pediatrics, 172(4), 327–335. https://doi.org/10.1001/jamapediatrics.2017.5314

Manomano, T., & Tanga, P. T. (2018). HOUSING NEEDS: THE QUALITY AND QUANTITY OF HOUSING PROVIDED BY THE GOVERNMENT FOR THE POOR IN THE EASTERN CAPE PROVINCE IN SOUTH AFRICA. Social Work, 54(1).

Manu, E., Maluleke, X. T., & Douglas, M. (2017). Knowledge of High School Learners Regarding Substance Use Within High School Premises in the Buffalo Flats of East London , Eastern Cape Province , South Africa. Journal of Child & Adolescent Substance Abuse, 26(1), 1–10. https://doi.org/10.1080/1067828X.2016.1175984

Marongw, N., Billey, A., & Kasumba, H. (2017). UNIVERSITY STUDENTS' PERCEPTIONS ON THE USE OF SMARTPHONES IN LEARNING AND TEACHING: A CASE OF A UNIVERSITY IN A RURAL SETTING. African Academic Research Forum.

Masilo, D. T. (2018). Social work intervention to address the phenomenon of bullying amongst learners in the school setting : A literature review. South African Journal of Education, 38(1), 1–9.

Mathiyazhagan, T., & Nandan, D. (2010). Survey research method.

Mattioni, L. (2013). School Staff's Perceptions And Attitudes Towards Cyberbullying .

Maunder, R. E., & Crafter, S. (2018). Aggression and Violent Behavior School bullying from a sociocultural perspective. Aggression and Violent Behavior, 38(May 2016), 13–20. https://doi.org/10.1016/j.avb.2017.10.010

Mccuddy, T., & Esbensen, F. (2017). After the Bell and into the Night : The Link between Delinquency and and Dual-Bullying Victimization. Journal of Research in Crime and

Delinquency, 54(3), 409–441. https://doi.org/10.1177/0022427816683515

Méndez, I., Jorquera Hernández, A. B., & Ruiz-Esteban, C. (2020). Profiles of Mobile Phone Problem Use in Bullying and Cyberbullying Among Adolescents. Frontiers in Psychology, 11(October), 1–7. https://doi.org/10.3389/fpsyg.2020.596961

Mesch, G. S. (2009). Parental Mediation, Online Activities and Cyberbullying.

Meter, D. J., & Bauman, S. (2018). Moral Disengagement About Cyberbullying and Parental Monitoring : Effects on Traditional Bullying and Victimization via Cyberbullying Involvement. Journal of Early Adolescence, 38(3), 303– 326. https://doi.org/10.1177/0272431616670752

Meyer, E. L., & Overen, O. K. (2021). Towards a sustainable rural electrification scheme in South Africa: Analysis of the Status quo. Energy Reports, 7, 4273–4287. https://doi.org/10.1016/j.egyr.2021.07.007

Mitchell, L., & Hussain, Z. (2018). Predictors of Problematic Smartphone Use : An Examination of the Integrative Pathways Model and the Role of Age , Gender , Impulsiveness , Excessive. Behavioral Sciences, 8(74). https://doi.org/10.3390/bs8080074

Mkansi , M., & Acheampong, E. A. (2012). Research Philosophy Debates and Classifications: Students' Dilemma. *The Electronic Journal of Business Research Methods , 10* (2), 132-140.

Mlambo, V. H. (2018). An overview of rural-urban migration in South Africa : its causes and implications. Archives of Business Research, 6(4), 63–70. https://doi.org/10.14738/abr.64.4407

Moreno, D., Martínez, B., & García, F. (2019). Parenting styles , cyberaggression , and cybervictimization among adolescents. Computers in Human Behavior, 93, 252–259. https://doi.org/10.1016/j.chb.2018.12.031

Moreno, M. A., Suthamjariya, N., & Selkie, E. (2018). Stakeholder Perceptions of Cyberbullying Cases: Application of the Uniform Definition of Bullying. Journal of Adolescent Health, 62(4), 444–449. https://doi.org/10.1016/j.jadohealth.2017.11.289

Motswi, E. M., & Mashegoane, S. (2017). The Role of Sex in The Prevalence Rates and Psychological Consequences of Cyberbullying Among Learners in The Limpopo Province, South Africa. Gender & Behaviour, 15(3), 9808–9817.

Muhanga, M. (2017). Get Connected Or Get Destroyed ? Adolescents And Mobile Devices In Urban Settings In Tanzania. International Journal of Advanced Research and Publications, 1(3), 62–68.

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

Nanayakkara, C. (2007). A Model of User Acceptance of Learning Management Systems:A Study within Tertiary Institutions in New Zealand. *International Journal Of Learning , 13* (12).

Ncube, L. S., & Dube, L. (2016). Cyberbullying a desecration of information ethics Perceptions of post-high school youth in a rural community. Journal of Information , Communication and Ethics in Society, 14(4).

Ngesi, N., Landa, N., Madikiza, N., Cekiso, M. P., Tshotsho, B., Walters, L. M., Africa, S., Hare, F., Africa, S., & Africa, S. (2018). Use of mobile phones as supplementary teaching and learning tools to learners in South Africa Research problem. Journal of the Reading Association of South Africa, 9(1), 1–13.

Ngorima, A., & Shackleton, C. M. (2019). Livelihood benefits and costs from an invasive alien tree (Acacia dealbata) to rural communities in the Eastern Cape, South Africa. Journal of Environmental Management, 229, 158–165. https://doi.org/10.1016/j.jenvman.2018.05.077

Njwambe, A., Cocks, M., & Vetter, S. (2019). Ekhayeni : Rural – Urban Migration , Belonging and Landscapes of Home in South Africa Ekhayeni : Rural – Urban Migration , Belonging and Landscapes of Home in South Africa. Journal of Southern African Studies, 45(2), 413–431. https://doi.org/10.1080/03057070.2019.1631007

O'Brien, N., & Moules, T. (2010). The impact of cyber-bullying on young people's mental health.

Ojeda, M., Del Rey, R., & Hunter, S. C. (2019). Longitudinal relationships between sexting and involvement in both bullying and cyberbullying. Journal of Adolescence, 77(October), 81–89. https://doi.org/10.1016/j.adolescence.2019.10.003

Ojo, O. A., & Adu, E. O. (2018). The effectiveness of information and communication technologies (Icts) in teaching and learning in high schools in eastern cape province. South African Journal of Education, 38(December), 1–11. https://doi.org/10.15700/saje.v38ns2a1483

Olga, G., Romera, E. M., Ortega-ruiz, R., & Rey, R. Del. (2018). Parenting Practices as Risk or Preventive Factors for Adolescent Involvement in Cyberbullying : Contribution of Children and Parent Gender. International Journal of Environmental Research and Public Health, 15. https://doi.org/10.3390/ijerph15122664

Olsen, N.E. (2010). Bullying Trends and Reporting Preferences Among an Urban, Suburban, and Rural School. *ll Theses and Dissertations, Paper 2418.*

Oppenheim, A. N. (1992). *Questionnaire Design,Interviewing and Attitude Measurement.* London.

Orkibi, H., Hamama, L., & Gavriel-fried, B. (2018). Pathways to Adolescents ' Flourishing : Linking Self-Control Skills and Positivity Ratio Through Social Support. https://doi.org/10.1177/0044118X15581171

Otterbach, S., & Rogan, M. (2019). Exploring spatial differences in the risk of child stunting : Evidence from a South African national panel survey ☆. Journal of Rural Studies, 65(November 2018), 65–78. https://doi.org/10.1016/j.jrurstud.2018.11.006

Pabian, S., & Vandebosch, H. (2016). Short-term longitudinal relationships between adolescents ' (cyber) bullying perpetration and bonding to school and teachers. https://doi.org/10.1177/0165025415573639

Palladino, B. E., Menesini, E., Nocentini, A., & Luik, P. (2017). Perceived Severity of Cyberbullying : Differences and Similarities across Four Countries. 8(September), 1–12. https://doi.org/10.3389/fpsyg.2017.01524

Pasmansa, T., & Hebinck, P. (2017). Rural development and the role of game farming in the Eastern Cape, South Africa. 64, 440–450.

Patterson, L. J., Allan, A., & Cross, D. (2017). Adolescent perceptions of bystanders ' responses to cyberbullying. New Media & Society, 19(3), 366– 383. https://doi.org/10.1177/1461444815606369

Peled, Y. (2019). Cyberbullying and its in fl uence on academic , social , and emotional development of undergraduate students. Heliyon. https://doi.org/10.1016/j.heliyon.2019.e01393

Petrus, T., & Kinnes, I. (2019). New social bandits ? A comparative analysis of gangsterism in the Western and Eastern Cape provinces of South Africa. Criminology & Criminal Justice, 19(2), 179 –196. https://doi.org/10.1177/1748895817750436

Piccoli, V., Carnaghi, A., Grassi, M., Stragà, M., & Bianchi, M. (2020). Cyberbullying through the lens of social influence: Predicting cyberbullying perpetration from perceived peer-norm, cyberspace regulations and ingroup processes. Computers in Human Behavior, 102(September 2019), 260–273. https://doi.org/10.1016/j.chb.2019.09.001

Pichel, R., Norman, J. O. H., Feij, S., & Rial, A. (2021). Bullying , Cyberbullying and the Overlap : What Does Age Have to Do with It ? Sustainability.

Popovac, M., & Hadlington, L. (2019). Exploring the role of egocentrism and fear of missing out on online risk behaviours among adolescents in South Africa Exploring the role of egocentrism and fear of missing out on. International Journal of Adolescence and Youth, 1–16. https://doi.org/10.1080/02673843.2019.1617171

Porta, D. D., & Keating, M. (2008). Approaches and Methodologies in the Social Science: A Pluralist Perspective.

Porta, D. D., & Keating, M. (2008). Approaches and Methodologies in the Social Sciences. *Cambridge University Press* .

Porter, G., Hampshire, K., Milner, J., Munthali, A., Robson, E., Lannoy, A., Bango, A., Gunguluza, N., Mashiri, M., Tanle, A., & Abane, A. (2016). Mobile Phones and Education in Sub-Saharan Africa : From Youth Practice to SUB-SAHARAN AFRICA : FROM YOUTH PRACTICE TO PUBLIC POLICY. Journal of International Development, 22–39. https://doi.org/10.1002/jid.3116

Prasad, M., Patthi, B., Singla, A., Gupta, R., & Saha, S. (2017). Nomophobia : A Cross-sectional Study to Assess Mobile Phone Usage Among Dental Students. Journal of Clinical and Diagnostic Research, 11(2). https://doi.org/10.7860/JCDR/2017/20858.9341

Preez, C. Du, & Prinsloo, J. (2017). An Exploration Of Bullying In School Context With Specific Focus On Cyberbullying As A Form Of Cybercrime In Tshwane, Gauteng. Southern African Journal of Criminology, 30(3), 103–120.

Priegue, D. (2019). Influence of Family Variables on Cyberbullying Perpetration and Victimization : A Systematic Literature Review. Social Sciences, 8(98). https://doi.org/10.3390/socsci8030098

Privitera, C., & Campbell, M. A. (2009). Cyberbullying : the new face of workplace bullying? *CyberPsychology and Behavior , 12* (4), 395-400.

Radhakrishnan, P., Sriram, N., & Manivannan, N. (2020). Usage of Social Networking Tools by Rural Youth in Transfer of Technology - An Overview. Asian Journal of Agricultural Extension, Economics & Sociology, 38(2), 44–57. https://doi.org/10.9734/ajaees/2020/v38i230309

Rasheed, M. I., Malik, M. J., Pitafi, A. H., Iqbal, J., Anser, M. K., & Abbas, M. (2020). Usage of social media, student engagement, and creativity: The role of knowledge sharing behavior and cyberbullying. *Computers & Education*, *159*, 104002. https://doi.org/10.1016/j.compedu.2020.104002

Reason, L., Boyd, M., & Reason, C. (2016). Cyberbullying in Rural Communities : Origin and Processing through the Lens of Older Adolescents Cyberbullying in Rural Communities : Origin and Processing through the. The Qualitative Report, 21(12), 2331–2348.

Redmond, P., Lock, J. V., & Smart, V. (2020). Developing a cyberbullying conceptual framework for educators. Technology in Society, 60(November 2017), 101223. https://doi.org/10.1016/j.techsoc.2019.101223

Ren, L. (2017). Self-Control, Risky Lifestyles, And Victimization. A Study With a Sample of Chinese School Youth. Criminal Justice and Behavior, 44(5), 695–716. https://doi.org/10.1177/0093854816674758

Reyneke, M. J. M., & Jacobs, L. (2018). Can legal remedy be used to address bullying and cyberbullying in South African schools ? 66–80. https://doi.org/10.2478/poljes-2018-0006

Rezapour, M., Khanjani, N., & Mirzai, M. (2019). Children and Youth Services Review Exploring associations between school environment and bullying in Iran : Multilevel contextual e ff ects modeling. Children and Youth Services Review, 99(October 2018), 54–63. https://doi.org/10.1016/j.childyouth.2019.01.036

Rheeder, P., Morris-Paxton, A. A., Ewing, R.-M. G., & Woods, D. (2017). The noncommunicable disease outcomes of primary healthcare screening in two rural subdistricts of the Eastern Cape Province , South Africa. African Journal of Primary Health Care & Family Medicine, 9(1).

Romero, H. R., Hall, J., Cluver, L., & Meinck, F. (2018). Can supportive parenting protect against school delay amongst violence-exposed adolescents in South Africa? Child Abuse & Neglect, 78, 31–45.

Romero, R. H., Hall, J., & Cluver, L. (2019). Exposure to violence , teacher support , and school delay amongst adolescents in South Africa. British Journal of Educational Psychology, 89, 1–21. https://doi.org/10.1111/bjep.12212

Ronis, S., & Slaunwhite, A. (2019). Gender and Geographic Predictors of Cyberbullying

Victimization , Perpetration , and Coping Modalities Among Youth. 3–21. https://doi.org/10.1177/0829573517734029

Rosalba Manna, Samuele Calzone, Paola Adinolfi, R. P. (2019). School bullying as a quality issue in educational institutions. The TQM Journal, 31(2), 274–291. https://doi.org/10.1108/TQM-10-2018-0130

Rudisill, T. M., Ph, D., Smith, G., D, M., Chu, H., Ph, D., Zhu, M., & Ph, D. (2018). Cellphone Legislation and Self-Reported Behaviors Among Subgroups of Adolescent U . S . Drivers. Journal of Adolescent Health, 62(5), 618–625. https://doi.org/10.1016/j.jadohealth.2017.12.001

Sale, J. E., Lohfeld, L. H., & Brazil, K. (2002). Quality & Quantity. *Kluwer Academic Publishers* , 43–53.

Salmon, S., Turner, S., Taillieu, T., Fortier, J., & Tracie, O. A. (2018). Bullying victimization experiences among middle and high school adolescents : Traditional bullying , discriminatory harassment , and cybervictimization. Journal of Adolescence, 63, 29–40. https://doi.org/10.1016/j.adolescence.2017.12.005

Saunders, M., Lewis, P., & Thornhill, A. (2009). Research methods for business students fifth Edition.

Savage, M. W., & Tokunaga, R. S. (2017). Computers in Human Behavior Moving toward a theory : Testing an integrated model of cyberbullying perpetration , aggression , social skills , and Internet self-ef fi cacy. Computers in Human Behavior, 71, 353–361. https://doi.org/10.1016/j.chb.2017.02.016

Scheerder, A. J., Deursen, A. J. A. M. Van, Dijk, J. A. G. M. Van, Scheerder, A. J., Deursen, A. J. A. M. Van, & Jan, A. G. M. (2019). Negative outcomes of Internet use : A qualitative analysis in the homes of families with different educational backgrounds. The Information Society, 35(5), 286–298. https://doi.org/10.1080/01972243.2019.1649774

Scholtz, B., Turha, T. van, & Johnston, K. (2017). Internet visibility and cyberbullying : A survey of Cape Town high school students. The African Journal of Information and Communication (AJIC), 15. https://doi.org/10.23962/10539/20333

Schwartz, J. A., Connolly, E. J., & Brauer, J. R. (2017). Head Injuries and Changes in Delinquency from Adolescence to Emerging Adulthood : The Importance of Self-control as a Mediating Influence. 54(6), 869–901. https://doi.org/10.1177/0022427817710287

Scroll, P., & For, D. (2019). Multiple Victimization (Bullying and Cyberbullying) in Primary Education in Spain from a Gender Perspective. Multidisciplinary Journal of Educational Research, 9(2), 169–192. https://doi.org/10.4471/remie.2019.4272

Seepamore, B. K. (2016). DISTANCE PARENTING – IMPLICATIONS FOR SOCIAL WORK PRACTICE. Social Work, 52(4).

Semerci, A. (2016). Examining middle school students ' views on text bullying. Education and Information Technologies, July 2015, 1807–1819. https://doi.org/10.1007/s10639-015-9420-6

Şentürk, Ş., & Bayat, S. (2016a). Internet Usage Habits and Cyberbullying Related Opinions of Secondary School Students. 4(5), 1103–1110.

https://doi.org/10.13189/ujer.2016.040520

Şentürk, Ş., & Bayat, S. (2016b). Internet Usage Habits and Cyberbullying Related Opinions of Secondary School Students. Universal Journal of Educational Research, 4(5), 1103–1110. https://doi.org/10.13189/ujer.2016.040520

Sewell, S. J., Desai, S. A., Mutsaa, E., & Lottering, R. T. (2019). A comparative study of community perceptions regarding the role of roads as a poverty alleviation strategy in rural areas. Journal of Rural Studies, 71(March), 73–84. https://doi.org/10.1016/j.jrurstud.2019.09.001

Shafi, R. M. A., Nakonezny, P. A., Miller, K. A., Desai, J., Almorsy, A. G., Ligezka, A. N., Morath, B. A., Romanowicz, M., & Croarkin, P. E. (2021). An exploratory study of clinical and physiological correlates of problematic social media use in adolescents. Psychiatry Research, 302(December 2020), 114020. https://doi.org/10.1016/j.psychres.2021.114020

Shanks, G., & Parr, A. (2003). Positivist, Single Case Study Research in Information Systems: a Critical Analysis.

Shava, H., & Chinyamurindi, W. T. (2018). Determinants of social media usage among a sample of rural South African youth. SA Journal of Information Management, 20(1), 1–8. https://doi.org/10.4102/sajim.v20i1.827

Singh, V. K., & Jose, C. (2017). Toward Multimodal Cyberbullying Detection.

Sisulu, W., Cape, E., & Africa, S. (2017). Quality education for sustainable development : Are we on the right track ? Evidence from the TIMSS 2015 study in South Africa. Human Sciences Research Council, 35(2), 1–16.

Slonje, R., Smith, P. K., & Frisén, A. (2012). The nature of cyberbullying, and strategies for prevention. *Computers in Human Behavior* .

Smith, P. K., López-castro, L., Robinson, S., & Görzig, A. (2018). Aggression and Violent Behavior Consistency of gender di ff erences in bullying in cross-cultural surveys. Aggression and Violent Behavior, April, 0–1. https://doi.org/10.1016/j.avb.2018.04.006

Smith, P. K., López-Castro, L., Robinson, S., & Görzig, A. (2019). Consistency of gender differences in bullying in cross-cultural surveys. Aggression and Violent Behavior, 45(April 2018), 33–40. https://doi.org/10.1016/j.avb.2018.04.006

Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry* , *49* (4), 376–385.

Smokowski, P. R., Cotter, K. L., Robertson, C., & Guo, S. (2013). Demographic, Psychological, and School Environment Correlates of Bullying Victimization and School Hassles in Rural Schools. *Journal of Criminology* .

Sommer, J., Hinsberger, M., Elbert, T., Holtzhausen, L., Kaminer, D., Seedat, S., Madikane, S., & Weierstall, R. (2017). Addictive Behaviors The interplay between trauma , substance abuse and appetitive aggression and its relation to criminal activity among high-risk males in South Africa. Addictive Behaviors, 64, 29–34.

Souza, N. D., Forsyth, D., Tappin, D., & Catley, B. (2017). Engaging industry specialists on the issue of workplace cyberbullying - A New Zealand study. Journal Health Saf Environ, 33(2), 105–124.

Strömbäck, C., Lind, T., Skagerlund, K., Västfjäll, D., & Tinghög, G. (2017). Does self-control predict financial behavior and financial well-being? Journal of Behavioral and Experimental Finance, 14, 30–38. https://doi.org/10.1016/j.jbef.2017.04.002

Tanrikulu, I., & Erdur-baker, Ö. (2019). Motives Behind Cyberbullying Perpetration : A Test of Uses and Gratifications Theory. Journal of Interpersonal Violence. https://doi.org/10.1177/0886260518819882

Teddlie, C., & Yu, F. (2007). Mixed Methods Sampling: A Typology With Examples. *Journal of Mixed Methods Research , 1* (1), 77-100.

Thi, H., Le, H., Dunne, M. P., Campbell, M. A., & Gatton, M. L. (2017). Temporal patterns and predictors of bullying roles among adolescents in Vietnam : a school-based cohort study. Psychology, Health & Medicine, 8506, 1–15. https://doi.org/10.1080/13548506.2016.1271953

Thun, L. J., Teh, P. L., & Cheng, C. Bin. (2021). CyberAid: Are your children safe from cyberbullying? Journal of King Saud University - Computer and Information Sciences, xxxx. https://doi.org/10.1016/j.jksuci.2021.03.001

Toit, R. du, Hadebe, P. N., & Mphatheni, M. (2018). PUBLIC PERCEPTIONS OF CYBERSECURITY: A SOUTH AFRICAN CONTEXT. Southern African Journal of Criminology, 31(3), 111–131.

Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of research. *Computers in Human Behavior , 20*, 277–287.

Twardowska-staszek, E., Zych, I., Ortega-ruiz, R., & Ignatianum, A. (2018). Children and Youth Services Review Bullying and cyberbullying in Polish elementary and middle schools : Validation of questionnaires and nature of the phenomena. Children and Youth Services Review, 95(July), 217–225. https://doi.org/10.1016/j.childyouth.2018.10.045

Usta, E. (2017). University Students ' Views about Their Cyber bullying Behaviors and Self-Exposition. Journal of Education and Practice, 8(22), 67–71.

Uys, M., Bassett, S., Draper, C. E., Micklesfield, L., Monyeki, A., Villiers, A. De, Lambert, E. V, & Group, W. (2016). Results From South Africa ' s 2016 Report Card on Physical Activity for Children and Youth. Journal of Physical Activity and Health, 13(2), 265–273.

Uziel, L. (2018). The Intricacies of the Pursuit of Higher. https://doi.org/10.1177/0963721417744322

Vaillancourt, T., Faris, R., & Mishna, F. (2017). Cyberbullying in Children and Youth : Implications for Health and Clinical Practice. The Canadian Journal of Psychiatry, 62(6), 368–373. https://doi.org/10.1177/0706743716684791

Vally, Z., & El, F. (2019). Addictive Behaviors Reports An examination of problematic mobile phone use in the United Arab Emirates : Prevalence , correlates , and predictors in a college-aged sample of young adults. Addictive Behaviors Reports, 9(April),

100185. https://doi.org/10.1016/j.abrep.2019.100185

Van Manen, M. (1977). Linking Ways of Knowing with Ways of Being Practical. *Ontario Institute for Studies in Education , 6* (3), 205-228.

Van Ouytsel, J. (2021). The prevalence and motivations for password sharing practices and intrusive behaviors among early adolescents' best friendships – A mixed-methods study. Telematics and Informatics, 63(June), 101668. https://doi.org/10.1016/j.tele.2021.101668

Vaterlaus, J. M., Aylward, A., Tarabochia, D., & Martin, J. D. (2021). "A smartphone made my life easier": An exploratory study on age of adolescent smartphone acquisition and well-being. Computers in Human Behavior, 114(September 2020), 106563. https://doi.org/10.1016/j.chb.2020.106563

Vazsonyi, A. T., & Jiskrova, G. K. (2018). On the development of self-control and deviance from preschool to middle. Journal of Criminal Justice, 56(May 2017), 60–69. https://doi.org/10.1016/j.jcrimjus.2017.08.005

Vazsonyi, A. T., Jiskrova, G. K., Özdemir, Y., & Bell, M. M. (2017). Bullying and Cyberbullying in Turkish Adolescents : Direct and Indirect Effects of Parenting Processes. https://doi.org/10.1177/0022022116687853

Vazsonyi, A. T., Miku, J., & Kelley, E. L. (2017). It ' s time : A meta-analysis on the self-control-deviance link. Journal of Criminal Justice, 48, 48–63. https://doi.org/10.1016/j.jcrimjus.2016.10.001

Veenstra, S. (2009). Cyberbullying: an explanatory analysis.

Volk, A. A., Camilleri, J. A., Dane, A. V., & Marini, Z. A. (2012). Is Adolescent Bullying an Evolutionary Adaptation? *Aggressive Behavior* , 1-17.

Wachs, S., Bilz, L., Fischer, S. M., & Wright, M. F. (2018). Do Emotional Components of Alexithymia Mediate the Interplay between Cyberbullying Victimization and Perpetration ? International Journal of Environmental Research and Public Health BriefReport, 14. https://doi.org/10.3390/ijerph14121530

Walliman, N. (2011). Research Methods:The Basics.

Wang, L., & Ngai, S. S. yum. (2021). Understanding the effects of personal factors and situational factors for adolescent cyberbullying perpetration: The roles of internal states and parental mediation. Journal of Adolescence, 89(January), 28–40. https://doi.org/10.1016/j.adolescence.2021.03.006

Wang, P., & Wang, X. (2019). Gender Differences Between Student – Student Relationship and Cyberbullying Perpetration : An Evolutionary Perspective. Journal of Interpersonal Violence, 59, 1– 21. https://doi.org/10.1177/0886260519865970

Wright, M. F. (2017). The Role of Technologies , Behaviors , Gender , and Gender Stereotype Traits in Adolescents ' Cyber Aggression. Journal of Interpersonal Violence, 1–20. https://doi.org/10.1177/0886260517696858

Wright, M. F., Harper, B. D., & Wachs, S. (2019). Differences in Adolescents ' Response Decision and Evaluation for Face-to-Face and Cyber Victimization. Journal of Early

Adolescence, 39(8), 1110– 1128. https://doi.org/10.1177/0272431618806052

Xie, X., Tao, Y., Liu, A., & Lei, L. (2020). Peer relationship mediates the effect of mobile phone functions on adolescent adaptation. Children and Youth Services Review, 108(November 2019), 104571. https://doi.org/10.1016/j.childyouth.2019.104571

Yang, J., Wang, N., Gao, L., & Wang, X. (2021). Deviant peer affiliation and adolescents' cyberbullying perpetration: Online disinhibition and perceived social support as moderators. Children and Youth Services Review, 127(92), 106066. https://doi.org/10.1016/j.childyouth.2021.106066

Ybarra, M. L., & Mitchell, K. J. (2004). Youth engaging in online harassment: associations with caregiver–child relationships, Internet use, and personal characteristics. *Journal of Adolescence , 27*, 319–336.

Yin, R. K. (2009). Case Study Research. Design and Methods. *Sage Publications, Thousand Oaks , 4*, 240.

Yuchang, J., Junyi, L., Junxiu, A., Jing, W., & Mingcheng, H. (2019). The Differential Victimization Associated With Depression and Anxiety in Cross-Cultural Perspective : A Meta-Analysis. TRAUMA, VIOLENCE and ABUSE, 20(4), 560–573. https://doi.org/10.1177/1524838017726426

Zhang, A. T., Dick, G., Pek, L., & Land, W. (2010). Key Influences Of Cyberbullying For University Students. *Pacis 2010 Proceedings* .

Zsa, Z., Asanan, T., Hussain, I. A., & Laidey, N. M. (2017). A Study on Cyberbullying : Its Forms , Awareness and Moral Reasoning Among Youth. International Journal of Information and Communication Sciences, 2(5), 54–58. https://doi.org/10.11648/j.ijics.20170205.11

Zsila, Á., Orosz, G., & Király, O. (2018). Psychoactive Substance Use and Problematic Internet Use as Predictors of Bullying and Cyberbullying Victimization. International Journal Ment Health Addiction, 16, 466–479. https://doi.org/10.1007/s11469-017-9809-0

APPENDICES

Appendix A - Questionnaire

Mobile Bullying Survey

Mobile bullying can be defined as a form of electronic online bullying through email, chat rooms, instant messaging and small text messages using mobile phones (Kowalski *et al.* 2007).

This questionnaire is confidential and so no one in your school will know what you have answered. It is anonymous, so please don't put your name on it anywhere.

This questionnaire is completely voluntary and you can decide to exit at any time. Please mark with an X in the relevant box provided.

A. General Information - Demographics					
1. **Gender**			Female		Male
2. **Grade**	8	9	10	11	12
3. **Age**	14 or younger	15	16	17	18 or older
4. **Where do you live?**					
B. Mobile Phone Internet Accessibility and Usage					
5. **How much time do you think you spend on the internet in a day?**	0 – 2hrs	3 – 5hrs	Not sure	6 - 8hrs	8 or more

6. **Please indicate how often you use the following mobile facilities?**

	Never	**Rarely**	**Sometimes**	**Often**	**Always**
SMS	1	2	3	4	5
MMS	1	2	3	4	5
Email	1	2	3	4	5
Chat rooms	1	2	3	4	5
Social Networks (Facebook, Twitter)	1	2	3	4	5

C. Feelings about my Mobile Phone	**Strongly Disagree**	**Disagree**	**Some times**	**Agree**	**Strongly Agree**
7. I often think about my mobile phone when I am not using it	1	2	3	4	5
8. I often use my mobile phone for no particular reason	1	2	3	4	5

9. Arguments have arisen with others because of my mobile phone use	1	2	3	4	5
10. I interrupt whatever else I do when I am contacted on my mobile phone	1	2	3	4	5
11. I feel connected to others when I use my mobile phone	1	2	3	4	5
12. I lose track of times I use my mobile phone	1	2	3	4	5
13. The thought of being without my mobile phone makes me feel distressed	1	2	3	4	5
14. I have been unable to reduce the number of times I my mobile phone	1	2	3	4	5
15. I am comfortable using mobile phone technology	1	2	3	4	5
16. I feel confident using mobile phone technology	1	2	3	4	5
D. Mobile bullying	**Never**	**Rarely**	**Sometimes**	**Often**	**Always**
17. Have used my mobile to get others to dislike a person	1	2	3	4	5
18. Have used my mobile to start or spread rumour	1	2	3	4	5
19. I belong to a mobile phone chat-group that excludes others from joining	1	2	3	4	5
20. I am part of an online social networking group going around teasing others using my mobile phone	1	2	3	4	5
21. I like threatening others by using mobile applications (SMS, WhatsApp, BBM)	1	2	3	4	5
E. Traditional Bullying	**Never**	**Rarely**	**Sometimes**	**Often**	**Always**

22. I like to get into a fight with someone I can easily beat	1	2	3	4	5
23. I get picked on by others	1	2	3	4	5
24. How long have you bullied others?	Never	One Week	Six Months	One Year	More than One year
F. Mobile Phone Victimisation	**Never**	**Rarely**	**Sometimes**	**Often**	**Always**
25. I receive insulting messages on my mobile phone	1	2	3	4	5
26. I have received threatening calls from someone	1	2	3	4	5
27. Have received a threatening message on my mobile	1	2	3	4	5
28. How long have you been mobile victimised	Never	One week	Six Months	One year	More than one year
29. If any of the threats identified above happened to you, which mobile facility was used? (Check all that apply)	SMS/MMS	Email	Instant Messaging (BBM, WhatsApp)	Social Network (Facebook, Twitter)	Voice Calls
30. What is the likelihood that you would get back at them using your mobile phone?	Definitely would not do	Would not consider	Unsure	Would consider	Definitely would do

31. Who mobile bullied you?	Fellow peer(s) from your school	Fellow peer(s) not from your school	I don't know who it was	Not Applicable	
32. Who do you talk to when mobile bullied?	None	Friends	Parent	My teacher	Not Applicable
33. The person(s) who mobile bullied you was: (Check only one that apply)	Female	Male	Both Male & Female	Unknown	Not Applicable
34. Where were you mobile bullied?	On the school premises	Outside of school premises	Both in and out of school	Unsure	Not Applicable

35. Have you seen or heard of anyone else being bullied in the last 3 months?				
I haven't	It has only	I'm not sure	About once a week	Two or three times a month

seen or heard of anyone else	happened once or twice			
36. Your school has an anti-mobile bullying policy	Yes	No	Not sure	
Complete				
You have now completed all the questions. All of the sections are confidential, so please do not discuss the answers you have written with your friends. If you have been bullied or mobile bullied and would like to discuss it with someone then please contact a teacher or parent/caregiver. If you are not comfortable with this then call Childline (08000 55 555), they are experience at giving advice and support. Childline is free 24-hour support. **THANK YOU FOR TAKING THE TIME TO COMPLETE THIS QUESTIONNAIRE.**				

Appendix B - School Consent Form

University of Cape Town
Department of Information Systems
Leslie Commerce Building
Upper Campus
Private Bag X3 - Rondebosch - 7701
Tel: +27 (0) 21 650 2261 Fax: +27 (0) 21650 2280
Internet: http://www.commerce.uct.ac.za/informationsystems

Dear Principal

RE: Survey on Mobile Bullying in South Africa: Exploring its nature, Influential factors and Prevalence

Mobile bullying is one form of electronic bullying that is relatively new. It involves the use of mobile technology applications such as email, chat rooms, instant messaging and small text messages. This form of bullying often goes unnoticed. Victims, institutions and parents are unaware of how to deal with it and there is limited knowledge of its legal and social implications.

I am currently conducting a study on mobile bullying. The main aim is to understand the nature of this aggression in schools and also identify the factors that influence this aggression and its implications.

I am a masters student at the University of Cape Town (Department of Information Systems) supervised by Professor Michael Kyobe. We request your consent to conduct this research in your school. This will entail two parts: (1) a presentation to the learners on what mobile bullying is about (2) survey. These will take approximately 20 minutes. Participation in this study will be voluntary, all responses will be anonymous and confidentiality of the participants will be insured. The outcomes of this study will be made known to the school and we hope that the students will also benefit through creation of awareness of the risks involved in mobile bullying.

Your assistance by allowing us to conduct this study in your school will be much appreciated. If you are willing to participate in this study, kindly complete the attached consent form and if you require any further information please do not hesitate to call me or Professor Michael Kyobe.

Sive Mtshazi
Masters Research Student
University of Cape Town
Cell: 0787723641
Email:MTSSIV006@uct.ac.za

Professor Michael Kyobe
Supervisor
University of Cape Town
Cell: 083 949 3011
Email:Michael.Kyobe@uct.ac.za

I hereby consent Sive Mtshazi to conduct a survey on mobile bullying in my school. I also give Sive Mtshazi permission for my results to be used in the write up of this study.

Name: _____

School Name: _____

Signature: _____

Date: _____

Appendix C - Ethics Form

UNIVERSITY OF CAPE TOWN
FACULTY OF COMMERCE
Igniting Knowledge and Opportunity

Commerce Faculty Ethics in Research Committee

Updated Ethics Form March 2013

Any individual in the Faculty of Commerce at the University of Cape Town undertaking any research that involves the use of human subjects, or research that may hold ethical consequences for the University of Cape Town, is required to complete this form and obtain approval before conducting research. The completed form should be submitted as an electronic document to departmental Ethics Committee representatives for submission to the Commerce Faculty Ethics in Research Committee. Please also submit electronic copies of your research proposal, informed consent form or other information used to obtain consent, and any questionnaires other material shown to subjects.

1. PROJECT DETAILS			
Project title:	Investigating the nature and prevalence of mobile bullying in rural high schools in the Eastern Cape province of South Africa		
Principal Researcher/s:	**Sive Mtashazi**	**Email address(es):**	**MTSSIV006@uct.ac.za**
Research Supervisor:	**Professor Michael Kyobe**	**Email address(es):**	**Michael.Kyobe@uct.ac.za**
Co-researcher(s):	N/A	**Email address(es):**	**N/A**
Brief description of the project:			
This research aims to understand mobile phone aggression (mobile bullying) among rural high school students in the Eastern Cape Province.			
Data collection: (please select) ☒Interviews ☒Questionnaire ☐Experiment ☐Secondary data ☐Observation ☐ Other (please specify):			

Procedure: (please describe)

○ 2. PARTICIPANTS

Characteristics of participants:

Gender:	Male and Female
Race / Ethnicity:	All
Age range:	13-19
Location:	Eastern Cape Province, Butterworth
Other:	

Race / Ethnicity:

Have you included a "**Prefer not to Answer**" response category in your questionnaire? (please select)

☐ Yes ☐No ☒ Not applicable

If you answered 'No' why not?

Affiliations of participants: (please select)

☐Company employees ☐UCT staff ☒General public ☐UCT Students

☐ Other (please specify):

If your sample includes children (aged 18 and below), mentally incompetent persons, or legally restricted groups please explain below why it is necessary to use these particular groups. If subjects are minors or mentally incompetent, please describe how and by whom permission will be granted? If you are including children under the age of 18 and are not getting parental consent, please explain why you believe that their parents would consent if it was possible to contact them.

Mobile bullying is an aggression common among adolescents. It is a global issue which practitioners seek to solve. In order to solve this problem, knowledge about it is required and this knowledge can be obtained from the people who engage or associated with the behaviour- in this case the high school learners. Although some may not be involved in mobile bullying, this study seeks to educate high school learners and create awareness about mobile bullying.

Since the nature of this research is considered educational by some educators the researcher will seek permission from school principals to work with the students and only upon the advice of the principals will the researcher seek approval from the parents.

○ 3. ORGANISATIONAL PERMISSION

If your research is being conducted within a specific organisation, please provide organisational permission or explain how permission will be obtained.

Are you making use of UCT students as respondents for your research? (please select) ☐ Yes ☒No

If yes, have you contacted Executive Director: Student Affairs for permission? (please select) ☐ Yes ☐No

Was approval granted? (please select) ☐ Yes ☐No ☐Awaiting a response

Are you making use of UCT staff as respondents for your research? (please select) ☐ Yes ☒No

If yes, have you contacted Executive Director: Human Resources for permission? (please select) ☐ Yes ☐No

Was approval granted? (please select) ☐ Yes ☐No ☐Awaiting a response

Contact Emails: Executive Director: Human Resources (Miriam.Hoosain@uct.ac.za)
Executive Director: Student Affairs (Moonira.Khan@uct.ac.za)

○ 4. INFORMED CONSENT

What type of consent will be obtained from study participants?

☒ written consent

☐ anonymous survey

☐ oral consent (please justify)

☐ other (please specify)

- ○ Oral Consent
- ◉ Written Consent
- ○ Anonymous survey questionnaire (covering letter required, no consent form needed)
- ○ Other (please specify)

How and where will consent/permission be recorded?

○ 5. CONFIDENTIALITY OF DATA

What precautions will be taken to safeguard identifiable records of individuals? Please describe specific procedures to be used to provide confidentiality of data by you and others, in both the short and long run. This question also applies if you are using secondary sources of data that is not anonymous.

The researcher will not requested their names or contact details in the course of the research and a final research report will be sent out to any participant who requests it. Respondents will be told and ensured of their anonymity before they participate in the study.

Respondents will be invited to take part in the study and ensured that they are not obliged to do so, allowing individuals who for instance are in traumatic situations or having communication disorders the freewill not to take part in the study. Thus individuals who participate in this study will be from their own consent, furthermore, participants will be informed they are free to withdraw at any stage of the study.

○ 6. RISK TO PARTICIPANTS

Does the proposed research pose any physical, psychological, social, legal, economic, or other risks to study participants you can foresee, both immediate and long range? **(please select)**

☐ Yes ☒No

If yes, answer the following questions:

1. Describe in detail the nature and extent of the risk and provide the rationale for the necessity of such risks
2. Outline any alternative approaches that were or will be considered and why alternatives may not be feasible in the study
3. Outline whether and why you feel that the value of information to be gained outweighs the risks

1.
2.
3.

What authorship agreement have you reached with your co-researchers or supervisor? ☐ This research is not intended for publication ☒ Standard authorship agreement (principal researcher first author, co-researcher(s) and supervisor(s) co-authors) ☐ Customised agreement (please specify below):
I certify that we have read the the UCT Authorship Policy, and Commerce Faculty Authorship Guidelines (http://www.commerce.uct.ac.za/Commerce/Information/research.asp) ☒ **I certify that that the material contained herein is truthful and that all co-researchers and supervisors are ☒aware of the contents thereof.** **I understand that it is my responsibility to conduct research in accordance with the ethical requirements of ☒UCT.** **_____ _____** **Applicant's signature:**
Date:

CHECKLIST	SELECT
A full copy of a research proposal or a literature review with methodology is attached	☒
Research proposal/ interview schedules / cover letters / questionnaires / forms and other materials used in the study are attached/ consent form	☒
Organisational consent letter / UCT student or staff approval letter	☒
On your cover letter to your questionnaire have you included the following?	**NA** ☐
1. The following UCT Logo 	☒
2. A sentence explaining the aim of the research	☒
3. Sentences of a similar nature to below must be included in the cover letter or consent form:	
This research has been approved by the Commerce Faculty Ethics in Research Committee.	☐
Your participation in this research is voluntary. You can choose to withdraw from the research at any time.	☒
The questionnaire will take approximately X minutes to complete	☒

You will not be requested to supply any identifiable information, ensuring anonymity of your responses. **Due to the nature of the study you will need to provide the researchers with some form of identifiable information however, all responses will be confidential and used for the purposes of this research only.** **Should you have any questions regarding the research please feel free to contact the researcher (insert contact details).**	☒ **OR** ☐ ☐
4. Have you scanned in your signature for the last section of the form?	☒

○ **FOR ETHICS COMMITTEE REPRESENTATIVE ONLY**	
Recommendation(s):	
Signature: **Date:**	
○ **FOR ETHICS COMMITTEE CHAIRPERSON ONLY**	
Recommendation:	
Signature: **Date:**	