

**EXPLORING PARENTAL PERCEPTIONS OF ADOLESCENT MOBILE DEVICE
USE.**

by

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ABSTRACT

Mobile devices and the internet provide access to a vast amount of information, educational content, entertainment and their attendant risks. The easy accessibility and variety of devices available for adolescents to use increases the concern for the possible negative effects and harm for adolescents to exposure by inappropriate and harmful media. Parents face new challenges brought about by the ever-changing technology available. Adolescents are competent and confident with using modern technology, such as smartphones and tablets. Often, children will have more knowledge and understanding of modern devices than their parents. Additionally, modern mobile devices are portable, making it difficult for the monitoring of their use. For these reasons, it is imperative to explore parents' perceptions relating to their adolescents use of mobile devices and how they are coping with the challenges associated with this use. Protective methods that can be used by parents to limit their adolescent's mobile device use is important. Parents need to be educated about the options that are available to them in this regard.

The overarching aim of the study was to collect information about parents' perceptions of the effects that mobile device use has on their adolescents, and to show how they regulate and monitor this use in order to promote healthy habits. This study sought greater understanding of South African parental perspectives of mobile device use by adolescents and concomitantly, how parents monitor this use.

An exploratory study using qualitative methods was adopted for the accumulation and the analysis of the data where a social constructionist approach was adopted. Non-probability, purposive sampling was used. Ten participants took part in this study. From the lens of Bronfenbrenner's (1994) Bio-Ecological Systems theory, with the aid of Johnson and Puplampu's (2008) Techno-Subsystem, the lived experiences and perceptions of the participants were explored. This study focused on the nests in which families live and the various factors that influence parents' views on the decision to allow their adolescent's to use mobile devices. It focused too on the experiences relating to this decision, how participants manage and view potential risks, and the problems encountered and expressed by participants. This included feelings of having inadequate knowledge of how to protect adolescents from online dangers.

Data was obtained by using a semi-structured interview. Thematic analysis of this data was conducted as this facilitated insight into how the participants construct meaning from their social world and family life. Three main themes were identified, namely: (1) Parents' experiences and perceptions regarding adolescent mobile device use; (2) Parents feeling a lack of complete safety with their adolescent using mobile devices, and (3) Safety strategies employed by parents to protect their adolescents from potential harm caused by mobile device use. While participants could see the value and importance of mobile devices, particularly the value of added security and the educational advantages these devices offer, participants were torn due to the many risks posed by this use. As a result of the many dangers associated with adolescent mobile device use, such as easily accessible inappropriate content, negative behavioural changes in adolescents and pressure by other individuals online, participants chose to employ safeguards in an attempt to protect their adolescents. These reported safeguards include checking mobile devices frequently, setting rules and limits, and encouraging an open relationships and communication about safety

and risks. Participants reported having feelings of insecurity regarding the protection of their adolescents and believe that schools need to play a role in educating parents about safety measures, online risks and creating more awareness around this important concern.

The findings from this research suggest that the issue of adolescent mobile device use is a complex matter that requires further study. The findings indicated that many parents have insufficient knowledge to adequately protect their adolescents from the potential harms created by the use of mobile devices and that there is a need for parents to improve their digital literacy skills. Participants indicated the need for schools and thus the Department of Basic Education, to become involved in helping to educate them and assist with protecting adolescents. An awareness and educational programme would greatly benefit parents and aid in protecting adolescents from the dangers associated with internet use.

Keywords: Adolescents, mobile device, parental monitoring, safeguards, parental involvement.

OPSOMMING

Mobiele toestelle en die internet bied toegang tot 'n groot hoeveelheid inligting, opvoedkundige inhoud, vermaak en die gepaardgaande risiko's. Die maklike toeganklikheid en verskeidenheid toestelle wat beskikbaar is vir adolessente om te gebruik, verhoog die kommer oor die moontlike negatiewe uitwerking en skade vir adolessente aan blootstelling deur onvanpaste en skadelike media. Ouers staar nuwe uitdagings in die gesig wat deur die steeds veranderende tegnologie beskikbaar gestel word. Adolessente is bekwaam en selfversekerd met die gebruik van moderne tegnologie, soos slimfone en tablette. Dikwels sal kinders meer kennis en begrip van moderne toestelle hê as hul ouers. Boonop is moderne mobiele toestelle draagbaar, wat dit moeilik maak vir die monitering van hul gebruik. Om hierdie redes is dit noodsaaklik om ouers se persepsies met betrekking tot hul adolessente se gebruik van mobiele toestelle te ondersoek en hoe hulle die uitdagings wat met hierdie gebruik geassosieer word, die hoof te bied. Beskermende metodes wat deur ouers gebruik kan word om hul adolessent se mobiele toestelgebruik te beperk, is belangrik. Ouers moet opgevoed word oor die opsies wat in hierdie verband vir hulle beskikbaar is.

Die oorkoepelende doel van die studie was om inligting in te samel oor ouers se persepsies van die uitwerking wat die gebruik van mobiele toestelle op hul adolessente het, en om te wys hoe hulle hierdie gebruik reguleer en moniteer ten einde gesonde gewoontes te bevorder. Hierdie studie het gesoek na groter begrip van Suid-Afrikaanse ouerperspektiewe van mobiele toestelgebruik deur adolessente en gepaardgaande hoe Hiermee ouers hierdie gebruik monitor.

'n Verkennende studie met behulp van kwalitatiewe metodes is gebruik vir die akkumulاسie en die ontleding van die data waar 'n sosiaal-konstruksionistiese benadering gevolg is. Nie-waarskynlikheid, doelgerigte steekproefneming is gebruik. Tien deelnemers het aan hierdie studie deelgeneem. Uit die lens van Bronfenbrenner (1994) se Bio-Ecological Systems teorie, met behulp van Johnson en Pupilampu (2008) se Techno-Subsisteem, is die alledaagse ervarings en persepsies van die deelnemers ondersoek. Hierdie studie het gefokus op die omgewing waarin gesinne woon en die verskeie faktore wat ouers se sienings beïnvloed oor die besluit om hul adolessente toe te laat om mobiele toestelle te gebruik. Dit het ook gefokus op die ervarings wat met hierdie besluit verband hou, hoe deelnemers potensiële risiko's bestuur en beskou, en die probleme wat deelnemers ondervind en uitgedruk het. Dit het gevoelens ingesluit dat hulle onvoldoende kennis het van hoe om adolessente teen aanlyn gevare te beskerm.

Data is verkry deur gebruik te maak van 'n semi-gestruktureerde onderhoud. Tematiese ontleding van hierdie data is uitgevoer aangesien dit insig vergemaklik het in hoe die deelnemers betekenis konstrueer uit hul sosiale wêreld en gesinslewe. Drie hooftemas is geïdentifiseer, naamlik: (1) Ouers se ervarings en persepsies rakende adolessente mobiele toestelgebruik; (2) Ouers voel 'n gebrek aan volledige veiligheid met hul adolessent wat mobiele toestelle gebruik, en (3) Veiligheidsstrategieë wat deur ouers aangewend word om hul adolessente te beskerm teen potensiële skade wat deur mobiele toestelgebruik veroorsaak word. Terwyl deelnemers die waarde en belangrikheid van mobiele toestelle kon sien, veral die waarde van bykomende sekuriteit en die opvoedkundige voordele wat hierdie toestelle bied, was deelnemers verskeur weens die baie risiko's wat hierdie gebruik inhou. As gevolg van die vele gevare verbonde aan adolessente mobiele toestelgebruik, soos

maklik toeganklike onvanpaste inhoud, negatiewe gedragsveranderinge by adolessente en druk deur ander individue aanlyn, het deelnemers gekies om voorsorgmaatreëls te gebruik in 'n poging om hul adolessente te beskerm. Hierdie gerapporteerde voorsorgmaatreëls sluit in die gereelde nagaan van mobiele toestelle, die stel van reëls en limiete, en die aanmoediging van oop verhoudings en kommunikasie oor veiligheid en risiko's. Deelnemers het gerapporteer dat hulle gevoelens van onsekerheid het oor die beskerming van hul adolessente en glo dat skole 'n rol moet speel in die opvoeding van ouers oor veiligheidsmaatreëls, aanlynrisiko's en die skep van meer bewustheid rondom hierdie belangrike saak.

Die bevindinge van hierdie navorsing dui daarop dat die kwessie van adolessente mobiele toestelgebruik 'n komplekse saak is wat verdere studie verg. Die bevindinge het aangedui dat baie ouers onvoldoende kennis het om hul adolessente voldoende te beskerm teen die potensiële skade wat deur die gebruik van mobiele toestelle veroorsaak word en dat daar 'n behoefte is vir ouers om hul digitale geletterdheidsvaardighede te verbeter. Deelnemers het aangedui dat skole en dus die Departement van Basiese Onderwys betrokke moet raak om hulle op te voed en te help met die beskerming van adolessente. 'n Bewusmakings- en opvoedkundige program sal ouers grootliks baat en help om adolessente te beskerm teen die gevare verbonde aan internetgebruik.

Sleutelwoorde: Adolessente, mobiele toestel, ouermonitering, voorsorgmaatreëls, ouerbetrokkenheid.

ISIFINYEZO

Imishini ephathwayo kanye ne-inthanethi kunikeza ukufinyelela olwazini oluningi, okuqokethwe kwezemfundo, ukuzijabulisa kanye nezingozi ezikhona. Ukufinyeleleka kalula kanye nezinhlobozinhlobo zamadivayisi atholakalayo ukuze intsha iwasebenzise kwandisa ukukhathazeka ngemiphumela engemihle engaba khona kanye nokulimala kwentsha ekuchayekeni ngemidiya engalungile neyingozi. Abazali babhekana nezinsalelo ezintsha ezilethwa ubuchwepheshe obushintsha njalo obutholakalayo. Intsha inekhono futhi iyazethemba ngokusebenzisa ubuchwepheshe besimanje, njengama-smartphone namakhompyutha amancane. Ngokuvamile, izingane ziyoba nolwazi nokuqonda okwengeziwe ngemishini yesimanje kunabazali bazo. Ukwengeza, amadivayisi eselula esimanje apha theka kalula, okwenza kube nzima ukuqapha ukusetshenziswa kwawo. Ngenxa yalezi zizathu, kubalulekile ukuhlola imibono yabazali ehlobene nokusebenzisa kwentsha yabo imishini ephathwayo nokuthi ibhekana kanjani nezinsalelo ezihlobene nalokhu kusetshenziswa. Izindlela zokuzivikela ezingasetshenziswa abazali nkuncibhisa ukusetshenziswa komakhalekhukhwini kwengane yabo zibalulekile. Abazali badinga ukufundiswa mayelana nezindlela ezitholakalayo kubo mayelana nalokhu.

Inhloso enkulu yocwaningo bekuwukuqoqa ulwazi olumayelana nemibono yabazali ngemiphumela ukusetshenziswa kwedivayisi yeselula okuba nayo entsheni yabo, kanye nokukhombisa ukuthi balawula kanjani futhi baqaphe lokhu kusetshenziswa ukuze kuthuthukiswe imikhuba enempilo. Lolucwaningo lufune ukuqonda okwengeziwe kwemibono yabazali baseNingizimu Afrika yokusetshenziswa kwedivayisi ephathwayo yintsha futhi ngasikhathi sinye, indlela abazali abakuqapha ngayo lokhu kusetshenziswa.

Ucwaningo lokuhlola olusebenzisa izindlela zekhwalthi lwamukelwa ukuze kuqoqwe kanye nokuhlaziywa kwedatha lapho kwamukelwa indlela ye-social constructionist. Kwasetshenziswa amasampula okungewona amathuba, okuhlosiwe. Ababambe iqhaza babeyishumi kulolu cwaningo. Kusukela ku-lens ye-Bronfenbrenner's (1994) ye-Bio-Ecological Systems theory, ngosizo lwe-Johnson and Ptoplampu's (2008) Techno-Subsystem, okuhlangenwe nakho okuphilayo kanye nemibono yabahlanganyeli kwahlolisiswa. Lolucwaningo lugxile ezidlekeni lapho imindeni ehlala kuzo kanye nezici ezihlukahlukene ezithonya imibono yabazali esinqumweni sokuvumela izingane zabo ezisakhula ukuba zisebenzise amadivayisi eselula. Iphinde yagxila kokuhlangenwe nakho okuhlobene nalesi sinqumo, indlela ababambiqhaza abaphatha futhi babuke ngayo ubungozi obungaba khona, kanye nezinkinga okuhlangatshezwane nazo futhi zivezwe ababambiqhaza. Lokhu kwakuhlanganisa imizwa yokungabi nolwazi olwanele lwendlela yokuzivikela intsha ezingozini ze-inthanethi.

Idatha itholwe kusetshenziswa inhlolekhono ene-semi-structured. Ukuhlaziywa kwetimu kwale datha kwenziwa njengoba lokhu kwenza kube lula ukuqonda ukuthi ababambiqhaza bayakha kanjani incazelo emhlabeni wabo wezinhlalo nempilo yomndeni. Izindikimba ezintathu eziyinhloko zikhonjwe, okuyilezi: (1) Okuhlangenwe nakho kwabazali kanye nemibono mayelana nokusetshenziswa kwemishini yeselula yentsha; (2) Abazali abazizwa bentula ukuphepha okuphelele lapho besebenzisa amadivayisi eselula, kanye (3) Namasu okuphepha asetshenziswa abazali ukuze bavikele izingane zabo ezisanda kweva eshumini nambili leminyaka ekulimaleni okungaba khona okubangelwa ukusetshenziswa kwamaselula. Nakuba ababambiqhaza ubumqoka ukubaluleka nokubaluleka kwamadivayisi

eselula, ikakhulukazi inani lokuvikeleka okungeziwe kanye nezinzuzo zezemfundo ezinikezwa yila madivayisi, ababambiqhaza badabukile ngenxa yezingozi eziningi ezilethwa yilokhu kusetshenziswa. Ngenxa yezingozi eziningi ezihlobene nokusetshenziswa kwedivayisi yeselula kwentsha, njengokuqukethwe okungafanelekile okufinyeleleka kalula kukho, izinguquko ezingezinhle zokuziphatha entsheni kanye nokucindezela kwabanye abantu ku-inthanethi, ababambiqhaza bakhethe ukusebenzisa izivikelo emzamweni wokuvikela intsha yabo. Lezi zivikelo ezibikiwe zihlanganisa ukuhlola amadivayisi eselula njalo, ukubeka imithetho nemikhawulo, nokukhuthaza ubudlelwano obuvulekile nokuxhumana mayelana nokuphepha nezingozi. Ababambiqhaza babike ukuthi banemizwa yokungazethembi mayelana nokuvikelwa kwentsha yabo futhi bakholelwa ukuthi izikole zidinga ukudlala indima ekufundiseni abazali mayelana nezinyathelo zokuphepha, izingozi eziku-inthanethi nokudala ukuqwashisa okwengeziwe ngalokhu kukhathazeka okubalulekile.

Okutholwe kulolu cwaningokusekela ukuthi udaba lokusetshenziswa kwemishini ephathwayo yentsha iyindaba eyinkimbinkimbi edinga ucwaningo olwengeziwe. Okutholakele kubonise ukuthi abazali abaningi abanalo ulwazi olwanele lokuvikela ngokwanele izingane zabo ekulimaleni okungaba khona okudalwa ukusetshenziswa kwemishini ephathwayo nokuthi kunesidingo sokuthi abazali bathuthukise amakhono abo okufunda ngedijithali. Abahlanganyeli baveze isidingo sokuthi izikole kanjalo noMnyango wezeMfundo eyisiSekelo, uzibandakanye ekusizeni ukuzifundisa nokusiza ngokuvikela intsha. Uhlelo lokuqwashisa nokufundisa lungabazuzisa kakhulu abazali futhi lusize ekuvikeleni intsha ezingozini ezihlobene nokusetshenziswa kwe-inthanethi.

Amagama angukhiye: Intsha, idivayisi yeselula, ukuqapha kwabazali, izivikelo, ukubandakanyeka kwabazali.

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND AND RATIONALE

Due to the rapid advancements in mobile media (such as tablets and smartphones) over the last decade, parents and children now have the opportunity to use mobile devices regardless of the place or time (Domoff, Borgen, & Radesky, 2018). The inclusion of technologies into the household, such as the television, the internet, or mobile devices for example, have always created uncertainty and discussions about both how-, and whether-, the addition of these technologies will impact the family, and in particular, the development of children (Calvert & Wilson, 2011).

Most children are now being raised in environments where exposure to an array of different media is the norm, regardless of their parental income, age, or education level (Danovitch, 2019). Modern mobile devices, such as tablets, iPhones and smartphones, have become a fundamental part of adolescents' lives (Kamenetz, 2019). Adolescents¹ view social media as a valuable and imperative part of life. A study conducted by Pew Research Centre (Anderson, 2016) revealed that 45% of the participants in the 13-to-17-year-old age group spent many hours online, and 97% of the participants made use of at least one social media platform, such as Snapchat, Facebook, Instagram, or YouTube. The use of social media grants adolescents the opportunity to create an online identity for themselves, to communicate with others, to build their social networks and to feel a sense of community with others online. Adolescents gain a sense of belonging from these networks, which can assist with their psycho-social wellbeing and their identity development (Smith, Leonis, & Anandavilli, 2021; Allen, Ryan, Gray, & McInerney, 2014).

Social media also provides adolescents with an outlet for self-expression, entertainment and for joining and forming online communities (Weinstein, 2017). The aspect of trust plays a vital role in an adolescent's choice of sharing information online with others (Nguyen, Le, & Vu, 2020). Adolescents often rely on their interpersonal relationships when making decisions about what information is safe to share about themselves (Chung, Lee, & Lee, 2019). Rainie and Duggan (2016) explain that individuals would only share their personal information when feeling confident that it would not hurt them to do so. Adolescents tend to achieve this by mutual sharing of information, which assists in building trust in one another. Adolescents form a trusting bond between one another by sharing information (Clarke, Meredith, & Rose, 2020). The risk here is that an adolescent may learn to trust an unknown individual online, and begin sharing information with them. An individual's feelings of trust towards online platforms plays an important role in predicting their online behaviours. One's confidence in a website greatly influences the user's attitudes towards sharing personal information (Nguyen et al, 2020).

The transition from childhood to adolescence is accompanied by considerable changes in a child's life (Berk, 2013). Adolescents start becoming more self-reliant and autonomous, and their focus shifts to friendships and social interactions, as they seek to individuate from their

¹ Adolescence: A transitional phase of growth, including both physical and psychological development, that occurs from puberty to adulthood (Csikszentmihalyi, 2022).

parents (Schacter & Margolin, 2019). They begin exploring their social environment by seeking to build relationships with their peers. The adolescent years are a period of identity development and learning to find one's place in a wider society outside of the family unit (Drummond, 1991). In this regard, modern technologies provide more opportunities for adolescents developing identity, social interactions and independence (Gray, 2014). The coronavirus pandemic (Covid-19) has rapidly increased the use of digital technology worldwide, due to the national lockdowns and the social distancing norms put into place (Dé, Pandey, & Pal, 2020). Individuals around the world have had to adjust to the new ways of living and working. The use of audio- and-visual communication applications and devices has become increasingly common, as most communication between people now takes place in this manner (Dé et al., 2020). The impact that adolescents feel from these lockdown measures stems from the closure of schools and being isolated from peers and friends (Volkin, 2020). Adolescents are at a stage in their lives where social interaction is important, and as a result, they have turned to relying on their mobile devices to allow them to be in contact with friends and maintain their social connections (Cauberghe, Van Wesenbeeck, De Jans, Hudders, & Ponnet, 2020). However, parents did not grow up in the same technologically advanced environments. Often, parents experience difficulties with using new social media platforms and are unable to stay informed with the continuously changing digital technology (Waqas et al., 2016). In turn, this can result in parents feeling unsure about their abilities and competence in using social media and how to best mediate their adolescent's use of social media and mitigate the risks that are associated with this use (Waqas, Afzal, Zaman, & Sabir, 2016).

A study into smartphone addiction (Wise, 2022) revealed that 80% of adolescents reported checking their mobile device at least once every hour, 95% of adolescent participants reported having access to a smartphone, and 45% of those adolescents expressed that they are almost always online. In our technology saturated era it is expected that parents will play a management role to ensure that adolescents are protected from the potential risks and threats online, such as exposure to solicitation, cyberbullying, or sexual content (Staksrud, Olafsson, & Livingstone, 2013). This role is expected, because despite the opportunities provided by modern technology for adolescents, there are also many risks involved that require parental mediation of their activities online (Cabello-Hutt, Cabello, & Claro, 2017). It is important for 21st Century adolescents to build digital resilience skills (Graafland, 2018). Adolescents do not automatically have digital skills. They can be ignorant of potential safety risks and are not immune from the potential harms involved in online media use (Graafland, 2018).

Over the last decade, there has been an increasing amount of awareness and concern regarding the potential negative ramifications that are affiliated with the use of smartphones, tablets and other multi-media platforms, particularly those that contain offensive, aggressive and violent content. Initially, it was the media which began creating awareness amongst parents of these risks (Valkenburg & Piotrowski, 2017). A survey conducted by BBC Learning (2014) found that most parents were not already aware of the potential risks that their children were faced with when using tablets and smartphones. Social media platforms have been integral in creating awareness about the dangers associated with adolescent mobile device use. Different social media applications assist in creating platforms for sharing photos, stories, narratives and facts in a consumable manner, engaging the audience by helping them form an understanding (Maryville University, 2022). With the increase in the

number of devices and frequency of use by adolescents, there has been a corresponding amount of awareness being created about the potential dangers of this use. There has been a barrage of research focusing on the aspect of awareness related to the dangers of mobile device and social media use (Chassiakos, Radesky, Christakis, Moreno, Cross, & Council on Communications and media, 2016; Brecht, 2017; Ben-Joseph, 2018; Fabian-Weber, 2019). This heightened worry and awareness has been caused by the increase in the occurrence of negative behaviours, such as cyberbullying², and suicide intent or ideation in adolescents (Valkenburg & Piotrowski, 2017).

The digital literacy skills of parents influence their parenting approach to their adolescent's mobile device use (Benedetto & Ingrassia, 2020; Terras & Ramsay, 2016). The aims of parental mediation serve to minimise the potential negative repercussions and maximise the advantages for their adolescents (Livingstone, Blum-Ross, & Zhang, 2018).

Effective parenting is influenced by the different beliefs, norms, and cultural values of parents (Roman, Davids, Schilder, & Moyo, 2015). A study conducted by Kronke (2020) revealed that adult digital literacy is 52% in South Africa. This relatively low literacy level could hinder effective mediation by parents. Digital literacy is an important skill that assists parents in adequately monitoring, regulating, and guiding their adolescent's use of mobile devices (Romero, 2014).

It is important that parents and guardians are provided with essential skills and resources, such as learning the basics of how to use modern technology and the methods that this technology provides for protecting adolescents online, so as to enable them to be in a better position to ensure that their adolescents are not being exposed to adverse content online (Vulcano, Angeletti, & Croll., 2017). A parent's responsibility to empower and safeguard their children has become increasingly more essential and demanding in our digital era. This role, however, can be influenced greatly by a parent's awareness level and their ability to use modern technology (Vulcano et al., 2017).

Research into parenting in our digital age from a South African perspective is limited (Van Jaarsveld, 2017; Livingstone & Byrne, 2018). Currently, there is little data showing the ways in which technology is being used by South African children, or how parents interact with their children about such topics. For this reason, it is important to explore parents' perceptions related to parenting in this era, to reveal where the problems may be occurring and to begin to formulate solutions that are fitting in our South African society. This study contributes by exploring parents' attitudes, knowledge, opinions and perceptions about their adolescents' mobile device use. Consequently, it assists in contributing to the existing body of literature on parental mediation, in particular, the fundamental knowledge and skills that will aid in advancing protective behaviours of parents, and therefore, minimise the potential risk of harm to adolescents when using their mobile devices. The use of qualitative methods allowed for an in-depth understanding of the factors that create the need for parental protective behaviours to be explored, from a parental point of view. Such information would

²Cyberbullying: refers to bullying with the use of digital technologies. It can occur on messaging platforms, social media applications, gaming platforms, and mobile devices. It involves the repetitive behaviour, aimed at sharing, scaring, or angering the individuals targeted (United Nations Children's Fund, 2022).

not have been obtained by using quantitative research. The interviews with the participants assisted in finding a possible way forward in developing efficient strategies parents can utilise in protecting their adolescents from the potential dangers associated with mobile device use.

Urie Bronfenbrenner's Bio-Ecological Systems Theory (1994), along with Johnson and Ptoplampu's (2008) Techno-Subsystem provided the theoretical lens through which this study was conducted. Bronfenbrenner (1994) described various environments in which an individual interacts and which have an impact on the individual, namely the microsystem, mesosystem, exosystem, macrosystem and chronosystem. Bronfenbrenner (1994) proposed that an individual's development occurs through mutual interactions that happen between the person and their different environmental levels, including their relationships within said systems. These systems include events in the contexts in which an individual may not be physically present. A majority of homes now have a variety of modern technologies readily available for use, and thus an individual's home setting is impacted by events occurring online. Johnson and Ptoplampu (2008) include modern technology into Bronfenbrenner's theory, referred to as the Techno-Subsystem. This subsystem presents the bidirectional exchange between an individual and their environment, and demonstrates how technology has become part of a person's recurring social interactions.

This research explored factors from the different nests in which parents and adolescents live and how these factors impact parental views, decision making, control measures chosen regarding technology use, and problems encountered by participants. This theory will be further elaborated on in Chapter Three.

There are a number of challenges that parents and adolescents have to face in today's world. There are many different online sources of information, socialisation, and entertainment to which adolescents now have access to (Yardi & Bruckman, 2011; Lopez-cobo, 2018). Social media platforms such as Tik-Tok, SnapChat, YouTube, and Facebook all allow people to interact with other individuals from anywhere around the world. Adolescents regularly watch movies and videos, play games, access websites and applications and communicate online. These are important modes of communication and entertainment; however, they are not without risk. With the rise in mobile device use by adolescents, the complications of cyberbullying and exploitation have also become more common (Crucial Paradigm PTY Ltd, 2020). Consequently, these problems have resulted in a need for parents and adolescents to be educated about the risks involved in the use of mobile devices. This study assisted in identifying the effective methods and tools that are essential in assisting with reducing the risk of possible harm to adolescents caused by the use of mobile devices.

1.2 RESEARCH QUESTIONS

The overarching aim of this dissertation was to explore parental perceptions and experiences relating to adolescent mobile device use. To this end, the study poses three main research questions:

1. What are the experiences of parents regarding the use of internet enabled devices by their adolescent?
(This question relates to how parents feel about their adolescent using mobile devices. Have their experiences been mostly positive or negative, have they encountered any problems, and if so, how did they deal with these problems?).
2. How safe do parents perceive their adolescent as being while using mobile devices?
(Do parents feel that their adolescent is safe using the internet and modern technology? Do parents have concerns regarding their adolescent using these devices, and what are their concerns?).
3. What safety measures do the parents of adolescents utilise to protect their online browsing activities?
(What safety precautions do parents implement to assist in keeping their adolescent safe from the potential dangers of internet use? Are they aware of different methods and applications available to assist in protecting their adolescent from online harm? What are the most common methods parents utilise for protection from harm?).

1.3 OBJECTIVES AND AIMS OF THE STUDY

1.3.1 STUDY AIM

The aim of this study was to explore parental experiences and perceptions of adolescent use of mobile devices.

1.3.2 STUDY OBJECTIVES

The objectives of this study were to explore the participants' perceptions and experiences relating to their adolescent using mobile devices. Furthermore, parental opinions of mobile device safety and the safeguards utilised to aid parents in protecting their adolescents were explored.

1.4 DELINEATION OF CHAPTERS

Chapter One: Introduction

This chapter explains the issue that this study aimed to address, the reasoning behind this, the potential contributions that the study aims to present, and the structure of the chapters to follow.

Chapter Two: Literature review

This chapter presents the literature that exists on the issue to create an understanding of the research questions and to emphasise the need for this research. Chapter Two presents the literature that exists on the potential impact on the use of mobile devices by adolescents, parental perceptions and beliefs about these devices, methods of parental mediation, parenting styles and parental use of mobile devices. The South African technological

environment will also be discussed to create an understanding of the context in which the study took place.

Chapter Three: Bio-Ecological Systems Theory and the Techno-Subsystem

Chapter Three discusses the theoretical background on which this study is based and how this influences the study. The Bio-Ecological Systems Theory, with the Techno-Subsystem, will be discussed and the manner in which they fit into this study will be described.

Chapter Four: Methodology

Chapter Four engages with a discussion on the methodological considerations of this dissertation, including the research design, research sample, data collection, and research procedure. The chapter will end with an explanation of the ethical aspects that were involved in the research process.

Chapter Five: Findings

Chapter Five discusses the qualitative findings and results from the interviews with the participants. The findings from the research were linked to the existing literature and discussed with regards to the Bio-Ecological Systems Theory with the Techno Subsystem. This chapter uses the reported experiences of the participants and discusses the emerging themes.

Chapter Six: Discussion and conclusion

Chapter Six explores the research findings in relation to the theoretical framework used, namely Bronfenbrenner's Bio-Ecological Systems Theory and Johnson and Pupilampu's Techno-Subsystem. Additionally, the implications of the study, recommendations for future research and the limitations of this study. The contents of this chapter provides a summary of the main findings of this study and suggestions for future research.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

This review of literature highlights research that was conducted in an international and local arena on this topic of interest. The first section of the literature review will focus on the definition and history of the problem, discussing the inclusion of technology into our lives, as well as the effects and parental responses to this inclusion. The focus then moves onto a review of internet trends across Africa in comparison to South Africa and ends with a review of studies conducted on digital parenting in South Africa. In the next section of this chapter, an overview of the extent and repercussions of mobile device usage will be reviewed, with a focus on parental concerns and awareness relating to mobile devices use. In the final section of this chapter the primary determinants of problems relating to mobile device use will be discussed, with a focus on the parent-adolescent relationship, parenting styles, parent's perceptions and usage off mobile devices, parental mediation methods, and finally the effect of the Coronavirus (Covid-19) pandemic on parental mediation strategies.

2.2 DEFINITION AND HISTORY OF THE PROBLEM

2.2.1. INTRODUCTION

Globally, the mobile phone has been identified as the preferred mode to communicate. People's lives are influenced in many ways by modern technology, which shapes the ways in which we work, play and live (McGivern, 2016). The increasing ease of accessibility to mobile devices has resulted in an increased number of adolescents using mobile devices (Schlosser, 2018; Ungar, 2018; Kabali, Irigoyen, Nunez-Davis, Budacki, Mohanty, Leister, & Bonner Jr, 2015). The use of mobile devices has transformed how adolescents learn, communicate and interact with one another (Chassiakos et al., 2016; Anderson, 2016; Hatch, 2011), where most have now grown up in an environment in which mobile devices are readily available (Organisation for Economic Co-operation and Development, 2021). In general, adolescents use mobile devices in their homes and at school (Kamenetz, 2019). This new reality, in which mobile devices are readily available, calls into question concerns about how to ensure that the younger generations are guaranteed the many opportunities that modern technology provides them (for learning, socialising, enhancing skills), while simultaneously protecting them from the possible harms and risks involved in the use of these devices (including contact with strangers, exposure to violent content, for example) (McGivern, 2016 ; The Lancet Child and Adolescent Health, 2018). Even though today's adolescents have grown up in a world that is saturated with technology, they are not necessarily 'digitally literate', meaning that they are not automatically able to control and reflect on the digital world and its use (Leowus, 2016). Abbasi and Huang (2020) argue that adolescents have trouble with controlling, relegating, and finding information, regulating their online privacy, and maintaining safe practices online, and therefore, will all differ in their digital literacy.

Despite the debate about whether or not mobile devices have a general positive or negative impact on adolescents, it is suggested that this impact on adolescents is predominantly

dependent on the appropriate control and mediation of their use (Nikken & Schols, 2015; Nikken & Oprea, 2018). Based on this the researcher argues that parents are also exposed to different experiences when using mobile devices. Modern mobile devices have altered the way in which family members interact, obtain information, access entertainment, and solve problems in their everyday lives (Anderson & Rainie, 2018). Parents are the initial mediators of their adolescents' experiences using mobile devices and as such are tasked with the challenge of integrating mobile device use into their daily routine (education, entertainment, for example), and encouraging the safe use of these devices (De Dios, Van Oosten, & Igartua, 2018). A major challenge that parents are faced with is the management of their adolescent's use of the many portable devices that are available for them to use (Iqbal, Zakar, & Fischer, 2021). Due to the enhanced access and unlimited Wi-Fi, many adolescents have incorporated the use of mobile devices into their daily routines, for example, while doing homework and communicating with their friends (Lenhart, 2015). Annenberg and Annenberg (2017) argue that parents are particularly concerned about the pervasiveness that mobile devices create in their adolescent's daily lives, and they are worried that their control and effective management of this use may diminish (Matthes, 2021). Parents are able to minimise or encourage the use of mobile devices to their adolescents depending on the risks or opportunities that they assign to them (Hill, 2017). With parents becoming frequent users of mobile devices, their confidence in their digital skills and their frequency of daily use, combined with their beliefs about modern technology, are all important factors that are now being systematically explored by researchers (Sanders, Parent, Forehand, & Sullivan, 2016).

Parental mediation refers to a type of behaviour that can aid in protecting children from the harmful consequences that are associated with the use of mobile devices (Hwang, Choi, Yum, & Jeong, 2017). It comprises of the management of the relationship that an adolescent has with mobile devices, including monitoring activities, setting restrictions, and having conversations about the safe use of these devices (Livingstone & Helsper, 2008). However, this is made difficult for parents, due to the developing technological advancements and the increasing challenges related to monitoring. It has been suggested that today's adolescents are proficient and self-assured in using modern technology such as tablets and smartphones. Frequently, adolescents tend to have more knowledge and a better understanding about modern devices than their parents or guardians (Metzger, 2015; Ofcom, 2014).

Mobile devices assist us in our daily lives (Singh & Samah, 2018). The appeal of these devices lies in their user-friendly designs, their easy accessibility to individuals, and the range of features available (Pew Research Centre, 2019). Nowadays, both businesses and individuals rely on mobile devices in their daily lives, due to the wide range of applications and features that they have to offer. Mobile devices appeal to individuals from all age groups, and their capability to assist with making life easier is the main reason that they are found in the majority of social settings (Lauricella, Cingel, Blackwell, & Wartella, 2014). With the increase in mobile device usage, there is a need to explore parental perceptions of mobile device usage in households, and the ways in which they monitor their adolescents' use of these devices and protect them from the potential risks that they could be exposed to by using these devices.

Through the use of these different platforms, including applications like WhatsApp, Facebook, Instagram or TikTok, for example, adolescents are exposed to an assortment of subjects that they can learn about, for instance, learning a new language. They are able to connect with one another regardless of geographical boundaries. These are some examples of positive outcomes of the use of such platforms; however, social media use is not always related to positive outcomes and can also lead to harm. Research has revealed links between higher social media use and a higher intention and eagerness to use e-cigarettes (Vogel, Ramo, Rubinstein, Delucchi, Darrow, Costello, & Proschaska, 2020), an increased possibility of the participation in dangerous sexual behaviours (Lin, Liuk, & Yi, 2020), and violence, drug use, and obesity (Kishorekumar & Thomas, 2020). The exposure to bullying and aggression by adolescents while using social media is one of the concerns that is becoming increasingly worrying, both internationally and locally (Petrov, 2021; White, 2020; Liebenberg, 2015). Pew Research Centre discovered that 59% of teenagers in the US have, at some point, been bullied or harassed online (Anderson, 2018). Da Costa (2019) found that 25% of participating parents reported that their child had been exposed to bullying while they were online, indicating that South Africa has a high prevalence of cyberbullying.

The participation in healthy activities, such as exercising, can be negatively influenced by an excessive amount of screen time. A person's exercise and reading regime are influenced by mindless screen time (Lee, 2022). Cohen (2019) cites that people often report that they often did not have the time to exercise regularly. However, upon monitoring their time, it was found that they had a minimum of four hours of open-ended time every day and that much of this time was spent on a screen. There has been a positive link found between exercise, physical and mental health, sleep, and learning, and it is important to recognise that this is the opposite of the typical influence that screen use has on individuals (Bertin, 2020).

Many parents believe that adolescents ought to be left to find their own balance with healthy screen behaviours and use, however, this is not the case. Most adolescents require guidance from both their parents and guardians (Bertin, 2020). Gentile, Reimmer, Nathanson, Walsh, and Eisenmann (2014) revealed that there is an interrelationship between strong parental involvement in a teenager's technology use, and better social, academic, and physical outcomes. Adolescents ought to be educated about safety measures to take online and how to protect themselves and others from being harmed online. Adolescents need to be informed about the possible dangers that they may encounter while they use mobile devices and how they should handle these situations, should they arise. Parents form an integral part of the cyber safety education of their children, however, for this education to be effective, parents themselves need to be well-informed and knowledgeable on this topic (Paraiso, 2019). A survey conducted in the US (SellCell, 2019) found that the most reported factors impacting parents' choice in allowing their children to use mobile devices is to allow them to be in contact with each other should the need arise. Most parents make the decision to purchase a mobile device for their children based on safety and communication factors. Allowing an adolescent to have their own mobile device has both potentially positive and negative benefits (Miller, 2019). Thus, it is vital that they be educated on how to safely and effectively use said devices. Providing parents with education about how to monitor and limit their adolescent's use of mobile devices provides a protective mechanism for their child.

Research focusing on the use of mobile devices, specifically mediation methods and parental perceptions, remains limited, where most of the studies conducted are centred around the use of a single media activity, such as the use of social media (Gottschalk, 2019; Shoukat, 2019; Anderson & Jiang, 2018), the use of the internet (Rachmayani, 2017), or playing games online (Sinclair, 2019). Anderson and Jiang (2018) explored the use of social media platforms by teenagers. Their study revealed that 95% of teenagers reported owning a smartphone or having access to one. Additionally, it was found that the teenagers also reported more frequent online activities, with 45% of teenagers reporting to be online on an almost constant basis. A study by Sinclair (2019) replicated these findings showing frequent use of mobile devices. Sinclair's study focused on early teenage online gaming habits and found that online gaming has become a popular way for teenagers to spend their time. The study indicated that 12-15 year olds reported spending an average of 13 hours and 48 minutes per week gaming online. In 2017 Rachmayari conducted a literature review of twenty research articles relating to children's internet use. The review revealed that children use the internet as a form of entertainment, including viewing videos, listening to music and playing games online. Additionally, it was found that children use the internet for social interaction and searching for information. Despite these studies exploring one particular aspect relating to mobile device use, they all point to the high importance that children of all ages put on these devices. However, a literature review by Gottschalk (2019) indicates that the use of technology by children is an area of research that is still developing, with existing literature showing a number of benefits and risks relating to technology use. Gottschalk (2019) states that progress still needs to be made in this area. In today's modern world, however, adolescents often use multiple devices, services, and applications simultaneously (Chassiakos et al., 2016). Adolescents are able to play games on their tablets, speak to their friends on their smartphones and search the internet on their computers at the same time. In our technologically advanced world, parents are faced with the challenge of employing monitoring methods that consider the multiple mobile devices that their children can make use of, and their tendency to multitask with these devices. Secondly, many of the studies that have been carried out in this field have taken place in Europe or North America (Madigan, Browne, Racine, Mori, & Tough, 2019; Stiglic & Viner, 2019; Sanders, Parent, & Forehand, 2018).

2.2.2. INTERNET USE: TRENDS ACROSS AFRICA IN COMPARISON TO SOUTH AFRICA

The fourth industrial revolution (4IR) is a new stage of human development and a focus on the socio-techno landscape. It represents a significant shift in the way that we work, live, and associate with one another (Phala, 2020). Technology is assisting in the creation of opportunities for bettering lives. Modern technologies, such as artificial intelligence and machine learning, are reshaping the ways that we conduct business, govern, and live. South Africa would benefit greatly by using these technological advances to attract investments, industrialise further and pursue inclusive growth for all in society. These technologies need to be the focus in developing solutions to the developmental challenges that we face, such as healthcare and education, and also allow for the advancement of technological integration between humans and the digital space. Currently, there is little data showing the ways in which technology is being used by South African children, or how parents interact with their children on such topics.

It is important to form an understanding of technology trends across Africa and to situate South Africa within these trends to understand the context in which this study occurred. In this regard, the trends relating to internet penetration³, mobile internet⁴, social media, and e-commerce and digital services, as well as opportunities and challenges, will be discussed.

Research by Saleh (2023) into internet use in Africa revealed that internet penetration across African countries has steadily been increasing over recent years. However, as of December 2021, the typical internet penetration rate was around 43,1% in Africa, according to a survey conducted by Statista (Kamer, 2022). This indicates that less than half of the African population had internet access at that point. In comparison to the average penetration rate across Africa, South Africa shows a higher rate (Kamer, 2022), with the rate sitting at 63, 5% in 2021. This indicates that there is a greater portion of the population in South Africa which has internet access in comparison to the average across the African continent.

Mobile internet usage has played a significant role in internet adoption in Africa according to the State of mobile internet connectivity survey (Delaporte, 2021). With the increase in affordability and more readily accessible mobile devices, many individuals have been able to access the internet using these devices (Delaporte, 2021). In comparison, South Africa has mobile infrastructure which is well developed. Thus, mobile internet use is widespread. Mobile devices are a key component to enabling internet access and many South Africans rely on such devices for this access (Mzekandaba, 2020).

Across the African continent, social media usage has seen substantial growth, as found by a survey carried out by Cumbi (2023). This research by Cumbi (2023) shows that prominent social media platforms, such as Twitter, Instagram, and Facebook, have gained significant popularity in Africa. According to the Digital 2023 report (Kemp, 2023) 57% of the South African population used social media platforms, with Facebook, YouTube, Instagram, and TikTok being the highest reported platforms being used.

Digital services and e-commerce services have grown rapidly throughout Africa according to the New York stock exchange reports (Leke & Sibanda, 2019). This illustrates the rapid digitisation across Africa. Digital payment platforms and online marketplaces have all gained popularity in countries across Africa (Saleh, 2023). According to the International Trade Administration report (Mwendera, 2023) the internet landscape in South Africa is more developed in comparison to other African countries (Mwendera, 2023). In South Africa food delivery services, digital payment platforms, and online shopping are well-established online services, with international and local businesses operating in the country (Schaefer & Bulbulia, 2021).

Despite the advancements and progress across the continent, Africa still has challenges to overcome, including the high costs of data, limited infrastructure and unequal access to

³ Internet penetration: Refers to the percentage of a country's residents who have access to the internet (Internet penetration, n.d.).

⁴ Mobile internet: Internet content accessed through a mobile device, such as a smartphone (definition of mobile internet, n.d.).

people. However, such challenges also represent growth opportunities for investment and expanding the internet connectivity and further closing the gap on the digital divide. In South Africa major challenges in this regard relate to data costs, internet connectivity in remote areas and addressing the digital divide. However, effects are being made to broaden inclusion, growth access, and affordability as can be seen in the National planning commission (2020).

2.2.3. DIGITAL PARENTING RESEARCH IN SOUTH AFRICA

South Africa's rapid advancement in internet usage was highlighted in the Digital 2023 report, with results indicating that South Africa's internet penetration rate at the start of 2023 was 72,3%, and that as at the end of January 2023 there was reportedly 43.48 million South African internet users (Kemp, 2023). Of these users 10,4% are between the ages of thirteen-to-seventeen-year-olds, according to a survey by Statista (2023). This statistic shows the degree to which adolescents in South Africa are using mobile devices, and thus the importance for further research to be conducted in this field.

The extensive use of the internet by adolescents, especially the use of mobile devices, was illustrated in a survey carried out to explore internet connection. This survey included grade eleven students attending low-income schools in Cape Town, South Africa (Donner et al., 2011). The findings showed that 77% of the participating students owned a mobile device with internet access, and 68% of them had used their mobile device to access information a day earlier (Donner, Gitau, & Marsden, 2011).

In South Africa there is a limited set of data on the ways in which parents interact with children with regards to technology use and related issues. In 2012, Van der Merwe, conducted an exploratory study in Gauteng, South Africa, focusing on technology and the risks associated with this use for adolescents. The findings revealed that 51% of the parents did not discuss internet use with their children and that 70% of parents felt that they did not have the relevant knowledge to discuss this topic effectively with their children. In line with these findings, Marais, van Niekerk, and von Solms (2011) discussed issues around parental control of mobile devices and found that most parents are not aware that their children had viewed potentially harmful content online.

Recently, an investigation was carried out with the aim of exploring the impact that screen time has on mental and behavioural challenges. The study included adolescents between the ages of fifteen-to-seventeen-year-olds and included participants from three government schools in KwaZulu Natal (Ranjit, Ntlantsana, Tomita, & Paruk, 2022). The findings indicated that adolescents spent 2,1 hours per weekday and 4,7 hours per day on the weekends on their mobile devices. The weekend screen time was linked to a higher tendency for conduct problems and depression. Additionally, the increased weekend mobile device use times were linked to lower prosocial behaviours (Ranjit et al., 2022).

There has been little research conducted on parental mediation from a South African perspective and the impact of such mediation strategies. It is imperative for information to be gathered about how parents in South Africa engage with their adolescents about internet, and mobile device use to aid in the developing of an appropriate response and prevention

strategies to deal with the ways in which we can balance online safety for adolescents, whilst also providing continued opportunities.

2.3. EXTENT AND REPERCUSSIONS OF THE PROBLEM

In the section to follow the extent and repercussions of the problem will be examined, including the use of mobile devices, parental concerns relating to mobile device use, parental awareness of their children's online activities and the risks associated with mobile device use.

2.3.1. MOBILE DEVICE USE

For millions of people mobile devices now form part of their daily lives. Globally, internet-enabled devices, such as smartphones and tablets, have developed to become indispensable tools for accessing information, communicating, and entertainment. In 2023, research by Petrosyan into the digital population revealed that over 60% of the global internet population goes online through mobile devices. Petrosyan (2023) examined internet use worldwide and found that with mobile technology becoming more readily available and affordable, mobile internet usage and ownership is predicted to continue growing in the future. This growth trend in mobile device internet usage has been particularly noticeable in the developing digital markets where mobile networks are the primary source of internet access for people (Ceci, 2023).

Globally, mobile internet traffic attributes to 60% of total traffic online, with countries such as Asia and Africa, which predominantly access internet using mobile devices, accounting for a bigger share of website views (Bianchi, 2023). Research by Vom Orde and Durner (2022) focusing on international youth and media use, revealed an increase in technology use starting between the ages of eight to eleven years, as children enter adolescence, and increasing more into the adolescent years.

2.3.2. PARENTAL CONCERNS

Children and adolescent technology use is often a topic leading to conflict within the family (Matthes, Thomas, Stevic, & Schmick, 2021). Whilst adolescents are keen technology users, parents tend to be concerned about their adolescent's use of these technologies (Matthes et al., 2021).

A survey by Pew research centre found that many parents are anxious about the effect that mobile device use will have on their children and adolescents. Their study explored how parents and teenagers handle screen time and found that 66% of parents were concerned about their adolescent's screen time (Jiang, 2018). One of the most discussed concerns amongst parents is screen time and the effects this will have on their children. Pew research centre conducted a study into screen time and found that 71% of parents who have children under the age of twelve years are concerned about the amount of time that their child spends on mobile devices (Auxier, Anderson, Perrin, & Turner, 2020). In 2016, Common sense media, conducted a survey which indicated that 59% of parents felt that their

teenagers are addicted to their smartphones. These concerns over an excessive screen time go hand-in-hand with concerns over access to harmful content online.

Parents have several different concerns relating to adolescent mobile device use, with access to unsuitable content and frivolous activities ranking the highest according to a survey conducted by Pew research centre (2022). This survey included parents with teenagers between the ages of thirteen and seventeen. Of the participating parents, 46% reported feeling concerned about their teenager being exposed to unsuitable content while online. Additionally, 34% of parents expressed worry relating to their teenager sharing too much personal information online (Gelles-Watnick, 2022). It can be a challenge for parents to monitor what their adolescent is viewing online. There may be times when they accidentally stumble onto inappropriate websites through links that were sent to them by their friends, downloads, or while chatting to people online. It is vital that parents monitor what their adolescent is doing on their mobile device.

Additionally, findings from a study conducted in South Africa demonstrated that cyberbullying is a huge concern for parents. The 'Responsible digital parenting' survey revealed that 32% of parents felt that cyberbullying was their main concern, and 30% of children had experienced being cyberbullied at some point (Raisbeck, 2022). Researchers also found that parents were not familiar with the activities that their adolescent was participating in online and that 28% of parents had not educated their adolescent about online safety and internet ethics (Raisbeck, 2022). It is imperative that parents are actively involved with their children and adolescents and discuss the risks affiliated with internet use, as this lack of knowledge opens them up to harm (Raisbeck, 2022).

2.3.3. PARENTAL AWARENESS

Parental awareness of adolescent online activities is seen to be a protective factor in relation to adolescent adjustment. Empirical research by Symons, Ponnet, Emmery, Walrave, and Heirman (2016) focusing on parental knowledge of adolescent activities and risks experienced online, revealed that parents are unaware of the occurrence of risks online and adolescent online behaviours and activities in which they participated. Similarly, research by TRU Group (Pappas, 2012) found that there is a disconnect between parents and teenagers regarding internet use. Parents of this study reported that their teenagers spend roughly two hours per day online, while the teenagers reported being online for about five hours per day. Of the teenagers, 25% reported being bullied online, with 62% reporting witnessing nasty behaviours online. Of the teenage participants, 71% revealed that they had hidden their online behaviour from their parents at some point. In comparison to only 17% of parental participants suspected that their teenagers would hide online activities from them (Pappas, 2012).

Another study by the National cyber security alliance (as cited in Wong, 2016) discovered that only 13% of teenagers felt that their parents fully comprehended the extent of their internet use. The survey revealed that 60% of teenagers have created profiles and accounts on social media platforms or applications without their parents' knowledge (Wong, 2016). Furthermore, the study discovered that 67% of parents had told their children to inform them of any incidents online that made them feel uncomfortable, but only 32% of teenagers reported that such a rule had been imposed by their parents (Wong, 2016). The divide

between teenager activities online and parental awareness of these activities is concerning. Helping teenagers to navigate safely in a digital world is a challenge for 21st century parents.

2.4. PRIMARY DETERMINANTS OF THE PROBLEM

In this section, the effect of the parent-adolescent relationship on mobile device use will be discussed, followed by a discussion on different parenting styles and their effect on mobile device use. Thereafter, parental perceptions and their impact on mobile device use, as well as a parent's role in their child's use of mobile devices will be explored. Finally, research on parental mediation methods will be examined, including the effect of family dynamics on family media use and parental control measures, as well as the effect that the Coronavirus (Covid-19) pandemic had on parental mediation of mobile device use.

2.4.1. PARENT-ADOLESCENT RELATIONSHIP

The use of technology by families is common, where for instance, 88,2% of South African households have access to at least one mobile device (Gilbert, 2018). Whilst it is feasible that a family can use technology to connect, such as watching television together, these devices can also hinder parent-child time. The relationship that a parent has with their adolescent significantly impacts their development and growth (Evelyn, 2016). Adolescence can be a challenging period for both parents and adolescents. The strength of a parent-adolescent relationship can play a significant role in an adolescent's decision-making process with regards to their healthy behaviours, tobacco and alcohol use, and education (Chaplin, Sinha, Simmons, Healy, Mayes, Hommer, & Crowley, 2012). Positive decision making by an adolescent can be encouraged by a strong relationship with their parents (Svetaz, Garcia-Huidobro, & Allen, 2014).

Despite the positive aspects related to technology use, there are also negative aspects involved. Adolescents focus much attention on their mobile devices and often spend many hours on social media or talking to their friends on various applications and platforms. This can result in a decline in the amount of face-to-face interactions they have, such as between a parent and adolescent (Steinmetz, 2018). This was found to be true in a survey conducted by Common sense media in 2018. This study found that texting is a teenager's preferred means of communication (Steinmetz, 2018). These findings demonstrated that in 2012 most participants reported preferring face-to-face communication, in comparison to 2018 in which most chose text messaging to be the mode of choice. These findings indicate that there could be a shift in the ways in which people choose to interact with one another. Social media platforms have changed the ways in which adolescents learn and interact, and raises a new set of concerns for parents to consider (Ehmke, 2021).

Today, emerging technology plays an even bigger role in an adolescent's life than it did previously (Ehmke, 2021). During the adolescent stage, there are many changes that occur that parents and adolescents have to adjust to, along with the additional role that technology plays in an adolescent's life having to be considered as well (Patrikakou, 2016). Conflict between parents and adolescents often arises due to the contradictory use and differing beliefs around social meetings (Valizadeh, Zamanzadeh, Rassouli, & Farshi, 2018). This conflict mostly arises due to different expectations between parent and teenager. Such

incongruity could be a result of changing cultural norms and social norms due to the inclusion of technology in society. Although both adolescents and parents typically agree that adolescents deserve some privacy to a certain extent, some parents also believe that their adolescent's possessions should not be exempt from monitoring (Cranor, Durity, Marsh, & Ur, 2014). Interviews with participants found that eight out of ten teenagers and four out of ten parents believe that it is unethical to read teenager's text messages (Cranor et al., 2014).

Parents with adolescents have to find a balance between their adolescent's increased independence and their personal concerns for safety. Parents need to decide which rules they are willing to ease and which will be implemented or remain in place (Simeon, 2019). According to the Digital Family Lifestyle Survey (Ottoni, 2018), which explored parents' thoughts, rules, concerns, and habits relating to their children's mobile device use, found that 76% of parents purchased mobile devices for their children for safety reasons. The chosen mediation strategies rely on a parent's personal digital literacies (Smahelova, Juhova, Cermak, & Smahel, 2017). Parents are not automatically able to use their own adolescent experience to assist them in making decisions about the privacy precautions to put in place for their own children (Cranor et al., 2014). Wisniewski, Jia, Xu, Rosson, & Carroll (2015) explored the ways in which parental mediation influences teenagers' social media privacy behaviours and found that adolescents whose parents adopted direct mediation approaches, such as setting privacy settings for their adolescent or using parental controls, were exposed to less risk online. However, this had an influence on their ability to communicate safely with other individuals online and how to deal with the hazards involved with internet use effectively. A parent-adolescent relationship that aids in preventing adolescents from participating in possible deviant behaviour requires the collaboration, eagerness, and action of both adolescents and parents (Ross-Gray, 2020). The adolescence stage is a time when autonomy negotiations occur between parents and adolescents (Branje, 2018).

The parent-adolescent relationship quality plays an important role in parental monitoring of adolescents (Ying, Ma, Huang, Guo, Chen, & Xu, 2015). Communication is the primary factor in strengthening and building feelings of connectedness between parents and adolescents, as revealed in a study by Ying et al. (2015) in which they conducted a cross-sectional study examining parent-adolescent communication, trust, and parental monitoring. Parents who encourage their adolescent to discuss concerns or question openly with them can create a sense of confidence in the adolescent and will help to make them feel safe to approach a parent when in need (Woda, 2013). An adolescent's willingness to approach a parent to discuss cyberbullying, for example, has been found to be linked to a parent's ability to respond appropriately (Joint select committee on cybersafety, 2011). In the survey conducted by the JSCC (2011) children between the ages of nine to sixteen years old participated, with a focus on cyber-safety and factors impacting safety online. The survey found that when children and teenagers believe that their parents are trustworthy and accepting, there is a higher chance of them being open to approaching and disclosing information to their parents (JSCC, 2011). Salgado, Gonzalez, & Yanez (2021) found that a strong parent-adolescent relationship resulted in parents having greater access to their adolescent's lives, and that parental involvement is positively correlated to adolescent life satisfaction.

2.4.2. PARENTING STYLES

The family system constitutes the main agent in the socialisation process of children and, therefore, is crucial in a child's development. In this technology-saturated world, children are faced with additional adjustment difficulties in comparison to previous generations. Parenting styles shape the different social environments in the lives of children within their homes. With the inclusion of modern technology to families worldwide, the essential parental role and parenting goals are still the same, namely to love, protect, provide for, guide, nurture, and connect with children (Milovidov, 2020). Additionally, parenting practices, both from the past and in our current times, are most effective when they are grounded in positive parenting principles (Livingstone & Byrne, 2018). Research by Livingstone and Byrne (2018) revealed that the values of positive parenting need to be incorporated into our online activities as a means to create a connection between our traditional values and the online environments, and to reduce the risks associated with technology and internet use for children.

Communication between parents and children is influenced by parenting style. Researchers have investigated how parenting style is linked to both positive and negative outcomes for children, showing that the parent-child relationship is interrelated with parenting styles. The primary factor in differentiating between parenting styles is communication patterns (Baumrind, 1966). Baumrind's (1966) parenting typologies, including authoritarian, authoritative, neglectful, and permissive, were found to play a substantial role in defining the approaches and behaviours of parents towards their children (Sharma & Joshi, 2015). The most reported parenting style in the literature is the authoritative style, which is seen to be the first indicator of positive outcomes for the child (Papalia, Olds, & Feldman, 2009; Socha & Stamp, 1995). Research has revealed that the authoritative parenting style can result in a number of positive effects and is linked to the most favourable outcomes for children. These include lower excessive alcohol consumption (Bahr & Hoffman, 2010), lower tobacco use rate (Stanton, Highland, Tercyak, Luta, & Niaura, 2014), improved prosocial skills (Altay & Gure, 2012), increased resiliency (Zakeri, Jowkara, & Razmjoebe, 2010), as well as a more secure attachment with their parents (Doinita & Maria, 2015). With bidirectional communication, in which two people participate in a conversation, seen to play an important role in the parent-child relationship, mobile devices may be able to serve as an additional means of openness and negotiation, particularly for children with authoritative parents (Morris, 2015).

Over the last four years, researchers have discovered that there is a relationship between the use of the internet by children and parenting styles (Oden, 2019). There has been a link discovered between internet use and the emotional warmth of the family unit (Chou & Lee, 2017). Neglectful and authoritarian parenting styles have respectively been linked to compulsive internet use (Chou & Lee, 2017). A neglecting parenting style, in which children's needs are not given any priority, and children are given little attention, results in children having complete freedom to participate in any activity that they please, and often boosts compulsive use of the internet (Eastin, Greenberg, & Hofschire, 2006). Authoritarian and authoritative parents are in control of their households. Authoritative parents instil discipline through the rules that are set. These result in more control of the behaviour of their children as found by Chou and Lee (2017) in their study which investigated the moderating effect of parenting styles and internet use by children. Thus, the researcher argues that there is a clear link between parental styles and a parent's chosen methods of monitoring of

adolescent mobile device use, as well as parental involvement in their adolescent's use of mobile devices. The authoritarian and authoritative styles will lead to the most favourable behaviours relating to mobile device use by adolescents. Regardless of the chosen parenting style, the aim should be to raise children who can think critically, can openly communicate with parents, can trust parents, and can grow up in a nurturing and positive environment which encourages and enables them to fully develop (Milovidov, 2020).

2.4.3. PARENT'S PERCEPTIONS AND USAGE OF MOBILE DEVICES

The ownership of mobile devices amongst the adult population has increased over the last few years. Pew Research Centre (Silver, Smith, Johnson, Jiang, Anderson, & Rainie, 2019) conducted a study into the use of social media platforms and the ownership of smartphones across eleven countries, including Vietnam, Jordan, Tunisia, Colombia, Kenya, Lebanon, South Africa, Mexico, Philippines, India and Venezuela. The study revealed that in all eleven participating countries, the majority of adults reported owning a mobile device, and roughly nine out of ten individuals own a mobile device in Kenya, Columbia, Tunisia, South Africa, Lebanon, and Jordan (Silver et al., 2019).

Two of the most prominent messaging applications that individuals reported using were WhatsApp and Facebook. A South African study revealed: 47% of adults use Facebook, 13% use Instagram, 5% use Snapchat, 12% use Twitter, and 57% use WhatsApp messenger (Silver et al., 2019). Most adults use at least one of the available social media platforms or messaging applications.

Perception is an important aspect of mobile device use and the manner in which we approach cyberspace and mobile devices. According to Dr. Humphreys (as cited in Estrada, 2020), our past experiences influence how we decode things. The term 'risk perception' refers to an individual's subjective judgement of a perceived susceptibility to a threat (Ferrer & Klein, 2015). Previous research has shown a strong relationship between a parent's feelings toward mobile devices and the methods that they use to mediate and control mobile device use on the part of their children (Hwang et al., 2017; Shin & Lwin, 2019; Livingstone, Mascheroni, Dreier, Chaudron, & Lagae, 2015). Hwang et al. (2017) conducted a survey in which 448 parents from South Korea participated. The results from their study support the statement about a link between parental feelings and mediation of mobile device use. The findings revealed that the more that parents perceive smartphones and smartphone addiction to be problematic, the higher the likelihood of them actively mediating this use (Hwang et al., 2017). Similarly, a literature review conducted by Shin and Lwin (2019) demonstrated that a consistent finding is that parents who are concerned about the potential risks involved in mobile device use for children are more likely to monitor and regulate their children's use of these devices. Research has also found an association between mediation of children's use of mobile devices and a parent's own personal use of these devices (Haelle, 2019), where it has been found that there is a positive correlation between a parent's time spent using a mobile device and their control of their children's use of these devices (Nevski & Sibak, 2016; Terras & Ramsay, 2016). Klimczak (as cited in Haelle, 2019) discovered that among those parents who excessively used their mobile devices, 22% reported that their children used mobile devices for at least two hours per day, compared to only 4% of those parents who did not use their smartphone excessively. The confidence that

a parent has in their abilities and their managing of mobile device use by their children is linked (Livingstone et al., 2018).

This dissertation explored parental perceptions of adolescent mobile device use, the methods used to monitor this use, and the methods in which parents promote the safe use of mobile devices.

2.4.4. PARENTS' ROLE IN CHILDREN'S USE OF MOBILE DEVICES

Parenting practices have been significantly influenced by the inclusion of modern technology into the household (McDaniel & Coyne, 2016). Studies have been conducted to explore how parents are using technology for monitoring and surveillance purposes (Anderson, 2016). Parents who adopt an authoritarian parenting style and favour having greater control are more likely to utilise such systems. Nakayama (2011), while studying the ways in which parents monitor technology use within the household, found that the attributes of parents, including parenting style, shapes their children's use of mobile devices.

Parents play a significant role in their adolescent's behaviour (Landry, 2014), where both directly and indirectly, they influence their children's behaviours through the rules and boundaries that they put into place (Darling & Steinberg, 2017). For instance, Lauricella, Wartella and Rideout (2015) conducted a study in which 2300 parents and their children's use of mobile devices were examined. The findings revealed that the home environment is greatly influenced by parents. Different aspects of the environment all assist in encouraging certain behaviours over others, such as whether a child is allowed to use a tablet, as well as whether they are permitted to use this device at any time that they please, or if there are strict rules around the use of this device. The behaviours of parents significantly influence the lifestyle and habits of their children, such as their permitted daily screen time (Lauricella et al., 2015).

Due to the significant influence that parents have on the development of their adolescent's socialisation and development, it is their responsibility to mentor their use of these devices. The appropriate monitoring of adolescent mobile device use by parents is proven to result in more positive outcomes, including decreased exposure to privacy risks, a better understanding of media content and the reduced risk of exposure to unsuitable and inappropriate media (Haddon, 2015; Jensen, 2012). Dittus, Li, Verlenden, Wilkins, Carman-McCLanahan, Cavalier, Mercado, Welder, Roehler, and Ethier (2023) administered a cross-sectional survey looking into parental monitoring and teenage risk behaviours. The results indicated that effective parental monitoring was linked to more positive decision making by teenagers. The findings further indicated that higher monitoring was related to lower occurrences of cyberbullying, and that there is a strong relation between a teenager's perceptions of parental monitoring and better mental health (Dittus et al., 2023).

2.4.4.1. PARENTAL ATTITUDES AND BELIEFS

Every parent has beliefs. In terms of this study, the focus is on their personal views and opinions about adolescent mobile device use, such as the age at which their adolescent was given their own device, their opportunities, or the risks posed by these devices (Konok, Bunford, & Miklosi, 2019). Beliefs refer to the cognitive component of attitudes, and they

serve as a guide for an individual's decisions and behaviours (McLeod, 2018). When raising a child, a parent makes decisions and acts in a manner that fits with their views about what is most beneficial and valuable for their children (Grusec & Danyliuk, 2014). Although parents are not constantly aware of their personal preference and beliefs, these beliefs always play a role in parent-adolescent relationships and their adolescent's opportunities to develop, learn, and develop digital skills (Bi, Yang, Li, Wang, Zhang, & Deater-Deckard, 2018). Konok et al. (2019) explored digital parenting styles of Hungarian parents and their children's mobile device use and found that parental beliefs are important factors in parenting styles and the microsystem of a family, combined with a parent's education, culture, history and socioeconomic status.

Parental attitude regarding the use of mobile devices is an important determinant of parental mediating behaviours and decision-making (Cingel & Krcmar, 2013). Kutrovatz (2022) also found this to be true in their study which explored parental mediation by interviewing parents about mediation strategies and children's screen time and found that parental perceptions of the advantages and disadvantages and the need for mediation influence their decisions on how to handle the matter. An adolescent's participation in certain activities is influenced by their parent's attitudes toward these habits or activities (Nikken & Schols, 2015). Parental attitudes directly influence parental practices, rules, role-modelling, and parenting styles (Grusec & Danyliuk, 2014). Research has revealed mostly mixed attitudes towards adolescent mobile device use by parents (Johnson & Hertlein, 2019; Roy & Paradis, 2015; Terras & Ramsay, 2016). Terras & Ramsay (2016) found that positive parental attitudes regarding mobile device use were related to longer time spent on mobile devices by adolescents. Parental attitudes may be shaped by the personal values and beliefs that they have regarding mobile device use (Topper, 2017), and the perceived associated risks of exposure to these devices (Tahir & Anfi, 2015).

All parents have personal beliefs and opinions about their children using mobile devices, including the age at which they feel is suitable for a child to use these devices and whether they feel that these devices may be beneficial or harmful for their children. All of these beliefs play a role in a parent's decision to permit and promote the use of these devices by their adolescent, where in turn, this will impact how much their adolescent makes use of these devices. For instance, Ofcom (2017) carried out research focusing on parents' and children's media use and attitudes towards this use. It was found that parents who maintain that there are positive features to the use of media will be involved in active mediation and co-use with their adolescent, whilst parents who were anxious about the potential negative aspects of use were more likely to rely on the restriction of media use.

In 2018 Shin examined the association between different self-efficacy types and the influence that these have on a parent's choice of mediation relating to their children's mobile device use. The survey included 304 parents in the United States of America, and revealed that parental self-efficacy forms part of a parent's beliefs (Shin, 2018). Parental self-efficacy describes a parent's views of their ability to be successful parents, including their digital skill abilities and being able to manage their adolescent's use of mobile devices. Parental self-efficacy has been found to be positively related to active parenting practices (Anderson, 2019), where, in such a case that a parent feels capable and confident in their digital abilities, they are more likely to be involved in monitoring their adolescent's online activities (Anderson, 2019). Shin, Huh, and Faber (2012) categorised general self-efficacy (which is a

parent's confidence in being a good parent) separately from two self-efficacy spheres that are related strictly to modern technology use. These two spheres are parental media competency in making use of media technology, such as sending an email from a smartphone, and parents perceived control over their mediation strategies, which refers to the degree to which a parent feels capable of guiding or adjusting their adolescent's behaviours on their smartphones (Shin et al., 2012). All of these different spheres of parental self-efficacy are related to one another (Shin et al., 2012), indicating that a parent's perceived competence on their personal digital skills can positively influence parent's involvement with their adolescent (for example, discussing the safe use of smartphones).

Sanders et al. (2016) conducted research which explored their proposed model that linked parental perceptions of technology to their chosen parenting strategy to control screen time. This study revealed that a parent who is confident in their ability to acquire adequate digital skills are likely to intervene more, using reinforcement techniques and rules, with their adolescents. A parent's self-efficacy can also impact their point of views about modern technology and the ways in which they talk to their adolescents about these devices (Sanders et al., 2016).

2.4.5. PARENTAL MEDIATION

Parental mediation refers to a range of actions that are implemented by parents to oversee their children's media use (Warren, 2001). Parental mediation involves the management of technology use by adolescents, including smartphones and tablets for example. A review of literature shows a consensus relating to the primary forms of mediation used by parents, including co-viewing, restrictive, and active/instructive (Danby, Flear, Davidson, & Hatzigianni, 2018; Gentile, Nathanson, Rasmussen, Reimer, & Walsh, 2012; Camerini, Schulz, & Jeannet, 2017). This approach was created in accordance with the empirical data obtained through investigations into television viewing control methods (Valkenburg, Krcmar, Peeters, & Marseille, 1999). However, gradually, over time the spotlight has shifted from studies relating to television to studies relating to the mediation of mobile device use and the internet. With the emergence of different platforms and digitisation it is vital for us to form a better understanding of newer mediation methods (Symons, Ponnet, Emmery, Walrave, Heirman, 2017; Konok et al., 2020).

Kutrovatz, Balogh, Wittinger, and Kiraly (2018) conducted a systemic review of literature published between 2007 and 2017 relating to children's technology use and parental mediation. According to this review there are four parental mediation strategies repeatedly employed with regards to technology, namely active, restriction, deference, and monitoring (Kutrovatz et al., 2018). The restrictive method includes limiting a child's access, use of specific platforms, content and having specific rules in place about technology use (Symons et al., 2017). Although studies have found that restrictive methods can be effective in aiding to reduce screen time and risks, it can also depend heavily on parental authority to be effective, as found by research into parental mediation by Naab (2018). Additionally, this approach hampers the enhancement of children's digital literacy skills and resilience (Mascheroni, Livingstone, Dreier, & Chaudron, 2016).

The second form of mediation is called active mediation and is used as a means to educate children about proper online behaviour, such as appropriate content, negotiating, and

interpreting content online (Symons et al., 2017). Often active and co-use forms of mediation are implemented together. With regards to parenting, active mediation can assist with enhancing knowledge and skills that are learnt by children that help to improve their digital literacy and appropriate behaviours online, as revealed by a study by Gentile et al. (2012). Further, the fact that active mediation methods are the most frequently investigated methods highlights the expectation and belief that parents need to both help with proper, safe, technology use and screen the applications used by their children on these devices (Kalmus, Sukk, & So, 2022). Kalmus et al. (2022) explored parental mediation trends across twelve European countries, and found that there is a new trend showing an increase in the use of active mediation strategies and a decrease in the use of restrictive methods among these parents, indicating that there is a change in parental behaviours which is in line with the new parental expectations. The third form of mediation is monitoring. As a mediation method monitoring is mostly focused on controlling technology use and checking what content is viewed or shared by children, reported Symons et al (2017). Part of the monitoring strategy involves checking children's mobile devices, including messages sent and received, internet browsing history, and applications used (Symons et al., 2017). Ying et al (2015) explored monitoring of adolescents by Chinese parents and found that monitoring for them included the actions parents take to track their child's mobile device use, their expectations of behaviour, and the ways in which parents respond to rules being broken by their adolescents.

Deference is the fourth mediation method employed by contemporary parents. Zaman, Nouwen, Vanattenhovwn, de Ferrerre, and Looy (2016) conducted a qualitative study exploring parental mediation of media use at home and found that this method aims at educating and encouraging children to become independent and sensible, and tends to avoid parental technology use interventions. This method is aimed at leading by example and not by being actively involved in technology use (Zaman et al., 2016).

Nagy, Kutrovatz, Kiraly, and Rakovics (2022), while exploring the impacts of adolescent screen time in relation to different mediation methods, found that the expectations placed on people, both socially and culturally, strongly influence their choices of mediation methods employed. Consequently, parental mediation strategies change in relation to the perception of parental responsibilities and functions.

2.4.5.1. FAMILY DYNAMICS AND FAMILY MEDIA

The screen viewing habits of children and adolescents are influenced by their home environment, which includes family rules and norms regarding the use of mobile devices and access to media and parental habits. A study by Jago, Thompson, Sebire, Wood, Pool, Zahra, and Lawlor (2014) looked at British parents' and children's screen-viewing habits and the duration spent behind screens by parents in comparison to their children. The findings show a link between a parent and child's screen time. In the homes in which a parents' screen-viewings were higher there was more likelihood of the children also having high screen-viewing times. According to Wartella and Lauricella (2014), technology focused parents (parents with a total screen time of roughly eleven hours per day) were found to have children who have higher daily screen times. The influence that mobile devices have on adolescents is greatly affected by the involvement of their parents in this process. By becoming involved in their adolescent's use of mobile devices and by explaining and sharing

information with their children, parents can assist in reducing the potential harm than may result from media use (Bond, 2017). Coyne, Padilla-Walker, Fraser, Fellows, and Day (2014) examined the influence of positive media use in the homes of 633 British families. The study utilised a mixed methods approach to collect data and found that positive media use was strongly linked to general functioning of the family, adolescent disclosure to parents, and parental involvement. Additionally, the qualitative results revealed that families make use of media for information, emotional connectedness, and entertainment. Parents need to teach their adolescents about how to use media safely and appropriately on their mobile devices, as well as about what behaviour is acceptable by themselves and others while using these devices.

2.4.5.2. PARENTAL CONTROLS

Modern technology constantly influences the world around us. Pew Research Centre conducted a study to explore the methods that parents use to oversee their teenagers digital behaviours. This study discovered that parents preferred to use personal, face-to-face communication and monitoring over technological methods (Anderson, 2016). Generally, parents reported monitoring teenage girls' and boys' digital activities equally (Anderson, 2016), thus indicating that there are no gender-specific monitoring activities. A total of 48% of parents reported viewing the call record and messages on their adolescent's mobile phone, and 61% of parents reported that they had viewed their adolescent's social media profiles (Anderson, 2016). Technological methods, in comparison, were much less commonly reported, with only 39% of parents reporting used parental control options and 16% making use of the control options to restrict the access of certain content on their children's mobile devices (Anderson, 2016).

Research by Nielsen, Favez, Liddle, and Rigter (2019) explored parental mediation and found that there is a link between parental mediation and potential harm. They found that no parental mediation was harmful in problematic online gaming and problematic internet use, while active mediation, in which a parent is involved in monitoring their adolescent's activities online, was found to be beneficial. These researchers found that a strong relationship between a parent and adolescent assisted in protecting them from problematic use of the internet and online gaming, and that conflict within the family was associated with an increased risk of problematic online gaming and problematic internet use (Nielsen et al., 2019).

Recommended methods of controlling adolescent mobile device use and the content that they are able to access involves the use of software that blocks or restricts access to certain websites or content, as well as talking to your adolescent about the risks involved in internet use and how to stay safe online (Iannelli, 2020). Pew research centre explored American parental control of teenagers' online activities. The survey found that 57% of parents use parental control to monitor their teenagers access to the internet and 49% reported using at least one parental control on their teenager's mobile device (Gelles-Watnick, 2022). A report by a Chicago children's hospital found that 63% of parents noticed that their teenager had been using social media platforms more during the Covid-19 pandemic and 80% of parents reported easing off on their rules regarding social media use during this time (Ann & Robert H. Lurie Children's Hospital of Chicago (2020). Active involvement from parents is vital, and parents need to be aware of their adolescent's activities online. Helping adolescents to build

safe habits online is important, and parents cannot solely rely on parental controls to keep their adolescent safe.

2.4.5.3. CORONAVIRUS (COVID-19) PANDEMIC AND PARENTAL MEDIATION

Due to the Coronavirus (Covid-19) pandemic many countries have adopted safety measures in order to reduce the rate of transmission of the disease. These measures involved staying at home, limiting access to facilities, school closures, and prohibiting gatherings to minimise contact between individuals. As a result of the closure of schools and offices, there was an increase in digital media use, including smartphones, laptops, tablets, and computers for interpersonal communication and other activities (Robbins, Hudson, Ray, Sankar, Patel, Randeve, & Arvanitis, 2020).

Following the closure of schools and social distancing measures, many education ministries world-wide employed online, distance learning (Organisation for Economic Co-operation and Development, 2020). This move from face-to-face to online teaching shifts the responsibility for teaching onto parents, who now have to be a support resource for their adolescent's learning (Organisation for Economic Co-operation and Development, 2020).

In the current situation, families need a renegotiation of their normal routines, to create a balance between screen time and family time. The World Health Organisation (2020) has recommended that parents retain regular routines in the household, for example keeping regular time schedules for learning, free time, and bedtime. Possessing the necessary competencies to successfully navigate the digital world, while avoiding the potential risks, requires learning and educating oneself in this area, known as digital literacy. This responsibility poses a challenge for some parents, who feel unprepared for this shift (Organisation for Economic Co-operation and Development, 2020). Martin (2006) explains that the term 'digital literacy' refers to the capability, beliefs, and awareness of individuals to use digital tools suitably to regulate, access, guide, and incorporate digital resources, to develop media expressions, to communicate with others, to build knowledge, in order to allow social action and to reflect on this whole process.

Dias, Brito, Ribbens, Daniela, Rubene, Dreier, Gemo, Di Gioia, and Chaudron (2016) investigated the role of parents as children's mediators of digital technology use in Portugal, Belgium, Latvia, and Germany. Ten families from each country were interviewed and findings show that presently, the difficulties faced by parents stem from their different levels of technical ability, involvement and opinions that affect their choice of mediation methods employed with their children (Dias et al., 2016). Parents who are less confident in their abilities with digital technology could lean towards a more restrictive mediation approach (Dias et al., 2016). A parent's feelings of possessing the ability to manage their adolescent's use of digital technology increases when a parent has a positive view of the usefulness of the media, for example educational resources and whether they have more than one child.

2.5. SUMMARY

Modern technology has changed parenting. The easy accessibility and the number of modern mobile devices available increases the concern for the possible risks involved in adolescent media exposure (Schlosser, 2018).

Educating parents about monitoring and limiting their adolescent's mobile device can be a protective mechanism for these adolescents. Previous studies have looked into the relationship between parenting styles and mediation methods. Symons et al. (2016) demonstrated that parental knowledge about the risks involved in being online were low. There is a need for research to be conducted in order to form an understanding of the true extent to which South African parents are accustomed to the online activities of their adolescents. Research ought to focus on the methods that parents use to monitor their adolescent's use of these devices (Greene, Wilkins, & Wyld, 2019). Such research would assist in helping parents to identify their current knowledge, competence, and abilities that they have in caring for their adolescent, and how they can employ these to the use of mobile devices (Greene et al., 2019).

Parents need to ensure that they find a way within their family to create relationships while making use of these devices in the home. It is a parent's responsibility to guide their adolescent's use of mobile devices. Parental behaviours and attitudes affect a child's lifestyle and habits, such as their daily screen time (Lauricella et al., 2015). Proper monitoring is needed so as to ensure positive outcomes and to diminish the risks involved in this use. Adolescent socialisation, behaviour and development is affected by the microsystem, including peers, school, and family (Bronfenbrenner, 1979). In the next chapter the theoretical framework of this thesis, namely Bronfenbrenner's Bio-Ecological Systems Theory and Johnson and Ptoplampu's Techno-Subsystem, will be explored.

CHAPTER 3: THE BIO-ECOLOGICAL SYSTEMS THEORY AND THE TECHNO-SUBSYSTEM

3.1. INTRODUCTION

The previous chapter provided a review of literature. This chapter focuses on the theoretical framework that was adopted in this study, namely Bronfenbrenner's Bio-Ecological Systems Theory (1994), with an expansion of this to include discussion of Johnson and Puplamupu's (2008) Techno-Subsystem.

3.2. BRIEF OVERVIEW OF THEORY

The Bio-Ecological Systems Theory presents a comprehensive foundation for understanding the effects of different environmental influences on a child's development, by locating the child within a system of interconnected relationships from different levels of their environment. This theory proposes that human development happens through the mutual interactions that occur between individuals, the different levels of their environments (namely, their microsystem, mesosystem, exosystem, macrosystem and chronosystem), and the relationships within these systems (Bronfenbrenner, 1979). Bronfenbrenner (1979) arranged the developmental context of children into different environmental systems that affect one another from both within a given system, as well as between different systems.

Urie Bronfenbrenner, an American psychologist, formulated the Ecological Systems Theory to demonstrate how the inherent qualities of a child interacts with their environment to influence their development and growth (Guy-Evans, 2020). Bronfenbrenner's theory considers child development to be a complex system of relationships influenced by different levels of their surrounding environment, including the immediate setting in their family to school and broader cultural beliefs and values, customs, and laws (Guy-Evans, 2020). This theory focuses on the context and the quality of a child's environment. Bronfenbrenner's (1979) theory provides a lens to create a better understanding of the importance between home and parental influence in a child's life, notably with regards to technology use. Bronfenbrenner's (1979) model encompasses a lifespan developmental approach and is applicable theoretically to childhood, adolescence, and adulthood.

Urie Bronfenbrenner began his theory construction with the ecology of human development, and thereafter developed the bio-ecological systems theory. This theoretical perspective understands human development as a person-in-environment context and uses different forms of surroundings and relationships to assist in explaining development (Guy-Evans, 2020). Bronfenbrenner's (1979) theory was initially called the Ecological Systems Theory and addressed the child's surroundings and environments. In 1994, this theory was modified by including the biological disposition of the child and combined these with the environmental factors, becoming known as the Bio-Ecological Systems Theory (Griffore & Phenice, 2016). This framework consists of five environmental systems in which the child interacts, and which influence the child's growth, namely the microsystem, the mesosystem, the exosystem, the macrosystem, and the chronosystem (Bronfenbrenner, 1994).

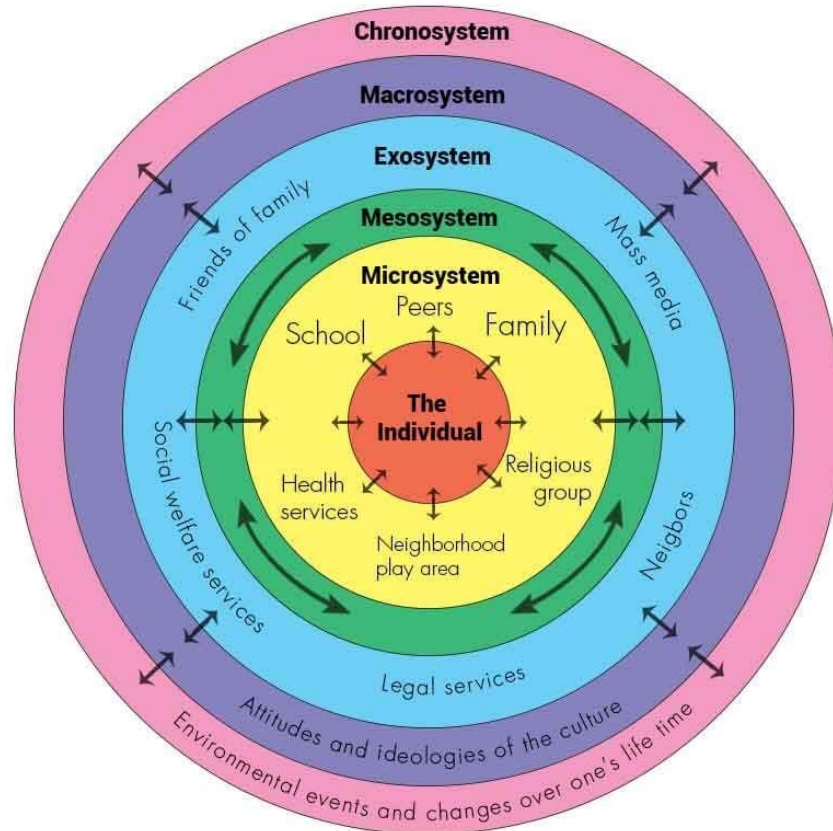


Figure 1: Bio-Ecological Systems Theory (Bronfenbrenner, 1994).

Figure 2 illustrates the key feature of this theory to be the interactions of the structure, both within and between these five systems (Bronfenbrenner, 1994). This shows how the close relationships to the individual has a direct impact, and where factors outside of these close relationships also play an important role in the individual's development (Guy-Evans, 2020). The social factors external to the individual influence their behaviour and development (Bronfenbrenner, 1979). Therefore, the environmental conditions to which an individual is exposed, both negative and positive, directly impacts their development.

This study was guided by Bronfenbrenner's (1979) bio-ecological systems theory that is formed by an understanding of human behaviour within one's natural environment. Bio-ecological systems theory examines how environmental influences impact an individual's behaviour. This framework illustrates the interconnection between an individual's developmental processes, their life content currently, and the era of development that influences an individual's behaviours within the ecosystem. Based on this theory an individual's development is influenced either negatively or positively by their existential environment (Bronfenbrenner, 1979). Bronfenbrenner's theory (1979) postulates that an individual's psychological and biological disposition, along with other environmental elements, all play a role in shaping a person's development. The theory devises a model where individual is embedded in an environment that consists of five concentric circles that exert their influence, with the individual in the centre. All these different levels are interconnected, and play a role in influencing an individual's environmental and behavioural adaptations (Bronfenbrenner, 1979).

3.2.1. THE BIO-ECOLOGICAL SYSTEMS THEORY LEVELS

The main assumption of this theory is that individuals interact with one another and with their environments on multiple levels, namely micro-, meso-, exo-, macro-, and chrono systems (Bronfenbrenner, 1994).

3.2.1.1 THE MICROSISTEM

The innermost level of this theory is the microsystem. This level represents the relations between an individual and their immediate surroundings (Bronfenbrenner, 1979). This system involved the roles, interpersonal relationships experienced by the individual, and the activities that occur within the individual's immediate environment (Bronfenbrenner, 1979). This system involves intimate contacts and personal connections, such as with family members, and important events, which often will serve as this individual's point of reference (Bronfenbrenner, 1979).

The microsystem involves structures such as family, school, and peers, for example. The manner in which these groups interact with the individual impacts their development, where the more positive and encouraging these relationships and environments are, the better the individual will develop (Ebersohn & Bouwer, 2015). This level includes bidirectional relationships, that is, toward the individual, as well as away from them. For example, parents of a child may influence behaviour and beliefs that their child holds but the child will also influence behaviour and beliefs that the parents hold (Paquette & Ryan, 2011). This is called a bi-directional influence and it happens at all levels of our environment (Bronfenbrenner, 1994). Bi-directional influences are the strongest at the microsystem level and have the greatest influence on an individual. However, interactions at all other levels can also impact an individual's inner structure (Paquette & Ryan, 2011).

A child's family is the social institution in which they learn how to fit in and navigate their society. This constitutes the most intimate of the systems for a given individual (Eliason, 2021). Children experience daily reality and socialisation in their family settings. Ceka & Murati (2016) defines the family environment as being the most vital for development and learning for a child. However, microsystems are not equal, as the influence that one system has may outweigh another, for example, the influence exerted by a family may supersede the influence of a peer group or vice versa, depending on the individual's developmental milestones (Eliason, 2021). Paat (2013) also explains that as children get older, the number of microsystems in which they interact inevitably increases.

Bio-Ecological Systems Theory postulates that if an individual's relationships in the microsystem breaks down, they will not have the necessary tools to explore other parts of their environment (Bronfenbrenner, 1979). Children who do not receive the required affirmations in the parent-child relationship may look for attention in places that are not appropriate (New World Encyclopaedia, 2020). Bronfenbrenner (1979) explains that a child who has a lack of affirmations will develop deficiencies later. These show themselves during adolescence in the form of a lack of self-direction. When some children grow to adolescence, their beliefs that their parents have authority over their behaviours and their prior obligation to obey their parents may decline (Paquette & Ryan, 2011). This may come

to bear in the concomitant context of the influence of peers, setting of rules, substance use, and the types of content that they choose to view (Darling, 2007). Whilst there are other adolescents who do believe that their parents have any authority over them, they are more likely to obey and disclose this information to their parents. Darling (2007) found that those adolescents had been exposed to parental monitoring, parental rules, and parental knowledge, resulting in adolescent's receiving the necessary tools to explore their environments.

As Bio-Ecological Systems Theory postulates, a child's primary relationships need to be with an individual who can provide them with a sense of care, where, in the context of this study, this person is considered to be the parent. The parent within the immediate circle of their adolescent's influence needs to foster the parent-adolescent relationship.

Bio-ecological theory also advocates the idea that we need to promote societal attitudes which respect the work that is conducted on behalf of children at all levels, including family, parents, teachers, work supervisors, and mentors (Paquette & Ryan, 2011).

The microsystem, which includes an individual's immediate family and their home environment, is the closest system to that person and all types of relationships, experiences, where interactions are more intense at this level (Paquette & Ryan, 2011). The parent-child relationship is seen to be the most important element of the microsystem. A parent's relationship with their child needs to promote a sense of caring and positive influence over a child's life. Parents need to provide suitable rules, knowledge, and monitoring, which can result in the child receiving the necessary tools to explore other areas within their microsystem.

3.2.1.2 THE MESOSYSTEM

The mesosystem constitutes the second layer in the ecological context, and consists of an individual's networks of the microsystem (Bronfenbrenner, 1994). This layer support the link between the different structure of an individual's microsystems (Guy-Evans, 2020). The system represents the links between at least two of an individual's microsystems in which they are active participants, such as interactions with family or peers (Paat, 2013). This ecological environment can impact an individual's social outcomes (Bronfenbrenner, 1979). Links happen continuously between the two or more settings containing the individual. This system includes family and school; family and parent's workplace; family and church; and family and the community (Guy-Evans, 2020). The lack of meaningful participation and link between a parent and their child's teacher, between a child and their neighbourhood, within the mesosystem can result in negative behaviours and developmental outcomes (Paquette & Ryan, 2011).

In this study, the mesosystem can be considered to consist of when a parent takes an active role in their adolescent's mobile device use by monitoring the usage, setting rules, and talking to their adolescent about safe use and the risks involved. All of these behaviours support adolescent growth and positive behaviour, which aids in creating a positive relationship with their adolescent.

3.2.1.3 THE EXOSYSTEM

This level includes the remote social settings that affect an individual indirectly, such as parental support network, neighbourhood, parent's workplace, and wider society (Bronfenbrenner, 1979). This system includes the processes and links that occur between two or more settings, with at least one of these not containing the individual ordinarily but in which there are events that happen that impact the immediate setting that does involve the individual (Guy-Evans, 2020). These can include processes occurring between a parent's workplace and their home, for example.

At this level, an individual may not be directly involved but they are impacted either positively or negatively by the interaction with their own system (Paquette & Ryan, 2011). Therefore, if a parent receives a promotion at work, this may positively impact their adolescent because their parent is now better able to provide for their needs (Ebersohn & Bouwer, 2015.).

In this study, for example, if a parent loses their job, this may negatively affect an adolescent if they are no longer capable of paying school fees, paying rent, or buying groceries. At the exosystem level it is vital for parents to maintain positive relationships at work, should they require support from their employer in order to take care of a sick adolescent for example.

3.2.1.4 THE MACROSYSTEM

Bronfenbrenner (1979) broadly defines this system as the large overarching set of culture, norms, beliefs, customs, social values, laws and government, which include the micro-, meso-, and exosystems. The year and historical period in which a child develops and matures influences their outcomes (Paat, 2013). According to Tylor (as cited in Wahab, Rose, & Osman, 2012) culture is an intricate whole that includes morals, knowledge, arts, customs, beliefs, and other learned capabilities, which are shared by individuals as members of a society, and are transmitted through generations. This underscores the importance of parents within a child's microsystem to learn and share the important positive qualities of culture more broadly. Additionally, the impact that the wider principles defined by the macrosystem have an effect throughout the interactions in all system layers. For example, if a certain culture believes that parents are solely responsible for raising their children, then this culture is less inclined to assist parents with required resources. Therefore, the success or failure of parents in carrying out these responsibilities for their children within one's microsystem context is impacted (Paquette & Ryan, 2011).

The macrosystem is distant, and broad to an individual but greatly influences the person (Ebersohn & Bouwer, 2015). Parental involvement provides children and adolescents with positive psychological wellbeing, and better functioning of the family unit (Baig, Ganesan, Ibrahim, Yosuf, & Mahfoud, 2021).

With regards to the current study, the macrosystem can be seen to include parental involvement in developing policies to promote a culture, which encourages parental involvement and positive family relationships. Cybersecurity is a concern for governments worldwide (Sutherland, 2017). This concern has been heightened by the drive for universal access to the internet for all people and the growing digital environment and the threats

arising from this access. In 2015 the South African government implemented a National Cybersecurity Policy Framework (National Cybersecurity Policy Framework-South African Government, 2015). The purpose of the framework is to create dependable and safe digital environments that enable the protection of information while simultaneously reinforcing shared values and understanding of cybersecurity in alignment with the national security mandates (National Cybersecurity Policy Framework-South African Government, 2015). The policies which relate to this matter and the study at hand include the Protection of personal information act (POPI Act) and the Cybercrimes Act.

The POPI act outlines the minimum standards which have to be met in terms of processing and accessing personal information that belongs to other individuals (Western Cape Government, 2020). The purpose of the Cybercrime Act is to prevent and reduce the amount of cybercrime in South Africa, and establishes cybercrimes as criminal offences. This act allows the minister of Justice to create regulations on information sharing (Cybercrimes Act in South Africa| Overview and Read, 2023). Technology is immersive and should be accessible to all individuals, however, it is the responsibility of the government to ensure that there are policies in place to protect their citizens from the potential dangers associated with the use of this technology.

3.2.1.5 THE CHRONOSYSTEM

The chronosystem reiterates individual changes and life transitions through time, such as a child's transition into adolescence, as well as major life changes that naturally occur over time (Bronfenbrenner, 1994). Additionally, Bronfenbrenner (1994) defined the chronosystem with respect to a lifespan context of development, noting that proximal process developmental effects are dependent on when and in which order they occur in a child's life, including when they occur within the historical framework (Bronfenbrenner, 1994). The chronosystem includes the aspect of time as it pertains to a child's environment. Components of this system can include the death of a parent for example (Bronfenbrenner, 1994). With age, a child's reaction to environmental changes may differ and they may be able to decide how that change will influence them (Paquette & Ryan, 2011).

The application of this system with regards to the current study confirms that parenthood involves responsibilities, duties, and childrearing tasks that parents have to perform. According to Williams (2021) these duties occur over a child's lifespan. High quality parental involvement is advantageous to adolescent's development and well-being. Adolescents who have involved parents have better social, emotional, and learning capabilities, and fewer behavioural problems (Roy & Giraldo-Garcia, 2018).

The chronosystem is applicable to this study, as it emphasises that parents have a nurturing and valuable role in their adolescents' lives.

3.3. THE ECOLOGICAL TECHNO-SUBSYSTEM

Bronfenbrenner (1994) focused on the interplay between the different environments in which an individual lives and believed that a relationship between the environments occurred in a space in which communication and information were vital. Bronfenbrenner's model

emphasises the interactions and overlaps between these systems. These systems also consider the events in the contexts where the individual is not present physically (Bronfenbrenner, 1994). In today's world, the home setting is impacted by events that occur online. This virtual world constitutes the place in which adolescents spend much time. This online interaction brings a new microsystem into the home (Gamble, D'Rozario, Bartlett, Williams, Bin, Grunstein, & Marshall, 2014).

When Bronfenbrenner (1979) developed the ecological systems theory, the significant role that technology plays in adolescent development was not yet fully appreciated (Johnson & Pupilampu, 2008). Bronfenbrenner's theory arose before television had become commonplace in most homes and the internet had flourished. Televisions formed part of an individual's microsystem. Since the development of Bronfenbrenner's theory (1979), and his modification to include biological aspects (1994), the immense impact that technology has in our lives has become better understood. In this regard, Johnson and Pupilampu (2008) theorise the techno-subsystem, as that which forms part of individual's microsystem, and accounts for the continual increase in accessibility and the complexity of technology to children. Figure 2 illustrates the inclusion of the interaction of the child's living elements (for example, their peers) and their non-living elements (for example, a tablet) of communication, recreation, and information technology available in their immediate environment. From the perspective of the bio-ecological systems theory, the techno- subsystem presents the bidirectional interplay between a child and their microsystem (Johnson & Pupilampu, 2008). This model demonstrates that modern mobile technology has become part of an adolescent's regular and recurring social interactions.

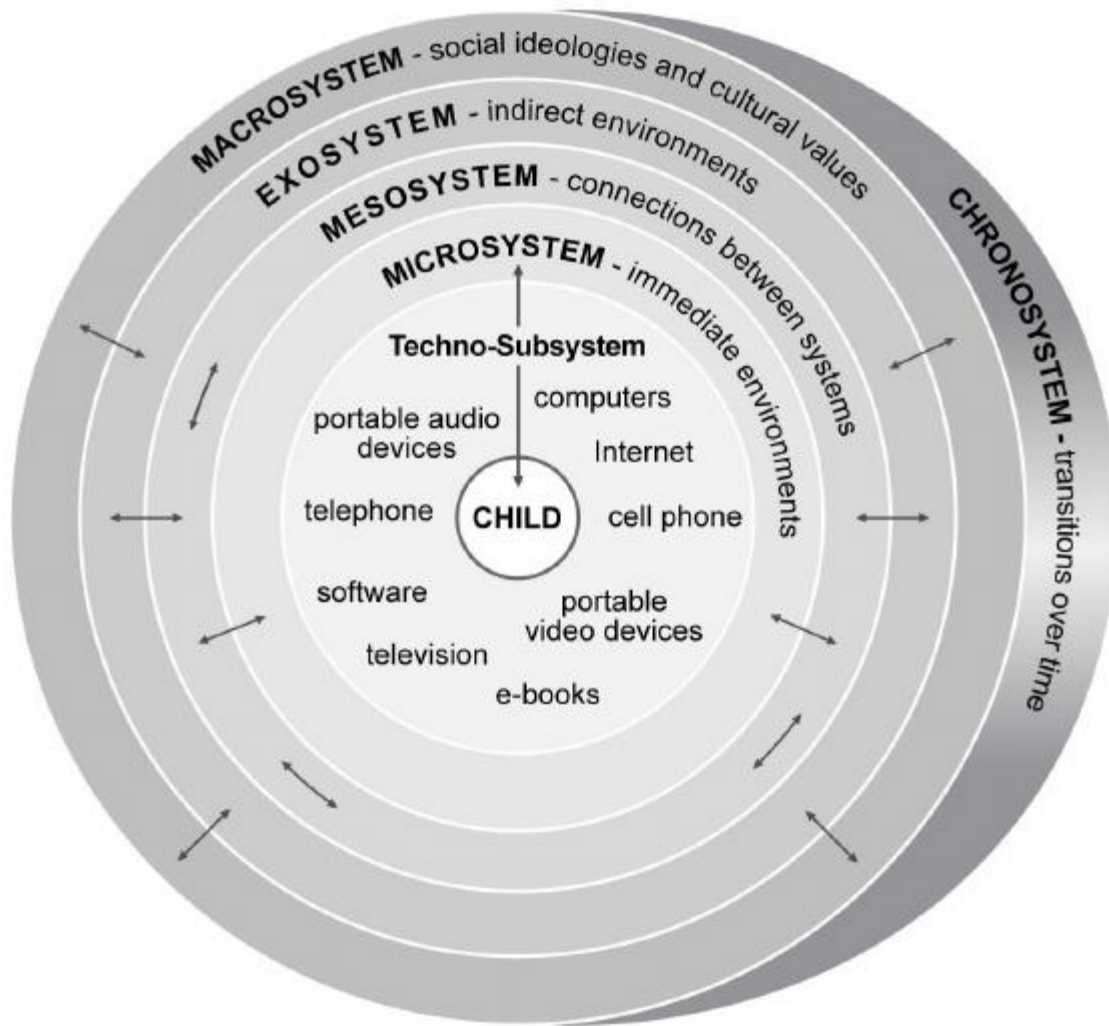


Figure 2: The bio-ecological techno-subsystem (Johnson & Pupilampu, 2008).

Figure 2 illustrates the techno-subsystem as an extension of the microsystem, and explains the interaction between an adolescent and modern mobile devices, as well as the interaction with the microsystem of the adolescent that is mediated by this technology, for example using social media platforms to communicate with their peers (Johnson & Pupilampu, 2008). With regards to mesosystems, our digital social media environments interact with other microsystems, including school, home and work, as well as other physical microsystems. All individuals have to navigate the interaction between their digital environment and their physical environments. The economic situation of a family can often determine the technology that is present in a home. For example, if a parent works as an IT analyst and makes a good income, then the child might have access to the latest and best smartphone. Social media use policies (including at schools, workplace or other policies), privacy, and other laws which may influence the way an individual engages with different systems. For example there are specific age requirement laws around certain social media platforms. These are examples of influences at the exosystem level. In terms of the macrosystem and the techno subsystem, at this level the cultural value that a parent has attached to modern technology use is considered, such as a parent's belief that technology has educational benefit. Children who were born in the age of the internet have radically different ways of perceiving the world around them in comparison to their parents who were born without the

internet being a normal tool in one's life, which may also speak to the chronosystem. (Paquette & Ryan, 2015). The excessive use of modern technology will have an impact on an adolescent's interactional systems, as suggested by Bronfenbrenner (1979), where, for example, excessive use of the internet will result in less time being spent on interactions between parent and child, thereby adversely affecting the microsystem (Johnson & Puplampu, 2008).

Society requires that parents adapt to manage the extensive association between their adolescent and modern mobile devices. The mediation methods employed by parents to include the use of mobile devices by their adolescents can be considered to be a parental adaptation of the microsystem level, towards exerting an influence on their adolescent's use of these devices. Parental mediation within in the microsystem of an adolescent can assist in shielding the adolescent from the potential negative influences and foster safe use and the positive outcomes associated with the use of modern technologies. Within the microsystem of the parent and child, modern technology has the ability to transform the traditional parent-child relationship and roles (Facer, Sutherland, Furlong, & Furlong, 2001). Since adolescents have grown up with modern technology being readily available and used in their homes, they are able to adapt easily to innovations (Facer et al., 2001). In comparison, adults who have had to grow into the technological advancement tend to feel less confident and uncomfortable with changes and new developments in technology (Knowles & Hanson, 2018). The advanced knowledge that adolescents have about using technology gives them a great deal of power in the home, particularly with parents, who are less certain about themselves when using these devices (Auxier et al., 2020). The limited abilities that some parents face in mediating their adolescent's technology use can create concerns about safety, and potential risk of harm (Livingstone, Nandi, Banaji, & Stoilova, 2017).

There are a number of different mediation methods that parents can make use of when dealing with mobile device use by adolescents (Steinfeld, 2021). Although a parent's direct influence on mobile media (macrosystem) is restricted, within the microsystem of the parent and child, parents are able to manage the content to which their adolescent/s is/are being exposed, the amount of time that they are allowed to use these devices, and the number of different devices they are allowed to use (Coyne, Radesky, Collier, Gentile, Linder, Nathanson, Rasmussen, Reich, & Rogers, 2017).

Through the Bio-Ecological Systems Theory lens, the use of mobile devices by adolescents can be examined through the micro-level framework (for example, the role of parents and peers in this use); the meso-level framework (such as the influence of the school); and macro-level frameworks (for example the influence of cultural values and norms) (Bronfenbrenner, 1979). Considering the way that some parents may choose to restrict their adolescent's access to certain mobile devices, there may be cultural norms and values that discourage a child's use of these devices (Valkenburg & Piotrowski, 2017). In this way, these different contexts can influence a decision regarding whether an adolescent is permitted to use mobile devices, as well as the resulting experiences and effects of such use (Valkenburg & Piotrowski, 2017).

3.4. STUDIES ON PARENTAL PERCEPTIONS AND MEDIATION OF CHILDREN OR ADOLESCENT MOBILE DEVICE USE

The Bio-Ecological Systems Theory, with Johnson and Ptoplampu's (2008) Techno Subsystem approach, has proven to be useful in a few studies that have been conducted in the area of parental perspectives of child and adolescent mobile devices use internationally (Rahman & Farzana, 2019; Dardanou, Brito, Dias, Fotakopoulou, Sakata, & O'Conner, 2020). In a study focusing on the role that parents play in quality screen time for children (Rahman & Farzana, 2019), the results revealed a strong relationship between parental screen time and children's screen time.

Another study conducted by Dardanou et al. (2020) found that parents across different cultures have similar concerns and ideas relating to technology use by children. The different cultural discourses, including what a 'good childhood' involves, the importance of outdoor activities, differences between learning and playing, and concerns about technology addiction were reported by parents from Japan, Norway, and Portugal.

Hill (2017) and Vaterlaus, Beckert, Tulane, & Bird (2014) used the Bio-Ecological Systems framework to explore parents' perceptions and the perceived effects on their children. These studies found that parents usually employ multiple mediation methods simultaneously and that the type of technique chosen is dependent on the parent-child or parent-adolescent relationship. Vaterlaus et al. (2014) also revealed that the resulting outcomes of parental mediation methods are influenced by an open relationship between adolescents and parents and a mutual feeling of trust.

These studies have all considered the different factors that fall into one or more of Bronfenbrenner's systems and include the child's age, parent-child or parent-adolescent relationships and cultural and societal norms. The notion of parental mediation was initially proposed when researching child exposure to television and was closely related to parenting practice theories (Jiow, Lim, & Lin, 2016). However, more recently, there have been several models and theories developed relating to digital media (Jiow et al., 2016). However, parental perceptions concerning adolescent's engaging with modern mobile devices remains under-researched (Connell, Wartella, & Lauricella, 2015). This dissertation explored parental perceptions and experiences with navigating their adolescent's mobile device use from a South African perspective.

3.5. APPLICABILITY OF THE BIO-ECOLOGICAL SYSTEMS THEORY AND THE TECHNO-SUBSYSTEM TO THIS DISSERTATION

This study examined the nests in which adolescents grow and the use of parental perceptions and experiences as a lens through which to form an understanding of this phenomenon. Ecological systems theory refers to this area as the immediate environments in which an individual lives out their life, as the process concerns the relations within and between these different settings, as well as the formal and informal social contexts in which these settings are embedded (Bronfenbrenner, 1979). The environments that this study explored were the home, school, and social nests, through a parent's experiences and perceptions.

Johnson and Ptoplampu's (2008) addition of the techno-subsystem allows for the inclusion of the online lives and time spent using mobile devices by adolescents. The digital space that this study focused on were the use of smartphones and tablets by adolescents.

Bronfenbrenner (1979) states that the development of individuals occurs over five systems, namely the microsystem, mesosystem, exosystem, macrosystem, and chronosystem. None of these systems exist on their own and the interaction between them is highlighted by Bronfenbrenner (1994). This study aimed to examine the lived experience of parents who live in their adolescent's systems to create an understanding of this experience.

Cyberpsychology and digital research is an emerging and developing field of study in South Africa. The use of Bronfenbrenner's (1994) and Johnson and Ptoplampu's (2008) theoretical framework allowed for a more holistic approach to the exploration of parental perceptions and experiences regarding adolescent mobile device use. Despite the main focus of this study being the microsystem and techno-subsystem, the use of these theoretical frameworks allowed for an exploration into the different factors from the various levels, namely the microsystem, mesosystem, exosystem, macrosystem, and chronosystem. Factors such as parent-adolescent relationship (microsystem), peer influences (mesosystem), workplace influences (exosystem), effects of one's community (exosystem) (Bronfenbrenner, 1994). School involvement (mesosystem), societal values of mobile devices (macrosystem), as well as developmental circumstances such as adolescence (chronosystem) were discussed by participants of this study.

3.6. CONCLUSION

Bronfenbrenner's Bio-Ecological Systems Theory (1994) together with Johnson and Ptoplampu's Techno-Subsystem (2008), were adopted in this study and were used to inform the construction of the interview guide.

Urie Bronfenbrenner's (1994) Bio-Ecological Systems Theory was used as a framework in this study, which explored parental perceptions, knowledge and mediation methods used for managing their adolescent's use of mobile devices. Bronfenbrenner (1979) views human development and growth to be a function of the interactions between the developing individual and their environment. According to Bronfenbrenner (1979), this meeting of context, time, and place is known as an ecology. If an individual does not have the correct fit with the surrounding ecology, this will hamper development to their full potential (Bronfenbrenner, 1979). The coinciding contexts of home, school and society shape adolescent experiences and development (Bronfenbrenner, 1979). This study examined the nests in which adolescents grow and use parental perceptions and experiences as a lens through which to form an understanding of this phenomenon. Ecological systems theory refers to this area as the immediate environments in which an individual lives out their life, as the process concerns the relations within and between these different settings, as well as the formal and informal social contexts in which these settings are embedded (Bronfenbrenner, 1979). The environments that this study explored were the home, school, and social nests, through parents' experiences and perceptions.

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3.7. SUMMARY

An understanding of parental perceptions and mediation of adolescent mobile device use from a South African perspective is important. However, there is limited extant research in this area. It is evident that parental perceptions and mediation cannot be fully understood without exploring the various influences that shape these beliefs and methods of parents within a family context (Bronfenbrenner, 1979). This chapter discussed the influences of parental perceptions and mediation, within the context of the different spheres found in bio-ecological systems theory (1994), and the techno-subsystem. These spheres included the microsystem, mesosystem, exosystem, macrosystem, and chronosystem.

This theoretical framework provides an effective method for the researcher to explore the influences that affect parental perceptions and choices of mediation methods and allows for a more holistic understanding of how these different influences have contributed to their perceptions and choices of mediation methods used within their home. The subsequent chapter will discuss the methodology used in this research study.

CHAPTER 4: METHODOLOGY

4.1. INTRODUCTION

The previous chapter provided a brief discussion on the theoretical framework used. This chapter discusses the methodological aspects of this study, including the research design and paradigm, the research procedure, research sample, data collection aspects, data analysis methods as well as ethical considerations.

4.2. RESEARCH PARADIGM AND DESIGN

A Qualitative, interpretivism, approach, which is used to answer questions in relation to social phenomena and personal meanings (Rahman, 2016), was used to meet the aims of the study and to answer the research questions.

There are several strengths of qualitative research that made it the most suitable approach for this study. Qualitative research creates the opportunity to discover attitudes within a population of interest (Rahman, 2016). This approach allowed for a thorough account of the viewpoints, feelings and experiences of the participants of this study to be gathered. According to the interpretivism approach individuals are complex in nature and people experience and comprehend the same reality differently and have their own personal reasons for their actions. Interpretivism is established on the belief that reality is subject and socially constructed (Thomson, 2023). This means that we are only able to understand a person's reality through their lens and their experiences of their reality. This approach is qualitative in nature and relies on questioning to explore and form a deep understanding of the topic being explored. This approach also gave the researcher the opportunity to explore the personal experiences of the participants and to learn how meanings were shaped for these individual. From the lens of the Interpretivism approach the researcher was able to view the realities of the participants and to learn how their experiences and opinions impacted their realities. The researcher was able to gather a rich collection of data and to form an understanding of the subjective realities of the participants and their personal realities around the topic of adolescent mobile device use.

A review of existing literature revealed gaps in knowledge relating to parental monitoring, and therefore there was a focus on parental education and support of adolescent mobile device use. The qualitative nature of this study was aimed at forming an understanding from a parent's perspective of the possible harmful consequences of mobile device use on adolescents. The collection of data fostered an understanding of the surrounding issues from the parent's perspective.

4.3. RESEARCH PROCEDURE

Qualitative data collection provides valuable information about the participant's subjective and personal understandings of his or her own reality and how this understanding converges with their opinions about how mobile device use affects their family.

Purposive sampling was used to seek out participants that are considered to be representative of the target population and uses specific criteria to identify the most suitable individuals. Once the criteria had been made, the researcher approached individuals who met this criteria and explained the research and research aims and enquired as to whether they would be willing to participate in an interview. Purposive sampling is understood to be the most beneficial non-probability sampling method (Wagner, Kawulich, & Garner, 2012).

Individual interviews were conducted with each of the participants using Skype. Interviews are particularly useful for retrieving descriptive information that will assist us in seeing the world through the participant's eyes (Wagner et al., 2012). Semi-structured interviews are a type of qualitative data collection strategy. These interviews allow the researcher to explore a series of predetermined and open-ended questions (Wagner et al., 2012). This type of approach promotes focused and conversational two-way communication (Wagner et al., 2012). Therefore, semi-structured interviews are the most suitable data collection method for this study, as they complement its aims.

The researcher contacted the individuals identified, who met the necessary requirements for participation in the study and inquired as to whether they would be interested in participating in the study subsequent to an initial conversation. The purpose of the study and what would be expected of the participants was explained to each participant. Once the participant showed interest in participating in the study, the researcher gave them the recruitment letter, which explained all the relevant details, including the purpose of the study, the participant's rights, the procedure, contact details for the researcher's supervisor, and contact details for local psychologist. Once informed consent was given, the researcher set a date and time for the interview with each participant.

Due to the study taking place during the pandemic, all semi-structured interviews were conducted using Skype. The interview began with a section to obtain biographical information about the participants, including age, marital status, age and number of children in the household. Once this information was obtained, the questions from the interview guide were used. These questions revolved around parental perceptions and beliefs about their adolescent using mobile devices, their knowledge about the risks involved in using mobile devices and the methods that they used to monitor and control their adolescent's use of these devices.

The gathered information was stored on a password-protected computer in a locked cupboard of the researcher's office. The researcher continuously made notes and examined their reflexivity journal throughout the research process. Upon the completion of the data collection stage, the researcher started to analyse the data.

4.4. RESEARCH SAMPLE

Typically, qualitative research studies include a small sample of participants using purposive sampling, where the researcher chooses participants that are considered to be representative of the population of interest to participate in the study (Wagner et al., 2012). This form of purposeful selection allows for the creation of relationships that assist the researcher in answering the research questions in a productive manner by including the

participants who share a common characteristic, understanding, or experience (Glen, 2015). This applied in this study, as the participants who were interviewed had adolescents and personal experience with the effects and experiences of their adolescent's using mobile devices. This allowed the researcher to collect the relevant information required for answering the research questions effectively.

The purposive sample in this study included parents who had adolescent children between the ages of ten to sixteen years old and resided in the Amanzimtoti area.

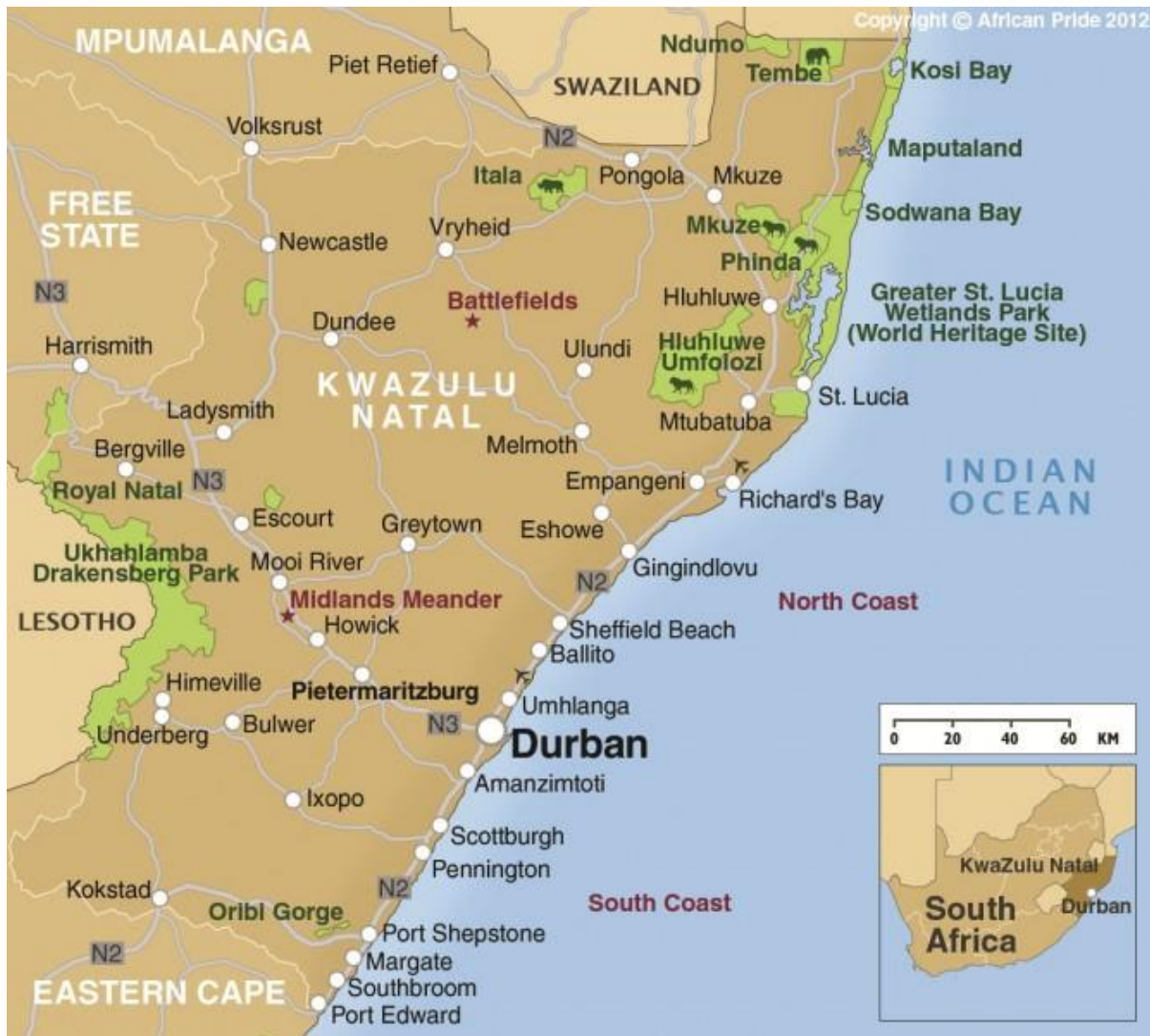


Figure 3: Map of Durban, Kwazulu-Natal, showing Amanzimtoti (Grimett, 2022).

Amanzimtoti is a coastal town which is south of Durban in Kwazulu-Natal, South Africa. For the purpose of this study participants living in the Amanzimtoti area were included due to the purposive sampling measures of the study. Additionally, during the time in which the study took place, the Covid-19 pandemic safety restrictions were enforced, making it difficult for the researcher to access potential participants. According to the laws in place at the time, all research interviews had to take place online due to safety precautions, thus the researcher had to reach out to participants from the area in which she was familiar, as she was able to contact potential participants to discuss the study and to ensure suitability. The Covid-19

safety restrictions limited access to a larger group of participants at the time. Thus, potential participants from the interest population were contacted based on accessibility and suitability for the study. Upon potential participants accepting to participate in the study, an interview date and time were arranged with each of the participants.

Although there are no defined limits for the sample sizes in qualitative research, the literature does advise that data saturation can be attained with as little as six interviews (Guest, Bunce, & Johnson, 2006). Data saturation was reached in this study after eight interviews had been conducted. Data saturation was reached for this study after continual reviews of the data transcripts. By taking note of the repetition of data from the participants, an adequate collection of data was accepted after the completion of twelve interviews. According to Strauss and Corbin (1998), saturation occurs when the addition of more participants to the study does not produce new information or different perspectives. The research participant sample and the data collection methods will now be explained.

4.4.1. DESCRIBING SAMPLE CHARACTERISTICS

Due to the fact that this study focused on parents' perceptions, the population of interest were parents. The criteria that the participants needed to meet were to have an adolescent between the ages of ten to sixteen years of age. Additionally, the participants had to have at least one mobile device with internet access, which their adolescent is allowed to make use of for at least one hour per week and the participants had to understand English from a first or second additional language perspective. There was not a specific parental age group required. Both male and female participants, from no particular age group, were included. While not focused on obtaining the biographical details as a basis for answering the research questions, the biographical data does, however, provide a profile of the participants in this sample population group.

4.4.2. PARTICIPANT BIOGRAPHICAL DATA

The interview consisted of a biographical information section and questions that directed the interview. The biographical section consists of biographical information relevant to the study. These include the participant's age, gender, marital status and the number of children in the household. The participant's age is included to work out the age range of the participants. Gender has been included in this section so as to ensure that both male and female participants were represented in this study, but it did not influence the research. The number of children and their ages are included, to assist in creating a clearer picture of the family unit. Marital status is a key biographical factor, as research has shown that single parents have different styles of parenting to that of married parents (Yaffe, 2017).

The biographical information collected from the participants is summarised in the table below:

Participant number	Age	Marital Status	Gender of adolescent
01	49	Married	Female
02	41	Married	Female
03	51	Married	Female and male

04	45	Married	Female and male
05	47	Married	Male
06	44	married	Male
07	54	Married	Female and male
08	48	Divorced	Male
09	50	Married	Female
10	53	Single	Female

Table 1: Summary of Participant's biographical data

4.5. DATA COLLECTION METHOD

The data collection measures that were used in this study will be described below and can be seen in the appendices section.

Individual interviews are regarded as a valuable method for acquiring insight into an individual's experiences, perceptions, and understandings about a particular topic of interest, and contributes to the collection of in-depth data (Ryan et al., 2009). In this study, a semi-structured interview guide was created (Appendix B), using questions from various surveys (Smahel, Machackova, Mascheroni, Dedkova, Staksrud, Olafsson, Livingstone, & Hasebrink, 2020; Auxier et al., 2020) that have proven to be reliable and valid as a guide when creating these questions, and used the bio-ecological systems theory and the techno-subsystem as a framework. This allowed the researcher to steer the conversation in particular areas of interest when exploring the topic of study (Trochim, 2006).

The interview schedule allowed the researcher to obtain information about the areas of interest, while still providing the participants with control of the direction of the conversation by means of questions that were open-ended and by allowing the participant to speak freely (Adams, 2015). The interview schedule was designed to gather information in line with a social constructionist approach and allowed for information to be obtained about parents' perceptions, behaviours, monitoring methods employed and experiences of adolescent mobile device use. The semi-structured interview gave the participants the freedom to discuss the matter in their own words and to openly share their opinions and experiences on how these experiences shaped their behaviours. The interviews gave the participants the opportunity to express their views and share their experiences in a way that they saw fit, with no restrictions as to how the questions needed to be answered. This allowed for the participants' personal points of views to be shared and a better understanding to be formed by the researcher.

4.5.1. STUDY PROTOCOL

The collection of data commenced with the appraisal of the answers to the interview questions by the first two participants interviewed. This served to ensure the trustworthiness of the questions in allowing for the collection of data that was required for this study. The interview commenced with the biographical questionnaire, which included closed-ended questions about the individual and their family structure (see Appendix B). This interview guide includes the list of open-ended questions that were adapted from Pew research centres survey of US online health habits (Fox & Duggan, 2013), and their survey on

Parents, teens, and digital monitoring (Anderson, 2016). By using these surveys as a guideline in creating the interview guide the researcher was able to explore the topic of parental perceptions linked to the literature review by asking questions relating to knowledge, perceptions and beliefs, parental monitoring and controlling methods, and potential gaps in parental knowledge in these areas. When necessary, there were additional questions asked to assist in clarifying or further examining the responses given to the questions.

So as to ensure the confidentiality of the participants and to adhere to the Coronavirus (Covid-19) Lockdown safety measures, all interviews were conducted using Skype. All interview sessions lasted between 20-40 minutes in length.

4.5.2. STUDY TRUSTWORTHINESS

Trustworthiness

The term 'trustworthiness' in qualitative research is the equivalent of validity and reliability in quantitative research. However, since qualitative researchers do not use instruments with metrics about reliability and validity, it is important to address the methods that qualitative researchers use to ensure that their findings are confirmable, credible, transferable, and dependable (Korstjens & Moser, 2018). Trustworthiness in this study involved establishing the following four concepts:

Credibility

The term 'credibility' refers to the consistency of the research findings to reality, or the confidence in the truth of the research findings (Korstjens & Moser, 2018). This study ensured the credibility of the research findings by adopting an appropriate research method. The use of semi-structured interviews allowed the researchers to gather data that answered the research questions. The credibility of a study is determined by the simultaneous reviewing of the developing data so as to form themes, categories, interpretations, and explanations (Creswell & Miller, 2000). In this study, credibility was established by providing comprehensive descriptions of the themes that emerged to allow the readers to share the experience of the participants in this study (Creswell & Miller, 2000). These themes included the three main themes of parental experiences and perceptions relating to their adolescents using mobile devices, parents perceiving their adolescents as not being completely safe from harm when using mobile devices, and parents employing different safety strategies and rules in an attempt to protect their adolescents when using mobile devices.

Credibility illustrates that the exploration was carried out in a manner which ensures that the subject was identified and described accurately (Korstjens & Moser, 2018). The researcher ensured this by accurately capturing and reflecting on the participants' views by reviewing the information provided by the participants.

Transferability

Transferability refers to the extent to which the research findings are applicable to other contexts, or the degree to which the study results can be transferred to other settings and contexts with other respondents. Transferability was ensured in this study by providing rich descriptions of the context in which the study took place, and by providing information about the characteristics of the participants, the length of the study, and the methods used for data collection and analysis. The researcher ensured transferability further by using purposive sampling to collect sufficient rich data and by providing background information to the study (Korstjens & Moser, 2018). Additionally, transferability was ensured by thoroughly transcribing the collected data and by reflecting the information comprehensively and precisely.

Dependability

Dependability refers to the stability of the research findings over time (Korstjens & Moser, 2018). The researcher needs to ensure that they have provided enough information to allow other researchers to repeat their work. This research study provides an understanding of the parental perspectives and experiences regarding adolescent mobile device use, and has the potential to contribute to more complex findings and a richer database.

To ensure dependability the researcher used a reflexive journal throughout the research process to record ideas and thoughts to assist with reflections and analytic observation (Nadin & Cassell, 2006). The reflexivity process required the researcher to participate in critical self-reflection, specifically focusing on personal beliefs, preconceptions, bias, the researcher's relationships and how these could have influenced the research participants (Korstjens & Moser, 2018). This process assisted in guaranteeing the internal validity of the study. Appendix E illustrates the reflex journal created by the researcher. After each interview, the researcher reflected on the session and the interview process, and documented her thoughts. Appendix F presents the qualitative audit trail conducted by the researcher. Both the reflex journal and the audit trail were used to assist in curbing bias in this research study.

After every interview, a new entry was made, and the entry was done straight after the closure of the interview. Each new entry began on a new page, and included the date and a brief biographical description of the participant. The researcher reflected on the interview experience, both from a practical perspective and from the experience of the interview as a social perspective. These reflections included the perceived success of the interview, the researcher's feelings throughout the interview, the main themes throughout the interview, the parenting style of the participant, the participant's beliefs about technology, contradictions or abnormalities that appeared and how these could influence the theories and methodology of the study.

This served several functions. The practical comments allowed the researcher to explore issues in the methodology (such as the competence of the interview guide), and enhanced the content of the gathered data by noting the reoccurring themes and non-verbal communication or behaviours of the participants. Including notes on how the researcher experienced the encounter from a social perspective allowed the researcher to reflect on her

own beliefs, values and assumptions and how those affected the research. The reflexive journal also aided in keeping track of the research process as a whole.

Furthermore, the researcher ensured dependability by describing what the researcher planned through the research design, how the design was implemented and provided a detailed description of the data collection process (Nadin & Cassell, 2006). Additionally, the researcher used the same data collection method, in the form of a semi-structured interview schedule, for all participants. These were employed so as to ensure that the data correlated to create dependability.

Confirmability

Confirmability refers to the degree to which the research findings could be confirmed by other researchers (Korstjens & Moser, 2018). Both confirmability and dependability allows other researchers to follow the same procedure and to arrive at a similar set of results (Korstjens & Moser, 2018). The audit trail (Appendix F) that the researcher documented is a strategy that was useful for achieving confirmability and dependability.

A research audit trail is a qualitative procedure that is used to ensure the trustworthiness of a research study's findings (Carcary, 2009). The audit trail enables the reader to examine a researcher's logic and whether the findings of the study can be relied upon (Carcary, 2009). The researcher preserved an audit trail, which included the maintenance of the raw data collected, including notes and the preliminary coding themes from the data analysis. Throughout the study, trustworthiness was supported by employing a process of reviews with the study supervisor. Feedback and external audits by the supervisor assisted in identifying and deterring any bias that might have threatened the research findings.

TRANSPARENCY IN RESEARCH

The researcher guaranteed vigilance and honesty about any pre-existing perceptions, beliefs, thoughts and emerging themes with the analytic aim of listening to the participant's experiences with an open mind (Barbour & Schostak, 2005). This process allowed the researcher to acknowledge their positionality (such as education and economic level), subjectivity (the personal attributes and history of the researcher that form the basis for beliefs) and embodiment (the researcher's personal traits that cannot be altered or changed, and are fixed, such as age, gender, and race) (Glense, 2016). Although one can argue the fact that an individual can never truly know himself or herself fully, the acknowledgement of the researcher of their potential bias related to these characteristics can assist in strengthening the validity (Glense, 2016). This reflexivity process is aimed at increasing the accuracy, validity and legitimacy of the research (Glense, 2016).

4.6. DATA ANALYSIS

The data collection and analysis of gathered information will be discussed in the sections below. Interviews were conducted using a semi-structured interview guide and analysis of gathered information was done following a thematic analysis process, as outlined by Braune and Clarke (2006).

4.6.1 INTERVIEW SCHEDULE DESIGN

The semi-structured interview format provided the researcher with an ability to adjust the order and the phrasing of the research questions. The interview schedule was used to guide the researcher with the conversation held with the participants. This approach was suitable for this study because it granted some flexibility with the interviews and allowed empathy with the participants when deemed necessary by the researcher. This approach was selected to further encourage a valuable data collection (Robson & McCartan, 2016).

The interview format included a collection of baseline information, introductory questions, topic headings, important questions and a closing question (Robson & McCartan, 2016). During the interview design phase, Kvale and Brinkman's (2009) interview inquiry stages were applied. Their seven stages guided the researcher during the design stages. The initial step in composing the interview guide involved the clarification of the 'what' and 'why' of the questions relating to the aims of the interviews and the area of concern being explored, namely, parental perceptions of adolescent mobile device use. The 'how' of the interview guide involved making a decision as to which interview technique and analysis method would be appropriate for obtaining the required information. The second step in this process required the researcher to plan the study design and any ethical aspects involved. Stage three included the interview schedule design and conducting the pilot interviews. Subsequently, after the pilot interviews, this was amended. Throughout stage three interpersonal connections during the interviews was maintained, whilst reflecting on the desired data collection. The stages involving the transcribing of the collected data, analysing this data, and verifying and reporting the data will be discussed in detail in this chapter.

It was imperative that the design of the questionnaire allowed participants to be comfortable and relaxed throughout the interview process. After achieving this, the interview questions could then be discussed so as to gather information pertaining to the research questions. The interview guide was used to motivate the participants to discuss the relevant topics (Willig, 2008). In this way, the participants addressed the areas of interest, supporting the accumulation of data suitable to the research questions.

The interview began by collecting personal biographical data about the participant and their family. Subsequently, questions were asked about the area of focus. The link between the research questions and the interview guide questionnaire is outlined in the table below.

Areas explored	Research Question 1	Research Question 2	Research Question 3
Adolescent mobile device usage	X		
Attitude to mobile devices	X		
Parental experiences of mobile devices	X		
Parental perceptions of mobile devices	X		
Concerns about mobile devices		X	X
Technological knowledge		X	
Safety concerns		X	X

Support required	X		X
Monitoring methods		X	X

Table 2: A visual representation of the link between the research questions and the interview guide questions.

Questions concerning adolescent mobile device use were used to explore whether parents allowed their adolescent to have their own personal mobile device, the age from which they were allowed to use these devices and how often they were allowed to use them. This assisted in forming an understanding of their experience on this matter. Parents were asked about personal experiences and perceptions and the support that they felt they required on this matter. This information supported answering Research Question One.

To address Research Question Two, parents were asked about their concerns relating to adolescent mobile device use and their personal and their adolescent's technology knowledge. Their personal experiences and perception also shed light on this area of interest.

Research Question Three was addressed by asking questions about safety protocols utilised by parents to protect their adolescents from the dangers associated with using mobile devices. Their personal concerns shared in other questions also assisted in understanding their needs for using safety strategies in their homes. The detailed interview guide is provided in Appendix B.

4.6.2 INTERVIEW PROCEDURE

Participants provided the researcher with their contact information upon expressing an interest in participating in the study. The researcher contacted the participants to confirm participation. Participants were provided with recruitment letters. The research purpose was explained to all participants, both in writing in the recruitment letter and verbally by the researcher (Appendix A). Due to the pandemic safety measures in place at the time of the interviews, all interviews were conducted online, as noted, using the Skype.

During the interview and analysis process it was important for the researcher to be aware of the possibility that participants tend to align with the situation of the interview and the responses could reflect the researcher bias (Willig, 2008). Thus, it remained important for the transcription to include both the researcher's and the participant's comments.

Before beginning the interviews, all participants were requested to supply their signed consent of their agreement to take part in the interview, and for the collected data to be utilised for research (Appendix A). Information pertaining to confidentiality and what the data would be used for, was shared with the participants. Permission to voice record the interview was obtained. The researcher built rapport with the participant by engaging in general talk before commencing with the interviews. To encourage the participants to feel comfortable and relaxed, the interview began with some factual biographical information questions. Subsequently, this was followed with questions about their adolescent using mobile devices, leading to specific areas of interest, as highlighted in the interview guide.

4.6.3 DATA ANALYSIS

The conducted interviews were transcribed verbatim. Subsequently, Braun and Clarke's (2006) guidance on conducting thematic analysis was followed. The six phases described by them are:

- (1) Phase one: Become familiar with the gathered data
- (2) Phase two: Generate initial codes from the data
- (3) Phase three: Search for meaning units
- (4) Phase four: Review the themes
- (5) Phase five: Define and name the themes
- (6) Phase six: Produce the report

Thematic analysis is an interpretive and subjective process which is believed by some researchers to not have proper conceptual tools in guiding the analysis process (Kiger & Varpio, 2020). However, Braun and Clarke (2006) supplied detailed directions for use when conducting thematic analysis. Appendix G illustrates the six stages that were involved in the data analysis process. The successive passages will provide an explanation of the analysis process that was followed as recommended by Braun and Clarke (2006). This aids in creating transparency in relation to the ways in which the discovered themes were formed from the collected data. While this process has been presented in a linear, systematic way, it needs to be made clear that the researcher's analysis was a reflective and iterative process.

4.6.3.1 PHASE ONE: BECOME FAMILIAR WITH THE GATHERED DATA

As a result of the use of semi-structured interviews in the data collection process and the researcher's knowledge due to her role as a high school counsellor, she had some initial ideas relating to the area of study. The researcher being familiar with the study area did not necessarily mean that all knowledge and information was known. The researcher still needed to engage with the transcription data to acquire a comprehensive view on participant information. Moreover, this phase also directly connects with the researcher's approach to establishing a reflex journal as it was important for the researcher's previous knowledge and practical exposure on the area of focus to not contaminate the immersive process of familiarising oneself with the interview. The transcription of the interviews included relevant non-verbal cues, such as laughing. All participants' citations recorded were transcribed verbatim. After transcribing the data, immersion and familiarisation was executed through the repeated reading of the transcripts before any attempts at coding the data began.

4.6.3.2 PHASE TWO: GENERATE INITIAL CODES FROM THE DATA

A composite approach (Fereday & Muir-Cochrane, 2006) was used during analysis. The gathered qualitative data was analysed using inductive approaches. This study involved asking participants an array of questions and coding the collected data around those questions. The initial codes stemmed from data driven codes and can be found in the initial themes that emerged. Data coding was conducted using the pre-specified research

questions (Fereday & Muir-Cochrane, 2006). Appendix H illustrates the initial coding of the transcript of Participant 01.

The inductive approach to the data analysis process involved shifting from the specified research questions to contemplating the emerging themes by considering the data set as a whole. Accordingly, parental perceptions were analysed from an inductive technique to identify the predominant themes and subthemes.

All three research questions were deliberated separately. For each of these questions, all the participant transcripts were read. All relevant portions of the data was highlighted manually. The highlighted data was then typed into a word document, and can be seen in Appendix G.

Coding was conducted over the whole data set, with the primary focus falling on the research questions. Therefore, for example, the gathered data was treated as a single data set and used to classify portions of information that applied to issues pertaining to parent's perceptions of their adolescent's mobile device use, which was the first research question. This process was repeated for all research questions.

4.6.3.3 PHASE THREE: SUMMARISING DATA AND INITIAL MEANING UNIT IDENTIFICATION

This coded data was then grouped into twenty-six initial meaning units, from the initial forty-three codes, covering the three research questions. Initially, there was some overlapping, leading to similar information being coded for different research questions. For example, parental concerns regarding the dangers of mobile device use such as cyberbullying, peer pressure, and self-harm were all initially coded separately. However, later these were all grouped under one code, namely 'concerns'. Parental experiences was the wider theme, which included the codes of positive and negative experiences, were initially coded separately.

Initially the collected data was coded using a deductive approach. However, the researcher sought to use an inductive approach in conjunction with this to generate the themes. This required a shift from the specifically conveyed perceptions to the wider main themes and subthemes. Thus, all of the coded data was transcribed by hand, from a Word document to Post-it notes. These notes were then randomly placed on a table. The researcher then considered the codes on these notes. The researcher then grouped them together with other codes with mutual concepts and formulated the initial themes (Appendix H). For example, some participants shared their feelings of uncertainty and confusion around the question of giving their adolescent a mobile device, while others shared feeling this way after having a negative experience with these devices. This refers to the same feeling of uncertainty and having ambiguous feelings and would therefore, fall under the same theme, viz. Theme One, parental perceptions and experiences of adolescent mobile device use.

4.6.3.4 PHASE FOUR: REVIEWING OF THEMES

Twenty-six initial meaning units emerged. An analysis focusing on the research questions generated these main themes. There was a need to refine these initial themes in order to diminish overlapping and redundancy of themes. This resulted in some of the themes previously identified during phase three being removed due to being redundant or clustered with themes that had already been identified. Appendix I illustrates the reviewing of themes and reducing of themes. For example, the theme of adolescents being a 'New Generation' was initially a separate theme but was later included into the theme of Positive perceptions. This was due to the fact that upon further reflection parental views were considered to apply to the same area of interest.

During the themes review process, some themes were considered to be too confined. For example, with reference to Research Question Three: Safety strategies and rules to protect adolescents when using mobile devices, Subtheme Two: Monitoring methods included parents physically checking mobile devices and using social media to check adolescent's activities online. These were initially coded as two separate themes. These were then merged into one broader theme of 'check mobile device or track usage'. Themes were merged based on their importance held for the researcher.

For example, parents discussing the need for informative talks and awareness to be created around the issue of dangers involved in using mobile devices: these two codes were merged into one main theme of 'school involvement'.

At this point, the preceding three stages were re-examined to ensure that the joined themes were a true representation of the primary data analysis. This method of theme review was conducted throughout the analysis process and the emerging themes were developed and reduced during this process.

4.6.3.5 PHASE FIVE: DEFINING AND NAMING THE THEMES

The themes were then grouped into 'main themes', where this was deemed appropriate. A representation of these themes can be seen in Appendix L. These themes were assigned brief phrases by means of which to depict the meaning underpinning these themes. Where possible, these phrases needed to describe and clearly show the implication of the text. This allowed for a clear connection between the data and words to be perceptible. For example, in research question one which explored parental perceptions and experiences, the theme 'ambiguous feelings' showed that parents were conflicted and felt uncertain about their adolescent using a mobile device. There is a clear link between participants' expressed views and the words used for a theme, as illustrated in research question three. The main theme of 'safety strategies employed by parents to protect adolescents' included topics such as limiting social media, time restrictions on mobile device use, specific content not allowed to be viewed and punishment if rules are not followed. This final clustering of main themes led to an identification of the three main themes and their subthemes.

Theme	Subtheme
Theme 1: Parents' experiences and perceptions regarding adolescent mobile device use.	Subtheme 1.1. Parent's positive experiences and perceptions relating to adolescent mobile device use.
	Subtheme 1.2. Parent's negative experiences and perceptions relating to adolescent mobile device use.
	Subtheme 1.3. The impact of the Covid-19 pandemic on technology use.
Theme 2: Parents feel a lack of complete safety with their adolescent using mobile devices and the internet.	Subtheme 2.1. Parental concerns and perceived safety of mobile device use.
	Subtheme 2.2. Adolescent skill level for using technology.
Theme 3: Safety strategies employed by parents to protect adolescents.	Subtheme 3.1. The responsibility of parents in protecting adolescents.
	Subtheme 3.2. The safeguarding practices used by parents.
	Subtheme 3.3. The establishment of school educational awareness programmes.

Table 3: Main themes and subthemes emerging from collected data.

The information supplied in table 3 shows that the main themes included (1) parent's experiences and perceptions regarding adolescent mobile device use. (2) parents feel a lack of complete safety with their adolescent using mobile devices and the internet, and (3) safety strategies employed by parents to protect their adolescents from potential harm caused by mobile device use.

4.6.3.6 PHASE SIX: REPORT PRODUCTION

With regards to this dissertation, Phase Six is evident within the writing of the dissertation, and the findings that were reported in Chapter 5. This chapter demonstrates the link between the identified themes and the research questions.

4.7. ETHICAL CONSIDERATIONS

This study took into account several ethical considerations to allow for the study to become ethically acceptable based on recommended ethical regulations (Resnik, 2020). Primarily, the study had to be granted ethical approval from the University of South Africa. The study informed the participants about the research and ensured that no harm would come to the participants from their participation in the study. Additionally, the participants' identities were protected by ensuring confidentiality. Furthermore, participants were informed of the forthcoming dissertation with a consent form and information sheet. The ethical principles will be examined in more detail below.

4.7.1 ETHICAL APPROVAL

One of the first imperative steps followed during the research procedure was to submit a proposal to the ethics committee for consideration. Gray (2018) explains that it is important to compile a proposal which then has to be evaluated and validated by the ethics committee. This research study was ethically approved by the Ethics Department at the University of South Africa. When the researcher submitted the proposal for ethical review the research proposal, consent form and interview guide were reviewed as tools. Ethical approval was obtained before the researcher engaged in the data collection process. Once these documents were approved the researcher made contact with the participants.

4.7.2 INFORMED CONSENT

Within this research study the participants were provided with a fully detailed information sheet. Participants were given recruitment letters (Appendix A) containing information about the study, their rights as participants and contact details of the researcher and the supervisor were provided. On the information letter there was a consent section that required the participants to sign to indicate their agreement to participate in the study. Participation in the study was completely voluntary and by informed consent. Participants were also informed that they had the right to withdraw from the study at any point, with no repercussions. Participants were further also informed that they had the right to refuse to answer any questions that they did not feel comfortable answering. The research was expected to cause no harm to the participants. However, participants were given a list of contact details of the local psychologists who could assist them should they require it. Participants were informed prior to consent that the data collected from their interview would be used in the researcher's master's dissertation, and should the dissertation be published that the data would be used anonymously.

4.7.3 ANNONYMITY AND CONFIDENTIALITY

Since the family life and relationships of a person are a sensitive subject to discuss it is important to address the issues of consent and confidentiality. Participant anonymity was ensured by the researcher by appointing a number to each participant, thereby protecting the identity of the participants and ensuring confidentiality.

Due to the pandemic and the safety restrictions put in place, all interviews were conducted using Skype. The researcher provided each participant with a voucher for 250-300 MB of data after the interview was finalised. The interviews were recorded, and the participants were informed about this prior to commencing with the interview. Participants were asked to give their informed consent for the interaction to be recorded. To ensure confidentiality during these interviews, the researcher used a private office so that there was no risk of the participants being either overheard or seen. All interview recordings and transcribed data were stored on a password-protected laptop that only the researcher had access to. The laptop was locked in a secured cabinet in the researcher's office. Only the researcher and supervisor had access to the transcribed data. The Covid-19 regulations were adhered to using an online medium of communication, thereby protecting both the participant and the researcher.

4.7.4 ETHICAL PRINCIPALS SUMMARY

With regards to the principles of ethics, participants were well informed about the research purpose and aims. Participants were informed about their role and expectations as participants, and how the collected data will be used. Anonymity and confidentiality were assured throughout the research. This was explained to the participants. Participant and researcher safety were ensured by complying to safety measures in place for the Covid-19 pandemic. Participation in the study was on a voluntary basis and there were no consequences to declining or accepting participation in the research study.

4.8. SUMMARY

The research methodology and design adopted in this study assisted in achieving the aims of this research study and were explained in this chapter. This included the description of the research methodology, research design, trustworthiness of the study, sampling and participants and ethical considerations. The next chapter discusses the thematic findings of the interviews.

CHAPTER 5: FINDINGS

5.1 INTRODUCTION

The gathered data was analysed through thematic analysis, following the process as described by Braun and Clarke (2006). This chapter discusses the qualitative findings and results from the interviews with the participants. This chapter uses the reported experiences of the participants and discuss the emerging themes. The results discussed will also provide examples from research participants to verify the findings.

5.2 EMERGING MAIN THEMES

The participants of this study discussed many of their experiences and perceptions of protecting their adolescent and forming workable routines and rules regarding the use of the internet. Thematic analysis identified three main themes to understand this subject better, namely: (1) Parents' experiences and perceptions regarding adolescent mobile device use, (2) Parents feel a lack of complete safety with their adolescent using mobile devices, and (3) safety strategies employed by parents to protect their adolescents.

5.2.1 THEME 1: PARENTS' EXPERIENCES AND PERCEPTIONS REGARDING ADOLESCENT MOBILE DEVICE USE.

A notable observation from the findings was that participants tend to have a variety of different perceptions and experiences about adolescent mobile device use, not solely negative or positive. Perceptions are the ways in which a person understands, interprets, or regards something (Definition of perception, n.d.). Experience refers to a state of having been impacted by, or gained knowledge through, participation or direct observation (definition of experience, n.d.). Participants shared their experiences and perceptions relating to mobile device use by their adolescents. All participants shared both negative and positive perceptions and experiences. Many expressed having mixed feelings and feeling conflicted at times. Most participants were of the opinion that technology is useful but can be problematic. Participants could see the benefits of technology use and how mobile devices are an advantage for their adolescent. However, they were also aware of the risks and dangers involved in technology use at the same time. Regardless of the negative perceptions and experiences, there was a general agreement among the participants that there were positive aspects and they had positive experiences of adolescent mobile device use. The main subthemes relating to the experiences and perceptions of parents include: (1) Parent's positive experiences and perceptions relating to adolescent mobile device use, (2) Parent's negative experiences and perceptions relating to adolescent mobile device use, and (3) the impact of the Covid-19 pandemic on technology use. All participants citations recorded herein are transcribed verbatim.

Subtheme 1.1. Parent's positive experiences and perceptions relating to adolescent mobile device use.

The commonly reported experiences expressed by participants included educational advantages, the creation of a sense of safety by mobile devices, no major problems

experienced personally, internet being a useful research tool and the ability to communicate with friends and family with mobile devices. Eight of the participants explained how the internet was a beneficial and useful tool for their adolescent's schoolwork. The ease of accessibility and vast information available online assisted greatly with schoolwork (Participant 06). Participant 07 explained how he relies on information available online to assist his adolescent when he is uncertain or unable to explain educational concepts to his adolescent:

"The positives I would say is for educational purposes. Kids can google things and get the right information because sometimes parents, we suck thumb, and we are not too sure ourselves" (Participant 07).

Participant 06 shared her experience of how the educational videos available online assisted her son when he had difficulties understanding work done in class:

"Sometimes at school, when they were doing a difficult section in biology or whatever, he would rather watch a YouTube video where somebody explained it to him verbally than to have to sit and read a section in the book. So that helped him a lot" (Participant 06).

Participant 08 shared how her son better himself and learns new skills through online courses that are available to him. Thus, she also sees the use of the internet as a beneficial educational platform. Participant 06 also related how her adolescent would watch educational videos about topics that interest them and would learn new skills in that way. Many of the participants had common perspectives like:

"Internet is a useful tool when used properly, and great advantages to education" (Participant 08).

Another positive experience shared by five participants was the creation of a sense of safety with the use of mobile devices. Five of the participants viewed mobile devices positively from a safety point of view when using the mobile device to be in contact with one another. Participant 01 said that:

"So I gave her the phone for security reasons" (Participant 01).

They explained how the ability to be in contact and communicate with their adolescent put them at ease and made them feel that their adolescent was a bit safer. By simply knowing that their adolescent can communicate with them if there is a problem, or they can be in contact with their adolescent at all times, put their mind at ease. Participant 02 explained this feeling that the mobile device created for their family in the following way:

"So when I am at work and my husband is at work we are able to reach her and know if she is okay, she has eaten, and she has done her homework. That is why we gave her a phone" (Participant 02).

Participant 08 shared the same sentiment when she explained that her adolescent would spend time with her father when they got divorced. The ability to communicate with her

daughter and know that she was alright made her feel more at ease about not being with her child.

Half of the participants decided to give their children mobile devices as a safety precaution, replicating the results from the Ting Digital Family Lifestyle Survey (see the Ting Digital Family Lifestyle Survey of 2018). This gives parents peace of mind, as they are able to be in direct contact with their child. Additionally, many high school adolescent parents benefit from their adolescent being able to notify them during sport practice and fixtures. Participant 01 explained that his daughter would contact him to inform him what time she would need to be fetched from school:

“It was just after my wife passed away, so I gave her the phone for security reasons. When she is at school, when I need to get hold of her after school, if I need to pick her up after school. Because she was in Primary school, and I was obviously working at a high school, so that was the only reason that I gave her the phone” (Participant 01).

Five of the participants explained that they had not encountered any major problems with their adolescent using mobile devices because they had rules in place and monitored their device use. Participant 02 shared a conversation with her daughter:

“The reason why you got the cell phone is that you got it for school, not for you to chat with your friends. But you have that privilege since you have got it, but your time is limited for that. You can use it for school and other things, important things” (Participant 02).

Some participants, such as Participant 04 and 01 for example, believe that using the internet together in an attempt to monitor the content accessed creates a more positive experience. With regards to this Participant 04 shared her view, stating that:

“I must say, that firstly, I firmly believe that the internet cannot be relied on. Secondly, I feel that, yes it is very useful as an educational tool in most aspects, um, but depending on who is using it. In this case if my kids are using it, then it needs to be controlled. It needs to be controlled where if they want, if they are doing a project and they want to google something I will say ‘let’s use my laptop and let’s look for it together’, I won’t allow them to just go through it themselves. And once I have found they are on the right websites, and I know then I will leave them for a while to do their project” (Participant 04).

Additionally, all of the participants had a positive experience with the ability to be in contact with friends and family using mobile devices.

When reviewing the positive perceptions expressed by parents regarding mobile devices there were several recurring views shared, namely that

(1) mobile devices are a useful tool:

“Internet is helpful and dangerous. But in terms of the way technology is moving, and research, I mean, it’s a given, its an absolutely wonderful tool. But I also believe that everything in moderation is absolutely wonderful. So you just have to be careful. There is a danger, but it is a positive tool if used correctly” (Participant 08).

(2) technology is the new norm:

"Parents need to understand that this is the new norm. Kids will use technology" (Participant 01).

(3) adolescents know how to use mobile devices properly:

"Because I didn't know how to do a lot of things, they check on me, and they would find it for me in a limited space of time, whereas I will be struggling and I don't know what to look for, and they are sharp at that. So they generally help me. Even with my computer and things like that. They are share like that" (Participant 05).

(4) our adolescents are a new generation regarding technology:

"even my son, although in grade 9, he knows much more than I think I would. The thing is it's just a different generation". (Participant 05).

"it's like almost built into their DNA, like at that level. It just comes more naturally to them" (Participant 06).

And (5) trust in adolescents not to be involved in inappropriate activities online:

"I hope that I instil enough values in them for them not to be tempted, not to look into those things or go down that path. My daughter did tell me, she did. When she did come across something she did come and tell me about it (Participant 05).

"But if we can be like loosen a bit as parents, learn to trust our children and to communicate with our children and know exactly what is happening in their lives it will make things easier for both parents and children" (participant 02).

Several participants stated that mobile devices and the internet were beneficial educational tools for their adolescents. Six participants had a positive view towards technology becoming the 'new norm' and that their adolescents are part of this new generation who benefit greatly from the inclusion of technology in our everyday lives:

Subtheme 1.2. Parent's negative experiences and perceptions relating to adolescent mobile device use.

Despite the positive perceptions and experiences of adolescent mobile device use there were many negative perceptions and experiences shared by participants. The negative experiences included the following codes: inappropriate content accessed, uncertainty felt, adolescent's inquisitive nature, consuming nature of mobile devices, too much time spent on device and fear for potential harm.

Particularly, nine participants reported feeling uncertain and that their adolescent is not safe online, needing rules and limits: "we have to have boundaries, it can get so out of hand" (Participant 09) and that mobile devices are consuming. On this topic of the consuming nature of mobile devices Participant 06 shared this opinion on the matter:

"I just think that all of us in our whole family could actually benefit from putting our devices down. Be off for longer periods of time (laughs). You know, actually doing, instead of watching. All of us, the whole family would benefit from that. It just, we get so involved, and it becomes, well, addictive. I mean, as a say, you are flipping through pictures and then next thing you see like an hour and a half of your day is just gone. And it's like, oh dear, where did that go type of thing. But we are, we are just, so connected. Ya, we could just benefit from a little bit less. More living instead of watching" (participant06).

What we perceive is strongly influenced by our past experiences. According to Dr, Humphreys (as cited in Estrada, 2020), past experiences influence how people decode current experience. Accordingly, there were three reoccurring codes that appeared in both experiences and perceptions. These included inappropriate content accessed, the consuming nature of mobile devices and the inquisitive nature of adolescents. The common experience and perception of inappropriate content included personal experience, where the participants had experienced their adolescent easily accessing inappropriate content. Participant 01 reflects on the time that this happened to his daughter and shared:

"One friend actually told me one day that Lelo was on sites, like porn sites and stuff like that" (Participant 01).

Six of the ten participants had personal experiences of their adolescent easily being exposed to inappropriate content online. Eight of the ten participants feared their adolescent being able to access inappropriate content while online. When discussing concerns about their adolescents' online Participant 02 revealed that:

"At the moment my daughter is not street smart when it comes to a lot of things" (Participant 02).

This concern caused a lot of worry for this participant. Five of the participants had experienced their adolescent becoming involved in inappropriate content online due to their inquisitive natures. Five of the participants were concerned about adolescent inquisitive natures unintentionally leading them to content that is not suitable for their viewing. Participant 01 revealed:

"Sometimes they are interested, they want to see why is it a top internet. They will go and search for things if you just allow and push it aside and say 'don't go there, it has nothing to do with you', then it makes it more interesting" (Participant 01).

Many participants felt that it is this inquisitive nature that adolescent have that gets them into trouble most often. Similarly, Participant 03 share her perception, stating:

"when you make the child aware of it then some children just want to like, yes they are now aware of it and 'ooh' that site pops up, so now let's open it and have a look at it" (Participant 03).

Participant 05 shared her beliefs about how an adolescent's inquisitive nature can lead to problems:

“They are so experimental at that stage. It has terrible effects on them” (Participant 05).

Participant 09 explained that her concern in this regard is that parents can't control what their adolescent is exposed to:

“so, we could control this, you can to a certain degree, but you can't control what they are getting exposed to” (Participant 09).

Another commonly reported negative perception and experience had by the participants is the consuming nature of mobile devices. Eight of the participants had experienced their adolescent being consumed by their mobile devices and becoming consumed when first being given a mobile device. These participants shared experiences of how their adolescent would become completely engrossed by the content on their mobile devices and would waste countless hours on their mobile devices on social media or talking to friends:

“Because it's a new thing for them, they do kind of get consumed by it” (Participant 09).

Participant 02 had experienced the same problem with her daughter being consumed by her device, and expressed the following on this topic:

“I try my best to control that because if I cannot have control then she cannot study, she cannot do anything, she will be on her cell phone, on TikTok” (Participant 02).

Participant 01 shared an analogy of the consuming nature that mobile devices have on us, *“So I think it has just taken over. Somebody said the other day to me that a cell phone has become your cell, like a prison. You have a phone, but the cell part of it is the prison part of it. And it is something that resonates with me because people have made it now a problem”* (Participant 01).

When discussing the issue of becoming consumed by mobile devices, many participants explained that their adolescents spent too much time on their mobile devices every day. If this time is not controlled by parents it becomes problematic as their adolescents will not do anything else apart from using their devices. When enquiring about their adolescent's time spent on mobile devices, Participant 08 stated:

“as you asked me now how many hours, I think way too much” (Participant 08). This was a common sentiment shared by many of the participants.

Five of the participants reported feeling uncertainty regarding the issue of adolescent mobile device use. Participants shared their experiences of the internal battle to decide whether or not to allow their adolescent to have a mobile device and the potential harm that could result from such a decision. Five participants felt conflicted with the decision. Participant 01 encountered several problems with his daughter using a mobile device, eventually regretting the decision and leading to the device being confiscated:

“But I am not giving her a phone. I think, no. I am going to regret it. I just have this feeling in my gut that I am going to regret giving her a phone now” (Participant 01).

Parents feel pressured into giving their adolescent mobile devices because it is seen as acceptable. This pressure can create a lot of uncertainty and stress for a parent. Participant 04 shared her experience in this regard:

“As a parent, I must say I feel that pressure as well because they always, like my daughter says ‘Mom, this person has this phone, and that person has a phone, when am I getting a phone? But you feel that pressure because you feel like if every other parent is doing it maybe I should have that little bit of trust’” (Participant 04).

Seven participants shared their experiences with feeling regret, uncertainty and fear around the consequences of their adolescent using a mobile device. Participant 09 expressed their feeling on this matter as follows:

“you know like you do, you see, ‘oh my gosh, this thing, should I have done it?’ You know?” (Participant 09).

Much of this uncertainty was a result of being fearful of potential harm. Seven of the participants were fearful of the consequences of their adolescent having a mobile device. Many participants were concerned about content exposure and its effects on their adolescent. Participant 03 explained her fear about inappropriate content exposure:

“If you look at all these TikTok videos and the bad, or the negative influence that it is having on learners. As a parent it worries you” (Participant 03).

From the participant narratives, it became clear that all participants felt that adolescents have adequate knowledge with using mobile devices, and participants believe that this could be problematic. Participant 04 shared her view on her beliefs regarding her adolescent's technological skill and knowledge:

“ I would say not as a beginner, but a little bit more in between. Because as much as I have the fact that they now are introduced to coding at school, and they are allowed to go on the internet at school for school purposes. And I think now they are able to teach me a thing or two. So, like my daughter was telling me the other day that they had an LO project and they had to do it all on an iPad at school. And this entire thing has to be done on the iPad and um, she was trying to tell me how to do this, and I was lost by the time, but she knew exactly what she was talking about. But I think in terms of they are more techno-savvy than I am. They are beginners in many ways in terms of content-wise, they are a little more innocent I would say than if I listen to uh. In terms of the technical aspect, they are quite familiar with it” (participant 04).

The advanced knowledge creates fear for a parent. Participant 05 shared her experience in this regard:

“when you look at what grade 10's and 9's are capable of, it scares the daylight out of me” (Participant 05). The vast and ease of accessibility to various types of content and information online creates a tremendous amount of fear and anxiety for parents.

While some of the negative experiences and perceptions overlapped, there were other negative perceptions that were voiced by the participants. These negative perceptions included the following commonly reported codes: the inability to fully control mobile device use, problems resulting from device use, parents being unaware of adolescents activities on their devices, children given mobile devices from too young, social media concerns, the influence of others, a lack of knowledge, lack of control and resulting problems, and the feeling that adolescents are not safe using the internet.

In particular, six participants reported feeling that their adolescent was not safe using the internet and that there was a need for rules and limits to be set. Six participants described feeling incapable of fully controlling their adolescent's mobile device use. Participants explained that even with setting rules and limits, they are not able to completely control what their adolescent is doing online. This, in turn, creates a feeling of uneasiness and that adolescents are not safe when using the internet. Despite putting safety measures in place, participants still felt as though this was not enough, and that they were powerless to fully control device use. Many participants explained that, as a parent, you cannot control mobile device use at all times and it is particularly difficult with multiple devices and more than one adolescent in the household. Participant 07 stated:

"You can't control all the time" (Participant 07).

This inability to fully control device use creates a sense of uncertainty for this participant. He explained that despite safety and control measures he put in place, there is still a risk involved. Participant 07 expressed this concern as follows:

"The only risk, the only harm that we are maybe falsely, we have a false sense of security is because they use our google accounts. So that puts us under a false illusion" (Participant 07).

Concern then arises amongst parents that with the inability to fully control mobile device use problems may arise, where parents may be unaware of the activities for which teens are using the device. Parents felt the need to be actively involved and closely monitor device use to avoid risk and inappropriate use. Social media in particular is a problem area when adolescents are left unsupervised, and device use is not properly controlled. Participant 01 reported an incident in which his daughter found a way around his safety measures and was using her friend's Wi-Fi to access inappropriate content:

" She didn't have a sim card, so her phone could only at one stage get music. So when she went to friends they has Wi-Fi though, and they gave her the password. Not very clever of the friends" (participant 01).

Participant 03 encountered a similar issue, with her daughter viewing unacceptable content when left unsupervised at home:

" And then when you start paging through the stuff that she was looking at, especially a good few months after lockdown when we were back, I was back at work. My husband was obviously working from home, but I mean he was in the office, he was working, and she had

all this free time on her hands. It was just horrific, it was, you know what she was getting to see. I think she knew more about the Biden and Trump election than what we did. So, it was ya, it was very scary, ya” (participant 03).

Parents explained that problems can result from this inappropriate content, including the negative influence of others on adolescents, and consequent behavioural changes. Participant 02 disclosed her concerns about adolescent’s using the internet unsupervised. This parent stated:

“It is easy for a child to be misled through the internet” (Participant 02).

Participant 03 encountered a negative experience after her daughter accessed unsuitable content on the TikTok platform.⁵ She began behaving differently and speaking poorly to her family. As a result, the participant was obliged to ban her daughter from using this platform for a while to try to get her behaviour under control. Participant 03 explained that

“I find that when we have taken it (referring to the TikTok application) away from her for a couple of days or a week then it’s like she becomes this whole different person again. And then um, she goes back onto the media again and eventually two-three-weeks down the line you are back at square one again” (Participant 03). Nine participants felt that many problems arise from children being given mobile devices from too early an age. Nine of the participants shared a common belief in adolescents needing to be mature enough to have a mobile device, and should be of a mature age to have their own mobile device. Nine participants were in agreement that adolescents need to be ready for the responsibility of having a mobile device. Participant 01 described his belief in having criteria that needs to be met before an adolescent is given a mobile device. Participant 01 felt that an adolescent must be:

“Emotionally strong and you need to be intelligent to use the internet” (Participant 01).

Participant 04 expressed the same perspective about age and maturity level:

“ I was actually. As I said I was very reluctant in the beginning, and the only reason why was because of the work that was posted on the D6 for the schools and the primary schools. I did have an experience where one of my boys was trying to google some information, but you know when you google information and something else crops up, and then he went onto that and the content of it I wasn’t too happy about. It was like something about um, it had girls in it. And I just thought as a ten-year-old now, and he was looking for something starting with a ‘G’, I can’t remember what he was looking for. Some game, he was trying to download a game. And then, so my husband and I, just to be cautious because we know what it’s like, we would take their phonies like randomly and go through it. Just to make sure that they are not, you know, going onto websites that they shouldn’t be going onto. And then when I found something I confronted him, and at that stage he wasn’t even aware, he was nine years old at that time. He wasn’t even aware, you know, that, he said it just cropped up, he says “I didn’t look for it mom, I promise you I didn’t look for it”. And for me, I was very divided,

⁵ TikTok: A short-form video hosting service that allows users to share and view videos (Geysler, 2022).

because at that stage I just wanted to take the phone away. And ya, so that incident was worrying. I just worry when they are looking for something and try to download something and something else crops up” (Participant 04).

This participant’s son came across inappropriate content while using the internet but he was too young to understand what he had viewed. This incident highlights the risks involved in children using mobile devices when they are not old enough to use them safely as well as the lack of parental controls and the ease of access to material on different platforms.

Five of the participants expressed feelings towards having limited knowledge and experience on monitoring their adolescents browsing. Certain participants’ negative perceptions arise from their feelings of having a lack of knowledge regarding technology use and how to successfully protect their adolescent when using these devices. This lack of knowledge leads to fears and anxiety and an overall negative perception of adolescent mobile device use. Nine out of the participants were aware that there was software available that could be used to protect their adolescent. However, many of them felt that they had insufficient knowledge and skills to employ proper safety measures and chose not to make use of the available software. When asked about safety measures and advice to parents about protecting their adolescent, Participant 07 responded:

“I’m not good enough to know that” (Participant 07). This participant felt that his knowledge on the matter was lacking to the extent that he could not offer advice to other parents about how to protect their children.

Subtheme 1.3. The impact of the Covid-19 pandemic on technology use

During lockdown, technology use became the norm. People began to rely on the use of different platforms for both schoolwork and their professions. Adolescents had to make use of Zoom, Skype, WhatsApp, google classroom and the D6⁶ communicator to be in contact with their educators and to complete their schoolwork. In this way, the Covid-19 pandemic accelerated the reliance on technology in schools. More participants had to allow their adolescent to use mobile devices and the internet to fulfil schoolwork. This led to increased screen time and more use of mobile devices by adolescents. Adolescents were using mobile devices more frequently during this time, where there was increased chance of them becoming involved in inappropriate activities and being influenced by others. During the pandemic, this increased screen time was the cause of many concerns on the part of participants. While six of the ten participants were accepting of the fact that technology use is the new norm and their adolescent would be using mobile devices more, they were still aware that this needed to be monitored and controlled. During the pandemic period once schools reopened there were limits on the capacity of students allowed in the school at any time. Thus, adolescents would alternate their school days. For this reason, mobile devices served multiple purposes. In the first instance, they were a form of safety so that parents and adolescents could communicate while parents were at work and their adolescent was at home alone. Secondly, on their days off from school, adolescents would use their devices to

⁶ D6 Communicator: Is an application designed to assist in parent-school communication. The application is used by schools to share information with parents (D6, 2022).

complete and submit their schoolwork and communicate with their educators. Participant 02 shared her experience with this situation in this way:

“Remember, we started having lockdown last year, and we started alternating school days. So, when I am at work and my husband is at work, we are able to reach her, and know she is okay” (Participant 02).

Participant 02 also explained that her daughter uses her mobile device to *“communicate with educators because some of the educators are giving them work over WhatsApp”* (Participant 02). Nine parents expressed similar experiences with their adolescent relying on mobile devices during this time. When enquiring about mobile device use, Participant 03 reported that her adolescents used mobile devices more during the lockdown for schoolwork. She stated:

“More communication is done online, using different platforms for schoolwork, such as Google classroom or WhatsApp” (Participant 03).

Due to this increased need for mobile device use, many parents allowed more screen time for their adolescent during this time. Participant 08 revealed:

“Very importantly now in the school scenario, the boy has all his teachers on groups with him, so there is a lot of communication that’s going through teachers and schoolwork” (Participant 08).

Thus, all participants were accepting of the fact that their adolescent would require the use of mobile devices and the internet during these times. They adjusted their parenting style accordingly.

5.2.2 THEME 2: PARENTS FEEL A LACK OF COMPLETE SAFETY WITH THEIR ADOLESCENT USING MOBILE DEVICES AND THE INTERNET.

The second encompassing theme was the belief that parents did not feel that their adolescents were completely safe when using mobile devices and the internet. When reflecting on parents’ perceived views on their adolescent’s safety when using mobile devices, nine of the ten participants viewed the use of mobile devices as unsafe for adolescents. The prevalent subthemes relating to safety level included: (1) parental concerns and perceived safety of mobile device use; and (2) adolescent skill level for using technology.

Subtheme 2.1. Parental concerns and perceived safety of mobile device use

Prevailing codes relating to why the participants perceived a lack of safety included easily accessible inappropriate content, social media concerns, negative influence of others, the maturity level of adolescents, and the all-consuming nature of mobile devices. These concerns were particularly worrisome due to adolescent curiosity. Participants were worried about their vulnerability to external influence. Six participants have personally experienced their adolescent being exposed to inappropriate content online. Seven participants

expressed concern over potential negative impact that strangers might have. Some participants felt assured that their monitoring and controlling of device use was effective but were worried about pop-up content. Several participants mentioned how websites have pop-ups, which contain pornographic and other unambiguous content. Participant 04 said:

“I did have an experience where one of my boys was trying to google some information, but you know when you google information and something else crops up. And then he went onto that and the content I wasn’t too happy about” (Participant 04).

Some participants discussed experiences of how searching for something innocently could lead an adolescent astray. Participant 09 explained:

“It’s just the simple thing of googling something as innocent as Winnie the Pooh”, and the results are completely irrelevant and unsuitable (Participant 09).

Many participants described how they knew their adolescent would not actively seek out inappropriate content (Participant 04 and Participant 06) or choose to view unsuitable pop-ups but their concern was the ease of accessibility.

All participants had certain fears regarding mobile devices, such as negative inference of others, social media content, cyberbullying and mobile device addiction. Participant 07 shared one of his experiences in which his daughter had been approached by a stranger online:

“I think, um, my wife has picked up that her daughter had some older guy that was trying to make contact. Uh, otherwise, um, older guys, once, I think one of my sons was inappropriate, but nothing bad, he was just trying to initially make contact” (Participant 07).

Participant 03’s daughter had been negatively influenced by content that she had viewed online. This content influenced her behaviour and was of a major concern to this parent. Reflecting on the incident participant 03 expressed concern, saying:

“I feel that because the TikTok is back, it just seems to be what she is exposed to there. And I think also, you know, when she sees these videos, also the way that these kids speak to their parents, um, you know that they are not real video clips, but they make them look real. You know, I mean, most times you will probably think where do you now recorded somebody speaking to their parents the way that they are speaking to their parents. Like a full-fledged, proper done video. You know, I mean, it’s obviously staged, you know. So um, ya, it does look real, so it does worry me that she is exposed to that and she thinks that she can treat us the same way” (Participant 03).

Regardless of the rules and safety discussions with their adolescents, participants were concerned about their adolescent being misled into disclosing personal information. Participant 08 explained that *“As soon as you use a device you are setting yourself up for external problems, threats”* (Participant 08).

Participant 07 and 08 both had experiences in which strangers had been in contact with their adolescents online. Participant 08’s adolescent gave his google password to a stranger online and Participant 07’s adolescent had been in contact with older men online. These two

incidences highlight how easily adolescents can be misled and targeted; a concern shared by all participants.

Social media appeared to be one of the major concerns mentioned by parents. Eight of the participants expressed the potential harm that can result from social media use. TikTok, in particular, was most widely reported by parents as being troublesome. Parent's concerns in this regard relate to how social media disturbs healthy habits, such as education. Their mobile devices and social media too easily consume adolescents, which can lead to problems. Participant 02 experienced this problem with her daughter, noting that:

"I try my best to control that because if I cannot have control then she cannot study, she cannot do anything, she will be on her cell phone, on TikTok" (Participant 02).

An ever-increasing proportion of adolescents live in a technological world, where if mobile device use is left uncontrolled, it can take over their lives. If not closely monitored, mobile devices and social media use can result in adolescents becoming completely absorbed in this online world. Six participants have personally experienced their adolescent using social media and mobile devices frequently and this having a negative impact on them. Participant 03 shared her experience in this regard:

"We actually landed up taking TikTok away from her for a good couple of months, because unbeknown to us, that it was just this whole platform for politics" (Participant 03).

Six participants had encountered similar problems with their adolescent accessing content on social media that was unsuitable. The impact that social media has on adolescents can be both damaging and unnerving for parents. Some participants discussed the influence that social media content had on their adolescent's behaviours and how the negative role models online steer adolescents to behave in uncharacteristic ways. Participant 03 shared her experience with her daughter emulating unacceptable behaviour towards her family after viewing this behaviour in a video on social media (Participant 03). These participants deliberated about how their adolescent "is a whole different person" when they do not have mobile devices or access to social media.

The maturity level of an adolescent was a common belief shared by the participants. Seven participants felt that adolescents ought only to be given a mobile device from the age of twelve years or older. An adolescent's level of maturity plays an important role in parent's views about their safety when using these mobile devices. Participant 09 reflected on the time when her daughter was given a mobile device at the age of twelve but struggled to cope with the responsibility of it:

"For Rachel in grade 7 it was a new thing, all of her friends had had cell phones for years, she got hers in the middle of her grade 7 year, and it was a new thing, so it kind of like, just got. She was totally inexperienced, as opposed, or compared to the other kids that have had cell phones for so long. So, um, we had to sit her down at the end of that year, and um, just speak to her about, you know, what is the etiquette and how one goes about it, and what you talk about, and who you talk to, and, and, and. And after we sat her down, she out of her own, said 'mom I don't think I am ready for a cell phone'" (Participant 09).

Eight participants expressed the view that an adolescent ought to be mature enough to use mobile devices responsibly and safely, noting that this is directly linked to parental perception. Most participants believe that adolescents become safer as they mature and gain more knowledge about mobile devices and the internet. Participant 01, for example, stated:

“You need to be emotionally strong and you need to be intelligent to use the internet” (Participant 01).

Participant 07 shared his views about how an immature adolescent using mobile devices and the internet can easily be influenced, leading to dangers online. Participant 07 explained:

“Boys go into porn and things like that, and they could be scarred and damaged. But with girls and catfights that they have, I don’t think they are ready for that. I don’t think that they are emotionally mature enough” (Participant 07). Many of the participants harboured this fear.

In relation to this immaturity, Participant 05 expressed concern that with this immaturity comes further risks, as adolescents are then exposed to content that is too mature for them and impacts them negatively. Participant 05 shared how this exposure to negative content can make adolescents feel more mature than they in fact are and take up inappropriate or dangerous behaviours, something which she has personally seen as an educator. Participant 05 shared her experience, stating:

“The things that these children are exposed to, it’s tragic, when you look at what grade 10’s and 9’s are capable of, it scares the daylight out of me. To think that those are things that we didn’t even hear about before. And now definitely, last year, was that, the grade 10 children were involved in those photographs, and even up to grade 8 and 9 as well. They are so experimental at that stage. It has terrible effects on them” (Participant 05).

Thus, the question of emotional maturity impacts a parent’s perception of their adolescent’s safety level when using mobile devices.

Subtheme 2.2. Adolescent skill level for using Technology.

Parenting an adolescent in the digital age can be a major challenge for parents, especially with adolescents being skilled and experienced with using mobile devices. Eight of the ten participants reported that their adolescent was experienced in using technology and had more knowledge about using it than they did. Several participants disclosed that they often rely on their adolescent for help with using mobile devices and other modern technology. Participant 10 expressed her experience as follows:

“You cannot believe that I was taught by my child who was doing Grade Five at that time how to use a laptop” (Participant 10).

This advanced knowledge with using technology can make parenting a challenge for parents with less technological knowledge. What this also implies is the possible notion of

uncertainty with knowledge that is associated with exposure. The researcher infers from this statement that the parent might feel uncomfortable about adolescent mobile device use, due to his or her own limited knowledge and exposure to technology. Thus, the idea of the unknown may also be linked to mobile device use.

5.2.3 THEME 3: SAFETY STRATEGIES EMPLOYED BY PARENTS TO PROTECT ADOLESCENTS

Main theme three is related to the importance of parental involvement in an adolescent's life, and a parent's responsibility for protecting their adolescent. All participants of this study viewed adolescent's safety as the responsibility of the parents. Participants expressed the need to make a concerted effort and be actively involved in their adolescent's life.

Participants feel that they need to maintain a trustful and positive relationship with their adolescents. Participants feel that by being constantly attentive to their adolescent's online activities, parents will better understand how their adolescent uses mobile devices, provide guidance when necessary and help to maintain a healthy balanced relationship with technology. The subthemes concerning this theme include: (1) responsibility, (2) the safeguarding practices used by parents and (3) the establishment of school educational awareness programmes.

Subtheme 3.1. The Responsibility of parents in protecting adolescents

Parents are the gatekeepers and managers of their adolescent's mobile device and internet use. All participants believe that parents are responsible for keeping their adolescent safe online. Part of this responsibility of protecting one's adolescent involves being actively involved in their adolescent's lives. Participants shared their beliefs that parents need to talk to their adolescent about safety and risks of mobile devices and internet use and about appropriate behaviour online. Nine participants stated that it is up to parents to discuss the risks involved in internet use and methods to protect themselves. Participant 09 expressed that parents need to do this *"because they are our responsibility"* (Participant 09). Participant 01 shared a similar sentiment when discussing this topic. He stated:

"Because you are the parents and they are the child. And that's your responsibility as a parent to protect them" (Participant 01).

Participant 06 noted:

"It's your job, you can't delegate your kid's safety. It's for you to take responsibility for your children" (Participant 06).

Subtheme 3.2. The safeguarding practices used by parents

Participants had common safeguards to assist in protecting their adolescent online. These included being involved in their adolescent's lives, controlled mobile device use, limiting social media use, checking mobile devices, talking about risks and punishment given when rules were broken.

Based on the findings expressed by parents, there is a shared sentiment that parents need to encourage open communication and spend time together to foster their relationship with their adolescents. Open communication and honesty encourages adolescents to approach a parent when uncertain about something and to seek advice from parents when needed. It was evident from parent narratives that most parents reported talking openly to their adolescent about dangers and safety when using mobile devices. They often encouraged their adolescent to ask questions about those things that they may be unsure about. Participant 08 shared her experience, noting how an open line of communication has helped her adolescent stay safe online:

“He knows that social media bullying is quite a thing, and that we were talking about it last night. And so, I know that my children are aware of it. So I think the awareness that I have created in them, and an open line of communication has definitely helped” (Participant 08).

Participants expressed their views on communication and feel that by openly speaking to adolescents, explaining their point of view and concerns, the relationship is improved, and adolescents can better understand why parents have put certain measures in place. This open communication can assist in protecting adolescent’s risks online. Parents need to learn to speak more openly and not withhold information from their adolescents. If parents are aware of dangers or risks, these need to be discussed and addressed. This awareness will assist in protecting adolescents when using mobile devices. Participant 04, after hearing about a tragic incident with a young boy on social media, openly spoke to her adolescents about it, noting:

“You know this is the reason why I don’t want you to watch TikTok or anything of the sort” (Participant 04). Based on the narrative provided by the participant, it can be deduced that she was able to warn her adolescents about these dangers and to illustrate for them why she has certain rules set to protect them. Other participants shared similar experiences. Participant 06 explained to her adolescent *“If strange stuff comes up then we talk about it”* (Participant 06).

An important factor in keeping adolescents safe online is to know what is happening in their lives. Parents need to know about their interests and hobbies and to know what activities that participate in online. As a parent, you need to monitor and control adolescent mobile device use. You can only do this by being involved in this use. Participant 02 believes that parents must:

“Communicate with our children and know exactly what is happening in their lives” (Participant 02).

Another important factor in keeping adolescents safe is being aware, as a parent, of the potential risks and trends. Parents need to actively seek information about current trends and potential dangers as a means of educating themselves to better protect their adolescent. Participant 10 shared her view on this matter and stated:

“Parents must ask for help when needed. They need to ask. Parents need to seek advice from the people who are experienced” (Participant 10).

Only one participant reported using software to assist with protecting their adolescent online. All other participants resorted to self-monitoring methods, including checking mobile devices and tracking their use. All participants reported having rules and limits in place, such as limited social media (Participant 05), rules about times when device use is permitted (Participant 07), limiting the applications allowed to be used (Participant 08) and rooms in the household where mobile devices could be used (Participant 01). Most participants reported that the punishment for breaking these rules would be confiscating the mobile device. Participant 09 explained:

“They know the rules, so there are consequences, and the consequences, the phone will be taken away. And that’s as simple as that” (Participant 09).

Nine participants felt that openly talking about risks and safety online with their adolescents assisted in keeping them safe. Participant 02 stated:

“It is our responsibility to teach our children. It is our responsibility to guide them in the right direction” (Participant 02).

Participants felt that discussing risks and using the internet together can be a useful learning experience for adolescents and is an important means of protection. Participant 01 explained that parents should:

“Sit next to them (adolescents) and show them what the internet is, show them what social media is. Show them the good and bad parts” (Participant 01).

Six of the participants expressed their concern about the difficulty with controlling mobile device use by the adolescents in their household and while away from their home. This difficulty was the result of their adolescent using multiple devices. The element of using multiple devices is coupled with the notion of knowledge. Participant 03 and 07 demonstrates how adolescents apply their knowledge on mobile device use on multiple platforms and devices:

“You can’t control [them] all the time” (Participant 07). Participants feel that with the inability to completely control mobile device use, it becomes even more important for parents to be actively involved and aware of what is happening in their adolescent’s life.

Active parental involvement was believed by many participants to be a safety method for their adolescent. Participants express needing to be aware of their adolescent’s mobile device activities:

“a lot of parents don’t do that. And I think that’s where their kids are getting into stuff” (Participant 09).

Seven participants reported checking their adolescent’s mobile devices and tracking their online activities. Participant 03 shared her advice in this regard, noting:

“What has been helpful is just to keep checking. My husband is on Instagram, so he can keep tabs on her Instagram account” (Participant 03).

Due to adolescents carrying a mobile device with them at most times, it becomes trickier to monitor their device use. They may both desire and require some privacy. While most parents accepted this fact and allowed for some privacy, parents felt it is their responsibility to still keep their adolescent safe and thus check and monitor device use.

“It starts in the home. I think parents need to be more aware of what their kids are up to. And even to check that phone. Why can’t parents have access to their phone, just to check it and to monitor it” (Participant 05).

Participant 02 explained that:

“Sometimes, we as parents we tend to be very strict with our children. Not because we don’t trust them, but because of the world that we are living in. We try to protect them” (Participant 02).

Overall, participants felt that discussing the internet and the risks involved with interacting with strangers online, encouraging open communication and checking mobile devices were the most frequently reported safety measures put in place by parents. Taking an active role in an adolescent’s life helps ensure that they benefit from mobile devices without them being susceptible to potential harm.

Serving as a good role model forms part of a parent’s responsibility to keep their adolescent safe. Parental screen time⁷ can have a positive effect on an adolescent’s attitude to mobile device use, where adolescents develop healthy mobile device use habits when they observe parents and role models using mobile devices in a healthy, balanced way (Participant 01).

Four participants reported times when they personally had been using their mobile devices for an excessive amount of time. Due to being distracted by these devices their adolescent was, in turn, also spending an excessive amount of time on their mobile devices, Participant 06 explained:

“Ya, um, it’s I mean, you know when you are working on it you get caught up and next thing it’s like an hour and a half has gone, and you know, it so easily sucks you in” (participant 06).

These parents felt that mobile devices were corroding family time: *“I think the biggest thing for me about the phones and stuff like that is it takes social times from family away. It ruins, it destroys family time”* (participant 07),

and that the family would benefit greatly from putting their mobile device down for a while (Participant 06). It is imperative that parents are aware of their actions and to ensure that they model healthy behaviours for their adolescents, as learning begins in the home.

All ten participants believed that teaching your adolescent about responsible and safe mobile device use and checking their internet use, is more important than blocking specific websites and content. The basic safety precautions that parents implemented included spending time

⁷ Screen time: Refers to the amount of time that an individual spends using a device with a screen (Kaneshiro, 2021). This study specifically focused on the use of smartphones and tablets.

online together to educate adolescents about appropriate behaviours (Nine participants), checking mobile device activities (Seven participants), talking to adolescents about any online activities that made them feel uncomfortable (six participants), setting rules and limits (ten participants) and controlling device use (seven participants).

The main rules set by participants involved limiting mobile device use and social media platforms. Most participants reported having rules regarding time limits for mobile device use. In particular, mobile device use was more restricted during weekdays and examination times, while on weekends the adolescents were permitted to spend more time on their devices. At other times, if a participant noticed that their adolescent had been spending an excessive amount of time on their device then they will restrict access or lower time limits for a while, as noted by Participant 07:

“We have definitely got times where we say no, no more, enough. There is restrictions” (Participant 07).

Participant 05 shared her experience with needing to limit device use and said:

“If I find they are overdoing it then I will obviously put restrictions on it” (Participant 05).

Again, this highlights the importance of parental involvement and awareness. Adolescents easily become addicted to their mobile devices and parents need to set rules to control this use. For example, Participant 05 stated:

“I have a lot of rules in terms of when they can use it” (Participant 05).

The element of control was apparent in the findings of this theme, as most participants indicated that they needed to limit the use of social media among their adolescents. Adding to the aspect of control, most participants felt that the monitoring and limiting of social media use is a method of further protecting their adolescent from potential harm. Many parents mentioned concerns about the array of dangers involved in social media use and made an effort to try to minimise their adolescent’s chances of being affected by these. Many participants reported that their adolescent did not use certain social media platforms, for example:

“...none of them have Facebook and things like that” (Participant 05).

Several participants reported that their adolescents became consumed by mobile devices and social media, to the point that they had to step in and prohibit social media use for a time. Participant 03 had a negative experience with this when her daughter was addicted to TikTok. This participant revealed:

“We definitely clamped down on that a lot now, in terms of, we took TikTok away from her for a good couple of months” (Participant 03).

Social media restrictions and control is very important. Parents need to actively monitor their adolescent’s use of these platforms so that it does not become a problem (Participant 09). Participants felt that there was a need to control social media use, as this is important for

protecting their adolescent. This sentiment was expressed by most participants and summed up by Participant 10 in the following way:

“We need to control. We need to have a way of controlling. A way they use their social media” (Participant 10).

Most participants made use of some method of monitoring adolescent mobile device use as a safety mechanism. The most commonly reported method was for parents to physically check their adolescent’s mobile device and internet history. Participants felt that it is their duty as a parent to protect their adolescent and to do this they need to be aware of the activities that their adolescent is participating in on the mobile devices. Parents reported frequently checking their adolescent’s device, believing that all parents ought to be doing this. Parents need to know what is happening on their adolescent’s mobile device (Participant 10) so as to better protect them and to teach them. This point was stressed by participant 10, noting that:

“I have learnt that as a parent we need to know what is going on in our children’s cell phones. Um, I don’t know, I, even now, I don’t know how we are going to do it. But at the end of the day we need to know. Because some of them are exposed to bullying and we are not even aware. Some of them are exposed to, uh, dangerous things and we are not even aware. They get all these things from their cell phones. So, we need to control, we need to have a way of controlling. A way they use their social media” (participant 10).

The second commonly reported method of monitoring device use is to use the mobile devices together. Five participants reported that their adolescent has to use their mobile device in their presence and that they would use the internet together (Participant 04), as a way of ensuring that their adolescent is not being exposed to inappropriate content online (Participant 01).

Subtheme 3.3. The establishment of School educational awareness programmes

The final subtheme for theme three involves school educational awareness programmes. When asked about community support and resources to assist with protecting their adolescent, all participants felt that schools could assist parents in this regard. Most participants felt that schools ought to host informative talks and help to educate parents about current trends, safety methods and to create more awareness about the risks associated with adolescent mobile device use. The majority of the participants were of the belief that they would benefit greatly from learning about trends and how to better protect their adolescent. They were open to learning from individuals with knowledge in this area. Participant 10 stated that it is important that :

“Parents need to communicate with people who have the knowledge about this and who are experienced about technology” (Participant 10).

Three participants felt that they lacked the necessary knowledge (Participant 07) to properly protect their adolescent online. For this reason, educational programmes run by schools would go a long way towards improving overall adolescent protection in the community.

Parents can feel overwhelmed at times (Participant 03) and do not know where to find help with protecting their adolescents online. Participant 07 expressed his experience with this, noting that:

“All parents, it’s much easier if the school comes out and we do that (A parent group), because when parents have a meeting they do not feel so isolated. I think schools are the place to initiate it” (Participant 07). If parents work together (Participant 02) and help one another, then the community and all adolescents will benefit and a safer environment can be created (Participant 02).

Overall, most participants believe that greater involvement from the school will be beneficial. Participants believed that there is not enough awareness around this issue and the school should be the ones creating more awareness (Participant 08). Participant 08 felt that this can be achieved by including online safety into the Life Orientation subject syllabus and hosting informative talks for parents to attend (Participant 08). Participants 04 and 05 were of the opinion that a blanket policy barring mobile devices from school would greatly reduce risks to adolescents. Participant 04 explained how this policy could assist parents:

” I feel like, as much as technology helps learners, I felt like if the school can put out a blanket policy at school level. Where for example, at school don’t bring cell phones to school. It should be a blanket policy. And because if you look at it some of the things, the texting that takes place during the school day, the sharing of information, and if I look at teenagers especially, they, when they feel inadequate. Like within the group together they are all looking at something on the internet and someone doesn’t have a phone. And i think if we just make parents feel safe, for me I would feel safe as a parent if it was a blanket policy from 8:00 to 15:00 cell phones, learners should not bring cell phones to school. And if they need to contact the parents they can just use the front office. I think that there would be less pressure on parents that way as well to conform, and to buy a phone (Participant 04).

Most problems occur during school hours, when parents are unable to monitor and control what their adolescent is doing on their mobile device (Participant 04).

Schools and parents all know the benefit of online resources for learning. However, despite the opportunities, there are many risks involved (Participant 01). Schools have an important responsibility to assist in safeguarding and protecting adolescents (Participant 07) and also to assist in educating their parents about the dangers they may encounter online (Participant 10). Participant 07 shared his views on the assistance of school in this important task of protecting adolescents, noting:

“I think parents need common ground. Everybody must speak the same, the same expectations, the same, the parents need to get together and talk the same talk. That is what the main thing is. I think the schools are the place to initiate it. I think schools should initiate” (Participant 07).

5.3 SUMMARY

The findings in this chapter revealed the three main themes relating to parental perceptions of adolescent mobile device use. These themes included a variety of different experiences and perceptions related to adolescent mobile device use, a perception of a lack of safety and safety strategies employed by many parents in an attempt to better protect their adolescent. In the next chapter, these main themes will be discussed in terms of the research questions of the dissertation and how the qualitative findings answered the three research questions, namely, parent experiences with their adolescent using mobile devices, safety perceptions held by parents and what parental control methods do parents utilise to protect their adolescent online.

The following chapter will discuss how the theoretical framework used for this thesis, namely Bronfenbrenner's Bio-Ecological Systems Theory (1994) and Johnson and Puplampu's Techno-Subsystem (2008), frame the main findings of this thesis in their relevant context.

Additionally, the research contributions, limitations and challenges and recommendations will be explored.

CHAPTER 6: DISCUSSION AND CONCLUSION

6.1 INTRODUCTION

The previous chapter addressed the research findings. These findings identified three main themes which emerged from the responses of the participants, namely: (1) parents' perceptions and experiences relating to adolescent mobile device use; (2) participants feel a lack of complete safety with their adolescent using mobile devices and the internet; and (3) safeguards and rules have been set to protect adolescents. This study used Bronfenbrenner's Bio-Ecological Systems Theory (1994) and Johnson and Puplampu's (2008) Techno-Subsystem as a lens through which to explore parental perceptions and experiences of adolescent mobile device use. The research findings will be discussed in relation to the research questions and the link between the findings and the theoretical framework used for the research will be explained. The contributions of this study and the research and practice implications of the study will be discussed. Recommendations for future research and the limitations of this study are presented.

6.2 SUMMARY OF FINDINGS IN RELATION TO THE RESEARCH QUESTIONS

6.2.1 FINDINGS OF RESEARCH QUESTION 1: What have been the experiences of parents with their adolescents using internet enabled devices?

One of the most notable revelations by participants in this study was the variety of different perceptions and experiences regarding adolescent mobile device use, not strictly either positive or negative alone. Many participants had experiences and perceptions that were both positive and negative and many felt mixed feelings and were conflicted in certain situations in this regard. Despite the negative perceptions and experiences shared, generally the participants agreed that there are also positive aspects and had personally experienced advantages to their adolescent using mobile devices.

Many participants had not personally experienced major problems with their adolescent using mobile devices, due to having rules in place and monitoring this use. This allowed their adolescent to benefit from the educational resources and for parents to feel more confident and comfortable with their adolescent using these devices.

Apart from the positive experiences and perceptions, many participants reported feeling uncertainty. They believe that their adolescent is not safe online and they needed to have rules in place, particularly due to the consuming nature of mobile devices and adolescents becoming easily addicted to using these devices. In relation to the issue of adolescents becoming addicted to mobile device use, many participants felt that their adolescents spent too much time on their mobile devices daily. Therefore, that it is imperative for parents to be actively involved and monitor this use carefully. These findings support the findings of studies conducted by Common Sense Media (2016) in which they found that 59% of parents felt that their teenagers were addicted to their mobile devices, as well as the study by Jiang (2018) which found that 71% of parents were concerned about their adolescent's screen time.

Many participants reported feeling uncertainty around the decision of allowing their adolescent to have and use a mobile device, as was found in the study by Jiang (2018). Participants shared experiences they had around this issue and assisted in forming a better understanding of how they struggled with their decision. The worry about whether or not the decisions they were making, and the potential consequences, were shared by most participants. This feeling of uncertainty was the result of the potential fears of the harm that could come to their adolescents from being allowed to use mobile devices. Content exposure and its effects was a main concern shared by many participants, due to this content being so easily accessible with the number of social media platforms and multiple mobile devices available to adolescents. Similarly, the survey by Pew research centre (2022) revealed that the highest ranking concern shared by parents was exposure and access to unsuitable content. For many participants this fear is the cause for the hesitancy with allowing their adolescent to use mobile devices and the internet, creating a need for parental education on methods to protect their adolescent from these dangers as much as possible.

The negative perceptions expressed by participants included the inability to fully control mobile device use, problems resulting from this use, parents being unaware of the activities that their adolescents participate in on these devices, social media concerns, the potentially negative influence of other individuals online, a lack of control creating problems, and an overall feeling that adolescents are not truly safe online. Many participants felt incapable of properly controlling mobile device usage, despite having rules set. This inability to fully control what their adolescent is doing online and on their mobile devices creates a sense of unease for parents. Despite being actively involved and putting rules in place regarding mobile device use, many participants still felt powerless in actually controlling this use fully.

Participants were fully aware of the hazards involved when adolescents were left to use mobile devices without supervision or guidance. Participants believed that it is the responsibility of a parent to be actively involved in the lives of their adolescents, hence the findings in theme three, which alludes to the notion that strict parental controls are needed when an adolescent accesses the internet. Participants felt that parents need to know their adolescents interests, friends and the activities that they are involved in online, because if parents are not involved and allow their adolescents free reign of their mobile devices then problems arise. Participants were of the opinion that adolescents can be easily led astray, thus it is imperative for parents to be active in protecting them. The findings in theme three suggest that this is achieved by setting rules, talking to adolescents openly and monitoring their mobile device use. Many participants felt that controlling mobile device use has become particularly difficult now that adolescents have multiple mobile devices available for them to use. This problem becomes even more difficult with more than one adolescent in the household.

Eight of the ten participants also expressed concern about the young age at which children are now being given mobile devices. They felt that adolescents are being given permission to use mobile devices freely from too young an age, when not mature enough for the responsibility of using such devices properly and safely. Participants felt that this immaturity can lead to adolescents becoming involved in inappropriate activities online and being manipulated into dangerous situations. Nine of the participants were of the opinion that adolescents need to be mature enough to be given the responsibility of having a mobile device of their own.

Many participants shared a sense of lacking knowledge when it comes to modern technology. Some of the negative perceptions felt by participants were as a result of not having the necessary knowledge to protect their adolescent. Nine participants reported experiencing ambiguous feelings towards adolescent mobile device use, with these emotions stemming from their limited understanding of ways in which they can protect their adolescent from harm. Participants mostly believed that technology is useful, particularly for academic resources. However, there are a number of problems that can also result from this use. Mobile devices are seen to have both positive and negative aspects. The vast information and educational resources available online are seen to be the most valuable aspects of mobile devices and internet access. Nine of the participants view mobile devices as something positive, which has improved their lives, and they accept modern technology in their lives. However, this same vast information that is easily accessible can also be problematic when content that is inappropriate is accessed and viewed.

The pandemic lockdown led to technology use becoming the norm for accessing school work for many adolescents in our country, and worldwide. This led to increased screen time by adolescents. Most participants in this study had to relax some of their rules in order to allow for this increased reliance on mobile devices to access schoolwork. This increased use of mobile devices resulted in an increase in the chances of being exposed and manipulated into inappropriate situations. This created a significant amount of stress for participants during this time.

Thus, during the pandemic, mobile devices aided educationally for students and assisted with safety. Participants explained that once schools opened up again, the learners were put onto a rotational basis, so they would be at school one day and at home working online the next. With adolescents, only returning to school intermittently due to the restrictions in place meant that adolescents were necessarily alone at home more. Mobile devices were then vital in allowing parents and adolescents to communicate for safety reasons. This period led to a need for adjustment by parents.

Overall, participants in this study were of two minds regarding mobile devices. They all acknowledged the many benefits that they offer but are also aware of the risks and have personally experienced some of these. Participants believe strongly that parental involvement is a vital factor in keeping adolescents safe in this technological world.

6.2.2 FINDINGS OF RESEARCH QUESTION 2: How safe do parents perceive their adolescent to be while using mobile devices?

The second overarching theme of this study was the participant's belief that their adolescents were not safe when using mobile devices and the internet. Nine of the participants viewed mobile devices as not being safe at all for adolescents. The subthemes relating to the aspect of safety were parental concerns and perceived safety regarding mobile device use and adolescent technology skill level.

A common belief shared by participants was that the maturity level of an adolescent plays an important role in their safety when using mobile devices. If an adolescent is not mature enough to cope with the responsibility of using a mobile device appropriately and safely, they

can become easily involved in inappropriate stations, can be exposed to inappropriate and harmful content mistakenly, or can be manipulated by other individuals online.

The maturity level of an adolescent plays an important role in parent's views about their safety. Many participants believe that as adolescents mature and learn, they become safer when using mobile devices and the internet. With regards to this immaturity, there are further risks as adolescents can be exposed to content that is too mature for them, which can be damaging for them.

The curious nature of adolescents is a cause for concern for participants. Concern was expressed by participants that this curiosity can lead to problems if not monitored and addressed properly due to adolescents being more vulnerable to inappropriate content and being harmed by other individuals. Pop-up content was a shared concern of several participants. These participants felt that, even with rules in place and careful monitoring, their adolescents can still be exposed to inappropriate content, due to the many advertisements that are present on all websites. Some participants shared experiences of their own adolescents being exposed to content that was not appropriate and being manipulated by strangers online to share personal information. Further to this, parents expressed concern about how easily adolescents can be led astray by others and by content that was seemingly innocent at first glance.

All participants had fears regarding adolescent mobile device use. Despite safety discussions and rules being set, participants were concerned about their adolescent being manipulated into sharing personal information online. These findings align with the results of the study by Gelles-Watnick (2022) in which it was found that 34% of parents were concerned that their children would share too much of their personal information online. The naïve nature of adolescents can often get them involved in harmful situations and be easily targeted by others.

A major concern expressed by participants was the different social media platforms. Eight participants expressed worry about the potential harm that social media can do. Tik Tok was mentioned by several participants as being troublesome. Social media can consume adolescents too easily if not controlled by parents. There were several experiences participants had in which they discovered that their adolescent has been on social media websites for which they were not given permission. The effect that social media has on adolescents can be just as harmful to parents. Some participants explained the changes in behaviour they experienced when their adolescent had viewed content on social media that was influencing their behaviours negatively.

This study revealed that parenting an adolescent in the digital age can be troublesome and challenging, especially when adolescents are proficient technology users and often have superior technology knowledge. Often, parents rely on their adolescents to assist with modern technology, which can lead to problems for parents trying to protect their adolescent from the dangers associated with mobile device use.

6.2.3 FINDINGS OF RESEARCH QUESTION 3: What parental controls do the parents of adolescents utilise to protect their online browsing activities?

As with the findings from the study conducted by Raisbeck (2022) in which communication was a vital tool for protection, the research participants of this study believe that open communication about safety and the responsible use of mobile devices, coupled with parents checking mobile devices frequently, are preferable to using any blocking software. The safety precautions implemented by participants included spending time online together to educate adolescents about appropriate behaviours online, checking activities on mobile devices, discussing concerns or content that made adolescents feel uncomfortable online, and controlling mobile device use, aligning with the findings of Symons et al. (2017) when it was found that active and co-use parenting mediation styles were commonly used together.

Participants have set a number of rules to further assist with protecting their adolescents, including limiting the amount of time using a mobile device and limiting social media platforms. The controlling of time limits for device use is also important, as this assists in teaching healthy habits regarding technology use. Social media control was one of the shared views held by parents of this study. Many participants felt that it is important for parents to actively monitor and limit the use of social media platforms due to the associated risks involved in using these platforms. Several participants had experienced their adolescent being consumed with social media and spending too much time on these applications daily, to the point that they had to prohibit use of these applications for a time period.

The most commonly reported safety mechanism used by participants was to physically check the mobile devices of their adolescents to be aware of who they are talking to, what they are involved in, as was also found by the study conducted by Symons et al. (2017). Using mobile devices together was another commonly reported protective measure put in place by parents. Parents felt more comfortable using mobile devices with their adolescent so that they can closely supervise the content to which they are being exposed.

As with the studies by Rasibeck (2022) and Symons et al. (2016), six of the participants of this study believed that they lacked the necessary knowledge to properly protect their adolescents. They felt that they would benefit greatly from educational programmes for parents. Most parents felt that schools in the community needed to become more involved and should be the ones to host educational drives for the community. Overall, most participants were of the opinion that greater school involvement would be beneficial for all parents. Participants expressed the need to create more awareness around the issue and for schools to reach out to a number of parents and families and that they should be responsible for initiating such a cause.

Mobile devices and internet access pose many opportunities for adolescents, such as research, socialising and entertainment. However, without proper safety measures in place and parental involvement there are many risks related to this use. Parents and schools are aware of the many educational advantages. However, they have an important responsibility in safeguarding and protecting adolescents from potential harm. Parental education on safety measures plays an important part in protecting adolescents in today's modern technological world.

6.3 SUMMARY OF FINDINGS IN RELATION TO THE THEORETICAL FRAMEWORK

The Bio-Ecological Systems Theory emphasises particular factors of development which are important in influencing the environment of adolescents (Bronfenbrenner, 1994). In particular, this theory allows for an understanding of the current scenario of digital and media landscapes that surround every adolescent at the home, school and community levels (Iqbal et al, 2021). Despite this approach being developed prior to the internet revolution and the advent of digital media, it is considered to be a comprehensive theory which focuses on adolescents direct, immediate, and indirect environments (Iqbal et al., 2021).

Iqbal et al. (2021) argue that an ecological stance, which centres on the home environment, is vital to understanding a child and adolescent's environments as digital natives and their relationships within the micro-, meso-, and exo-, systems. Johnson and Pupilampu (2008) also acknowledge the important role of technology and ingrained the concept of the techno-subsystem, by including a new element into the immediate environment (microsystem), including children and adolescent's interactions with their living elements (for example parents), with the non-living elements of technology (for example, digital devices).

In 2008, Livingstone and Helsper adapted the Bio-Ecological Systems Theory in their study investigating children and teenagers online activities and parental mediation within their family's social structures, culture and community. Previously, researchers applied the bio-ecological systems theory within internet and media related research to create an understanding of the interaction between the different factors (Livingstone & Helsper, 2008; Iqbal et al., 2021).

With this context in mind, the researcher includes the ecological theoretical perspective to explore the factors within the integrated systems. Due to internet use being individualised and a personal experience, it is imperative to recognise the elements which influence internet access and mobile device use for adolescents. Essentially, the role of an adolescent's digital environment at home and school are the most important factors to consider, as this is where they have instant access to mobile devices and internet access.

6.3.1 MICROSYSTEM LEVEL WITH TECHNO-SUBSYSTEM

6.3.1.1 INDIVIDUAL LEVEL

The microsystem refers to the immediate environment in our lives. These include the direct interactions an individual has with family members and friends (Bronfenbrenner, 1979). The techno-subsystem includes the direct interaction that an individual experiences with technology, for example an individual's interaction with a tablet, a smartphone, or media (Johnson and Pupilampu, 2008).

Online safety for adolescents is reliant upon parental awareness of dangers online and their understanding of how to help their adolescents avoid these dangers. This study explored parental perceptions, monitoring methods and knowledge regarding adolescent mobile device use. Five of the participants reported feeling that their adolescent spends too much

time on their mobile devices daily. Most participants reported that there is a need for parents to monitor and control mobile device use by their adolescents. Eight of the ten participants reported concerns about the consuming nature of mobile devices and how adolescents become easily addicted to these devices if parents are not actively involved in monitoring this use. All participants in this study set rules, checked mobile devices and had discussions with adolescents about dangers as safeguards, corresponding with the literature review. The study findings corroborate existing data showing that parents who are unfamiliar with modern technological advances in communication media can limit protective behaviours. Furthermore, this study found that parents who feel confident with their knowledge on using modern technology still experienced problems with their adolescent using mobile devices; problems that they did not anticipate due to having protective measures in place to stop these potential problems from arising. Only one participant of this study reported making use of parental blocking software. Despite one parent's use of blocking software and having rules set and checking his daughter's mobile device, it became necessary to resort to taking away the mobile device from his daughter permanently after it was misused. Although all participants in this study were aware that software exists that will help protect their adolescent, their lack of knowledge regarding how to use this was the reason that nine of the participants chose to resort to active parental mediation instead of relying on technology for this.

Previous literature reveals that parental supervision plays a key role in an adolescent's use of social media and that parental mediation can assist in diminishing unfavourable effects of social media use (Coyne et al., 2017). This author believes that there is a need for further research in this area due to the findings of this study. Most participants reported having rules set and openly discussing risks with their adolescents. With regards to the skills levels, eight participants reported their adolescents being experienced technology users. Six of these participants felt that their adolescent had superior technology knowledge in comparison to their own knowledge with using mobile devices. The findings revealed that communication and active involvement of parents with their adolescents are vital factors in the microsystem which impact the potential advantages and disadvantages of the inclusion of technology into the household. Most participants of this study reported having a good, open relationship with their adolescent. They talked often and discussed concerns, which assisted in making parents feel more comfortable with their adolescent using mobile devices. They believe that should any issues arise their adolescents will speak to them and alert them to the matter. For example, Participant 08 had a personal experience in which her son was manipulated into sharing his passwords with a stranger online. When this happened, her son spoke to her and asked for her help. Another example was Participant 07, who had similar problems on two separate occasions with his adolescents. His adolescents informed him that a man was trying to speak to them online. An environment that encourages open communication and fosters a healthy relationship between parent and adolescent can assist in protecting adolescents online. The positive interactions between a parent and adolescent helps to foster trust between one another. This, in turn, helps parents feel more comfortable with their adolescent using mobile devices, as they feel confident that should any inappropriate occurrences happen their adolescents will alert them to this. By fostering a relationship of trust and openness, parents feel more positively about their adolescent using mobile devices. As a result, the home environment and family attitudes towards mobile devices is more positive, as explained by participants 08 and 06, for example. Education is required for

parents to fully understand social media and modern technology, as well as methods to supplement active mediation to better protect their adolescent online.

Regardless of the website, application, or mobile device, parents need to generate an attitude with adolescents that their actions online are permanent and can be accessed by anyone. Many participants of this study shared their methods of openly discussing dangers and concerns about being online, assisting in creating awareness about this digital permanence spoken about by many experts. Parents need to be actively involved to ensure that their adolescents understand the potential negative consequences and risks involved in using digital technology.

6.3.1.2 INTERPERSONAL LEVEL

One possible means by which the wellbeing of both adolescents and parents can be improved is through parental self-efficacy. Intervention and prevention programmes should consider focusing on parental self-efficacy to promote healthy childhood and behaviours, and improve parenting (Kieslinger, Wartha, Pollatos, Steinacker, & Kobel, 2021). The parenting for Lifelong Health for Parents and Teens Training Programme is one of the potential intervention programmes that could be modified as a follow up, aimed at the protective behaviours of adolescent mobile device use (World Health Organisation & Black, 2020). The parenting for Lifelong Health for Parents and Teens Training Programme is a training programme for parents or caregivers and their 10 to 17-year-olds. The aim of the programme is to nurturer parent-teen relationships and to reduce the risks of violence against teenagers outside and inside the home. The programme aims to strengthen parents' ability to create a protective environment and to ensure their child's wellbeing and health through the implementation of positive parenting techniques. Parents are taught about parenting methods, in order to reduce problematic adolescent behaviour and to avoid using harsh disciplining methods at home (World Health Organisation & Black, 2020).

Previous research has revealed that adults, adolescents and children use technology for different reasons. Young people view technology as an important part of their social lives and their development of their identities, whereas adults find technology to be more useful for business and practical reasons. The perceived significance and use of technology was described by parents of different ages in this study. A significant finding from this study was that participants view older siblings as an important resource and as helpers with guiding technology use by their younger siblings. The recruiting of siblings to assist with protecting younger siblings by parents can assist in supporting family cohesion. The findings of this study align with previous research showing that participants rely on a number of different sources regarding safety for their adolescent online, such as other parents, information online, and schools. One valuable contribution of this study was the recommendations and suggestions from parents. For example, some participants expressed worry about adolescents being given mobile devices from too you an age, where some parents believed that adolescents need to be of an age where they are mature enough to handle the responsibility of safely using a mobile device.

Participants felt that parents needed to be more actively involved both with monitoring device use and with openly discussing risks and concerns with their adolescent. This study's

findings highlight the significance of open communication between parents and adolescents. The participants of this study expressed different views on disclosure by their adolescent. Most parents frequently checked their adolescent's mobile device, regardless of their adolescent's disclosure. Some parents reported feeling overwhelmed, influencing their self-efficacy in controlling and monitoring their adolescent's mobile device use and activities online. It is important for schools, community resources and health care providers to collaborate with parents in providing support with keeping children and adolescents safe.

This study found that, although all participants of this study were aware that software exists, only one participant made use of these parental control methods. It is important for parents to improve their knowledge of mobile devices and the internet and to be more involved in their adolescent's use of these devices.

The themes revealed in this study contribute to knowledge development about parental perceptions and monitoring of adolescent mobile device use as experienced by the participants. For example, research by Simeon (2019) (discussed in Chapter 2) revealed that a parent's chosen mediation strategy relies on their digital literacies. This study found this to be true, where despite adolescents using technology on a daily basis, they felt more comfortable relying on active mediation strategies, such as open discussions about risks and concerns and checking mobile devices, instead of making use of software to keep their adolescents safe. This form of research assists in providing information about the best ways to influence parental attitudes, monitoring methods and knowledge about how to keep their adolescent safe when using technology.

6.3.2 MESOSYSTEM LEVEL

The mesosystem includes the relationships between an individual's microsystems (Bronfenbrenner, 1979). For example, an individual's family experiences may be linked to their school experiences. This system is also comprised of the role of peers and friends, parental digital skills and the characteristics of the digital environment of an adolescent at home and school. An example would be the availability of the internet (Wi-Fi for example), and internet-enabled devices (such as smartphones and tablets).

This study creates an opportunity for researchers to promote programmes at the mesosystem level by means of which to magnify protection strategies related to adolescent mobile device use and online media exposure, by encouraging protective measures of parental monitoring by establishing educational and awareness programmes for parents. As suggested by the research participants, schools need to create more awareness about the dangers online and to assist parents, by hosting informational talks to educate them about the potential risks and by providing the tools available to them to assist in keeping their adolescent safe. Parents and schools can collaborate in order to better protect all adolescents, such as setting zero tolerance for bullying, both online and offline.

Participants felt that schools currently lack the necessary cyber-safety awareness to promote the safe use of online resources. There is a need for schools to create cyber-safety awareness guidelines on the ways in which to implement and maintain a cyber-safety culture. These guidelines will assist schools in understanding the learners needs and to

create knowledge, skills and awareness of cyber safety. Campaigns such as this could be implemented in all schools to assist with educating learners about the dangers and risks involved in using mobile devices and the internet. This could be implemented as part of the Life Orientation curriculum in all schools in order to reach and educate all children and adolescents in our country. This same programme could be adjusted and presented to parents. The schools need to become more involved. Each school could aim to implement an awareness programme, which can be presented to all parents to teach them about trends, risks, and safety measures that they can make use of to better protect their adolescents. Other methods that could be used to create awareness of the risks involved in adolescent mobile device use include workbooks for adolescents at school, information booklets for parents, posters to be displayed in schools and for the distribution of information to parents. Schools could share insightful information about safety strategies and aid in creating awareness of risks by sending letters home, sharing information on school websites and sending information to parents on the school's D6 communicator.

Furthermore, this study revealed some of the barriers that are curbing parental monitoring and may assist with creating awareness of online safety training programmes that are vital for parents in the community. For example, Emma Saddler, a social media lawyer, hosts informational talks at schools for parents and children to create awareness about the dangers of social media. Emma Saddler teaches the viewers the following important statement to think about, "Before you press send, ask yourself – am I happy for the following to see my message or post? My parents, my principal, the police, the public". This serves to encourage children and adolescents to carefully consider information they share on social media (As cited by Brown, 2019).

6.3.3 EXOSYSTEM LEVEL

The exosystem refers to the setting in which there is a connection between the context in which an individual actively participates and the context in which they do not have an active role (Bronfenbrenner, 1979). The exosystem includes the characteristics that concern parents, such as their workplace and nature of occupation, contextual factors such as support by the community and mass media. Participants of this study reported a need for schools to become involved in helping the community to better protect adolescents. Participants reported feeling that they lacked the necessary knowledge and skills to properly protect their adolescent from all potential dangers online. Participants felt that schools need to become involved in creating more awareness about this issue and for providing parents with education and tools to help them better protect their adolescents.

The circulation of information about the urgency of these dangers to adolescents and the perceived obstacles faced by parents in monitoring their adolescent's technology use needs to be a goal for all stakeholders. Several participants expressed how they felt that mass media is making inappropriate content more easily accessible to adolescents, making it difficult for them as parents. Participant 04 explained how she viewed content online about a child who had passed away due to online influences. The media is making negative content more readily available. For this reason, it is even more important now for parents to be actively involved and educated about these dangers and the different means of protecting their adolescent that are available to them.

6.3.4 MACROSYSTEM LEVEL

The macrosystem includes those influences that are related to an individual's wider community, such as the cultural values, and their stand on digital technology (Bronfenbrenner and Morris, 2006). The macrosystem refers to the society that frames the different relationships and structures among the systems.

With smartphone penetration at 91,2% in South African households, it is clear that South Africa as a whole is embracing the technological advancements made available by 4IR (Independent Communications Authority of South Africa, 2020). This revolution has led to a number of changes in all spheres of our lives, including industry and education. The participants of this study are in agreement with the Education Department's view on technology use and see the value in the educational resources available for their adolescents online. The positive perceptions shared by the leaders in education are mirrored by the participants interviewed. However, the findings from this study revealed that many parents do not feel confident or competent in protecting their adolescents when using mobile devices. There is a need for higher learning institutions to create learning programmes that aim to introduce parents to modern technology and training them in protective methods that can be implemented in the home. Education is vital in shaping the weaknesses and strengths of every country, society, or region. Education spreads awareness and assists in the upliftment of society by helping to elevate the conditions in which we live. This researcher believes that it is vital for parents and adolescents to be educated in proper and safe use of mobile devices to benefit fully from the many advantages offered by modern technology. All parents of this study were of the opinion that they would benefit greatly from training, believing that the community needs to become more involved in creating awareness in society about these issues, with the aim of better protecting all South African children and adolescents.

In 2004, the e-Education white paper was released (Government of South Africa, 2004), recognising the importance of information and communication technology's role in education. The assimilation of this technology into education has grown and new tools have been developed. As the transition and use increases, children, parents and teachers will need to establish digital literacy skills (Department of Basic Education, 2012). This increased use of Information and communication technology use in schools requires that the department of basic education has an obligation to assist teachers and parents, through the school networks, to properly protect children's internet use. The protection of children falls under the government's regulatory framework. Thus at a macro level, it is the responsibility to ensure that safety measures are in place to protect children.

The gathered data relating to parental perception of adolescent mobile device use revealed that parents are scared to allow their adolescents to freely browse online without any safety measures in place. From a macrosystem level the government has taken a stance that technology should be accessible to all (National Cybersecurity Policy Framework-South African Government, 2015). The cybercrimes act and the POPI Act, which prohibit the unlawful behaviour in our digital environments and the sharing of personal information aid in protecting all citizens. However, there is a need for the government to improve on this safety

and the education of all people thereof. The threats that go hand-in-hand with technology progression need to be adequately addressed.

6.3.5 CHRONOSYSTEM LEVEL

The chronosystem is the temporal element of the theory, which exists throughout the different systems, and includes historical and developmental circumstances that occur in an individual's life (Bronfenbrenner, 1979). These factors can include changes in society, changes in familial relationships, or individual development and internal changes which influence the individual and the environment, such as adolescence, for example. This system adds a contextual insight of the influence of the systems on that individual (Bronfenbrenner, 1979). This system was relevant to this study, because adolescents are in a stage of transition from childhood to adulthood. During this period that there are changes in the parent-adolescent relationship (Whiteman, McHale, & Crouter, 2011). Adolescents and parents have direct interactions with and are influenced by, mobile device use. During adolescence, parents tend to allow more freedom for adolescents, as expressed by Participant 07 of this study, who shared his experience of allowing his oldest adolescent to have more privacy and freedom, and to have different rules for him in comparison to those of his younger siblings.

Another example of an influence as seen from this system level was the participant who was divorced. She expressed a difference in rules between her and her ex-husband. Although they support one another's rules, they each set different rules and each have different views on what is deemed acceptable. This highlights different parental perceptions on the matter at hand.

6.4 THEORETICAL FRAMEWORK CONTRIBUTIONS

Bronfenbrenner's Bio-Ecological Systems Theory (1994), centred on the home environment, is the most important aspect to consider when trying to create an understanding of an individual's environment and their relationships within the micro-, meso-, and exo-systems. Johnson and Pupilampu's (2008) addition of the Techno-Subsystem further acknowledges the important role of technology in one's immediate environment (microsystem).

Bio-ecological systems theory (1994) with Johnson and Pupilampu's (2008) techno-Subsystem served as a framework through which to investigate adolescent mobile device use and parental perceptions of this use, within the context of social structures of family and community. This theoretical framework allowed for an exploration into the factors within the integrated systems of an individual. Bronfenbrenner's (1994) Bio-Ecological Systems Theory with Johnson and Pupilampu's Techno-Subsystem allowed exploration into how parents are navigating the use of digital devices in the household and applying it to their chosen safety behaviours. Due to parental personal views and experiences being the focus of the research, this theoretical framework allowed for an understanding to be formed of the different influences that impact parental perspective of adolescent mobile devices use, such as parent-adolescent relationships, impact of a parent's workplace and community values and norms.

This theory provided an effective method to explore the different factors that influenced a parent's perception and their choices of mediation methods and adolescent mobile device use, and allowed for a more holistic understanding of how these different influences contributed to their perception and choices made within their homes.

6.5 RESEARCH CONTRIBUTIONS

This research examines important issues that have not been explored enough from a South African context, namely, adolescent mobile device use and related parental safety measures. The findings from this study contributed to the body of literature on parental mediation in South Africa. There has been extensive research conducted to examine the ways in which parents influence children's use of media. However, most of this previous research has focused on parental mediation of a single type of technology, such as internet usage or television viewing. This study examined parental awareness of online dangers, personal perceptions and experiences of technology use in the household and ways in which parents implement safety strategies in the household. Thus, a unique gap was covered in this study. These findings may assist with some useful insights in the South African household and ways in which scholars, parents, and educators can employ strategies to safeguard their adolescents from threats in the digital domain.

The findings from this study may be used by social workers and schools to form a better understanding of the risk profiles of families and adolescents, especially since there is a movement towards the 4IR and digitisation. With research indicating that monitoring is a parent's responsibility, social workers and staff from schools can assist by being knowledgeable about mobile devices and internet use, monitoring software, and mediation methods parents can use to protect their adolescents and children. Additionally, social workers and schools working with families, parents and adolescents should consider developing programmes for parents and adolescents to educate them about the risks involved, methods to protect them, current trends online and other potential negative consequences.

In South Africa, cyberbullying has become a problem promoting the need for greater cybersecurity awareness. This qualitative, exploratory research design that allows the researcher to engage parents, as the study views parents as the first point of contact in ensuring the safety of adolescents online. This research design allowed the researcher to examine the matter in-depth and was not restricted to specific questions, allowing for the personal experiences of participants to be expressed to the researcher, creating a better understanding on the matter.

With regards to the theoretical framework this study contributes towards continuous development of the techno-subsystem from a South African context. It gives a view from a context outside of the traditional western views from which this theory originated. The section that follows explores the limitations and challenges faced by the researcher during the study.

6.6 LIMITATIONS AND CHALLENGES OF THIS STUDY

The limitations of this study included external validity threats, which could weaken the research transferability. By using a single setting, such as a town like Amanzimtoti, the outcomes may not translate to other settings as well. However, the emerging themes from this study may correspond to other similar contexts and could contribute valuable insights for educators and policy makers alike, despite the potential lack of generalisation that may exist (Maxwell, 2012).

Selection bias could occur due to the data being obtained using a purposive sample of selected volunteers. A disadvantage of purposive sampling is the chance of the collected data focusing on a single experience and losing the wider range of possible data that could be obtained from a convenience sample of participants (Etikan, 2016). Due to the covid-19 pandemic safety restrictions in place during the research, the participants were limited to one area alone for the selection, thus restricting the chance for participants from other areas to be included.

Due to the pandemic lockdown restrictions enforced at the time interviews needed to be conducted at specific times using Skype. Concerns have been raised by researchers about online interviews limiting the participation of individuals without access to the internet, or where participants are expected to incur any costs for using the internet to participate in interviews. For this reason, it was important for the researcher to ensure that the participants had access to the internet for the purpose of conducting interviews. The need for online interviews also led to a need for reliable and stable internet connections and the technological knowledge on using online platforms. Certain groups may be excluded from the study because they feel uncomfortable with using such platforms or do not have the technology required.

6.7 RECOMMENDATIONS

One recommendation for future research is the replication and extension of the findings of this study to a broader context by using a mixed methods approach to provide for a more comprehensive understanding to be formed of digital device use and parenting styles. Owing to the fact that this topic is emerging in this academic context it needs to be explored entirely and to have data triangulated. A mixed methods approach will allow for a broader and more complete vision of the problem to be identified. The results obtained from a mixed methods approach has the potential to enrich our understanding of the topic at hand and will add value and aid in advancing our knowledge in this field. However, the gathered data from the participants in this study contributed towards a qualitative dimension to the knowledge that is currently known on parental knowledge and experiences relating to adolescent mobile device use. There is a need for further research into barriers and opinions about parental monitoring of adolescent mobile device use and the dangers associated with this use. Community support is vital, where nationally, school initiatives need to administer educational training for parents and the public, so as to develop awareness about the potential undesired effects of social media exposure to adolescents. The development of a programme that addresses parental digital literacy needs to be designed and administered by the Department of Basic Education. The circulation of information about the urgency of

these dangers to adolescents and the perceived obstacles faced by parents in monitoring their adolescent's technology use needs to be a goal for all stakeholders. Additionally, the exploration of the perceptions and experiences of adolescents themselves of their internet and mobile device use would be beneficial in creating a better understanding of how they view their need for better protection and the ways in which they feel we could assist in reducing their vulnerability would further aid with this problem.

The strength of the current study was its exploration of parental views and experiences with regards to the inclusion of mobile devices in their adolescent's lives and the home. The role that parents play in keeping adolescents safe online ought not to be undervalued and requires further investigation. Future research should collect data through a quantitative survey and should be followed by qualitative interviews. Future research needs to explore whether the new generations of parents will increase their digital literacy skills and whether this will, in turn, influence their chosen methods of mediation to help their adolescents manage online risks.

6.8 CONCLUSION

This dissertation sets out to gather the perceptions and experiences of parents in relation to their adolescent using mobile devices. This was accomplished by ascertaining parents' experiences and perceptions relating to adolescent mobile device use in a qualitative research design. The findings from this study provide a rich description of parental experiences and the perceptions they hold in relation to mobile device use and its impact on adolescents.

Parental concerns about technology use by adolescents is a commonly reported issue over generations, from televisions to computers (Wartella and Jennings, 2000). With the inclusion of mobile devices into our lives these worries are now amplified for parents, owing to their immersive nature and personal uses (Orben, 2020). Underlying these concerns is the tension that parents feel between protecting adolescents and allowing them some degree of autonomy. The findings highlighted the mixture of both positive and negative experiences and perceptions held by parents in relation to this matter. The participants reported both advantages and disadvantages to the widely available technology in our lives now.

This study revealed the perceptions and experiences participants have with their adolescents use of mobile devices and the internet, as well as the preventative security measures that are used. Some parents personally experienced some of the harmful effects of adolescent mobile device use, such as inappropriate content exposure, pressure by others online to share personal information and changes in behaviour. Some of the positive experiences held by participants included educational advantages such as access to information and safety advantages, as they are able to remain in contact while parent and adolescent are not together.

The safety strategies used by participants to create a level of safety for adolescents were discussed and included setting rules, checking mobile devices, and maintaining an open relationship in which concerns and risks can be discussed. However, it was also found that there is a need for more systemic support for parents. While participants believe that

protecting their adolescents and monitoring their mobile device use is their responsibility, families require further assistance to better protect their adolescents.

Participants provided some insight into the insecurities they felt regarding technology use and monitoring their adolescent's use. These insecurities arose from a parental lack of technological knowledge, adolescents' advanced skills with using modern technology and participants being unaware of the best methods available to assist with safeguarding their adolescents. Previous negative experiences with technology and parental awareness of potential dangers also created a sense of unease regarding the best means of safeguarding adolescents.

All participants felt strongly that educational programmes to create awareness about the potential risks and possible methods to better protect adolescents when using mobile devices would be beneficial. It would likewise be beneficial for schools and parents to work together to assist one another in protecting all adolescents from the dangers involved in mobile device use. An educational programme for parents focusing on digital trends, risks in cyberspace, information threats and practising cyber safety is likely to go a long way in promoting the safe use of mobile devices. Technology has a role to play in the digital age, and this study showed that the adolescent is immersed in the use of social media tools for both educational and private use. School run education programmes for parents are the recommended starting point in relation to this, as recommended by the participants of this study.

The implications for this dissertation include strengthening parental skills through awareness and informative programmes, maximising the advantages and reducing the risks associated with mobile device exposure and advancing the limited knowledge in the literature from a South African parent's perspective. There is a need for the Department of Basic Education to play a more active role in protecting adolescents from the potential harm created by the risks of mobile device and internet use. Programmes need to be developed to create awareness and to develop digital literacy skills. The Department of Basic Education and schools are a vital part of the solution to helping protect adolescents. Further research is needed to explore the ways in which parents and adolescents can be assisted to reduce their risks of harm. This dissertation has gathered information for a unified approach to adolescent mobile device safety, developing parental knowledge on monitoring methods, identifying gaps in parental risk reduction for adolescent's mobile device use and providing recommendations for preventative interventions to better equip parents with facing the challenge of keeping their adolescents safe when using mobile devices. This study revealed that there are oversights and possibilities for an important multidisciplinary research to be conducted in South Africa on digital parenting. It is important for this area of study to be explored further. The dangers and risks to adolescents that are inherent with mobile device use will continue to increase and progress. The Department of Basic Education, schools, educator and parents need to respond accordingly.

Parents have a significant responsibility to adapt to the digital age in which we live. Recognising and making the necessary adjustments to the time and space that mobile devices occupy within the parent-adolescent relationship is an important step in the process of adapting to our world. Additionally, the findings from this study contribute to the collection

of knowledge on families and technology and may influence the way in which future research is conducted in a positive manner.

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APPENDIX

APPENDIX A- RECRUITMENT LETTER



RECRUITMENT LETTER

Ethical clearance reference number: r 45297207_CREC_CHS_2021

AN EXPLORATION OF PARENT'S PERCEPTIONS OF ADOLESCENT MOBILE DEVICE USE

You are asked to participate in a research study that will be conducted by Samantha Murray (BA Masters in Psychological Counselling), from the department of Psychology at UNISA. The results of this study will be compiled into an article. You were selected as a possible participant for this study because you are a parent.

PURPOSE OF THE STUDY

This study is designed to create and describe an understanding of parent's perceptions about the use of mobile devices by their children, how parent's monitor and control this use, and how they promote good behaviour online.

Many adolescents are exposed to large amounts of violence in the media, and real-life. Exposure to violence has been linked to emotional desensitisation. The easy accessibility and variety of devices available for adolescents to use increases the concern for the possible negative effects and harm for adolescents to exposure by violent and harmful media. Parents face new challenges brought about by the ever-changing technology that is available. Today's children are competent and confident with using modern technology, such as smartphones and tablets. Often, children will have more knowledge and understanding of modern devices in comparison to their parents. Additionally, modern mobile devices are portable, thus making it difficult for the monitoring of their use. For these reasons, it is imperative to explore parent's perceptions, and how they are coping with these challenges.

PROCEDURES

If you volunteer to participate in this study, I will ask you the following:

1. Sign this form to indicate that you have given consent to be part of this study.
2. Agree to a one-on-one semi-structured interview with the researcher.

POTENTIAL RISKS AND DISCOMFORTS

The interview will involve personal and sensitive information. It is not likely, but it could create some emotional distress. Should any emotional distress arise please contact:

Research study supervisor:

Mr. Kyle Bester: bestekj@unisa.ac.za

Chair of the Psychology Department's Committee:

Ilse Ferns: fernsi@unisa.ac.za

POTENTIAL BENEFITS TO RESEARCH PARTICIPANTS AND SOCIETY AS A WHOLE

This study is beneficial as it will add to existing literature and create an understanding from a South African perspective on the topic.

PAYMENT FOR PARTICIPATION

Participants will not be paid for participating in this research study. Participants who conduct their interviews using the Skype platform will receive a voucher for 250-300MB of data after the completion of the interview.

CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you personally will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of the collected information being stored safely, and only being accessible to the relevant research staff.

PARTICIPATION AND WITHDRAWAL

It is your choice as to whether or not you would like to participate in this study. If you volunteer to participate in this study, you may withdraw at any time without any consequences. You may also refuse to answer any of the questions that you do not want to answer, and remain in the study. The researcher may withdraw you from this research should the circumstances arise that require this.

RESEARCHERS IN THIS STUDY

If you have any concerns or questions about the research, please feel free to contact the researcher, Samantha Murray via email: murraysamantha89@gmail.com or the research study supervisor, Mr. Kyle Bester via email: bestekj@unisa.ac.za

RIGHTS OF THE RESEARCH PARTICIPANTS

You may choose to withdraw your consent at any point and discontinue your participation without consequence. You are not waiving any legal rights or claims due to your participation in this study. If you have any queries or questions regarding your rights as a research participant, contact, Ilse Ferns, the Chair of the Psychology Department's Ethics Committee via email: fernsi@unisa.ac.za

SIGNATURE OF RESEARCH PARTICIPANT

The above information was provided to me (the participant) by Samantha Murray. I was given the opportunity to ask questions and these questions were answered by Samantha satisfactorily.

Name of Participant: _____

Signature: _____

Date: _____

REFERRALS FOR COUNSELLING SERVICES

1. Amanzimtoti Trauma Unit (ATU)

The ATU focuses on a variety of issues concerning the community, such as crisis intervention, preventative programmes, and awareness campaigns. Services offered include:

1. Counselling
2. Family therapy
3. Practical support
4. Trauma intervention and crisis management

Contact information:

Phone: 031 903 7777

Email: info@totitraumacentre.co.za

Address: 1 Queens Terrace, Doonside, Amanzimtoti.

2. Local psychologists who can assist:

1. Dr. Melissa Boulind
Clinical Psychologist
BA (Honours) UNISA ; MA Rhodes ; PHD Rhodes.

Dr. Boulind specialises in:

- Anxiety
- Depression
- Trauma
- Adolescent conflicts
- Making positive lifestyle changes
- Relationship issues

Contact information:

Phone: 082 716 6120

Email: melissaboulind@hotmail.com

Address: 22 Wavecrest Road, Athlone Park, Amanzimtoti.

2. Sheryn Arnold
Clinical Psychologist
MA UNIZULU

Sheryn specialises in:

- Anxiety
- Depression
- Trauma
- Adolescent conflicts
- Relationship issues

Contact information:

Phone: 073 827 5802

Email: sarnold@vodamail.co.za

Address: 311 Kingsway Road, Amanzimtoti.

APPENDIX B - INTERVIEW GUIDE



INTERVIEW GUIDE

SECTION 1: BIOGRAPHICAL INFORMATION

Age	
Gender	
Marital status	
How many children do you have?	
What are the ages of your children?	

SECTION 2: RESEARCH QUESTIONS

INTRODUCTORY QUESTIONS

1. There are a number of reasons why adolescents are given smartphones and tablets;
 - 1.1. At what age did you allow your adolescent to start using mobile devices?
 - 1.2. Can you explain the circumstances regarding your adolescent getting a mobile device?
 - 1.3. What do they use these devices for?
 - 1.4. How long do they spend on the mobile device each day?

ATTITUDE TO MOBILE DEVICE USE QUESTIONS

2. What has your experience with this mobile device been like? (Positive/ negative, problems or concerns) Please explain.

3. What are the main concerns that you have regarding your adolescent using the internet?
4. What are your personal views or attitudes towards the internet?

LEVEL OF KNOWLEDGE AND SAFETY QUESTIONS

5. How would you describe your adolescent's knowledge regarding internet use? (Are they a beginner or experienced, do they have basic or advanced knowledge?).
6. Do you feel that your adolescent has more internet knowledge than you? Why do you feel this way?
7. Do you feel that your adolescent has more knowledge than you with using modern technology? Why do you feel this way?
8. What types of support do you need from schools or the community to better protect your adolescent online?
9. Do you have any suggestions for parents that will assist them in educating their adolescent about the risks involved in using mobile devices?

MONITORING QUESTIONS

10. What kind of rules or limits do you have around mobile device use in the home?
 - 10.1. Do you have any rules about certain times or places in your home that your adolescent can use their mobile device?
 - 10.2. Do you have any rules about what activities your adolescent may participate in while using their mobile devices?
 - 10.3. If your adolescent does not follow your rules regarding mobile device use, what are the consequences? How often would you say rule violations occur?
 - 10.4. Do you use any kind of software to block or track websites on your adolescent's mobile device?
 - 10.5. What other steps have you taken to monitor your adolescent's mobile device use? To what extent do you think these measures keep your adolescent safe?
 - 10.6. Overall, how safe do you feel your adolescent is when using mobile devices?

CLOSING QUESTION

11. Is there anything else that you feel we missed in this discussion and you would like to add?

APPENDIX C – GLOSSARY



Glossary

A 'mobile device' is the general term that is used for any type of handheld computer. These devices have been designed to be portable and are able to fit in your hand (GFC Global, n.d.). The term 'mobile device' encompasses laptop computers, tablets, e-readers, cellphones and smartphones (GFC Global, n.d). This study will be focusing on two of these devices, namely smartphones and tablets. Thus, for the purpose of this study the term 'mobile device' will be referring to tablets and smartphones.

"Parental mediation" refers to the interactions that parents have with their children about their use of media.

According to Lauricella et al (2017) parental monitoring includes parent's expectations for their adolescent's behaviour, the actions that are taken by parents to track their adolescent, and the ways in which parent's respond when their adolescent disobeys these rules.

This study will focus on adolescents aged ten to sixteen years of age, as this age group has been found to spend a significant amount of time on their mobile devices daily (Anderson, 2018).

"Parental controls" refers to the features that may be included on mobile devices and software that allows parents to restrict the access to content by their children.

APPENDIX D – STUDY TIMELINE



STUDY TIMELINE

The timeline for the research study was as follows:

January - April 2021- Awaiting approval from the Ethics Committee

May 2021- July 2021- Interviews conducted.

July 2021- August 2021 – Interviews transcribed.

September 2021- November 2021 – Analysis of transcriptions.

December 2021- December 2022 – Dissertation written.

January 2023- Dissertation submitted for examination.

APPENDIX E – REFLEX JOURNAL



REFLEX JOURNAL ENTRIES

17 June 2021

Participant 01

This participant was very informative and explained his views well. He felt strongly about the topic, as could be seen from his responses and this is an issue that he has dealt with a lot over the last few years with his daughter. I was very happy with the answers he provided to the questions. He also explained how he feels the larger community, and the school can assist in helping family's with dealing with this issue. Thus showing how a micro- and meso-system can influence and affect one another. Thus far, I am pleased with how the interviews are going and feel that we are meeting the aim and research questions with the information gathered. Thus I feel the research method is fitting the aims of the research study. One personal belief that this interview made me confront was my belief that the male participants would be less willing to share a lot of personal information, and I expected to collect less data from the male participants. However, this assumption of mine was incorrect. This participant was very open and honest about the challenges that he was facing with parenting in the digital age, and this motivated me even more. I made note of my false beliefs and confronted this idea and realised that this assumption was wrong, and I changed my thinking a bit. I gathered a lot of useful and helpful information from this participant. His experiences and passion about this topic helped me to see the difficulties that he was facing and the uncertainty he felt. This participant has helped me to form an understanding of how he is feeling, his concerns, and the challenges that he is struggling with.

14 June 2021

Participant 02

The confidence that this parent has in her daughter is incredible. Her posture and way of speaking about how well behaved her daughter is when using mobile devices and the internet is heart-warming. This participant monitors her child's online activities, but explains that this is not because she does not trust her daughter, and is because of the dangers out there and her responsibility as a parent to protect her child. This is exactly the type of relationship, love and care that one would hope to find in a mother-daughter relationship.

I felt satisfied with the interview questions and the answers received from this participant. I feel like the information provided does explore the research questions and I feel that the questions and aims of the study are a good fit. The only concern that I found was that the participant did not explore in a lot of detail the questions being asked, so I will need to focus more on encouraging the participants to explore these questions in more detail.

This participant spoke of the community working together to protect all children living there, this aligns with the ecological systems theory and how all areas of an individual's life, ranging from family, school, and community influence one another and can affect one another.

The participant also showed how the larger systems, mesosystem, has influenced their everyday lives and the micro-system. Because of her experiences and her perception of the dangers out there she is more protective of her daughter and her behaviours towards her daughter and her activities has changed due to this, thus showing the way that the meso- and micro-systems affect one another.

This participant also highlighted the way that the individuals influence one another, and the different systems. By teaching her daughter right from wrong and having a relationship with open communication, she is able to display healthy behaviours to her daughter, thus indicating the two-way influence in the microsystem.

14 June 2021

Participant 03

This participant spoke more openly and freely regarding her children and her experiences. She gave examples of issues that they are facing, and the ways in which they are attempting to resolve them. She also explained how she would like to incorporate more modern ways of keeping their children safe online. This participant also illustrated the impact that their religious beliefs play in their daily lives, and the ways in which they try to uphold these values, namely keeping their children away from access to content and individuals who swear, thus displaying how the wider context influences their daily lives, or micro-system. I feel at this stage pleased with the answers I am receiving to the questions and feel that they fit the aims of the research study and the theoretical framework used.

The positive attitude of this participant toward me and the research was encouraging and put me in a very good mindset. I felt motivated and determined after this interview. I managed to collect a lot of data from this participant, all of which nicely answered the research questions and aims. I feel that the research questions and achieving the desired results and that they have encouraged this participant to share a lot of information that can assist me in formulating an understanding of this parents experience and perception on the issue.

17 June 2021

Participant 04

This participant gave a good insight into the pressure that she, as a parent, faces regarding mobile device use by her children. She feels the pressure from other parents to allow her own children to use mobile devices. Thus, showing how the different aspects of one's micro- and meso-systems influence one another. This participant answered the questions really well and provided a good insight into how she feels regarding this issue. This participant did answer a few of the questions at once as an explanation for other answers, so with her some of the questions did feel a bit repetitive at times, which I have not encountered with any of the other participant as yet. Will have to be aware of whether repetition is happening with other participants, and if so may have to relook at the questions. After this interview and noticing the participant point out the distinction between knowledge between using technology and knowledge between using mobile devices I decided to add in an extra question, so now parents will be asked about if they feel their child has more knowledge than them when using the internet and when using modern technology.

Also, upon reviewing the answers from the last few interviews I felt that I wanted to get a more clear answer regarding how safe they feel their adolescent is when using mobile devices, so I included a question about how safe they feel their adolescent is when using mobile devices.

18 June 2021

Participant 05

This participant made me really annoyed. She spoke and came across as though her children were perfect and that this study is meant for lesser children and not hers. As if her children were perfect and would never be involved in anything inappropriate on their phones. She showed little interest in the study and appeared to feel that her children are different and that these questions were meant for parents who had troubled children only. Although I felt annoyed, I was able to push this feeling aside and continue with the interview process. Although this participant did not provide much information regarding her own children's use of mobile devices, she did give an interesting insight as an English teacher and how she has noticed the change in her students and their language abilities due to the use of mobile devices.

18 June 2021

Participant 06

This participant provided some useful insight into her perceptions and feelings towards her child's use of mobile devices. I obtained some valuable information regarding her insight as a parent. The new questions were useful and assisted in gaining more information for the research questions. I am happy at this stage to keep the new questions in the schedule and to continue with the interviews. I feel that the interviews are obtaining useful information concerning the study aims and research questions. The parents have been sharing personal experiences and opinions with me. I felt satisfied with this interview, and am feeling excited with the direction that this research is taking. I feel that I have accumulated a useful and rich

set of data that will assist in creating an understanding of the issue at hand and am pleased with the research progress thus far.

18 June 2021

Participant 07

This interview went well and I obtained some valuable information from the participant. The new questions are helping to gain further insight into the parent's perceptions, so I am pleased about that. Overall, I feel that the interviews are going well. I am beginning to notice some common and shared beliefs by the participants and have noticed some repetition with their answers. This participant spoke openly and honestly, and I felt pleased about the attitude that the participants had towards the research topic. I feel that the participants feel happy to be able to share their story and the experiences and that I am achieving my aim of this research.

22 June 2021

Participant 08

This interview was very insightful and interesting. The questions asked led to the participant self-reflecting and coming to the realisation that while she thought that she had no problems with technology in her family and she had it all under control, she in fact had experiences with both of her children and her stepson. It was fantastic as a researcher to be able to see the participant think back and make these realisations. I obtained some very valuable information from this interview.

24 June 2021

Participant 09

I found this interview to be very successful. The participant was open and honest and shared his experiences freely. He shared personal experiences that he had been through with his adolescents, as well as how he felt overwhelmed and that he lacked the necessary knowledge required. It was interesting as a researcher to hear these views and to see the uncertainty on the participants face when discussing these issues. I could sense his uneasiness about not having all the knowledge about mobile device safety, and how he feels strongly that schools need to become more involved in keeping adolescents safe (Mesosystem). This interview helped to solidify some of the previous participant's experiences and I can see similar common themes emerging from the participants responses.

01 July 2021

Participant 10

This participant had a very interesting view for me. She used mobile devices as a reward system for her adolescents. She has rules in place, but did not appear to be overly

concerned about the potential dangers involved. She is aware of them, but did not feel that they were a major concern for her personally. This participant lacks a lot of knowledge with using technology, and relies on her adolescent in this regard. This could possibly be a reason why she is not as concerned as the other participants about her adolescent on their devices. This participant spoke confidently, and despite lacking technological knowledge, was confident in her perceptions. She strongly believes that parents who lack the necessary knowledge need to seek assistance from other individuals, highlighting the influence of the different systems interacting. Again, I noticed similar ideas and beliefs that have been expressed by previous parents and feel that my data has reached saturation point. I have not received additional data from this participant that was not already shared by previous participants. I feel confident in the interviews and the data that has been gathered.

APPENDIX F – QUALITATIVE AUDIT TRAIL



QUALITATIVE AUDIT TRAIL

Research audit trail	
Identification of the research question	<p>Modern technology has become embedded in our daily lives. While working as a school counsellor I saw the importance that mobile devices and social media plays in the lives of adolescents. I also saw the devastation that the use of such devices can have on some adolescent's lives, and the impact that this can have on their family. This made me want to explore different ways that we can better assist with this problem. The majority of the research in this area has been conducted in other countries, with limited information coming from South Africa. I thus, identified a gap in the knowledge and upon further research realised that there is limited knowledge on parental understanding and perceptions in this area of concern. Additionally, parents are the ones responsible for protecting adolescents, and thus my focus was directed towards exploring parental views on the matter relating to their adolescent using mobile devices.</p>
Research proposal	<p>Based on this research problem, I developed a proposal, with the guidance of my supervisor. This proposal was submitted to UNISA's research committee for approval. This research proposal included a study outline, the study objectives and</p>

	aims, and the research questions. The study was approved in November 2020.
Literature review	I performed an in-depth review of literature relating to mobile device use, parental perceptions and usage of mobile devices, parental roles in adolescent mobile device use, parent-adolescent relationships, as well as the technological landscape of South Africa. Despite the vast amounts of research in this area, the literature review highlighted the need for further research to be conducted from a South African perspective.
Theoretical framework design	The next step required me to research potential theoretical frameworks. After reading through numerous studies, Bronfenbrenner's Bio-Ecological Systems Theory (1994) appeared to fit the concept of the study. Bronfenbrenner's explanation of the different systems and factors which have an impact on an individual was a suitable lens through which to explore parental experiences and perceptions. However, due to this theory being developed prior to the internet and the ease of accessibility to mobile devices, I chose to make use of Johnson and Pupilampu's (2008) Techno-Subsystem. This subsystem added more depth and focus to the Microsystem level, an important level in a parent and adolescent's lives.
Research Framework design	This step involved designing a research framework that will enable the collection of data. As this research was exploratory in nature, a qualitative research design was chosen to be the most suitable for this study. A qualitative design using participant interviews was selected as an appropriate strategy.
Data collection	A semi-structured interview guide was used as the source of data collection for this research. Based on the identified issues in literature and in the research problem definition, an interview schedule was developed. All participants had to sign an informed consent from before participating in the interview. An information sheet with

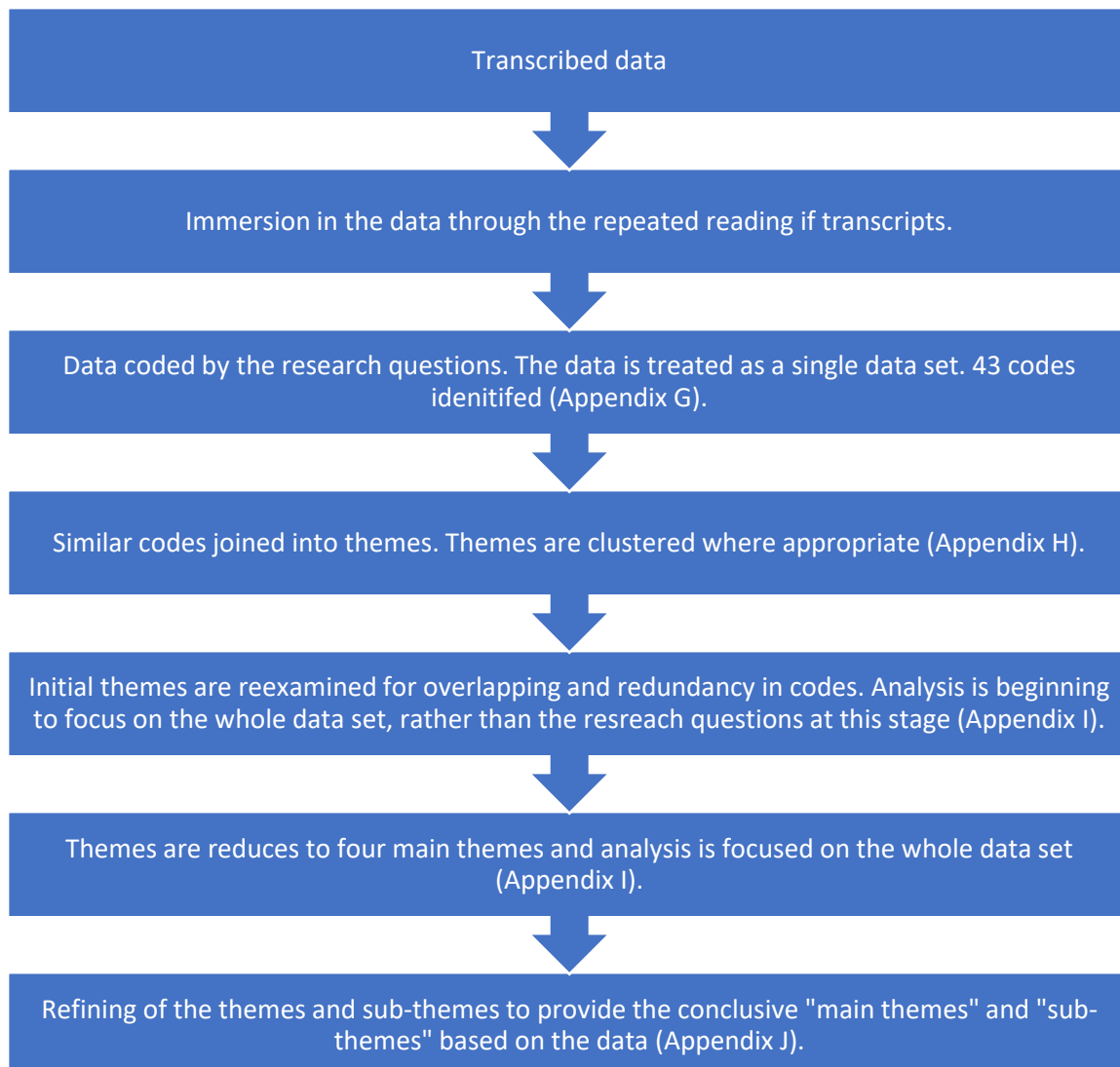
	<p>information about the study was provided to all participants. Due to the Covid-19 pandemic restrictions in place, all interviews were conducted online using the Skype platform. A total of ten semi-structured interviews were conducted. These lasted between 20-40 minutes and were recorded and transcribed. Data saturation was reached after eight participants were interviewed.</p>
Participant sample selection	<p>Criteria for the sample population was developed. These criteria included parents who had at least one adolescent between the ages of ten-16 years old living in the household. This adolescent had to have access to at least one mobile device with internet access, which they used for at least one hour per week.</p>
Data transcription	<p>All interviews were transcribed verbatim from the recorded interview sessions.</p>
Analysis of collected data and research findings	<p>Thematic analysis was conducted on the collected data. Braune and Clarke's (2006) guide to conducting thematic analysis was followed. The six phases of thematic analysis included: (1) familiarise yourself with the collected data; (2) generate the initial codes; (3) search for meaning units; (4) review the themes; (5) define and name the themes; and (6) produce a report.</p>
The writing of the findings	<p>The interpretation, discussion, and presentation of the themes that emerged, and the connections to previous research was discussed. Based on the emerging themes, discussions about the findings of parental perceptions, experiences, safety concerns, and safeguards were explored. The research findings were explored in relation to the chosen theoretical framework, namely Bronfenbrenner's bio-ecological systems theory with the techno-subsystem. The final thesis was designed and reviewed by my supervisor.</p>

APPENDIX G – BRAUN AND CLARKE’S THEMATIC ANALYSIS PROCESS



Thematic Analysis

Model illustrating the stages of the coding process that leads to theme development:



APPENDIX H – THEMATIC ANALYSIS (TRANSCRIBED INTERVIEW)



Transcribed interview – Participant 01

Below is the transcribed interview of Participant 01. Initial codes have been included in this transcript to illustrate the process that the researcher took when coding the data initially for each participant.

PARTICIPANT 01

SECTION 1: BIOGRAPHICAL INFORMATION

Age	49
Gender	Male
Marital status	Married
How many children do you have?	2
What are the ages of your children?	15 years old and 10 months old.

SECTION 2: RESEARCH QUESTIONS

INTRODUCTORY QUESTIONS

1. There are a number of reasons why adolescents are given smartphones and tablets.

1.1. At what age did you allow your adolescent to start using mobile devices?

Participant: Currently she got a cell phone when she turned thirteen, but I have taken it away. So, she got one on thirteen.

INITIAL CODES:

Age given mobile device

1.2. Can you explain the circumstances regarding your adolescent getting a mobile device?

Participant: It was just after my wife passed away, so I gave her the phone for security reasons. When she is at school, when I need to get hold of her after school, if I need to pick her up after school. Because she was in primary school, and I was obviously working at a high school, so that was the only reason that I gave her the phone.

Researcher: *Ok, so just to stay in contact with her?*

Participant: To stay in contact with her.

INITIAL CODES:

Safety/Security

Communication

1.3. What do they use these devices for?

Participant: Unfortunately, she went on social media, WhatsApp, um, Instagram and TikTok. All the sites that the young people goes on these days, and Google.

INITIAL CODES:

Social media

Internet access

1.4. How long do they spend on the mobile device each day?

Participant: When she had it, um, way too much (laughs) um. Well she went to school and then the afternoons and evenings, so probably two to three hours in the afternoons, after school.

Researcher: *And that was every day, about two to three hours?*

Participant: Every day, ya. And weekends obviously it was longer when she was at home and not school it was obviously longer hours.

Researcher: *And on the weekends was she allowed to use it all day if she wanted?*

Participant: Yes, because it was not school. So, she obviously took it to listen to music. That was, um, the main aim for it also was she wanted it for music.

INITIAL CODES:

Time spent on device

Use of device

ATTITUDE TO MOBILE DEVICE USE AND EXPERIENCES QUESTIONS

2. What has your experience with this mobile device been like? (Positive/negative, problems or concerns) Please explain.

Participant: I think it is mostly negative. I think we should not give her a phone, if your child is not emotionally stable to use a phone. So I would say mostly negative. And also found out after putting a parent's app that she went on sites that she was not supposed to go on. So obviously, no, it was not a good decision of mine to give it to her.

Researcher: *So that was a regret that you had?*

Participant: A big regret, and I actually took the phone away.

INITIAL CODES:

Negative Experience

Uncertainty

Emotional maturity

3. What are the main concerns that you have regarding your adolescent using the internet? (For example, cyberbullying, inappropriate content, or sexual victimisation)

Participant: Well, I think it is also the friends. Main concern is going on sites, looking for things like um, she is a teenager, so obviously looking for things like sex, um, things, drugs, um, and also these days they all belong in groups. Um. I know that she was going through a cutting stage. That she was with a group of friends that were cutting. So that is my biggest concern. Things that might lead her to go to the wrong things.

Researcher: *And did you experience that this was the problem?*

Participant: Yes, I did experience that. I had, um, she used uh. She didn't have a SIM card, so her phone could only at one stage get music. So when she went to friends they has Wi-Fi though, and they gave her the password. Not very clever of the friends. And then one fiend actually came and told me one day that Lelo was

on sites, like pornographic sites, and stuff like that. So obviously, that is also one of the reasons I took the phone away. Without a phone, probably, more than two years now.

Researcher: *Do you plan on giving it back to her?*

Participant: It is actually really interesting [laughing]. We had a discussion over the public holiday and, uh, to give her more responsibility and I have got a spare phone, and uh, me and my wife had a discussion to give it to her after the exams, if she does good in the exams. But not to tell her that we will give it to her. But this morning I changed my mind. And I was standing and working at the bottom gate, and I just thought to myself 'she is not ready yet'. And I also, with Covid, my biggest concern, I spoke to one or two guys here, it is still one or two things that are happening on social media, peer pressure. And my experience the last two years without her having a phone is that I get more questions now that she needs answers, she doesn't go look for it. And I just found that it is better for her not to have a phone because when I tracked it, I had to constantly be on the app to see what she was doing. And I had more problems with her having a phone than not having a phone. So, I decided this morning that I would rather spoil her for a day out, I am going to get her hair groomed, and take her to a salon, and just to pamper her. But I am not giving her a phone, I think, no. I am going to regret it. I just have this feeling in my gut that I am going to regret giving her a phone now. I think I might wait, um, until the end of the year, also when she turns sixteen, um, to get her phone.

INITIAL CODES:

Influence of others

Internet access

Inappropriate content

Self-harm

Control measures

Pornography

Punishment

Responsibility

Reward system

Uncertainty

Improved relationship

Mobile devices cause problems

Emotional maturity

4. What are your personal views or attitudes towards the internet?

Participant: I think the internet can be very good. I tell all the learners that I work with in all the different sports, when I spoke, we speak about the internet. There is a lot of good things on the internet, research, and stuff. So, I don't have a problem with the internet, to be honest. I have a problem that there is a lot of things that

gives a kid, uh, the young people, too much access to the internet. There is no blockage, you can have a parent, and they can still go in the sites, you can track them, but you can't stop them. There is no block on the phone. I mean there is no app that blocks if you type in a different word, if you look for a bottle and you type in 'BEOO' unfortunately, on the internet it pops up with the latest research and it could be 'boobs' and I found that. And that sometimes they are interested, they want to see why is it a top internet. So that is for me a concern when it comes. And now with Covid it is a big concern because of people going on there, joining groups, and we had discussion the other day in the staffroom about people diagnosing themselves, people, I think we know about someone who is currently doing that, he was in my office yesterday. But um, ya, so it can be good, but you need to be emotionally strong, and you need to be intelligent to use the internet. I think that is my main, emotionally strong, and intelligent to use the internet.

INITIAL CODES:

Positive perspective of internet

Uncontrolled internet access

Control measures

Inquisitive nature

Effects of Covid-19

Influence of others

Emotional maturity

Criteria to meet before using the internet

LEVEL OF KNOWLEDGE AND SAFETY QUESTIONS

5. How would you describe your adolescent's knowledge regarding internet use (are they a beginner or experience, do they have basic or advanced knowledge)?

Participant: Unfortunately, I think she is experienced. I don't think you get beginners anymore, because the, my opinion also, the parents give the phones way too young for their kids. I do understand that its, uh, what I should have knew with my daughter that if my daughter was in a school and there was a problem then the school should have phoned me. So I should have actually said no. So if you are at school sick the school will phone me. So, um, ya. No.

Researcher: *So, you feel that she has got advanced enough knowledge that she can get around things?*

Participant: She can, because obviously, if you give her a phone, she knows to use Wi-Fi, she knows how to get internet without having a sim card. So, she has got enough experience.

INITIAL CODES:

Skill level

Emotional maturity

6. Do you feel that your adolescent has more internet knowledge than you? Why do you feel this way?

Participant: (laughs) No, I would not say so. I think that other kids might have, but my daughter currently don't have that chance to go on the internet. And if we do, we take her to the library when it was open for projects. Or she will sit next to me and use my phone.

INITIAL CODES:

Skill level

Control measures

7. What types of support do you need from schools or the community to better protect your adolescent online?

Participant: I think what the principal said that other day, I think we have to have a meeting with the parents, and I think we need to encourage them to put the app on their kid's phone. And also, to be involved in their kid's lives and track them. Um, they might think it's a part of privacy, but the end of the day you are protecting your child. You are not there; you need to be involved. And I think sometimes we forget about that. We are so busy that we give them a phone, and we tell them 'There is your cell phone, there is your phone', and we don't actually see what is going on on that phone. And then later on we have cases of people wanting to commit suicide and stuff like that, and the parents don't know that because they not tracking it. So I will say from a school's side, it's more also, since we got these zoom meetings, it's getting parents involved in Zoom meetings, tell them there is an online training for cell phones, there is online training for new apps to track your kid. Also, I think parents need to be up to date with what is happening with the new trends, they need to know about the new trends. I think a lot of us as parents were shocked in that meeting when we heard the principal telling us about the trends that is currently happening. For me, I knew about some of them, but I was not aware of all the other stuff like for Christianity and the way they are having groups and stuff, but now that I know that I can also be more aware when Lelo was going to certain friends. And I can actually see some of these things happening, the way that Lelo reacts, she can be more than likely involved in part of that group that says like don't listen to your teachers, don't listen to your parents. Um, I just found that yesterday spending time with Lelo without having a phone was brilliant. She was the whole day at home. Yesterday we had one of the best days in a very long time because she sat and communicated, and played with Ann-Sune and all the kids walking past here were on their phones, so I think it has just taken over. Somebody said the other day to me a cell phone has become your cell, like a prison. You have a phone, but the cell part of it is prison part of it. And it is something that resonates with me, because people have made it now a problem. And I think parents should know that and should be aware of that. And I think a lot of the challenges is that parents are also on their cell phones constantly. If you go to restaurants, and I think kids, kids don't do what you say, they do what you do.

So if you are a parent, watch your time that you are on your phone. So on that I would say, ya, tell the parents also spend family time with your kids. If we go on camps or we go on rugby, or any tour, I take all the kids' phone and I put it in a box. I let them send messages to their parents. I tell them 'there is my number', if there is a problem phone me, and I put their phones away. And they are all different young people when their phones are locked away for two days. So I think the parents, when they are at home, should spend time with your kids, without technology, anything, tv, laptop, anything, switch it off and play Uno, play monopoly, play board games. And that is what we have also been doing now, we have been spending time playing Uno, the new flip version of Uno. Ya, so, question on that, schools needs to be more involved. I think they must definitely, because part of the internet that is a big concern for me is bullying. Because people post things on your WhatsApp, they react on your wall. If you are on Facebook people will say things on your social media, and I think kids are not emotionally able and capable of that, and I think the school can have a course, a group that says if your kids are being cyberbullied, please tell us so that they can get help. So ya, I think schools need to get more involved in technology.

INITIAL CODES:

- Educate parents
- Parental involvement
- Parental awareness
- Control measures
- Privacy
- Mobile devices assist parents
- Suicide
- Influence of others
- Religion
- Behavioural changes
- Consuming nature of mobile devices
- Mobile devices cause problems
- Role model
- School involvement
- Concerns
- Bullying
- Emotional maturity

8. Do you have any suggestions for parents that will assist them in educating their adolescent about the risks involved in using mobile devices?

Participant: I think sitting down with them, explaining to them, you know what a phone really is, but also you have to give them some responsibility. So you need to, if I can have a way, I would take the phone only for emergencies give the phone to the kids. On play days let them play, don't give them the phone, let them go play outside, keep the phone. And if they are on the phone, sit next to them and show them what the internet is, show them what social media is. Show them the good

and bad parts. Show them that there are good things on the internet, but also show them the bad part also. Show them what is happening on social media, how people, um, there is a lot of interaction that I have seen on Facebook of people getting bullied that you can actually go and see and learn from it how they got bullied because when it happens to them they know how to deal with it. And also, one thing parents need to tell them is 'you must always come and ask me', come and ask mom or dad. If you are not sure, if you see something on the internet, or you read something, come and discuss it with us. Be open enough to tell me 'dad I've', one thing that a lot of kids ask, even Lelo asked yesterday, 'dad how do I, what is 'them' and 'they', and what is this people these days that I can't call them on their names. Is it a boy or is it a girl? They don't, she doesn't know how to behave, she even said to me 'what am I then?', and I said to her 'you are a girl'. But why are they 'they' or 'them', and also according to her a boy or a girl. I think they also need to be open to their parents to discuss it and say listen I'm not sure. And I think then the parents need to sit down and go on a site that says 'what is the word them, 'what is the word they', have an open conversation and not keep things hidden. So, advice to parents, and to myself, is sometimes don't be so stuck up. Be more open-minded because these days we are living in 2021, we are not living in the stone age, we are living with a lot of LBTQ, things on the outside world, we are living with different views, not only with Christianity. There are a lot, and I think you need to broaden your horizons. You don't always have to believe all of it, we all have our standards. If you are Christian you will have your standards, but you need to be able to explain your viewpoint to your child, not only force it on them, because I think that make it worse and the kids would rather go on the internet. They will go and search for things if you just allow and push it aside, 'don't go there, it has nothing to do with you', then it makes it more interesting. Say listen 'I am going to go and find out why my parents are so against this them and they and all of this stuff'. So.

INITIAL CODES:

Parental involvement

Responsibility

Safety/Security

Control measures

Mixed feelings

Social media

Concerns

Bullying

Inquisitive nature

New Generation

MONITORING QUESTIONS

9. What kind of rules or limits do you have around mobile device use in the home?

9.1. Do you have any rules about certain times or places in the home that your adolescent can use their mobile device?

Participant: Well, currently she doesn't have a phone. But if she has a phone then she uses it with me at home. If she leaves the room or the house then she puts the phone on the table. The same is when she had a phone, the phone wouldn't go to school, when she wakes up, she would put the phone on the table. At night-time when we go to bed the phone is switched off and put on the table. So obviously she has her own room, so we can't control it, we have to have the phone. Um, weekends we did give the phone to her, until we found out, obviously, I regret it because we took the sim card out, but obviously, Wi-Fi works. And I think that this is something also that parents need to know that when they visit friends and family be careful that your kids don't give your Wi-Fi password to their friends. Because it might become a problem with those people visiting, and your kids will get into trouble. So, control, yes, definitely, there needs to be control.

INITIAL CODES:

Control measures

A need for control

Punishment

Regret (Uncertainty)

Parental involvement

Parental awareness

9.2. Do you have any rules about what activities your adolescent may participate in while using their mobile devices?

At one stage, when she had a phone, she had money, she watched a lot of TikTok. TikTok in the beginning for me was fine, but then at a later stage the videos that were shared was for me a little bit horrendous. It became racist, some comments, there were things that were not so good. There is a problem with TikTok. There is good things on it, and she was using a lot of TikTok. She doesn't have a Facebook page, so TikTok was the one and obviously googling.

INITIAL CODES:

Social media

Racism

Internet access

9.3. If your adolescent does not follow your rules regarding mobile device use, what are the consequences? How often would you say rule violations occur?

Participant: I will just take the phone away from her.

Researcher: *How many times would you say she has not followed your rules?*

Participant: (laughs) So the phone was taken quite a lot away. Um, again, that's why my daughter doesn't have a phone currently. We came to a point where it was daily taken away, and then we did it for two days and then three days, and then I

just took the phone and said, 'you know what you can't control it'. Also, parents need to know one of the reasons why my daughter doesn't have a phone is her phone got broken twice. Her screen got cracked, because of kids. Friends playing. Parents don't understand the value. It's when you have a contract, you buy your child a new Apple phone, I see that a lot in school, kids walking around with cracked screens. And then you ask them what happened, 'no sir, somebody bumped me'. So, I think, advice to parents for yourself and your own protection, also financially, give your child a basic phone. The basic, basic, the cheapest phone that you can give them, because it will not last. It will not last, unfortunately. And it does not matter how old they are, it will not last. So many times, it will cost you more money giving them that phone.

INITIAL CODES:

Control measures

Punishment

Value of mobile devices

9.4. Do you use any kind of software to block or track websites on your adolescent's mobile devices?

Participant: Yes, I do.

Researcher: *Do you know the names of those?*

Participant: Sam, I don't. Um, True Caller was one of them that I used for numbers phoning her. And I can't remember the other one. It was quite a good one that you put on your phone and her phone. So that when she switches on, it beeps on your phone. It tells you what app she has gone onto. But there is a lot on your app store, there is a lot that you can actually put on there. Again, you can track them, but you can't block them. There is one app that is quite nice, that you can switch your daughter's phone off. So, at 9pm you can actually switch it off. You can track it, but then you can't go into the sites and block the sites.

Researcher: *So you can just monitor what they are doing, but not stop it?*

Participant: Yes, you can't stop it.

INITIAL CODES:

Control measures

Limits set

Software

Parental involvement

Parental awareness

9.5. What other steps have you taken to monitor your adolescent's mobile device use? To what extent do you think these measures keep your adolescent safe?

Participant: Well, asking her, and obviously sometimes when I take the phone I go through her internet history.

Researcher: *Do you feel that the measures that you are taking are keeping her safe online?*

Participant: Yes.

INITIAL CODES:

Control measures

Check phone

CLOSING QUESTION

10. Is there anything else that you feel we missed in this discussion, and you would like to add?

Participant: No, I just think again, especially with Covid and us in education and zoom meetings, and everything going online, parents need to understand that this is the new norm. Kids will use technology, but you need to make it safe for them. You can't stop it in total, so my advice is you have to give them a cell phone, you have to, because obviously they need to also be responsible, where grownups get to the point where you can't keep them away from it, but you need to be able to track it, you need to be able to be on their cases, because you are the parent and they are the child, and that's your responsibility as a parent to protect them.

INITIAL CODES:

Effects of Covid-19

New Generation

Responsibility

APPENDIX I – THEMATIC ANALYSIS (PHASE TWO)



Initial Codes– Phase 2 of Thematic Analysis

Initial Code	Participants who discussed this code
Safety and security	01 , 02 , 03 , 06 , 08
Communication	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Social media	01 , 02 , 03 , 05 , 08 , 09 , 10
Internet access	01 , 02 , 03 , 04 , 05 , 06 , 07
Time spent on mobile device	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Age adolescent given mobile device	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Use of device	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Negative experience	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Uncertainty	01 , 03 , 04 , 07 , 09
Maturity	01 , 02 , 03 , 04 , 05 , 07 , 08 , 09
Influence of others	01 , 02 , 03 , 04 , 05 , 07 , 08
Inappropriate content	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Self-harm	01
Control measures	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Responsibility	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09
Improved relationship	01 , 02 , 03
Mobile devices can lead to problems	01 , 02 , 03 , 04 , 05 , 07 , 08 , 09 , 10
Positive perspective on mobile devices	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Inquisitive nature	01 , 03 , 04 , 05 , 09
Effects of Covid-19 pandemic	01 , 02 , 03 , 04 , 07 , 08 , 09
Criteria to meet before given a mobile device	01 , 05 , 10
Skill level	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Parental involvement	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Parental awareness	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Privacy	01 , 07
Mobile devices assist parents	01 , 07
Suicide	01
Religion	01

Behavioural changes	01 , 03 , 07
Consuming nature of mobile devices	01 , 02 , 03 , 05 , 06 , 07 , 08 , 09
Role model	01 , 04 , 07
School involvement	01 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Concerns	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Ambiguous feelings	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
New generation	01 , 04 , 05 , 06 , 08 , 09
Value of mobile devices	01
Trust	02 , 04 , 05 , 06 , 08 , 10
Multiple devices	03 , 05 , 07 , 08
Want mobile device, not a need	03
Family relationship	04
Lack of knowledge	04 , 05 , 07 , 08 , 09
Parental perceptions	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Safety level	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10

APPENDIX J- THEMATIC ANALYSIS (PHASE THREE)



Initial themes developed – Phase 3 of Thematic Analysis

The researcher transcribed the collected data. After the repetitive reading of the gathered data and immersion in that data, the data was subsequently coded. Coding was conducted transversely, using the whole data set with the focus primarily on the research questions. Therefore, for example, the whole data set was treated as a single data set and used to label parts of the information that pertained to parental experiences, which pertained to Research Question One.

The initial 43 codes were grouped into 26 initial meaning units, covering the three research questions, as follows:

Research Question 1: Parental perception and experiences

- Theme 1: Parental perceptions
- Theme 2: Parental experiences
- Theme 3: Ambiguous feelings
- Theme 4: Parental views on internet access
- Theme 5: The effects of Covid-19 Pandemic
- Theme 6: The influence of others on adolescents
- Theme 7: Mobile devices can lead to problems
- Theme 8: Adolescents time spent on mobile devices
- Theme 9: New generation
- Theme 10: Lack of knowledge
- Theme 11: Trust
- Theme 12: Uncertainty
- Theme 13: Responsibility
- Theme 14: Parental involvement
- Theme 15: Parental awareness
- Theme 16: Potential safeguards

Research Question 2: Perceived safety level

- Theme 17: Control measures

Theme 18: Maturity
Theme 19: Age adolescent given a mobile device
Theme 20: Inquisitive nature
Theme 21: Skill level
Theme 22: Safety level
Theme 23: Concerns

Research Question 3: Parental control measures employed

Theme 24: Control measures – set rules
Theme 25: Safety level
Theme 26: School involvement

APPENDIX K - THEMATIC ANALYSIS (PHASE FOUR)



Reviewing themes – Phase 4 of Thematic Analysis

Initially, twenty-six themes emerged. These themes were yielded by the analysis, which centred around the three research questions. These themes were grouped into main themes where this was appropriate. A representation of these themes can be seen below.

Theme 1: Parental experiences and perceptions

Parents have a number of different experiences and perceptions regarding adolescent mobile device use.

Initial code	Participants who discussed this code
1. Negative Experiences	
Inappropriate content accessed	01 , 02 , 04 , 07 , 08 , 10
Influenced by others	01 , 03 , 07 , 08
Behavioural changes	01 , 03 , 07
Regret	01 , 07
Doubt	01 , 03 , 04 , 07
Uncertainty	01 , 03 , 04 , 07 , 09
Inappropriate activities done online	01 , 03 , 08
Self-harm	01
Inquisitive nature	01 , 03 , 04 , 05 , 09
Not mature enough for mobile device – problems encountered	01 , 03
Peer pressure	01 , 07
Social media influenced adolescent negatively	01 , 02 , 03
Consuming nature of mobile devices	01 , 02 , 03 , 05 , 06 , 07 , 08 , 09

Too much time spent on mobile device	01 , 03 , 06 , 07 , 08
Communication is negatively influenced by devices	01 , 02 , 03
More free time to use mobile devices	03 , 09
Fear about potential harm	03 , 04 , 05 , 08 , 09
Parent feels overwhelmed with controlling devices	04 , 09
Cyberbullying	10
Family time lost	06 , 07
Negative impact on academics	05
2. Positive Experiences	
Mobile devices create a sense of safety	01 , 02 , 06 , 08 , 09
No major problems encountered	02 , 05 , 06 , 07 , 09
Educational advantages	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08
Internet can be a useful tool	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 10
Mobile devices assist parents	01 , 07
Parent has not felt the need to check adolescent's device	05 , 06 , 08
Internet is useful and makes life easier	07
Mobile devices allow for communication with family and friends	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
3. Negative perception	
Can't fully control device use	01 , 03 , 04 , 06 , 07 , 09
Mobile device use can lead to problems	01 , 02 , 03 , 04 , 05 , 07 , 08 , 09 , 10
Children given mobile devices from too young	01 , 03 , 04 , 05 , 09
If parent is not aware of what adolescent is doing on device, it can be problematic	01 , 02 , 03 , 04 , 05 , 06 , 07 , 09 , 10
Mobile devices can potentially have a negative impact on adolescents	01 , 03 , 04 , 05
Adolescent could be introduced to inappropriate content	01 , 02 , 04 , 05 , 09

Consuming nature of mobile devices	01 , 02, 03 , 05 , 06 , 07 , 08 , 09
Problems could result if adolescent not mature enough	01 , 02, 03 , 04 , 05 , 06 , 07 , 08 , 09
Social media could lead to problems	01 , 02, 03 , 04 , 05 , 07 , 09 , 10
Uncontrolled mobile device use could lead to problems	01 , 02, 03 , 04 , 07 , 09 , 10
Influence of others	01 , 02 , 03 , 04 , 05 , 07 , 08
Peer pressure	02 , 03 , 04 , 07
Easily accessible information makes us lazy	06
Adolescents not safe using the internet	01 , 04 , 05 , 06 , 08 , 09 , 10
Inappropriate content is easily accessed	01 , 02 , 04 , 05 , 06 , 07 , 08 , 10
Inquisitive nature	01 , 03 , 04 , 05 , 09
Lack of control leads to problems	01 , 02 , 03 , 04 , 10
Parents lack of knowledge makes them feel uneasy	03 , 07 , 09
Parent prefers to limit personal mobile device use	05
Negative role models online	07
Lack of knowledge	04 , 05 , 07 , 08 , 09
4. Positive perception	
Mobile devices can be a useful tool	01 , 02 , 04 , 06 , 07 , 08
Mobile devices can assist parents	01 , 07
Parents must work together to protect adolescents	02 , 10
Technology is the new norm	01 , 03 , 04 , 05 , 06 , 07
Internet provides vast information	03 , 06 , 08
Internet allows for easily accessible information	03 , 06
Adolescent knows how to use mobile devices properly	01 , 03 , 04 , 06 , 07
Reward system	03 , 04 , 10
Parents must be good role models	01 , 04
Different/new generation	01 , 04 , 05 , 06 , 08 , 09

Guidance needed, not rules	06 , 08
Trust in adolescent not to be involved in inappropriate things online	02 , 04 , 05 , 06 , 08 , 10
Family is knowledgeable about technology	03 ,06 , 08
Parents know about trends	06
Cannot live without internet	07
Internet makes our lives easier	06 , 07
5. Mixed emotions/Ambiguous feelings	
Uncertain about giving adolescent a mobile	01 , 03 , 04 ,09
Mobile devices are a necessity, but a distraction	09 , 10
Technology is useful, but can be problematic	01 , 02 , 03 , 04 , 05 , 07 , 08 , 09 , 10
If parents are not involved in adolescent mobile device use, there could be problems	02 , 04 , 08
Both pros and cons of mobile devices	01 , 02 , 04 , 05 , 07 , 08 , 09 , 10
Mobile devices can help parents, but you shouldn't rely on it	07 , 09
Mobile devices are good if adolescent is mature enough	01 , 02 , 03 , 04 , 05 , 07 , 08 , 09
Parents have a need to be in control	02 , 03
Parent should have been more concerned about the risks for adolescent	06
Family would benefit from putting mobile devices down	06 , 07
Parent feels uncertain about themselves and information	07
Parent is uncertain about safety measures	05 , 07 , 09
Some form of uncertainty felt by parent	01 , 03 , 04 , 05 , 07 , 09

6. Parental views on internet access	
Positive aspects seen	01 , 02, 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Negative aspects seen	01 , 02, 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
It is a useful research tool	01 , 02, 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
There are dangers involved in its use	01 , 02, 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
7. The effects of the Covid-19 pandemic	
Rely on online resources	01 , 02 ,03 , 04 , 07 , 08 ,09
Rely on technology for schoolwork	01 , 02 , 03 ,04 ,07 ,08
Technology use is the new norm	01 ,02 , 03 , 04 ,06 , 07
Communicated with educators using different platforms	01 , 02 , 03 , 04 , 07 ,08
Adolescents have more unsupervised time	03 , 09

Changes made after reviewing themes:

Initially the following themes were identified, but later grouped into other themes due to overlapping:

New generation – now falls into the category of Positive perceptions.

Lack of knowledge – now falls into the category of Negative perceptions.

Trust – now falls into category of Positive perceptions.

Uncertainty – now falls into category of Ambiguous feelings.

Ambiguous feelings- now falls into category of parental perceptions and experiences.

Theme 2: Lack of safety

Parents feel a lack of complete safety when their adolescents are using mobile devices and the internet.

Initial code	Participants who discussed this code
1. Maturity	
Must be mature enough to use a mobile device	01 , 02 , 03 , 04 , 05 , 07 , 08 ,09

Age adolescent was given a mobile device - age 10 or under	04 , 07 , 08
Age adolescent was given a mobile device - age 12 or above	01 , 02 , 03 , 05 , 06 , 09 , 10
2. Inquisitive nature can lead to problems	
Inquisitive nature	01 , 03 , 04 , 05 , 09
3. Skill level	
Intermediate (Adolescent)	03 , 04
Experienced (Adolescent)	01 , 03 , 05 , 06 , 07 , 08 , 09 , 10
Beginner (Adolescent)	02
Adolescent has superior technology knowledge	04 , 05 , 07 , 08 , 09 , 10
Adolescent has superior internet knowledge	01 , 02 , 04
Parent has superior technology knowledge	01 , 02
Parent has superior internet knowledge	01 , 02 , 04
Adolescent is on par with parent with using technology	03 , 06
Adolescent is on par with parent with using	03 , 06 , 07 , 09
4. Safety level	
Safe using mobile devices	01 , 02 , 07 , 10
Not safe using mobile devices	03 , 04 , 05 , 06 , 08 , 09
5. Concerns	
Social media	01 , 03 , 04 , 05 , 07 , 08 , 09 , 10
Cyberbullying	01 , 02 , 04 , 10
Inappropriate content	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Influence of others	01 , 02 , 03 , 04 , 05 , 07 , 08
Self-harm	01
Inquisitive nature	01 , 03 , 04 , 05 , 09
Behavioural changes	01 , 03 , 07
Consuming nature	01 , 02 , 03 , 05 , 06 , 07 , 08 , 09
Peer pressure	01 , 02
Negative role models	07
Victimisation	02

Child trafficking	02
Rape	02
Death	02
Lost family time	07
Fake news	08

Changes made after reviewing themes:

Initially the following themes were identified, but later grouped into other themes due to overlapping:

Age adolescent is given a mobile device – now falls into category of maturity.

Maturity level of adolescent – now falls into category of parental concerns and perceived safety of mobile device use.

Theme 3: Parental involvement

Parental involvement in an adolescent's life is important.

Initial code	Participants who discussed this code
1. Responsibility	
Parent is responsible for protecting adolescent	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09
2. Parental involvement	
Be actively involved in adolescent's life	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Learn about trends and risks	01 , 02 , 06 , 07 , 08 , 10
Talk to adolescent about risks and safety	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09
Spend time together	01 , 02 , 04 , 06 , 07 , 08
Monitor and control mobile device use	01 , 02 , 03 , 04 , 05 , 07 , 09
Lack of involvement can lead to problems	09
Be involved and know what is happening in adolescent's life	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
3. Potential safeguards	
Punishment – confiscate mobile device	01 , 02 , 03 , 04 , 07 , 09 , 10
Controlled mobile device use	01 , 02 , 03 , 04 , 05 , 07 , 09
No software used	02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Limited social media	02 , 03 , 04 , 05 , 09

Check mobile device/ track usage	01 , 02 , 03 , 04 , 05 , 07 , 09
Reward system	03 , 04 , 10
Blocking websites	01 , 02 , 03
Monitoring usage / using device together	01 , 03 , 04 , 07 , 09
Set rules and limits	01 , 02, 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Unable to control device use completely	01 , 03 , 04 , 06 , 07 , 09
Parents uses social media to monitor use	03
No password allowed to be set	03 , 07
Shared google account used	07
Talk to adolescent about risks	01 , 04 , 06 , 07 , 08 , 09

Changes made after reviewing themes:

Initially the following themes were identified, but later grouped into other themes due to overlapping:

Parental awareness – now falls into category of Parental Involvement.

Theme 4: Safety Strategies

Parents have employed certain safety strategies and rules to protect their adolescent when they are using mobile devices.

Initial code	Participants who discussed this code
1. Rules have been set	
Yes	01 , 02 , 03 , 04 , 05 , 06 , 08 , 09 , 10
No	07
Not allowed to use mobile device at night	01
Not allowed to use mobile device at school	01
Mobile device use is limited	01 , 02 , 03 , 04 , 05 , 07 , 09
Mobile devices not allowed at dinner table	05 , 08 , 09
Mobile device use is limited or forbidden during exam time	05 , 07
Mobile devices cannot be used around visitors	04
Mobile devices cannot be taken out of the house	01 , 04 , 10
Social media is limited	02 , 03 , 04 , 05 , 09

No banking applications to be used	08
No content with swearing	03 , 07
2. Monitoring methods	
Check mobile device / track usage	01 , 02 , 03 , 04 , 05 , 07 , 09
Software used	01
No software used	02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Use mobile devices together	01 , 03 , 04 , 07 , 09
Parent uses social media to monitor use	03
Shared Google account used	07
Blocking websites	01 , 02 , 03
3. School educational awareness	
School host workshops	01 , 10
School should host informative talks	01 , 03 , 06 , 07 , 08 , 09 , 10
School should educate parents about trends	01 , 06 , 07 , 08 , 09 , 10
School should educate parents about safety methods	01 , 03 , 06 , 07 , 08 , 10
School should educate adolescents	03 , 08
School should create awareness about risks and safety methods	03 , 07 , 08 , 09 , 10
Blanket policy – no mobile devices at school	04 05
4. Potential safeguards	
Punishment – confiscate mobile device	01 , 02 , 03 , 04 , 07 , 09 , 10
Controlled mobile device use	01 , 02 , 03 , 04 , 05 , 07 , 09
No software used	02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10
Limited social media	02 , 03 , 04 , 05 , 09
Check mobile device / track usage	01 , 02 , 03 , 04 , 05 , 07 , 09
Reward system	03 , 04 , 10
Blocking websites	01 , 02 , 03
Monitoring usage / using device together	01 , 03 , 04 , 07 , 09
Set rules and limits	01 , 02 , 03 , 04 , 05 , 06 , 07 , 08 , 09 , 10

Unable to control device use completely	01 , 03 , 04 , 06 , 07 , 09
Parents uses social media to monitor use	03
No password allowed to be set	03 , 07
Shared google account used	07
Talk to adolescent about risks	01 , 04 , 06 , 07 , 08 , 09

APPENDIX L - THEMATIC ANALYSIS (PHASE FIVE)



Main themes and subthemes developed – Phase 5 of Thematic Analysis

The themes initially identified exposed areas of overlap. Therefore, this stage involved reducing the overlap and redundancy of themes. This stage emulated the shift in the analysis process from concentrating solely on the research questions. The themes were grouped into main themes and subthemes. The theme labels represented the content as opposed to the specific words that the parents said.

Theme 1: Parents' experiences and perceptions regarding adolescent mobile device use.

Parents have a number of different experiences and perceptions regarding adolescent mobile device use.

Sub-themes for Theme 1:

1. Parent's positive experiences and perceptions relating to adolescent mobile device use.
2. Parent's negative experiences and perceptions relating to adolescent mobile device use..
3. The impact of the Covid-19 pandemic on technology use.

Theme 2: Parents feel a lack of complete safety with their adolescent using mobile devices and the internet.

Parents feel a lack of complete safety when their adolescents are using mobile devices and the internet.

Sub-themes for Theme 2:

1. Parental concerns and perceived safety of mobile device use
2. Adolescent skill level for using technology.

Theme 3: Safety strategies employed by parents to protect adolescents.

Parents have employed certain safety strategies and rules to protect their adolescent when they are using mobile devices.

Sub-themes for Theme 3:

1. The responsibility of parents in protecting adolescents.
2. The safeguarding practices used by parents.
3. The establishment of school educational awareness programmes.