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Parents' perspectives of online learning for learners with ADHD

by

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A mini-dissertation in partial fulfilment of the requirement for the degree

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Abstract

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Supervisor: Dr Michelle Finestone

Degree: MEd (Educational Psychology)

Owing to school closures in 2020 and 2021 in South Africa because of the COVID-19 national lockdown, several schools turned to online learning to continue teaching and learning despite not physically attending school. Online learning was an ideal solution to school closures; however, several disadvantages were noted, especially for learners with learning challenges and special learning needs, such as learners with Attention-Deficit/Hyperactivity Disorder (ADHD). This study analysed parents' experiences throughout the online learning process to establish if it was a beneficial mode of learning and teaching such children. The study aimed to achieve this by examining the perspectives of parents, teachers, and the deputy head principal at a primary school on the advantages and challenges experienced by children with ADHD participating in online learning. The study followed a qualitative, interpretivist approach using semi-structured interviews. An exploratory case study research design was used, and a thematic inductive data analysis was conducted to analyse the data collected. The study findings suggest that parents did not find the online learning experience enjoyable or beneficial for their children. Several factors influenced this sentiment, including substantial parental involvement, the absence of socialisation opportunities leading to hindered learning, increased distractions within the home learning environment, and a perceived lack of professional attention from teachers compared to a traditional classroom setting. Teachers and the deputy head principal support the parents' opinion that online learning is not an ideal mode for children who experience difficulties associated with ADHD. Based on the study findings, such children experienced challenges with online learning, therefore the data indicated that in person learning is recommended for children with ADHD.

Key words: attention; hyperactivity; impulsivity; online learning; COVID-19; distractibility; movement; executive functioning; learning difficulties.

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List of abbreviations

ADHD	Attention-Deficit/Hyperactivity Disorder
APA	American Psychological Association
ASD	Autism Spectrum Disorder
CD	Conduct Disorder
DBE	Department of Basic Education
DSM-5	Diagnostic and Statistical Manual of Mental Disorders Fifth Edition
GAD	Generalised Anxiety Disorder
IT	information technology
LD	learning disorder
LSI	learning style inventory
LSQ	learning styles questionnaire
MBD	minimal brain damage/dysfunction
ODD	Oppositional defiant disorder
SADAG	South African Depression and Anxiety Group
SLD	Specific Learning Disorder
WHO	World Health Organization

Chapter 1: Introduction and rationale

1.1 Introduction

Online learning has increased for years, attributable to the flexibility it allows regarding time and place (Dong et al., 2020) and for financial reasons (Roberts et al., 2011). This observation resulted in debates about whether online learning would benefit learners who preferred traditional classroom teaching.

Coronavirus Disease 2019, referred to as Covid-19, was identified by the World Health Organisation (DBE, 2020). The outbreak of Covid-19 resulted in the national lockdowns implemented in 2020 and 2021, which led to school closures (DBE, 2020). Owing to school closures because of the COVID-19 lockdowns, teaching and learning have been forced to be conducted through online platforms (Pecor et al., 2021). Online learning has been observed as an alternative solution to school closures owing to learners and teachers needing to quarantine (Dhawan, 2020). Although this way of learning may be beneficial and preferable for several learners globally, it is important to establish whether it is beneficial to learners with special learning needs and if these needs can be met through online platforms. In this study, specific attention was paid to learners with Attention-Deficit/Hyperactivity Disorder (ADHD), as a common disorder experienced by 8.4% of children (American Psychiatric Society, n/d; Tessarollo et al., 2021).

Learners with ADHD struggle with hyperactivity, impulsivity, and a lack of attention (depending on the type of ADHD) (Sibley et al., 2021). Other symptoms may include a lack of executive functioning, such as planning and organising, realising time, and the ability to regulate emotions (Cibrian et al., 2021). According to the American Psychiatric Association (2015), learners with ADHD can also experience a specific learning disorder as a comorbidity, which would also affect their learning.

The researcher's teaching experience began in 2020 and, owing to the lockdowns, involved much online learning. This experience enabled an understanding of the importance of investigating the effects of online learning. This experience includes learners thriving with online learning but the struggles of other learners and parents.

The theoretical framework underpinning this study is an amalgamation of Bronfenbrenner's ecological systems theory (Onwuegbuzie et al., 2013; Paat, 2013), and Folkman and Lazarus's coping theory (Lazarus & Folkman, 1984, as cited in Schreuder & Coetzee, 2021; Folkman, 1984). This is elaborated on in Chapter 2.

1.2 Background

Attention-Deficit/Hyperactivity Disorder (ADHD) is a neurodevelopmental disorder, meaning that symptoms are present during the developmental age of childhood (Barlow et al., 2017).

The diagnostic criteria for ADHD include symptoms of inattention, hyperactivity, and impulsivity (APA, 2013). ADHD has three types of presentations. The first type is called combined presentation (ADHD-C), which refers to experiencing inattention, hyperactivity, and impulsivity. The second type is predominantly inattentive (ADHD-PI), referring to experiencing inattention but not hyperactivity and impulsivity. The third type is predominantly hyperactive/impulsive (ADHD-HI), referring to experiencing hyperactivity and impulsivity but not inattention (APA, 2013; Mash & Wolfe, 2018).

The DSM-5 also confirms three levels of severity with ADHD, indicating mild, moderate, and severe (APA, 2013; Mash & Wolfe, 2018). The severity level of ADHD is determined by the number of symptoms experienced by an individual and the level of impairment in their functioning (APA, 2013). The symptoms and severity can vary from one individual with ADHD to another (Mash & Wolfe, 2018).

Barlow et al. (2017) remark that ADHD symptoms can overlap with other developmental disorders, complicating an ADHD diagnosis. Disorders commonly comorbid with ADHD include learning disorders, oppositional defiant disorders, and conduct disorders (APA, 2013; Nolen-Hoeksema & Marroquín, 2017); therefore, a correct diagnosis is vital to inform the intervention procedures.

Individuals with ADHD often experience a lack of attention, which can lead to disorganisation and difficulty staying on a task long enough to complete it (Barlow et al., 2017). Mash and Wolfe (2018) remark that these individuals may experience selective attention, focusing more on certain things or tasks and less on others. A learner in school may be more focused on what their peers are doing than on completing an academic activity, which can cause disruption or a lack of learning. Mash and Wolfe (2018) also explain that learners with ADHD are easily distracted and struggle to sustain their focus over time, especially if the task is

observed as too easy or boring. Learners may struggle academically owing to challenges in completing tasks and paying attention.

Other challenges experienced by learners with ADHD may include speech and language difficulties, which may be comorbid with a specific learning disorder (Mash & Wolfe, 2018). Learners also experience impairments in the social, academic, and occupational aspects of their lives (APA, 2013) and difficulties with executive functioning, such as planning and organising. Nolen-Hoeksema and Marroquín (2017) remark that ADHD affects the functioning of brain structures, including the prefrontal cortex, the striatum, and the cerebellum. This affects the individual's cognition, behaviour, and functioning memory, which explains their challenges with attention, hyperactivity, and impulsivity (Nolen-Hoeksema & Marroquín, 2017).

Owing to these challenges with attention, hyperactivity, and impulsivity, learners with ADHD may also experience social challenges (Mash & Wolfe, 2018). As they act impulsively and struggle to regulate their behaviour, other learners in the class may not want to play or interact with them. They may struggle to make and maintain friendships (Nolen-Hoeksema & Marroquín, 2017).

1.3 Research problem

The research problem indicates that owing to the COVID-19 restrictions in 2020 and 2021, South African schools closed and were forced to find alternative teaching and learning methods—schools with sufficient resources conducted lessons online through various learning platforms. The responses to individuals' and families' experiences varied, although more information is required regarding the inclusivity of online learning for learners with special learning needs, such as ADHD.

Learners with ADHD may experience challenges with sustaining attention during online learning as they must focus on the lesson conducted through a computer or device rather than having the teacher present in person. This may have complicated online learning for them; however, online learning methods may have accommodated their needs and may have been beneficial for learners with ADHD. Dong et al. (2020) remark that the views of online learning from parents is an area in which more research is required, as parents play a significant role in their child's learning. This is therefore a gap in the research.

Learners in South Africa may have experienced issues with access to devices, electricity and internet connection (Dhawan, 2020). These authors also suggest that a lack of preparedness of online learning due to the sudden lockdown and school closures may also have resulted in challenges with online learning (Dhawan, 2020). Pecor et al. (2021) and He et al. (2021) indicate that an increase in stress due to the changes resulting from the national lockdown may have interfered with learning.

1.4 Research questions.

The research questions are as follows.

1.4.1 Primary research question

What are parents, teachers and deputy head's perspectives regarding online learning as a mode of teaching learners with ADHD?

1.4.2 Secondary research questions

1. According to the parents, teachers and the deputy head, what emotional effect did online learning have on children with ADHD?
2. According to parents, teachers and the deputy head, what effect did online learning have on the learning experiences of children with ADHD?
3. How did parents, teachers and the deputy head experience their role during online learning?

1.5 Purpose of the research

This study aimed to analyse parents', teachers and the deputy head's perspectives of online learning in order to establish whether online learning benefits children with ADHD. This study investigated the aspects of online learning and teaching and the effect on the learning of children with ADHD according to the learner's parents. Owing to the increase in online learning over the past few years (Roberts et al., 2011) and the change to online learning because of the COVID-19 lockdowns, this information is necessary to improve online learning to include various needs. This data could be useful for future lockdowns or if parents decide on online learning as a more appropriate learning platform for their children.

1.6 Concept clarification

Attention-Deficit/Hyperactivity Disorder (ADHD): A common neurological disorder affecting children and adults, experiencing inattention, hyperactivity, and impulsivity (American Psychiatric Society, n/d). In this study, learners with ADHD refer to those professionally diagnosed by a psychologist or psychiatrist, according to the DSM-5. This includes the three types of ADHD, indicating inattentive, hyperactivity/impulsivity, and combined types (APA, 2013). Participants had to specify if their children experienced a comorbid disorder alongside ADHD in this study.

COVID-19: COVID-19 refers to the global pandemic that affected the world in 2020, requiring populations to isolate in their homes to 'curb the spread of the virus', therefore, leading to online learning (World Health Organization [WHO], 2020). Ciotti et al. (2020) define the COVID-19 pandemic as the spreading od the disease globally.

Neurodevelopmental disorders: Disorders where symptoms are experienced in childhood or adolescence (i.e., the developmental period), causing deficits in development in areas including social, academic and occupational aspects of life (APA, 2013). Such disorders include ADHD, Autism Spectrum Disorder and Intellectual Disability (APA, 2013). These disorders affect individuals' behaviour and interactions.

Online learning: Remote learning that uses technologies, such as computers (He et al., 2021; Greer et al., 2013), compared to traditional face-to-face schooling in which children attend school in person. This was implemented in countries globally during the COVID-19 lockdowns (Tessarollo et al., 2021).

Traditional school setting: This refers to the typical school setting containing classrooms with a teacher and multiple learners (Dhawan, 2020).

Special learning needs: This refers to special or more complex learning needs that some children require to learn more effectively, such as accommodations, due to difficulties that they experience in the classroom. (Björklund, 2011; Pecor et al., 2021; Ortiz et al., 2021).

1.7 Working assumptions

The working assumptions for this study are that learners with ADHD did not thrive while learning online owing to a change in routine, a lack of support, a lack of social interaction with peers, and a lack of physical activity. Other issues experienced may include a lack of access

to devices and Internet connection and electricity owing to load-shedding. The study results might display online learning as complicated for learners with ADHD and their families owing to inattention, a lack of motivation, a lack of social interaction, and behavioural concerns.

There are positives to online learning and using technology. These positives include learning and improving one's skills with technology (Wu et al., 2014), flexibility in learning, affordability and accessibility (Dhawan, 2020; Roberts et al., 2011). Despite these positives, the study supports Björklund's (2011) observation that face-to-face learning at school, with assistive technologies, is the most beneficial form of learning for most learners, especially those with special needs, such as ADHD. The difference is that the learning is not conducted online; instead, the teaching and learning are completed in a face-to-face environment using technological devices to help where learners struggle (Björklund, 2011).

Other assumptions include that the participants can accurately communicate the results of their online learning experiences. It is an accurate indicator of the success level of online learning. It is also assumed that the learners have been correctly diagnosed with ADHD.

1.8 Epistemology of the study

Epistemology is defined by Mack (2010, p.5) as "the view of how one acquired knowledge". The study followed an interpretivist approach for this study, allowing the construction of meaning from the data collected (Mack, 2010; Nieuwenhuis, 2019; Ryan, 2018). Interpretivism refers to making interpretations of the experiences of participants in order to make meaning (De Vos et al., 2011). The researcher will therefore be able to construct meaning from the data in order to answer the research questions. Interpretivism presents responses from people from diverse backgrounds, interpreting situations differently based on their experiences (Nieuwenhuis, 2019). Interviewing different participants regarding the same situation obtained assorted results of the participants' experiences.

The advantages of this approach include that interpretivism is subjective and socially constructed (Ryan, 2018); therefore, the researcher may hold personal ideas of how learners with ADHD were affected by online learning, but through the interview process, other people's opinions were understood, based on their experiences and backgrounds (Walsham, 1995). As Mack (2010) explains, interpretivism allows the researcher to observe the objective realitly of the participants, Due to this, meaning is made from the lived experiences of each participant, rather than the views of the researcher. The study's initial opinions could change owing to

understanding the experiences of individuals directly involved in online learning, such as learners and parents.

Potential challenges of the interpretive approach include that the data cannot be generalised to other instances; therefore, concrete conclusions cannot be made about online learning (Mack, 2010). It is vital to understand the various perspectives of each participant, as the participants may have had similar or overlapping experiences, therefore developing common themes. Another challenge owing to interpretivism's subjectivism is that it may allow the researcher's observations to interfere with the conclusions. Collecting data from multiple sources (Di Fabio & Maree, 2012), interviewing several participants, and analysing the learners' academic achievement, improved the authenticity of the study. Trustworthiness was ensured by using credibility, applicability, consistency, and neutrality (Di Fabio & Maree, 2012). These concepts will be discussed in Chapter 3.

1.9 Methodological approach

This study followed a qualitative approach, focusing on people's subjective experiences (Silverman, 2020). Nieuwenhuis (2019) describes qualitative research as focusing on words and searching for meaning from those words and clarifying the subjective opinions of individuals. It uses open-ended exploratory research questions and allows the researcher to understand the participant's perspective (Nieuwenhuis, 2019). This approach is suitable for this research as it relies on the participants' own subjective experiences to establish whether the online learning process benefits the parents and their children academically, emotionally, and behaviourally.

The advantages of a qualitative approach include requiring "first-hand involvement in the social world" (Kelle, 2006, p. 295); therefore, the researcher is involved. Davis and Meyer (2009) explain that qualitative research aims to resolve problems by understanding experiences. The problem is the effectiveness of online learning of learners with ADHD, and the aim is to improve the process and advance it to include special needs.

Potential issues with a qualitative approach include the lack of generalisability (Crowe et al., 2011). Data would only reflect the observations of a few selected participants, rather than a complete perspective. Although the data reflected the complete perspectives of the participants involved in the study, other perspectives could not be analysed. It may also take more time to collect qualitative data through interviews. Despite these concerns, qualitative research aims to understand the participants' experiences.

1.10 Research design

An exploratory case study was chosen for the research design. Yin (2018) remarks that a case study design is appropriate where the research requires an in-depth explanation of a social situation. Stake (1995) and Morgan and Sklar (2012) remark that a case study explores data with a specific boundary, such as parents of learners with ADHD who experienced online learning. A case study was, therefore, appropriate. Yin (2018) remarks that an exploratory case study answers "what?" research questions. An exploratory case study was therefore appropriate for this study as the research questions focus on "what?" type of questions.

The advantages of a case study research design include detailing the research phenomena. It also allows the researcher to collaborate closely with the participants to understand their experiences (Nieuwenhuis, 2019). As the study focuses on the individual experiences of learners and parents to establish how effectively they experienced online learning, it requires an in-depth understanding.

Potential challenges of a case study design include the temptation to interview too many participants and spend excessive time collecting data, resulting in less time allocated for analysis and interpretation (Crowe et al., 2011). To overcome this obstacle, data were collected until saturation, ensuring sufficient data to answer the research questions. Another challenge was the lack of thoroughness, which could be problematic in a case study design (Crowe et al., 2011); therefore, the study opted to use triangulation by collecting various data types, working according to specific guidelines to avoid this error.

1.11 Sampling

Morgan and Sklar (2012) remark that non-probability sampling is typically used in qualitative studies. It is intentional and participants are chosen purposefully. This study employed purposive sampling, as the participants needed to comply with specific criteria, such as parents or teachers of learners diagnosed with ADHD who experienced online and traditional face-to-face learning, as well as the deputy head of a school that made use of online learning.

After receiving ethical clearance from the Ethics Committee, an independent primary school in the Johannesburg North area was approached, enquiring if the study could be introduced to the parents and the teachers. A consent letter was distributed to be signed by individuals who met the set criteria to participate in the study. The school would need to be rich in Internet and electronic devices as these resources were needed to conduct online learning. Due to the

rules of the POPI Act, participants were not directly approached by the researcher, they were rather made aware of the study by the school and contacted the researcher to show their interest in participating. Convenience sampling was therefore used as participants decided to be involved in the study and approached the researcher.

The advantages of purposive sampling include the ability of the researcher to choose participants who fit specific criteria—parents of children with ADHD, as well as teachers and the deputy head of the school. The information was directly obtained from the source. Consequently, the study obtained accurate information based on participants' subjective experiences with ADHD and online learning.

Potential challenges with purposive sampling techniques, include attaining the participants who fit the criteria and ensuring that their children have been accurately diagnosed with ADHD. It could also have been a challenge to find participants willing to share information about their children (Maree et al., 2016). To combat this challenge, the approaches to ensure anonymity and confidentiality were explained to potential participants.

1.12 Data collection and documentation

Seabi (2012) explains that case studies use multiple data collection forms, which Yin (2018) remarks are a strength of case study design; therefore, semi-structured interviews of various role players (parents, teachers, and the deputy head) and document analysis were used.

The study commenced with interviews with two teachers and the deputy head of the chosen primary school. These participants participated in online learning and taught learners diagnosed with and experienced challenges relating to ADHD. Subsequently, three parents at the school with children diagnosed with ADHD, involved in the online process, were also interviewed. Including various role players in the data collection allowed information collection from participants with possible diverse perspectives of the online learning process.

Seabi (2012) explains that interviews can cause descriptive data, allowing the researcher to understand the social reality of the participant; therefore, this was a valuable technique to employ in this study. The interviews were conducted until data saturation and sufficient information was collected to answer the research questions (Morgan & Sklar, 2012).

A document analysis was done on the *Coronavirus Orientation Guidelines for Schools* (Department of Basic Education, 2020) document implemented by the Department of Education to establish how this policy was implemented to support learners during online

learning. This document outlined the department's plans to recover the curriculum after the school closures, as well as how to support learners and teachers during the time of school closures.

The participants could choose between conducting the interviews in a face-to-face setting or on online platforms, such as Google Meets and Microsoft Teams. This allowed the participants to feel at ease. The interviews with the teachers, deputy head, and Parent 2 were conducted face-to-face at the school. The interviews with Parent 1 and Parent 3 were conducted online through Google Meets and Microsoft Teams, respectively.

The interviews followed a semi-structured approach (Seabi, 2012), allowing for a rough plan of what needs to be discussed to answer the research questions and disclose alternative disregarded ideas and phenomena. Questions supporting these conversations include: *Describe your online learning experiences during lockdown. How did your children experience online learning? How did this process affect your child and the rest of the family? How did online learning affect your child's ability to learn?*

To document the data, the participants were requested to consent to audio recordings of the interviews, which were later transcribed. The data are kept safe and out of reach, saved on computers with passwords. Only the researcher and supervisor have access to the raw data. A research diary was used for field notes and to note information of interest on the research topic. The themes or trends emerging through the data collection process were documented in the research diary.

1.13 Data analysis and interpretation

Thematic inductive analysis was appropriate for this study as it analyses the raw data collected while pursuing common themes arising from this data (Nieuwenhuis, 2019) or from a bottom-up perspective (Braun & Clarke, 2006). The study searched for themes arising from the information established from the data collection rather than seeking themes when collecting data.

Braun and Clarke (2022) describe a six-step process of thematic analysis. These steps include becoming familiar with the data, coding aspects of data of interest, seeking themes, analysing the themes, defining the themes, and creating a report (Braun & Clarke, 2022).

According to Braun and Clark (2006), an advantage of thematic inductive analysis is the ability to be flexible, and helpful in collecting detailed data, as the data collected can be

comprehensive and wide-ranging. This assisted in being open-minded, as several perspectives and experiences could arise from the data.

A potential challenge of thematic inductive analysis is that an anecdote can be mistaken for a theme rather than a single aspect. Another challenge remarked on by Braun and Clarke (2006) is using research questions as themes. To avoid this, the study ensured that the data analysis was objective and open to various themes, not only those relating to the research questions. Inter-rater reliability was ensured by directing the study supervisor to code the data independently and then comparing the coding for agreements.

1.14 Ethical considerations

Yin (2018) and Crowe et al. (2011) list potential ethical issues that should be solicited, such as informed consent, protection from harm, ensuring privacy, confidentiality, and anonymity, and protecting vulnerable participants.

It was ensured that the participants were aware of the study details by explaining and answering their questions and elaborating on what was required from them as participants to discourse the concern of informed consent (Flick, 2018). The participants signed a consent form affirming their inclusion and that they could opt-out at any point of the voluntary consent without ramifications.

The information provided by each participant is kept confidential to protect the participants' identities; personal information is not shared with others and documents were saved on devices that were password protected (Nieuwenhuis, 2019). Anonymity was ensured by omitting the participants' names instead using pseudonyms.

To protect vulnerable participants (Yin, 2018), such as children, parents were interviewed only; therefore, it was ensured that the parents were comfortable and had given permission for their children's information to be discussed and included in the study.

The University of Pretoria's Ethics Committee granted ethical clearance to progress with the study; the study complied with the ethical requirements of the university. As part of these requirements, the data collected are stored at the university premises for 15 years.

1.15 Overview of the study

The study analysed the experiences of parents and teachers of children with ADHD, as well as the deputy head of the school, during online learning. It aimed to establish whether online learning is ideal for learners with ADHD or if certain challenges can be identified as a barrier to learning for learners with ADHD. Learners with ADHD may struggle with academic and social issues (Nolen-Hoeksema & Marroquín, 2017); therefore, it was necessary to establish if an online learning environment would benefit or harm learners with ADHD.

Parents and teachers of learners with ADHD, as well as the deputy head of the school, were interviewed on their online learning experiences and that of the learners. Focus was on the learning of the learners and their socio-emotional experiences of learning from home to identify positive and negative aspects associated with online learning.

Chapter 2: Literature Review

2.1 Introduction

2.1.1 Attention-Deficit/Hyperactivity Disorder

Attention-Deficit/Hyperactivity Disorder (ADHD as a neurodevelopmental disorder, meaning that symptoms are present in individuals during childhood, particularly before twelve (Barlow et al., 2017; Nolen-Hoeksema & Marroquín, 2017). ADHD is characterised by difficulties in attention, hyperactivity, and impulsivity, depending on the ADHD type. An individual diagnosed with ADHD can experience attention or hyperactivity/impulsivity, or both symptoms (combined presentation) (Barlow et al., 2017; Mash & Wolfe, 2018; Nolen-Hoeksema & Marroquín, 2017). Inattention refers to the challenge of sustaining attention for certain periods. This refers to individuals easily distracted while struggling to complete tasks (Kos et al., 2006). Owing to this, they may be disorganised with deficient planning skills (Barlow et al., 2017; Mash & Wolfe, 2018). Hyperactivity is excessive motor behaviour and activity (Mash & Wolfe, 2018). Impulsivity refers to the inability to control reactions and responses. Conversely, an individual may struggle to think before acting, resulting in inappropriate reactions (Barlow et al., 2017; Mash & Wolfe, 2018).

Individuals with ADHD are fidgety, careless, impatient, and lacking organisational skills (Barlow et al., 2017; Kos et al., 2006; Mash & Wolfe, 2018). Mash and Wolfe (2018) explain that these individuals may not perform appropriately in social settings and struggle to follow

instructions and focus. These authors also emphasise that the ADHD symptoms do not align with age and developmentally-appropriate expectations of behaviour (Einarsdottir, 2008; Mash & Wolfe, 2018).

Mash and Wolfe (2018) distinguish among diverse types of attention. Sustained attention refers to sustaining attention throughout a task until completion. Selective attention refers to ignoring information irrelevant to the task (Mash & Wolfe, 2018). Individuals with ADHD may, therefore, struggle to focus on information while blocking out irrelevant information. They may struggle to hold their attention to a certain stimulus.

2.2.1 Diagnosis of ADHD

According to the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5) by the American Psychological Association (APA), for a diagnosis of ADHD, at least six symptoms of inattention and at least six symptoms of hyperactivity and impulsivity must be present (APA, 2013; Nolen-Hoeksema & Marroquín, 2017). Symptoms must also be present before the age of twelve and should be present for at least six months before a diagnosis is possible (APA, 2013). Another crucial factor is that the symptoms must exist in at least two settings (APA, 2013; Einarsdottir, 2008). Conversely, the individual must present symptoms of inattention, hyperactivity, and impulsivity, whether they are at home, school, work or in another social setting. This factor ensures that the symptoms are because of ADHD rather than a reaction to a setting or activity. For these symptoms to be considered ADHD, they must have a considerable influence on the individual's life, complicating completing daily tasks (APA, 2013).

Barlow et al. (2017) explain that ADHD can be difficult to diagnose owing to several symptoms common to other disorders, such as Oppositional Defiant Disorder, Conduct Disorder and Bipolar Disorders. Mash and Wolfe (2018) explain that individuals with ADHD can also experience slight delays in development areas, such as language and social. These symptoms overlap with those of Autism Spectrum Disorder (ASD) and specific learning disorder (SLD), presenting difficulty in a diagnosis (Mash & Wolfe, 2018).

2.1.2 Specifiers for a diagnosis of ADHD

Certain specifiers are required for an ADHD diagnosis. These specifiers include the subtype of ADHD, relating to the individual and the severity of the disorder (APA, 2013).

The subtype of ADHD refers to the predominant symptoms experienced (Nolen-Hoeksema & Marroquín, 2017). Subtypes of ADHD are, therefore, called predominantly inattentive presentation, predominantly hyperactive/impulsive presentation, or combined presentation, as aforementioned (APA, 2013; Mash & Wolfe, 2018). The specified subtype, therefore, determines the specific challenges an individual experienced. Individuals with the inattentive subtype struggle with remaining focused on completing tasks, whereas individuals with the predominantly hyperactive/impulsive subtype struggle with sitting still and thinking about their behaviour before reacting (Barlow et al., 2017).

The severity experienced by the individual must also be specified with the diagnosis. Mash and Wolfe (2018) explain that the extent to which these symptoms impair an individual, relates to the severity level classified. The severity levels of ADHD include mild, moderate, and severe (APA, 2013). A mild severity of ADHD indicates that the individual experiences symptoms of inattention, hyperactivity, and impulsivity. These symptoms do not cause significant influences on the individual's daily living but only slight difficulties. Moderate severity of ADHD refers to those experiencing more symptoms than a mild severity and fewer symptoms than a severe severity level. The influence on the individual's life is, therefore, more than a mild severity and less than a severe severity level (APA, 2013). A severe level of ADHD causes significant difficulties experienced regarding daily functioning, and the symptoms are more than the required number for a diagnosis (APA, 2013).

Another specifier regarding diagnosing ADHD is whether the individual is in partial remission (APA, 2013). According to the DSM-5, partial remission refers to fewer symptoms met, compared to when diagnosed, although these symptoms still interfere with their daily functioning (APA, 2013). If an individual was diagnosed with ADHD based on the symptoms experienced, they would be in partial remission if they experienced fewer symptoms than before.

The ADHD specifiers, particularly subtype and severity, influence how an individual functions daily (APA, 2013). Regarding this study, the specifiers provided to children diagnosed with ADHD could influence their academic ability and behaviour; therefore, participants' children with a distinctive subtype or severity of ADHD may have had diverse experiences with online learning and varied perspectives of its effectiveness.

2.1.3 Common comorbidities with ADHD

Daley and Birchwood (2010) acknowledge several disorders commonly comorbid with ADHD. Individuals with ADHD are not only challenged by the disorder but could also experience other challenges. Individuals with ADHD may experience delays in certain developmental or learning areas (Mash & Wolfe, 2018). According to Daley and Birchwood (2010), ADHD is commonly comorbid with oppositional defiant disorder (ODD), conduct disorder (CD), bipolar disorder, anxiety and learning disorders. Children with comorbidity of ODD or CD will, therefore, experience an increase in behavioural issues, whereas children with a comorbid learning disorder may experience other learning challenges atypical of ADHD, therefore, increasing their learning difficulties. Landsberg at al. (2019) remark that ADHD commonly co-occurs with learning impairments, such as SLDs. Not only do learners with ADHD experience symptoms about ADHD, but they may also experience learning impairments, increasingly complicating learning.

2.1.4 Causes of ADHD

Attention-Deficit/Hyperactivity Disorder was called Minimal Brain Damage/Dysfunction (MBD) in the 1960s and was later referred to as Hyperkinetic Disorder of Childhood. (Einarsdottir, 2008; Rosa, 2010). These terms refer to ADHD as a degree of brain damage. This explains that the development of an individual's brain is crucial in ADHD onset. Nolen-Hoeksema and Marroquín (2017) explain that the brain of individuals with ADHD develop slower compared to that of neurotypical individuals.

ADHD has a strong genetic influence, as Barlow et al. (2017) and Mash and Wolfe (2018) explain that it can be hereditary and passed down from generation to generation. Nolen-Hoeksema and Marroquín (2017) support this by explaining that siblings of individuals with ADHD are also likely to receive an ADHD diagnosis. A genetic mutation can cause ADHD. Barlow et al. (2017) and Nolen-Hoeksema and Marroquín (2017) further explain that neurotransmitters, such as dopamine, can influence an individual's genetic makeup and, therefore, affect ADHD development. Mash and Wolfe (2018) explain that certain genes affected by dopamine can affect areas of an individual's brain and the extent to which medication can be beneficial in aiding ADHD symptoms.

Some environmental factors may also influence ADHD development, such as a mother's habits during pregnancy, including smoking and alcohol consumption (Barlow et al., 2017; Nolen-Hoeksema & Marroquín, 2017), which may influence the genetic position of the child. Other environmental factors include allergens and toxins in foods, which may increase the

likelihood of developing ADHD (Barlow et al., 2017). A combination of certain genetic and environmental factors can cause ADHD (Barlow et al., 2017).

2.1.5 Treatment of ADHD

Einarsdottir (2008) and Nolen-Hoeksema and Marroquín (2017) maintain that medication and certain interventions to teach individuals better behavioural skills are the most typical treatments for ADHD. Daley and Birchwood (2010) support this, stating that medication combined with interventions that teach a learnt behaviour are commonly used to treat ADHD. Concerning learning and classroom behaviour, academic interventions can improve certain skills that learners with ADHD find challenging (Raggi & Chronis, 2006).

Regarding medication, stimulant medications, such as Ritalin and Concerta, are commonly used to treat ADHD (Barlow et al., 2017; Nolen-Hoeksema & Marroquín, 2017). These medications are methylphenidates that must be prescribed to the individual (Einarsdottir, 2008). Barlow et al. (2017) explain that ADHD medication can cause less obvious changes in the brain compared to those with ADHD who do not receive medication.

Raggi and Chronis (2006) suggest academic interventions to help learners with ADHD in the classroom. These interventions include one-on-one academic attention, setting goals, teaching specific skills, and using fidget toys or items. Nolen-Hoeksema and Marroquín (2017) explain that behavioural therapy to teach children desired behaviours can benefit ADHD treatment. Positive behaviours taught can include promoting attention and controlling impulses (Nolen-Hoeksema & Marroquín, 2017). Landsberg et al. (2019) suggest focusing on a specific routine to improve the child's executive functioning skills. This can help them to be more organised and ensure that the tasks are completed. Positive reinforcement can also be a useful apparatus, as it encourages prosocial and acceptable behaviours (Barlow et al., 2017; Landsberg et al., 2019; Nolen-Hoeksema & Marroquín, 2017). Landsberg et al. (2019) also suggest technology in the classroom to help children with barriers to learning, such as reading and writing. This is discussed further throughout this chapter.

Another crucial point raised by Raggi and Chronis (2006) is teaching according to the learner's learning style to achieve the most success from the learning experience. Using varied teaching styles may improve a learner's ability to focus and understand the content presented. Learning styles are discussed further in Section 0.

2.1.6 Teaching children with ADHD

The subsequent section discusses the specific challenges experienced by children with ADHD and how these challenges may affect their learning and ability to function effectively in the classroom. As ADHD is one of the most common neurological disorders (Anderson et al., 2012), there is a strong likelihood that most teachers experience teaching learners with ADHD and, therefore, know of the symptoms experienced and the effect of difficulties on their behaviour and academic performance.

2.1.6.1 Academic/cognitive challenges/deficits

Raggi and Chronis (2006) explain that inattention can cause an individual to struggle to listen to and follow instructions, disorganisation resulting in incomplete or lost tasks, and forgetting to submit tasks to the teacher. It can also cause a lack of understanding of the content taught in class (Kos et al., 2006). Owing to this, several learners with ADHD may have low marks at school because of a lack of organisational skills that allow them to keep track of and complete their work. Hyperactivity in the classroom can affect a child's learning ability as they may struggle to remain still for long enough to listen to instructions or complete a task (Kos et al., 2006; Raggi & Chronis, 2006). Impulsivity can cause constant mistakes in the child's work owing to their fast and careless responses (Raggi & Chronis, 2006). This may also affect the learner socially, as they may be observed as annoying to their peers in the classroom, as they do not wait their turn or present other learners a chance (Barlow et al., 2017; Kos et al., 2006; Mash & Wolfe, 2018).

2.1.6.2 The effect of ADHD on developmental stages

According to Daley and Birchwood (2010), although ADHD is typically regarded as a childhood or a disorder primarily affecting children, adolescents can also experience symptoms and be diagnosed with ADHD. These authors explain that adolescents with ADHD have typically struggled academically and behaviourally in the past and may have experienced special education classes and therapy (Daley & Birchwood, 2010). Nolen-Hoeksema and Marroquín (2017) remark that individuals with ADHD are more inclined to develop or experience negative circumstances in adolescence and adulthood, such as CD, antisocial personality disorder, and issues with substance use. ADHD can, therefore, affect an individual throughout their life. This study focused on children in primary school; therefore, children currently experiencing Erikson's *industry vs inferiority* developmental stage (Snowman & McCown, 2013). These children are learning to work and learn independently. Snowman and McCown maintain that praising, motivating, and rewarding learners during this stage can promote industry development rather than inferiority through critiquing the child's efforts. Considering Piaget's

cognitive development stages, the children focused on this study were between the *preoperational* and *concrete operational* stages (Snowman & McCown, 2013). This explains that these children cannot grasp another person's perspective of a situation; rather, they are focused on their own way of observing the situation or are developing the ability to consider various perspectives. This factor may be enhanced through online learning, as the child is exposed to fewer social interactions with peers and teachers; therefore, their own perspective is encouraged.

Older children, such as high school learners, may also experience difficulties owing to ADHD, specifically regarding their learning abilities. This demonstrates that young and older children can be affected by ADHD symptoms and experience the associated challenges. Although this study focuses on primary school learners, the experiences of older learners, such as high school or university students, may yield diverse results and could be considered for future research.

Turgay et al. (2012) discuss the effects of ADHD on transitional periods of an individual's life, such as the transition from childhood to adolescence. These authors remark that the effect of ADHD on an individual's life can depend on their developmental phase. The demands placed on an individual are appropriate to their phase of life (Turgay et al., 2012). For example, a child's demands would be to attend school and learn, while a young adult's demands may be that of securing employment and fulfilling the job functions.

Managing these life changes is crucial, particularly for those with ADHD, as it may influence how the disorder is experienced and treated (Turgay et al., 2012). Einarsdottir (2008) maintains that it is essential to observe those diagnosed with ADHD within their context; therefore, this study aimed to clarify the experiences of learners with ADHD from their parents' perspectives in their immediate context, as well as that of the teachers and the deputy head of the school. The phenomena are considered, such as their learning styles, abilities, parenting styles, and other factors influencing their ability to learn through online learning. Study participants are considered within their own context, following Bronfenbrenner's ecological systems theory, discussed in Section 2.7.1

2.1.6.3 Teachers' perspectives of teaching learners with ADHD

Anderson et al. (2012) discuss the difference in perspectives of students or newly qualified teachers and experienced teachers on teaching with learners with ADHD. Their study

demonstrates that younger, less experienced teachers are more open to teaching learners with ADHD compared to more experienced teachers.

Anderson et al. (2012) and Kos et al. 2006) explain that teachers' knowledge of ADHD regarding its symptoms and behavioural interventions increases as they gain more experience in teaching these learners. Kos et al. (2006) remark that previous experience in teaching learners with ADHD increases the teacher's knowledge and understanding of the disorder, therefore, resulting in being more prepared and able to teach them. In the current study, the teachers interviewed have at least thirteen years of teaching experience; therefore, they have worked with children for several years, and their knowledge of ADHD and how these learners behave, interact, and learn, is strong, making them credible and knowable sources for this study. How a teacher observes learners with ADHD is also inclined to determine how they teach and interact with such learners (Anderson et al., 2012). This knowledge is valuable as it improves the learning experiences of children with ADHD, therefore, resulting in more effective learning and improved results. This aligns with the theory of learning styles, further elaborated in Section 0

2.2 Parents of children with special needs/challenges

Kelso et al. (2005) explain that parents of children with special needs, such as a disability or learning difficulty, experience increased stress compared to other parents. They encounter the normal stressors of raising a child and additional stressors brought by the child's specific challenges. As ADHD is a neurological disorder that causes impairments in the child's functioning, the parents would experience additional stressors based on the disorder's symptoms (APA, 2013). The impairments in the child's functioning are experienced daily and can affect the family, not only the diagnosed individual (Kelso et al., 2005).

One stressor outlined by Kelso et al. (2005) includes a diagnosis and interacting with specialists regarding their child's specific difficulties. The authors note the emotional challenge of a diagnosis for their child and accepting their difficulties. They also remark that dealing with diverse professionals and specialists on their child's difficulties is challenging because the parents had little knowledge and information regarding the diagnosis, which they had to learn from various specialists. This lack of knowledge contributes to parents' stress. Parents uneducated about their child's condition encounter the challenge of raising a child without understanding their specific needs or how to support them. This stressor may be increased in an online learning setting as the parents lack guidance and support from teachers and other professionals. Parents of children with difficulties must provide support the entire day, which

can strain them (Kelso et al., 2005). Psychoeducation is, therefore, required to support these parents in raising their children and supporting them academically.

Kelso et al. (2005) also remark that specific challenges relating to a specific diagnosis cause increased stress. For children with ADHD, specific challenges relate to symptoms of the disorder, specifically a lack of attention, hyperactivity, and impulsivity (APA, 2013). Daily challenges resulting from these symptoms can include learning challenges, issues with social interaction, disorganisation and impatience (Mash & Wolfe, 2018).

The stigma associated with a disability is also a stressor that could be experienced by parents and children with difficulties (Barnard-Brak & Sulak, 2010). Barnard-Brak and Sulak (2010) describe ADHD as a hidden disability, as it is not always noticeable that these individuals experience such challenges. This may be difficult if people are unaware of or do not understand these challenges, as mentioned by Kelso et al. (2005). For example, a child with ADHD may be perceived as rude owing to their impulsivity. According to the authors, those with hidden disorders experience negative interactions with others when learning about their disorders. Those with disorders pursuing academic accommodations and exemptions in school receive unpleasant responses from peers who may not understand the extent of their challenges. The subsequent section explains the chosen theories to guide this study and how they are integrated and applied to online learning and ADHD.

2.3 Parenting styles

The theory of parenting styles lists certain ways of parenting, guiding how parents interact and respond to their children in certain situations (Darling & Steinberg, 1993). It describes how the child's development is connected to their socialisation and learning of appropriate interactions (Darling & Steinberg, 1993). As children learning from home through online platforms spend more time with their parents, families' diverse parenting styles could affect how each family perceives online learning.

Darling and Steinberg (1993) explain that Baumrind (1966, 1967, 1971)[1] believed that the goal of parenting is to teach a child to conform to the norms of society while presenting a sense of honour and self-respect. The way a parent raises a child has a considerable influence on the child's development. It is remarked that a higher level of parental involvement is more beneficial to a child's development and, therefore, their ability to achieve academically (Kuppens & Ceulemans, 2018).

As parenting styles affect a child's development, it is necessary to consider parenting styles and the level of involvement in a child's life and academic work when analysing the effects of online learning. This observation is required as the level of involvement and parenting style could influence the success or failure of online learning for certain children and families. While working from home, children have less direct support from their teachers, indicating that they may rely more on their parents for additional support.

Baumrind (1966, 1967, 1971) initiated parenting styles (Kuppens & Ceulemans, 2018). Baumrind (1991)'s theory of parenting styles refers to four styles, indicating authoritarian, permissive, authoritative, and rejecting-neglecting parenting styles. These styles refer to the parents' levels of responsiveness and demandingness regarding their interactions with their children (Baumrind, 1991). Baumrind (1991) defines responsiveness as allowing the child to foster a sense of independence while supporting the child and their requirements. Parents allow their children space to grow and develop independently, while ensuring that guidance and assistance are available for the child. Demandingness is how a parent disciplines their child and manages their behaviour (Baumrind, 1991).

According to Baumrind (1991), authoritarian parenting refers to parents displaying prominent levels of demandingness but are unresponsive. These parents set clear rules, and their children are expected to follow these. The parents proactively manage the children's behaviour (Baumrind, 1991). A lack of warmth towards children can be associated with authoritarian parenting (Tus, 2021).

Permissive parenting, also called non-directive parenting, refers to parents with higher levels of responsiveness than demandingness (Baumrind, 1991). These parents allow their children to manage their own behaviour. This style can be described as merciful, tolerant, or soothing.

[1] This reference is from an earlier publication where Baumrind initiated the idea of parenting styles.

Permissive parents display care and gentleness towards their children (Tus, 2021). Regarding online learning, permissive parents may have been too involved in their child's learning process, therefore, resulting in a lack of learning or participation on the child's part.

Authoritative parenting refers to parents displaying demandingness and responsiveness (Baumrind, 1991). These parents set clear rules for their children and are assertive, without excessive limits on their children's behaviour. Authoritative parents support and guide their children rather than disciplining them, expecting them to be mature and responsible (Baumrind, 1991). Authoritative parents provide their children with emotional support and ensure effective communication (Darling & Steinberg, 1993). Authoritative parenting is alleged to fall between authoritarian and permissive parenting, resulting in the most desirable outcomes regarding a child's development (Kuppens & Ceulemans, 2018). Regarding online learning, learners would require demandingness and responsiveness to remain organised and committed to learning online. This parenting, therefore, would be beneficial in online learning.

Rejecting-neglecting parenting, also called disengaged parenting, refers to low levels of demandingness and responsiveness (Baumrind, 1991). These parents do not manage or observe their children's behaviour, as they neglect or reject their child's needs (Baumrind, 1991). This parenting style has also been called uninvolved (Kuppens & Ceulemans, 2018; Tus, 2021). Regarding online learning, children of rejecting-neglecting parents may have struggled owing to the lack of support from their parents. They may have experienced challenges that learners exposed to diverse parenting styles may not have, which may have resulted in a low standard of work or a lack of online learning participation.

Similar to Baumrind's responsiveness and demandingness, Kuppens and Ceulemans (2018) refer to support and control as aspects relating to parenting styles. Support in parenting refers to being emotionally responsive to the child and being involved in the child's life (Kuppens & Ceulemans, 2018). Parental support can be related to Baumrind's aspect of responsiveness. Control is divided into psychological and behavioural control (Kuppens & Ceulemans, 2018). Psychological control is associated with negative development as it refers to the parents over-controlling their children (Kuppens & Ceulemans, 2018). Behavioural control refers to the parent managing the child's behaviour through rules and discipline while rewarding desired behaviour (Kuppens & Ceulemans, 2018). Parental control relates to Baumrind's aspect of demandingness. Behaviour control relates to the authoritative parenting style, allowing for some level of independence and trust, whereas psychological control relates to the authoritarian parenting style, where the child has little freedom of expression.

Bernhardt et al. (2021) regard how parenting was affected during the COVID-19 pandemic, when parents and children had to work and learn from home. Bernhardt et al. (2021) list responsive and harsh parenting and other parenting styles.

Bernhardt et al. (2021) acknowledge that parenting has significant effects on the child's development while also noting that the context of the family influences its dynamics and, therefore, parenting styles. Darling and Steinberg (1993) also refer to the influence of context on parenting styles. Authoritative parenting styles are allegedly the most beneficial for child development (Kuppens & Ceulemans, 2018), although Darling and Steinberg (1993) remark that this is inaccurate in all cultural backgrounds and that culture influences parenting styles and their effectiveness.

Bernhardt et al. (2021) refer to the contexts of families as systems, displaying the interrelatedness among other systems and the influences of each. Observing parenting styles through systems demonstrates how family members interact with one another, influencing parenting. Bernhardt et al. (2021) also explain that factors relating to one system, such as the parents' job, can influence another system—their parenting style. If a parent is stressed because of their job, they may use more harsh ways of parenting. This applies as the COVID-19 pandemic was a source of stress for many. Having to work online and assist children's learning through online platforms created a new, stressful experience. This stress, uncertainty, and confusion may have affected how a parent interacts with their child.

Bernhardt et al. (2021) established that working from home indicated an increase in responsive parenting in families with a mother and a father, although harsh parenting increased in families with a single mother. Families with both parents present may experience working and learning from home as positive, owing to the increased family time spent together, and the ability to help and organise the children; they are more prepared for online learning. Single mothers may have experienced working from home and online learning as an additional stress, therefore, increasing harsh parenting style.

The parenting styles adopted by families influence the child's development and, therefore, their academic achievement. This would affect how online learning is perceived. For example, parents who adopted Baumrind's authoritative parenting style may be more involved in online learning and, therefore, more able and willing to help their child, as is typical for authoritative parents (Darling & Steinberg, 1993). Uninvolved or rejecting-neglecting parents, typically less responsive to their children's needs (Baumrind, 1991), may not provide the support and guidance needed to succeed during online learning.

2.4 Learning styles

Learning styles refer to how an individual learns (Costa et al., 2020). How a learner learns refers to how they can process and assimilate information effectively (Costa et al., 2020). Literature does not emphasise one theory regarding learning styles; instead, several theories and assessment scales of learning styles are evaluated. These studies categorise individuals based on their learning preferences. Online learning and the platforms used may, therefore, affect the ability of a child to learn.

Some theoretical approaches to learning styles include Soloman and Felder's index of learning styles and Kolb's learning style inventory (LSI) (Santo, 2006). Romanelli et al. (2009) discuss LSI. This approach refers to four types of learners, indicating divergers, convergers, assimilators, and accommodators. According to Santo (2006), divergers are creative thinkers who clarify problems from alternative perspectives. Convergers prefer to relate learning subjects to the real world and their subjective experiences. Assimilators are logical thinkers. Accommodators are practical, learning effectively when actively involved in a situation (Santo, 2006).

Another assessment approach to learning styles is the learning styles questionnaire (LSQ), as referred to by Romanelli et al. (2009). This approach identifies four types of learners, indicating activists, reflectors, theorists and pragmatics. Activists learn through experiences and active involvement; reflectors learn through observing others and reflecting on their own; theorists explore situations, pursuing relating factors; pragmatics are practical, learning by physical activities relating to the learning experience.

As learners respond to diverse ways of instruction, learning styles guide how an individual learns, making them an essential aspect of learning. The learning manner and environment influence how learning occurs. Romanelli et al. (2009) remark that learning styles are a crucial factor that can contribute to academic success. These authors explain that understanding an individual's preferences regarding how they learn enables enhanced learning by using diverse techniques. (Romanelli et al., 2009). Similarly, the teacher's understanding of a learner's learning style may allow diverse techniques and, therefore, enhance how they learn, resulting in greater academic success.

Romanelli et al. (2009) remark that the teacher's teaching can also influence how learners learn, according to their specific learning style. These authors explain that conflicting learning

and teaching styles may cause a learning barrier (Romanelli et al., 2009). Costa et al. (2020) recommend varied teaching styles relating to learning styles in a classroom.

Costa et al. (2020) remark that learning styles relate to how an individual engages with certain resources. Online learning and technological devices, therefore, play a significant role in the way a learner can learn. According to Costa et al. (2020), the knowledge of a learner's learning style helps adapt to new teaching methods. The transition to online learning may have been easier based on the understanding of the learning styles in the class.

There is, however, controversy regarding the theory of learning styles. Some researchers do not agree with the theory, stating that there is no evidence to prove that being taught in a way that matches one's learning style is more effective than learning through a mismatched approach. (Newton & Miah, 2017). Learning styles has also been considered to be potentially harmful to learners as it classifies them into groups, which may limit their learning potential. (Newtown & Miah, 2017). The effect of learning styles during the online learning process may therefore be insignificant.

2.5 Online learning

Online learning refers to the use of digital devices that allow learning and teaching to be conducted remotely (Dong, et al., 2020). During 2020 and 2021, schools were closed in South Africa owing to the national shutdowns implemented by the governments and a result of COVID-19 Department of Basic Education, 2020; Pecor et al., 2021). As a result of remote schooling, some schools were able to conduct lessons via online platforms.

2.5.1 Advantages of online learning reported in the literature

Dhawan (2020) remarks that online learning was the perfect response to the need for social isolation during the pandemic. Positive aspects that were outlined in studies conducted in India, the United States of America and Taiwan, include that online learning is more affordable and accessible (Dhawan, 2020; Roberts et al., 2011; Wu et al., 2014). In a South African context, these aspects may or may not be perceived as positive aspects. The affordability aspect, however, may be counter-contended. Pecor et al. (2021) mention the increased costs of children with special education needs, such as ADHD. Accessibility may also be counter-contended as Burgstahler (2015, p. 69) and Wu et al. (2014) mention the "digital divide", referring to the lack of access to devices and the Internet. Due to the high levels of inequality in South Africa, a digital divide may exist. While affordability and accessibility may be positive

aspects of online learning for specific individuals, others may not have the same opinions. This questions the inclusivity of online learning.

Sibley et al. (2021) report that the result of a study demonstrates that an increase in time spent with family members is a positive aspect to emerge from online learning, with 43.0% of parents and 29.8% of learners listing this as a benefit to learning online. As children learn at home through online platforms, they can spend more time interacting with their families.

Flexibility is a benefit of online learning from multiple sources (Dhawan, 2020; Roberts et al., 2011; Sibley et al., 2021). Sibley et al. (2021) established that learners reported having more time to complete their schoolwork and unstructured time to relax as a positive aspect of learning online. This is interesting to the current study as it is remarked that learners with special needs rely on routine and do not enjoy a lack of structure (Tessarollo et al., 2021). Sibley et al. (2021) also remark it can be more challenging to keep to a routine with online learning than in a typical school environment. Another reason online learning may be preferable to learners with specific learning needs is the ability for a learner to work at their own pace, rather than struggling to keep up with peers in a classroom (Wu et al., 2014). This may allow learners to ensure that they have mastered certain skills before they move on to other learning areas.

Learners with specific learning needs may benefit from online learning or using technological devices. Greer et al. (2013, p. 44) mention the “modality effect”, combining visual and auditory input, therefore, helping learners to understand new information. This is helpful as, if one sensory channel (visual or auditory) is overloaded with information, the other channel can process this new information (Greer et al., 2013). Björklund (2011) refers to using assistive technologies to help individuals with learning impairments, as information is presented in alternative ways to suit specific needs. This can apply to learners with ADHD as they may focus on one source more than another; therefore, this would help in learning and retaining information.

2.5.2 Disadvantages of online learning reported in the literature

Ryan et al. (2015) explain that parents knowledgeable about ADHD better understand how to help their children and manage their behaviour. The authors remark it is essential for parents to receive correct and accurate information from healthcare professionals regarding a diagnosis of ADHD and how to collaborate with their child (Ryan et al., 2015). Being in a face-to-face school setting, learners interact significantly with their teachers, who may notice ADHD

symptoms and refer the child to a psychologist for a diagnosis. This may be difficult for learners attending school online, as they do not interact closely with teachers, which could prevent a potential diagnosis (Tessarollo et al., 2021). The lack of a diagnosis could prevent the learner's parents from helping to manage their symptoms. Ortiz et al. (2021) and Hamad (2021) remark that the learners' needs are unmet when learning online. Sibley et al. (2021) also remark that the lack of teacher assistance would create more difficulties, as learners would lack their teachers' cues, reminders, or support to guide them.

Cibrian et al. (2021) indicate that individuals with ADHD experience deficits in their executive functioning skills, which may include organisation and planning. Learners with ADHD struggle with organisational skills, such as time management (Cibrian et al., 2021); therefore, learning online may increase this difficulty, as learners do not have their teachers or peers to remind and guide them. Sibley et al. (2021) also remark that the lack of academic and behavioural support made working from home more difficult. Learners could fall behind in their learning and experience increased behavioural issues owing to the lack of school teachers' support.

According to Dong et al. (2020) and He et al. (2021), another parent concern regarding online learning is potential Internet addiction. Studies revealed a correlation between ADHD symptoms and Internet addiction (Weiss et al., 2011). Although the cause is not stated, it could be owing to reasons, such as instant gratification gained from online gaming and the lack of attention required for specific tasks. Weiss et al. (2011, p. 327) believe that childhood has been redefined owing to the "screen culture" of today's children. Increased online gaming and social media resources led to a lack of physical activities compared to previous generations.

Another concern parents mention is the risk of obesity in children because of a lack of physical exercise (Dong et al., 2020; He et al., 2021). Cibrian et al. (2021) established that parents struggled to ensure their children had adequate physical activity while learning online. Such online learners working from home may struggle to engage in adequate physical exercise owing to a lack of space and sports available in a traditional school setting. The lack of sports can also be linked to a lack of social interaction, as children would not have the chance to be a part of a team and interact with other children of the same age. As some children with ADHD experience increased levels of hyperactivity, the effects of a lack of physical activity may be more prominent, as they cannot release their energy.

According to Cibrian et al. (2021), individuals with ADHD also struggle with emotion regulation, which can cause social concerns. People with ADHD are, therefore, predisposed to social issues, which may be amplified by online learning and the lack of social interaction. More time

in social settings, such as a face-to-face classroom environment, would allow these learners to improve their social skills by interacting with their peers and teachers. Dong et al. (2020) remark that young learners struggle with self-regulation; therefore, it would be difficult to manage their behaviour. In a traditional school setting, teachers and assistants are trained to support learners and help them manage their behaviour positively. Learners can, therefore, learn prosocial skills through interaction with peers and teachers in a face-to-face classroom setting.

Motivation and participation are further concerns regarding online learning (He et al., 2021). A lack of motivation to learn was the main concern of Sibley et al. (2021). Ortiz et al. (2021) established that learners' concentration dissipates as the day continues. Sibley et al. (2021) remark that maintaining attention is a symptom of ADHD, which could decrease when a learner must learn online. Sibley et al. (2021) and Tessarollo et al. (2021) also remark that the routine change would cause difficulties that would not aid the challenge of the organisational skills of learners with ADHD. This could also contribute to behavioural issues, as a lack of motivation could lead to learners pursuing other activities to keep them busy.

2.7 Conceptual framework

The study is based on two theories, indicating Bronfenbrenner's ecological systems theory (Figure 2.1: Conceptual) and Lazarus and Folkman's coping theory.

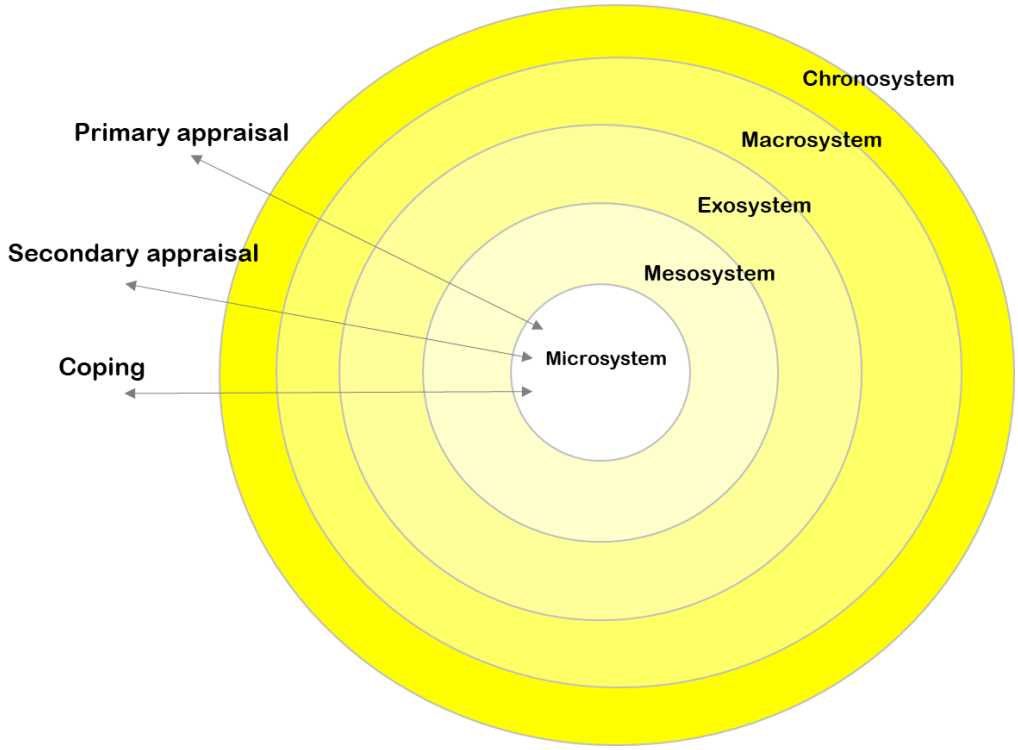

Figure 2.1: Conceptual framework

2.7.1 Bronfenbrenner's ecological systems theory

Bronfenbrenner's theory aims to understand an individual's development by observing factors influencing the individual. It refers to five systems, indicating the microsystem, mesosystem, exosystem, macrosystem and chronosystem (Onwuegbuzie et al., 2013; Paat, 2013), observing them as interrelated (Darling, 2007). One system cannot exist without the other systems, and they are linked. This theory also emphasises the social, cultural and historical context of the individual, as this influences an individual's development (Darling, 2007). Darling (2007) also explains that the theory revolves around a dynamic individual constantly changing and being affected by various systems (Figure 2.1: Conceptual).

The microsystem refers to the individual's immediate and direct environment and includes factors that directly affect the individual (Bronfenbrenner, 1977; Bronfenbrenner, 1981; Onwuegbuzie et al., 2013; Paat, 2013). This includes the people that the individual directly interacts with. For example, this may include an individual's immediate family or those they live with. Family dynamics, interactions and parenting styles relate to the microsystem. For example, Paat (2013) remarks that children within a family with both parents lead to better

outcomes for children as both parents provide financially, are present, and play a parenting role. In this situation, the presence of both parents is the influencing factor in the child's microsystem.

With specific reference to this study, the microsystem would be the children and parents who comprise the participant's immediate family—the family members with whom the participant experienced online learning during the pandemic. Fergert et al. (2020) list family challenges as potential threats during the pandemic, as individuals were at home isolating from their families and, therefore, spending more time together than normal. This concern relates to the microsystem as it directly influences the individual, involving those closest to them. As families were restricted to staying at home during the lockdowns, their microsystems were the most directly relevant to individuals spending most time with.

The mesosystem comprises the interactions among diverse microsystems (Bronfenbrenner, 1977; Bronfenbrenner, 1981; Onwuegbuzie et al., 2013; Paat, 2013). This may refer to how a child's family and friends interact. In this study, an important mesosystem is the interaction between the family, the school, and teachers, during online participated learning. The lack of interaction with peers and friends, of children and parents mentioned by Fergert et al. (2020), during the pandemic also relates to the mesosystems of those concerned.

The exosystem refers to the broader community with which the individual does not have a direct interaction but is indirectly affected (Bronfenbrenner, 1977; Bronfenbrenner, 1981; Onwuegbuzie et al., 2013; Paat, 2013). Relevant exosystems in this study may include the parents' workplaces and their community. Chachar et al. (2021) explain how the lockdowns harmed the economy and, therefore, the financial situations of some people, an indirect influence on children in affected families. Fergert et al. (2020) further explain how the COVID-19 lockdowns resulted in significant changes to people's lives and how community services, such as schools, were closed. This is, therefore, a community-level concern, affecting the wider community and individuals, as learners could not attend school. According to Chachar et al. (2021), the exosystems of children collapsed, as lockdowns resulted in the cancellation of school activities, such as sports. These authors also explain that decreased social support and services also had a negative influence on families (Chachar et al., 2021).

The macrosystem refers to the society where the individual exists (Bronfenbrenner, 1977; Bronfenbrenner, 1981; Onwuegbuzie et al., 2013; Paat, 2013). Aspects such as culture, values, norms and politics make up this system. Paat (2013) remarks that as the macrosystem determines the society where people live, it influences aspects, such as parenting techniques.

The societal climate can influence how parents discipline their children as outside factors, such as other parents and the norms and expectations of the time can influence them. Implemented parenting techniques directly influence the child's development (Romanelli et al., 2009). This influence demonstrates how the child can be affected by societal norms and, therefore, their macrosystem.

The chronosystem refers to the period where the individual exists and the level of change of systems through time (Paat, 2013). For example, this study refers to individuals working and learning online during the COVID-19 pandemic. The pandemic was a significant event which occurred and affected individuals and their diverse systems.

The microsystem, mesosystem, exosystem and macrosystem, respectively, refer to factors directly affecting the individual, how diverse parties in the microsystem relate, events that the individual is not directly involved in but is still affected by and society, including cultures, values and beliefs (Bronfenbrenner, 1977; Bronfenbrenner, 1981; Onwuegbuzie et al., 2013).

Bronfenbrenner's theory relates to this study as it investigates the distinct aspects of an individual's life and how this can affect them. This benefited the study as it guided the research into assessing the distinct aspects of the participants' day-to-day lives, focusing on how each system affected the online learning process. Effects of each participant's direct environment (microsystem), relationships among dissimilar environments (mesosystem), external situations (exosystem), and the broader society (macrosystem) were studied and analysed. By observing each system, the study aimed to understand the factors influencing the online learning experiences of parents and learners with ADHD.

2.7.2 Coping theory

Lazarus (2006) describes coping as managing demands and the emotions evoked. Coping refers to how individuals can manage their emotions and reactions in stressful situations (Lazarus & Folkman, 1984, as cited in Schreuder & Coetzee, 2021).

The theory of coping examines how people cope with demands or stressors relating to their surrounding environment (Nilsson, 2007). Several people experienced increased demands during the pandemic, including working and learning from home. Owing to these new demands, people may have experienced increased stress or anxiety, which they would have had to cope with. Folkman et al. (1984) remark that coping refers to how people approach demands and whether they approach such demands. Folkman (1984) remarks that coping

theory comprises cognitive appraisal and coping as ways where individuals can manage and adapt to stressful events.

Carver et al. (1989), as cited in Schreuder & Coetzee (2021), and Folkman (1984) remark that stress comprises primary and secondary appraisal and coping. Primary appraisal refers to how a potential danger or stressor is perceived (Folkman, 1984). Folkman (1984) remarks that primary appraisals are the individual's perception of an event as positive, unimportant or difficult and taxing, causing stress to the individual. Secondary appraisal refers to thinking about a response resulting from the stressor and deciding which response would fit the demand (Carver et al., 1989, as cited in Schreuder & Coetzee, 2021; Folkman, 1984). Coping refers to acting on the suggested response (Schreuder & Coetzee, 2021). Folkman (1984) describes coping as an individual's attempt to manage a stressor by minimising the demand and enduring the stress caused by it.

Folkman and Lazarus (1980), as cited in Schreuder and Coetzee (2021), refer to two types of coping, indicating problem-focused and emotion-focused. Problem-focused coping refers to the ability of the individual to find a solution to solve the problem and, therefore, manage their resulting stress regarding the problem or situation. Emotion-focused coping refers to the individual's focus on the emotion resulting from the stressor. The individual reacts emotionally to the stress caused by the problem or situation. The focus is on how the individual interprets the stressor (Schreuder & Coetzee, 2021). For example, an individual may cry or act out frustratedly owing to the stress experienced. Folkman (1984) remarks that emotional-focused and problem-focused coping are used regularly in stressful encounters, although the individual's perception of these stressors dictates the coping used.

Active and avoidant coping methods are also referred to in the coping theory (Schreuder & Coetzee, 2021). Similar to problem-focused coping, active coping refers to changing the circumstances of the situation, leading to a decrease in stress caused by the event. Avoidant coping includes denial of and disengagement with the problem (Schreuder & Coetzee, 2021). The individual either does not acknowledge the stressor or decides not to approach it. Problem-focused coping and active coping are, therefore, more effective ways of coping by directly discussing the stressor, implementing a solution to the stressor and decreasing stress.

During the COVID-19 pandemic, stressors and demands increase for families globally. Stressful situations, such as a family member falling ill or deaths, were prominent. Demands, such as working and learning from home and using digital devices and online platforms increased. This affected the stress levels experienced by individuals and families. It was

important for this study to consider the coping strategies employed by parents and children and how this may have influenced their online learning experiences.

This study analysed the demands experienced by learners and parents while learning online and whether they could cope with them. The subsequent section explains the integration of the ecological systems framework with the coping theory.

2.7.3 Integration of frameworks

Bronfenbrenner's ecological systems framework was integrated with the coping theory in this study as each system of a participant and family life was considered and related to the coping theory. The diverse demands and stressors experienced by the participants and their families were observed. Through this, these demands and stressors affecting the participants were the coping strategies employed by each family, and the individual were established. This allowed for evaluating of how effectively the participants coped with the increased demands and stressors. The research analysed how the relevant stressors and coping strategies affected the success of online learning.

The study considered the specific challenges experienced by the participants and their families, how they perceived these challenges (primary appraisal), the coping strategies implemented as a reaction to the challenges (secondary appraisal and problem or emotion-focused coping), and the effectiveness of the implemented strategy in minimising stress (Schreuder & Coetzee, 2021; Folkman, 1984). Stressors or demands can arise from diverse systems relating to the individual. By noting the system where a stressor is present, the degree of the threat can be established while determining a suitable reaction or coping strategy.

2.8 Conclusion

This chapter outlines the advantages and disadvantages of online learning, particularly regarding the experiences of children with learning challenges, such as ADHD, according to the literature reviewed. It also emphasises learning difficulties associated with ADHD that may cause the online learning process increasingly difficult for learners with ADHD. Some of these difficulties include the lack of executive functioning and organisational skills required to keep abreast with the demands of online learning. This chapter also considers the diverse learning styles children and parenting are exposed to; when learning from home specifically, these factors may affect the effectiveness of online learning. Chapter 3 clarifies the research design and methodology.

Chapter 3: Research design and methodology

3.1 Introduction

The study's goal was to understand the experiences of parents of children with ADHD; as well as teachers and the deputy head of the school. therefore, it followed an interpretivist approach and a qualitative methodological paradigm. Implementing an exploratory case study design, interviews with parents, teachers and school deputy head were used for the data collection. Purposive sampling was used to select the participants. A thematic inductive analysis was used for the data analysis. The subsequent section discusses the paradigmatic perspective and the methodological paradigm used within the study.

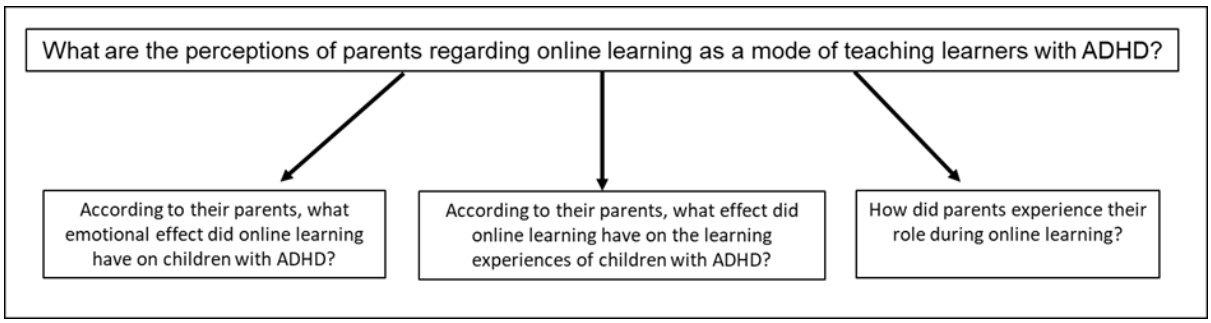

Figure 3.1: Research questions

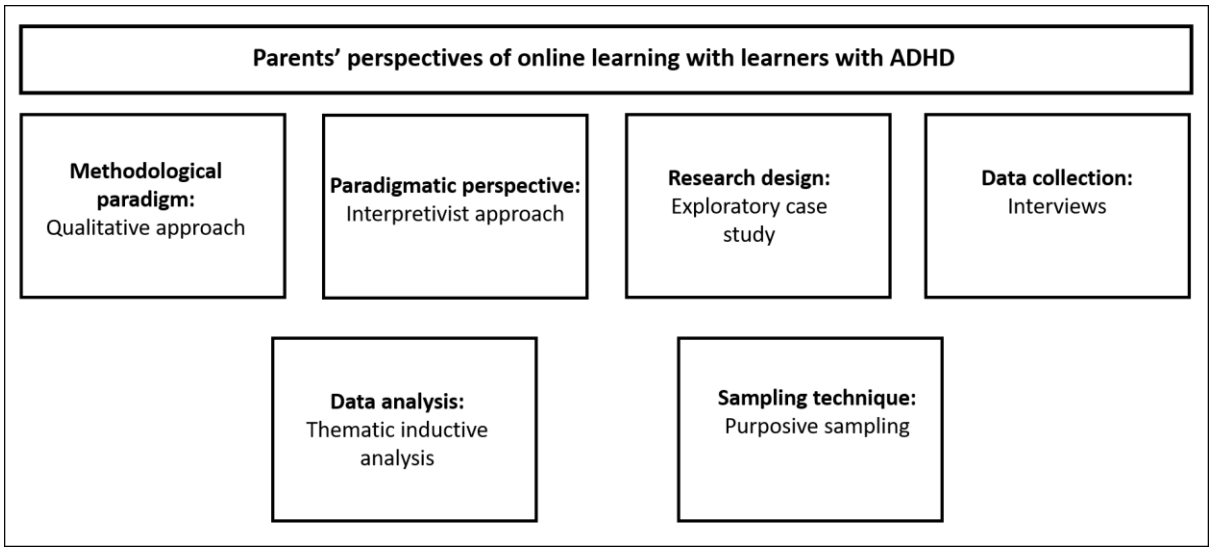

Figure 3.2: Research design and methodology

3.1.1 Paradigmatic perspective: Interpretivist approach

The interpretivist approach is also called “anti-positivism”, as it opposes positivism, the theory that the researcher observes objective reality (Mack, 2010), and constructivism. It allows the researcher to explore the meaning of the data collected from the participants (Mack, 2010; Nieuwenhuis, 2019; Ryan, 2018). As mentioned in Chapter 1, interpretivism refers to the researcher’s ability to make meaning through the interpretation of the experiences of participants (De Vos et al., 2011).

This approach is justified because people from diverse backgrounds interpret situations contrarily, based on their own experiences and opinions (Nieuwenhuis, 2019). Interviewing various people regarding the same situation, such as online learning, lead to diverse opinions and reflections on the participants’ subjective experiences.

An interpretivist approach was selected as it is subjective and socially constructed (Ryan, 2018). Personal ideas of how learners with ADHD were affected by online learning could have been reflected, but through the interview process, other people’s opinions based on their subjective experiences and backgrounds were recognised (Walsham, 1995). Initial opinions could have changed owing to understanding the experiences of individuals directly involved in online learning, such as learners and parents. This is a crucial factor in the attempt to understand the perspectives of other role players.

Challenges of the interpretive approach include that the data cannot be generalised to other instances, as it is subjective; therefore, concrete conclusions cannot be made about online learning (Mack, 2010). It is, therefore, important to understand the diverse perspectives of each participant, as those with similar experiences can relate. Interviewing parents from diverse families and teachers with different experiences, various ideas emerged, indicating that the research did not focus on one perspective only.

Another challenge was that because interpretivism is subjective, it might allow for the researcher’s observations to interfere with the conclusions. To combat this, the study implemented triangulation, which Di Fabio and Maree (2012) explain refers to collecting data from multiple sources, by interviewing numerous participants (parents, teachers and principals). Their reactions to online learning experiences were observed to improve the study's validity. Trustworthiness was ensured by using credibility, applicability, consistency, and neutrality (Di Fabio & Maree, 2012).

3.1.2 Methodological paradigm: Qualitative research

This study followed a qualitative approach. Silverman (2020) remarks that qualitative research concerns discovering people's subjective experiences. Data are focused on individuals' subjective opinions (Silverman, 2020). Nieuwenhuis (2019) describes qualitative research as focusing on words, rather than numbers and pursuing their meaning. It uses open-ended exploratory research questions and allows the researcher to understand the perspective and participants' experiences (Niewenhuis, 2019). This was suitable for this research as it requires reports and reflections of the participants' experiences collected from parents of children with ADHD who experienced online learning, as well as teachers and the deputy head of the school.. It relied on their subjective opinions of their own subjective experiences to establish whether learning online benefits the parents and their children academically, emotionally and behaviourally. A qualitative approach was selected owing to requiring "first-hand involvement in the social world" (Kelle, 2006, p. 295). Davis and Meyer (2009) explain that qualitative research aims to understand the participants' experiences of resolving a problem. This study focused on the effectiveness of online learning for learners with ADHD. It was essential to understand the perspectives of those who experienced this phenomenon.

Potential issues with a qualitative approach, as with interpretivism, include the lack of ability to generalise findings. Data would only reflect the observations of a few selected participants, rather than a complete perspective. It may also take more time to collect qualitative data through interviews compared to surveys. Although this may be a challenge, it is important to delve deeper into the participants' perspectives to analyse how online learning affects families and learners with ADHD. The study carefully ensured that adequate planning and time were used wisely when collecting data from the participants.

3.1.3 Research design: An exploratory case study

An exploratory case study was conducted for the research design. Yin (2018) remarks that a case study design is appropriate where the research requires an in-depth explanation of a social situation. Stake (1995) and Morgan and Sklar (2012) remark that a case study explores data with a specific boundary, such as parents of learners with ADHD who experienced online learning. A case study was, therefore, appropriate for this study.

Yin (2018) remarks that an exploratory case study answers "what?" research questions. An exploratory case study was appropriate, as the research questions are mainly "what?" questions, therefore, exploratory.

The advantages of a case study research design include that researchers can go into detail regarding the phenomena researched. It also allows the researcher to collaborate closely with the participants to understand their experiences (Nieuwenhuis, 2019). As the study clarified the subjective experiences of parents and teachers to establish how effective online learning is, it required an in-depth understanding of these experiences.

Potential challenges of a case study design include the temptation to interview excessive participants and time collecting data, which could cause less time allocated for analysis and interpretation (Crowe et al., 2011). To overcome this, data were collected until saturation, therefore, ensuring sufficient data to answer the research questions. Another challenge could be the lack of thoroughness, which can be observed in case study research (Crowe et al., 2011). Triangulation was used by collecting diverse forms of data, such as interviews with parents, teachers and the deputy head of the school, and a document analysis of Coronavirus Orientation Guidelines for Schools, implemented by the Department of Basic Education (DBE) (Department of Basic Education, 2020), to avoid this.

In this study, the case referred to is the school in which the interviews were conducted. In other words, the school which the children of the parent participants attended and the school in which the teachers and deputy head taught. The data sources for this case study were therefore the interviews conducted with the parents, teachers and deputy head at the school.

3.2 Selection of participants and research site

3.2.1 Participant selection

Morgan and Sklar (2012) remark that non-probability sampling is typically used in qualitative studies. It is intentional, and participants are chosen purposefully. The study employed purposive sampling only to include participants who met specific criteria, including being parents of learners diagnosed with ADHD and having experience with online and traditional face-to-face learning.

A resource-rich school in a nearby area was approached to locate the participants for this study. This followed ethical clearance from the Ethics Committee at the University of Pretoria. Consent forms explained the research while inviting parents at the school who met the criteria to participate. The school would need to be rich in resources, such as the Internet and electronic devices, necessary to conduct online learning. This sampling is under convenience

sampling as the parents and teachers agreeing and completing consent forms were invited to participate.

Advantages of purposive sampling include choosing participants who fit the specific criteria of parents of children with ADHD experiencing online learning, as well as teachers and the deputy head of the school (Maree et al., 2016). The information was obtained directly from the source, indicating the collection of accurate information based on their subjective experiences with ADHD and online learning. Participants had to meet the following criteria: parents of children with ADHD, as well as teachers and the deputy head of the school, involved with or experienced online learning; therefore, parents whose children do not have ADHD and did not experience online learning were excluded from the study.

Challenges associated with sampling techniques, such as purposeful sampling, include finding the participants who fit the criteria and ensuring that their children have been accurately diagnosed with ADHD. Another challenge experienced was finding participants willing to share information about their children's lives. To combat this, several schools were approached until enough participants were identified at one school. The importance of the research and how it could help improve the educational experiences of children with ADHD was explained to schools and participants in order for the participants to understand the study and be willing to participate.

For this study, the inclusion criteria for the parent participants mandated that their child be diagnosed with ADHD and possess experience in both online and traditional, in person schooling, facilitating a comprehensive analysis between the two modalities. Teacher inclusion criteria required a minimum of having taught at least one child with ADHD through online learning. The deputy head's inclusion criteria stipulated her position as the deputy head of the school involved in online learning.

3.2.2 Research site

The name of the school where the research was conducted is omitted to ensure anonymity. The school is an independent school in Sandton, Johannesburg, rich in resources and, therefore, conducted online learning during the COVID-19 pandemic in 2020 and 2021.The parents at the school are a part of the middle class and generally work in the Sandton area.

3.2.3 Data generation and documentation

Seabi (2012) explains that case studies involve multiple data collection forms. Yin (2018) remarks that this is a strength of the case study design; therefore, to collect the study data, various methods were used, including semi-structured interviews and document analysis.

Interviews with teachers and the deputy principal occurred at the school. Seabi (2012) explains that interviews can cause descriptive data, allowing the researcher to understand the social reality of the participant; therefore, this was a valuable technique to employ in this study.

Two teachers and a deputy principal were interviewed regarding their subjective experiences and opinions of online learning and their roles and expectations. Three parents of children with ADHD who experienced online learning, as well as teachers and the deputy head of the school were also interviewed regarding their subjective experiences, challenges, level of involvement, and their satisfaction with online learning for their child with ADHD.

Interviews with teachers, principals and parents allowed information collection from various role players involved in online learning to ensure an understanding of the diverse observations regarding the online learning of children with ADHD.

The interviews were held in a face-to-face setting or conducted online through Google Meets or Microsoft Teams, based on the participants' preferences. It was important to ensure that the participants felt comfortable during the interview; therefore, they met online or in person. For convenience and owing to the availability of the participants, two of the parent interviews were conducted online and one in person. Despite not being in a face-to-face setting for some of these interviews, nonverbal cues were observed through the participants' cameras. The online interviews were useful as it provided insight into challenges encountered by parents during online learning, such as interruptions from their children and a lack of access to certain platforms owing to outdated devices. Interviews were conducted until data saturation and the research questions were sufficiently answered (Morgan & Sklar, 2012).

3.2.4 Qualitative semi-structured interviews

The interviews followed a semi-structured interview approach (Seabi, 2012), which allowed a rough plan of what needed to be discussed to answer the research questions and display other ideas and phenomena not considered. Questions supporting these conversations included questions such as:

How would you describe your family's experience with online learning?

How would you describe the impact of ADHD in general on your child's learning?

What was the most challenging aspect for you as a parent regarding online learning?

How would you improve the process of online learning to make it more accommodating to the needs of children with ADHD?

The interview questions that were used for each of the different interviews are included in Appendix B.

The strengths of conducting research interviews include the ability to confirm an understanding of the participant's responses while directing follow-up questions for the participant to present a more apparent response (Christensen et al., 2015; Maree et al., 2016). Probing was used to confirm an understanding of the participant. This was conducted by repeating what the participant verbalised to confirm their understanding of their response; directing questions clarified minor details in the participant's responses (Maree et al., 2016).

Weaknesses of the interviewing process include the time to approach participants while arranging, conducting, and transcribing the interviews (Christensen et al., 2015). Despite this negative factor, the interviews provided descriptive data to analyse the participants' subjective experiences. This enabled an understanding of their perspectives on online learning with children with ADHD to answer the research questions. Another potential risk of interviews was that the participants might not have been able to recall information, as the interviews occurred two to three years after they experienced online learning (Christensen et al., 2015) accurately. Probing and follow-up questions reminded participants of potential factors and, therefore, minimised this risk. Another concern regarding interviews, mentioned by Maree et al. (2016), is the ability of the participant to get distracted and talk about irrelevant scenarios. Probing and questions were used to refocused the interview where necessary.

Permission was obtained from each participant to record the interview using a mobile device voice recording application to document the data. These interviews were transcribed through Otter.ai and copied onto a Word document. A personal research diary was used for field notes, recording anything of interest, and the themes or trends emerging through the data collection.

3.2.5 Audio recordings and observational notes

Audio recordings of each interview were made on the voice memo application on a mobile device once permission from the participant was granted. This allowed focus on the questions

and responses without trying to transcribe the participants' responses immediately (Creswell & Creswell, 2018). It also allowed for the observation of the facial expressions and nonverbal cues of the participants. These responses presented their reactions to questions while providing insight into their opinions and emotions on challenges associated with ADHD and online learning. Observational notes during each interview ensured monitoring of the nonverbal information gained through the interviews. These observation notes were typed and included in Appendix D.

3.3 Documentation

A document study, as a textual analysis, aligns with qualitative and interpretivist approaches. (Maree et al., 2016). This was used to analyse the Coronavirus Orientation Guidelines for Schools implemented by the DBE (2020) government document, which outlines the principles of special education in South Africa. This document was used in order to make inferences and to understand what was expected from schools during the Covid-19 lockdowns and return to school. It was also used to ensure triangulation together with the interviews of parents, teachers and the deputy head. Information that related to online learning… was highlighted, analysed and compared to the information gathered from the participants…

Transcriptions of audio-recorded interviews, field notes observations and a reflective research journal ensured record-keeping throughout the research process. Transcriptions of the interviews helped to ensure that all the information provided by each participant was recorded and analysed. This was useful to understand the responses of each participant, as well as to develop common themes throughout all the interviews. Field notes of observations made during the interviews were useful as it indicated important areas that were emphasized by the participants, as well as their initial thoughts and reactions of certain questions. The reflective research journal was useful in organising thoughts and comparing ideas from each interview. As a result of these measures, the researcher was constantly engaged with and made familiar with the data.

3.3.1 Transcripts

After recording each interview with a mobile device voice recording application, each interview was transcribed through the Otter.ai website. The transcriptions[2] were completed timeously,

[2] See Appendix C for the transcriptions of the interviews.

to ensure clarity and understanding while preventing information loss (Leavy, 2017). Names or personal details of the participants were omitted to ensure their anonymity. After using the Otter.ai website to formulate the transcriptions, the oTranscribe website assisted in perusing the transcriptions while listening to the recordings and correcting pronunciation or errors leading to a lack of clarity. This ensured that the transcriptions were clear and accurate and that the interviews were transcribed verbatim, ensuring an apparent understanding, which enhanced the authenticity of the study.

Teachers, the deputy principal and parents were requested to share other thoughts they wanted to add to the discussion during the interviews. This additional information was included in the Word document after transcribing each interview.

3.3.2 Field notes and reflexivity

According to Creswell and Creswell (2018), reflexivity involves the researcher's reflections and awareness of how their role may influence the research process. Field notes during interviewing process ensured observing the nonverbal cues of the participants. For example, some participants hesitated in responding to certain questions and required prompting to elaborate on their responses. Other participants laughed or rolled their eyes at certain questions, expressing their thoughts about certain aspects of online learning and ADHD. The field note observations of the participant also indicated aspects of online learning—a challenge for parents and their children. For example, during one online interview with a parent, the children interrupted the meeting, and the parent had to pause while speaking to their child, requesting them to leave the room. This confirmed being interrupted while they worked from home, and their children continued with online learning.

Another instance was that one parent struggled to join Google Meet as they could not download the application owing to their device being too old. This also demonstrated how some parents and children may not have accessed certain platforms owing to technical difficulties. The observation notes during each interview are included in Appendix D.A reflective research journal updated throughout the research process ensured reflexivity. Regular engagement with the study supervisor also contributed to the reflexivity of the study.

3.3.3 Data analysis and interpretation: Thematic inductive analysis

The data captured was analysed following a method of thematic inductive analysis. Nieuwenhuis (2019) explains that inductive analysis clarifies the raw data while pursuing

common themes arising from this data or a button-up perspective (Braun & Clarke, 2006). Inductive analysis was, therefore, appropriate for this study as it analyses the themes arising because of the information from the data collection rather than pursuing certain themes when collecting data.

Braun and Clarke (2006) remark that thematic analysis refers to finding patterns or common themes from the data gathered. For example, a theme could be the common negative aspects of online learning, such as a lack of social interaction, as remarked by the participants. Braun and Clarke (2006, p. 83) also distinguish between having a “rich description of the data set” and a “detailed account of a particular aspect”. The current study focused on the former; the initial prediction was that several aspects could arise from the data. Creswell and Creswell (2018) describe a six-step process of data analysis. The six steps include:

1. Familiarising of the researcher with the data collected
2. Developing of codes
3. Identifying and coding each theme
4. Evaluating the themes
5. Defining the themes
6. Developing the results (Creswell & Creswell, 2018)

Creswell and Creswell (2018) explain that thematic analysis can be a protracted process, taking considerable time; therefore, they recommend computer programs to assist when coding. Such a program was not used for the thematic analysis in this study, as themes were analysed from the data collected, despite the concerns regarding time.

According to Braun and Clarke (2006), an advantage of thematic inductive analysis is the ability to be flexible, and helpful in collecting detailed data, as it can be comprehensive and wide-ranging. This assisted in being open-minded, as several perspectives and experiences are reflected in the data.

A potential challenge of thematic inductive analysis is the potential that an anecdote can be mistaken for a theme rather than only one aspect. Another challenge remarked on by Braun and Clarke (2006) is the mistake of employing research questions as themes. To avoid this, it was ensured that the data analysis was objective and open to diverse themes, not only to those relating to the research questions. Another potential disadvantage of thematic analysis is the time consumed to code the data themes (Creswell & Creswell, 2018). The software was used to assist the coding process and reduce the time needed to code the data.

The data were analysed manually, as it is qualitative and, therefore, relies on the researcher's input. Unlike quantitative data, a software program was unnecessary, as this could remove the personal aspect of qualitative research.

3.4 Trustworthiness of the study

3.4.1 Triangulation

Triangulation was ensured through multiple interviews with various sources (Lincoln & Guba, 1986). Semi-structured interviews were conducted with various role players, such as parents of children with ADHD, teachers of children with ADHD (at the time of online learning), and the deputy principal at the school where the learners attend, and the teachers work. This ensured that online learning experiences with children with ADHD were observed from multiple perspectives.

A text analysis of the Coronavirus Orientation Guidelines for Schools, implemented by the DBE, 2020), was also completed as part of the triangulation process. The document was implemented by the DBE in 2020 to approach concerns regarding the school closures owing to the COVID-19 pandemic and how schools could discuss the concerns regarding a loss of learning while remaining at home.

3.4.2 Credibility

Lincoln and Guba (1986) refer to credibility, transferability, dependability, and objectivity as essential to trustworthiness. Maree et al. (2016) describe credibility as the extend that the study findings are according to reality. For this study, credibility was ensured through relevant research methods, such as using a qualitative, interpretivist approach and purposive sampling. Triangulation enhanced the study's credibility, as information was collected through multiple sources (teachers, parents, and the deputy head principal of the school) (Lincoln & Guba, 1986). The semi-structured interviews were in depth to ensure a clear understanding of the participants' experiences (Lincoln & Guba, 1986). Throughout the study, updated notes reflected on the research process. Once the interviews were conducted, the information collected was verified by the participants to confirm that their feedback was interpreted and understood correctly (Maree et al., 2016).

3.4.3 Transferability

As qualitative research prohibits the generalisability of findings, transferability is considered (Maree et al., 2016). For transferability to be ensured, purposeful sampling was used to select participants who fit the criteria for the study. The data collected were in depth and lucidly described the participants' experiences (Lincoln & Guba, 1986). The study was also completed descriptively, ensuring the reader understands the phenomenon being studied (Maree et al., 2016).

3.4.4 Dependability

As this study followed a qualitative approach, dependability was considered rather than reliability (Maree et al., 2016). Field notes and a reflective research journal were kept during the research to document and reflect on the decisions. Dependability was also ensured by aligning the research design and data collection process.

3.4.5 Confirmability

Triangulation was used through several data collection methods, enhancing the confirmability of the research findings (Maree et al., 2016). Throughout the research process, the aim was to remain open-minded by contemplating the participants' experiences to avoid researcher bias. The data collected, and the data analysis were overlooked by a supervisor for confirmability to be ensured (Lincoln & Guba, 1986).

3.4.6 Authenticity

Leavy (2017) explains that people hold diverse morals and value systems; therefore, when interviewed regarding the same phenomenon, participants share distinctive information depending on their personal values and perspectives. To ensure the authenticity of the study, the data collected from each participant were considered equally and fairly to have a balanced perspective of the participants' experiences (all three parents, teachers, and the deputy head principal) (Lincoln & Guba, 1986). Consideration of the diverse experiences and opinions of the participants was also ensured; for example, parents working while assisting their children with online learning had a dissimilar experience to parents who did not work. This difference in perspective was considered when analysing the data. To further enhance the authenticity of the study, the researcher's personal morals and values were acknowledged; whilst, remaining open-minded to ensure that the participants' experiences were understood, despite diverse opinions (Leavy, 2017). Informed consent was ensured as the participants knew the study's implications; each participant signed a consent form (Leavy, 2017).

Authenticity was also considered through the transcription process, and meticulous, verbatim transcriptions presented each interview. This was ensured through the Otter.ai website, which completed the initial transcriptions and then used the oTranscribe website to listen to the voice recordings while confirming the accuracy of the transcriptions and implementing corrections were necessary.

3.5 Ethical considerations

Permission was granted from the Ethics Committee of the University of Pretoria's Education faculty to conduct the research. Permission ensured that the study followed the ethical guidelines set by the university. Yin (2018) and Crowe et al. (2011) list potential ethical issues that should be solicited, including informed consent, protection from harm, ensuring privacy, confidentiality, anonymity, and protecting vulnerable participants.

3.5.1 Informed consent and voluntary participation

Participants were informed of the study details by explaining and answering questions to guide the concern of informed consent. They were informed of what would be required of them as participants (McLeod, 2010). It was necessary to share and explain the research questions with the participants and make them aware of what the research results would be used for. Participants signed consent forms (Appendix A) stating that they have voluntarily chosen to be included and can opt-out at any time. The consent forms also included a letter explaining the purposes of the research to ensure the participants were well-informed (Leavy, 2017).

3.5.2 Privacy, anonymity, and confidentiality

The anonymity and confidentiality of the participants were ensured by protecting their identities (McLeod, 2010). Certain information was omitted, such as participants' names and other personal details and names mentioned in the interviews, including the names of children or schools. This ensured that no identifying information about the participants was included, therefore, keeping it anonymous. Information about the school was also excluded to protect the anonymity and confidentiality of the parents, teachers, and deputy principal. The information from the interviews is kept in a safe place that cannot be accessed by others, and passwords are used for devices containing information regarding the participants involved in the study (McLeod, 2010).

3.5.3 Avoidance of harm and protection of vulnerable participants

Leavy (2017) emphasises the importance of avoiding harm to research participants. Harm towards the study participants was avoided as I ensured that their personal details were not shared or discussed with anyone outside of the study (McLeod, 2010). I also ensured that the participants were comfortable sharing their experiences and allowed them, whether the interviews were conducted online or in person, for their comfort and convenience. The transcriptions and analysis of the data collected were also carefully written to exclude personal information, such as names, ages, job titles, or association with a school. Regarding the protection of vulnerable participants, interviews were conducted with the parents rather than the children, ensuring their protection. Parents' comfort was ensured, enabling them to permit information regarding their children to be discussed and included in the study.

3.5.4 Respect, integrity, debriefing, and the avoidance of deception

Throughout the data collection process, participants were treated with respect and integrity (Leavy, 2017) and were acknowledged for their contributions to the study. The perspectives and opinions of the participants were respected, as their experiences presented the main phenomenon of the study and contributed to the conclusion. Before conducting the interviews, the participants were familiar with the study to avoid deception or misunderstanding. The participants were informed that the information would remain anonymous, and that the data would be stored for fifteen years. The participants perused and signed consent forms (Appendix A), confirming their participation. This ensured that the participants were aware of the information required and how it would be used in the study. Each participant permitted the interview to be audio-recorded for the conversation to be transcribed.

3.6 Conclusion

This study followed a qualitative, interpretivist approach and used an exploratory case study research design and a thematic inductive data analysis. Various ethical procedures ensured participants' comfort and safety. This was conducted to ensure that the personal details, and the information shared by each participant were kept confidential and anonymous to avoid any breaches of ethical standards. Chapter 4 focuses on the study findings.

Chapter 4: Study findings

4.1 Introduction

This chapter discusses the study findings. These findings were obtained through interviews with a deputy head principal, two teachers, and three parents at an independent primary school[3]. The findings suggest an overwhelming preference for traditional, face-to-face schooling, as opposed to online learning experienced during the COVID-19 lockdowns in 2020 and 2021. The chapter continues by positioning the study findings within the literature.

4.1.1 Study participants' information

The subsequent section briefly describes the study participants, indicating the three parents, two teachers, and the school's deputy head.

4.1.1.1 Parent 1 (P1, Child A [CA], Child B [CB])[4]

Parent 1 is a white, female between the ages of 35 and 45, who works fulltime. This participant discussed her two sons' experiences with online learning; Child A attended Grades 4 and 5 (between the ages of 9 and 11 years) during online learning, and Child B, Grades 1 and 2 during online learning (between the ages of 6 and 8 years); both children have ADHD. Child A has a comorbidity of SLD, and Child B has a comorbidity of Generalised Anxiety Disorder (GAD). Parent 1 and her husband worked from home while their children were learning online.

4.1.1.2 Parent 2 (P2, Child C [CC])

Parent 2 is a white, female between the ages of 35 and 45, and is a fulltime stay-at-home mother. She discussed her daughter's experience with online learning, Child C, who was in Grades 1 and 2 during online learning (between the ages of 6 and 8 years). Child C has a comorbidity of SLD. Parent 2 also has twins, two and a half years younger than Child C. Parent 2 was not working during online learning; however, her husband worked from home.

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[3] See Appendix C for the transcriptions of the interviews.

[4] In these codes, P refers to parent participant interviewed C refers to child of the parent, T refers to teacher participant interviewed, D refers to deputy head participant interviewed and L refers to the line in the transcription where the quote comes from.

4.1.1.3 Parent 3 (P3, Child D [CD])

Parent 3 is a black woman, between the ages of 35 and 45, who works fulltime. She discussed her son's experience of online learning, Child D, who was in Grade 2 and 3 during online learning (between the ages of 7 and 9 years). Parent 3, another child, three-years old, during online learning. Parent 3 and her husband worked from home while their child was learning online.

4.1.1.4 Teacher 1 (T1)

Teacher 1 is a Grade 3 teacher who taught during online learning.

4.1.1.5 Teacher 2 (T2)

Teacher 2 is a Grade 2 teacher who taught during online learning.

4.1.1.6 Deputy head (D):

The school's deputy head is the head of the junior prep (Grades R - 3) and a Grade 3 teacher who taught during online learning.

Table 4.1 below indicates the themes and subthemes of the study.

Table 4.1: Overview of themes and subthemes

Themes	Subthemes
Theme 1: Perspectives of online learning	Subtheme 1: Negative perspectives on online learning
	Subtheme 2: Online learning is a challenge for teachers
	Subtheme 3: Online learning was a challenge for the school's management
	Subtheme 4: Challenges with online learning experience by children

Themes	Subthemes
Theme 2: Academic challenges experienced during online learning	Subtheme 1: Loss of attention from professionals
	Subtheme 2: Loss of learning
	Subtheme 3: Lack of practical, concrete learning
Theme 3: Social, emotional, and physical challenges during online learning	Subtheme 1: Lack of socialisation and connections with others
	Subtheme 2: Lack of learning of social cues
	Subtheme 3: Lack of learning through interaction with others
	Subtheme 4: Emotional effects of online learning
Theme 4: Family interactions during online learning	Subtheme 1: The role of parents
	Subtheme 2: Frustration
	Subtheme 3: Parents having to balance time between multiple children and work
Theme 5: Issues relating to technology	Subtheme 1: Concerns regarding increased screen time
	Subtheme 2: Technical difficulties
	Subtheme 3: Access to devices and online platforms
Theme 6: Suitability of online learning to children with ADHD	Subtheme 1: Navigating distraction in online learning
	Subtheme 2: Challenges of limited physical activity
	Subtheme 3: Disrupted routines in the online educational landscape

Themes	Subthemes
	Subtheme 4: Effect of medication on learning process

4.2 Results of the study

4.2.1 Theme 1: Perspectives of online learning

Theme 1 focused on the perspectives of online learning based on the experiences of various role players, such as the parents, teachers, and deputy head principal of the school (Table 4.1).

4.2.1.1 Subtheme 1: Negative perceptions of online learning

All three parents interviewed had strong observations that online learning would not benefit their children. When asked about their experiences with online learning, responses included “chaotic”, “very stressful” and that they “would not want to do it again”.

> I’m very grateful I’m not a teacher, put it that way. (P1 L135).
>
> It was hard… I wouldn’t like anyone to have to go through that again. (P2 L662-663).
>
> It was a nightmare. (P3 L175).

Both teachers interviewed agreed with the parents that online learning was a negative experience for themselves and that it required a lot of effort.

Teacher 1 reported that online learning was “hectic, hectic, hectic” and Teacher 2 remarked that it was “very challenging”. Teachers described online learning as:

> a baptism of fire really. It was the biggest, steepest learning curve I’ve ever experienced apart from my first year of teaching… It was mad, absolutely mad, initially, and then kind of got into the swing of things. And then it was fine. (T1 L6-9). I’ll never go back [to online learning] (T1 L114)... I will resign. I can’t. I can never teach like that again. (T1 L120).

> Our mental and emotional health also was, was that seriously affected by the stress of, of managing your own home, your own family, but then also being on demand almost… recording lessons, making worksheets, loading them. (T2 L347-350).

For both teachers, a lack of connection among people was reported with online learning:

> I found I was very out of touch with my, the children I was teaching, as well as my colleagues… As teachers, you share and you bounce ideas, and you communicate, whereas it almost felt like there was a barrier. (T2 L6-9).

> Trying to maintain a personal touch and it was enormous distance. That was tough. Really, really tough. (T1 L 480-481). I'm not for online learning at all. I'm not a great believer in online learning. I do think that we are social beings, we need face to face learning. (T1 L522-523).

Both teachers agreed that learning is more beneficial in a face-to-face environment rather than online:

> Always better in the classroom. 100 per cent always better in the classroom. (T1 L608).

> I think any teacher would say that online was a nightmare… you studied teaching, to be with people. To be with your colleagues, to be with the kids. So, to have that taken away with that taking part of your identity as a teacher away. (T2 L167-169).

The deputy head's experiences of online learning echo that of the parents and the teachers, as she agreed that online learning has its challenges and is not beneficial, particularly for young children.

> [Online learning] needs to be taken out of the whole thing altogether. (D L154). I have my doubts that it's beneficial anywhere. (D L 165-166).

Other issues with online learning mentioned by the deputy head include a lack of contact among people (staff and learners, herself, and teachers):

> We were all in our own little boxes. And so, to support [the teachers] and guide them in something that they've never done before, was probably the most challenging thing… And when I say that they've never done that, none of us had done, so it was a new experience for all of us. (D L8-11).

The deputy head also solicited concerns experienced by the school, such as financial issues and decision-making.

> Parents didn't feel like they were getting what they had paid for, and they weren't. There was no sport, none of that. So, it was reducing fees, but still having to produce a product with limited resources. (D L50-52). And then also the decision making for full exco was very difficult. In, when do we open? When do we close? Where do we stretch the rules… And so, it was quite stressful from that point of view. (D L62-65).

4.2.1.2 Subtheme 4: Challenges with online learning experienced by children with ADHD

When asked about how each parent thinks their child would describe online learning, parents agreed that their children did not enjoy it. Child C specifically struggled with schoolwork, whereas Child A, Child B, and Child D primarily missed seeing their friends and the social aspect of face-to-face school. The adjustment to online learning was a specific challenge experienced by Child A and Child B.

> [Child A and Child B] missed the friendship aspect. (P1 L185-188). Trying to settle so that um the kids could hear what was being said, and what was being asked of them took a while to adjust (P1 L147-148).

> [Child C] would say she hated it. And um she didn't think it was fun. And yeah, I think she felt completely disengaged from school as such. (P2 L436-437).

> I think it was frustrating for [Child D] at times. And I don't think he enjoyed it much, because he likes playing with kids, and then being around kids, but he knew just, he needed to do it… But I don't think it's something that he would want to do again. (P3 L236-240)... But [Child D was] just happier going to school. (P3 L632).

4.2.2 Theme 2: Academic challenges experienced with online learning

Theme 2 focused on the academic challenges experienced because of online learning, according to the parents, teachers, and deputy head (Table 4.1).

4.2.2.1 Subtheme 1: Lack of attention from professionals

One concern outlined by two of the parents includes the lack of attention the children had from teachers and child development professionals.

> My boys at the time were both at [special needs school]. So, in that environment, you've got like, you know, three adults in the classroom, kind of helping each child at different paces and everything else. So, I think it was definitely what they lost out on was kind of, I would say, as much attention as they would have probably have gotten in a class, from skilled professionals. (P1 L139-144).

> Their parents aren't qualified to, to teach, firstly… so they weren't getting that person who knew how to handle them in that situation. So, I think that definitely affected their academics. (T2 L148-151).

Another concern regarding the lack of attention from professionals was that by not being at school, potential challenges and learning difficulties experienced by the children were not noticed, resulting in a lack of a diagnosis of such learning difficulties. Parent 2 established that learning to read online was a challenge Child C struggled with. Child C was later diagnosed with SLD, which the parent felt was not noticed during online learning:

> I also think that we missed a couple of her learning difficulties in her Grade One year… Her reports say that she could read, and she could sound and she could do all sorts of things. By the time she got to Grade Two, within two weeks, I phoned her teacher and I said, 'Listen, I don't think this child's where she needs to be' and she's like, 'No, I don't think so either. (P2 L230-239).

This statement from this participant demonstrates that children being away from school may experience a delay in diagnoses and, therefore, support, owing to a lack of knowledgeable, professional opinions of teachers and relevant referrals.

Parent 2 and Teacher 2 mentioned that hiring someone, such as a tutor, became necessary, as the children constantly needed someone to sit with them and manage their learning.

> We actually got a tutor for them. There were four or five kids, and we got a tutor to come in and do this. We just took them there every day. (P2 L532-533).

> And I found that the kids in my class that had ADHD, there always had to be someone around to sort of manage them… a parent I had even employed someone, because she couldn't be there, you know, she was doing her job, but employed someone to manage her child during the online session, or keep them on track, doing the work in a day, you know, giving them the time-out breaks. (T2 L219-225).

4.2.2.2 Subtheme 2: Loss of learning

Several participants, including parents and teachers, referred to losing learning by children during the time of the COVID-19 pandemic and online learning as a concern.

> Our biggest focuses are on Maths and English, and how are we going to maintain the level that we have? And still, you know, bring everybody up… in the same way? (T1 L21-23). I don't think [child with ADHD] learned anything in the three months… he really battled… he really battled to concentrate. (T1 L349-351).

> Learning to read in a Covid environment [online learning environment] for a child like her was not ideal. (P2 L219-220). And without being in the classroom for big chunks of time. You missed out on some of the foundation, fundamentals. (P2 L248-249).

> …they learn to read, you know, in Grade One, and a lot of those children missed a huge chunk of that time in Grade One… so almost with every year that comes after that, you're filling gaps, that, that they couldn't have got to in that year. (T2 L264-266). Academically, again, I felt for those kids because they just fell further and further behind in their learning. (T2 L147-148).

> They learn through playing and everything, not really sitting and watching someone talk. So, I don't even think they learned anything. I think it's very limiting in how they learn. (P1 L551-553).

Despite the concerns of parents and teachers regarding a loss of learning through online learning, the deputy head of the school reflected on the experience differently.

> The anxiety about keeping the children up to scratch from an academic point of view. And actually, that negated itself, because the children were up to scratch academically… So, I think our focus to a large extent was on the academics. And we achieved that. (D L43-47).

This was echoed by one teacher, who stated:

> Although we're working through the work and when we looked at it at the end of the year, all our research, sort of assessments told us that [the children] were okay. So, we hadn't dropped the ball from a learning content point of view. (T1 L238-240).

4.2.2.3 Subtheme 3: Lack of practical and concrete learning experience

Parents and teachers expressed concerns that online learning did not adequately meet the needs of the children concerning their practical and concrete learning (Table 4.1):

> They would need printed materials. We discovered that very quickly and really, for the, because for our children, they need the experience of writing and colouring and not doing it on a screen. (D L184-186)

> Working for our kids, definitely in Junior [Prep] is they need to actually physically do the work. Working on a computer it's just, it's not the same. The process, it's just not the same… there's not that connection, screen to brain. But paper, pen to brain there's the connection. (T1 L432-435). For our little ones, our experiences, better to be on the more practical, concrete side of things rather than abstract. They're not read for abstract work… You know, for us, we still rely on pen to paper. (T1 L575-579).

> We were able to create boxes, that's what we did, what we were asked to do so you know, you'd have to find beans and whatever, cotton wool buds, like anything lying around the house so that teaching could become more tangible, because obviously in an online format, there's no tangibility to it… You're just getting visual and hearing kind of um cues, but you're not actually dealing with all your senses… That's definitely what they lost out by being in an online format. (P1 L168-175). At school… one day you're using paints, and the next day you're making something with clay and so… you didn't get that variety. (P1 L346-348). An ADHD kid needs multisensory feedback, and online does not offer it. (P1 L497).

> I find foundation phase, as well, it's so hands on, and they really need a lot of hand holding. (T2 L15-16).

In the second lockdown, when schools were closed at the beginning of the year, the school and the teachers learnt from their experience in the previous year and improved online learning by making learning packs of worksheets for the week that the parents would collect from the school and the children would work through in the week and bring back to school at the end of the week for the teachers to mark. This allowed teachers to assess the learners' understanding and engagement with the content accurately, therefore benefiting them.

> And so, we had the week to go through stuff then obviously in our contact lessons we could say to the kinds, "I noticed you haven't handed this in. I noticed that you're battling with this" and so for us it was a whole lot better from a control point of view, going to learning packs. (T1 L148-151)

> We could do learning packs, which we found much better because we're a bit more in control… Their actual lesson was in front of them, the actual worksheet was in front of them. So, the quality of work was better. We tracked things better, because when they were working purely online, to track what they were handing in was unbelievable… (T1 L131-138)

The learning packs also indicated to the teachers that the children were doing the work themselves rather than the parents:

> The learning packs were better because we could see it was the children's handwriting… From a control point of view [the learning packs] was better for us, and assessment point of view. (T1 L283-291).

> We found it was far more beneficial for us to print work packs… our actual lessons were on paper, which means it was more tangible to mark. And I think the children took it more seriously… when they had to do it on paper, it was a much more sort of accurate representation of where they were rather than the actual "tick this box" or "circle this answer". (T2 L30-37).

> … it ended up what we wanted, which was the kids doing more work that could actually be used to say like "oh, they don't know how or have a number concept, or they don't do this, or they can't spell or answer comprehension questions". (T2 L320-322).

Despite the improvement in the in way the school and teachers went about online learning during the second school closure, teachers maintained that in person school was still the most beneficial outcome for themselves and the children. When asked in online learning should be improved, the deputy head of the school stated:

> Absolutely. It needs to be taken out of the whole thing altogether (D L154). I don't think online learning should happen (D L161).

Teachers explained that even when they made use of the hardcopy learning packs, it was still a lot of effort.

> So although the workload was still exorbitant, and you're having to print stuff, and teach, still teach live, we weren't having to make extra videos (T1 L132-133). It's so much better face to face, really so much better (T1 L450).

4.2.3 Theme 3: Social, emotional, and physical challenges during online learning

Theme 3 focused on the social, emotional, and physical challenges experienced during the online learning process (Table 4.1).

4.2.3.1 Subtheme 1: Lack of socialisation and connections with others

Within the data collected, multiple issues regarding the lack of socialisation of children during online learning. These issues included the lack of learning of social skills or practising skills in a social setting, lack of support from peers in the classroom and learning from others and that children missed their friends because of not seeing them at school.

All three of the parents interviewed indicated that their children were deprived of the lack of socialisation associated with online learning:

> [Child C] didn't want to be doing [school] online. She is an incredibly social kid. So, she thrives in an environment like this (indicates classroom), where she wants to go to school, she wants to see her friends. (P2 L365-367). I think they need to be in a classroom environment, and I think they need to be with people. (P2 L684-685). I mean, they need to leave home and make friends. You can't, you can't just sit in your small environment. I think you become part of a recluse. (P2 L931-932).

> I think for [Child A and Child B], what was negative is that they missed their friends, they missed the engagement in the interaction with their friends. (P1 L185-186). [Child in class with ADHD] needed contact with other people. And so, he used the Zoom sessions, or live sessions as a catch up with all [his] mates. (P1 L367-369).

When asked if online learning benefits children with ADHD, Parent 3 responded that it would depend on the child. For Child D, however, it would not be beneficial, as he is a social child:

> Not for my child. My child likes being outside and playing and interacting with people. He's very social (P3 L291-292). My son loves that school, he loves being social. So no, it wouldn't work for him. (P3 L306-307). I think being on the tablet with his classmates was actually a break he looked forward to. (P3 L409)... I think if they needed it, they needed to be on the tablets there with their friends and find out how their friends are doing and all of this. I think we needed it. I think the kids needed it. (P3 L420-422).

The teachers expressed similar views, particularly regarding connections with children and parents:

> … how to maintain the relationship with the children… the relationships, the group work, the groups of children… how we were going to deal with the teaching. (T1 L15-19). …we did a lot of our parent interviews via Zoom because that's what we had to do. And even the body language between over the screen it's very different. You might as well email because it's, it felt the same way… there's always like a wall up. (T1 L441-444).
>
> Not building that connection, not getting to know the parents… (T2 L197) …they didn't know you; they meet you from behind the screen. And it was hard to build that connection… building a connection for me was the hardest… (T2 L205-208).

4.2.3.2 Subtheme 2: Lack of learning of social cues

Participants were not only concerned about a lack of academic learning, but another major concern outlined by the participants was that during online learning, children were socially isolated from their peers, which resulted negatively in their ability to learn and practise social skills:

> I think they lost out of the soft skills, the emotional, the social, and that sort of thing. (D L45-46). I think the aftereffects more, was around him having to figure out social cues… My younger one was going into Grade One so no sooner had you joined you went into lockdown. So, you didn't really know these people you were sitting in a classroom with so you couldn't actually really refer to them so to speak as friends… And then also because you're kind of engaged then was a, you know, it's kind of the neck and shoulders, it's like that view of your peers. When you meet them in like, in real life it was like, "oh I didn't know you were tall, short, thin, fat". Um and the social cues were just out, you know, because they, when they did eventually get to engage, they were all wearing masks and your ability to read facial cues and body language and what have you. (P1 L569-577).

Parent 2 explained that [Child C]'s management of her impulsivity was a social skill necessary for her child to practise.

> And the only way they can learn that [social skills] is through being around other people. (P2 L722). Having siblings made it easier… You know, you have to share with your siblings… You have to learn "no"... I think if she was an only child that would have been harder, probably. (P2 L1360-1373).

When asked about aftereffects noticed owing to online learning, both teachers mentioned that social issues have prevailed since children have returned to school:

> We're looking at our Grade Three group, which is our first lockdown group of Grade One, and there definitely are social issues. We've had an enormous amount of social issues this year… we've had a torrid year of dealing with all sorts of nonsense this year where they just haven't gelled as a group. And I think a lot of it's down to that isolation they had initially. (T1 L509-514).

> Socialisation, like, that's been so difficult for some of them is to work in a group or, you know, be patient, be, I don't know, kind in some ways. So it's really affected them socially, which I then think affects them emotionally. (T2 L158-160).

4.2.3.3 Subtheme 3: Lack of learning through interaction with others

Owing to the social isolation of online learning, learning through and from interaction with others was impossible:

> The interaction in class… There are certain things he learns with the other kids, you know, when the other kids are asking questions. So when he's just [at home]... he's just gonna listen to what is being said, without having a conversation, maybe with someone about it, and maybe expanding his knowledge. He's just going to absorb whatever is on the computer… I think he learns more from the conversations he has with his classmates, as well. (P3 L317-321).

> ... It's the other things. It's the things we don't think of, incidental learning that they get through... and especially for a kid with ADHD because there are a lot more in your space. And they need to understand that this space limits. (P2 L713-716).

Parent 2 explained how [Child C] is motivated by her peers to do her work in a classroom setting, whereas at home, it was more difficult.

> if you're not seeing your friends do it, because small tasks almost felt difficult for her. But this is a simple, simple, simple as writing three lines, three sentences (P2 L1013-1014)... But if her friends are doing it next to her, she would have just done it because they were all doing it. (P2 L1025-1026).

> We are social beings, we need people, you learn from people… We have to teach children how to work with other children in society… So they may come across a personality… that they're going to not get on with, how do we work with that? You're doing to get that person in the real world one day. So that kind of relationship is, you can't do it over Zoom. You can't do it through a machine. (T1 L458-465).

> You weren't able to help and support [hands on work].... That's when you make your connection. And we couldn't, so it was difficult. (T2 L17-18).

4.2.3.4 Subtheme 4: Emotional effects of online learning

According to the data collected, emotional issues were experienced by children and their families during the time of school closures and online learning and the global COVID-19 pandemic. These issues included emotions of frustration owing to the challenges of online learning, fear and worry regarding the pandemic and children not seeing their friends and extended family members, and frustrations in managing online learning and balancing other responsibilities, such as work and looking after other children.

Parents and children experienced emotional difficulties because of online learning and the COVID-19 pandemic, and emotional aftereffects noted since their return to school, resulting from issues with online learning:

> I think it was keeping track of where the kids were… how they were actually feeling. It's 40 minutes and you're trying to teach something, it's not really time to find out how they feel. How are [the learners] coping?... we saw little outbursts every so often on screen during the lesson… the parents… were supportive. And so I think a lot of it is down to them… and them accepting it and them helping the kids deal with it. (T1 L474-478).

> If you look at now, like, when we come back to school, the children who battle with behaviour and battle with emotions are often those who had the biggest chunk of the foundation phase online. So for me, there has to be some kind of connection between how it affected, I mean, in the classroom, the structure you know, so I think that helps manage all those sort of things, academics, emotions and, and behaviour, whereas they missed a big chunk of that. (T2 L152-154). … some [children] had serious separation anxiety coming back [to school]. And they cried, and they just wanted to be home. And then you found like, ailments developed. So it was some, you know. They always had a sore tummy… when they came back, it was like, are they not coping because of Covid? Or are they not coping because there's actually a learning difficulty? (T2 L303-307).

With regards to Bronfenbrenner's theory, the national lockdowns due to the COVID-19 pandemic were a significant societal change that affected each of the participants and the children involved at their chronosystem level. Each individual was affected by this as the lockdowns transformed how they spent their time, interacted with each other and conducted learning, teaching and work.

4.2.4 Theme 4: Family interactions during online learning

Theme 4 focused on the interactions among family members during the online learning process (Table 4.1).

4.2.4.1 Subtheme 1: The role of parents

Parent 2 remarked that Child C did not know how to access her online lessons in Grade 1; therefore, she had to spend considerable time helping her child:

> Kids in Grade One weren't um equipped on how to even get on it. Some of them are, but my kids aren't. (P2 L523-524). Because all of us were "we're not doing this again, it's just not good for our relationships". (P2 L534-535).

> It's very different for a mom to tell you to do the work. Then it is if a teacher tells you to. (P2 L439-440). It was hard… you had to actually physically sit there and do it. (P2 L540).

The teachers also remarked there was considerable parental involvement in online learning; however, some parents may have been too involved in their child's online learning:

> …a lot of parent involvement (P1 L241)… From some parents, you know, kind of say, "well, tell mom and dad to leave the room. You need to answer the questions not mom or dad. Don't look at mom for the answer. She doesn't know it"... We had to tell kids to tell their parents to please take their business meetings elsewhere. Because we don't want to be privy to their business dealings. (T1 L247-251).They didn't actually do the work for the children, But they gave them, they were a lot more lenient with the kids. So if they didn't do the world, they weren't overly concerned either. (T1 L258-260). I think the parents were very supportive. And so I think a lot of it is down to them, that the success of that first lockdown was down to them, and them accepting it and them helping the kids deal with it. (T1 L 476-478).

> Parents are there to be parents not to be teachers. (T2 L150).

This statement links with Parent 2's observations about parents providing a safe space for their children rather than playing the role of a teacher:

> And I think that you're their safe space. So you actually want to be where they can come to you and fall apart because they've had a bad day at school, not the person forcing them to do the bad day at school. (P2 L510-512).

4.2.4.2 Subtheme 2: Frustration and disagreements

Frustration and disagreements were apparent themes regarding the interactions of family members during online learning, expressed by all three parents. Stress was heightened:

> It was lots of fighting amongst the family. And parent, mom, mom, and her trying to get [online learning] to work because she didn't want to. (P2 L223-224). We always, we were fighting with her because she had to get the work done. It had to be submitted, but she didn't want to do it. And then you're getting to five o'clock at night and you still haven't done it. You've had the whole morning, the whole day (P2 L456-459). For the kid that doesn't like [online learning], she's just going to fight you for it and even on her meds actually she didn't, didn't like it… she would fight and she didn't want to take her meds and we were like "ugh you know, don't worry." And those days were shockers. I mean, then there was getting nothing done. (P2 L560-565).It's a big change. I mean, we all struggle, never mind the littlies. (P2 L880). We probably fought a little bit about [online learning]. When I say fought it was, they were more like little niggles with each other. You know, I remember one example is Child C wasn't wanting to do something, and I was then moaning at her. And then I had [my husband] moaning at me because I was moaning at Child C, because he was listening from the outside, or had been on a call and he's listening. And I was like "Well", eventually "Well you do this. You come into it, and then tell me how you'd like this to work." because actually, it's quite hard on a parent, trying to force a kid… (P2 L1143-1149). We didn't argue much. But there were one or two instances. We were like "actually, you know what, hang on you, you're not supporting me, but I'm not supporting you". But actually, we try to support, both try to support Child C, but we all struggling here because she doesn't want us to support her… I kind of got a little bit resentful sometimes of [my husband] being able to go online and just be on his calls and be doing work because I was the one that was having to sit. (P2 L1152-1158).

> Whereas a parent, you're just getting frustrated, because you've now spent 45 minutes on Afrikaans and you're on word five, and it can like, you know, push you over the edge. (P1 L199-201).

> It was… very stressful… for the whole family. Because if I'm in a meeting, and he needs to join a call or something is wrong, and he's not able to join, then I'm in a meeting, his dad is in a meeting. Then okay… how do we help him? So yeah, it was very frustrating. (P3 L184-192). There were negative moments. There were screaming and shouting and frustrations. "Um everyone… which class? Did you attend the live class with this live class? The… is it not connecting?" Yeah so there are moments of frustration. (P3 L493-495). It just happens, and we moved on. But yeah, it was, there were moments of frustration. And when everyone is in a meeting,

> “well okay, who is going to help this one?” (P3 L501-503). And when you’re frustrated, it also frustrates the child as well. (P3 L526-527).

4.2.4.3 Subtheme 3: Parents having to balance time between multiple children and work

The parents interviewed had multiple children to look after when their child engaged in online learning. Each parent described how they had to manage their time to look after their children. As Child A and Child B were working online, Parent 1 and her husband worked together to help each child:

> And I think that eventually, we also got to a point where, for the benefit of the children, and for the benefit of our own sanity, we alternate days. So when they, because I've worked with [Youngest child] the other day, he worked with [Oldest child] and the next day, we would swap so that the children at least got different learning perspectives from each of us, but also that we didn't get aggravated with each child because you've now had a week of one child who can't do something and it can drive you mad. (P1 L450-456).

Parent 2 and Parent 3 had younger children who were not involved with online learning; however, they still needed to look after their younger children:

> And thank God, thank goodness… [the younger siblings] actually weren’t having to do any work. Because to have to have managed Child C, while she was doing hers, and then trying to get them online… It would have been a disaster. (P2 L1158-1164).

> And if I didn't also have a three-year-old [it might have been fine]. (P3 L384-385).

Despite it being challenging to help Child D when he was working online and looking after his younger sister, Parent 3 felt some positives came out of this challenge as her daughter learnt:

> Very stressful and very chaotic. But my daughter got to learn a lot. She knew how to write her name. But she also wanted homework. So she learned quite a lot… She learned to be way above her peers. (P3 L474-479).

Working parents experienced online learning as particularly challenging as they worked from home and had to juggle their parenting and work responsibilities at the same time:

> It was very timeous. I felt sorry for moms that were working because they were not online at eight o’clock. But you’ve got to meet, a meeting, and you got to try and get

> your kid on there. (P2 L521-523). How moms managed that when they were trying to dial into their own meetings and all that, I'm not sure. (P2 L1269-1270).
>
> And I think also when you've got kids who've got learning difficulties, right? You know, it's not just the fact that it's, you know, it's online, and you're trying to, you know, run between two children at the same time and do your own work in between all of that. (P1 L135-139).

During the interview with Parent 1, her children entered the room to converse with her:

> So that would be like a typical online working from home experience, Right? You're trying to get on with work and the kids are like "okay I've done my work now". Not it would be, "I'm curious what you're up to". And it would be quite disruptive… So then it's quite difficult to get your work done, because just because they finished, then I think that they can run around. (P1 L420-426).

Parent 3 explained that the most challenging thing about online learning was that she had to be overly involved while working and looking after her three-year-old daughter at the same time:

> You can't have a job and have a child that's online learning. Because then even when they do assignments and things that they would normally do at school, you have to get involved with the cutting and finding the right papers…. It's a full time job. (P3 L259-262).
>
> I really felt for parents with children with ADHD], because I think, I don't know how parents were working. I mean, if we were battling, you know, I don't know how they were doing it with their kids at home, they're at home, they're trying to do their jobs. And then you have a child who has, you know, learning difficulties in terms of ADHD, it must have been a constant battle. (T2 L216-219).

4.2.5 Theme 5: Issues relating to technology

Theme 5 focused on the issues experienced during online learning as a result of using technology for learning and teaching.

4.2.5.1 Subtheme 1: Concerns regarding increased screen time

Parent 2 was at ease regarding screen time as she felt her child was too young and lacked the knowledge to use the Internet and devices and that she would rather play outside with her siblings:

> I think when we first went into lockdown, we stopped TV in the week just because otherwise you'll just roll from one to the other. I wasn't worried, [current school] were great with the amount of work that they actually did on the screen. So especially the little ones. They weren't on a lot. (P2 L625-628). And I'm not particularly worried about screen time. I think our kids get enough time outside that when they do watch TV sometimes it is their downtime… I'm more worried about the access they have other stuff on things like iPads and computers. So that's my worry of screens… It's my fear of what they click into. If they're on YouTube. What does it go to next? (P2 L634-641). She wouldn't know how to even get from like something else, so we didn't have to worry about her at that stage. I think now she probably could get around it, navigate it a bit better than… she did in Grade One. (P2 L651-653).

> The novelty was fun, but it was more like, you know, "the screen again?" And then of course, you know, you're trying to keep the kids away from screens… That's the irony with it all, you know, like screen time should be limited, well they've spent basically the last five hours in front of a laptop so… (P1 L356-359).Also because you're trying to work so I mean, it's a terrible thing. But you know, the screen does become the babysitter. SO like, you know, the work is done now. Now, you've got four hours of work still ahead of you. You can't really be the child's entertainment because you've got to do work, you know, and like… today it's raining or what do you do? Well, you know that there's the TV… I stopped at the beginning. I used to feel like, worried and guilty about it. But then I kind of got over it quickly. I was like, you know, pick your battles. (P1 L365-374).

> Sitting in front of a screen, I don't think it's great. Which is why the 40 minutes was actually quite good, because it was limited screen time. (T2 L92-93).

Parent 3 also expressed that she did not have concerns about increased screen time as the family's pre-existing rules had already been set regarding using devices:

> I think we already had the rules where they wouldn't use the iPads during the week. SO now Child D knew that he's only going to use it in the morning for school and make sure that it's charging, is charged for tomorrow. So it was new rules that were already there. They just got extended… it wasn't hard to have them because they were already in place. So he knew the rules for using my device. I can only use it for school then once I'm done with school it gets put away and I use it tomorrow for school. (P3 L606-615).

4.2.5.2 Subtheme 2: Technical difficulties

As online learning was conducted through technological devices and Internet platforms, some participants referred to technical difficulties experienced, which made online learning more challenging:

> Because they also, many of them [the parents] couldn't get printers (D L143)… And on home printing is expensive. (D L148). We need to have easily accessible computer programs. So a lot of our parents battled with Seesaw, which to us is intuitive, and to the kids is intuitive, but the parents didn't have a clue. So I had people who were head IT departments in their companies who couldn't access lessons on Seesaw and couldn't upload a photograph, or upload a worksheet onto Seesaw. It was horrific". (D L172-177). That's why we went with the learning packs because they could cope with getting a pack. (D L176-177).

> In an online environment, it took a while for the kids to realise like there's mute buttons, and you don't all scream on top of each other. And like that. So from [the teachers'] point of view, trying to settle so that um the kids could hear what was being said, and what was being asked of them took a while to adjust. (P1 L145-148). There was definitely a big learning curve for them around how to use online platforms and tools and time manage. (P1 L214-215).

> I think some of our children didn't have access to unlimited, uncapped Wi-Fi. And so connecting with some of them, I mean, they dropped during a lesson or I'd drop during a lesson and have to try and find them again. (T1 L194-196). Sometimes connectivity was an enormous issue. (T1 L203). With any online anything, there's always a delay between your instructions and them responding and so because [Child in class with ADHD] was so impulsive, he would control the mic. (T1 L372-374).

Despite concerns regarding technical issues experienced, Teacher 1 reported that the online platforms they used to teach with worked well.

> We found the Zoom platform brilliant, because we could obviously share screens, present properly… our lessons worked very well. If we used a video or anything… we could, you know, show through the screen, especially with maths, work alongside the children. (T1 L214-217).

4.2.5.3 Subtheme 3: Access to devices and online platforms

Two parents raised concerns about a lack of access to devices and online platforms. Parent 2 explained that it worked out for her family since her two younger children were not involved

in online learning owing to their young age; this was fortunate because they would not have had adequate devices for each other their children:

> They only have a certain amount of devices in the house, and then they all wanting to be doing something different. It would have been a disaster". (P2 L1161-1164).

> And I think, maybe the other thing with online learning is that it assumes that everyone has the tools… (P1 L588-589). Everyone has the latest apps, the latest gadgets. And because I remember there was one particular program that we couldn't download… because our iPad was old. So online learning assumes that you have the latest and you can download apps and to do all of these things, but not necessarily everyone has. (P1 L 595-598).

This parent felt the assumption that everyone had access to devices and online platforms was one of the fundamental issues with online learning as it was frustrating:

> Maybe the emphasis is being the technology, like the assumptions that everyone has access to that technology can be quite frustrating. (P3 L673-674).

Parent 2 explained that Child 2 did not know how to access the online learning platforms on her own; therefore, Parent 2 spent considerable time sitting with her to help her use the platforms:

> I don't think my child even knows how to like, sign into something. (P2 L536-537).

This concern was also discussed by Teacher 1:

> And getting the kids online, getting them up to speed and how to access everything through Seesaw was a mammoth task. And it was hard for us as Grade Threes, I can only imagine what the Grade Ones had. Because they had never had any kind of technology at all. (T1 L40-43).

4.2.6 Theme 6: Suitability of online learning for children with ADHD

Theme 6 focused on the suitability of online learning for children diagnosed with ADHD. Several positive aspects of online learning were mentioned by participants, including:

> I can see certain benefits in a way where it's a short burst of, "I'm going to only have to concentrate for 40 minutes, and then I can go and do X, Y, and Zed and then are coming back to another 40 minute session". I can sort of see benefits in that way. (T1 L590-593).

> I think some aspects may be [beneficial to learners with ADHD] because it's do this in your own time. (T2 L83-84). A lot of our other activities were 'jump while sounding out your spelling words", "throw a ball"... They didn't have to sit a lot, they could move around. (T2 L93-96). [ADHD children] lose track of the structure of what you want, whereas the other children obviously have a better memory, I suppose. And planning wise… ADHD kids battle with that sort of aspect of it. And when there isn't someone saying, "no, no, you need to do X, Y and Zed"... they would just write an answer… That's probably a place where they battled is the planning without someone there to help. (T2 L114-122).

Despite these positive aspects, the participants considered online learning unsatisfactory for learners, particularly those with ADHD.

4.2.6.1 Subtheme 1: Navigating distraction in online learning

As children with ADHD struggle with inattention (APA, 2013), distractibility was noted to be heightened through online learning:

> And whilst I think that you can medicate them to focus and get away with the distractions and that kind of stuff, they still need an element of distraction… (P2 L685-686).

When asked if online learning would be easier if her child did not have ADHD:

> I think she would have been able to focus a bit more, and I think she would have maybe done the tasks with a little bit more focus. (P2 L745-746).

Parent 2 explained that Child C constantly needed someone to refocus her for her to complete a task:

> …and with siblings running around… like they're around too, and they'll play for a bit, but they're distracting [Child C] It's hard to keep pulling her back. (P2 L749-750).

Parent 2 compared Child C's focus to some of her peers' saying:

> Whereas like her friends, I mean, they would just get there, wake up, ask what they had to do in the morning, be ready and waiting. Do the activity and submit it. (P2 L751-753).

Concerns were also raised regarding the engagement of the learners with their online lessons:

> I think the other challenge, of course, is that um for a teacher, how do you gauge if the child is actually engaged, right? Because it's in 2D, so you're not seeing the fact that the child is doodling or kind of looking out the window. (P1 L 148-151). With ADHD… it's all about processing, right? So if you, if you're kind of now having to process it, and someone's talking to you online, and you say, "but can you repeat it?" And then, you know, other kids are asking questions over and above that… Ten of you in a class and so someone's busy with something and then they see that someone's walking behind, the distractibility is just magnified. (P1 L299-304).

While other participants believed the distractibility owing to ADHD was a hindrance to the child's online learning process, Parent 3 disagreed, explaining that owing to the medication, Child D was more focused and less distracted than his neurotypical peers lacking the advantage that the medication provided him:

> Having experienced what the other kids were going through, his classmates, he was more focused than a whole lot of them. (P3 L350-351). It was probably easier with him because he had the pill, as opposed to the kids without ADHD that they would just get distracted and now watching TV instead of… or clicking trying to find something. (P3 L357-359). He had a boost, as opposed to kids that don't have that… There isn't anything like getting them to focus. Whereas, he had the pills that were pushing him to focus. So I don't think it would have been easier had he not had ADHD. (P3 L368-371). So luckily Child D was not fidgeting like, so he wouldn't go and try and find, like the other kids, they stomp they will go and try and create backgrounds… that thing that their faces are looking funny. So luckily Child D didn't do that. Maybe that's why I'm thinking he was in a better position because he had the pills. So the other kids get distracted with all of these buttons that are available here. "What does this thing think?" The next thing the graphics have changed, there's a monkey behind you, and all the kids are laughing. So yeah, it is. I'm sure it would have been quite distracting. (P3 L577-584).

The teachers' perspectives confirmed that children with ADHD were distracted during online learning lessons, compared to being at school:

> We had to tell kids to tell their parents to please take their business meetings elsewhere. Because we don't want to be privy to their business dealings. "No, your helper can't vacuum now. So those kinds of distractions were there, and aggravations for us. (T1 L249-252). [Child in class with ADHD] was hard to manage in class… in the live sessions, he couldn't maintain his focus… He really, really battled to concentrate… He was very disruptive in the lessons. (T1 L348-354). In

> class, they've got time to refocus. They've got time to run out the jiggles and the wiggles. (T1 L498-499).
>
> If you even think of those kids in the classroom, like you are there the whole time, but they get distracted by the smallest thing. So now they're in their own home, they know what toys they have to play with, they know there's food in the fridge that they can go and get at any time. (T2 L251-254).

Teacher 2 explained the challenge of not prompting and reminding learners to stay on track:

> When we were doing our online sessions, and you could visibly see that the child was like, not concentrating, not doing what you wanted, you had no access to the... in class, you would be able to walk past and put your hand on their shoulder, or you'd be able to say, to then go for a movement break… I found that really difficult with the learners who struggled in terms of ADHD. (T2 L86-91).

4.2.6.2 Subtheme 2: Challenges of limited physical activity

The lack of movement that the children had during online learning was considered the most challenging aspect of online learning. Parent 1:

> It was actually getting [Child A and Child B] to do the physical exercise afterwards. Because you know… you sit stagnant all the time, and an ADHD child needs movement, and they need to walk around, and they need to have a body break… It's like "go outside, in the garden… jump on the trampoline… I'll time you, I only want to see you in five minutes time", but actually getting them to have those body breaks so that their minds could re-engage before sitting back down to actually sit in front of a computer. (P1 L313-320).

This was reflected in the reports presented by teachers and the deputy head:

> It's very difficult to keep little children sitting still for 40 minutes. We don't teach that way. So, we will teach for ten minutes, go, and do this, come back to the carpet. Whereas, when you're in a setup [online], and you're governed by time, you lose that movement that they need. (D L193-195).
>
> I think sometimes the, the idea of a short burst of, you know, come to class, be a live session for this time, if fine… he needed movement… he needed contact with others. (T1 L365-368). [The other child in the class with ADHD]... he had a swivel chair. He spent his time doing rotations, and then coming back. (T1 L383-384). They were basically caged. They couldn't do what they would normally do. And they

> couldn't run out the energy or they couldn't refocus. They didn't have the time. (T1 L491-492). An ADHD child needs a variety of stimuli, needs a varsity of scenarios….. (T1 L598-599).
>
> And especially for a kid with ADHD, they like the rough, they like to move. They like the busyness of a class, that kind of a distraction sometimes also keeps them in line. Whereas that like focused attention onto an iPad or a computer. It was difficult for her. (P2 L372-375). And actually school is good for them, because they move, they get the movement that they need in the playground. (P2 L712-713).

Parent 2 explained that with online learning, the school sent irrelevant things to them for the children to do. For example, they sent work for music and physical education, which she felt was unnecessary and that she would rather focus on the other schoolwork and let her children jump on their trampoline rather than do one of the physical education lessons sent to them. For this parent, her children needed to acquire physical exercise, but it did not necessarily have to be what the school had sent them to do.

> Like, maybe in South Africa, it's different because we've got, generally… all got gardens, we've got homes, like kids must run around. To go and, whether they did a jumping jack, or a squat or whatever, really made no difference to me. (P2 L1176-1179).

When asked regarding her concerns about increased screen time during online learning, Parent 2 explained that Child 2 was not interested in the screens and that she would rather play with her siblings:

> She really finished her work and the minute she finished her work she closed the [device] and she was running off because she wanted to go and play with her siblings. (P2 L654-656).
>
> … they are in the same environment, even though we don't stay at our desks, we move around, we sit on the carpet, we work outside, we do different things. (T1 L593-597).

4.2.6.3 Subtheme 3: Disrupted routines in the online educational landscape

Routine is necessary and beneficial to learners with ADHD. As online learning changed the way children experienced learning, this was disruptive to their daily routines:

> They're going from sort of like no routine, to routine when they come back [to school]... we still battle with that now… They come back to a more formal

> environment where it's, you have to sit for this amount of time, have to complete this activity, you have to do it this way, whereas online, they were just doing, you know, whatever. (T2 L144-146). So I think coming back into a more structured environment was hard for them. Particularly, we were saying the structure, and was difficult to get back into like, the more sort of formal, I mean, because it was like, especially when they had to start wearing uniform, the kids were so reluctant, and to like, actually wear a full school uniform. (T2 L293-297). Change for those kids is not easy. So I mean, it was like, not at school, back to school, back at home… and then sadly, a lot of those parents opted to keep them still at home… it was some of those kids who should have, you needed to have them back at school, were the ones whose parents opted to keep them at home even longer. (T2 L397-402).

> [The parents of children with ADHD] must have found it hectic. I think that if you've got a child who is in a good routine, I think it would be easier. (T1 L488-489).

Parents also referred to the monotony of online learning, stating that the routine of online learning was too structured:

> In an online format, you only have one way of teaching. (P1 L167-168).

Both Parent 3 and the deputy's head called the environment monotonous in an online learning situation compared to being at school, specifically with regards to working in the same environment or space. At home, children would have to sit at their desks with their devices, whereas at school, they spent time in different areas of the school or classroom.

> And it's not very easy for for kids to go from one environment where, this is where they play, this is where they watch TV, and then is the very same place where they must learn (P3 L528-530).

> Where it's different here, where they are in the same environment, even though we don't stay at our desks, we move around, we sit on the carpet, we work outside, we do different things… (T1 L593-597).

4.2.6.4 Subtheme 4: Effect of medication on the learning process

All parents reported medication as beneficial in managing their children's ADHD symptoms:

> So it was probably easier with him because he had the pill, as opposed to the kids without ADHD that they would just get distracted and now watching TV instead of... or clicking trying to find something. (P3 L357-359)... He had that boost, as opposed to kids that don't have that they, they are distracted. There isn't anything kind of like

> getting them to focus. Whereas, he had the pills that were pushing him to focus. (P3 L368-370).
>
> So the whole point for me with medication is to give this, to produce the chemicals they need so they can make the association so they can concentrate and listen and learn. (P1 L88-90). This parent agreed that the medication was immensely helpful for her children.
>
> Maybe it, when I think, before she was medicated, she was very unaware of herself and space… Whereas she's much more aware if it when she's on meds. (P2 L109-113).

Teacher 1 referred to challenges she experienced with a child with ADHD in her class who discontinued this medication during online learning:

> [Mother of child with ADHD] decided well, it was enough of a stress to be at home so she wasn't going to medicate [Child with ADHD] either. He was hard to manage. (T1 L347-348)... it would be different if maybe the medication was taken consistently. And then he could actually have paid attention and focussed on it. But he really… he just couldn't keep it together. (T1 L 352-354).

Medication was, therefore, established to be beneficial to children with ADHD in aiding them with concentration and the ability to manage impulses, allowing them to work better and learn acceptable social skills. A lack of medication resulted in disorganisation that led to a loss of learning.

4.3 Document analysis: Coronavirus Orientation Guidelines for Schools (Department of Basic Education, 2020). In this section, the *Coronavirus Orientation Guidelines for Schools* document created by the Department of Education in 2020 is discussed.

This document outlines the guidelines to be followed by schools during the national COVID-19 lockdowns and school closures of 2020 and 2021 (DBE, 2020). The background of the document provides information pertaining to COVID-19, and the national lockdown implemented by the government of South Africa on the 26th of March 2020. The objectives of this guidelines document include sharing information regarding the national lockdown and how this affected schools in South Africa, regarding the curriculum, support of teachers and learners, the closure and reopening of schools, and how various role players involved in schools should interact with one another.

The document refers to a “Phased-in Plan’ which considers various aspects of education under the national lockdown law (DBE, 2020). This plan ensures the inclusion and equity of the learners concerned, and the participation of all role players. Within these guidelines, the orientation process of teachers, cleaning and sanitation requirements of schools and equipment, a “Back to School Plan”, and procedures are outlined. For this study, sections of this document relating to the learning process and well-being of learners and their families were analysed.

Section 7.2, on page 13, outlines the responsibilities of school principals and management teams. It remarks that the “vulnerable learners” must be aided, as these children may be at risk owing to a lack of learning and their vulnerabilities (DBE, 2020, p. 13). This relates to children with ADHD and comorbid disorders, such as those discussed in this study, as children diagnosed with learning difficulties can be regarded as “vulnerable learners” owing to their learning challenges and need for learning support and attention.

This section also refers to the in-person engagement between teachers and the children in the classes as “invaluable” (DBE, 2020). This description of face-to-face schooling implies there is a significant benefit of attending school and the interactions between teachers and children that cannot be replaced. This section also demands the continuation of learning at home during school closures and suggests resources, such as online learning, for this to be facilitated. Where online learning may not be possible, other resources, such as television programmes or radio broadcasts, are recommended (DBE, 2020).

Another responsibility of school management teams is to be conscious of the dangers of social media platforms that children can use (DBE, 2020). This demonstrates a significant concern regarding the risks of using social media, especially by children. This supports the concerns raised by Dong et al. (2020) and He et al. (2021), stating that using social media and potential Internet addiction is a concern associated with online learning.

Section 9.1 on page 23 is titled “Providing Emotional Support to Teachers, Non-Teaching Staff and Learners” (DBE, 2020, p. 23). It emphasises the importance of supporting role players during a challenging situation, such as the COVID-19 pandemic. One such emotional concern solicited in this section is anxiety and fear surrounding the pandemic. Sources of psychological support, such as The South African Depression and Anxiety Group (SADAG) are recommended to schools to support role players who may cope negatively owing to the emotional effects of the pandemic and the national lockdown (DBE, 2020, p. 23). The emotional issues, such as anxiety and fear regarding the global pandemic and national

lockdown—concerns affecting school children and their families and their online learning experiences.

Section 9.2 on page 25 refers to school support and extra-curricular programmes and remarks that such events had to be suspended because of the national lockdown (DBE, 2020, p. 25). When children and teachers returned to school, there were limits set on sports practices and events and cultural after-school activities. Owing to this, children are deprived of much of the interaction with peers they were used to before the pandemic and the physical exercise they received owing to being a part of a sports team. This relates to Dong et al. (2020) and He et al. (2021)'s concerns regarding an increase in childhood obesity because of online learning and Cibrian et al. (2021) who refers to the challenges parents encounter regarding ensuring their children have adequate physical activity and concerns regarding the lack of peer interaction during online learning.

Section 10 on pages 26 and 27 outline the "Curriculum Recovery Plan" implemented by the DBE and the Provincial Education Department (PEDs) to recover the loss of learning because of the school closures (Department of Basic Education, 2020, p. 26-27), intended to be implemented when schools reopen. A "Short-Term Recovery Plan" was implemented, which resulted in the rearranging of teaching and learning timetables, the re-evaluation of the curriculum and the acceleration of learning to prioritise and ensure certain areas of learning (DBE, 2020). The quality of the education provided is necessitated within the recovery plan and effective time management. A lack of learning is a concern; therefore, the need for a recovery plan. Implementing an online learning system during this time of a national lockdown may, therefore, be beneficial as children could engage with their teachers and, therefore, minimise the learning loss, which relates to Dhawan (2020)'s statement agreeing that online learning was the perfect option to continue learning in such circumstances.

This document aimed to ensure the continuation and recovery of education that may have been lost during the school closures 2020. It also identifies areas where children may be affected emotionally, specifically referring to the anxiety surrounding the global pandemic, national lockdown, and school closures. It refers to other issues brought on by the school closures, such as the banning and limiting extra-curricular sporting and cultural events, resulting in a lack of physical exercise and interaction with peers and risks regarding social media use by children. The necessity of this document and the "Curriculum Recovery Plan" implemented by the DBE is evidence of the concern about losing learning owing to the school closures of 2020.

As this document is a government policy which schools were required to follow, it affected the exosystems of parents, teachers and children as it enforced the school closures during the national lockdowns, which resulted in people having to remain at home while conducting work and school from a distance.

4.4 Discussion of the findings within the context of the literature

This section discusses the similarities, silences, and differences observed in the research findings within the context of the literature.

4.4.1 Similarities between the data and literature

This section discusses the similarities between the data collected and the literature reviewed.

4.4.1.1 Social interaction for building social skills

The literature supports that children need to be around other children to learn social skills (Cibrian et al., 2021). As observed in the data collected, challenges were experienced owing to a lack of social interaction resulting from online learning. These challenges include the lack of learning social cues and practising managing impulses in a social setting, lack of learning through interactions with others and losing out on the social aspect of school and being with friends.

In Chapter 2, children with ADHD are predisposed to experiencing social issues (Cibrian et al., 2021); therefore, a concern with online learning is that children do not have the interaction to practise their social skills and understand the expectations of participating socially. Dong et al. (2020) also explain that young children struggle to manage their emotions and impulses, as they have not learnt such skills yet. They, therefore, need to be in a social environment to interact with others and learn how to behave in such settings. This was a concern raised in the data collected, as Parent 2 explained that children with ADHD experience difficulties with understanding personal space and boundaries. These children therefore were not afforded the opportunity to practise social skills such as personal space during the school closures, as they social interaction was minimised and they are not able to see their friends or other people.

Children with ADHD can also struggle with certain skills pertaining to executive functioning, such as organisation, planning, and following instructions (Barlow et al., 2017; Mash & Wolfe, 2018). According to the DBE (2020), face-to-face teaching at schools is ‘invaluable’ owing to the interactions between children and their teachers. Sibley et al. (2012) also emphasise the

importance of teacher assistance within a classroom. As teachers are present with children in the classroom, they can guide and assess the children's progress and, therefore, support them by meeting their specific learning needs. A lack of social interaction between children in the classroom can also enhance these difficulties, as children do not have their peers around them to follow or seek cues. Parent 2 explained how children with ADHD in a classroom could be aided by being around others as they can observe what needs to be conducted and, therefore, help them remain on track rather than losing focus and lagging owing to deficient planning skills. This parent stated that in a classroom environment, her child would look for prompts from her peers in order to help her with planning and organisation.

Owing to this, the social interaction of a classroom environment can benefit learners with ADHD, especially those who struggle with organisation and planning.

4.4.1.2 Access to technological devices, platforms, and Internet

The literature draws attention to a ‘digital divide’ explaining that not everyone has access to technological devices and Internet platforms (Burgstahler, 2015 & Wu et al., 2014). Therefore, online learning may be less practical and effective, as not all children can participate in online learning. Not all families have access to the technological equipment, such as computers and the Internet, to allow their children to participate in online learning, therefore, creating a divide between those with access and those lacking access. This was also evident in the study findings, as it was specifically expressed by Parent 3 as a challenge of online learning. This parent explained that, owing to old devices, they lacked up-to-date software to download applications. This parent also mentioned that they had recently bought Child D a tablet, and had they not conducted this, the child would not have had a device to participate in online learning with. This participant explained how online learning assumes that everyone has equal access to technology; however, this is not the case. She expressed frustration regarding the lack of access to technology and the fact that it is also expensive.

This concern was also raised by Parent 2, who explained that if her two younger children also had to participate in online learning, the family would not have had sufficient devices for them each to use as they only have a certain number of technological devices.

4.4.1.3 Time spent with family

An advantage of online learning noted in the literature includes increased family time when children are learning online (Sibley et al., 2021). As children need not attend school at a certain

time and may have fewer commitments school-wise, they may have increased time to spend with their families. As part of the national lockdown and school closures of 2020, the DBE (2020) banned and, after that, set limits on the extra-curricular activities offered by schools. Owing to this, children would, therefore, have more time to spend at home with their families, which would have been spent engaged in sporting and cultural activities at school. This is also evident in the research findings as Parent 1 reported that her family enjoyed that on weekends and afternoons, they did not have to rush off to sports days but could spend quality time at home as a family, without being obligated to be anywhere.

Parent 2 reported that her eldest child (Child C) enjoyed playing with her younger siblings when she had finished her schoolwork for the day, which may not have been a possibility, had Child C been involved in after-school sporting activities. Owing to this increased free time, playing at home with her siblings became a priority for her and was something she looked forward to doing.

Online learning, therefore, affords learners more free time, which may have been spent at school, to spend with their families. Increased time spent with one's family was seen to be a positive outcome of the national lockdowns affecting the microsystems of parents and children, as family members were afforded quality time to interact with each other.

4.4.1.4 Time spent with professionals

Tessarollo et al. (2021) explain how a lack of interaction with professionals, such as teachers, can cause a lack of diagnosis about learning difficulties and, therefore, a lack of necessary intervention and support for the child. As teachers are specifically trained to work with children, they are, therefore, knowledgeable about learning milestones that should be reached at certain ages or stages of development. Without such interaction, children may experience certain difficulties that may not be noticed at home by their parents.

Ryan et al. (2015) remark that parental knowledge regarding a child's diagnosis or specific difficulties is imperative to support their children's needs adequately. Without a diagnosis or knowledge regarding certain difficulties, children may encounter increased difficulties owing to a lack of understanding of their abilities on the parents' part. This was evident in the research findings, as Parent 2 described Child C falling behind academically and her difficulties with reading not being noticed, resulting in a delay in a diagnosis of SLD being made. Parent 2 reported that she felt as though Child C had missed some foundations owing to this. In support of this, Teacher 2 explained that parents are not qualified to teach children; therefore, they

may not know how to support their child effectively. She expressed that this meant that they were not getting the full benefit of teaching and learning, which affected their academics.

Sibley et al. (2021) remark that a lack of support from teachers owing to learning conducted online can cause academic issues and behavioural concerns. This is reflected in the research findings as Teacher 2 explained that through online platforms, teachers could not use valuable techniques which they would use in the classroom, therefore, resulting in them not guiding and supporting their learners how they normally would. Teacher 1 referred to a child in her class with ADHD who was unmanageable online owing to a lack of support from his parents.

4.4.1.5 Lack of learning through online lessons

In the literature, the needs of learners can go unmet when learning online, particularly with learners with special learning needs or learning challenges (Hamad, 2021; Ortiz et al., 2021). The lack of assistance from teachers because of online learning is observed as a significant contributing factor to concern regarding a lack of learning through online platforms (Sibley et al., 2021). A concern regarding a loss of learning through online learning was evident throughout the data collected, as participants expressed uncertainty about the effectiveness of online learning in ensuring that learning and teaching were kept up to the school's standards. This concern was especially significant regarding children with special learning needs. The DBE (2020) called for vulnerable learners' protection during the time of school closures and online learning.

Such children with learning difficulties may be considered "vulnerable" owing to their pre-existing learning challenges. These children would, therefore, need more support. According to the data collected, parents and teachers remarked that children are deprived of much of the fundamentals being taught during the younger grades; for example, Parent 2 spoke specifically on the challenge of learning to read online and the incidental learning that occurs in a classroom environment. Parent 1 noted that children learn through play, which was limited owing to the social isolation of online learning. Teacher 1 believed that a child with ADHD in her online lessons was deprived of significant learning. Teacher 2 supported this by stating that children with learning difficulties fell behind academically when online learning was conducted. Teacher 2 also reported speech and language difficulties, as children were deprived of social interaction while developing their language skills.

The lack of learning, as observed in the data collected, also referred to the learning of practical skills because of learning conducted online. Dhawan (2020) explains that online learning can

often neglect the practical side of learning. This was evident in the data as Teacher 1 and Teacher 2 referred to younger children learning practical skills and working with concrete learning materials, such as pencils and paper, rather than working on digital documents or worksheets. She expressed a lack of connection from the screen to the brain, compared to the connection of learning content from working with pens and paper.

Teacher 2 explained that assessing learners using hardcopy learning materials was much easier and a more accurate way of understanding a child's grasp of a certain concept, as they had a more accurate representation on paper.

A lack of motivation for online learning, as mentioned by Sibley et al. (2021) and He et al. (2021), is a possible contributing factor to losing learning through the online learning process. As concentration is regarded as a challenge for children with ADHD (Barlow et al., 2017; Mash & Wolfe, 2018; Nolen-Hoeksema & Marroquín, 2017), these children would require increased motivation to be engaged in online learning lessons.

4.4.1.6 Participation and engagement in online learning

As observed in the literature and the research findings, participation and engagement with online lessons were an evident concern. According to the research findings, online learning identifies distractions specific to learning in the child's home environment, such as siblings, parents, toys at home, and food in the kitchen. Mash and Wolfe (2018) explain that selective attention refers to the ability of an individual to focus their attention on one aspect while ignoring distractions in the background. With an increased number of distractions at home, children with ADHD, already challenged by distracting thoughts and actions, are even more challenged when learning from home.

As children with ADHD struggle to maintain attention (Sibley et al., 2021), this was a difficult aspect of the learning process for them. Parent 2 reported that Child C may have been able to concentrate and, therefore, engage better in lessons had she not had the challenges of ADHD, as her neurotypical friends managed a lot better with their online lessons. Parent 1 noted that it was difficult for the teachers to establish whether the children were engaged in the lesson. Teacher 1 reported that a child in her class with ADHD struggled to concentrate during online lessons and, therefore, disrupted the lesson. The literature confirms this, as He et al. (2021) confirm motivation and participation as major online learning concerns.

Kos et al. (2006) explain that, owing to the difficulty of sustaining attention, children with ADHD may struggle to complete certain tasks or follow a teacher's instructions. This was evident in the research findings as Teacher 1 explained that the child in her class with ADHD could not submit the quality of work that he could have conducted had he been in the classroom. Children who struggle with inattention were, therefore, at a disadvantage working online, as they did not have their teacher to prompt them to remain focused on the task.

4.4.1.7 Parental role, involvement, and parenting style

Within the literature, Kuppens and Ceulemans (2018) explain that parental involvement in a child's life and learning is beneficial to the child's development, and that increased parental involvement results in higher academic success for the child. This was observed in the research findings as children with parental support and involvement coped better with the demands and expectations of online learning than those who lacked parental involvement. Teacher 2 discussed a child in her class with ADHD whose mother was busy and left her child to his own devices regarding his online learning. Teacher 2 explained how this child was difficult to manage and deprived of considerable learning owing to a lack of support and organisational skills, typical of children with ADHD (Cibrian et al., 2021). Had this child had more support from their parents, they may have been more prepared for lessons and, therefore, benefited more from the online learning process. As observed in the literature regarding parenting styles, children whose parents display prominent levels of support or responsiveness to their needs develop more successfully than children of unresponsive parents (Baumrind, 1991; Kuppens & Ceulemans, 2018).

The literature also explains that children from a two-parent household may have had more positive experiences than children of single-parent households, as they had two parents to support their online learning, rather than one who may have been juggling work simultaneously (Bernhardt et al., 2021). All study participants were part of a two-parent household. All parents mentioned that both parents in the house would help the children with their learning. Parent 1 remarked that she and her husband worked together to help their two children with online learning, as they were working full-time. This parent explained how she and her husband would work with a different child each day to minimise the frustrations and conflict and to present both children a chance with a unique way of parenting.

Parent 2 referred to her being able to help Child C with her online schoolwork, as her husband worked, and she did not. As her husband provided for the family, she could look after their children and support them throughout their online learning experience. Like Parent 1, Parent

3 explained that she and her husband were both working while Child D was learning online. Owing to this, they both worked together to fulfil their work responsibilities and to help Child D when he required assistance with his online schoolwork. Although the families experienced frustration and challenging times during online learning, owing to both parents being present and involved in each family, they shared responsibilities and made it work. This aligns with the literature as it demonstrates that families where both parents learnt may have had better experiences than families with only one parent to support the child (Bernhardt et al., 2021).

Kuppens and Ceulemans (2018) remark that parental involvement benefits a child's academic performance. This is reflected in the data as Teacher 1 experienced a child with ADHD in her class, who had little parental support, and struggled to keep up with the lessons and schoolwork. This child was disruptive and distracted in class and could not submit work up to the expected standard. Parents noted that a prominent level of parental involvement and support was required for their children to participate in online learning effectively. Participants also mentioned the benefit of employing a tutor to help their children manage their online learning, as they required significant support.

4.4.2 Differences between the data and literature

The subsequent section discusses the differences between the literature reviewed and the data collected.

4.4.2.1 The concern of obesity owing to a lack of physical exercise

A concern with online learning, evident in the literature, is the concern of children developing obesity owing to a lack of physical exercise (Cibrian et al., 2021; Dong et al., 2020; He et al., 2021). As children no longer attend school in person, they do not have access to the sporting facilities and programmes that would be on offer if they were at school. During the school closures and national lockdowns of 2020, the Department of Basic Education banned, and after that limit, the extra-curricular activities that schools offered to minimise contact among large groups of people (DBE, 2020). Owing to this, parents were concerned that their children would not maintain a regular exercise routine when involved in online learning, as they could not participate in sports offered at school.

This concern, however, was not raised by the participants of this study, as the parents indicated that despite their children not being involved in sports during their online learning experience, there were other resources to ensure their children engaged in physical activity.

Parent 1 and Parent 2 referred to allowing their children to jump on their trampolines, ensuring exercise and movement throughout the day. Fortunately for these families, a lack of space at home was not an issue, as indicated in the literature (Cibrian et al., 2021). Parent 2 also explained that her children did not use the physical education lessons they received from the school during online learning, as she felt this was unnecessary. This demonstrates that a lack of exercise, owing to not being at school, was not a concern for the participants involved in this study, therefore, contrasting with the literature.

4.4.2.2 The concern of Internet addiction owing to increased screen time

The literature indicates a concern regarding Internet addiction owing to the increased use of screens and technological devices owing to online learning (Dong et al., 2020; He et al., 2021). According to Weiss et al. (2011), this is concerning for children with ADHD, as social media and online games provide the child with instant gratification, therefore, retaining their attention. This concern of developing potential Internet addiction owing to increased screen use was, however, not expressed by the participants in the study.

The participants indicated that screen time had been a concern regarding online learning; however, the children of the parents involved regarded their tablets and computers as devices used for online learning rather than expressing a desire to use their devices for fun constantly. As observed in the interview with Parent 2, Child C was more interested in playing with her siblings outside, rather than playing games or using social media in her free time. Parent 3 indicated that Child D understood that his tablet was used exclusively for schoolwork, as they had pre-existing rules and limits regarding using digital devices before implementing online learning. Although this was a similar pattern with Parent 1, this parent indicated that the television was used to keep her children busy when they had finished their schoolwork, and she and her husband still had work to do. Despite this, a concern regarding the potential for children to develop an addiction to the Internet was not raised.

4.4.2.3 Social difficulties encountered by children with ADHD

According to the literature, children with ADHD may struggle socially (Cibrian et al., 2021); however, parents interviewed in this study remarked that their children were social and that this was one of their strengths. According to Barlow et al. (2017) and Mash and Wolfe (2018), children with ADHD experience social issues owing to their difficulties with behaving appropriately in social settings, not managing their impulses, and not following rules or instructions. As observed in the data, Parents reported that their children did not enjoy learning

online because they missed interacting with their friends. Parent 2 and Parent 3 explained that their children (Child C and Child D) were socially strong before online learning; therefore, they did not struggle socially when returning to school after they had been online for a while, nor was this a concern for either set of parents.

Although the children of the participants were naturally social, challenges resulted from a lack of social interaction resulting from online learning. Owing to this being the case, a major social concern experienced was that the children missed their school friends as they could no longer accompany or attend school with them. As the literature explains that building and maintaining social relationships is a challenge experienced by children with ADHD, and the data reports that the children of the participants did not experience such challenges, this is, therefore, a difference between the literature and the data.

4.4.2.4 Navigating stress related to diagnosis of learning difficulties

The literature refers to the stress experienced by parents of children with special learning needs regarding receiving a diagnosis of their child's difficulties (Kelso et al., 2005). These authors explain that receiving a diagnosis of their child's difficulties can be emotionally taxing on a parent. In this study, however, a diagnosis of their child's difficulties made life easier for the parents, as Parent 1 explained that they knew their child behaved differently to other children and a diagnosis provided them with an explanation.

Parent 3 referred to the clarity she acquired once Child D had been diagnosed, as she was able to understand her child's behaviours. She also explained that her child's confidence improved and he learned how to manage his behaviours.

Parent 2 described her struggles with Child C before they were aware of her diagnosis of ADHD as exhausting. She also explained the stress and confusion regarding Child C's difficulties with reading before her diagnosis of SLD, as she could tell her child was struggling. Once a diagnosis of SLD had been made, the parents understood Child C's difficulties with reading and had more knowledge, allowing them to support her. Parent 1 supported this notion by explaining that without medication and intervention, her child would have suffered.

Although Kelso et al. (2005) refer to the emotional stress of having their child receive a diagnosis, these parents describe how diagnosing their child's difficulties brought them clarity and understanding.

4.4.3 Silences in the data

The subsequent section discusses the silences between the data captured, and the literature reviewed.

4.4.3.1 Affordability of online learning

The affordability of online learning was an advantage mentioned in the literature (Dhawan, 2020; Roberts et al., 2011, Wu et al., 2014). Owing to the lack of expenses related to attending face-to-face schooling, such as transport to and from school and needing to live near a school, Dhawan (2020) reports that online learning can be less costly. Roberts et al. (2011) support this by explaining that several people have resorted to online learning owing to financial pressures. Affordability was, however, not noted as a benefit of online learning, according to the research findings.

Within the research findings, the deputy head noted the school's uncertainty in charging their normal school fees as the children and parents forfeited the normal face-to-face teaching and learning they had paid for. Parent 2 indicated that the school presented the parents with a fee reduction when they were forced to conduct learning and teaching online. This was, however, not called a specific benefit of online learning within the collected data. The benefit of online being more affordable than face-to-face learning at schools is, therefore, silence in the data.

4.4.3.2 The stigma of being diagnosed with a disorder

According to the literature, Barnard-Brak and Sulak (2010) refer to individuals diagnosed with disorders and experiencing a stigma because of their disorder. These authors specifically refer to disorders, such as ADHD, which are less obvious to other people than other disorders (Barnard-Brak & Sulak, 2010). Children diagnosed with ADHD may perceive that they have been stigmatised owing to their diagnosis. This, however, was not in the research findings as none of the parents described this as a challenge. The teachers and deputy head of the school also did not mention this as a challenge for children diagnosed with disorders. Parents indicated that the awareness and understanding of their child's diagnoses made it easier to provide relevant support for their children regarding their specific challenges. The stigma of being diagnosed with ADHD is, therefore, silence in the data.

4.4.3.3 Flexibility in learning

The flexibility of online learning was noted in the literature (Dhawan, 2020; Wu et al., 2014) explain that learning online can allow learners to work on their own time, therefore, affording them the ability to work at their own pace. Despite this factor being a prominent advantage of

online learning, as evident in the literature, none of the participants involved in the study referred to the flexibility of online learning as an advantage of online learning. Teacher 2 suggested that children doing their schoolwork at their own pace may be a benefit of online learning. Despite this statement, this teacher did not perceive this as a specific benefit to online learning to accord to the children's experiences in her class during the time. The teachers also noted that with online learning, children attended virtual lessons at certain times, therefore, limiting their flexibility time-wise. Parents reported that having a routine benefits their children's experiences of online learning; therefore, flexibility was disregarded as a benefit of online learning. The flexibility associated with online learning, according to the literature, is, therefore, considered a silence in the data.

4.5 Conclusion

Online learning was a challenging time for role players involved, such as children, parents, teachers, and schools. Although the benefits of online learning may be evident, the results display an overwhelming lack of support for online learning. The benefits of online learning, such as flexibility and increased time spent with family members, were compared to that of attending face-to-face lessons at school. Aspects of online learning, such as the lack of social interaction, the significant dependence on parental involvement, and the lack of practical, concrete learning, were less desirable than face-to-face learning and teaching. Aspects of online learning, including the elevated levels of distractibility, the lack of attention from professionals, and the lack of movement throughout the day, were perceived as ineffective, especially for children experiencing challenges related to ADHD. Chapter 5 answers the research questions, concludes the study, delineates the study limitations, and includes suggestions for future research.

Chapter 5: Conclusions and recommendations

5.1 Introduction

This chapter aims to answer the research questions pertaining to the perspectives of parents, teachers of children with ADHD and heads of schools that participate in online learning, regarding online learning, the emotional effects and the effects on the learning experiences of children, and the roles of parents throughout online learning. The findings of data collected, and the data discussed as part of the literature review are analysed. The contributions of this study to the field of education and the significance of the study are discussed and elaborated on. This chapter also outlines the study limitations and suggests future research involving online learning and learners with ADHD.

5.2 Responding to the research questions and summary of findings

The subsequent section aimed to answer the research questions outlined in Chapter 1, based on the data analysed in Chapter 4.

5.2.1 What are parents, teachers and deputy head's perspectives regarding online learning as a mode of teaching learners with ADHD?

As observed from the data collected, parents observed online learning as challenging for themselves, for their children and their families owing to multiple factors. Parents reported that online learning was demanding and required significant parental involvement, which complicated balancing work and looking after younger children. As children with ADHD struggle to pay attention, organise themselves and plan (Barlow et al., 2017; Kos et al., 2006; Mash & Wolfe, 2018), parents established they had to help their children with several online learning tasks.

Parents also reported that their children needed assistance with technological devices and Internet platforms required to participate in online learning. Parents working from home while assisting their children with online learning expressed that it was difficult to manage their work responsibilities while ensuring that their children coped with their schoolwork. Parents also reported the challenge of assisting one child with their online learning requirements while looking after younger siblings not involved in online learning. Some parents employed tutors

for their children while they attended online lessons and completed school tasks, as it was difficult to manage along with their other responsibilities.

All parents observed that their children did not enjoy online learning and preferred to attend school. The parents reported issues, such as lack of social interaction, distractibility, lack of attention from teachers and other professionals, and lack of assistance from peers in the classroom, which made their online learning experiences challenging. Teachers supported this observation, remarking that face-to-face school is more beneficial to the learners and that certain aspects of learning are lost through online platforms. For these reasons, parents found it difficult to motivate their children to complete their work and attend lessons. For some parents, this challenge resulted in arguments within the family—between a parent and the child or between the parents. Parents reported frustration and losing patience while encouraging their children to complete their schoolwork.

None of the parents selected online learning for their children. Based on reports from the parents involved in this study, parents of children with ADHD did not experience online learning to benefit their children. Teachers and the deputy head agreed with this sentiment.

5.2.2 According to the parents, teachers and the deputy head, what emotional effect did online learning have on children with ADHD?

The main emotional concern reported by study participants was that children struggled with the absence of social interaction. All three parents reported that their children missed their friends at school and the interaction with others their age.

All the parents remarked that one of the most negative aspects of online learning was that their children missed their friends and the interaction, which they would normally have had at school in a face-to-face classroom environment. These parents expressed that their children were happier attending school in person as they could see their friends, spend time with them, and learn from interacting with other children. They also reported that being in the classroom environment with other children helped them to organise their schoolwork better, as they saw what other children were doing, rather than feeling lost or confused on their own at home.

Some noted that having siblings helped lessen the influence that the lack of socialisation had on children as they played with their siblings and learnt from each other. Some noted that these interactions helped them to learn how to behave in a social space, for example, sharing

with others and understanding when to stop when someone says “no”. The interactions between siblings, therefore, replaced the social interaction aspect of school, which they felt their children were deprived of.

Teachers reported struggling to connect with the children and the parents, which made the teaching more challenging, as they could not use their usual techniques of encouraging and motivating learners to stay on task. Some noted that the only way to regain a learner’s focus in an online learning environment was to raise her voice and speak in a firm tone rather than being soft and supportive as teachers would experience in the classroom. Teachers explained that they felt disconnected from the children in their classes, contradicting their roles as empathetic educators, usually displaying affection towards their students. Some also noted that some children require more personal attention than others; however, teachers were less able to focus on these children through the online platform. Children, therefore, forfeited the gentleness and affection of teachers owing to learning conducted online rather than at school. Teachers also noted the difficulty of connecting with other teachers as the distance complicated communication and sharing ideas like they normally would.

Parents reported frustration while their children engaged in online learning. Parents explained that their role as a parent was to support their children emotionally; however, during online learning, they had to become stricter as they needed to ensure their children remained focused and up-to-date with their schoolwork. This role felt unnatural to parents, as they sensed they had become more like a teacher to their children. Parents also expressed frustration regarding agreeing with their partner when parenting their children.

Another emotional aspect mentioned by one parent was the fear and anxiety around COVID-19. This parent remarked that her children did not understand what COVID-19 was. Owing to this, they had several questions to which they could not respond. Children could not see their friends and extended family members. The parent confirmed considerable uncertainty within her family and worried about hearing of people dying from COVID-19. This parent explained that her younger child experienced night terrors owing to COVID-19 and lockdowns. Children did not fully understand the pandemic and the national lockdowns, which caused them great uncertainty and worry. The COVID-19 pandemic was stressful and online learning was a new experience for families, it signified an emotional time for several children and families. Participants noted that the lack of support from friends, other family members, and teachers made this particularly emotionally challenging.

Coping theory by Folkman and Lazarus relates to the emotional effect of online learning as this shows how families and individual members managed their stress during this emotional time (Nilsson, 2007). Primary appraisal refers to how the stress is perceived (Folkman 1984). In general, participants experienced online learning and the Covid-19 pandemic as stresfful and a potential danger. Secondary appraisal refers to the response employed by an individual based on the perception of the stressor. Participants experienced moments of frustration and anger during online learning. Therefore, they may have reacted emotionally to certain stressors such as by arguing with their children due to the difficulty experienced when attempting to encourage children to complete their work or the night terrors experienced by one participant's child due to the uncertainty of the pandemic. In instances of stress, individuals chose either emotion-focused coping or problem-focused coping (Carver et al., 1989, as cited in Schreuder & Coetzee, 2021). The child of the participant who experienced night terrors, therefore showed emotion-focused coping. Parent 1 stated that her and her husband experienced difficulties helping their children with their schoolwork each day. The solution they came up with resulted in them taking turns each day. This shows the use of problem-focused coping as they identified the problem they were experiencing and found a solution which helped them cope better with the problem. In general, participants made use of both emotion-focused coping and problem-focused coping. In instances where a solution could be made to help solve the problem, problem-focused coping was employed. In other instances, emotion-focused coping was employed as participants aimed to deal with their stressors by focusing on their emotions and emotionally supporting each other.

5.2.3 According to parents, teachers and the deputy head, what effect did online learning have on the learning experiences of children with ADHD?

The parents expressed concerns regarding a loss of learning during the online learning process. Some parents felt that their children missed learning some of the crucial foundations, as they were deprived of some of their early school years. Some noted that certain learners experienced divergences in their learning, for example, learning to read online, which was difficult for them. Divergences in learning were only noticed when the children returned to school and spent more time with their teachers.

Teachers were initially concerned about completing the curriculum and ensuring the children understood the teachings. Although this was a major concern for the teachers and the school, they completed the curriculum, and learning loss was minimised. Some learners who struggled

more than others with little parental support forfeited considerable learning. Teachers reported reteaching work to the children when they returned to school, as much of the work taught during online learning was misconceived or disregarded by the children.

Participants also reported that online learning resulted in a lack of concrete and practical learning, and children lacked physical materials at home to work with. Learning, therefore, became significantly theoretical. Teachers reported that owing to this, it was difficult to assess the progress of learners accurately and they were, therefore, less able to notice specific areas of difficulty the children experienced. Participants reported that, for the second school closure, hardcopy learning packs were implemented, containing physical materials, such as worksheets, which their children could work on combined with their online lessons. This process allowed the parents to submit the work to the school for the teachers to mark, resulting in a more effective assessment process. Teachers, therefore, had a better understanding of each child's learning level during the school closure.

Being away from school and the face-to-face attention of professionals, such as teachers, also harmed children's learning experiences. This was observed as one child's diagnosis of SLD was delayed owing to a teacher not noticing the symptoms through online learning. Once this child returned to school, she was diagnosed with SLD, which explained the difficulties in reading and writing the parent experienced while supporting her through online learning. Provided the diagnosis, the parents and teachers of the child could better understand her learning needs and, therefore, provide her with the measures to support her learning.

The parents reported that their children disfavoured online learning, and they would not recommend it for other children with ADHD. The teachers and the school's deputy head supported this notion, explaining that online learning is unsuitable for children with ADHD and young children.

5.2.4 How did parents, teachers and the deputy head experience their role during online learning?

Parents established online learning as demanding; their children required considerable support and assistance. Some children needed help to access online lessons, as they were unfamiliar with the related technology and online platforms.

Parents asserted that they had to be involved in their children's online learning experiences. These parents expressed that they disliked being overly involved, as they had other

responsibilities, such as looking after younger siblings and their own work responsibilities. The balancing of helping their children while continuing with their own work relates to the mesosystem of the parents as it involves two microsystems i.e. their children and their careers. As the overlapping of these microsystems resulted in stress experienced by the parents, which therefore had a negative effect on the parents.

Teachers validated this notion, remarking that parents engaged in the online learning process observed considerable parent involvement. Where parents were less involved, their children struggled to remain focused and prepared for their lessons. Teachers established that children were disruptive, and their learning suffered, as this child would disrupt lessons. The work he submitted was of a low standard, which made it evident to the teacher that he had to complete his work without parental supervision. The teachers described parents as supportive and willing to help their children to ensure learning progress.

Another reason for the significant demand for parental involvement is challenges associated with learning difficulties, particularly ADHD. ADHD traits of inattention, hyperactivity, and impulsivity complicated online learning for these learners. Inattention and distractibility were the main difficulties experienced, as they struggled to remain focused on online lessons and while completing learning tasks. Hyperactivity and impulsivity experienced by children with ADHD also harmed the online learning process; children could not remain seated throughout the lesson while teachers struggled to manage them, disrupting lessons, complicating learning, and teaching. Because of the hyperactivity and impulsivity experienced by their children, they required additional support and assistance compared to other children who did not experience these challenges.

Children with ADHD struggle with organisation and executive skills (Barlow et al., 2017; Kos et al., 2006; Mash & Wolfe, 2018). Owing to this being a particular wear area for children with ADHD, parents explained that work submitted by their children with ADHD required them to review and explain corrections the child could go back to and rethink. Children with ADHD also needed support with time management regarding online learning. As children with ADHD can be easily distracted, parents had to constantly prompt them to regain focus and continue the task. Motivation was also a factor in online learning difficult for children with ADHD, as their parents reported encouraging them to complete their work and participate in online lessons.

Parents explained that their children's prescription medication was effective in supporting them in managing the challenges associated with ADHD. Without this medication, parents

expressed that their online learning experiences would have been significantly more difficult, and their learning level would have been severely affected. Medication targeting their specific challenges supported children with ADHD throughout online learning. Although medication prescribed to children to help manage the challenges associated with ADHD helped children to concentrate during online lessons and complete their schoolwork, parents still encountered major challenges. Parents listed multiple medications prescribed to help manage ADHD symptoms, such as Ritalin, Concerta, and Strattera. Parents acknowledged that the prescribed medication for ADHD was effective as their children managed themselves better compared to not using the medication.

Parents' roles changed because of online learning, owing to significant involvement with their children's learning experiences. Parents had to ensure their children attended online learning lessons and completed the work teachers forwarded. This became difficult as parents felt they had become less of a parent and more of a teacher figure to their children, therefore, losing some of their soft and caring nature and replacing it with a more authoritative, disciplinarian style. This is especially true of parents of children with ADHD. They may experience it more challenging to encourage their children to complete their schoolwork owing to distractibility, lacking organisational skills, and other learning deficits. Parents expressed this as a detrimental relationship for a parent with their child, as they would typically be more empathetic and understanding towards their children; therefore, they felt they were not accomplishing their roles as parents, but that of a teacher. They had to be stricter in ensuring their child maintained their schoolwork. Parents reported that their roles became more of a teacher role rather than a parent, as they were no longer their child's safe space but those responsible for encouraging them to complete their work and participate in their lessons. When considering parenting styles, parents became more demanding of their children and less responsive to their emotional needs. This change in parenting styles demonstrates parents altered interactions with their children to adapt to their changing responsibilities. According to Darling and Steinberg (1993), parenting styles refer to how parents interact with, discipline, and support their children. As observed in this study, parents, who established their parenting styles before online learning, had to actively alter these styles to include a teacher-like role, owing to their child's lack of interaction with their teachers through online learning.

Parents expressed that this altering of parenting styles to adapt to such needs caused an unhealthy relationship between themselves and their children. Parents were less able to provide the gentleness and support their children needed. They were now responsible for ensuring that their child's learning progressed with less teacher support and guidance.

Kuppens and Ceulemans (2018) remark that the most effective parenting style for a child's development is *authoritative* parenting. This style refers to demanding and responsive parents (Baumrind, 1991). This parenting style includes elevated expectations and standards with a child and responding to their needs. Parents in this study, therefore, struggled to balance demandingness and responsiveness. They felt they had to be stricter and, therefore, embody a more teacher-like role. This role requires demanding more of their children academically, which differs from their usual parenting role. The style of parenting participants expressed throughout the online learning process was more according to an *authoritarian* parenting style, as they lost much of their responsiveness and were more demanding than usual (Baumrind, 1991).

The change in roles experienced by parents affected both the microsystems of parents and their children, as this altered the way in which the family members interacted with each other. Children were required to adapt to different parenting styles, while parents felt it was necessary for them to be stricter with their children and take on the role of a teacher, rather than that of a parent.

The literature findings reviewed and data collected reveal multiple diverse online learning perspectives. Participants interviewed in this study reported that they disagree that online learning benefits children with ADHD owing to varied factors. These factors include the lack of socialisation children experience owing to learning online rather than in person at school. Parents expressed that owing to their children not being at school and engaging with other children of the same age, several of their learning needs were unmet, as they could not learn from each other as peers through incidental and collaborative learning.

Another aspect of online learning observed as ineffective was the heightened distractibility of children with ADHD while working through online learning platforms in their home environments. Parents and teachers noted that, when learning in their home environments, distractibility for learners was magnified owing to distractions in their homes. Children had an increased number of distractions at home compared to school. These distractions include their siblings, toys, constant access to snacks, and people in their house, such as cleaners. These distractions intensified the difficulty of inattention by children with ADHD. The lack of their teachers' face-to-face support complicated focusing on lessons and educational tasks.

The lack of learning because of the school closures and implementing online learning was a concern expressed by participants. The school and teachers were initially concerned about maintaining the school's academic standard and keeping up with the curriculum. Teachers

reported that, although this was an initial concern, they maintained the standard and curriculum despite the challenges experienced. Teachers expressed that some children did not cope well with online learning and fell behind academically. They also remarked that some of the content covered through online learning needed to be re-taught once the children returned to school, as it had not been grasped effectively through online instruction.

Concrete and practical learning was also difficult through online learning. According to the parents and teachers, online learning resulted in more theoretical work, less engagement, and less interaction from the children than in-person lessons. Participants expressed that, especially for younger learners, concrete learning was more beneficial for children. This concern was improved during the second school closure, as the school distributed hardcopy learning packs with worksheets and activities for the learners to use with their online lessons. This allowed teachers to assign work for the children that they could assess, allowing a clear understanding of each child's progress. Participants reported that this method of assigning work was more effective than assigning work digitally; the learners could do this on their devices, as it resulted in more engagement with the content and an improved system of assessing progress.

Families also experienced frustration and disagreements owing to isolation at home and attending school online. Parents indicated they were forced to become stricter and more demanding with their children to ensure their schoolwork was completed as they were now playing the teacher and parental role. Parents expressed this as difficult for them as they were not used to coerce their children into completing their schoolwork and correcting their efforts. Parents expressed that online learning required considerable parental support, as several young children could not use the online learning platforms or technological devices independently. They also struggled with ADHD-related issues, such as time management and organisation; therefore, parents constantly had to help them. While assisting their children with online learning, parents also needed to attend to other responsibilities, such as caring for their younger children and their work responsibilities. This need to balance and prioritise diverse responsibilities contributed to the emotions of frustration experienced by parents.

A lack of attention from professionals was an aspect mentioned by parents, resulting in difficulties experienced by children and the needs of learners were not met. Parents expressed that having their children work from home through online learning platforms meant they lacked close attention from professionals at school, such as teachers. As teachers are trained and qualified to work with children, they know of the academic milestones children should reach at

certain points in their academic careers. Owing to the distance and decreased attention from teachers, some children's difficulties or lack of progress were unnoticed through online learning. Several difficulties, such as challenges with reading, were only observed when children and teachers returned to school, and face-to-face learning resumed.

Online learning was noted to benefit families as it allowed more time together, compared to being at school and attending extra-curricular sporting and cultural activities. Parents expressed that they had more time to spend with their children and that children played with their siblings more than when they attended school in-person.

5.3 Discussion of findings

5.3.1 Demand for space and exercise

The literature outlines the concern regarding the lack of exercise children engage in because of online learning (Dong et al., 2020; He et al., 2021; Weiss et al., 2011). The DBE (2020) banned extra-curricular activities, including sporting events and practices, during the school closures of 2020 and 2021; therefore, children had fewer opportunities to engage in physical exercise. Reasons for lack of exercise during online learning include that families may have lacked space at home where their children can run around and exercise. This concern contradicts observation of the results of the data collected for this study. Parents in this study, regarding the lack of movement, breaks for their children during online lessons, were not concerned about a lack of exercise, as they had adequate space at home for their children to play and exercise throughout the day. Parents referred to encouraging their children to jump on the trampolines in their garden, allowing for sufficient exercise and movement. This finding is interesting as families in South Africa, particularly the wealthier families, such as those attending private schools in this study, may be more inclined to have larger gardens. They have more space for their children to run around than less wealthy families or families in other countries that may not have the privilege of large houses and gardens.

5.3.2 Effect of medication on distractibility

As observed within the data collected, parents involved in the study had diverse opinions on distractibility. One parent explained that because of the ADHD medication, her child-focused better than other children, including neurotypical children; therefore, they did not have something to help them refocus and ignore distractions. This parent reported that she did not think her child would have performed better with online learning had he not had ADHD. Having

ADHD resulted in administering medication to support his concentration, which was effective in helping him manage his concentration. For this parent, that her child was on medication that helped him to concentrate meant that he was better prepared and able to avoid distractions than other children, including those who did not have ADHD, as they were also distracted by the change of learning environment and online devices. Other parents in the study explained that their children struggled to focus despite being on medication, even though they admitted that the medication was effective in aiding distractibility experienced by children, as they focused more than they would have without the aid of the medication.

5.5. Study limitations

The subsequent section discusses the study limitations, indicating time limits and the number of participants involved.

5.5.1 Time constraints

This study was conducted as part of a mini-dissertation. Such a dissertation involves time and page limits, therefore, limiting the depth of the research. As the mini-dissertation was expected to be completed within a year and a half as part of the course requirements, this necessitated strict deadlines for each chapter. Limited time was available to complete each chapter, resulting in the need to collect information and move to the next section rather than spending more time on certain sections. With more time to complete the mini-dissertation, there would have been less pressure and, therefore, increased time to interview more participants. It may have also been beneficial to extend the research to other schools by interviewing parents, teachers, and principals to obtain more information; however, owing to time constraints, this was impossible; however, significant information was collected from the six study participants. Thorough conclusions could be made by understanding the experiences of parents and children with ADHD.

5.5.2 Number of participants

It was a challenge to find enough parents to participate in the research process. This may have been owing to time, as parents are busy, or parents were unwilling to discuss their online learning experiences with their children with ADHD. Several schools were contacted to find parents to participate in this study; however, after following up attempts, only one school suggested adequate parents and teachers willing to be involved. Another factor that may have influenced this aspect is the lack of ADHD diagnoses during online learning because of

unnoticed challenges by parents and teachers. People may not have been pursuing professional help during the COVID-19 lockdowns, as they had to stay and home with minimal contact with others.

5.5.3 Ages of children and stages of education

This study was conducted in the junior section of a primary school (Grades R-3) and focused on children between the ages of seven and nine. The study was, therefore, limited to the experiences and opinions of parents of children within these ages rather than including participants of other ages. By limiting the data collected to the participants' experiences within this age bracket, the range of the data collected was, therefore, limited. Had the study expanded to include participants with children of other ages, a wider range of experiences could have been analysed with a more informed conclusion.

5.6 Contributions and significance

The research completed as part of this study is significant as it outlines several challenges children, parents, teachers, and schools experienced through online learning. With this information, schools can change their online learning procedures to be more inclusive of children with specific learning difficulties, such as those with ADHD. This information would be helpful if schools were required to close and, therefore, rely on online learning and a method of instruction and for exclusively online schools and children considering attending online schools. Schools can discuss the issues of distractibility, lack of socialisation, lack of exercise and movement throughout the day, significant parental involvement, technological issues, and the lack of concrete learning to improve online learning for children with ADHD. For example, user- and child-friendly online learning platforms can minimise parental involvement for effective online learning. Schedules and reminders on devices can assist children in managing their time effectively. The results can, therefore, contribute to the field of education, specifically online, by becoming more understanding and inclusive of special learning needs.

The study findings outline multiple areas where online learning can be improved by making it more inclusive of the unique needs of learners. Focus on these areas can improve how online learning is conducted in emergencies, such as COVID-19 lockdowns and for schools that offer learning and teaching exclusively online.

5.7 Suggestions for future research

The subsequent section presents suggestions for future research.

5.7.1 Parents' and teachers' knowledge of ADHD

During the data collection for this study, parents indicated diverse levels of understanding and knowledge about their children's diagnoses of ADHD and comorbid disorders. For example, Parent 2—not a working parent, appeared well-informed regarding her child's ADHD diagnosis as a comorbid disorder and referred to specific challenges typical of such diagnoses. She was also knowledgeable about the medication options and their effects. This parent also participated in an online course pertaining to her daughter's diagnosis, learning to support her child better. The literature also remarks that parents knowledgeable about their children's difficulties are better equipped to help them, therefore, allowing them to learn effectively (Ryan et al., 2015).

A suggestion for future research would be to analyse the effect of parental knowledge regarding a diagnosis on a child's learning experiences and well-being, particularly within an online learning environment where children spend their time with their parents. This may emphasise areas where parents can be better supported to provide their children with optimal online learning environments, accommodating their specific learning needs. As children learning through online learning platforms may spend more time with their parents, parental knowledge regarding learning challenges, such as ADHD, would have a significant effect on the learning process and its effectiveness.

5.7.2 Online learning experiences of older learners

Experiences of individuals at various educational stages could be studied to establish a complete understanding of online learning. As this study was limited to primary school learners, future research could investigate online learning experiences from the perspectives of high school learners or university students.

According to some interviews, online learning may have been experienced differently by various levels of education, such as high school (Teacher 1 interview), university (deputy head interview), and online courses (Parent 2 interview).

One participant referred to her daughter in high school, engaging in online learning. This process was described as untroubled:

> "The technology was user-friendly for her. She understood how the technology worked. And for her to type up, whatever she needed to type up and submit was not

> a problem at all. And obviously, the teachers are used to that kind of working model anyway" (T1 L 563-568).

This confirms that online learning may be preferable for older learners, such as high school learners. These learners can access and use online platforms and complete their schoolwork effectively through technology and the Internet. Another participant supported this notion, remarking that online learning was ineffective for young children, although it may be more effective for older children, saying:

> "Not for young kids who needs parents' involvement, maybe the older kids are better and they're able to get a bit focused time, but I think the younger ones, no" (P3 L 539-540).

Other participants disagreed that the learner's age and education stage influence online learning's effectiveness. A participant considered that online learning might benefit older learners, such as university students, referring to her nephew studying online through university and remarked that he was:

> "Beside himself because he was doing maths courses and he's the sort of kid who likes to direct questions and he was getting pre-recorded lessons and no contact with the teaching staff at all" (D L 162-165).

This participant doubted the value of online learning in any situation. Another parent supported this notion by describing her experience of participating in adult online courses.

> "I can see, um, halfway through I'm wondering, 'I'll turn on my video off, let me have a cup of coffee' or, but like a little more distracted in my head. I'm not as focused because if I'm sitting with someone, I actually engage with it. Whereas if I'm on there, like, we're talking and you're listening, but you zone out and you start thinking about something that else you should have been doing and you, then you come back. 'Oh, gosh, I wasn't listening'. Whereas if you actually watching someone you are much more engaged" (P2 L1125-1131).

This comment reinforces the opinion that online learning for older individuals may also be a challenging experience. Based on the aforementioned comments, by interviewing high school learners, university students, and adults enrolled in online courses, a more accurate description of online learning can be achieved. This can apply to online learning procedures to improve current practices.

5.7.3 The experiences of children with diverse learning difficulties

As this study focused on the experiences of children with ADHD, a suggestion for future research involves analysing the experiences of children with diverse learning difficulties and physical disabilities, such as visual or auditory impairments. Such research can benefit from analysing the effectiveness of online learning for learners with diverse learning needs to those with ADHD.

5.7.4 The effect of parenting styles on the experiences of online learning

In this study, parenting styles were outlined. As Dong et al. (2020) state, parents play a significant role in the learning experiences of their children. This may be particularly true of children who are involved in online learning, as they attend school from home via online platforms. The perspectives of parents of online learning may therefore play a significant role in the perspectives of their children, as well as the effectiveness of this mode of learning. Future studies could look into this in order to analyse the link between parenting styles and the effectiveness of online learning. As mentioned previously, the change in parenting styles during the time of online learning affected the microsystems of both children and parents as they were required to adjust to slightly different roles within their family.

5.8 Recommendations for practice and policy

5.8.1 Recommendations for schools and the department of education

The data from this study can be used to inform policy in order to improve online learning for children with special learning needs such as those with ADHD. Suggestions can be given to schools such as the inclusion of psychical activity and designated time for peer interactions or discussions.

5.8.2 Recommendations for educational professionals in practice

This study states that online learning was a challenging time for children with ADHD and their parents. Many of these challenges were a direct result of the Covid-19 pandemic, which resulted in the closure of schools and therefore a considerable lack of social interaction. This study highlights areas through which educational professionals such as educational psychologists can guide parents and children. Areas in which educational professionals can give guidance to parents of children with ADHD who participate in online learning include the following:

- Guidance on the dangers of excessive screen time and how to limit screen time

- How to support children with executive functioning skills such as time management and task organisation
- How to support their children emotionally during stressful times such as the Covid-19 pandemic

5.9 Concluding remarks

Online learning advantages and disadvantages exist, specifically for children requiring special learning support, such as those with challenges associated with ADHD. The overwhelming response from the study participants indicates that the disadvantages of online learning far outweigh the advantages. All participants, including parents, teachers, and the school's deputy head, agreed that learning and teaching in a face-to-face classroom was more beneficial than online learning to children, particularly those diagnosed with ADHD. Responses from participants confirm various challenges experienced by children, parents, teachers, and school management systems because of online learning. These challenges include the lack of social interaction children are exposed to through online learning, the lack of concrete and practical learning, the magnified distractibility owing to learning in their home environments and online platforms, a lack of attention from professionals and significant parental involvement required to assist children learning online. Because of these challenges experienced, parents agreed that they would not choose online learning to educate their children.

5.10 Personal reflection

As a teacher who taught during the school closures of 2020 and 2021 through online learning platforms, this research is important as, throughout my online learning experience, I noted several opinions of online learning from children, parents, other teachers, and heads of schools. For me, it was important to understand the experiences of children for which learning difficulties were evident in the classroom and how this affected the effectiveness of their online learning experiences. As someone who has taught children with ADHD in the face-to-face classroom setting and online setting, comparing these two methods was not only fascinating to understand, but also necessary to improve my teaching methods to accommodate children with dissimilar learning needs.

Throughout researching this topic, I related to my own teaching experiences, in the classroom and online, and understood how circumstances affected children, their learning, and their families.

I have since reflected on my own experience of online learning and how it was implemented in the school where I teach. I am now aware of the opinions of children and their parents and what they require. I have learnt about issues and experiences of parents, children, and teachers and reflected on how these could be avoided or minimised for children who participate in online learning. This knowledge would be useful as a teacher if I had to teach online again, as I could improve my online teaching style to avoid or minimise challenges experienced by children and parents. For example, I would be cognisant that learners learn through social interaction, providing children with opportunities to communicate and collaborate. I would also allow children to take frequent movement breaks, encouraging them to retain attention throughout the online lesson. Using concrete and practical materials, such as hardcopy worksheets, would also advantage the children's learning processes.

By engaging in this research, I have reflected on how I conduct my face-to-face lessons and am more aware of how to support the children in my class better. Some of these reflections include the need for children to take movement breaks throughout lessons. I have also included more collaborative tasks and activities for children to learn from each other within the lesson. Because of this, the knowledge gained throughout the research process of this study has made me more aware of the experiences of learning with diverse learning needs and, therefore, more accommodating and inclusive in my teaching methods.

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Appendices

Appendix A: Consent letters

- Example of consent letter sent to parents

Faculty of Education

Parents' perspectives of online learning with learners with ADHD
Consent Letter to Parents/Guardians

Dear parent/guardian,

I hereby request your consent to participate in my study. Currently I am studying for a Master's degree in Educational Psychology at the University of Pretoria. As part of my study I will be asking you questions, as part of a focus group with other parents, regarding the experiences of online learning according to parents of children with ADHD.

To ensure confidentiality you will be allocated a pseudonym. The collected data will be stored in a safe place as per the requirements of the University. If you agree to participate in this study, please sign this letter.

Should you require more information, please feel free to contact me or my supervisor on the email addresses provided below.

_____ _____

Jessica de Castro
(Student)
Jessicadc02@gmail.com

Dr Michelle Finestone
(Supervisor)
michelle.finestone@up.ac.za

……

I hereby confirm that I give consent / do not give consent to take part in the study. I understand that by giving my consent I will answer questions as part of a focus group with other parents.

I also understand that participation in the study is voluntary and my identity will remain confidential. I agree to keep the personal information of fellow participant confidential and not repeat what is discussed outside of the focus group. The data collected will only be used for the purposes of this study.

_____ _____

Signature of parent/guardian Date

_____

Name of school

- Example of consent letter sent to teachers

Faculty of Education

Parents' perspectives of online learning with learners with ADHD
Consent Letter Teacher

Dear Teacher,

I am a student at the University of Pretoria and currently enrolled for my MEd (Educational Psychology) degree in the Faculty of Education. The aim of my study is to investigate the experiences of online learning according to children with ADHD and their parents. This study may contribute to making online learning more inclusive of the needs of learners with ADHD.

I would therefore like to obtain your permission to ask you questions as part of a focus group with other teachers, regarding your experiences of teaching learners with ADHD online. Participation in the study is voluntary and you may withdraw from the study anytime you feel like doing so. All the data collected will remain confidential and will only be used for academic purposes.

Should you require more information, please feel free to contact me or my supervisor on the email addresses provided below.

_____ _____
Jessica de Castro **Michelle Finestone**
(Student) (Supervisor)
Jessicadc02@gmail.com michelle.finestone@up.ac.za

……

I hereby confirm that I give consent / do not give consent to participate in this study. I understand that by giving consent my participation is voluntary and that I can withdraw at anytime during the study. By agreeing to participate I will take part in a focus group with other teacher. I agree to keep any information discussed confidential.

_____
Name and Signature of teacher

_____ _____
Date Name of school/ School stamp

- Example of consent letter sent to deputy head

Faculty of Education

Parents' perspectives of online learning with learners with ADHD
Consent Letter Principal

Dear Principal

I am a student at the University of Pretoria and currently enrolled for my MEd (Educational Psychology) in the Faculty of Education. The aim of my study is to investigate the experiences of online learning according to the parents and teachers of learners with ADHD. The study will include focus groups and interviews with parents and teachers at the school, as well as an interview with the principal of the school. The study may contribute to making online learning more inclusive for learners with special needs such as those with ADHD.

I therefore would like to request permission to conduct the research and use the above mentioned methods as part of data collection.

All the data collected will remain confidential and will only be used for academic purposes.

Should you require more information, please feel free to contact me or my supervisor on the email addresses provided below.

_____ _____
Jessica de Castro **Dr Michelle Finestone**
(Student) (Supervisor)
Jessicadc02@gmail.com michelle.finestone@up.ac.za

I hereby confirm that I give consent / do not give consent for myself and the school to participate in this study. I understand the participation of the school is voluntary and can be withdrawn at anytime during the study. By agreeing to participate I allow teachers to be part of a focus group discussing the experiences of teaching online. I also agree to keep any information discussed confidential.

_____
Name and Signature of Principal

_____ _____
Date Name of school/ School stamp

Appendix B: Interview schedules

Semi-structured interview schedule for parents

1. What grade is your child in and how old were they during online learning?

2. What is your opinion on attention deficit hyperactivity disorder (ADHD)?

3. Is your child on any medication to help manage their ADHD and what effect does it have on his/her learning in your opinion?

4. How would you describe the impact of ADHD in general on your child's learning?

5. How would you describe your family's experience with online learning?

6. How do you think your child would describe the online learning experience?

7. How would you rate your involvement as a parent in your child's online learning?

8. In your opinion, do you think that online learning is beneficial to learners with ADHD?

   Please elaborate on your answer.

9. In your opinion, do you think online learning may have been easier if your child did not have ADHD? Please elaborate on your answer.

10. What was the most challenging aspect for you as a parent regarding online learning?

11. What do you think your child struggled with the most during online learning?

12. How would you improve the process of online learning to make it more accommodating to the needs of children with ADHD?

13. What effect did online learning have on your family as a whole?

14. Do you think that online learning needs to be improved? In what way?

15. How do you monitor your child's use of digital media? Do you find this particularly tricky due to online learning??
    - What are the rules? Is it easy to set rules?
    - How were you able to establish a routine?

16. Have you experienced any after effects of online learning since your child returned to school? Academically, socially or behaviourally? Please elaborate on your answer/s.

Semi-structured interview schedule for teachers

1. How would you describe your experience with online teaching?

2. Please briefly describe the process of online learning
    - apps/websites/devices
    - Expectations of you as a teacher?

3. In your opinion, do you think that online learning is beneficial to learners with ADHD?

4. Did you find a significant difference between learners with ADHD and neurotypical learners while teaching online? What was it?
    - Academically
    - Emotionally
    - Behaviourally

5. How would you compare teaching online with teaching in person at school?

6. What was the most challenging aspect of teaching online for you?

7. How do you think parents of children with ADHD found the online learning process?

8. Have you experienced any after effects in the learners (behaviour, academic performance, emotional wellbeing) since being back at school, as a result of online learning?

9. Do you think that online learning needs to be improved? In what way?
10. Are there any additional comments you would like to make regarding teaching children with ADHD online?

Semi-structured interview schedule for deputy head

1. What were the challenges you personally experienced during online learning, as the principal/deputy head of the school?

2. What were the challenges the school as a whole experienced during online learning?

3. Were there any specific challenges the teachers experienced at the time?

4. What did the school do to support the teachers during this time?

5. What did the school do to support the learners and their families during online learning?

6. Do you think that online learning can be improved? In what ways?

7. Do you think that online learning needs to be improved?

Appendix C: Example of interview transcripts and coding

Key for coding:

Socialisation

Technical issues

Concrete/practical learning

Role of parents/involvement

Emotional aspects

Child perspective

Distractibility/lack of focus

Working parents

Balancing time between multiple children

medication

movement

Family interactions

Loss of learning

Lack of attention from professionals

Routine and structure

Teacher perspective

Example of transcript

Parent 2 Interview

PART 1

Researcher 0:01

Cool. So just firstly, what is, what age is your child now? And what age were they when they were doing online learning?

Parent 2

So, she is nine at the moment, turning 10. And then they were doing online learning, they were six turning seven, is that right?

Researcher

six to seven. Three years ago...

Parent 2

Nine. Yes, yeah.

Researcher

Okay, perfect,

Parent 2

She was in grade one

Researcher

Okay so grade one,

Parent 2

When they did it online.

Researcher

Cool. And then she's in grade four now.

Parent 2

Four. Yeah.

Researcher 0:32

And then what is your opinion or your experience of ADHD.

Parent 2 0:38

So it's a difficult one, because [Child] doesn't, she doesn't show you the signs of like a jumping the kid around, blah, blah, blah, she's more distracted and slightly in the clouds kind of kid.

Researcher

Okay.

Parent 2

And a very avoidant of tasks that she finds hard, and that she's got to focus in on, more than anything else.

Parent 2 0:58

So ja like she, you know, if you give her a, if you give her a, something to go and do, you can give her one instruction. If you give her three, we get through maybe one or three, and get distracted, halfway through, going to do the first thing that we've got, because something else took her took her liking, and she decided that you know, so simple things like going in brushing your teeth. But on your way to brush your teeth, you found a card that you thought was interesting to stop and look at it. So it's quite, it's quite frustrating. And more because I think the focus and the concentration is the big issue. I know in a classroom environment she is, when we diagnosed her. She had a great teacher actually, she said she just she looks at this because it's in the clouds. She wants to organize a social life. She's a very happy, independent little girl. So she's got some really great skills, which is very interesting to watch from an outsider.

Parent 2 1:45

But yeah, but it's, it's, it's exhausting as well. I think we knew we had rock bottom when we had three of us dressing up for school one day, and I've got twins that are two and a half years younger than her who were dressing themselves for school.

Researcher

Oh, shame.

Parent 2

It's a little things like that. It's frustrating from the point of view that she's just, she just can't focus in on one task.

Parent 2 2:04

And a simple thing like getting yourself dressed because she was a lot younger at the time, but still.

Researcher

And things that she enjoys? Is that easier for her to maintain attention?

Parent 2 2:15

Absolutely. So she absolutely loves someone write reading to her. She'll listen to someone read to for hours and hours on end. And you think for a kid that's, so in the weekends, we don't [mumbles], we don't actually medicate her, up until actually probably a week ago. We don't medicate on weekends, so and holidays.

Parent 2 2:30

And yet she can hold a concentration perfectly listening to a book so you'll ask her like "[Child] are you even listening to this?" Because she'll be doing something else while she's listening. And she'll tell you exactly what's going on in the book.

Researcher

Okay

Parent 2

So she likes being read to. She loves an audible. Don't ask her to read. But then that's also different elements for her as well. So different sides of the difficulties that she has.

Parent 2 2:52

Yeah, she likes something. She's quite happy to do it. She'll go ahead and get on to things. She'll do stuff. She loves maths. Not a fan of English, we understand it's a lot more reading a lot more written. It's quite focused task. It's, you know, quite in depth.

Parent 2 3:07

But ya she'd definitely a pretty happy kid. And she doesn't actually almost realize that she is so um not there half the time. She actually gets quite frustrated when you say to her "But [Child], you're not concentrating". She's like "but I am". Which is quite a nice, it's probably the nicest way to have it, is that if you're not actually, someone isn't sitting on you all the time that you actually very unaware of the fact that you're in someone's space. Maybe it, when I think, before she was medicated, she was very unaware of her self and space. So like would give you a hug, but that would be an extreme hug, you know that type. And then you'd say like "[Child], back off. You're hugging your friends or you're in your friends", like that little circle of space. She's very unaware of that space. Whereas she's much more aware if it when she's on meds.

Researcher

Okay.

Parent 2

Off meds she does, she'll be on you know, she'll keep at you. Actually this holiday I still said to her, with the kids, the little ones. They've said no. They mean no. And it's interesting because she was she was on her meds when they say no, she's kind of like, "okay, I get it". But off the meds, it's like she almost can't comprehend anymore. You know, it just doesn't think like, doesn't think that way.

Researcher

Wow.

Parent 2

Yeah. So it's interesting.

Researcher 4:14

And then, okay, so the next question is, is your child on any medication to help and what effect does this have on on their learning?

Parent 2

So yes, she's been on numerous things. So in grade one and grade R we [mumbles] we started medicating and grade R. We're straight onto we did Ritalin, a short acting Ritalin which made a big difference grade R. On grade, by grade one we changed it to a long acting Ritalin to be able to get through the longer school day.

Researcher

Okay.

Parent 2

By grade two, she, we took her off Ritalin because Ritalin makes you very anxious, and I found it, we've, I just I just found her getting home and feeling quite anxious when she got home from school, which was very unlike her. So she went on to Concerta and a small dose of Ritalin. And now this year we've actually just, as I said a week ago, go just changed her again, is, she's on Concerta and Strattera, which is both...

Parent 2 5:00

Both of them are, the Strattera though you have to take regularly, you have to take everyday.

Researcher

Okay.

Parent 2

Um. But that's more focused on that, that that is used more for focus, whereas this Concerta is more for concentration. Well, distraction distraction. That's how they described it to me. And it was just interesting because she was sitting with the neurologist the other day, and she said to her, she was distracted about something you said, "[Child], you lost your focus there. Were you distracted by the baby crying in the background?" She said "No, I didn't notice that". And then she said she actually was losing her focus. So the Strattera, the Concerta was working for the distractibility, but it's actually focusing in on something. Which is difficult for her.

Researcher

Okay.

Parent 2 5:38

So let's see.

Researcher

Okay, so you've done all the trials.

Parent 2 5:42

We've done everything.

Researcher

So then grade one, she was on Ritalin. So that was when she was online.

Parent 2

Ya. Mmm [agrees].

Researcher 5:54

And then how would you describe the impact of ADHD in general on your child's learning?

Parent 2 6:03

This is a difficult one, though. So I think it's look. I think she lost a bit in that grade R year, she didn't go to [current school] initially. So she wasn't at [current schoo], four, double naught that well, triple naught and double knot. So she only came in grade naught [Grade R]. So only six new kids in her class. So the way they already started to learn was very specific for how they were going to learn in grade R. So for her coming in, she and then six months before I kind of had a chat with her teacher and realized that actually, her teacher was telling me what I already knew. So I kind of walked back in and I said, "What are you trying to tell me? I think I know what you want to tell me. But you can tell me, you know". And that's when we realized. So I think she lost a lot of that, a lot of a lot of her confidence there around, especially around sounds, sounds and naming letters, you know. So she had come from a nursery school environment where they learned the a b c, the apple, Annie Apple that thing, and then [current school] teaches them for the first six months A B C. And I don't think she, I don't think she knew anything. By the time she got to do an assessment in the July, we did not no longer knew the a b c. And we hardly knew the ABC, we muddled everything up. So like if you had, if you had to put a put a word together should go a P (spells out apple).

Parent 2 7:14

You know, so she was using the, she was using the word and the sound, and just using them together to

Researcher

confusing them together

Parent 2

Totally confused. So I think that impacted quite a bit.

Parent 2 7:23

Um. Grade R, I mean, grade one, learning to read in an COVID environment for a child like her was not ideal at all.

Parent 2 7:32

Um it was lots of fighting amongst the family. And parent, mom, mom and her trying to get it to work because she doesn't want to. She had two siblings that were two and a half years younger, they had nothing to do during the day because they were they were so young that they they must just go play. There's no reason that they had to do any like sit down work. So she really struggled with that. And I think...

Parent 2 7:54

I also think that we missed, a couple of her learning difficulties in her grade one year.

Researcher

Okay.

Parent 2

So her reports say that she could read and she could sound and she could do all sorts of things. By the time she got to grade two. Within two weeks, I phoned her teacher and I said,

"Listen, I don't think this child's where she needs to be". She's like, "No, I don't think so either". And I was like, Whoa, but we've got a report from last year where, and not to any default or [mumbles]not to be badmouth the teacher because it wasn't a teacher issue. I think those kids were, they were just, they would they were making sure they were getting, they were getting through it.

Researcher

Yes.

Parent 2

And without being in the classroom for big chunks of time. You missed out on some of the foundation fundamentals and foundations. And [Child] is quite bright, because as I said to you, auditory, she loves, [mumbles]. So I actually think that she learned to read, she, they would read the reader in class, and then they would have their turns to read. And I think she read from memory.

Researcher

Okay.

Parent 2

So that's all I can imagine, because it said she could read it. But then when I was doing sounds of her in Grade Two, I was like, “we're nowhere here." So how she was reading those readers efficiently enough to get what she got, like a Yeah, I'm not sure.

Researcher

So she was possibly aware that she was struggling to reading and she made up for it by memorizing...

Parent 2 9:06

She knows. Ja. She makes up for in her memorizing and her auditory process. So, so even in the reports that we've done, so like [school's educational psychologist] has done a couple of assessments on her and her auditory processing sits at about two or three years older than what she is. But her reading sits about two or three years. Yeah, two years. Was probably last time was about a year, yeah, below where she should be. Okay, well, so one takes over for the other generally.

Researcher

Yeah. So with the learning difficulties, has she been diagnosed with anything?

Parent 2

Yes. So [mumbles] she's dyslexic.

Researcher

Okay.

Parent 2

Which is what we... they only say you can only give a firm diagnosis at the age of nine. I think we've always known.

Researcher

Okay.

Parent 2

And it's, little things like, she'll miss a word out or she will replace it back later.

Parent 2 9:47

So we've done everything, from reading reading therapies to eye tracking to, whatever [laughs].

Researcher

Everything.

Parent 2

Yeah, we've done it all.

Parent 2 9:57

But ja so she's, [mumbles] at this stage she doesn't know, she's dyslexic. We've never told her because I actually don't understand enough about it to actually tell her that she's dyslexic because, but she, ja. And I don't know if we would have picked up a few more of those difficulties if she was actually in a school environment over the grade one year. Whereas not having been there. I mean, everyone was just in turmoil. The teachers were surviving. Everyone was just surviving.

Researcher

Exactly doing bare minimum.

Parent 2

You we're trying to get the kids through the year, and make sure that we're happy actually, more than anything else.

Researcher

Yes. And also not knowing how everything works.

Parent 2

Absolutely.

Researcher

We're all trying to figure it out.

Parent 2

Yeah. Yeah. So, at the end of last year, they diagnosed officially, it still doesn't actually say it on the report that she's dyslexic, but they just describe it as a specific learning disability, but she's dyslexic.

Researcher

Okay.

Parent 2

So I can tell by her spelling, so she spells phonetically. And she, yeah, she spells phonetically is the biggest thing and actually she just doesn't like writing more than anything. The biggest difficulty.

Researcher

Okay, so it's the writing and reading.

Parent 2

Reading, ja.

Researcher

But her math is good?

Parent 2

Maths is fine.

Researcher

Okay.

Parent 2

Yeah.

Researcher 10:56

And then, how would you describe your child's experience was online learning?

Parent 2

Hard. [laughs].

Parent 2 11:08

Um. She wasn't interested. She didn't want to be doing it online. She is an incredibly social kid. So she thrives in an environment like this (indicates classroom), where she wants to go to school, she wants to see her friends.

Parent 2 11:22

Having to get up in the morning and go and sit at a computer and learn off that and not have access to actually your friends and learn their normal the touch the feel that kind of stuff. And especially for a kid with ADHD, they like the tough, they like to move. They like the busyness of a class, that kind of a distraction sometimes also keep them in line. Whereas that like focused attention onto onto an iPad or a computer. It was difficult for her.

Researcher

Okay.

Parent 2

Um She didn't enjoy it at all.

Researcher

Yeah.

Parent 2

She was very happy to go back to school. She really didn't like it. I think she was like, jumping for joy the day they said they could go back to school.

Researcher

And you think she learned, she learns better in school than online?

Parent 2

Absolutely, yeah.

Researcher

Okay. So she prefers to be at school?

Parent 2

Yes. Yeah. I think as ADHD kids, they, they, they like people. They're very.. they've generally got very good, quite good people [mumbles], but a lot of them do actually have quite good people skills. I think that's why you see so many, like entrepreneurs, who've done incredibly well for themselves who are actually ADHD, or dyslexic because they, they're good at the people skills, that's their strengths you know.

Researcher

Exactly.

Parent 2

But then I'm sitting behind a computer doing work. Like actually, [Husband] always says to me, he doesn't worry about [Child] one day, she'll be fine. I always obviously, I'm being a mom. I worry.

Parent 2 12:35

What do we do next? What are we going to do? How are we gonna get her through? Is she gonna be okay? He's like, she's got she can look and he's a lawyer. And he she he said, she said "[Parent 2], she could negotiate me out of out of a deal". Because she's got that skill, you know.

Researcher

Yes.

Parent 2

She's wants what she wants, and she's going to push you till she gets what she needs.

Researcher

Yes, that's good. It must be difficult as a parent of someone like that though.

Parent 2

Yeah. It is [laughs].

Researcher 12:56

Okay, and then how do you think your child would describe online learning experience?

Parent 2

[Child C] would say she hated it. And um she didn't think it was fun. And yeah, I think she just felt completely disengaged from school as such. And also for kids that struggling, like to sit and listen to someone on a, who's not even moving and someone sitting there doing a task, being forced to sit and do a task. It's very different for a mom to tell you to do the work. Then it is if a teacher tells you to. If you see all your friends doing it, you do the work.

Researcher

Yes.

Parent 2 13:35

But then I found that even with your homework, when I'm saying "[Child] come up with this. This year, we actually onto a good start getting the homework done. But normally it be like "we've got to your reader". "Ja we'll do it just to just now. I'll do it just now". So very avoidance of the tasks.

Researcher

Okay.

Parent 2 13:45

So online learning for her meant that exactly that, we always, we were fighting with her because she had to get the work done. It had to be submitted, but she didn't want to do it. And then you're getting to like five o'clock at night and you still haven't done it. You've had the whole morning the whole day, because we're gonna be going anywhere.

Researcher

And then I'm sure also not seeing your teachers. There's not there's not that...

Parent 2 14:01

There's no feedback.

Researcher

"Where's your homework?"

Parent 2

That's it. And also, where was the feedback? Like, the feedback was like well, you handed it in but you didn't get the big star or the "well done my darling". So you never got.. like its the positive reinforcement on "try a little bit harder, come let me help you here." Um.

Parent 2 14:16

And also often getting the prompts, so for a kid like [Child C], she's often prompted by a kid next to her, you know, where to start on a piece of paper. So her, planning is very difficult. So, if you do now, if I tell her "[Child] you've got to do this task". She could spend 10 minutes looking at the piece of paper thinking "where do I even start?" Like I know I've got a date somewhere, but I don't know if it must be here or here. We were sometimes just by having someone next to you that says "okay the date goes here", prompts her to "okay, my start, my page". So it's often the planning that's difficult.

Researcher 14:46

And then she can just get on with it once you see she seen. Okay,

Parent

Once she's seen what's it what's going on.

Researcher

Yes. Okay.

Researcher 14:52

And then how would you rate your involvement as a parent in your child's online learning?

Parent 2 14:58

Uh. So we were very involved, but we also didn't enjoy it (says quietly (almost guiltily) and laughs).

Parent 2 15:03

I took away from that, that I would never homeschool my kids. And I didn't think it was healthy relationship with your mom to have with a kid.

Researcher

Okay.

Parent 2

Or a dad for that matter. And I think that you're their safe space. So you actually want to be where they can come to you and fall apart because they've had a bad day at school, not the person forcing him to do the bad day at school.

Researcher

Yes. Okay.

Parent 2 15:24

Yeah, I mean, we would, we would sit with her. And we had to sit with her quite a lot to do it, which I was lucky enough that I didn't work. So I could, you know, through the day do bits and pieces with her. But it was I mean, it was very timeous. I felt sorry for moms that were

working because to now be online at eight o'clock. But you've got to meet a meeting, and you got to try and get your kid on there. Because they weren't kids in grade one weren't um equipped on how to even get on it. Some of them are, but my kids aren't like I try and avoid computers as much as possible. Like they have very little, limited access to iPads at the moment, like it just is what it is. It's me, some other parents are looking for free with them. So the kids can log in. And actually at one point that was in the grade two when they started out in the beginning part of the year when we were also in lockdown.

Parent 2 16:06

And they, well they got a tutor, we actually got a tutor for them. There were four or five kids, and we got a tutor to come in and do this. We just took them there every day. Because all of us were "we're not doing this again, it's just not not good for our relationships". But there was a couple of kids that would arrive there, login to their computers. And I was like well, I don't think my child even knows how to like sign in to something.

Unknown Speaker 16:24

So it's it was hard to do to actually be, you had to actually physically sit there and do it.

Researcher 16:30

Okay. And with with her work and submitting, did you, did she need a lot of help getting the work done?

Parent 2

Yes.

Researcher 16:37

Okay.

Parent 2

Yes. Yeah. But it's again, because it was focus.

Researcher

Yes.

Parent 2

So another kid like her friends, just, they did the work. I used to say to their moms "you so lucky". For the kid that doesn't like it, she's just going to fight you for it and even on her meds actually she didn't, didn't like it. So it did make me realize how much who meds work because there were a couple of days, a couple of days when I said to her, she would fight and she didn't want to take her meds and we were like, "ugh you know, don't worry". And those days were shockers. I mean, then there was getting nothing done.

Researcher

Okay

Parent 2 17:05

It was like, to get to, get that concept. So, her being medicated and not being medicated you can notice straight away. Okay, I don't notice it in a, I don't notice it in the weekend because she's just a bit more in your space. But that's a bit because she's not a, like a lot of people medicate their kids if they're those hyperactive, jumping around. Because it's concentration, on the weekends we're doing stuff she's enjoying. So she's actually happy.

Researcher

Okay.

Parent 2 17:30

You don't notice it. I'm not, I don't feel like I have to medicate her on the weekends. The only time I would is probably when we go to people's, like in laws or like parents where they like the old school grannies that thinks like, you know, kids must be sit quietly and they mustn't be destructive and whatever. And your kid is pushing and poking, poking them and poking the sister and just poking them and poking them.

Parent 2 17:46

But there were a couple of days that last year, she, one day it was my fault. I forgot to take her got her to take her tablet and the next day I can't remember why also didn't take it. It was two days, two days in one week. But they weren't consecutive. And I got a message from [Child's teacher] to say, "[Parent 2] you need some help? [Child] tells me she hasn't taken her tablets for two days". And I was like "ja, sorry that one day was my fault but I had [Husband] was away and he normally does it', how we run our mornings. And the next time I

can't remember why she didn't take it but anyway, she said 'whilst it's been lovely to see the personality that has come out" because she's obviously a lot more engaging.

Researcher

Yes.

Parent 2 18:16

Whereas on her meds, she's much quieter and much more subdued, much more like, anxious in some ways, like and aware that it work is not perfect. Whereas off her meds she doesn't care that her work's not perfect. She would just do the work and hand it in. It wouldn't faze her, but her meds make her very much more aware of her, what she's producing. She said "it has been lovely to see the personality but we have done, no work. She said "normally she looks at me like with these little eyes, looking at me, trying to do everything perfectly not trying to get into trouble". And she said "I would say to her [Child], you haven't done your work and she'd be like "ahhh its okay. I'll do it now." She'd turn around and she'd still not do her work. So yeah, so it's always good to see both sides that it actually is doing what it needs to do.

Researcher

That's true.

Parent 2

Yeah.

Researcher 18:55

And then just about, you're quite strict with screens and screen time? Were you worried about that in in COVID?

Parent 2

No, I don't think so. I mean, I think when you first went into lockdown we stopped TV in the week just because otherwise you'll just roll from one to the other. I wasn't worried, [current school] were great with the amount of work that they actually did on the screen. So especially those little ones. They weren't on a lot.

Researcher

Okay.

Parent 2 19:20

Like they weren't on from from eight until 12 type thing. You know, they'd go on for an hour then they'd go have enough and then it was also, a lot of them was prerecorded so you could manage when and, when they were on and off. And I'm not particularly worried about screen time. I think our kids get enough time outside that when they do watch TV sometimes it is their downtime and but I don't, I don't I'm more worried about the access they have other stuff on things like iPads and computers. So that's my worry of screen. Of actually more, it's my fear of what they click into. If they're on YouTube. What does it go to next? So yeah.

Researcher

But you sat with her while you, while she did the work so you could monitor what was being seen.

Parent 2

Yeah, Yes.

Parent 2 19:56

I mean, that was, that, she would she wouldn't know how to even get from to like something else, so we didn't have to worry about her at that stage. I think now she probably could get around it, navigate it a bit better than we, then she did in grade one and grade one she really finished her work and the minute she finished her work she closed that thing and she was off running because she wanted to go and play with her siblings.

Researcher

Okay. That's good.

Parent 2 20:14

Yeah. So it wasn't too much but it was hard. I must say, I wouldn't. I wouldn't like anyone to have to go through that again

Researcher

Yeah, that's, that's what everyone's been saying.

PART 2:

Researcher 0:00

Okay, in your opinion, do you think that online learning is beneficial to learners with ADHD?

Parent 2

No.

Researcher

No. Can you elaborate?

Parent 2 0:09

I think that they need to be in a classroom environment, and I think they need to be with people. And whilst I think that you can medicate them to focus and get away with the distractions and that kind of stuff, they still need an element of distraction. Like they need, the way they focus is that to be able to have a break, and they are not the kind of kid that will sit and zone in on something and listen to the same monotonous talking of someone on the other side, they need to be engaging. But that's my opinion, I don't think that [Child] would ever thrive in a online environment. I think she would. Yeah, it's [mumbles] personality driven as well. She's a people's person. You know, last year, she couldn't come to school once, because she was sick, she burst into tears. She was half dressed to come to school, she didn't want to miss school. I was like, you know, most kids would be like, celebrating that they can have a day at home, and she doesn't want to, she wants to be with people.

Parent 2 1:01

I think online is incredibly boring. I mean, I know that it's reduced amount of work. And I think the problem with a school environment is that you had to get that, in some ways you had had much more work to do. If you speak to homeschool parents, parents that homeschool their kids, they don't do, they do if they're lucky, they say they do like two hours a day. It's so focused, they don't do music. They don't do the PE. They don't do... So actually, they do the English, the maths and maybe like general science or something like that. That's all they do.

Researcher

Yeah.

Parent 2 01:29

So how they get through that in a week. So maybe because it's less to do, but then you've got to have the kid for the rest of the day, who's distracted, all over the place. And actually school is good for them. Because they move, they get the movement that they need in the playground, they get the... It's the other things. It's the things we don't think of, incidental learning that they get through... and especially for a kid with ADHD because there are a lot more in your space. And they need to understand that this space limits. They need to understand that there's ways of coming into someone's group, there's ways of talking to people, and often when they they don't think like, you know, they don't have that blocker, they don't always have that... how do I explain it? It's like, you know, we always know like, Okay, we're gonna come into a group we say, "Hi, everyone", they'll barge into the group, because, not because they they're being ugly. It's just they don't think [mumbles] it's impulsivity, impulsivity of them, and they need to learn. And the only way they can learn that is through being around other people. But you know, what, what upsets people otherwise we'll go into an environment when they are around people and they just actually end up upsetting everyone.

Researcher

Because they're not used to it?

Parent 2

They're not used to it. Yes, yeah.

Researcher 2:32

And then, in your opinion, do you think online learning may have been easier if your child did not have ADHD?

Parent 2

Yes.

Researcher

Okay. Can you please elaborate?

Parent 2 02:41

I do. I think that she would have been able to focus a bit more, and I think she would have maybe done the tasks with a little bit more um focus. And and, yeah, I think, like, she needed someone to pull her back all the time. So she actually needed someone to always say to her, "[Child] come, come, this is what we're doing", you know, and with, with siblings running around, and you couldn't get them out because your husband's on a call. So like they're around too, and they'll go play for a bit, but they distracting you. It's hard to just to keep pulling her back. Whereas like her friends, I mean, they would just get there, wake up, ask what they had to do in the morning, be ready and waiting. Do the activity, submit it. You know, we as we were constantly like "Come [Child], what have you gotto do today? This is your plan", trying to manage her to get it all done. So yeah, I think, I think without an ADHD, well, I mean, I can see it now with even the two little ones, the one, that one of them, the little girl, I mean, she's definitely not ADHD. And I mean, she is just so much more structured. And the way that she does things, the way she processes things, the way she presents things.

Parent 2 3:41

She enjoys the learning. So like even the homework now she comes home, they're learning to read, "Mom, we've got to do my reading." [Child] would have said, "Oh, I'll do it later. I don't want to do it now". She was spending the whole day trying to keep it together. That actually the downer, especially on the meds, when they were on the, when she was on the short acting meds, was a, it eliminates that your body, it wasn't actually the short-acting, long acting at about 2:30. And that's when you're getting home from school. You haven't eaten. Because the Ritalin makes them not eat.

Researcher 04:07

Yes.

Parent 2

So she's hangry and she's frustrated and she's had a hard day because she has had to work extra hard. They just have to work hard all the time.

Researcher

Yes.

Parent 2 04:14

So like, ja, that's what makes me realize that the two little ones don't have it. Because when I look at them and their way of processing, because this is now they they're the same age [Child] was at when he went into lockdown. So it's quite interesting to watch.

Researcher

So you think that they would be a would be better?

Parent 2 04:30

They would be better off. Yeah. They would have minded so much. They'd find it exciting. Yes. But yeah, they don't need, they need, but then I don't know also, they've got, there's two of them. So they've got each other. You know, they're best mates they, you know. They're a boy and a girl which is also nice. So there's no competition. There's no fighting between the two of them. But there's an indirect competition, like what's your teacher doing? What's my teacher doing?

Researcher

Oh, okay.

Parent 2 4:52

Yeah, I think they would have enjoyed it a lot more than, well they had, because they had a little bit when they moved to [current school] that first, in that January, and they were much more eager to kind of go online and they were little. But they, I think the novelty of it wears off?

Researcher

Yes.

Parent 2 05:04

I think the first week that, everyone's kind of a little bit excited by the third week, and you know these kids were anxious, like it's not only not only were, they were doing online learning, there were people, they don't understand what COVID was. They didn't, didn't know how we were going to get through it. Would they ever go back to school? Would they see their friends again? Will their friends survive? You're hearing people dying, you can't see your family. You, I mean, it was so many elements to it. And now they are having to do this work and it's not normal. It's not the way they know, it's not what they want to do. Like, I just think, actually, I think we're only going to see the reality of what those kids went through in a couple of years time when we realized, like actually go deep down to what did they actually feel during that time? Because I don't think they were old enough to express what they felt.

Researcher

Exactly.

Parent 2 05:43

And how they were feeling. I know for one, my little boy had night terrors from the day we went into lockdown, until the day we were allowed to walk out our house. And he had a night terror every single night between half past eight and quarter past nine.

Researcher

Oh my goodness.

Parent 2 05:56

So at some stage between that time frame, obviously going into that. And then because he was little, he was they were they were all of 3, 4. 3 Maybe, I don't know, but they were tiny. He was a boy. Boys don't talk about the emotions, what they're feeling. The girls spoke about COVID. They mentioned COVID. They'd ask what does it mean? He never, he never ever mentioned the word COVID. And even today, if you talk to him about it, it's very like that COVID. You know, and he had night terror every single night for the whole time. And then we would walk out the house and he was fine. And then and it's but it's triggered. We have nightmares often now with this change.

Researcher

Okay.

Parent 2 06:29

So how do you deal with it? I don't think these kids know how to deal with that, they're too little.

Researcher

No, exactly.

Parent 2 06:32

But they knew they couldn't see their family all the time. They couldn't see their friends.

Researcher

Yeah, it's a big change.

Parent 2 06:37

It's a big change. I mean, we all struggle, never mind these littlies.

Researcher 6:41

No. Exactly. And then what was your, the most challenging aspect for you as a parent regarding online learning?

Parent 2 6:50

I think maybe getting [Child] to enjoy it. Like, and to want to do it? You know, challenging to say, well, we have to do it. It's not a case of we've got a choice.

Researcher

Yes.

Parent 2 07:00

So that, for me was quite challenging was to help her understand that, I'm not I'm not doing this to be ugly to you. Like, this is how we have to learn for now, you know, and I think she often took it as a, little bit of a punishment. You know, I'll go do this work, you know, but because normally Mom's not the one telling you to do your work.

Researcher

Yes.

Parent 2 07:15

Um. So I think that was quite challenging. I think she, yeah, I think she saw it of more of a punishment rather than what it was meant to be, you know.

Researcher 07:22

So that's quite challenging for like your role as a mom, because you're supposed to be supportive and encouraging. Now you're forcing her to work.

Parent 2

Yeah. Absolutely. That's it. And that's why I always say, that's why I would never homeschool my kids, you're in the safe space. You're there space that they come home to if they've had a bad day.

Researcher

Yes.

Parent 2 07:36

You need to teach them the skills to get through that. But when you're the person saying, "Go do your work, go do this, do that, come on, like this". I don't think it's a healthy

relationship. I think if I ever homeschooled my kids, I would homeschool them at an institution that does homeschooling. [laughs].

Parent 2 7:50

They would still have to leave. And I think it's important that kids leave home.

Researcher

Yes.

Parent 2 07:54

I mean, they need to leave home and make friends. You can't, you can't just sit in your small little environment. I think you become part of recluse.

Researcher

Yeah.

Parent 2 08:01

I mean, I can't stay at home all day. I think I probably have ADHD. I'm pretty sure if I was at school in this day and age, they would diagnose me as an ADHD kid.

Researcher 08:09

Oh wow. Do you see a lot of yourself in your daughter?

Parent 2 8:12

Um, yeah. I'm here, I'm there. I get to the shops, I get half the stuff that I needed. I come home with the stuff that I didn't need, you know. Um, so I do, I see lots of it. And I think that there's an inheriting element to it.

Researcher

Yes, definitely.

Parent 2

Yeah, I can see. I mean, that why I sometimes, I feel so sorry for her because I, but when we were at school, it was okay to be okay.

Researcher

Yes.

Parent 2 08:33

And I think that's the hardest thing is that we went to schools, we all did well, we all went to University. Our parents have more about us. But the, like our generation worry about kids, we pander over them. We want them to be better or be more but also maybe also by nature, sending them to private schools, it's a little more competitive. I think that's a big thing. I mean we all went to, we went to a government junior school, we had a great time. It was okay to be average. There kids that, there were always kids that were worse off than you and there were always kids that were better than you. You were just as long as you're getting food, you were fine. I also came from a family of four kids. And we are, my sister, I'm also a twin. So my sister and I were the last two with much older brothers. So there was, they were seven and six we were born so there's a six and seven year age gap. But life was busy. My mom didn't have enough time to worry about you and worry. So but, yet she worried the most of my oldest brother. So I can see it exactly like that. Where I worry about [Child], she's the oldest. She's the first to go into this, to be the first to be there, first to be exposed to this. Everything's new for her.

Researcher

Yes.

Researcher 9:28

Okay.

Researcher 9:31

And then, what do you think your child struggled the most with for, with online learning?

Parent 2 9:38

I think doing the activities and following the instruction. So, you know, I would have to say to her, "[Child] this is what you've got to do". Or, the teacher would give the instruction and tell the, to go back and do it or it would come as a task. And she would fight with me and say what "the teacher said this" because she would take in one instruction, not the, breakdown of instructions. And if you were in a class environment, your teacher would probably write it on the board for you and you could go step by step. Or because you're a kid that struggles, she'll know, she's got to remind you what the next step is. And kids like a like [Child] need to have small, achievable tasks. And then do the next one. And then do the next one. But if you give them this long topic like this, you've lost her in the first sentence. And then she gets anxious about that.

Researcher

Okay, so, online, the teacher would just list all the instructions and then that's it?

Parent 2 10:24

Yes. And then you'd, I mean, I'd get the printout of what they have to do, and the she'd fight me on what we'd have to do because her teacher didn't tell her that and I'd like "well the teacher didn't tell you that, you just lost concentration halfway through it", or decided you didn't, it was just too big, a mammoth task to get through.

Researcher

Okay.

Parent 2 10:38

And again, if you're not seeing your friends do it, because small tasks almost felt difficult for her. But this is a simple, simple, simple as writing three lines, three sentences. Hated it. Okay look, we've realize she still absolutely hates writing. So that was obviously an indicator there and then of her dyslexic and written expression struggling. But, but she would fight and if she just did it, it would be done.

Researcher

Yes.

Parent 2

But if her friends are doing it next to her, she would have just done it because they were all doing it.

Researcher

Yeah.

Parent 2 11:06

So she felt , again, it's a punishment. "I don't want to sit here and do this and I want to be playing". So ja. Shame, it was hard.

Researcher 11:11

Shame, that is hard.

Researcher 11:14

And then how would you improve the process of online learning to make it more accommodating to the needs of children with ADHD?

Parent 2 11:22

I think I'd just simplify it. And I think, I mean, I probably was good at it, I would sometimes maybe ask the teacher to do a one on one with the kid. Because I think sometimes they get lost a little bit and then everything feels overwhelming. And I know [Child]'s grade one teacher was really good like that. So sometimes she'd do like an extra reading lesson with [Child] on her own, just to make sure she was getting what she needed.

Parent 2 11:49

Um ADHD kids actually, interestingly, well my experience, from the kids that I do know, do actually enjoy quite a lot of one on one time with like a teacher or a therapist or a, because I think they they zone it on the needs, they, they're helping you, you know. And they enjoy that that kind of interaction that they get with them. Whereas when you're not getting it, you kind of feel a little bit like it on your own.

Researcher

Okay, yeah.

Parent 2

So she does enjoy the one on one interaction with a teacher or therapist or someone.

Researcher

So do you think being at school, that would still be better, the one on one in person, but then online, I mean, we had to be online, so, but it would, you'd still prefer, like one on one in person rather than online.

Parent 2
Yeah. I mean, I wouldn't choose to do anything, any of [Child]'s therapies online.

Researcher

Okay.

Parent 2

And even when they offered it to me, I was like, I'm, it's gonna waste my time. She's not gonna like it, we're gonna fight. And she needs to be sitting with you, she needs to understand that you're there and you're part of her team, you know.

Researcher

Yes.

Parent 2

Um. She would sit, I mean, uh the one minutes she's she's swiggling on a chair, rolling around and you're like, this is, rocking on the chair, and just trying to... it's too much.

Researcher

Yeah, okay.

Parent 2 12:58

So ja, actually even, even now, because I'm a lot of therapists and people you speak to are still willing to do online stuff. But I'd rather drive 40 minutes to go and find someone and actually have her there in person than do online.

Parent 2 13:11

Um. She doesn't like it.

Parent 2 13:13

And I don't like it's I don't, I'm not, you know, you sit and watch yourself on the screen. And it's...

Researcher

It's not ideal.

Parent 2

It's not and I mean, I'm just actually, this [special needs school] course I'm doing is even online now. And I asked, I wanted to go in, in person because I had of course on a Monday, Monday afternoon and it's Tuesday. Tuesdays was at [special needs school] and Mondays is online. And they didn't have enough uptake for the in person one so we're doing it online.

Researcher

Okay.

Parent 2 13:38

And I can see, um, half way through I'm wondering, "I'll turn on my video off, let me have a cup of coffee" or, but like a little more distracted in my head. I'm not as focused because if I'm sitting with someone, I actually engage with it. Whereas if I'm on there, like, we're talking and you're listening, but you zone out and you start thinking about something that else you should have been doing and you, then you come back. "Oh, gosh, I wasn't listening". Whereas if you actually watching someone you are much more engaged.

Researcher

Yes. Okay

Parent 2

So, yeah. I'm also finding it hard.

Researcher 14:08

And then what effect did online learning have on your family as a whole?

Parent 2 14:20

I suppose we probably fought a little bit about it [laughs]. When I say fought it was, they were more like, little like niggles with each other. You know, and I remember one example is [Child] wasn't wanting to do something, and I was then moaning at her. And then I had [husband] moaning at me because I was moaning at [Child], because he was listening from the outside, or had been on a call and he's listening. And I was like, "Well, eventually well you do this. You come into it, and then tell me how you'd like this to work because actually it's quite hard on a parent, trying to force a kid to "come do this, do this". And it was simple things like "[Child], let's look at your handwriting. Let's make it a bit neater. Look at how it goes here". And she'll, "I'll do my way." Well, this is not how it's meant to be done your way is wrong. [Mumbles] so we didn't. I mean, I don't, we didn't argue much. But there were one or two incidences. We were like, "actually you know what, hang on you, you're not supporting me, but I'm not supporting you". But actually, we try to support, both try to support [Child], but we all struggling here because she doesn't want us to support her. So then you [mumbles]. Yeah, I mean, I kind of got a little bit resentful sometimes of [husband] being able to go online and just be on his calls and be doing work because I was one that has having to sit. And thank God, thank goodness, I say this, thank goodness, [the younger siblings] actually weren't having to do any work. Because to have to have managed [Child], while she was doing hers, and then trying to get them online, who want to get online and then they only have a certain amount of devices in the house, and then they all wanting to be doing the same thing at the same time, and they doing fun stuff, because, and she's doing something different. It would have been a disaster. Then I think we would have all boxed [laughs].

Researcher 15:49

Yes [laughs]. Okay, and then, do you think that online learning needs to be improved? And in what way?

Parent 2 15:59

So I think learning [laughs] online learning from a school perspective, yes. I think that you've got to realize, and it's a hard one, because how do you justify the school fees when you're sending online learning home, and then you only give them two hours of work, but to sit and do music? And to sit and have a PE online thing sent your way? I mean, I said, we didn't do the PE stuff. I was like, "Absolutely not. I'm sorry, you guys jump around the trampoline". Like, maybe in South Africa, different because we've got, generally all, we've got all got gardens, we've got homes, like kids must run around. To go and, whether they did a jumping jack, or a squat or whatever, really made no difference to me.

Parent 2 16:36

You know, if you took out all those other small little things that they were having to do, and condensed it to English, Maths. So, probably what I would have said is actually just do more focused stuff. But I do understand from a school [mumbles] perspective, if you're sending that home, and people going, "Oh, what am I paying for?"

Researcher

Exactly.

Parent 2

If my kid is... paying these fees and this is what you're sending me. So, there was a catch all the time about what more can you send? Because you need to justify the fees. And we saw that with I mean, the grade triple naughts and the doubles naughts when they gave us those big massive um fee reductions?

Researcher 17:05

Yes.

Parent 2 17:06

And I think because they couldn't justify, but for incidental learning, again, that you got through your kid being at school. So yes, you can absolutely say, I couldn't online teach a grade double naught or a triple naught. But, what they, what they come to school is to learn social skills, they learn, how to learn how to share, they learn how to sit at a table, they learn how to, there's so many other things that, but but it was so hard for them to justify the big fee that you're paying for that.

Parent 2 17:32

Um. Which I think was a struggle for all these schools. I mean, even the music lesson, like it didn't need a music lesson sent out way.

Researcher

Yeah.

Parent 2

It just put more pressure on everyone to say, let's, we've got to do this. And we got this. And the day's got to get through that. And I mean, actually just, I would have, if it was me, but then I'm a mom that had a kid that struggled. And I'm the one that wasn't going to moan about having two hours worth of work. But some moms I know will, and say, "Well, I've got to keep my kid busy. I'm working all day". Now we're trying, [mumbles], I'm expecting you to keep my kid busy for the five hours that they would normally be at school. And I'm paying school fees for five hours. So, therefore we need to do work for five hours. And ya, I don't know, I don't I don't know how you manage it. I don't know how, how they would benefit from it. But I think more focused and just do that. Just the reading, just the sounds, just just the maths, like the simple stuff.

Researcher

Yes.

Parent 2

Keep it simple, but keep it quite direct and quite focused. And do away with all the the periphery stuff the, ya.

Researcher

Direct and focused.

Researcher 18:30

Okay, and then how do you monitor your child's use of digital media? Do you? Did you find this particularly tricky, while online? I think we kind of covered this.

Parent 2

No, it didn't have enough knowledge to get on to much.

Researcher 18:46

Okay. And then how were you able to establish a routine in during online?

Parent 2 18:52

I think we just tried to stick to the same routine as we always would have. So get up, have breakfast, we obviously changed our times around a little bit and said like at nine o'clock, we have to be ready to work. Um.

Parent 2 19:03

And then try and get everything that we had to do, done in the morning as a preference. And then afternoons you can play like you would have done anyway. And keep all routines just to the same.

Researcher

Okay.

Parent 2

The ja, but again, I don't work. So it was easy enough for me to be on on there and saying "okay, what are we doing next? Where do we, go have a break? Come back later for me to eat to come? Okay, let's do the next one".

Parent 2 19:23

How moms managed that when they were trying to dial into their own meetings, and all that, I'm not sure.

Researcher

Mmm. Okay.

Researcher 19:31

And then the last one, have you experienced any after effects of online learning since your child has returned to school so academically, socially, behaviorally?

Parent 2

So I wouldn't say socially all behaviorally, no. I think, but academically, yes, we've realized that there's things that weren't picked up that would have been picked up. Ordinarily, I think she should have been in a school environment.

Researcher

Okay.

Parent 2 19:55

Um. And learning to read in grade one online was not... I think that, I don't know. I'd love to see the stats of where those kids or all those grade fours are at the moment in terms of where their, what kids that weren't COVID, COVID influenced. How much more ahead they would have been?

Researcher

Yes.

Parent 2 20:17

Because I think there's a big.. I know that at [different school] the kids that I know that were the same age [Child], the teacher said that, on average, that kids were between eight... 18 months and a year behind where they would have been because of that, Covid.

Parent 2 20:30

And we were lucky at [current school] that we were back early hey. We were probably the first school back, and back for for a while before I know a lot of our friends' kids went back to school.

Researcher

Yes.

Parent 2 20:40

So I mean, a number of kids, a friend of ours was telling us that they kids at [another school], that all were doing that reading program at, during their reading lessons to try and get them all up to scratch.

Researcher

Oh, wow.

Parent 2

Because they were all behind, where they should have been when they went into lockdown versus what were when they came out of lockdown.

Researcher

And so they did that reading program, after they came back to school?

Parent 2

Yeah. They had a remedial teacher that would go in and do, as part of their offering. They were very lucky.

Researcher

Yeah. That's good. Mmmm.

Researcher 21:09

And then you say she, not really socially and behaviorally. But then do you think, you know, you talk about the incidental learning and learning how to interact with other people? Do you think she lost out on that?

Parent 2

No, I think she was quite good at it. I think she...

Researcher

Okay.

Parent 2

And yeah, we I mean we, when we when we could we would see people.

Researcher

Okay. So that was already...

Parent 2

And also having, having siblings made it easier.

Researcher

Okay.

Parent 2

You know, you have to share with your siblings. You have to do this. You have to learn no.

Researcher

Yes.

Parent 2

I think if she was only child that would have been harder, probably.

Researcher

Okay, so you think that it was already a strength that she had before so it wasn't too much of a concern?

Parent 2

Yeah. I wasn't worried about her. I wasn't worried that she was going to be... should would be fine.

Researcher 21:50

Okay. Cool. And that's everything. If you think of anything else, or you have anymore...

Parent 2

I'll let you know,

Researcher

questions or anything, thank you.

Parent 2

Pleasure.

Transcribed by https://otter.ai

Appendix D: Reflective journal and field notes

Reflective notes:

As a first-year teacher in 2020, during the Covid-19 pandemic, I am aware of the significance of conducting research regarding the process of online learning. I have experienced the challenges associated with online learning as a teacher and have had an insight into the challenges experienced by learners and parents. In order to ensure authenticity, I acknowledge my own personal views and biases, however, I remain open-minded in order to learn from the literature and participants regarding other points of view and experiences.

Timeline of events:

December 2021:

- I began researching different topics and decided that due to my experience as a teacher during the Covid-19 pandemic, online learning is a relevant and important topic to focus on. I am also interested in learners who have specific needs, such as those with ADHD, and therefore included this as an aspect of my research.

January and February 2022:

March 2022:

- I have submitted assignment 1 of the NMQ module. This assignment focused on my research questions, literature review, concept clarification and my working assumptions.
- I have submitted assignment 3 for NMQ which focused on my conceptual framework, epistemology and methodological approach.
- I decided to make use of Bronfenbrenner's Ecological Systems Theory, as my conceptual framework as I think it is important to consider the different systems of each participant and how these were affected during the pandemic and as a result of online learning.
- My supervisor has recommended that I include another framework, as Bronfenbrenner is fairly overused. I read up about Social Constructivism and related this to the Ecological Systems Theory, however, my supervisor thought this may not be the most appropriate approach. I therefore continued to read about different frameworks and eventually settled on using Lazarus and Folkman's Coping theory.

This theory is appropriate as it will help me to understand the ways of coping that the participants used during the difficult time of the pandemic.

April 2022:

- I have submitted assignment 3 for NMQ which focused on my research design, selection of participants, data generation and documentation, data analysis and interpretation and the ethical considerations regarding my study.
- My supervisor shared some articles about Covid with me. These focused on the mental health of people during the pandemic, how people coped and how the school closures impacted learners and university students.
- I received feedback on my assignment 3 and made the necessary changes to my research design.

May 2022:

- Submit research proposal to my supervisor and made the changes according to her feedback
- I submitted my proposal and Turnitin report and presented my research proposal
- I received the outcome letter for my research proposal, as well as the feedback suggested by the critical readers.

June 2022:

- I began the ethics application process for my research. I had some questions about the process which my supervisor was helpful in answering.

July 2022:

- Received ethical clearance from the university
- Finding and selecting participants:

August 2022:

- First school approached - emailed

September, October and November 2022:

- Contact school and organise interviews:
- I contacted a teacher I know personally at this school and explained my research. She was very happy to arrange participants to be interviewed and to join a focus group.

Unable to gather enough participants, specifically at least 4 parents for the focus groups. Data collection at this school falls through due to a lack of response from the teacher.

November 2022:

- Online meeting with my supervisor:

Discuss the struggle to find participants. Supervisor suggests contacting a second school to interview more parents, teachers and principal

- Second school approached (School A)
    - Email sent out with consent forms and information regarding the study
    - Two parents (Parent 1 and Parent 2) respond that they are interested in participating in study
    - One teacher (Teacher 1) and deputy head of the junior prep respond and are interviewed

- **Teacher 1 Interview is conducted:**

As this was my first interview, I initially felt quite nervous and did not know what to expect.

Observational notes:
Teacher 1 is a Grade 3 teacher.

Experienced lockdown with her family of four (two older children; one in high school and the other in senior prep),
This teacher was very friendly and eager to be interviewed and to share her experiences of online learning. She laughed a lot at some questions and answers as she implied that the thought of online learning is ridiculous/almost comical.
Teacher 1 imitated a child being impulsive and fidgety.
This teacher shared a lot of information and had many opinions (+/- 16 minutes of the interview was spent answering question 1).
Teacher 1 was not at all keen on online learning. She spoke a lot about the lack of control she felt as a teacher conducting online learning and throughout the pandemic and lockdowns.

- **Deputy Head Interview is conducted:**

Observational notes:
The deputy head (head of Grades R-3) is also a Grade 3 teacher who is very experienced. Initially this participant seemed offish, however, she contributed a lot when discussing online learning.
She shared very strong opinions against online learning

- Another email is sent to teachers in the junior prep. One teacher responds and is happy to be interviewed (Teacher 2)

December 2022:

- **Teacher 2 Interview is conducted:**

Observational notes:
Teacher 2 is a Grade 2 teacher.
Teacher 2 was very interested in being interviewed.
She has previously taught many children with ADHD and some with comorbid disorders.
Throughout the interview she expressed empathy towards children with ADHD and their parents. She explained that even though it is hard for them as teachers, it is very hard for parents.
When responding to question 3, Teacher 2 was initially very certain that online learning is not beneficial, however, the more she thought about it, the more she considered scenarios in which online learning may be useful to learners with ADHD, for example, the ability for them to complete their schoolwork in their own time, although children with ADHD need reminders and prompts. She explained that the online lessons were only 40 minutes long which limited the time that the children had to spend on screens.

- Contact a remedial therapist from a third school regarding finding participants and collecting data. Therapist is happy to help and will contact parents, teachers and a principal. Therapist responds that she will approach the school again in January to organise interviews.
- Two teacher interviews and one deputy head interview are transcribed.
- Received chapter 2 draft back from supervisor with some changes. These changes were made and a large section on ADHD was included.
- I began working on Chapter 3. I experienced some difficulty trying to understand the terms associated with research design. I borrowed some research textbooks from a friend with which I read up on all the different terms in my attempt to understand what was required of each. I was then able to apply this knowledge to my research and accurately describe the research design I planned to follow.

January 2023:

- I sent my Chapter 3 draft to my supervisor for her to check and give feedback on.
- I have arranged an online meeting with my supervisor to discuss my progress thus far. We discuss my Chapter 3 draft and changes that she has suggested.

- I received my Chapter 3 draft back from my supervisor with quite a few changes. The section on transcriptions needs to be completed and the ethics section needs a lot of work. My supervisor suggests reading up on Guba and Cresswell.

- **Parent Interview 1 is conducted:**

As this was my first interview with a parent, I was nervous before meeting this parent. The parent requested that we have an online meeting as she works and did not have time to meet in person.

Observational notes:
This parent appeared very serious which made the interview feel like a business meeting (she is a working mother). Despite this, she was very accommodating and seemed to be happy to be interviewed.
Parent 1 required some prompting as she did not elaborate much with her answers, however, prompts were successful in eliciting more information from her answers.
During the interview, Parent 1's children entered the room and disrupted the interview. This was interesting as it provided me with insight as to how it would have been for this parent to work from home while also having to look after and help her children with online learning.

- **Parent Interview 2 is conducted:**

Observational notes:

This interview went really well and this parent was eager to be interviewed. I feel that I got a lot of information from this parent and understood how her and her family experienced online learning well. The parent appeared very knowledgeable about her child's difficulties with ADHD and SLD and stated that she was doing an online learning course about dyslexia. She is also a very involved parent as she understands her children's needs well.
Parent 2 spoke quite fast when answering the interview questions and tended to go off topic at times, to which I was able to steer the conversation back to the main point. I thought this was interesting as she appeared hyperactive and lost focus, which are symptoms of ADHD. She later stated that she thought she may also have ADHD as it is hereditary and she relates to many of her child's difficulties. This was interesting as Parent 2 explained her struggles with learning online as part of her online dyslexia course, as she explained that she found it boring and struggled to retain her attention.

- I made contact with Parent 3 and discussed the possibility of conducting an interview, to which she said she was happy to do. We arranged to do the interview online as it suited the participant better.

February 2023:

- **Parent 3 Interview is conducted:**

Observational notes:

This interview went well, however, it was a bit disorganised as the parent wanted to have an online meeting, however, due to having an old device, there were limited platforms that we could make use of. For example, I initially sent an invitation for a Google Meeting, however, the parent was unable to download the Google Meets application as her phone was not up-to-date. She also stated that she did not like using Zoom. We ended up having a Microsoft Teams meeting which worked well. This gave an insight as to how online learning could be difficult and the complications of using electronic devices and the internet.

Parent 3 did not elaborate on her answers much and required encouragement and prompting. I also needed to rephrase and explain questions in order for her to give a comprehensive answer.

I have really enjoyed conducting these interviews and interacting with the role players who experienced online learning first hand. I feel proud that my research is focussing on such an important topic and that the response I have received can contribute to the knowledge of the process of online learning and hopefully support people in making decisions that better support children with learning challenges. I also hope that this information is useful to [people who are involved in online learning.

- Based on the suggestion of my supervisor as part of my Chapter 3 feedback, I read up on Guba and added some more information to chapter 3.

March 2023:

- Parent 1 interview transcription is completed:

This process was fairly simple, although it took a while. The transcription process was useful in that I was able to relisten to the interview and think about the answers the participant gave and how this fitted in with my study. I think this is a useful thing to do with all of the interviews as I will be able to confirm my initial understanding of each participant's experiences by relistening to the answers they gave, as well as their reactions to each question.

- Parent 2 interview transcription is completed:

This process took a very long time, about 5 hours. I think the reason for this is that the parent spoke quite fast and mumbled a lot, therefore Otter.ai was not able to accurately transcribe everything that was being said. Due to this, I spent a lot of time using OTranscribe to listen to the interview while following the transcription and correcting some of the errors made.

- Parent 3 transcription is completed:

This process also took a long time. The reason for this may be because the interview was conducted online, which may have made the transcription process more difficult. I made use of OTranscribe to correct the errors from the original transcription, in order to ensure the transcription was verbatim and that all the answers were correct.

The Otter.ai website works quite well in transcribing interviews, although there are some places where it is not 100% accurate. In order to ensure that each interview was transcribed accurately and verbatim, I made use of the OTranscribe website which allowed me to play the recordings of each interview while following along with the transcription completed by Otter.ai. During this process, I was able to correct any mistakes or inaccuracies in the transcriptions.

- I have submitted all the transcriptions (Teacher 1, Teacher 2, Deputy Head, Parent 1, Parent 2, Parent 3) to my supervisor, and asked her opinion whether she thinks I have reached data saturation, or if further interviews need to be conducted. My supervisor responds that she thinks I may have reached data saturation, therefore I should start with my data analysis. If I find, while analysing my data, that I have not collected enough data, I may need to conduct further interviews.
- I have emailed my supervisor the following question as I am unsure of how this will be mentioned in my chapter 3:
  Where do I include my observation notes of my interviews? if this part of the addendum and I can refer to the information in my chapter 4? Is this the same with my reflective research journal?
  Response: Reflective journal.
- I have typed out my observation notes from the notebook I wrote in during each interview and pasted each note under the discussion of the interview in this reflective journal.
- I have continued to work on chapter three corrections given by my supervisor and have submitted draft two of chapter three for her to check.
- I have found a government document of the guidelines implemented by the department of basic education when schools were closed during the national Covid-19 lockdown. I have shared this with my supervisor and she confirmed that it would be useful to include an analysis of this document

April 2023:

- I have received my draft two of chapter 3 and made relevant changes, as suggested by my supervisor.
- I met with my supervisor to discuss data analysis. She gave me an example of how to start my thematic analysis and gave me some tips such as colour-coding with sticky notes and then coloured pens.
- I began the data analysis process. My supervisor has given me a list of tips with regards to conducting thematic analysis. These include:
  - Being familiar with the data - as I conducted the interviews myself and relistened to them when correcting the transcriptions, I felt as though I was very familiar with the data
  - Generating initial codes: I did this by using different colour sticky notes to colour code different themes that arose as I read through each interview transcription

    - Identifying potential themes: I went through the colour coded sticky notes of each interview and made a list of the common ideas that came up.
    - Reviewing and refining themes: I made sure that I clearly understood what each theme meant and which quotes from the participants fitted best with each theme
    - Defining and naming themes: This was done in order to accurately describe what each theme meant
- April was a busy month with coursework, therefore not much research was done this month.

May 2023:

- Document analysis:

I found the following document from the IEB:

Coronavirus Orientation Guidelines for Schools (Department of Basic Education) (Department of Basic Education, 2020)

This document contains the guidelines that were implemented by the Department of Basic Education in 2020 when schools were forced to close due to the Covid-19 pandemic. I thought it was a useful resource to include in my study as it discusses the process of phasing children back into school after the school closures, providing emotional support to school staff and learners (which relates to coping theory), the banning of after- school sporting and cultural activities during the national lockdown, as well as how the department plan to recover the curriculum after the potential loss of learning resulting from the school closures.

-
- I have submitted my themes to my supervisor in order for her to check that I am on the right page. She agrees with the themes I have suggested, which are as follows:

Deputy head interview:

Challenges during online learning

- Supporting teachers from a distance
- Dealing with parents' expectations
- Maintaining academic focus at the expense of soft skills
- Managing financial constraints and reduced resource
- Segmentation and social isolation of the school community
- Stressful decision-making process regarding opening and closing of the school
- Teacher experiences during online learning

Feeling alienated and powerless

- Coping with personal issues
- Adapting teaching methods to online learning

Support for teachers during online learning

- Making resources available

Teacher interviews:
Assessment:

- Unable to track progress online
- Unable to help/guide/show learners physically

Distractions at home:

- Parents
- Pets
- Siblings
- Helpers
- Toys
- Food
- TV (parents interview)

Lack of/difficulty of learning:

- Kids fell further behind
- Speech and language issues
- Struggle to work independently when back at school
- Setbacks - need to reteach content when back at school

Lack of focus:

- Need for reminding and prompting

Disorganised:

- No equipment ready for lesson
- Planning (completing tasks)

Relationships/Connections: (need for contact with others)

- Kids and teachers
- Teachers and other teachers
- Socialisation - social skills
- Group work and group dynamics
- Social issues post covid

Parent involvement:

- Too much - sitting in on lessons and giving answers in lessons
- More lenient with kids not doing work/coming back to school
- Not qualified to teach children
- Playing a different role (teacher role)

Concrete, pen to paper:

- Practical
- Concrete
- Hands on
- Learning packs worked better than doing and submitting work online

Parent Interviews:

Classroom environment vs online environment

Loss of attention from professionals (teachers)

- Learning difficulties not picked up on (dyslexia)
- Not encouraged to do work
- Got a tutor to support learners

Socialisation/interaction with other children
Lack of socialisation:

- Incidental learning
- Help from friends in class
- Missed friends
- Learning from others - following cues
- Lack of social cues after online learning
- Not knowing classmates
- Understanding space limits/boundaries
- greeting/social etiquette - managing impulsivity
- Overstimulated when back at school (sensory overload)
- Online learning is not good for social children
- Look forward to online lessons to catch up with friends
- Learn from playing, not watching someone talk
- Already social children struggled less - already had good social skills

Frustration

Balance between children (multiple siblings)

- Husband helped one, wife helped the other (alternated)
- Younger children being a distraction to older child working
- Younger child wanting to be included in the learning

Balance between helping children and work (both working parents)

- Kids interrupt
- Juggling school work and job
- Both parents on a meeting then have to help child join a lesson - frustrating
- Biggest challenging (parent 3)
- If both parents are working - who helps the child?

Loss of learning:

- Loss of confidence
- Missed out on foundations
- Learning to read was a challenge
- No feedback/positive reinforcement on work (just submitted and moved on)

Novelty of online learning

- Exciting
- Wears off
- Medication allowed one child to be more focused - more focused than neurotypical children who were excited by the novelty

Technical issues:

- Children speaking over each other
- Children not knowing how to use devices
- Lack of devices for multiple children
- Children playing around with backgrounds/filters etc (distracting)
- Lack of access to tools - apps, devices, programs

Physical exercise and movement:

- Biggest challenge was child needed movement
- Encouraged children to play outside

Monotony of online learning:

- Same routine daily - no variation - very rigid
- Monotonous talking on the screen - difficult to concentrate
- Boring
- Learn from playing, not watching someone talk

Screen time issues:

- TV was babysitter while parents worked
- Stopped TV in the week (not working mother)
- Access to dangerous things on devices/internet
- Having already established rules helped

Feedback

Environment

- Same space to do everything
- Work
- Play watch TV
- Toys
- Distractions

Interactions within the family:

- Mother and child regarding doing work
- Mother and child regarding taking medication
- Mother and father regarding how to parent/teach/support child
- Negative moments - screaming/shouting and frustration
- If both parents are working, who helps the child?
- Happier going to school

Role of parents

- Lost - had to become like teachers
- Not their safe space - rather forcing them to work
- Less supportive and encouraging - more forcing them to do their work

Concerns regarding Covid:

- Lack of understanding (children)
- Uncertainty
- Too young to express their feelings (night terrors)
- Can't see family or friends
- Being stuck in the house (boring)

Describing online learning:

- Nightmare
- Chaotic
- Hard
- Very stressful
- Children hated it
- Would not want to do it again

Overall Themes:

Theme 1: Perspectives of online learning

Subtheme 1: Parents:

- Nightmare
- Chaotic
- Hard
- Very stressful
- Children hated it
- Would not want to do it again

Subtheme 2: Teachers:

- Very challenging (teacher 2)
- Out of touch - relationships with children and colleagues
- Barrier to communication
- Screen as a barrier
- Hands on learning
- Hectic (teacher 1)
- Learning curve
- Hard
- Efforts to maintain levels of education

Subtheme 3: Deputy Head:

- Support from a distance - connection with teachers
- Supportive parents
- Young children - not possible behind a computer

Theme 2: Academic challenges during online learning:

Subtheme 1: Loss of attention from professionals (teachers)

- Learning difficulties not picked up on (dyslexia)
- Not encouraged to do work
- Got a tutor to support learners

Subtheme 2: Loss of learning:

- Loss of confidence
- Missed out on foundations
- Learning to read was a challenge
- No feedback/positive reinforcement on work (just submitted and moved on)
- Assessment by teachers: unable to track progress online, unable to physically help/guide/show learners

Lack of/difficulty of learning: (teachers)

- Kids fell further behind
- Speech and language issues
- Struggle to work independently when back at school
- Setbacks - need to reteach content when back at school

Subtheme 3: Monotony of online learning:

- Same routine daily - no variation - very rigid
- Monotonous talking on the screen - difficult to concentrate
- Boring
- Learn from playing, not watching someone talk

Environment

- Same space to do everything: work, play, watch TV, toys

Subtheme 4: Distractibility

Distractions at home:

- Parents, pets, siblings, helpers, toys, food, TV

Lack of focus:

- Need for reminding and prompting

Disorganised:

- No equipment ready for lesson
- Planning (completing tasks)

Concrete, pen to paper:

- Practical
- Concrete
- Hands on
- Learning packs worked better than doing and submitting work online

Theme 3: Social, emotional and physical challenges during online learning:

Socialisation/interaction with other children
Lack of socialisation:

- Incidental learning
- Help from friends in class
- Missed friends
- Learning from others - following cues
- Lack of social cues after online learning
- Not knowing classmates
- Understanding space limits/boundaries
- greeting/social etiquette - managing impulsivity
- Overstimulated when back at school (sensory overload)
- Online learning is not good for social children
- Look forward to online lessons to catch up with friends
- Learn from playing, not watching someone talk
- Already social children struggled less - already had good social skills

Physical exercise and movement:

- Biggest challenge was child needed movement
- Encouraged children to play outside

Monotony of online learning:

- Same routine daily - no variation - very rigid
- Monotonous talking on the screen - difficult to concentrate
- Boring
- Learn from playing, not watching someone talk

Concerns regarding Covid:

- Lack of understanding (children)
- Uncertainty
- Too young to express their feelings (night terrors)
- Can't see family or friends
- Being stuck in the house (boring)

Relationships/Connections: (need for contact with others)

- Kids and teachers
- Teachers and other teachers
- Socialisation - social skills
- Group work and group dynamics
- Social issues post covid

Theme 4: Family interactions during online learning
Role of parents

- Lost - had to become like teachers
- Not their safe space - rather forcing them to work

- Less supportive and encouraging - more forcing them to do their work

Parent involvement: (according to teachers)

- Too much - sitting in on lessons and giving answers in lessons
- More lenient with kids not doing work/coming back to school
- Not qualified to teach children
- Playing a different role (teacher role)

Interactions within the family: (frustration)

- Mother and child regarding doing work
- Mother and child regarding taking medication
- Mother and father regarding how to parent/teach/support child
- Negative moments - screaming/shouting and frustration
- If both parents are working, who helps the child?
- Happier going to school

Balance between children (multiple siblings)

- Husband helped one, wife helped the other (alternated)
- Younger children being a distraction to older child working
- Younger child wanting to be included in the learning

Balance between helping children and work (both working parents)

- Kids interrupt
- Juggling school work and job
- Both parents on a meeting then have to help child join a lesson - frustrating
- Biggest challenging (parent 3)
- If both parents are working - who helps the child?

Theme 5: Technical issues regarding online learning

Concern regarding increased screen time:

Screen time issues:

- TV was babysitter while parents worked
- Stopped TV in the week (not working mother)
- Access to dangerous things on devices/internet
- Having already established rules helped

Technical issues:

- Children speaking over each other
- Children not knowing how to use devices
- Lack of devices for multiple children
- Children playing around with backgrounds/filters etc (distracting)
- Lack of access to tools - apps, devices, programs

Theme 6: Suitability of online learning to children with ADHD

- Distractibility
- Subtheme 2: Movement
- Subtheme 3: Relationships and interactions with others
- Submit chapter 4 rough draft

I was quite unsure of the structure of this chapter and the more I wrote about the themes and quotes from the interviews, I was worried that I was spending too much time and writing too much. I decided to send my supervisor a very rough draft to make sure that what I was writing was correct and that I wasn't writing too much information unnecessarily. My supervisor gave me some feedback and encouraged me to improve the introduction to the chapter, however, she confirmed that I was on the right track.

June 2023:

- I have submitted chapter 4 draft 1 for feedback from my supervisor
- My supervisor suggests a more in depth discussion of the literature
- She also advises that I should not worry about the page limits, but rather keep writing.

July 2023:

- I have submitted chapter 5 draft 1
- I have submitted the document analysis and chapter 4 to supervisor
- Meeting with supervisor:
    - Document analysis
- I have received my chapter 4 feedback and made the suggested changes. I then submitted Draft 2 of my chapter 4, which I feel has improved significantly from the first draft.

August 2023:

- I have submitted chapter 5 draft 2. Again, I am very happy with the improvements I have made on this draft of the chapter.

- I have submitted my full dissertation to my supervisor. She gave me feedback and suggested some changes.
    - I made some changes to the abstract, as suggested by my supervisor
    - My supervisor ran my dissertation through Turnitin and sent me the report, indicating only 2% similarity.
- I have submitted my dissertation to the language editor. She was able to check my research in a week and a half which was very efficient. She suggested changes that made my writing more formal, as well as checking the technical editing.
- I have gone through the suggestions from the language editor and made the necessary changes. I am feeling very proud of my research now that it has all come together.
- I have submitted my dissertation to the technical editor who briefly read over everything and checked the headings and table of content for any errors.

- Once I was happy with the language and technical editing, I added in the examples of consent forms, interview schedules, the example of the transcription and coding. I finally added my researcher reflective journal to the last appendix of my dissertation.

Appendix E: Turnitin Report

Parents' perspectives of online learning with learners with ADHD

by Jessica De Castro

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Parents' perspectives of online learning with learners with ADHD

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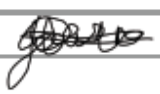

Jessica de Castro
2023-08-28

Dr M Finestone
2023-08-11

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