TE WHARE WĀNANGA O
AWANUIĀRANGI

IMPACT ON AOTEAROA PARENTS OF NEURODIVERSE LEARNERS DURING COVID-19 LOCKDOWNS.

JASMINE AROHA GEORGE
2023

A thesis submitted in partial fulfilment of the requirements for the degree of Master of Indigenous Studies at Te Whare Wānanga o Awanuiārangi

COPYRIGHT

DECLARATION

To the best of my knowledge and belief, this thesis contains no material previously published by any other person except where due acknowledgement has been made.

This thesis contains no material that I have submitted towards the award of any other degree or diploma in any other university or other institution.

This thesis represents research I have undertaken. My thesis's findings and opinions are mine and not necessarily those of Te Whare Wānanga o Awanuiārangi.

This thesis has been stored at Te Whare Wānanga o Awanuiārangi. It is, therefore, available for future students and researchers to read and reference.

Jasmine Aroha George

Signature: …………………………………….

Date: August 28, 2023

ACKNOWLEDGEMENTS
"Rūpahu kia taea ra anō e koe"

This whakatauākī translates to "Fake it until you make it." My mother often quoted this whakatauākī during my childhood and adolescence. The idea of the proverb is to portray confidence, optimism, and competence, and by doing so, one will achieve these qualities. This saying has also been often used within the Pākehā world. It has been suggested as an English aphorism that explains that by copying confidence, competence, and a positive attitude, a person can achieve the things that they want in real-life to have a better life. According to empirical studies, some or all academic work is gradually abandoned by students who lack mobility, school integration, academic self-esteem, and a greater sense of stigmatisation. Some students "disidentify" with pursuing a degree and eventually with college.

In prior generations, my Tupuna, as Māori, faced deliberate systemic barriers within the school system, which limited their academic opportunities. These barriers were manifested through the suppression of the Māori language, inadequate education provision, and resulting academic disadvantages, preventing Māori from reaching the grades necessary for university admission. Consequently, the transgenerational trauma emerged from being systematically excluded from academic pursuits, leading to disengagement. From academic studies and fostering a negative attitude towards them (Smith, 2012). My mother had undiagnosed and untreated Attention Deficit Hyperactivity Disorder (ADHD) and dyslexia.

Additionally, she was a single teen mother when she left high school. However, my nana provided my mother with strong emotional support when she had me as a teenager. At that point, my mother broke the cycle of this transgenerational trauma within our whakapapa. She took the trajectory of a "Faking it till she made it" attitude, embarking on academic studies. My nana helped her by reading aloud while she was studying to help her overcome her dyslexia. She also helped me with the daily care and responsibilities of caring for myself. The outcome was the achievement of her Bachelor's Degree, which caused a reaction of inspiration as her older sister also embarked on university studies. The waterfall effect from this achievement was that my cousins and I engaged in academic studies despite the genetic disabilities of ADHD and dyslexia because they were positive and inspirational role models. This proverb acknowledges my mother's healing and her changes to our whakapapa line. It shows the

continual strength, resilience, and perseverance our whakapapa has undertaken to remove itself from poverty. My mother's whakatauākī teaches our whakapapa history to future generations, inspiring them to continue and progress.

I am also diagnosed with ADHD and dyslexia, and it was difficult for me to work on my thesis and look after my ten-year-old son and a ten-day-old baby girl at the same time. Therefore, my mother supported me by treading upon her mother's path and helped me with my daily responsibilities so that I could pursue my university studies. She looked after my children so I could focus on my thesis. Moreover, she not only took care of them during the daytime of school days but also looked after them during school holidays. In addition, she also handled me when I was working on my thesis and encouraged me to finish it. My son is very responsible and understanding. He saw me juggling with the household, so he helped me with house chores and looking after his newborn sister. Handling a newborn while completing house chores are both tiresome tasks, but I am thankful to my son that I had him. I had to work on my thesis and complete household chores when my daughter was sleeping; therefore, my son helped me with the household to get more time to do the thesis.

Another amazing person whom I cannot thank enough is my supervisor. He understands my situation, as shown by his helping attitude toward me. As a new researcher, I had many doubts and questions, and he spent much time clearing doubts and answering questions via email. He knows that data collection is complicated; hence, he helped me submit my ethics application early so that collecting enough data for my research would not be a problem. I want to thank the ADHD Association & Dyslexia Foundation as they supported me enthusiastically in studying my Kaupapa, which was personal to me. This Kaupapa can also help the Attention Deficit Hyperactive Disorder and Dyslexic community to live better lives. Furthermore, they will support me during my research by sharing my survey link in their Facebook groups to achieve a large data set for analysis.

I would also like to show my gratitude to The AGE School. They allowed me to post my survey in their whanau Facebook group. This way, I could gather important information from their student's parents. It could be helpful for my research as it revolves around the impacts of COVID-19 lockdowns faced by parents of neuro-diverse learners.

Lastly, I would like to show my appreciation towards Te Whare Wānanga o Awanuiārangi for making this qualification available for tauira. This learning endeavour has allowed such healing and creativity to evolve. As a result of this discovery journey, new perspectives have been opened and realised. Healing of the past has happened, which has allowed for the creation of this thesis.

PERSONAL POSITIONING

Ki te taha o tōku Māmā

Ko Tākitimu tōku waka

Ko Te tapuae o uenuku tōku maunga

Ko waiautoa tōku awa

Ko Takahanga tōku marae

Ko Ngāti kurī tōku hapū

Ko Ngāi tahu tōku iwi

Ko Makareta Tangitu tōku tupuna

Ki te taha o tōku Pāpā

Ko Tainui tōku waka

Ko Kakepuku tōku maunga

Ko Waipa tōku awa

Ko Te Kōpua tōku marae

Ko Ngāti unu ko Ngāti kahu ōku hapū

Ko Ngāti Maniapoto tōku iwi

Ko Rangiamohia tōku tupuna

Ko Te Arawa tōku waka

Ko Tongariro tōku maunga

Ko Waikato tōku awa

Ko Taupō tōku moana

Ko Nukuhau tōku marae

Ko Ngāti Rauhoto ko Ngāti Te Urunga ōku hapū

Ko Ngāti Tūwharetoa tōku iwi

Ko Te Heuheu tōku tupuna

Ko Te Hoiere tōku Waka

Ko Tutumapou tōku Maunga

Ko Te Hoiere tōku Awa

Ko Te hora tōku marae

Ko Ngāti Hinekauwhata tōku hapū

Ko Ngāti Kuia tōku iwi

Ko Matua Hautere tōku tupuna

Ko Kurahaupō tōku waka

Ko Tapuae-o-Uenuku tōku maunga

Ko Wairau tōku awa

Ko Tuamātene tōku marae

Ko Ngāti Huataki tōku hapū

Ko Rangitāne tōku iwi

Ko Te Huataki tōku tupuna

Ko Kurahaupō tōku waka

Ko Puhi Kererū tōku maunga

Ko Raukawakawa tōku moana

Ko Ōmaka tōku marae

Ko Ngāti Tarakaipa tōku hapū

Ko Ngāti Apa ki te Rā Tō tōku iwi

Ko Ruatea tōku tupuna

Ko Jasmine George tōku ingoa

Tēnā koutou tēnā koutou tēnā koutou katoa

As a Māori wahine and a solo parent, I am aware of colonisation's profound impact on our bloodline, particularly concerning education. The Te Aute School Inquiry of 1906 is a notable example, revealing how Māori were deliberately set up to fail within the education system. Our ancestors were unjustly denied access to higher education opportunities, perpetuating a cycle of disadvantage that persisted even after decolonisation. This historical evidence (Simon & Smith, 2001) underscores the systemic barriers our people face. Furthermore, it is widely recognised that high-paying jobs are often reserved for individuals with educational qualifications. This reality, supported by various studies and statistical data, reinforces the importance of education in economic success. Māori, who were systematically excluded from educational opportunities, were disadvantaged in the job market, perpetuating a cycle of poverty within our community. However, it is important to acknowledge that Māori resilience and determination have led to a significant shift. In recent years, many Māori have pursued university education to improve their lives and challenge the inequities imposed upon us.

Along with being faced with transgenerational trauma and education set back, my nana and mother learnt that my mum had dyslexia. However, both did not lose heart, and my nana helped my mother to get her bachelor's degree as my nana used to read to my mum. My mum was a teen mother, so my nana helped my mother take care of me. When I grew up, I was diagnosed with dyslexia and ADHD. However, my mother started battling against the circumstances and changing into the happiest situation, so I decided not to give up. A person with learning disabilities has different problems, such as lack of focus, problems in reading, recognising symbols and memorising, which hurdles the path of education. I was no exception. Nonetheless, now I am pursuing a Master's, which is an achievement for my family and me. I also learned that traditional research methods and methodologies focus on Pākehā and ignore Māori; therefore, I selected a non-traditional methodology that can help neurodiverse children living in culturally diverse Aotearoa.

My thesis aims to educate its readers on neurodiversity and the COVID-19 lockdowns' impact on the families of students with neurological differences who were forced to take online classes. This investigation, which centres on the dilemma of neurodiverse school pupils during these unusual times, was inspired by my genetic susceptibility to intellectual disabilities: Attention Deficit Hyperactive Disorder (ADHD) and Dyslexia. In addition to my knowledge, I am also the parent of a neurodiverse schoolchild who went through the traumatic transition

from traditional teaching to virtual teaching in 2020. As a result of the frustrations and discomfort felt as a parent during these moments, I considered what lessons we could draw from them. Surely, these lessons can improve the learning environment for the children and the entire family.

ABSTRACT

This study examines the impact of COVID-19 lockdowns on parents of neurodiverse students in Aotearoa and provides recommendations to enhance support and instructional strategies. This study examines the insights derived from parental experiences during lockdowns, the impact of the learning environment, instructional approaches, parental support, and strategies for improving the online learning environment. The study employed a mixed-method phenomenological methodology, employing an online survey as the primary data collection method. The participants consisted of parents from diverse backgrounds who had neurodiverse learners. The findings emphasize the importance of personalized support, equal access to resources, and effective communication in addressing parents' and students' challenges. The study provides recommendations for future research and practical applications while contributing to our understanding of effectively supporting neurodiverse learners in online learning environments. The findings highlight the importance of collaboration, personalized patient care, and ongoing improvement of educational methods. Accepting these ideas can help educators, policymakers, and researchers advance the field and enhance support systems for neurodiverse learners. Inclusive online learning environments can be established for this student group as well.

Keywords: Neurodiverse learners, COVID-19 lockdowns, parental impact, online learning, support systems

TABLE OF CONTENTS

TABLE OF FIGURES

LIST OF TABLES

CHAPTER ONE

1. INTRODUCTION

1.1. Chapter Introduction

Being a neurodiverse learner, Aotearoa is not uncommon now, especially in the region of Aotearoa, where one person out of every 20 people has Attention Deficit Hyperactivity Disorder (ADHD). According to (*ADHD Is More Common than You Think | ADHD NZ - ADHD NZ*, 2023), ADHD was diagnosed 100 years ago. It cannot be said that it is more prevalent now; however, it can be mentioned that it is better recognised. As per the statistics provided by a charity organisation's website article ADHD Is More Common than You Think | ADHD NZ - ADHD NZ (2023), 280,000 citizens of New Zealand are diagnosed with ADHD and out of these numbers, 2.4 percent are aged between 2 to 14 years. Figure 1 shows the data the Ministry of Health collected about children aged between 2 and 14 diagnosed with ADHD. This figure also shows the gender and ethnic group divide of these children (*ADHD in New Zealand – Jenn Has ADHD*, n.d.).
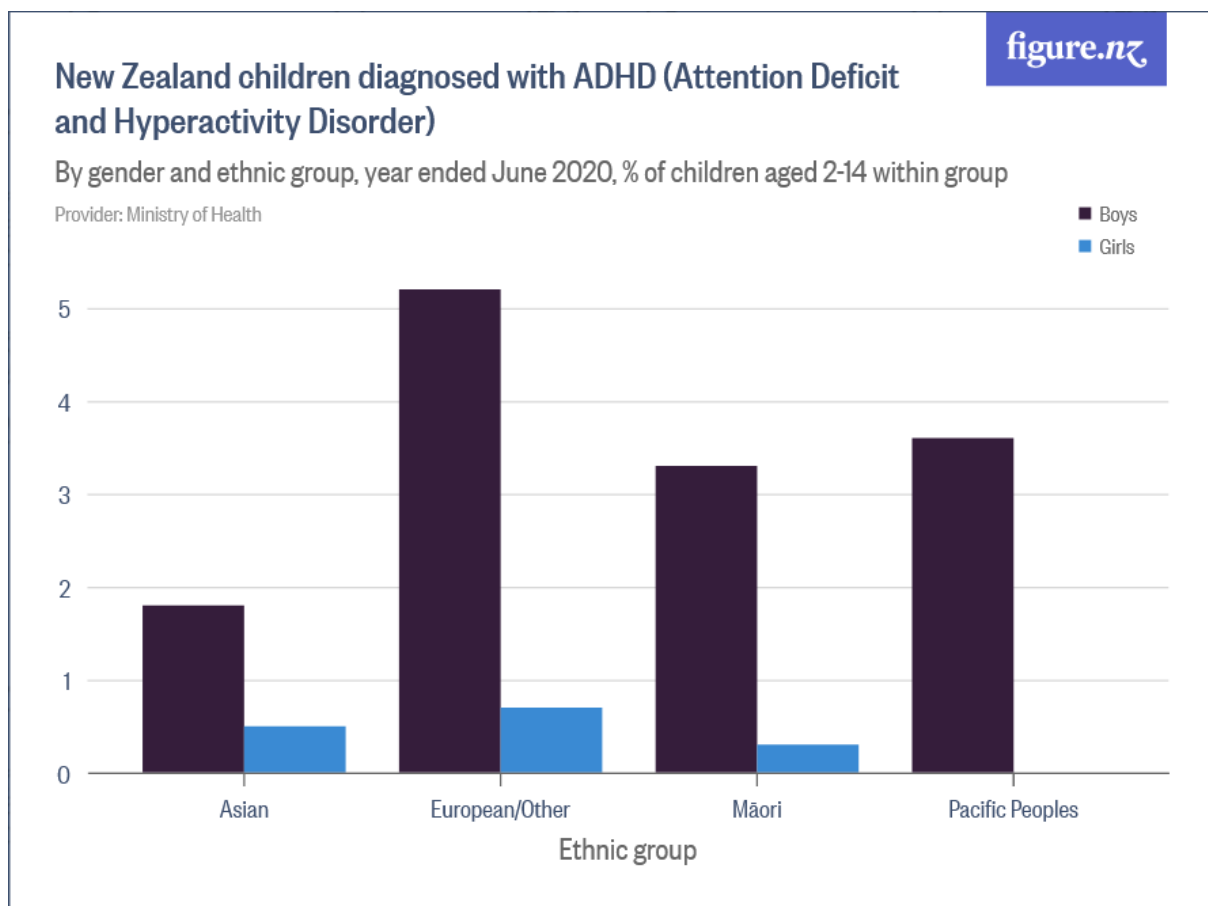
Figure 1: ADHD in New Zealand among children of age between 2-14

Therefore, this study aims to highlight the difficulty that the COVID-19 pandemic caused for parents of neurodiverse learners during Aotearoa lockdown situations. Throughout this time, the parents of neurotypical students experienced challenges as their children and other family members learned the use of online teaching platforms and participated in delivering the school day's curriculum. Some parents also managed their work responsibilities from home. During the COVID-19 lockdowns, Aotearoa parents were confronted with various concerns, and a broad social consensus was that it was not a pleasant experience. The unpleasant experience raised many problems for the parents of neurodiverse learners. This thesis aims to answer questions like how parents of children with intellectual disabilities cope. What obstacles did these parents face, and what can we learn from them? Parents of neurotypical learners can help by providing suggestions based on their experience and perception. However, suppose there were many possible viewpoints and perspectives around the country. In that case, the diversity and quantity of ideas may provide highly effective and efficient answers to the abovementioned questions. Neurotypical and neurodiverse learners acquire knowledge differently. Before the COVID-19 pandemic, neurodiverse learners faced

numerous obstacles. Examining how COVID-19 lockdowns affected neurodiverse learners and their parents can help in discovering the online learning needs of neurodiverse students. This research investigates Aotearoa's frontline parents' experiences, opinions, and recommendations so that the best recommendations can be provided at the conclusion.

Different researchers have emphasised the challenges faced by families with neurodiverse learners during COVID-19 lockdowns. In line with this, Polónyiová et al. (2021) conducted a study focusing on families that included individuals with neurodiverse differences. Their research aimed to collect data on the experiences of these families during the pandemic. To gather information, the researchers administered surveys to their target audience. They employed covariance analysis to examine differences between different periods of the COVID-19 pandemic, commonly referred to as the first and second waves. The first and second waves of the COVID-19 pandemic refer to distinct periods of increased infections and outbreaks. These waves are characterised by surges in cases and the implementation of various safety measures and restrictions to control the spread of the virus. The timing and severity of these waves may vary across countries and regions. In the context of Polónyiová et al.'s study, the first and second waves refer to specific periods during which the impact of COVID-19 on families with neurodiverse children was assessed.

The study revealed significant differences in treatment accessibility for children between the first and second waves of the pandemic. The closure and lockdown measures implemented during these waves resulted in a lack of therapy, which heightened the strain, anxiety, and stress experienced by caregivers. Additionally, the researchers found decreased therapy attendance during both waves compared to the pre-COVID-19 period. Although there was a partial improvement in availability during the second wave, it remained significantly different from the pre-pandemic situation (p. 1047).

Furthermore, Polónyiová et al. (2021) highlighted the negative impact of COVID-19 lockdowns on neurodivergent individuals, particularly those with Autism Spectrum Disorder (ASD). They described the demands faced by caregivers of children with ASD, including the symptoms of the disorder itself, associated stigma, and common comorbidities such as gastrointestinal and sleep problems, attention deficit hyperactivity disorder, anxiety, and

depression. These factors can significantly affect caregivers' mental health and increase their overall burden (p. 1047).

The findings from Polónyiová et al.'s study underscore the importance of understanding and addressing the specific challenges faced by families of neurodiverse learners during COVID-19 lockdowns, particularly during different waves of the pandemic. While their research provides valuable insights into the impact on treatment accessibility and the well-being of individuals with neurodiverse differences, it should be noted that the current researcher's study does not directly investigate waves of the pandemic or compare different periods. Nonetheless, their study serves as a relevant reference, highlighting the need to consider the unique circumstances and experiences of neurodiverse families in Aotearoa during times of crisis. By conducting research within the specific context of Aotearoa, the current study aims to contribute insights and recommendations that will assist teachers and parents in effectively supporting neurodiverse learners and their families amid restricted lockdowns in this region.

1.2. Background to the Study

Usually, neurodiverse children face many problems in learning and reading, such as lack of focus, issues pronouncing unknown words, difficulty memorising, etc. However, their condition worsened during COVID-19 lockdowns as they could not attend their learning and therapeutic sessions and had to take online classes. The key focus of this thesis is to investigate the impacts of COVID-19 lockdowns on neurodiverse children's learning and the lessons that can be learned from their parents in Aotearoa. These lessons can assist in identifying the most efficient and acceptable teaching approaches for neurodiverse learners online and at home. Neurodiverse learners struggle in today's academic learning environment. The learning ability of neurodiverse children is different from other children, and traditional school systems that do not pay much attention to learning disabilities complicate the learning journey of neurodivergent.

The preliminary study will be conducted via a web-based survey. Parents who meet the criteria can participate in the online e-survey without revealing their identities. They can do so from the comfort of their home using any internet-connected computer, tablet, or smartphone.

To enter this study and participate in the online survey, the potential participant must be the parent of a neurodiverse student who attended an Aotearoa school during the COVID-19 lockdowns and was required to participate in online learning. The individual must be of school age and have attended kindergarten, middle, or high school. The author will send the e-survey to the following group administrators for them to post into their Facebook groups so that it is advertised to their members:

➢ "Dyslexia NZ Evidence-Based Support Group"

Approximately eight thousand members.

➢ "Dyslexia Support Aotearoa Group"

Approximately three thousand members.

➢ "ADHD NZ Community for parents of children with ADHD"

Approximately eleven thousand members.

➢ "ADHD NZ Community for adults with ADHD"

Approximately eight thousand members.

The following organisations have agreed to advertise the e-survey on their Facebook pages:

➢ "ADHD NZ Association Facebook Page"

Approximately ten thousand followers.

➢ "Dyslexia Foundation of NZ Facebook Page"

Approximately nine thousand followers.

The following school has agreed to advertise the e-survey on their school Facebook group:

➢ "Age Whanau Group"

One hundred members.

Research Objectives

The objectives of this study are:

1. To investigate the lessons that can be learned from parents of neurodiverse learners in Aotearoa and the impacts of the COVID-19 lockdown on their children's learning.

2. Study these lessons to determine the most efficient methods for teaching neurodiverse learners through at-home online learning.

3. To provide recommendations for approaches that can be utilised at home to help neurodiverse learners, focusing on Attention Deficit Hyperactivity Disorder and Dyslexic learners.

1.3. Aim and Research Questions

This research proposes that there are lessons that can be learned from parents of neurodiverse learners in Aotearoa about the impacts of COVID-19 lockdowns on their children's learning. These lessons can shape the most efficient methods for teaching neurodiverse learners at home online learning.

1. What lessons can be learned from Aotearoa parents with neurodiverse learners during COVID-19 lockdowns?
2. How can their feedback help shape an online learning platform for neurodiverse learners?

The research aim is to provide recommendations for approaches that can be utilised at home to help neurodiverse learners learn, focusing on ADHD and Dyslexic learners. To achieve the aim described above, the research seeks to answer several questions first.

1. What was the learning environment for students during lockdowns?
2. How did the teachers deliver their lessons?
3. What support was given to parents of children with neurodiversity?
4. How can the online learning environment be improved to achieve both the high-quality student outcomes required and the ease and comfort for all household members?

1.4. Significance

This study is significant for many reasons. First, it sheds light on parents' difficulties with their neurodiverse children's education due to the lockdowns. The research will help advocates of neurodivergent students because choices and adjustments can be made to help students make improvements in terms of learning. Secondly, it presents new information on what tools were utilised during lockdowns and what suggestions parents might make based on their first-hand experiences. This study provides critical information that can improve the online learning environment for neurodiverse learners, teachers, and parents. Thirdly, this research can serve as a foundation for future researchers to build. It can also serve as a bridge for research focusing on neurodiversity distinct from Attention Deficit Hyperactivity Disorder and Dyslexia.

1.5. Overview of Methodology / Methods

This research aims to discover the impacts of COVID-19 lockdowns on neurodiverse learners and their parents. Based on these impacts, it will be possible to suggest methods and approaches that neurodiverse learners and parents can use to overcome their academic-related problems. The location of this research is Aotearoa, which is a culturally diverse country. The research participants are Aotearoa parents of neurodiverse children; therefore, the methodology should support the researcher throughout the research as they will tackle data from culturally diverse participants. For this reason, the culturally responsive methodology has been used. Culturally responsive methodology guides the researcher throughout the research process so that the research process can be easily done.

Another methodology used for this research is insider research methodology. Thus, methodology indicates that the researcher is also a part of the community where the research is being conducted. The research is focused on neurodiverse learners, and the researcher is also a member of the neurodiverse community. The researcher is aware of the problems faced by the neurodiverse community; hence, the research is being conducted to help them lead better and academically improved lives.

As mentioned, Aotearoa is a culturally diverse country; Māori people comprise 17.1% of the population (*Māori Population Estimates: At 30 June 2021 | Stats NZ*, 2021). Therefore, it is important to ensure that their values, philosophy, and principles are not harmed. During and after colonisation, Māori suffered academically and socially as traditional research approaches did not viably present and solve their problems. Hence, the Kaupapa Māori research methodology has been designed. This research methodology puts the interest of the Māori at the centre and tries to solve it. Māori children are also diagnosed with neurodiversity, and they face problems academically. The researcher is also a Māori, which compels them to utilise Kaupapa Māori methodology so that problems of neurodiverse Māori children and their parents' problems can be solved.

The final methodology employed in the present study is a phenomenological qualitative approach. The impact of COVID-19 lockdowns on parents of neurodiverse students in Aotearoa (New Zealand) is investigated using phenomenological qualitative research methodologies. Due to its individual-centeredness, this technique is especially well suited for investigating the many feelings, difficulties, and coping strategies of parents of neurodiverse children during extraordinary situations like the COVID-19 lockdowns.

1.6. Overview of Thesis

Chapter one provides a thorough introduction, presenting the background and context of the research. It outlines the research objectives, aims, significance, and questions, providing a clear roadmap for the thesis. This chapter emphasizes the study's importance and potential impact while posing pertinent research questions. By offering a concise and focused approach, Chapter one establishes a solid foundation, paving the way for the subsequent chapters to delve deeper into the subject matter.

Chapter two conducts an extensive literature review on neurodiversity, focusing on sub-topics such as ADHD and dyslexia. It critically examines the challenges faced by neurodiverse learners within the educational landscape and explores various teaching methods, assistive tools, and technologies that can effectively support their learning. Additionally, the chapter investigates the specific impacts of COVID-19 lockdowns on neurodiverse learners, their

parents, and family members, contributing to a deeper understanding of their experiences during unprecedented times.

Chapter three delves into the methodologies employed in the research, with a specific emphasis on culturally responsive methodology, insider research methodology, Kaupapa research methodology, and a mixed-method approach. The chapter details the chosen method for data collection, a web-based e-survey. It discusses the rationale behind these methodological choices, ensuring a robust and comprehensive approach to the study.

Chapter four presents the study's key findings, focusing on each research question and its purpose within the broader research framework. The chapter includes visual representations, such as graphs or tables, to present the data obtained from the survey responses. Additionally, relevant literature thoroughly reviewed during the proposal stage is woven into the discussion, establishing connections between the findings and the existing body of knowledge. The chapter critically analyses and interprets the results, shedding light on significant patterns, trends, and insights from the data.

Chapter five provides a detailed analysis and discussion of the collected data, leveraging tools such as Survey Monkey for data collection and NVivo for data analysis. This chapter focuses on conducting a qualitative phenomenological investigation, exploring the perceptions and experiences of parents in Aotearoa with neurodiverse learners during the COVID-19 lockdowns. Through a non-judgmental and impartial lens, the chapter aligns with the research questions, providing valuable insights into the participants' lived experiences. The analysis aims to deepen the understanding of the impact of COVID-19 lockdowns on parents of neurodiverse learners in Aotearoa, identifying potential areas for improvement in supporting these learners during times of crisis.

Chapter six offers a concise summary of the thesis, highlighting the key findings and insights derived from the analysis and discussion of the data. Drawing from the study's outcomes, the chapter concludes with informed recommendations to enhance support for neurodiverse learners and their parents. These recommendations consider the challenges encountered during the COVID-19 lockdowns, providing practical guidance for addressing the needs of neurodiverse learners in similar crises.

1.7. Chapter summary

This chapter introduces the research topic and provides a brief study background. It outlines the research objectives, aims, significance, and questions, setting a clear direction for the research. Emphasizing the importance of the study and its potential impact, the chapter presents a concise and focused overview. Establishing a solid foundation paves the way for the subsequent chapters to explore the subject matter in greater depth. The next chapter is a review of the literature on a variety of topics, including neurodiversity, neurodevelopment, ADHD, dyslexia, problems faced by ADHD and dyslexia learners, teaching methods, assistive tools and technologies for neurodivergent individuals, and the impacts of COVID-19 on children with neurodiversity and their families.

<h1 align="center">CHAPTER TWO</h1>
<h1 align="center">2. LITERATURE REVIEW</h1>

2.1. Chapter Introduction

The preceding chapter outlined the thesis and gave context for neurodiversity and the consequences experienced by international parents during covid-19 lockdowns. This chapter examines the relevant literature to understand this study clearly.

2.2. Key literature topics

This literature review aims to analyse essential information about neurodiversity, attention deficit hyperactivity disorder (ADHD), dyslexia, teaching approaches, and how COVID-19 lockdowns influenced the parents of school learners. These readings have supplied better knowledge and development in the study design. The most efficient research approach will be used, resulting in the most precise data collection.

This literature review is divided into seven themes. Each theme focuses on a separate topic and provides the base of that topic. Themes 1, 2, and 3 are about neurodiversity, ADHD, and dyslexia. Each of these three themes presents the topic's history and its definition. Theme 4 discusses the issues faced by neurodivergent learners (With an emphasis on ADHD and dyslexic learners). Theme 5 explains the teaching methods utilised by various researchers. In contrast, theme 6 presents the assistive tools and technologies that can be used in teaching methods to minimise or eradicate the learning disabilities of children and adults. Theme 7 discusses the impacts of COVID-19 on neurodiverse people during the lockdowns.

2.2.1. Theme 1: Neurodiversity

The origin of neurodiversity dates to 1998 from Judy Singer on Martijn Dekker's mailing list "InLv" during the autism rights movement. Neurodiversity means "variation in neurocognitive functioning" (Kapp, 2020, p. 3). With time, it has become a broad concept that includes neurotypical and neurodivergent people. The former are the people who lie under the spectrum of a socially acceptable range. At the same time, the latter are the people whose

neurocognitive functioning differs from the normal range limit. The neurodiversity movement was launched, and its motive was to work for the rights of neurodivergent people by applying an approach or framework that completely respects their differences and rights (Kapp, 2020).

Moreover, it did not perceive dyslexia, ADHD, and other neurological conditions as disorders but as a diversity of the human species. If neurodiversity is understood to be diversity, then multicultural education is appropriate. However, this viewpoint is absent from the literature on learning impairments, organised around the needs and services of individuals with learning differences. Nevertheless, according to Protopapas & Parrila (2018), dyslexia, autism, and ADHD result from disturbed neurological development; the authors called them neurodevelopment disorders not caused by physical or psychological reasons. Neurodivergent people aim to hide their differences due to "real or anticipated stigma" by masking them (Shmulsky et al., 2021). These conditions are called disorders; there is a dire need to spread awareness and normalise the fact that students learn differently from one another. Wilson & Savery (2013) stated that identification is the most important moment for a neurodivergent person. Once the neurodivergence is identified, it is possible to help them improve their learning and overcome their differences. In addition, it is also important to work on education methods and tools so that learning is easy for neurodivergent people.

2.2.2. Theme 2: ADHD

The first case of Attention Deficit Hyperactivity Disorder (ADHD) was first identified in 1775 in Germany; however, the information about ADHD was limited. After that, George Still mentioned ADHD cases in children in 1902 and studied it further. Since then, it has not been studied and researched (Barkley, 2015). Various researchers have presented definitions of ADHD. Khan (2020) quoted Rogers' definition and wrote that ADHD is a neurobehavioral disorder that has been present since childhood. Similarly, Quinn & Lynch (2016) presented a different American Psychiatric Association (APA) definition. According to APA, ADHD is a neurodevelopment disorder caused by a persistent pattern of hyperactivity-impulsivity and inattention.

There are three main subtypes of ADHD: impulsivity, inattentiveness, and hyperactivity. As the name suggests, children with impulsivity are usually impulsive and act

without thinking, affecting their logical decision-making. Impulsivity ADHD is the most common undiagnosed type of ADHD as these cases are not medically assessed, and children with these disorders face problems in academic settings. The second type of ADHD is inattentiveness, which is a behavioural condition. In this condition, a child does not pay proper attention, often resulting in absent-mindedness, disengagement, forgetfulness, and distractibility. Like impulsivity, this condition also negatively affects the affected children's academic performance because they cannot pay proper attention; hence, they lack focus in their studies. The last type is hyperactivity, which means an affected person is unnecessarily active, and normal people might find this unusual. Nevertheless, some infants/children are hyperactive, which does not mean that they are ADHD case (Khan, 2020).

According to Quinn & Lynch (2016), the exact causation of ADHD is known, and science still must achieve this goal. Using scales or subjective criteria, notably the DSM-5, to diagnose children with ADHD is one of the most disputed aspects of ADHD diagnosis. This is because, unlike other medical diseases, there are no biological markers, characteristics, or diagnostic tests for ADHD. On the other hand, multiple neurological studies support the notion that ADHD is a legit disorder by citing findings from genetic studies demonstrating three significant correlations: the prevalence of psychopathology in the parents or relatives of ADHD children, abnormalities in the dopamine system, and the high prevalence of ADHD symptoms in identical twins (Quinn & Lynch, 2016). It is also claimed that it can be triggered by different factors, such as psychological or environmental (Khan, 2020).

2.2.3. Theme 3: Dyslexia

The term dyslexia was first coined by German ophthalmologist and professor Rudolf Berlin 130 years ago. He noticed that some of his patients had difficulty reading the printed words while having no problems with their eyes (Deater-Deckard & Panneton, 2018). According to Protopapas & Parrila (2018), Dyslexia is now the most common learning disability. However, it does not mean that a person with difficulty reading has dyslexia disorder. A person will be considered as suffering from dyslexia disorder when they have proper instructions and guidance but are still unable to read and learn. It is defined as "[Dyslexia is] a disorder manifested by difficulty in learning to read despite conventional instruction, adequate intelligence, and sociocultural opportunity" (Protopapas & Parrila, 2018).

Nevertheless, it is impossible to claim that dyslexia is an inherent brain development disorder explicitly.

Protopapas & Parrila (2018) criticise two different problems:

We have criticised the widespread conflation of two very different issues, namely the relational descriptive claim that groups differ in their average values on some measures (brain-related or not) and the normative claim that one group is composed of brains that have failed to develop properly (p. 14).

Research conducted by Yale university claimed that gender is not a factor in the number of dyslexic cases. Nevertheless, genetics are related to learning disabilities. Typically, students with dyslexia have an undiagnosed family member with dyslexia from when they were students. Cases will range from moderate to severe, making the diagnosis of mild cases even more challenging (Burton, 2018).

2.2.4. Theme 4: Issues for learners

A person is likely to be affected by ADHD since childhood, and it is the most difficult time for them as they have to face problems during their academic career due to their disability. These problems include reading words, decoding, and/or reading comprehension. However, it can be said that these problems are caused due to traditional learning systems. Children with disabilities can excel academically if taught special learning tools and methods. Learners with ADHD face issues in performing daily tasks due to impulsivity and lack of attention. Due to a lack of focus and attention, they cannot concentrate on a particular task, and they also face issues of sitting still.

Moreover, they also speak at inappropriate times. As mentioned, children with ADHD suffer from a lack of attention, which causes problems in classrooms and results in poor academic performance. It is said that children with ADHD are more likely to be at risk of poor academic scores in reading and arithmetic tests. Their grade point average (GPA) also decreases; therefore, such children are sent to special education classes. Similarly, adolescents with ADHD perform worse academically than their matched controls (Gray & Climie, 2016).

A person with dyslexia faces numerous problems during the learning process. It results from the brain's neurodevelopment disorder and affects writing, spoken language, reading, and memory. The reading ability of a child with dyslexia is less than other children of this age (Burton, 2018). Some of the key issues faced by learners with dyslexia are as follows:

- The problem in recognising commonly used words
- The issue in pronouncing unknown words
- Ignoring some words/phrases when reading
- Problem in rhyming
- The issue in spelling the words
- The issue in learning a foreign language
- The problem in processing text
- Difficulty in remembering the sequence, such as numbers, lists, names, etc.
- The issue in comprehending what they listen
- A problem in understanding rapid guidance (Burton, 2018)

Burton (2018) has mentioned seven areas where people with dyslexia face the most difficulties; see figure 1.
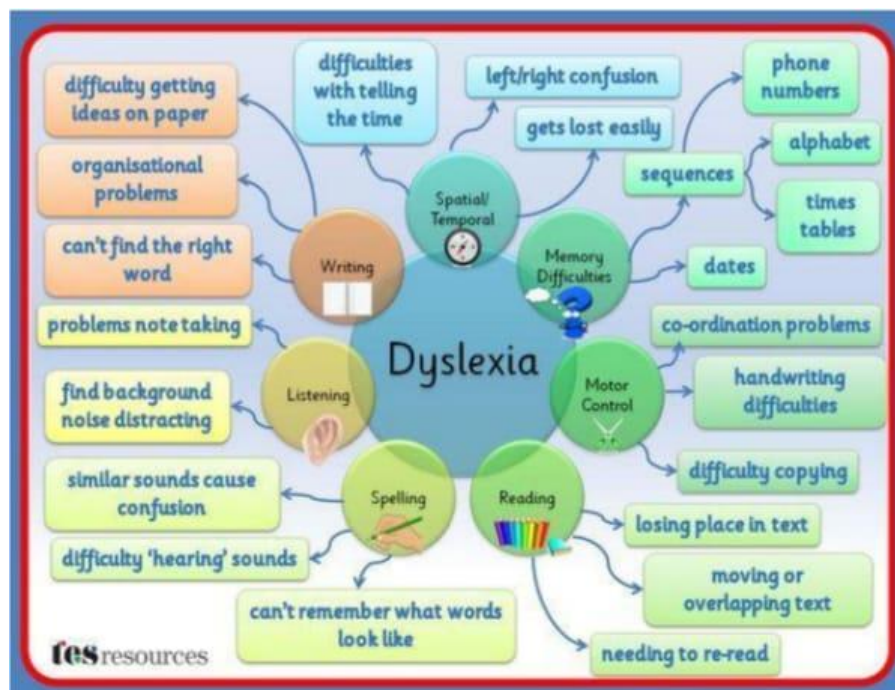
Figure 2: Areas in which people with dyslexia face problems (Burton, 2018)

Children with ADHD and dyslexia face major problems: lack of attention, reading problems, and spelling errors. Therefore, it is important to identify effective teaching methods to overcome these problems. Children face the major issue with mild learning impairments, i.e., ADHD, as these children are not considered at higher risk, so they are not included in the programs and teaching methods that aim to help children with severe learning impairments. Therefore, they do not improve in further studies (Fokides et al., 2019). Therefore, this study fills this gap by including children with ADHD in the research.

2.2.5. Theme 5: Teaching Methods

Each child is different from the others, especially if they are neurodiverse and have ADHD and dyslexia; therefore, no teaching strategy can be applied to all neurodiverse children. Using uniquely selected teaching methods with medication can significantly cure a child's disability (Geng, 2011). However, Khan (2020) suggested that the success of any teaching method depends on the mental health of the instructor and learner alike. Workable pedagogy and delivery mode, feedback style, and theories are important. In other words, the behaviour of learners and instructors should be positive, as "Negative behaviours cannot produce positive results" (Geng, 2011, p. 27). A child's behaviour can never be positive if the teacher yells at them. Teachers' negative behaviour indicates that the children's negative behaviour is not bad, and they can continue it (Geng, 2011). Therefore, teachers must understand the children and their mental stage and tackle them with a positive attitude and behaviour.

Understanding and awareness of the requirements of students with ADHD and dyslexia by teachers reduce social stigma and encourage them to explore and disclose their learning disabilities. The combination of educational pedagogies and psychosocial factors improves learning. The instructional methods include multisensory learning activities, explicit teaching of terminology, identification of the primary point in all texts and lectures with concluding summaries, and audiovisual technology, which can help children with ADHD and dyslexia improve with time (Wilson & Savery, 2013). Moreover, non-traditional learning methods can help learners with ADHD and dyslexia. In these methods, they should be the main participants, and the teachers will be a mere conduit for familiarising them with sounds/words. Konicarova

(2014) also supports the use of non-traditional teaching methods and states: "usual educational strategies in children with ADHD and dyslexia, in general, recommend to practice motor and linguistic skills and to train children in various kinds of social behaviour predominantly in small groups" (Konicarova, 2014, p. 65). These non-traditional teaching methods include physical activity, a stress-free environment, interpretation via movement, and social interactions that can be practiced at home as fun activities by parents.

Shmulsky et al. (2021) explain four pedagogies suitable for neurodivergent people. These four pedagogies are Culture Relevant Pedagogy (CRP), Culturally Responsive Teaching (CRT), Culturally Sustaining Pedagogy (CSP), and Universal Design for Learning (UDL). Similarly, Khan (2020) describes another pedagogy, i.e., Differentiated Instruction (DI). Differentiated instruction (DI) is a tiered, objective-based approach in which a differentiated educator conveys knowledge to students with varying needs. Severinsen (2018) discusses the adoption of another pedagogy within Aotearoa, the Davis Learning Strategy (DLS), which is a program designed for Special Needs Learners (SEN). The DLS is designed according to the principles mentioned in Aotearoa Curriculum (NZC). It is an excellent tool for people with dyslexia and non-dyslexics learners alike. It improves the thinking ability of the learner, which results in improvements in reading.

2.2.6. Theme 6: Assistive tools and technologies

Learners with disabilities are now trying to get postsecondary education, making up the largest group of people with disabilities who seek postsecondary education. Therefore, assistive tools and technologies must also be included apart from teaching methods to help learners with disabilities (Perelmutter et al., 2017). Goodmon et al. (2014) studied the use of therapy balls for learners with dyslexia only and students with ADHD and dyslexia. Therapy balls aim to improve the behaviour and learning ability of the students. The therapy balls could be proven effective for improving children's learning ability at home as this tool is inexpensive. Assistive Technologies (AT) can help children with learning disabilities. Andersen & Jensen (2018) studied seven categories of assistive technologies related to time management, memory training, collaboration, attention, behaviour, combination, and literacy skills. The implementation of technology as diagnostic tools, systems to amplify teachers' voices, Video social storytelling, a mobile application for smartphones, and tangible user interfaces for

classroom collaboration have all been found to result in desirable, beneficial changes. Analog and digital tools for enhancing literacy and communication have proven that the most effective tool depends on the individual student's demands.

One of the major problems learners face with ADHD and dyslexia is the lack of attention. Liontou (2019) investigated the development of ADHD learners' reading competency within a Technology-Enhanced Learning Environment (TELE) by conducting a one-year classroom-based study. Information and communication technology was utilised to minimise distractions and improve attention by creating a dynamic environment. Moreover, ICT also helped increase engagement and motivation and support teachers in designing learning materials.

Kellems et al. (2016) studied video prompting tools for teaching math skills to learners with disabilities. As said above, people with dyslexia face problems in solving maths problems as they have a disability in memorising number sequences; therefore, video modelling and video prompting are utilised for imparting different skills to adults with learning disabilities. VM and VP can be updated and developed per the standards of various countries for their curricula to solve the disparities in academic competency among neuro-diversity learners. Fokides et al. (2019) investigated the impact of two IT-based teaching methods: video vs. 3D virtual reality (VR). The aim was to improve the functional skills of children with ADHD. The age of these children was 8-9 years. The results of this research indicated that 3D VR outperformed video teaching methods.

2.2.7. Theme 7: COVID-19 Impacts

The COVID-19 pandemic has disturbed all fields of life. Children and adults with disabilities are no exception. During the COVID-19 pandemic, lockdowns have worsened the condition of learners with disabilities. Their behaviour was disturbed because they felt irritated. Moreover, these children's family members also felt irritable, and the rates of punishing children, shouting at them, and verbal abuse increased. On the other hand, praising and spending time with children also increased (Shah et al., 2020).

Different researchers have emphasized the challenges faced by families with neurodiverse learners during COVID-19 lockdowns. In line with this, Polónyiová et al. (2021) conducted a study focusing on families that included individuals with neurodiverse differences. Their research aimed to collect data on the experiences of these families during the pandemic. To gather information, the researchers administered surveys to their target audience. They employed covariance analysis to examine differences between different periods of the COVID-19 pandemic, commonly referred to as the first and second waves.

The first and second waves of the COVID-19 pandemic refer to distinct periods of increased infections and outbreaks. These waves are characterised by surges in cases and the implementation of various safety measures and restrictions to control the spread of the virus. The timing and severity of these waves may vary across countries and regions. In the context of Polónyiová et al.'s study, the first and second waves refer to specific periods during which the impact of COVID-19 on families with neurodiverse children was assessed.

The study revealed significant differences in treatment accessibility for children between the first and second waves of the pandemic. The closure and lockdown measures implemented during these waves resulted in a lack of therapy, which heightened the strain, anxiety, and stress experienced by caregivers. Additionally, the researchers found decreased therapy attendance during both waves compared to the pre-COVID-19 period. Although there was a partial improvement in availability during the second wave, it remained significantly different from the pre-pandemic situation.

"During the first and second waves, we recorded an overall decrease in therapy attendance compared to pre-COVID-19. During the second wave, the availability improved partially, but the difference was still significant compared to the period before the introduction of safety measures (p. 1050)."

Furthermore, Polónyiová et al. (2021) highlighted the negative impact of COVID-19 lockdowns on neurodivergent individuals, particularly those with Autism Spectrum Disorder (ASD). They described the demands faced by caregivers of children with ASD, including the symptoms of the disorder itself, associated stigma, and common comorbidities such as gastrointestinal and sleep problems, attention deficit hyperactivity disorder, anxiety, and

depression. These factors can significantly affect caregivers' mental health and increase their overall challenges.

"Caring for children with ASD is generally demanding due to the disorder symptoms, stigma connected to autism, and common comorbidities such as gastrointestinal and sleep problems, attention deficit hyperactive disorder, anxiety, and depression, which can affect mental health and strain caregivers (p. 1047)."

The findings from Polónyiová et al.'s study underscore the importance of understanding and addressing the specific challenges faced by families of neurodiverse learners during COVID-19 lockdowns, particularly during different waves of the pandemic. While their research provides valuable insights into the impact on treatment accessibility and the well-being of individuals with neurodiverse differences, it should be noted that the current researcher's study does not directly investigate waves of the pandemic or compare different periods. Nonetheless, their study serves as a relevant reference, highlighting the need to consider the unique circumstances and experiences of neurodiverse families in Aotearoa during times of crisis. By conducting research within the specific context of Aotearoa, the current study aims to contribute insights and recommendations that will assist teachers and parents in effectively supporting neurodiverse learners and their families amid restricted lockdowns in this region.

2.3. Chapter Summary

Chapter 2 is the literature review of this study, which provides information on various topics such as neurodiversity, neurodevelopment, ADHD, dyslexia, problems faced by ADHD and dyslexia learners, teaching methods, assistive tools and technologies for neurodivergent people, and impacts of COVID-19 on children with neurodiversity and their family members. Chapter 3 provides detailed information on the methodologies and methods used in this research. Methodologies used in this research are culturally diverse methodology, insider research methodology, Kaupapa Māori research methodology and mixed-method research. The method used in this research for data collection is a web-based survey which records the qualitative and quantitative responses of the participants.

CHAPTER THREE

3. METHODS

3.1. Chapter Introduction

Chapter 2 is the literature review of this study, which provides information on various topics such as neurodiversity, neurodevelopment, ADHD, dyslexia, problems faced by ADHD and dyslexia learners, teaching methods, assistive tools and technologies for neurodivergent people and impacts of COVID-19 on children with neurodiversity and their parents. Chapter 3 provides an overview of the methodologies and methods used in this thesis, specifically focusing on qualitative data collection. The research primarily utilises the phenomenological qualitative approach. This method focuses on exploring participants' underlying meanings and experiences to gain insights into their distinct perspectives. The research design includes various methodologies such as culturally responsive methodology, insider methodology, Kaupapa Māori research methodology, and mixed-method research approach. The data collection method uses a web-based survey distributed within Facebook groups related to different organisations and schools.

3.2. Methodology Overview

This research utilises a variety of methodologies due to the scope of the research. The culturally responsive methodology is used because it helps the researcher know participants from different cultures. This research is being conducted in Aotearoa, a culturally diverse country; therefore, the culturally responsive methodology will help the researcher understand the problems the participants face. The second methodology used in this research is insider research methodology. This methodology states that the researcher is a part of the community in which the research is being conducted. This research is conducted by a researcher from the dyslexia and ADHD community; therefore, the insider research methodology can help the researcher. The Aotearoa population comprises 17% Māori people, so utilising the Kaupapa Māori methodology can ensure that the interests of Māori people are not neglected. The last methodology employed in the present study is a phenomenological qualitative approach incorporating quantitative paradigms. The impact of COVID-19 lockdowns on parents of neurodiverse students in Aotearoa (New Zealand) is investigated using phenomenological

qualitative research methodologies. Due to its individual-centeredness, this technique is especially well suited for investigating the many feelings, difficulties, and coping strategies of parents of neurodiverse children during extraordinary situations like the COVID-19 lockdowns.

3.2. Research Framework

3.2.1. Culturally responsive methodology

Berryman, SooHoo, & Nevin (2013) presented the concept of culturally responsive methodology. According to the authors, culturally responsive methodology accepts epistemology, and cultural pluralism dismantles the traditional research methods introduced by Western colonies and acknowledges the centrality of relationships. This methodology introduces three phases of the research: learning the skills to know the research participants, revealing the researcher's true position, and participating in relation and dialogical interactions. These phases enable the researchers to conduct research effectively. "Within culturally responsive and socially responsible methodology, understanding oneself before understanding others is the first step toward building relationships based on mutual respect (Berryman et al., 2013, p. 106)." This quote highlights the first step of conducting research using culturally responsive methodology: understanding with respect.

Like other decolonising methodologies, the culturally responsive methodology is also resistant to the hierarchal power structure but has different opinions about the oppressor/oppressed relationship. It states that not all acts of oppression find their roots in the history of colonisation. For example, the problems of special populations in contemporary circumstances are caused by western colonial history.

Transformation and changes are not the critical aims of culturally responsive methodology because, in this methodology, a person does not step into a relationship for the sake of change. Instead, the main goal is honouring and supporting that person for improvement (Berryman, SooHoo, Nevin, et al., 2013). In addition, culturally responsive methodology gives an alternate way for young researchers, ethical grounds and the freedom to develop culturally specific methodologies guided by interactional collaboration.

Culturally responsive research methodology describes the research as the researcher's and participants' combined work through mutual respect and freedom. The essence of this methodology is a democracy, which means that the researchers cannot dominate participants. According to the traditional research methodology, early anthropologists had unquestioned authority and blind privilege of showing their point of view of the world of other people as truth. The early researchers described and interpreted the social phenomenon from their lens with little knowledge. However, the culturally responsive research methodology values the background of researchers and participants (Berryman, SooHoo, & Nevin, 2013).

This research follows the culturally responsive research methodology since the location of this research is Aotearoa, a culturally diverse country. Participants of this research will be from different cultural backgrounds; hence, the culturally responsive methodology will help deal with the participants with respect. The key idea of this methodology is that a researcher must apply culturally responsive methodologies as an important part of being a socially responsible researcher. A researcher must use self-reflection to understand their own identity and that of their research subjectivities. The researchers also belong to the neurodiverse community, and using this methodology will give them an edge in understanding themselves and the participants. The participants of this research are parents of neurodiverse children; therefore, respect towards them is of utmost importance.

3.3.2. Insider research methodologies

According to Fleming (2018), a researcher following the insider research methodology is a member of the organisation, community or group in which research is conducted. The insider researcher's study is directly concerned with the community or organisation where they live or work. Costley et al. (2014) discussed the insider research methodology and investigated factors influencing work-based research. The purpose was to broaden understanding of the key concepts for the insider-researcher as a good way to create a foundation or background for a researcher who intends or is interested in insider-researcher topics. Costley et al. (2014) presented different topics, and " lifetime " is particularly important." The authors stated that: "the term 'lifewide' is also a concept that recognises the 'non-formal' and implicit learning that occurs within work-based contexts as social action environments and the continual

development of oneself" (p. 2). This statement shows how an insider researcher can progress, benefit and grow as an individual from such an endeavour.

Additionally, this study may aid other parents in becoming stronger advocates for their neurodiverse children upon reading the findings. This researcher performs an explicit role and the normal function in that organisation/community. An advantage of insider research is easy-to-access data collection. Moreover, the insider researcher does not need to travel to collect data by conducting interviews.

Furthermore, the insider researcher will have historical and present knowledge of the organization or community, proving invaluable for the research. The insider researcher also understands the problems faced by the community daily. Comprehending the problems can help the study in areas that help solve the issue and benefit the community greatly (Fleming, 2018). Nevertheless, insider research methodology has been scrutinised due to the insider's role as a participant. From an intellectual standpoint, it is more challenging to cite approaches and procedures for managing "subjectivity." The relationship between the researcher and participants complicates the concept of validity for insider researchers (Teusner, 2016).

This research also follows insider research methodology as the researcher is a part of the neurodiverse community and lives in Aotearoa. It indicates that the researcher is very aware of the problems faced by neurodiverse children and their parents during the COVID-19 pandemic. The issue of validity is treated and resolved when the researcher engages with the participants in the data collection method and clarifies its position. The researcher will not take part as a participant. Additionally, the scope of this research is broad, which means that the researcher will use an e-survey method to collect data for the research. Therefore, despite being a community member, the researcher does not know the participants personally. In this way, the validity of the research will not be compromised. Nonetheless, the researcher understands the participants' problems completely.

3.3.3. Kaupapa Māori research methodology

Māori people have faced numerous problems in different fields of life, and the field of research is no exception. The research aims to solve problems, but Māori people have faced

problems in the research realm, too. They are not properly presented in the research. Most of the traditional research methodologies do not represent Māori adequately. Therefore, a Māori research methodology was needed. Hence, the Kaupapa Māori research methodology has been invented to solve Māori challenges in terms of research. The Māori challenges are no or minimal control over the research agenda, misrepresentation and poor research conduct. The Kaupapa Māori research methodology helps Māori people solve these problems by reclaiming their research space. In this way, any research affecting Māori can help in meeting their needs and requirements in a better way. It also offers the chance to challenge negative and deficient depictions of Mori that have little effect on constructive transformation (D. Wilson et al., 2022). The Kaupapa Māori research methodology means that research is conducted by Māori, for Māori and with Māori. It indicates that the researcher and participants are Māori, and the research findings will help Māori (L. T. Smith, 2015). This mythology places the Māori's interest at the centre (D. Wilson et al., 2022).

The Kaupapa Māori research methodology aims to understand and deliver the story correctly. This methodology also challenges the accepted and traditional way of understanding, knowing and doing Māori so that a positive change can be introduced. In other words, many Māori families face problems in their daily lives, so the right research can help them solve problems and tread on the path of success by being meaningful. As stated above, researchers following Kaupapa Māori research methodologies are Māori, so they normalise the Māori world and make sure that Māori worldview and knowledge are prioritised (D. Wilson et al., 2022).

Graham Smith has described the Kaupapa Māori research methodology in-depth (Hoskins & Jones, 2017), and he summarised this methodology as follows:

1. The Kaupapa Māori research methodology is related to 'being Māori.'
2. This methodology is robustly connected to the principles and philosophy of the Māori.
3. The Kaupapa methodology takes the Māori language, culture, and legitimacy of Māori.
4. It is connected to autonomy rather than cultural well-being.

In other words, the essence of Kaupapa Mori is the slogan "being Mori is the norm." Kaupapa Mori is an analytical technique that emphasises critical thinking, especially

generating a critique of Pākehā (non-Mori) constructions and definitions of Mori and confirming the significance of Mori self-definitions and self-evaluations (Hoskins & Jones, 2017).

This research also follows Kaupapa Māori research methodology since the researcher belongs to Māori. Moreover, as Kaupapa Māori research methodology's principles state that the research should be critical, the researcher has adopted the critical analysis attitude in analysing the findings. The e-survey questions are not rigid, which indicates Kaupapa Māori research methodology. The Kaupapa Māori research approach is about being ethical, accountable and open to other research methodologies; this research is also informed and accountable and has utilised other methodologies.

3.3.4. Phenomenological qualitative approach

3.3.4.1.   *Philosophical Foundations of Phenomenology*

Phenomenology is a research method that explores the underlying concepts and profound meanings parents attribute to their experiences by delving beyond the surface of their narratives. This approach facilitates a comprehensive exploration of the fundamental aspects of parenthood (Urcia, 2021). Phenomenology is a valuable approach to understanding the intricate network of concepts, emotions, and perspectives that constitute the lived experiences of parents. It sheds light on the nuanced dynamics that shape parents' perceptions and behaviours (vom Lehn, 2019). This perspective allows researchers to understand the intricate meanings that parents attribute to their experiences, leading to a more profound and nuanced comprehension of the overall parenting journey (Ataro, 2020).

Using the survey as a methodological strategy, researchers can collect thorough qualitative data that reflects the thoughts and attitudes of parents. This method makes it significant to see similarities and differences in participants' experiences, highlighting the common problems they encounter and the many solutions they choose (Alhazmi & Kaufmann, 2022). Furthermore, the phenomenological approach is consistent with the Maori worldview in Aotearoa, which stresses cultural sensitivity and the value of indigenous knowledge. The purpose of that research process is to be inclusive and sensitive to cultural differences, appropriately reflecting the viewpoints and backgrounds of the participants (Ataro, 2020).

However, given the need for a comprehensive response, it is necessary to explore additional qualitative methodologies that can complement the phenomenological approach (Bhar, 2019).

2.3.4.2.   *Narrative Inquiry*

The study employed a survey-based approach to collect data on parental experiences during the lockdown periods. Surveys are efficient for collecting data from many participants, but they may not fully capture individual experiences. Phenomenology and narrative inquiry prioritise participants' stories and personal narratives, enabling parents to express their distinct perspectives (Patterson, 2018). These narratives provide insights into parents' challenges, emotions, coping strategies, and developmental growth. Due to the exclusive use of surveys in the research, the level of depth in understanding individual stories may be limited. Surveys reveal trends and patterns, but using phenomenological and narrative approaches like interviews or open-ended questions can provide a deeper understanding of parents' adaptation techniques during lockdowns (Randle, 2013). Combining qualitative methods with survey data can offer a comprehensive perspective on parents' experiences during this challenging period.

2.3.4.3.   *Grounded Theory:*

The Grounded Theory approach is significantly an additional means of thoroughly studying the data in addition to phenomenology. The significance of this is made evident when individuals with learning problems like ADHD or dyslexia are considered. Researchers can better recognise macro-level patterns and concepts when fully immersed in parents' daily lives, particularly those coping with the difficulties connected with neurodiversity (Strandmark, 2015). The different strategies parents use to cope with challenges brought on by their children's neurodiversity must be documented, and this method may aid in developing concepts based on participant experiences (Urcia, 2021). The integration of Grounded Theory and phenomenology further enhances the overall rigour and depth of the investigation. The methical framework provided by grounded theory for data analysis makes it simpler to identify recurring themes and new ideas while guaranteeing that the conclusions drawn from the research are grounded in the participants' experiences. Thus, grounded theory is an

appropriate and beneficial addition to phenomenology, particularly when researching the challenges encountered by parents of neurodiverse children.
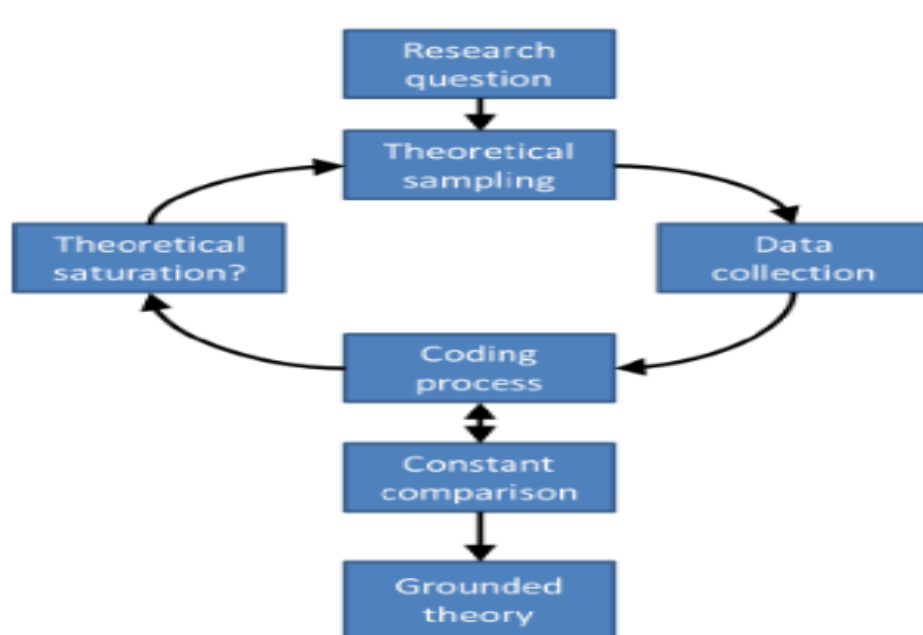
Figure 3: Process utilised in Grounded Theory

This investigation aims to gain insights into the resilience of individuals by examining their life stories (Bhar, 2019). This study's evaluation of parental narratives has the potential to improve treatments and support systems for families facing similar circumstances by shedding light on the complexity of their lives. Using the phenomenological method is essential for a comprehensive understanding of the Maori way of life in Aotearoa (White & Devitt, 2021). This approach is highly effective within the Maori culture, which places great importance on attaining a holistic comprehension of the human condition. Conducting a phenomenological study on Maori culture is essential for comprehending the interconnectedness between individuals, locations, and concepts. This approach allows for a comprehensive understanding of the distinct perspectives and fundamental tenets that form the basis of Maori culture (Cuthbertson et al., 2020). The phenomenological method provides a comprehensive and profound understanding of the Maori people and their cultural significance in Aotearoa. This statement aligns with the study's primary aim, which is to examine the cultural influences on parental attitudes and actions. The research aims to understand the impact of cultural influences on parents' worldviews and behaviours (Petitmengin et al., 2019).

The Phenomenological Qualitative Approach is the only one used in the present study. This approach includes several research viewpoints to verify the obtained insights, which aligns with the research purpose of knowledge advancement. By offering ideas for creating an online learning platform, this study's main goal is to improve the well-being of neurodiverse adolescents. These children's lives may be favourably changed, and their empowerment fostered by improving the school environment.

In the initial stages of this research, the researcher selected a mixed-method approach. For this reason, the researcher collected qualitative and quantitative data; however, due to unforeseen circumstances and situations like natural calamities, the research narrowed down this methodology to phenomenological qualitative research.

2.3.4.4. *Justification of the phenomenological qualitative approach*

Phenomenological qualitative analysis is widely recognised for its profound depth and insightful nature. It is a highly effective tool for exploring the complex relationships of the "Impact on Aotearoa Parents of Neurodiverse Learners during COVID-19 Lockdowns." This method can enhance researchers' understanding of the phenomenon, providing insights into the specific challenges and opportunities experienced by parents of neurodiverse children in Aotearoa during the COVID-19 lockdowns. The phenomenological qualitative technique offers a unique perspective for comprehending the wide-ranging impacts of the epidemic and subsequent lockdowns through an examination of the actual circumstances experienced by parents (Ataro, 2020). Researchers can gain valuable insights into how these parents have adapted and thrived despite adversity by examining the intricate dynamics, emotional experiences, and perspectives that shape their parenting trajectory (Nizza et al., 2022).
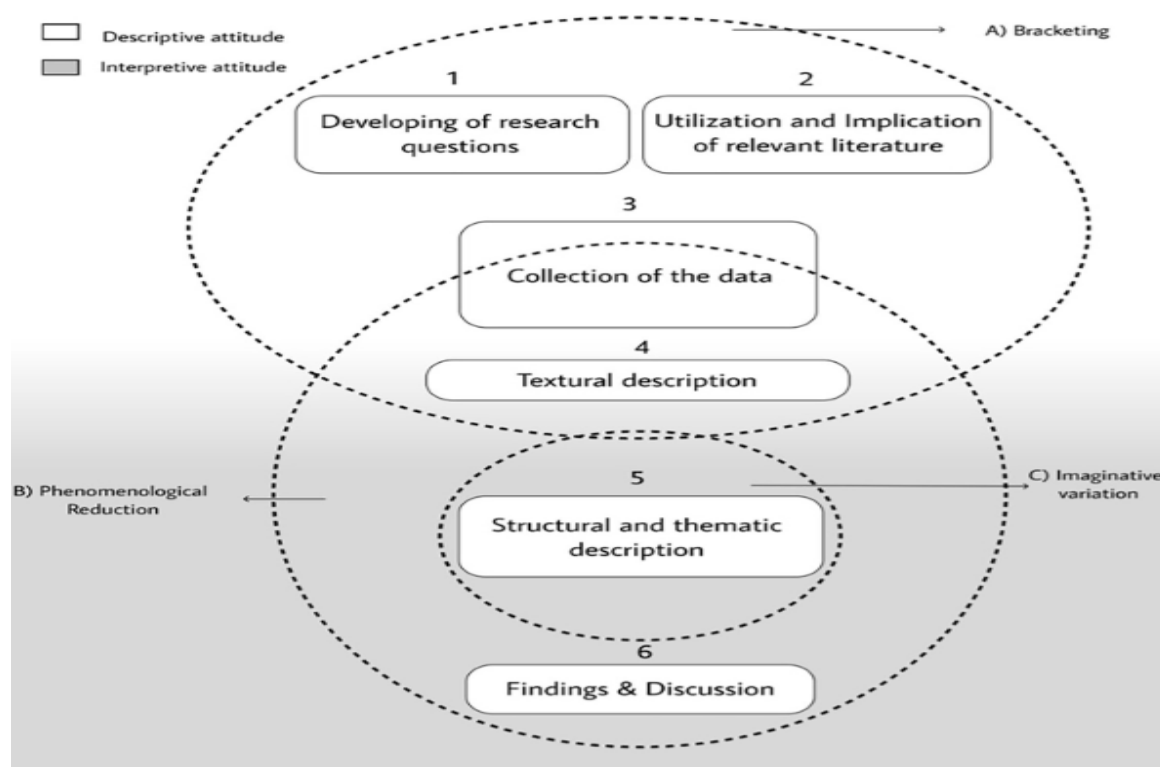
Figure 4: The hybrid phenomenological qualitative method.

2.3.4.5. *Understanding the Essence of Lived Experiences*

This methodology aims to facilitate a comprehensive understanding of the experiences of these parents and provide valuable insights into their ability to overcome challenges and adapt to their circumstances. Phenomenology, a philosophical approach, aims to understand the essence of human experiences as they are subjectively perceived. Phenomenology explores the intricate workings of the human mind to gain a comprehensive understanding of the factors that shape our perspective (Cuthbertson, Robb and Blair, 2020). This comprehensive analysis aims to elucidate the impact of individual experiences and emphasise the importance of recognising their significance. Researchers can gain valuable insights into parents' experiences raising children by conducting in-depth interviews or surveys (Howard et al., 2019). Researchers can analyse large amounts of data to identify recurring patterns that represent parents' responses to lockdown procedures (Ataro, 2020). Parents' participation in interviews and questionnaires can provide valuable insights for researchers seeking to gain a deeper understanding of the experiences parents face during a lockdown. This study examines valuable

insights into the multifaceted emotional experiences and successes parents have faced in the aftermath of the epidemic.

2.3.4.6.   Unveiling Nuances and Complexities

Parents' narratives of lockdown experiences offer valuable insights for researchers studying the impact of lockdowns on families. Surveys are a valuable research tool as they facilitate data collection from a diverse and sizable sample of individuals. This perspective enables us to evaluate the diverse effects of lockdown measures on parents. Researchers can identify trends by analysing survey results. The phenomenological technique can shed light on the unique challenges faced by parents of neurodiverse children in Aotearoa, New Zealand, as they seek to understand the essence of their lived experiences. Researchers can gain valuable insight into the internal processes of parents as they navigate challenging circumstances by conducting in-depth investigations into their subjective perceptions and unique realities. This perspective offers a comprehensive understanding of neurodiverse children in Aotearoa, emphasising the implementation of various strategies, coping mechanisms, and social supports to promote their well-being and achievement (Sundler et al., 2019).

Numerous arguments support phenomenology as a research methodology, demonstrating its validity. Phenomenology is a philosophical discipline that significantly comprehensively examines human experience and consciousness. Phenomenology is a study technique that aims to uncover the complex meanings and significances that individuals attribute to their experiences and the environment. One approach to addressing this issue is to conduct a comprehensive literature review (S. Smith et al., 2018).
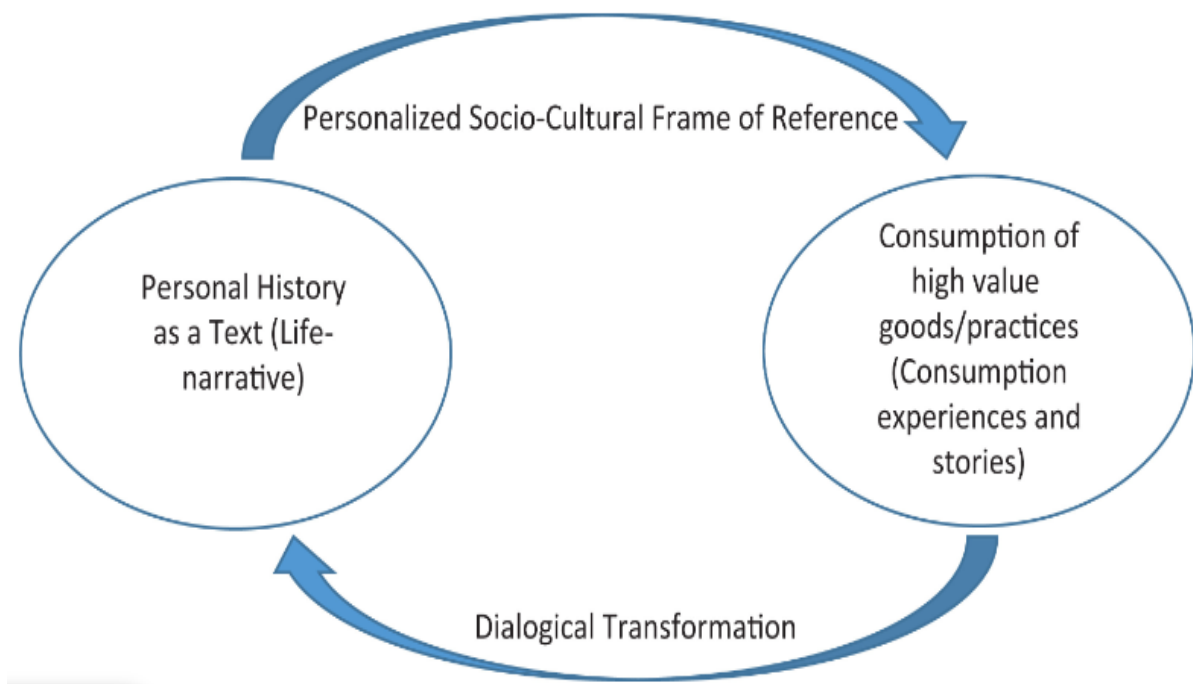
Figure 5: Conceptual Framework adapted from Thompson (1997).

During the lockdowns, students with neurodiversity encountered specific challenges. Neurodiversity encompasses a wide range of conditions. These issues affected both students and their families. Implementing lockdown measures necessitated significant modifications to regular activities, resulting in the unavailability of essential support services. Furthermore, the lessons needed to be delayed (S. Smith et al., 2018). The disruptions caused by the lockdowns posed challenges for parents and students who already experience neurodiversity. Individuals with neurodiversity often encounter stress due to frequent disruptions in their daily routines. The absence of a consistent routine exacerbated heightened levels of distress and insufficient emotional regulation. Another significant barrier was the limited availability of suitable support options for children with neurological disorders and their families (Strandmark, 2015). The lack of access to specific treatments, interventions, and resources can hinder the development and education of individuals with neurodiversity. Closing schools and rehabilitation centres has significantly hindered access to these essential services. The lack of assistance has worsened the challenges faced by families and children with neurodiversity (Sundler et al., 2019).

Furthermore, implementing lockdown measures resulted in significant disruptions to the typical school routine, posing challenges for children with neurodiverse conditions. The increasing popularity of online learning necessitated students' adaptation to new learning

environments and rapid acquisition of new teaching techniques (Yang et al., 2021). Students with neurological disorders often require customised instruction and additional support due to the unique functioning of their brains.

2.3.4.7. *Bridging academia and real-world impact*

Phenomenology provides a significant advantage in cultivating the practice of suspending one's preconceived notions, commonly referred to as "bracketing." Researchers should set aside any biases and assumptions about the study (Bhar, 2019). A deeper understanding of the lived experiences of parents in Aotearoa can be gained by introducing a degree of separation between the two entities. This study's emphasis on cultural sensitivity and community-based strategies represents a significant advancement in knowledge development. A phenomenology is a valuable approach to connecting rigorous scientific investigation with the practical application of findings. Phenomenological techniques facilitate the exploration of the impact of individuals' lived experiences on various aspects of society, providing valuable insights for academics (Ataro, 2020). This theoretical framework enables researchers to explore the intricacies of the human experience and thinking. This strategy provides an opportunity to highlight and commend the exceptional resilience consistently demonstrated by parents in response to unforeseen circumstances (Alhazmi and Kaufmann, 2022).

2.4. Methods

With the rapid increase in internet use, researchers are switching from paper and pencil surveys to electronic surveys. Scholars and researchers, such as web-based, point-of-contact, and email-based surveys, have used different electronic surveys (Jamsen & Corley, 2007). Abd Halim et al. (2018) also supported the claim that using surveys is popular. "Survey research is utilised scholarly by the community, government, and business" (Abd Halim et al., 2018, p. 309). It emphasises that scholars, academics, and governments use surveys in all domains of research alike. Each survey type has its advantages and disadvantages. However, web-based surveys are used in collecting data for this research. Cachia & Millward (2011) explain the importance of surveys by stating: "The most central advantages of telephone interviews consistently noted in the literature pertain to convenience factors rather than methodological strengths" (Cachia & Millward, 2011, p. 270). This is a significant quote because it applies to

web-based e as well. Acquiring participants is quick and simple, allowing for the possibility of a bigger sample size.

There are many advantages of using web-based surveys. The web-based surveys are not time-consuming; researchers must share only a link with participants to get their responses. Moreover, questions can be arranged in different ways (quantitative and qualitative), and the responses are directly saved in the database, where the data quality can be checked. Apart from its many advantages, a few disadvantages make the web-based survey complicated, such as time consumption in designing the survey, limited access to the targeted audience, potential decreased return rate, technical issues at the participants' end and security and privacy issues.

As mentioned above, this research utilises web-based surveys to record the quantitative responses of participants. Gill et al. (2008) describe the importance of quantitative methods to collect the data in these words: "quantitative methods, such as survey, are believed to provide a deeper' understanding of social phenomena than would be obtained from the purely quantitative method" (p. 292). This quotation demonstrates that it is more important to comprehend the narratives that create people's opinions than to know mere demographic data. It is crucial to learn how the parents of neurodiverse students felt during lockdowns and their perspectives, which is why a qualitative method will be used in addition to a quantitative method. Designing a web-based survey is not complicated for this research because The Survey Monkey Program has customisable and user-friendly survey templates, which can be created quickly.

Additionally, sharing the survey is also easy. The web-based survey will be shared in the Facebook groups of different organisations whose participants belong to the neurodiverse community. The list of these organisations is given below:

➢ "ADHD NZ Association Facebook Page"

Approximately ten thousand followers.

➢ "Dyslexia Foundation of NZ Facebook Page"

Approximately nine thousand followers.

Moreover, the following school has agreed to advertise the web-based survey on their school Facebook group:

➢ "Age Whanau Group"

One hundred members.

Web-based surveys are mostly regarded as a threat to privacy. However, in this research, there will be no privacy threat to participants' data as high technology will be used to protect the data, and only the research will have access to it.

2.5. Chapter Summary

The scope of this research necessitates the use of a phenomenological qualitative approach. The culturally responsive methodology is utilised because it aids the researcher in understanding individuals from other cultures. This research is being undertaken in Aotearoa, a culturally varied nation; hence, the culturally sensitive technique will aid the researcher in comprehending the issues the participants face. The second methodology employed in this study is insider research. According to this methodology, the researcher is a member of the community where the research is being conducted. This research is conducted by a member of the dyslexia and ADHD community; hence, the insider research approach can be of use to the researcher. 17% of Aotearoa's population is Māori; hence, employing the Kaupapa Māori technique can ensure that Māori concerns are not overlooked. The limited application of the phenomenological qualitative approach is employed in the current investigation. This approach incorporates multiple research perspectives to validate the acquired insights, aligning with the research objective of knowledge progression.

CHAPTER FOUR
3. FINDINGS/ RESULTS CHAPTER(S)

3.1. Chapter Introduction

The previous chapter provided an overview of the research approaches employed in this study. Culturally responsive methodology, insider research, Kaupapa Māori technique, and phenomenological qualitative approach are included. These approaches ensure an understanding the research subject in Aotearoa, a diverse nation. This chapter presents the findings of a qualitative phenomenological approach to delve into the perceptions and experiences of parents in Aotearoa who have neurodiverse learners, specifically focusing on their experiences during the COVID-19 lockdowns. The primary objective of this study was to gain insights into the effects of the pandemic on both parents and their neurodiverse children while also identifying potential challenges and opportunities for enhancing support. A sample of 121 participants, consisting of individuals from diverse backgrounds and experiences, was randomly selected for this study. The collected data was meticulously analysed to address the research inquiries and provide valuable insights into the unique challenges faced by neurodiverse learners and their parents during the lockdowns.

3.2. Results

3.2.1. Question one

The purpose of the question "What age is your child with neurodiversity?" was to gather demographic information and understand the age distribution of children with neurodiversity among the participants. This information identifies specific age groups within the neurodiverse population, enabling further analysis and exploration of age-related patterns, challenges, and support needs. Additionally, it contributes to a comprehensive understanding

of the sample population and aids in tailoring interventions and support services based on the unique requirements of each age group.

Q1 What age is your child with neurodiversity?

Answered: 120   Skipped: 0
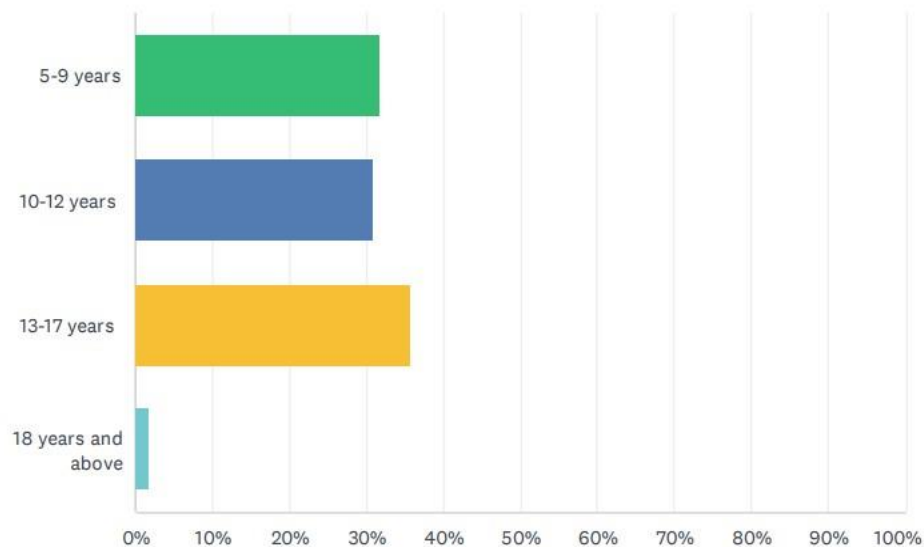
ANSWER CHOICES	RESPONSES	
5-9 years	31.67%	38
10-12 years	30.83%	37
13-17 years	35.83%	43
18 years and above	1.67%	2
TOTAL		120

Figure 6: Age of child with neurodiverse

During lockdown, Smith et al. (2023) observed significant disruptions in the learning and development of neurodiverse children of similar age groups. The study highlighted the need for customised support strategies for different age groups. Polónyiová et al. (2021) found that parents are crucial in mitigating lockdown's negative effects on neurodiverse learners. The study found that parents in the control group (52.44%) and parents with ASD children (78.87%) experienced more demanding childcare as the most common stressor during the first wave.

Wilson & Savery (2013) studied subjective psychosocial experiences of adults with dyslexia. This understanding would enable individuals to approach life from a strengths perspective and make informed decisions about potential risks. Wilson & Savery (2013) proposed that the absence of in-person interaction and individualised support during lockdowns could harm the social and emotional well-being of neurodiversity learners. They stressed the significance of social connections and in-person interventions to meet the overall needs of these learners. L. T. Smith (2015) suggested that neurodiverse learners may have benefited from the lockdowns, and a personalised home environment could support focused learning and reduce sensory overload. Among the 120 respondents, the results show that 31.67% had neurodiverse children aged 5-9, 30% had neurodiverse children aged 10-12, 35% had neurodiverse children aged 13-17, and 1.67% had neurodiverse children aged 18 and above. The age distribution of neurodiverse children helps to understand the sample population better and analyse specific challenges and support requirements for different age groups. The findings provide a demographic perspective on the impact of COVID-19 lockdowns on parents of neurodiverse learners in Aotearoa.

3.2.2. Question two

This question assesses the educational experiences of children with neurodiversity. Exploring education challenges during the COVID-19 lockdown and the difficulties parents face. In this way, the study will discuss the topics of remote learning, disruptions, and school adjustments. This study aims to examine the pandemic's impact and subsequent lockdowns on neurodiverse students at various educational levels. The system detects areas of remote learning support, teaching methods, and school resource gaps. The education of neurodiverse students is being significantly affected by the COVID-19 lockdowns. Clear expectations related to studying for student conduct at school reduce fear and uncertainty (Arthur-Kelly et al., 2006). This fosters a safe and supportive learning environment for young people to learn and take ownership of their responsibilities without fear of humiliation. Setting high expectations for students and holding them accountable can lead to positive outcomes (Geng, 2011). Knowing the child's grade level is important for adapting routines to meet the needs of students of different ages. Optimism from both the instructor and student does not ensure a productive classroom or a close working relationship. Pianta & Stuhlman (2004) suggest that the relationship between a teacher and their students is more complex than just the connection

between the teacher's mood and the student's achievement. The instructor-student connection is only one factor in student success.

Q2 What school level is your child?

Answered: 120   Skipped: 0
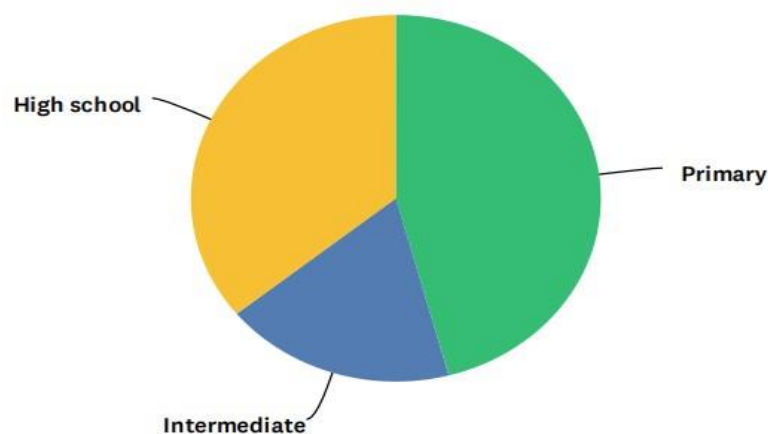
ANSWER CHOICES	RESPONSES	
Primary	45.83%	55
Intermediate	18.33%	22
High school	35.83%	43
TOTAL		120

Figure 7: What school level is your child?

Among 120 respondents, 45 had neurodiverse children in primary school, 18% had children in middle school, and 35% had children in high school. The distribution of grade levels in a sample group of neurodiverse children highlights the need to consider their developmental stages and family situations when addressing the impact of COVID-19 lockdowns. These findings improve the study by offering a demographic perspective, enabling a more thorough analysis of important challenges and potential treatments for each grade level. Understanding the academic standing of neurodiverse children is crucial for developing effective strategies and support systems to ensure their safety and well-being in difficult situations.

3.2.3. Question Three

The question "what gender is your child?" examines gender identification in neurodiverse children. Analysing the gender distribution of assessed children reveals insights into gender-specific challenges, disparities, and needs during COVID-19 lockdowns. This question focuses on understanding the specific experiences and support needs of neurodiverse young individuals, with a particular emphasis on gender-related aspects. Considering gender-related factors, COVID-19 lockdowns have impacted schooling, social connections, and resource availability. Gender can help identify the well-being and support needs of neurodiverse learners.

Q3 What gender is your child?

Answered: 120   Skipped: 0

ANSWER CHOICES	RESPONSES	
Male (1)	67.50%	81
Female (2)	30.83%	37
Prefer not to say (3)	1.67%	2
TOTAL		120

BASIC STATISTICS

Minimum	Maximum	Median	Mean	Standard Deviation
1.00	3.00	1.00	1.34	0.51
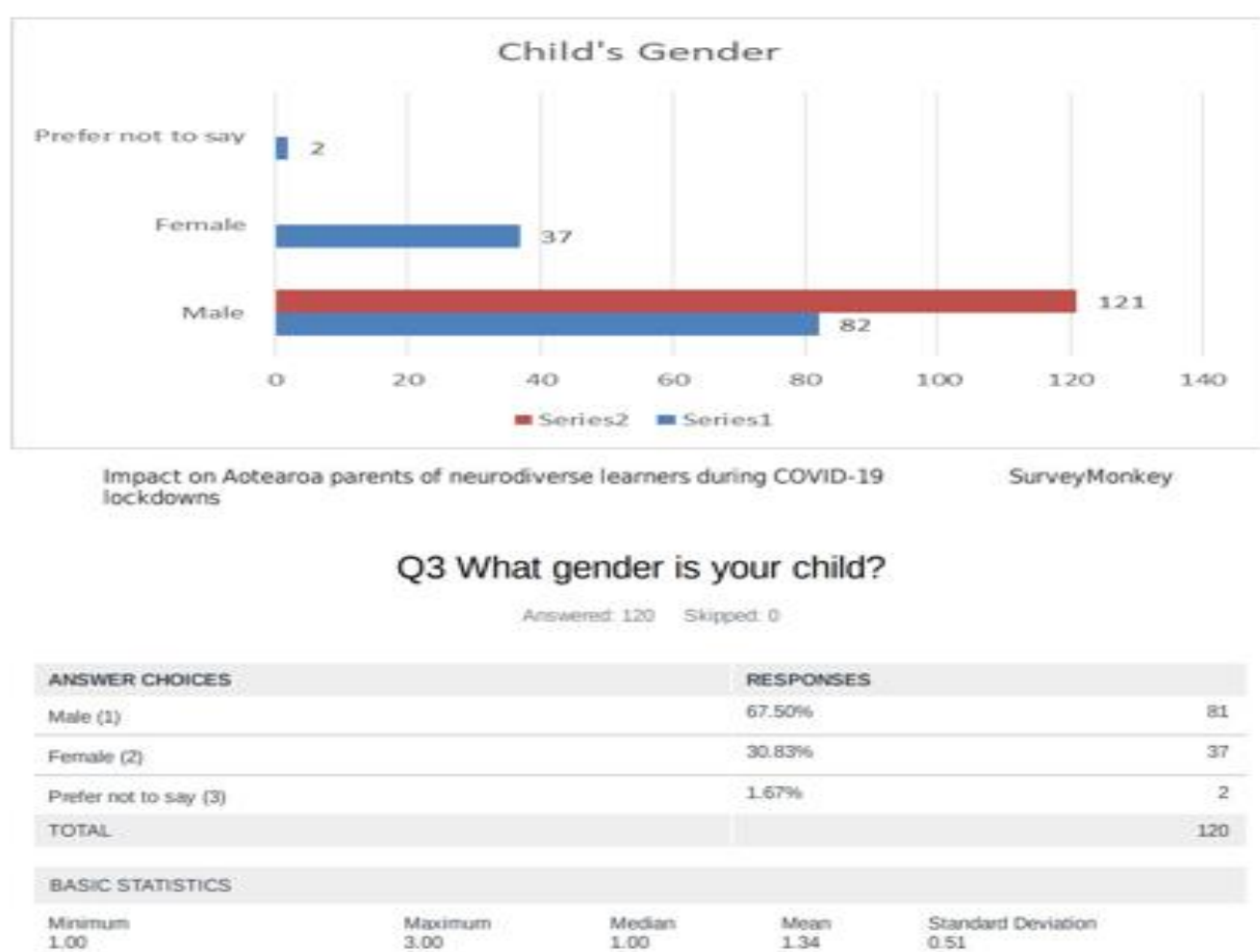
Figure 8: What gender is your child?

The study of Samji et al. (2022) emphasises the importance of collaboration among practitioners, policymakers, and at-risk children and adolescents to address the mental health

impact of the pandemic in both the short and long term. Mayer & Boston (2022) found that technological advancements support WFH, benefiting the economy and environment. The COVID-19 lockdown prompted people to try working from home, an opportunity they may not have had otherwise. Remote or blended learning can benefit neurodiverse learners during lockdowns. Approaches for neurodiverse students include flexible learning environments and reduced stress in alternative educational settings. (Averett, 2021) found varied impacts of the COVID-19 pandemic on global education. Gender plays a significant role in the challenges children face with remote learning. Remote learning challenges impacted all students, including those without disabilities.

In this way, 67.50% were male children, and 31.83% were female. Nevertheless, 1.67% of the respondents identified themselves as neutral gender. The gender distribution of the sample population is important for understanding the impact of COVID-19 lockdowns on neurodiverse children and their families. Understanding gender distribution can help researchers and practitioners customise interventions and support strategies for neurodiverse children. This helps them address the specific needs and challenges of these children. This research explores the relationship between gender and neurodiversity to develop inclusive strategies for helping neurodiverse learners in crises.

3.2.4. Question Four

What is your neurodiverse child's ethnicity or culture? Ethnic diversity within a group can reveal how cultural factors impact neurodiverse individuals in COVID-19 lockdowns. It enhances the analysis of culturally sensitive research. The responses show the impact of the pandemic on neurodiverse individuals from different ethnic backgrounds. This research examines the influence of cultural factors on well-being, and a diverse sample helps provide culturally relevant advice and methods for neurodiverse individuals and their families.

Both studies support the importance of ethnicity in the context of Neurodiversity in Aotearoa. According to Hyndman (2023), the COVID-19 crisis has worsened educational inequalities, particularly for underprivileged children during remote learning. Marques et al. (2022) found that lockdowns and movement restrictions reduced people's access to outdoor spaces and the benefits of nature. The pandemic offers an opportunity to study the connection

between nature exposure, outdoor recreation, and health in extreme circumstances. Dabrowski (2020) studies how school lockdowns affect student learning and engagement and the impact of a child's ethnicity on COVID-19 disruptions in education. Büdy (2021) emphasises the need to recognise that students' experiences differ based on their ethnic backgrounds when addressing teacher challenges and burnout risks. Access to socio-economic disparities and systemic inequalities affect how ethnic minority children adapt to remote learning and the transition back to in-person teaching.

Impact on Aotearoa parents of neurodiverse learners during COVID-19 lockdowns   SurveyMonkey

Q4 What ethnicity is your child?

Answered: 120   Skipped: 0
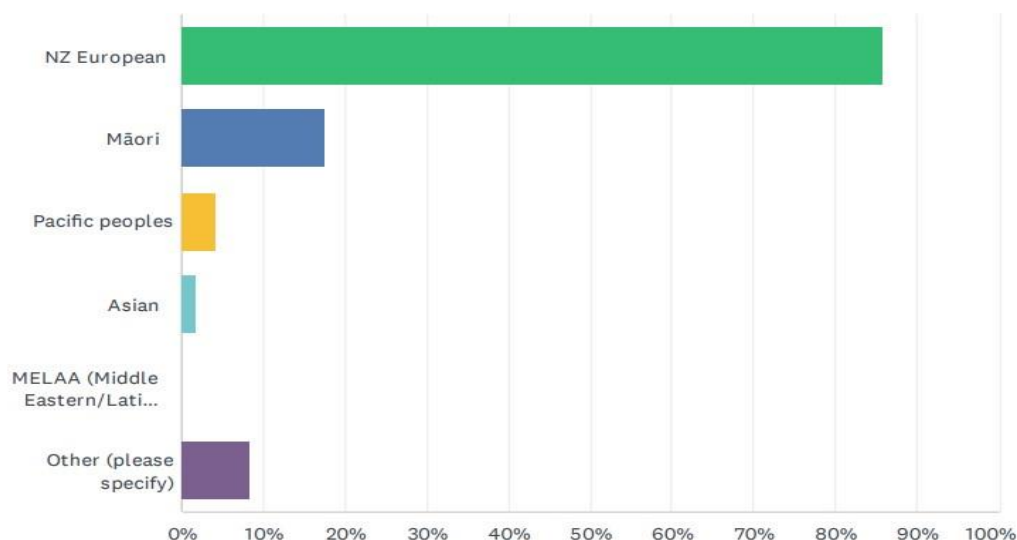
ANSWER CHOICES	RESPONSES	
NZ European	85.83%	103
Māori	17.50%	21
Pacific peoples	4.17%	5
Asian	1.67%	2
MELAA (Middle Eastern/Latin American/African)	0.00%	0
Other (please specify)	8.33%	10
Total Respondents: 120		

Figure 9: What ethnicity is your child?

While 85% of the 120 respondents identified as NZ. European, while 17% identified as Māori. 4% of respondents identified as Pacific, while 2% identified as Asian. The findings

show the ethnic composition of the sample population of neurodiverse children. Understanding the diverse cultural contexts of neurodiverse learners' ethnic backgrounds is crucial during COVID-19 lockdowns. Culturally responsive support strategies are crucial for neurodiverse learners from diverse ethnic backgrounds. To support neurodiverse learners during lockdowns, a personalised and culturally sensitive approach is necessary, acknowledging and embracing their diverse ethnic identities.

3.2.5. Question Five

Question five aims to know which iwi (tribe) Māori participants' neurodiverse children belong to. It values the cultural identity and tribal connections of Māori participants during COVID-19 lockdowns. This question enhances our understanding of how COVID-19 lockdowns affect Māori neurodiverse learners by gathering iwi information. The answers to this question help the research offer culturally responsive support for Māori neurodiverse individuals and their families, following the principles of Kaupapa Māori.

Figure 10: If Māori, please list your iwi

Hood's (2020) study reveals the unresolved equity issue in New Zealand. It discusses that the lockdown highlighted the digital divide and underscored the need for every child to have access to a device and internet at home. This is vital for diverse and widespread learning opportunities. To address educational equity, we need diverse strategies beyond just focusing on education. This involves tackling the root causes of social and economic inequalities. Pine et al. (2022) study parents' views on education for children with Tourette syndrome in New Zealand. Understanding parents' views and experiences with TS is vital for creating recommendations for educators and clinical methods in New Zealand.

Among the 120 respondents, 8 participants disclosed their iwi affiliations, which included Tūhoe, Ngai Tahu, Ngāti Tuwharetoa, Ngāti Maruwharanui, Ngāti Raukawa ki Waikato, Ngai Tahu Ngāti, Maniapoto, Ngāti Kuia, Te Arawa, Tainui, and Rangitane. The findings reveal iwi affiliations of neurodiverse children in the Māori population. Māori neurodiverse learners and their families have multiple iwi affiliations, reflecting their diverse cultural backgrounds and identities. Support strategies for neurodiverse learners should consider the diverse perspectives, needs, and cultural contexts of different iwi groups. The diverse iwi affiliations of Māori participants emphasise the need for culturally responsive approaches to support neurodiverse learners in their iwi communities.

3.2.6. Question six

This question aims to collect data on the neurodiversity of participants' children and seek to determine the neurodevelopmental conditions or disabilities found in neurodiverse children in the survey. Studying responses to this question reveals how COVID-19 lockdowns affect different neurodiverse conditions. The research considers various neurodiversity to understand specific needs and strategies for supporting individuals with each condition, informing tailored support services.

Q6 What neurodiversity(s) does your child have?

Answered: 120   Skipped: 0
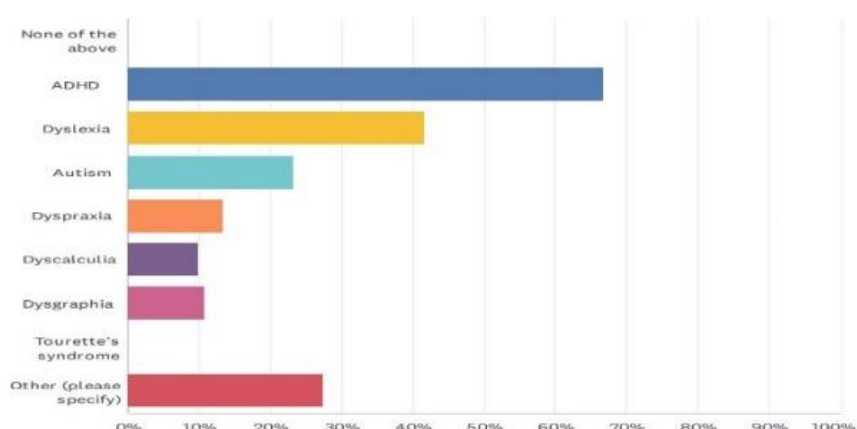
ANSWER CHOICES	RESPONSES	
None of the above	0.00%	0
ADHD	66.67%	80
Dyslexia	41.67%	50
Autism	23.33%	28
Dyspraxia	13.33%	16
Dyscalculia	10.00%	12
Dysgraphia	10.83%	13
Tourette's syndrome	0.00%	0
Other (please specify)	27.50%	33
Total Respondents: 120		

Figure 11: What neurodiversity(s) does your child have?

Hart et al. (2022) observed that implementing yoga in schools improves mental health and cognition, especially in neurodiverse populations. Promote yoga in schools to enhance the well-being and cognitive function of neurodiverse learners. Yoga in schools benefits neurodiverse students, according to the study. This allows for more research and the development of tailored school yoga programs. ADHD was the most common neurodiversity among the 130 respondents, affecting 66.67% of the children. 41% of respondents reported dyslexia, while autism was reported by 23.33%. Neurodiversity reported Dyspraxia (13.33%), Dyscalculia (10%), Dysgraphia (10%), and other issues (27%). These findings shed light on the prevalence of neurodiverse conditions in the sample population.

They showcase the various challenges neurodiverse learners encounter and emphasise the necessity for customised interventions and support strategies. The results inform research on neurodiverse conditions, enabling targeted investigations and interventions to address unique needs and challenges. The results highlight the need to acknowledge and address the various neurodiversity in children, leading to better support and interventions for neurodiverse

learners. Shah and Absoud (2021) emphasise the negative impact of the COVID-19 pandemic on the physical and mental well-being of children and young individuals, particularly those with neurodevelopmental conditions such as Autism Spectrum Disorder (ASD). Containment policies, such as social distancing, isolating school bubbles, and school closures, have disproportionately affected this group. Reviews have identified challenges faced by children and young people with ASD during the pandemic. Understanding the effects of the pandemic and containment measures on individuals with neurodevelopmental conditions, such as ASD, is important.

3.2.7. Question seven

This question aims to collect details about the school attended by participants' neurodiverse children. This question explores children's educational settings during COVID-19 lockdowns, revealing different types of schools and approaches to learning. Examining school types of impact on neurodiverse learners during the pandemic by analysing their responses. It reveals disparities in resources, remote learning capabilities, and support systems in different educational settings.

Question Seven: What school does your child attend?

School	Count	School	Count	School	Count
Age	12	Homeschool	6	Prefer not too disclose	5
Akaroa Area School	1	Howick Primary	2	Rapaura	1
Amuri Area School	1	HS	1	Red Beach School	1
Ao Tawhiti Unlimited Discovery School	1	Hutt valley high school	1	Riverdale school	1
Āorākei school	1	Kapakapanui School	1	Rosehill intermediate	1
Avondale College	1	Karori West Normal School	1	Rosmini College	1
Balaclava Primary	1	Kaukapakapa Primary	1	Rotorua specialist school	1
Baradene College, Auckland	1	Kings College	1	Selwyn College, auckland	2
Bayfield	2	Kristin	1	Shot over Primary	1
Beach haven primary	1	Lakes High	1	Silver stream south Mosgiel	1
Belmont Intermediate	1	Levin north school	1	Silverdale Normal	1
Broadfield school	1	Long Bay College	1	St Brendan's School Upper Hutt	1
Cashmere High	1	Mangapapa	1	St Clair school	1
Catholic cathedral College	1	Mangawhai Beach School	1	St Kentas	1
Chapel Downs	1	Maraetai Beach School	1	St Margaretas College Christchurch	1
College Street Normal School	1	Matatoki	1	St Orans but during lockdown Waterloo School	1
Cullinane collage whanganui	1	Milton primary	1	Summit point	1
Suzanne Aubert Catholic School	1	Mountain View High School	1	Taieri College	2
Dunedin	1	Mt Albert Grammar	1	Takapuna grammar school	2
Te Atatu Intermediate	1	Nelson College	1	Taupo	1
Dyer street	1	Newlands College	1	Tauranga boys college	1
Edendale Primary	2	Northcote College	2	Te kura correspondence school	3
Edmonton	1	Northcote Intermediate	1	Tokoroa High School	1
Ellerslie School	1	Ohakune Primary School	1	Trinity Catholic College	1
Eskdale School	1	Ohoka	1	Tuakau College	1
Gisborne Boys High School	1	Onslow College	1	waipipi	1
Glamorgan primary	1	Orewa college	1	Wakatipu high school	1
Greenbay High School	1	Pakuranga College	1	West Rolleston Primary	1
Highlands intermediate New Plymouth	1	Paremata school	1	West Spreydon	1
Holy Cross School Papatoetoe	1	Postgate School	1	Western Springs College	1
				Whenuapai school	1

Figure 12: What school does your child attend?

Hand (2023) explores the experiences of neurodivergent undergraduate students during presentations in educational and workplace settings. The study explores how neurodivergent students perceive their experiences and the effects of training, support activities, and learning technologies in presentations. Inclusive and supportive environments for neurodivergent learners promote their active participation in academic and professional settings. The children with neurodiversity attended various schools in New Zealand, including Kings College, Baradene College, and various primary, intermediate, and high schools across different regions.

The study includes neurodiverse learners from various schools and locations, highlighting its inclusive nature. The results offer valuable insights into how COVID-19 lockdowns affect parents and neurodiverse learners in different school settings, enhancing our understanding of the educational context and sample diversity. Shaw et al. (2022) study found positive outcomes for remote learning during COVID-19, but it is important to consider the challenges faced by neurodiverse students with dyslexia. The study reveals issues with limited clinical experience, potential harm to rankings, and exam cheating. Remote learning and assessment may not fully support dyslexic students who are neurodiverse (Shaw et al., 2022).

3.2.8. Question eight

Do neurodiverse children attend school? Is the educational setting equipped to support neurodiverse learners? Studying responses to this question reveals how specialised educational support for neurodiverse children was affected during COVID-19 lockdowns. It examines how specialised teaching affects neurodiverse learners' education, well-being, and outcomes.

Impact on Aotearoa parents of neurodiverse learners during COVID-19 lockdowns   SurveyMonkey

Q8 Is it a school offering specialist teaching to neurodiverse children?

Answered: 119   Skipped: 1
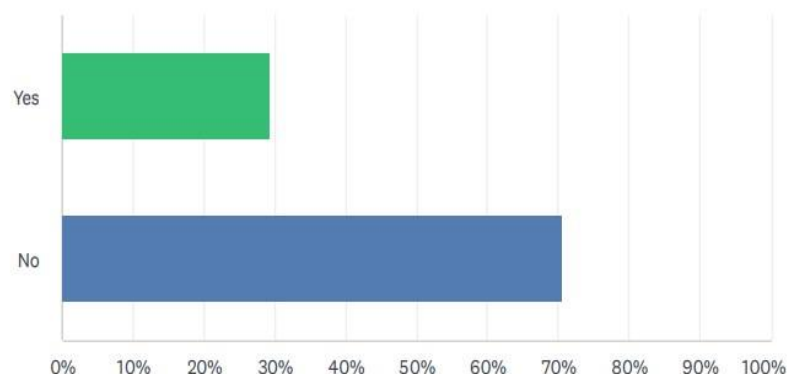
ANSWER CHOICES	RESPONSES	
Yes	29.41%	35
No	70.59%	84
TOTAL		119

Figure 13: Is it a school offering specialist teaching to neurodiverse children?

The study of Gillespie-Lynch et al. (2017) discusses that students value guidance and opportunities to improve social skills, which aligns with research showing that social skills training benefits autistic adolescents and young adults. Including self-advocacy in the curriculum can foster student acceptance, promoting a climate of inclusivity. Out of 120 respondents, 30% reported that their mentioned school offers specialist teaching for neurodiverse children, while 71% said their school does not provide this specialised teaching.

The responses reveal insights into the availability of educational support for neurodiverse children in the sample. Benton et al. (2014) study discusses that Neurodiverse children are now more involved in technology design, but the focus has been on overcoming challenges rather than harnessing their strengths. Introducing D4D, a novel participatory design (PD) framework, empowers technology designers to collaborate with neurodiverse children effectively. This framework leverages children's strengths while addressing potential challenges. This research explores how parents of neurodiverse learners access specialised teaching and resources during COVID-19 lockdowns. The findings shed light on parents' challenges in finding suitable educational environments for their neurodiverse children. In conclusion, it is crucial to prioritise specialised teaching and support services for neurodiverse learners during lockdowns.

3.2.9. Question Nine

This question aims to gather specific details about the specialist teaching or support services available in participants' children's schools. This question explores the support options for neurodiverse learners in education. Analysing responses to this question reveals the diverse specialist teaching and support services implemented in schools for neurodiverse learners during COVID-19 lockdowns. It identifies the interventions used, like IEPs, assistive tech, teaching methods, or support from educators. This question aims to collect details about the school attended by participants' neurodiverse children. This question explores children's educational settings during COVID-19 lockdowns, revealing different types of schools and approaches to learning. Examining school types of impact on neurodiverse learners during the pandemic by analysing their responses. It reveals disparities in resources, remote learning capabilities, and support systems in different educational settings.

While 60% declared their child's school does not offer specialist teaching, 30% said it does. The study reveals a lack of specialised teaching resources in schools for neurodiverse children. The COVID-19 lockdowns highlight the need for improved support and resources for neurodiverse learners. This study highlights the obstacles in accessing specialist teaching for neurodiverse students, emphasising the need for effective strategies to ensure equal access to specialised support. Addressing the lack of specialist teaching resources in schools is crucial for supporting neurodiverse learners during crises.
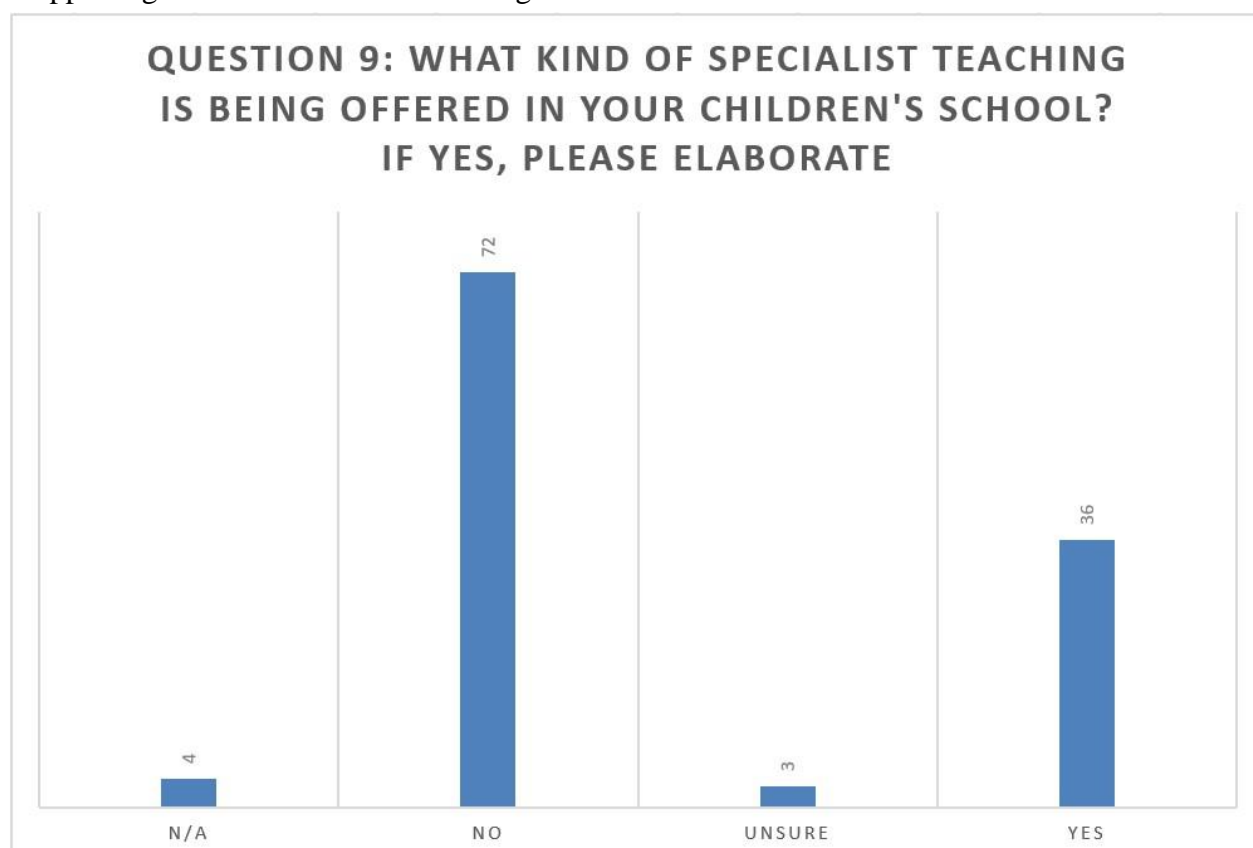
Figure 14: What kind of specialist teaching is offered in your child's school?

3.2.10. Question ten

Do your children's schools provide online programs for kids with ADHD and dyslexia? Are there online resources or support programs for neurodiverse learners with ADHD and dyslexia during COVID-19 lockdowns? Examining responses to this question uncovers how schools have tailored online programs for neurodiverse learners with ADHD and dyslexia. It assesses online resources, interventions, and support for remote learning of children with ADHD and dyslexia.
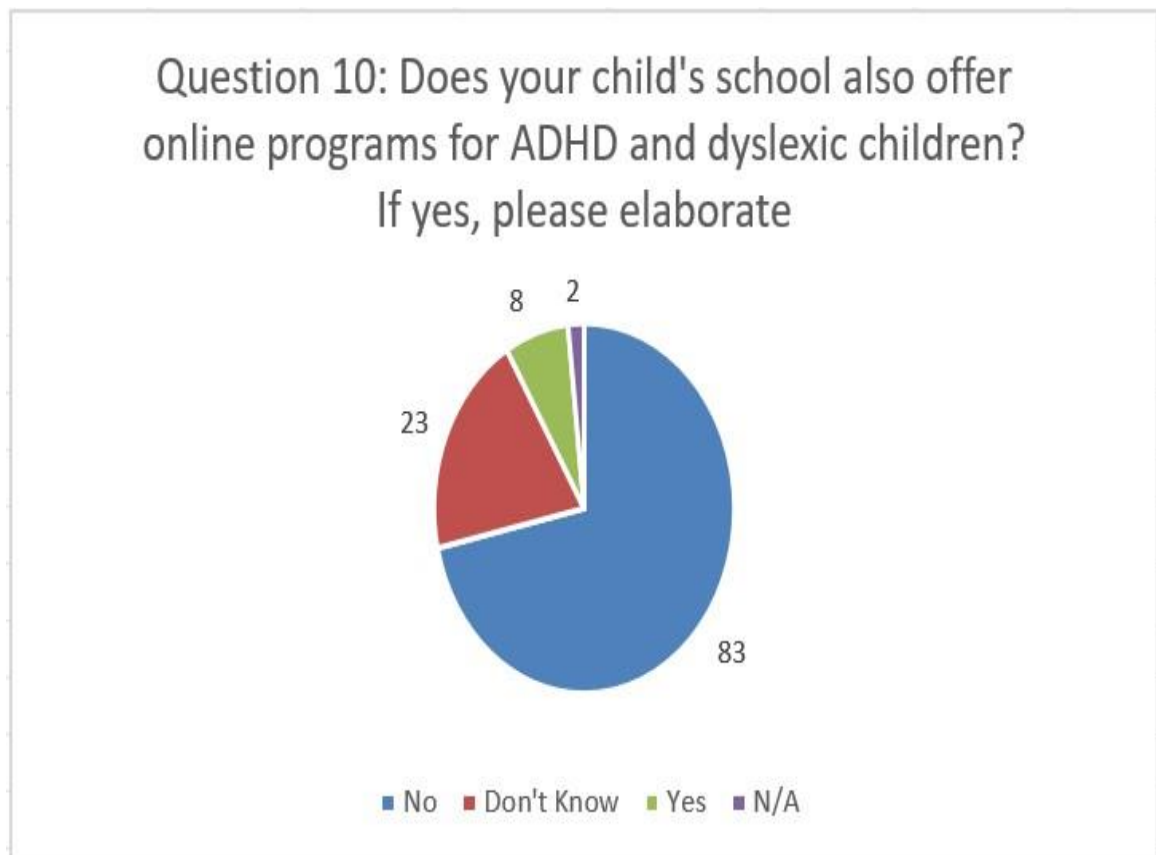
Figure 15: Does your child's school offer online programs for ADHD and dyslexic children?

The study by Soriano-Ferrer et al. (2021) highlights the importance of preventive programs for reducing the long-term impact of COVID-19 on children with dyslexia and their parents. It emphasises the need for timely assistance for these children. Chan & Mo's (2023) research reveals a lack of understanding regarding Chinese parents' views on raising dyslexic children.

Parental stress is linked to various themes: child traits and academic challenges, daily responsibilities and control of educators, and societal comparisons and blame culture. Identified coping resources include increased support from spouses, better communication with teachers, and recognition of the strengths of one's children. While 83 out of 120 parents said their child's school does not have online programs for ADHD and dyslexic students. However, 23 parents praised their child's school for effective online ADHD programs. Limited online programs for children with ADHD and dyslexia in schools underscore distribution issues. Remote learning exposes gaps in supporting neurodiverse learners. These findings reveal ways to improve online programs and support strategies for neurodiverse learners. Collaboration

between educators and policymakers is crucial to enhance online programs and support services for children with ADHD and dyslexia in remote learning.

3.2.11. Question Eleven

This question aims to collect data on the school type attended by participants' neurodiverse children. Analysing school types of impact on neurodiverse learners during COVID-19 lockdowns. Analysing the type of school attended can reveal differences in educational approaches, access to specialised services, and opportunities for remote learning.

Impact on Aotearoa parents of neurodiverse learners during COVID-19 lockdowns   SurveyMonkey

Q11 Is your child's school:

Answered: 115   Skipped: 5
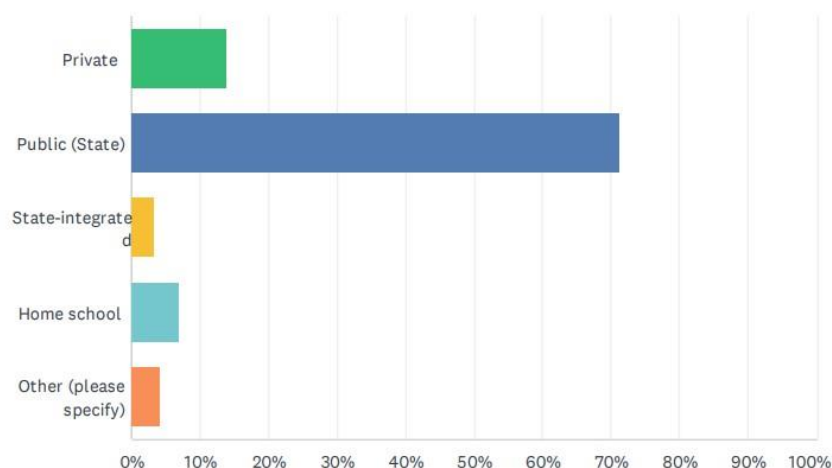
ANSWER CHOICES	RESPONSES	
Private	13.91%	16
Public (State)	71.30%	82
State-integrated	3.48%	4
Home school	6.96%	8
Other (please specify)	4.35%	5
TOTAL		115

Figure 16: Is your child's school?

Suizzo & Stapleton (2007) suggest that parents should create a study-friendly environment at home for students. Parents should balance their time between household chores and their children's academic work. The study revealed that factors like parents' education,

socio-economic status, professional qualifications, and involvement in household chores influenced students' academic performance. Mwaura (2014) conclude that maternal education plays a crucial role in explaining variations in parental involvement in young children's education across different ethnic groups in the U.S. Home-based education may not match the outcomes of private and public schools. The survey shows that 71% of respondents have children in public schools, 14% in private schools, 7% in home-schooling, and 4% in state-integrated schools. The findings reveal the significance of considering the educational context when studying the impact of COVID-19 lockdowns on neurodiverse children and their families. Analysing the distribution of school types helps identify unique challenges, support needs, and interventions that vary across different educational settings. It is essential to consider the educational setting of neurodiverse students when designing successful tactics and support systems.

3.2.12. Question Twelve

This question aims to collect information on how participants' neurodiverse children were engaged in learning during the COVID-19 lockdown. Analysing responses to this question reveals diverse learning approaches used by neurodiverse learners during the lockdown. It assesses the effectiveness of various learning methods, including online classes, virtual learning platforms, one-on-one support, and others.

Q12 How did your child engage in learning over the lockdown period?

Answered: 115   Skipped: 5
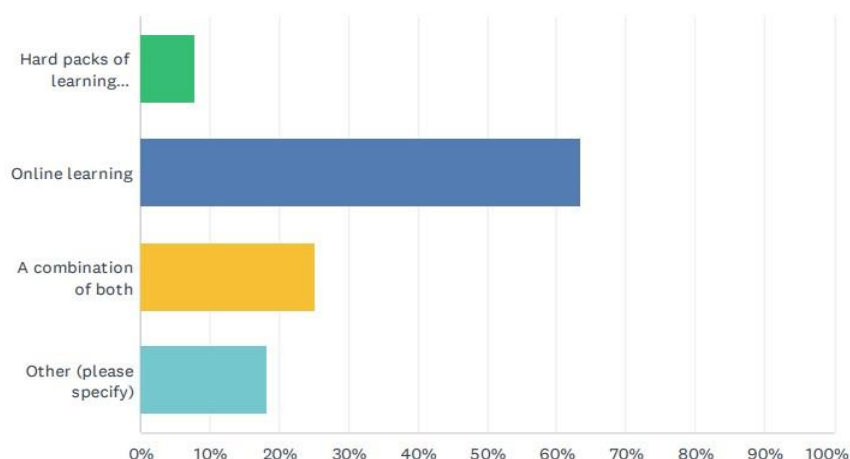
ANSWER CHOICES	RESPONSES	
Hard packs of learning material (for my child) were delivered to my house	7.83%	9
Online learning	63.48%	73
A combination of both	25.22%	29
Other (please specify)	18.26%	21
Total Respondents: 115		

Figure 17: How did your child engage in learning over the lockdown period?

Chamberlain et al. (2020) studied children's writing abilities during lockdown can offer valuable insights for educators and policymakers about their skills outside of school. A graduate student conveyed the crucial lesson to the teacher educator via email. (Christner et al., 2021) discovered that most parents and children felt stressed during lockdown. Children struggle to socialise with friends and family outside their homes. Children aged 7-10 showed more emotional symptoms but fewer conduct problems and hyperactivity than children aged 3-6. Children's stress, degree of missing other children, and age negatively affected their life satisfaction. Single parents and only children had higher rates of child problems.

While 63.48% of parents reported that their children were engaged in online learning during the lockdown, based on responses from 120 participants, only 7% of individuals received learning material in hard packs at home. Approximately 25% of parents indicated their children had access to online learning and materials during the lockdown. 18% of parents

reported their children engaging in other activities during the lockdown, suggesting various educational approaches. The findings provide insights into the learning patterns of neurodiverse children during the COVID-19 lockdown. Studying online learning, materials, and activities during lockdowns sheds light on their impact on neurodiverse learners. It demonstrates the adaptability of families and schools. The study concludes that contrasting teaching methods for neurodiverse children between parents and schools during the lockdown.

3.2.13. Question thirteen

This question seeks to understand the difficulties experienced by parents in assisting their neurodiverse children with remote learning during COVID-19 lockdowns. Responses to this question highlight challenges experienced by parents or carers in remote learning for neurodiverse learners. Common challenges in this context include focus and attention, support and accommodations, behaviour management, and social and emotional well-being.

Impact on Aotearoa parents of neurodiverse learners during COVID-19 lockdowns   SurveyMonkey

Q13 What did you find difficult about having your child learn from home?

Answered: 115   Skipped: 5

ANSWER CHOICES	RESPONSES	
Poor/unstable internet connection	4.35%	5
Technology problems (installation issues, login problems, downloading errors etc.)	6.96%	8
Unable to concentrate/too many distractions	64.35%	74
Too many learning delivery channels (emails, phone calls, video calls, WhatsApp messages etc.)	26.09%	30
Teachers not equipped for online teaching	33.91%	39
Quality of learning	43.48%	50
Other (please specify)	56.52%	65
Total Respondents: 115		

Figure 18: What was difficult about having your child learn from home?

Dong et al. (2020) conducted a study. Parents held negative beliefs about online learning and favoured traditional learning in early childhood settings. Online learning faced resistance and rejection due to limitations, young children's self-regulation challenges, and insufficient support in terms of time and expertise. The COVID-19 pandemic has negatively impacted individuals' ability to adapt to online learning at home. Giannotti et al. (2022) found that child externalising behaviours were linked to the male gender, reduced parental time, increased parental stress, and child distance learning workload. Positive co-parenting and dedicated time with children can help alleviate the negative effects of the COVID-19 lockdown on parents and children, leading to better family adjustment during pandemic restrictions.

While 4.35% of respondents had internet connection problems, 7% faced technology-related issues such as login, downloading, and installation problems. Over 64% of parents struggled with keeping their children focused during remote learning. 33% of teachers also faced online teaching difficulties. 43% of parents approved of lockdown learning quality. These findings shed light on the challenges of remote learning for parents and teachers. This study examines the impact of COVID-19 lockdowns on parents of neurodiverse learners. Remote learning challenges technology infrastructure, teacher training, and student engagement. Remote learning presents complex challenges for parents and teachers.

3.2.14. Question fourteen

This question aims to collect specific concerns or issues participants faced regarding the quality of their neurodiverse child's learning during the COVID-19 lockdowns. Analysing responses to this question reveals specific learning quality issues for neurodiverse learners during the lockdown. In this way, common issues were finalised in education, including inadequate resources, lack of individualised support, difficulty maintaining engagement and motivation, and challenges accessing specialised services.

Question Fourteen: If quality of learning was an issue, please tell us about it in greater detail
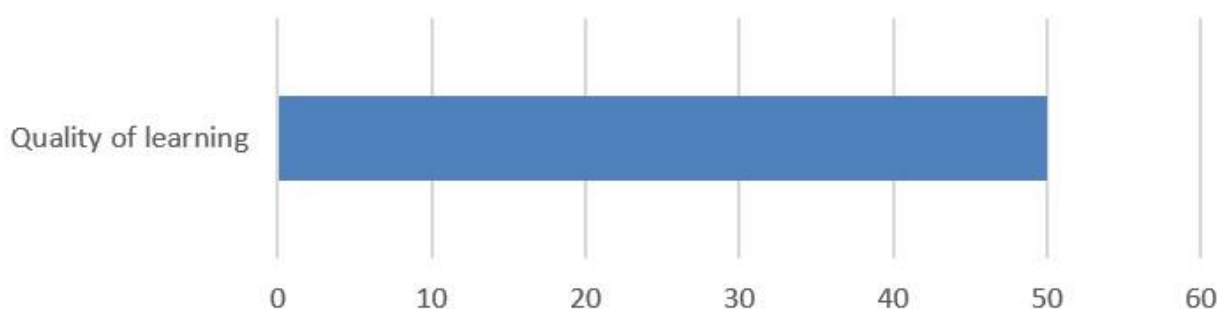
Figure 19: If the quality of learning was an issue, please tell us about it in greater detail.

The study by Bonal & González (2020) is an important contribution to the field. Some schools were more adaptable than others. Family structure, size, and various forms of capital (economic, social, and cultural) influence learning opportunities for children from diverse backgrounds. Middle-class families had greater access to high-quality education. In contrast, socially disadvantaged families faced limited learning opportunities due to time constraints and lack of access to schoolwork and after-school activities. According to Jena (2020), online learning is the most effective solution during a pandemic. Virtual classrooms equipped with the necessary tools enable teachers to effectively teach from home, ensuring that online sessions are as effective as traditional ones. Pandemics disrupt teaching-learning by requiring learners to stay home for extended periods.

Most parents faced learning quality challenges during the lockdown, according to the responses of 120 participants. The challenges revolved around technology issues like limited device access, weak internet connection, and teachers' lack of online proficiency. This finding reveals the challenges that parents, and neurodiverse children face in remote learning. These results emphasise the importance of better technology, training, and support for parents and

teachers to ensure fair and successful remote learning. Addressing challenges is key to improving remote learning for neurodiverse learners and their families.

3.2.15. Question Fifteen

This question aims to gain insight into the technological tools, devices, or resources available to facilitate remote learning. The analysis of the responses to this question allows for a deeper understanding of the impact of technology infrastructure and resources on the learning experience of neurodiverse learners during the COVID-19 lockdowns.

Laxton et al. (2021) discovered that lockdown measures, such as closing early provision, resulted in parental isolation while caring for young children at home. Early years educators faced challenges communicating with families, particularly those hard to reach. (Bhamani et al., 2020)identified a global initiative involving nations and academics to support and enhance home learning. Online resources are available for parents to assist with their children's education at home, and parents have adjusted to address educational inequalities in their children's learning amidst difficult circumstances. Approximately 22.81% of respondents had convenient access to television for at-home learning during the COVID-19 lockdown. Most parents have easy access to television (75%) and online platforms like Google Classroom and Zoom (78%). However, 42% of users have app access, 52% have email access, and 22.81% use another technology facility. The findings provide insight into the technology resources available to parents and children during lockdown. These findings emphasise the need for personalised interventions and support that consider parents' and children's specific technology access and preferences to improve remote learning.

Q15 If there were too many delivery channels, what technology did your child have for at-home learning?

Answered: 114   Skipped: 6
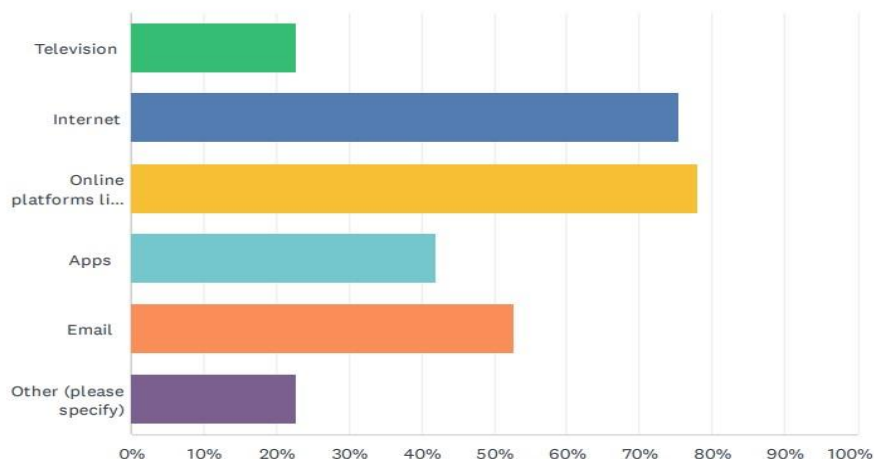
ANSWER CHOICES	RESPONSES	
Television	22.81%	26
Internet	75.44%	86
Online platforms like Zoom or Google classrooms	78.07%	89
Apps	42.11%	48
Email	52.63%	60
Other (please specify)	22.81%	26
Total Respondents: 114		

Figure 20: If there were too many delivery channels, what technology did your child have for at-home learning?

3.2.16. Question sixteen

This question aims to collect information on resources and support available to parents of neurodiverse children for managing at-home learning during COVID-19 lockdowns. However, analysing responses to this question provides insights into the availability and accessibility of resources and information for neurodiverse learners during at-home learning. This assesses whether parents or carers received guidelines, accommodation recommendations, and other relevant resources that manage neurodiverse learning children.

Q16 Were you given resources and information for managing at home learning for neurodiverse learners?

Answered: 114   Skipped: 6
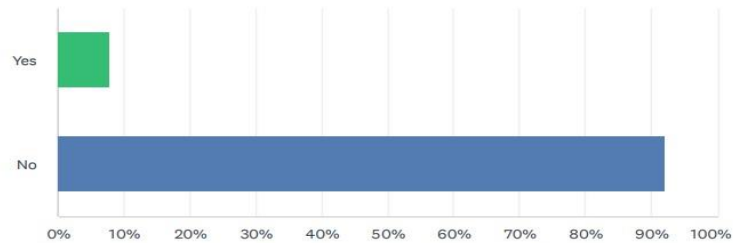
ANSWER CHOICES	RESPONSES	
Yes	7.89%	
No	92.11%	10
TOTAL		11

**Figure 21: Figure 21: Were you given resources and information for managing at-home learning
for neurodiverse learners?**

Soneson et al.'s (2023) study concluded that 33% of children and young people thrived mentally during the initial UK national lockdown. Lockdown improved CYP's mental well-being, leading to better relationships, reduced loneliness, less bullying, improved school task management, and increased sleep and exercise compared to peers. Lockdown boosted mental well-being for some CYPs. Vincent et al. (2023) found that the lockdown break allowed young people to break free from the negative aspects of their school routine.

Additionally, 92% of parents of neurodiverse learners did not receive resources and information for managing at-home learning, according to a survey of 120 respondents. 7.89% responded positively. Insufficient support and resources during COVID-19 lockdowns have hindered parents in assisting their neurodiverse children with at-home learning. The pandemic has made it challenging for parents to support their neurodiverse children's education. The results emphasise the necessity of improved support, resources, and information for parents overseeing at-home learning for neurodiverse learners.

3.2.17. Question seventeen

This question explores how valuable and helpful resources are in helping parents or carers support learning at home. Analysing responses to this question reveals participants' perspectives on managing at-home learning resources and information.
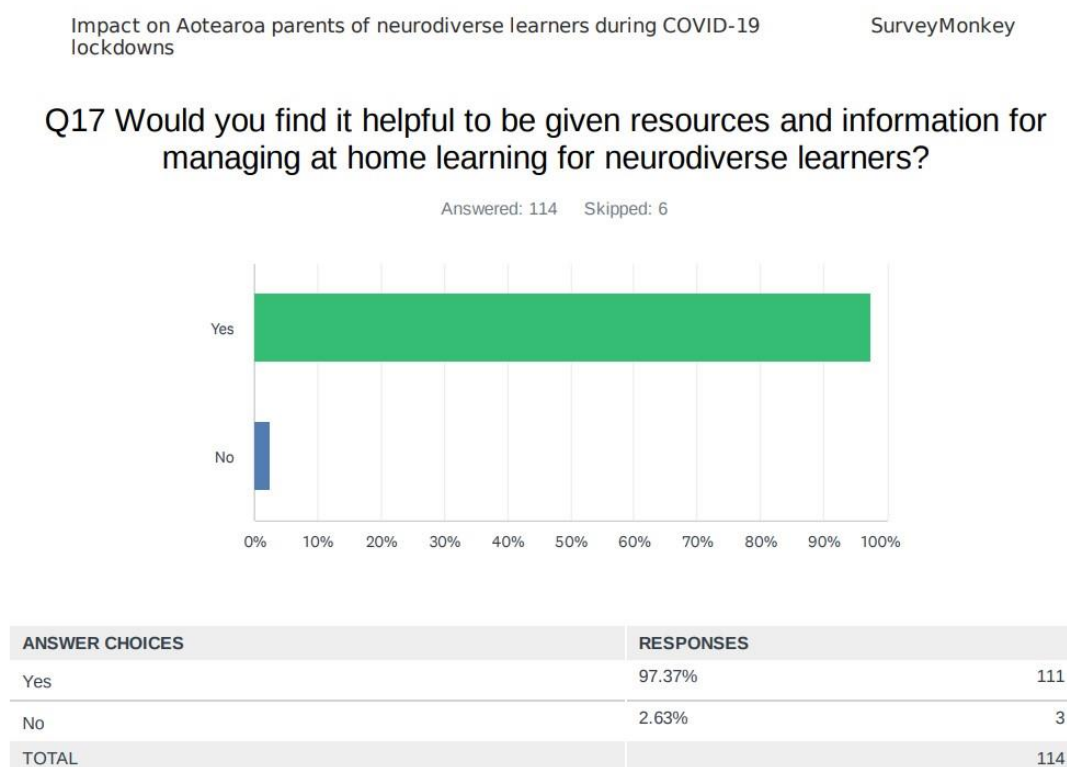
Figure 22: Would you find it helpful to be given resources and information for managing at-home learning for neurodiverse learners?

Saline (2021) states that COVID shelter-in-place directives have increased stress levels in families with alternative learners, including those with ADHD, ASD, and LD. Parents without special education training face challenges at home in juggling work, finances, housing, and tutoring their children with attention and learning challenges. Ortiz (2020) examines teaching neurologically diverse students in business communication. The author provides resources to assist instructors in supporting these students. The business communication course benefits neurodiverse students by challenging them and enhancing their essential soft skills for success.

Out of the 120 respondents, an overwhelming 97% found it helpful to receive resources and information for managing at-home learning for neurodiverse learners. The high percentage shows how valuable and important supportive resources are for helping neurodiverse children learn effectively at home. The high response rate shows that parents find having tools and information for remote learning during COVID-19 lockdowns valuable. This finding emphasises the need to provide parents with resources to support their neurodiverse children's education, improving their learning outcomes and well-being. In summary, providing parents with comprehensive support and information is crucial to help them effectively manage at-home learning for neurodiverse learners.

3.2.18. Question eighteen

This question aims to collect data on the types of aid that might improve the academic performance and overall health of children with neurological differences. Responses to this question may shed light on the kind of services and support networks parents of neurodiverse children would want to implement for their kids.
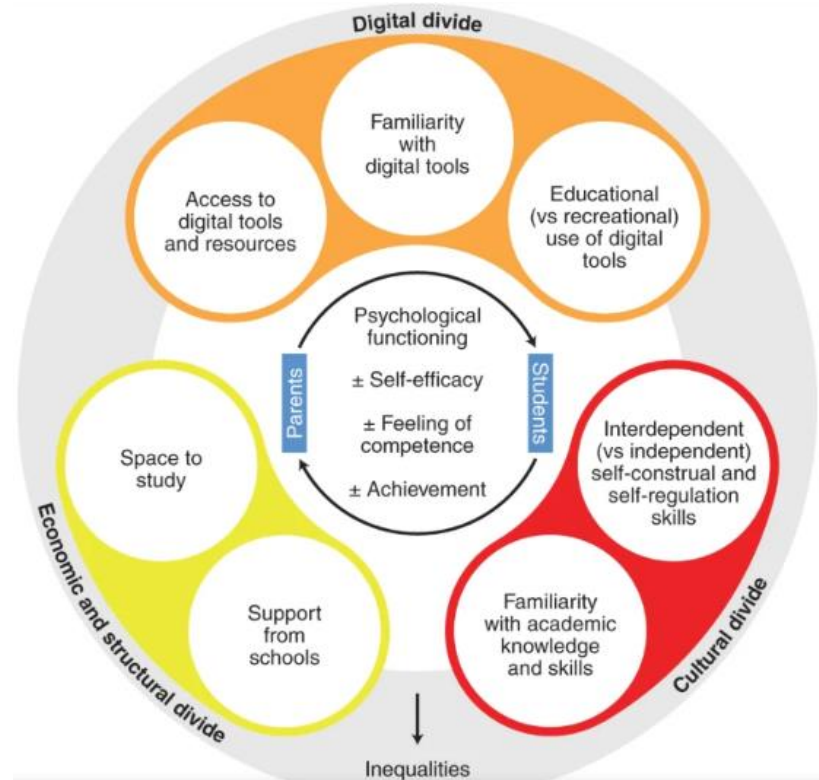
Figure 23: Digital Divide

Bambra et al. (2020) found that the COVID-19 pandemic has amplified health, social, and economic inequalities.1, 2. The pandemic closed schools and universities for over 900 million learners worldwide. Due to this unique situation, teachers, parents, and students swiftly adapted to distance learning. Teachers created online academic materials for at-home learning to maintain education during physical distancing (Goudeau et al., 2021). Students now rely on online support from their teachers for their schoolwork. During lockdown, college students returned home and connected with teachers and classmates through video conferences, email, and other digital tools.

3.2.19. Question Nineteen

This question aims to collect information on the positive aspects or experiences of home learning for neurodiverse children during COVID-19 lockdowns. Analysing responses to this question reveals the benefits of home learning for neurodiverse learners. The purpose is to

identify positive changes in the learning environment, such as personalised attention and self-directed learning. Opportunities during the lockdown period.

Impact on Aotearoa parents of neurodiverse learners during COVID-19 lockdowns   SurveyMonkey

Q19 Were there aspects of home learning that were positive?

Answered: 113   Skipped: 7

ANSWER CHOICES	RESPONSES	
Increased knowledge retention	7.96%	9
Able to grasp concepts faster	11.50%	13
Self-paced learning	45.13%	51
Able to spend more time with family	60.18%	68
More time for creative pursuits (hobbies, music etc.)	50.44%	57
Other (please specify)	37.17%	42
Total Respondents: 113		
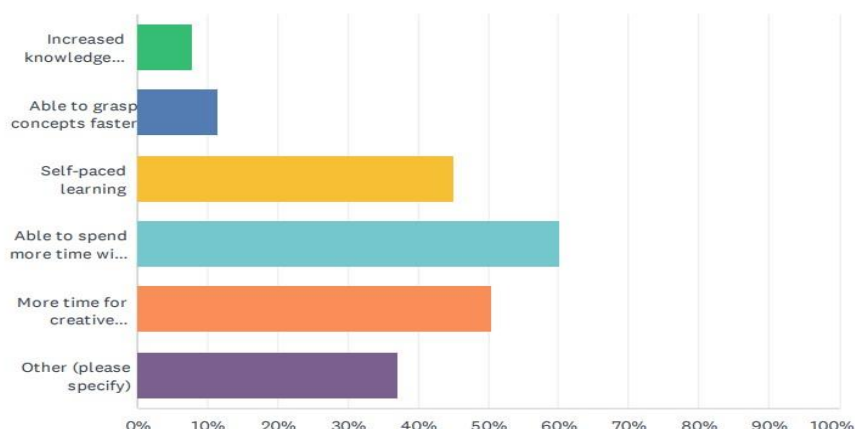
Figure 24: Were there aspects of home learning that were positive?

Multiple discourses circulated in the media. One example is "he waka eke noa," which translates to "we are all in the same boat." Leaders sent a message urging New Zealanders to cooperate with the strict lockdown (Darragh & Franke, 2022). Strong media messages have focused on stress, including general anxiety due to uncertainty, the economic impact on the country (*Kyle MacDonald: Covid 19 Coronavirus: It's OK to Feel Anxious about Swift Shutdown - NZ Herald*, 2020), and financial stress on families (*Liam Dann: Covid 19 Coronavirus Shock: How Big Is This Global Economic Shock? How Long Will Recovery Take? - NZ Herald*, 2020). Stress may hinder families from supporting their children's learning at home, while math homework can cause tension between parents and children, adding to the stress in the learning environment.

Of 120 respondents, 50% prioritised creativity with their children during home learning, while 45% focused on self-paced activities. 60% of respondents prioritise spending time with their families. The COVID-19 lockdowns revealed the bright side of home learning, emphasising the chance for creativity and self-guided education. Spending time with family is crucial for supporting neurodiverse learners at home during remote learning. These results reveal the benefits of home learning for neurodiverse learners and emphasise the importance of a supportive home environment during challenging times.

3.2.20. Question twenty

This question will collect data on participants' home internet connectivity during COVID-19 lockdowns. Analysing responses to this question reveals insights into internet access availability and reliability for remote learning. Stable and consistent internet connectivity is crucial for accessing online resources, which helps identify if participants have it.

Impact on Aotearoa parents of neurodiverse learners during COVID-19 lockdowns   SurveyMonkey

Q20 Did you have reliable internet access at home?

Answered: 112   Skipped: 8
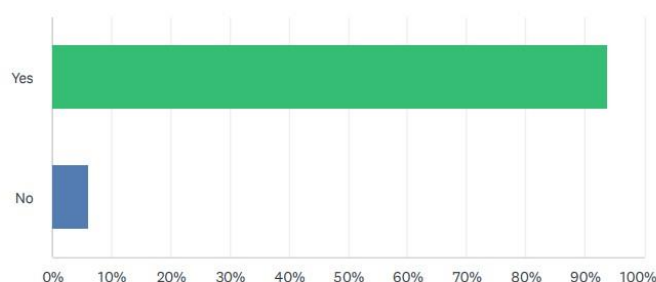
ANSWER CHOICES	RESPONSES	
Yes	93.75%	105
No	6.25%	7
TOTAL		112

Figure 25: Did you have reliable internet access at home?

Concerns about the impact on mental health are developing with the pandemic of problematic internet use. Priego-Parra et al. (2020) found that levels of anxiety and depression

were significantly greater during lockdown. Multiple countries' research has linked problematic internet use among adolescents to psychological problems (Fernandes et al., 2020). According to new studies, escapism and loneliness are major risk factors for problematic internet use, which in turn causes low self-esteem. However, 94% of parents had reliable internet access at home during the COVID-19 lockdown. Only 6% of parents were unhappy with their internet connection's stability and reliability. This finding is important as it shows that most participants had access to a vital resource for remote learning and communication during the lockdown. Moreover, *h*igh internet availability among parents helps neurodiverse learners and their families tackle remote learning challenges, while reliable internet access is crucial for remote education and support during crises.

3.2.21. Question twenty-one

The purpose of the survey is to collect data on the home-school curriculum used by participants when their children were neurodivergent. The answers to this question may provide information on the subjects addressed in home-schooling. In this way, how many educational resources were made accessible throughout the quarantine?

Q21 What subjects were covered during at home learning?

Answered: 112   Skipped: 8
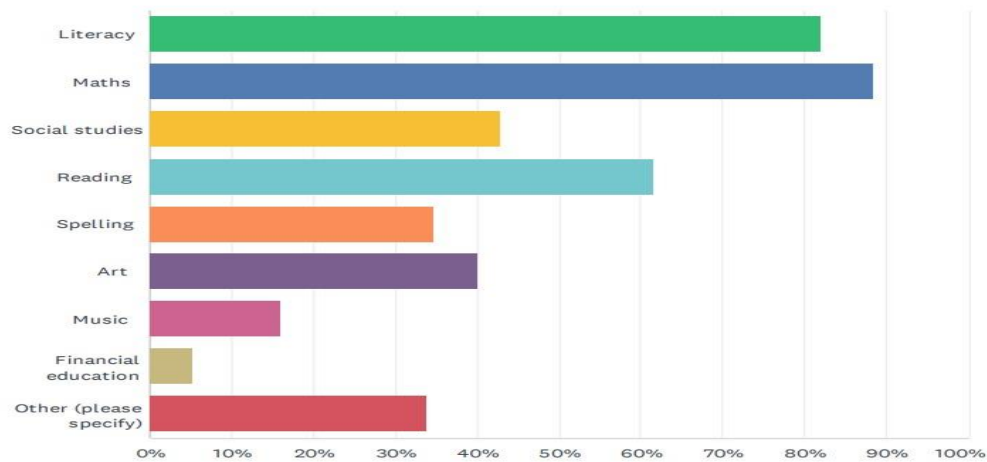
ANSWER CHOICES	RESPONSES	
Literacy	82.14%	92
Maths	88.39%	99
Social studies	42.86%	48
Reading	61.61%	69
Spelling	34.82%	39
Art	40.18%	45
Music	16.07%	18
Financial education	5.36%	6
Other (please specify)	33.93%	38
Total Respondents: 112		

Figure 26: What subjects were covered during at-home learning?

Educators and students alike have had to quickly adjust to the peculiarities of the digital platforms they have been thrust into (Ellis-Thompson et al., 2020) due to the abrupt shift from in-person to online instruction (Petrie et al., 2020). Home-schooling and online classrooms were rapidly implemented by national and local education systems that prioritised the use of technology. Compared to schools that had previously made minimal use of technology or where students did not have gadgets and the internet at home, those who had used digital learning platforms saw fewer hurdles to distance education (Petrie et al., 2020). Student involvement was shown to be greater in schools that had previously implemented a virtual learning environment (Lucas et al., 2020), particularly among economically disadvantaged students.

3.2.22. Question Twenty-Two

This question aims to collect insights on how neurodiverse children's mental health was affected during the COVID-19 lockdowns and at-home learning. At the same time, my analysis of responses to this question reveals how participants perceive their child's mental health during at-home learning. Considering the child's mental health is crucial for assessing the well-being and adjustment of neurodiverse learners during remote learning.

ANSWER CHOICES	RESPONSES	
The same	18.75%	21
Somewhat better	8.04%	9
Better	8.04%	9
A lot better	13.39%	15
Somewhat worse	20.54%	23
Worse	16.96%	19
A lot worse	9.82%	11
Not sure/Can't say	4.46%	5
TOTAL		112

Figure 27: How was your child's mental health over the at-home learning lockdown period?

The education system had to adapt to online teaching methods due to the prolonged school closures, leading to the widespread adoption of remote learning as a main form of education (Bozkurt et al., 2020). The prolonged period of remote learning posed challenges

and obstacles for young students. The COVID-19 pandemic has had a notable effect on young students, rendering them a susceptible population that could encounter substantial mental health difficulties. Segre et al. (2021) suggest that individuals in this group might experience greater vulnerability to societal lockdown and remote learning impacts. This vulnerability can be attributed to their limited self-regulated learning and coping skills.

During the COVID-19 lockdown, 20% of parents noticed a decline in their child's mental health, as reported by 120 respondents. 17% of parents noticed a decline in their child's mental health during lockdown. 19% of parents saw no change in their child's mental health during lockdown and home learning. COVID-19 lockdowns impact neurodiverse children's mental health, as revealed by these results. Many parents observed a decline in their child's mental health during home learning. The pandemic has been tough for neurodiverse learners, underscoring the importance of mental health support and convenient well-being services. In addition, tailored interventions and support are crucial for the mental health of neurodiverse children in crises.

3.2.23. Question Twenty-Three

This question aims to collect information on how respondents feel about the relationship between their child's mental health and the availability of resources to aid in the home-schooling of a neurodiverse learner. The answer to this question may provide insight into parents' beliefs and knowledge about the factors that may impact their child's emotional well-being while studying at home.

Q23 Do you think this (the impact of your child's mental health) was due to lack of support for teaching a neurodiverse learner at home?

Answered: 53   Skipped: 67
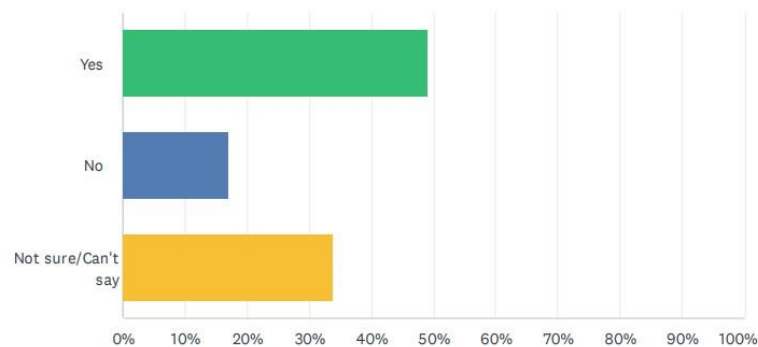
ANSWER CHOICES	RESPONSES	
Yes	49.06%	26
No	16.98%	9
Not sure/Can't say	33.96%	18
TOTAL		53

Figure 28: Do you think this (the impact on your child's mental health) was due to a lack of support for teaching a neurodiverse learner at home?

Compared to their normally developing peers, children and adolescents with language difficulties are at a higher risk of experiencing emotional and behavioural difficulties (Botting et al., 2016). Because of their language impairments, eighty percent of children referred only for emotional or behavioural challenges are overrepresented in courses for children with emotional or behavioural concerns (Hollo et al., 2014). Disorders that hinder language development are not exclusive to childhood and often remain into adulthood, so professionals should not assume that a child's additional mental health concerns will vanish after their language challenges have been overcome.

Of 120 respondents, 40% believed that lack of support for teaching a neurodiverse learner at home impacted their child's mental health, while 16% disagreed. Many parents believe their neurodiverse child's mental health has suffered due to insufficient support during remote learning. These results reveal a possible link between insufficient support for teaching neurodiverse learners at home and their mental health challenges. The findings highlight the need to support neurodiverse learners and provide resources for families and educators during challenging times like remote learning.

3.2.24. Question Twenty-Four

This question tests whether participants know therapy balls as seating for neurodiverse learners. Participants' responses indicate their knowledge of therapy balls for neurodiverse learners. Evaluate participants' awareness of therapy balls' advantages in improving attention, reducing restlessness, enhancing sensory regulation, and promoting engagement in learning.

Impact on Aotearoa parents of neurodiverse learners during COVID-19 lockdowns   SurveyMonkey

Q24 Have you heard of the use of therapy balls instead of normal seats to help improve attention, behaviour and some learning activities in neurodiverse learners?

Answered: 112   Skipped: 8
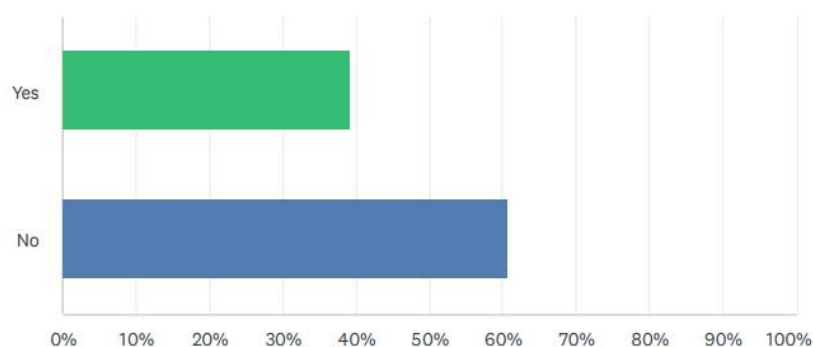
ANSWER CHOICES	RESPONSES	
Yes	39.29%	44
No	60.71%	68
TOTAL		112

Figure 29: Have you heard of using therapy balls instead of normal seats to help improve attention, behaviour, and some learning activities in neurodiverse learners?

Of 120 respondents, 40% knew about using therapy balls instead of regular seats to enhance attention, behaviour, and learning in neurodiverse learners. The remaining 60% were unaware of this intervention. More research and information sharing are necessary to understand how therapy balls can help neurodiverse learners. Assessing parental awareness reveals gaps in knowledge and highlights the need to educate them and practitioners about beneficial seating options for neurodiverse learners. Producing therapy balls can enhance research and support neurodiverse learners in education.

According to Schilling et al. (2003), therapy balls benefit children, regardless of whether they have disabilities or not. These balls help them maintain focus and remain seated at their workstations. According to Hand (2023), therapy balls are effective tools for various purposes, such as improving focus, perfecting handwriting, grasping academic concepts, and enhancing organisation skills. The use of seating on balls has been found to enhance focus in individuals by providing the sensory input they need. According to several studies (Gillespie-Lynch et al., 2017), evidence suggests that sitting in chairs can harm children's backs and posture.

3.2.25. Question twenty-five

This question investigates the impact of having a neurodiverse child at home during the lockdown on the mental health of the participants, their spouses, and other family members. Analysing the responses of participants, their spouses, and other family members will provide insights into the potential impact of having a neurodiverse child at home during the lockdown on their mental health.

Impact on Aotearoa parents of neurodiverse learners during COVID-19 lockdowns   SurveyMonkey

Q25 Did having your child at home over lockdown period impact your/your partner's/Whānau members mental health?

Answered: 112   Skipped: 8

ANSWER CHOICES	RESPONSES	
It was the same	25.89%	29
Somewhat better	4.46%	5
Better	2.68%	3
A lot better	1.79%	2
Somewhat worse	25.00%	28
Worse	16.96%	19
A lot worse	16.96%	19
Don't know/Can't say	6.25%	7
TOTAL		112

Figure 30: Did having your child at home over the lockdown period impact your/your partner's/Whānau members'' mental health?

The impact of quarantine-induced stress on adults' psychological well-being has been confirmed by a recent review conducted by Brooks et al. (2020). Furthermore, according to (Liu et al., 2012), it is suggested that these effects could potentially lead to significant long-term implications. The psychological well-being of parents and children who were quarantined during the H1N1 influenza outbreak in 2009 was negatively impacted, as indicated by a study. The isolation and high-stress environment of the quarantine contributed to increased psychological distress among these individuals. The distress experienced by parents had a subsequent impact on the well-being of their children, as noted by (Deater-Deckard & Panneton, 2018).

While 25% of the 120 respondents reported a significant negative impact on their mental health due to having their child at home during the lockdown. 25% reported no significant negative impact on their mental health due to COVID-19. 17% of respondents experienced severe mental health issues during the lockdown. These findings reveal how Aotearoa parents of neurodiverse learners were affected mentally during the COVID-19 lockdowns. The results highlight the importance of supporting parents' mental health during crises. In summary, providing effective interventions and support services is crucial to help parents with neurodiverse learners maintain their mental well-being during lockdowns.

3.2.26. Question twenty-six

The question "Would you like to leave any further comments?" aims to create a space for parents of neurodiverse children to share their additional thoughts and emotions about their child's home study experience. We can gain insights, experiences, and additional thoughts by analysing responses. This section is for respondents to elaborate on their previous comments, share additional relevant information, or ask any further questions they have.

Q27 Would you like to leave any further comments?

Answered: 112   Skipped: 8

ANSWER CHOICES	RESPONSES	
Yes (please specify)	45.54%	51
No	54.46%	61

Figure 31: Would you like to leave any further comments?

Moreover, 45% of respondents shared their perspectives on the impact of having their child at home during the lockdown period on their mental well-being. The comments shared by individuals demonstrated a wide range of experiences, including feelings of increased stress and anxiety. Furthermore, many individuals reported challenges in efficiently managing multiple obligations. Some individuals raised concerns about the lack of support and resources, while others expressed gratitude for the opportunity to spend more quality time with their children. A notable proportion of the participants, precisely 35%, opted not to include supplementary remarks. The comments provided contribute qualitative insights that complement the quantitative data, enabling a more comprehensive understanding of the complex mental health challenges faced by parents of neurodiverse learners during the COVID-19 lockdowns.

The findings inform interventions for parents to prevent children's distress. The results can inform and assist paediatricians and psychologists in supporting families during the pandemic. They guide parents looking to enhance their children's well-being. Parents can support their children despite their negative emotions. Enhance their skills and employ effective strategies. Intervention programmes should focus on teaching parents effective communication strategies with their children. Parents with high self-efficacy and emotional regulation are more likely to use effective language. This benefits the well-being of parents and children (Jones & Prinz, 2005). Examining the effects of pandemic-induced fear and isolation on families is vital for their well-being. Effective communication between parents and children

about the pandemic enhances parental confidence and promotes positive adjustment in children.

3.3. Chapter summary

This chapter examines the impact of COVID-19 lockdowns on parents of students with special needs in Aotearoa. The study examined the school's environment, instructional methods, parental support, and potential strategies for improving online education. Despite the limitations of the online survey methodology and external factors, significant and valuable insights were obtained. It is recommended to employ diverse instructional strategies, offer support to all students, and explore the integration of artificial intelligence in online learning. This study examines the challenges educators and students face, emphasising the importance of personalised support and collaboration in creating inclusive and user-friendly online learning environments. This chapter examines the impact of COVID-19 lockdowns on parents of neurodiversity students in Aotearoa. It presents findings on the effects on classroom settings, instruction, support mechanisms, and recommendations for future improvements. Following this chapter, a concise summary of the study's key findings will be presented, followed by a thorough examination of its limitations and recommendations for future research. This study explores the potential benefits of AI and emerging technologies in enhancing the accessibility and academic performance of students with neurological differences in online education.

CHAPTER FIVE

4. DISCUSSION

4.1. Chapter Introduction

The previous chapter focused on analysing the effects of the COVID-19 lockdowns on the households of neurodiverse students in Aotearoa. The mixed method study has examined parents' viewpoints regarding distance education and the difficulties their children encounter. The chapter analyses the demographics of neurodiverse children, highlighting the research challenges associated with studying this population and emphasizing the importance of conducting such studies. This chapter analyses the choices and assistance systems accessible to parents of neurodiverse students in Aotearoa during the COVID-19 lockdowns. In this analysis, I explore the strategies utilized by educational institutions, the significance of social networks, and the value of digital resources. The findings provide recommendations for enhancing support during comparable emergency scenarios and provide insights into the effectiveness of these approaches in addressing the specific requirements of neurodiverse students.

4.2. Research questions

This thesis examined the impact of COVID-19 lockdowns on the families of neurodiverse students in Aotearoa. Additionally, the study aims to explore the implications of these lockdowns for the future of online education for students with special needs (Averett, 2021). The initial investigation aims to uncover the insights that can be gained from these parents regarding the impact of lockdowns on their children's education. The second question examines the potential impact of their input on developing an e-learning environment specifically tailored for neurodiverse students. Questions 3 and 4 delve deeper into the impact of lockdowns on the classroom environment and the teaching methods employed by educators. In addition, it is important to explore the level of support provided to families with neurodiverse children.

Furthermore, the current study has examined ways to enhance online learning to promote optimal student achievement and ensure a comfortable learning environment for

families. This project aims to address the concerns surrounding the effective support of neurodiverse students in online learning environments during emergencies such as the COVID-19 lockdowns. The goal is to provide valuable insights and recommendations on enhancing their learning experience.

Table 1: Research Questions

Research Questions
1. **What lessons can be learned from Aotearoa parents with neurodiverse learners during COVID-19 lockdowns?**
2. **How can their feedback help shape an online learning platform for neurodiverse learners?**
3. **What was the learning environment for students during lockdowns?**
4. **How did the teachers deliver their lessons?**
5. **What support was given to parents of children with neurodiversity?**
6. **How can the online learning environment be improved to achieve both the high-quality student outcomes required and the ease and comfort for all household members?**

4.3. Discussion

4.3.1. What lessons can be learned from Aotearoa parents with neurodiverse learners during COVID-19 lockdowns?

This research project aims to study parents' experiences in Aotearoa with neurodiverse children. The specific focus is on the lessons that can be learned from their experiences during the COVID-19 lockdowns. The study aims to gain valuable insights into effective instructional strategies for students with diverse neurological profiles in asynchronous learning environments. To effectively address this issue, it is crucial to thoroughly analyse the different arguments surrounding the potential benefits that can be derived from the perspectives of parents with neurodiverse children during the lockdowns. According to Averett (2021), it is important to recognize that parents possess valuable insights and knowledge about their children's educational needs, making it a valid justification for seeking lessons from them. This perspective emphasizes the advantages of including parents in the educational process.

Parents can provide valuable insights and customize instruction based on their experiences, allowing them to address their children's needs. The argument highlights the importance of recognizing and valuing parents' expertise. Nevertheless, it is crucial to thoroughly analyse this perspective and consider any potential constraints or opposing viewpoints that might emerge. The insights gained from individuals with neurological differences can be valuable for instructors when designing online courses that meet the specific needs of these students. In their study, Bambra et al. (2020) examine different strategies parents can employ to enhance their children's learning. The strategies mentioned include customized teaching methods, visual aids, and adjustments for sensory needs. Parents can improve the effectiveness of the learning process by adapting their teaching methods to meet the specific needs of their children (Vincent et al., 2023).

On the other hand, incorporating visual aids can enhance children's comprehension and memory of information. Sensory accommodations can enhance the learning environment by effectively addressing the sensory sensitivities or preferences that children may possess. The strategies provided aim to assist parents in effectively supporting their children's educational development by offering practical approaches. Online educators have the potential to better support students with diverse neurological differences by critically examining their past mistakes (Bambra et al., 2020). The statement suggests that there are areas where online education can be enhanced to accommodate students with neurological differences better. Educators can enhance their teaching strategies by recognizing and reflecting upon their mistakes, enabling them to address these students' specific requirements better (Suizzo & Stapleton, 2007).

However, it is important to consider potential counterarguments that may arise. There is a perspective that suggests that the experiences of neurodiverse children may differ from those of their parents, as supported by research by Benton et al. (2014) &Bhamani et al. (2020). The effectiveness of strategies can vary depending on the individual child. According to Bhamani et al. (2020), multiple factors could influence individuals' opinions, such as their parent's education level and access to information. Furthermore, it is important to note that the experiences of parents who have faced adversity may not necessarily translate into effective strategies for educators, as highlighted by Deater-Deckard & Panneton (2018). Balancing parents' perspectives using research and established teaching methods is crucial.

A comprehensive analysis of the existing literature (Brooks et al., 2020; Deater-Deckard & Panneton, 2018) can provide valuable insights into the impact of COVID-19 lockdowns on neurodiverse students and the effectiveness of different pedagogical approaches. According to Bonal & González (2020), research has been conducted on the challenges faced by neurodiverse students in remote learning. These challenges include difficulties with maintaining focus, managing sensory issues, and adapting to changes in routine. Research by Soneson et al. (2023) has indicated that for neurodiverse students to thrive in online environments, they must be provided with tailored support, establish effective communication channels, and maintain consistent and predictable routines.

To enhance the education of students with neurodiversity in an online environment, it is beneficial to conduct a thorough analysis of the existing research on this subject (Bambra et al., 2020). The insights obtained from parents in Aotearoa who have neurodiverse children during the COVID-19 lockdowns have significant potential to inform the creation of effective strategies for teaching neurodiverse students in online classrooms (Shaw et al., 2022). The study contends that upgrading the online learning environment is vital for gaining high student results and making online learning simple and fun for the entire family. It is important to conduct a critical analysis of the various factors that impact the online learning environment, including feasibility and potential trade-offs, and to draw upon existing literature to develop strategies and recommendations to enhance the effectiveness of online learning (Dong et al., 2020). To identify issues and develop effective solutions, this technique thoroughly investigates the complexity of online education. To understand the challenges and opportunities in online education, it is important to consider the feasibility of different approaches and the potential trade-offs associated with each (Bambra et al., 2020). It is crucial to rely on the insights offered by the current literature to ensure that the plans and ideas generated are based on reliable research. Developing effective educational methods for neurodiverse learners requires thoroughly analysing parental perspectives and experiences and incorporating evidence-based research and pedagogical practices (Dabrowski, 2020).

4.3.2. How can their feedback help shape an online learning platform for neurodiverse learners?

The purpose of this question about "How can their feedback help shape an online learning platform for neurodiverse learners?" is to assess the practicality of integrating input from parents in Aotearoa who have neurodiverse children into the development of an online learning platform that caters to the specific requirements of neurodiverse students, focusing specifically on individuals with attention deficit hyperactivity disorder (ADHD) and dyslexia.

The parent's understanding of their children's learning needs and challenges is extremely valuable, making their perspectives worthy of consideration. According to Chamberlain et al. (2020), the online learning platform can be adjusted to cater to the requirements of neurodiverse students. In addition, this can be achieved through various methods, such as incorporating individualized instruction, utilizing visual aids, and implementing multi-sensory approaches to enhance the learning experience. According to a study conducted by Soneson et al. (2023), it was found that a significant proportion of children and young adults in the United Kingdom experienced positive psychological growth during the initial national lockdown. During the lockdown, several positive changes were observed in the mental health of children and young people (CYP). These changes included improved social interactions, reduced feelings of isolation, decreased bullying, better classroom time management, and increased sleep and physical activity. According to reports of Shah & Absoud (2021), certain individuals experienced positive changes in their mental health during the lockdown period. However, students experienced a break from the repetitive nature of school life during the lockdown period. According to Christner et al. (2021), the platform can be customized to cater to the specific requirements of neurodiverse students. Meanwhile, this situation can be achieved by incorporating input from parents regarding the techniques and assistive technology that are most beneficial for their children (Vincent et al., 2023).

Including parental input is good, as it can make the online learning platform more accessible and user-friendly. Incorporating parental feedback and expertise into the platform's evolution and refinement is a win-win. Due to their unique position as their children's primary educators, parents have unique insights to provide on the platform's structure, features, and content. Students and parents can ensure the platform is tailored to their needs by providing input. The platform's ability to encourage parental participation in school activities helps create

a more pleasant and supportive home-school connection. Parents' perspectives on issues like ease of use, navigation, and documentation clarity are invaluable, say Chan & Mo (2023). This feedback is crucial in developing a system that meets the requirements of students with neurological differences and their families. In addition, user input has a significant influence on developing better scaffolding tools, progress-tracking methods, and interactive features, as shown by the user's idea. Further, many users who appreciate the value of feedback are more likely to use the resources provided and be intrinsically motivated to do so (Sarrett, 2018). This understanding highlights the significance of integrating feedback methods into the development process to enhance the user experience.

However, to conduct a thorough research analysis, it is necessary to recognize competing points of view. Many study critics have argued that teachers cannot learn enough about neurodiverse students by listening to their parents' viewpoints and needs. For a platform to be both comprehensive and welcoming, educators, researchers, and people with neurodiversity must be involved in its creation (Christner et al., 2021; Mayer & Boston, 2022). In addition, it is important to recognize that parental input might vary owing to the wide range of individuals' backgrounds, interests, and perspectives. Finding a compromise that considers parental input and is still in line with evidence-based practices and pedagogical methods is crucial for providing students with a well-rounded and productive learning environment.

The scholarly studies look at how including stakeholders, especially parents, might help improve instructional technology for students with neurodiversity. The findings of these studies are corroborated by those of Christner et al. (2021), Dong et al. (2020), and Gillespie-Lynch et al. (2017). Multiple studies have stressed the importance of participatory design, including other points of view, while creating educational tools. Parents' input gathered via the co-design process may provide light on how best to meet the needs of students with neurological differences. Parents will feel more invested in the platform and more confident in its ability to meet their needs if they have a hand designing it (Marques et al., 2022). Significant progress can be made in developing an online learning platform that effectively addresses the unique needs of neurodiverse learners in Aotearoa by listening to the feedback provided by the parents of these students. The platform might be modified to suit the requirements of neurodiverse students better if only the necessary resources were applied (Laxton et al., 2021).

4.3.3. What was the learning environment for students during lockdowns?

The question's objective is to examine the coping mechanisms of pupils, particularly those with neurodiversity, during the COVID-19 lockdowns. This inquiry aims to understand the circumstances in which remote learners functioned and the factors influencing their experiences. Students, especially those with neurological disorders, have unique challenges while transitioning to remote learning, and a thorough evaluation of the learning environment during lockdown periods is essential to understanding these challenges. The advantages and disadvantages of distance learning can only be assessed with a thorough understanding of the current classroom setup (Jena, 2020). Several factors associated with students' neurodiversity may influence their academic performance. Hart et al. (2022) discovered many factors contributing to education's effectiveness. In today's information era, it is essential to have quick access to cutting-edge technology resources. Children must have easy access to programs that may help them succeed academically despite their challenges. It has also been shown that the physical arrangement of classrooms has a major impact on students' engagement and achievement.

Parental involvement is crucial to student's academic success because it gives them the additional encouragement and support, they need to succeed. All these factors affect the success of educational initiatives and must be considered. The user's belief that teachers might benefit from a more in-depth examination of their classrooms is intriguing (Hood, 2020). Educators might gain a lot from this research if they utilize the findings to inform their decision-making as they create interventions and support measures for needy children. This aligns with the idea that a thorough understanding of the classroom setting may help teachers devise more effective methods of meeting the requirements of students living in challenging environments. Nevertheless, remember that the user makes this assertion without offering evidence or specific instances (Laxton et al., 2021). The proposed hypothesis is intriguing, but further investigation and empirical data are required to assess its validity and practical implications.

The present study raises an important issue concerning the potential for disparity in the home conditions of students during lockdown. The importance of identifying all the factors that might have influenced the pupils' educational experiences cannot be overstated. Recognizing these differences allows us to consider the various potential influences on students' academic performance during this one-of-a-kind time. The proclamation claims that

kids' learning and success are significantly impacted by their environments at home and school. The present study contends that blanket assumptions about students' backgrounds and upbringing could be more helpful. To ensure specificity and applicability, it is necessary to provide results and recommendations tailored to specific circumstances.

Including a literature review in this study is commendable since it allows for a more in-depth analysis of previous studies. The COVID-19 pandemic prompted distance education and changed the dynamics of conventional classrooms, making this method much - more relevant. The author aims to improve our grasp of the topic by evaluating the related literature and highlighting existing patterns, trends, and potential knowledge gaps. This analysis is crucial in lockdown procedures since it may guide research and education (Hart et al., 2022). Numerous academic studies have examined the links between various factors and students' performance in the classroom. Students' home environments, as well as the views and involvement of their families, are considered in this study (Goudeau et al., 2021; Hand, 2023; Jena, 2020).

Many key challenges neurodiverse students confront while pursuing distant learning are brought to the reader's notice. In addition, self-regulation issues, sensory overload, and the need for expert assistance all come under this study. The author's awareness of these issues aids in drawing attention to the serious challenges that distance learners encounter. This study highlights the need to remove these barriers to make schools more welcoming places for kids with neurodiversity. The consequences of lockdown procedures on children with neurological abnormalities might benefit from a comprehensive literature review. This strategy helps pinpoint blank spots in our understanding and guides future research.

However, investigating the classroom setting during lockdowns is expected to yield important implications for the field. The current study contributes to the existing body of literature by examining the advantages and disadvantages of online education, specifically for students with neurological differences. The findings of this study have significant implications for future research focused on enhancing the engagement and academic achievement of neurodiverse students. Specifically, investigating the role of various environmental factors can be instrumental in designing effective interventions. The research findings can inform and improve policies, procedures, and resources that support students with neurodiversity during times of difficulty.

To understand the benefits and drawbacks of remote education, it is crucial to analyse the learning environment for students, particularly those with neurodiverse needs, during lockdown periods. By critically analysing the learning environment and considering multiple perspectives, it is possible to understand the factors influencing students' learning experiences comprehensively (Dong et al., 2020). This can be achieved by examining various aspects and drawing insights from existing research. The study's results will contribute to existing knowledge and offer valuable insights for future research and the development of effective treatments and support strategies for neurodiverse students facing similar challenges.

4.3.4. How did the teachers deliver their lessons?

The motivation behind this question is to analyse the pedagogical strategies employed by teachers during the COVID-19 lockdowns. The focus is on understanding how teachers delivered their lessons during this period. This investigation aims to analyse the methods instructors employ in distance education to support the learning of students with neurological differences.

The argument that the ability to adapt and generate novel ideas in the face of adversity provides educators with a compelling reason to assess their instructional methods is thought-provoking. Examining methods for remote learning provides valuable insights into the efficacy of various approaches that may be applicable in similar situations (Dabrowski, 2020). Educators have most likely modified their instructional strategies to effectively meet the needs of students with neurological differences. The proposed changes include various techniques to enhance the learning experience (Day, 2021). These strategies include the utilization of online platforms, the incorporation of recorded classes, the facilitation of video conferences, and the individualization of lesson plans to meet the needs of each student. By employing these strategies, educators can optimize the delivery of instruction and promote a more individualized approach to learning. A thorough examination of the dynamics between educators and students in remote learning environments can yield valuable insights regarding implementing effective strategies that accommodate the requirements of students with diverse neurological profiles.

Examining the obstacles instructors encounter when delivering remote instruction is essential, particularly in meeting the unique requirements of students with neurological

differences. Some students may not have substantially benefited from implementing remote teaching techniques. In addition, it is hypothesized that the online adaptation of certain educational methodologies may have reduced their efficacy (Christner et al., 2021). Several factors have delayed class delivery. However, inadequate resources may have influenced instructors' inability to conduct effective remote instruction.

Additionally, instructors may need adequate training in remote teaching techniques, which may have hindered class delivery. In addition, there may have been challenges in engaging and involving students, which may have diminished the effectiveness of the instructional process. To thoroughly evaluate the efficacy of the strategies implemented by instructors during lockdowns, it is necessary to examine the various obstacles they encountered (Gillespie-Lynch et al., 2017). The available literature significantly insights the practical aspects of implementing remote instruction during lockdowns. Many previous studies have focused on instructional approaches, technological integration, and educators' challenges when adapting their practices to remote learning environments. The research on remote learning settings has identified several important factors that play a role in its effectiveness. One factor that should be considered is the importance of clear communication (Ortiz, 2020; Pine et al., 2022). Educators' effective communication of information and instructions is essential for promoting student understanding and engagement. Research has emphasized the importance of clear communication, scaffolding, assistance, and encouraging student participation in distant learning contexts (Re & Cornoldi, 2013; Saline, 2021). Conducting a comprehensive literature review enables us to understand better the most effective instructional approaches for students with diverse levels of Neurotypical development and how these approaches impact their educational outcomes.

The findings of this study on how lecturers convey knowledge will have valuable implications for future researchers. The study will contribute to the literature on effective approaches for teaching neurodiverse students in remote learning environments. The findings can inform future investigations on the impact of different teaching strategies on students' interests, motivation, and academic performance. In addition, the study's findings can potentially guide the development of professional development programs and support initiatives for educators. These programs can equip educators with the necessary tools to deliver remote courses to students with neurodiversity effectively. The study's examination of

instructors' instructional methods could provide insights into the support provided to students and their families through online education. The study examines the potential consequences and effects of a particular subject matter. The user recognizes the importance of assessing various instructional strategies to determine their effectiveness in informing discussions on teaching methods (Saline, 2021; Samji et al., 2022). The assistance for neurodiverse students and the effectiveness of different educational methodologies can be explored using this point as a basis for discussion. The findings could guide improving teacher preparedness, enhancing student readiness, and developing future contingency plans for similar emergencies. Studying the teaching methods employed by instructors during the COVID-19 lockdowns could provide valuable insights into the impact of different teaching approaches on students with neurological differences (Sarrett, 2018).

To enhance understanding of effective instructional techniques in remote learning environments, engaging in a thorough analysis of course delivery, identifying challenges and effective strategies, and leveraging insights from current research are essential. The ultimate purpose of this critical analysis approach is to help students succeed in their studies by illuminating effective strategies and recommendations for making the most of their time spent learning online. The findings of this study have important consequences for further research, policymaking, and pedagogical methods. By shedding light on the factors that promote a family's good, inclusive, and productive use of the internet for educational reasons, this study adds to decision-making in this field. There is no understating of how important it is to provide a universally accessible online learning environment, and the findings from this study offer valuable guidelines for that objective. The study's findings could influence the development of future studies, training programs, and support initiatives aimed at enhancing instructional methods for students with neurodiversity.

4.3.5.   What support was given to parents of children with neurodiversity?

To significantly discuss the support offered to parents of students with neurodiversity during the COVID-19 lockdowns, the following research question: "What support was given to parents of children with neurodiversity?" This question explores how parents can obtain support in addressing their children's cognitive and affective requirements within the unique constraints of remote education.

The investigation of parental assistance is justified due to its acknowledgement of parents' pivotal role in the development and accomplishments of students with neurodiversity. To optimize parental involvement in children's educational endeavours within the home environment, it is imperative to gain a comprehensive understanding of the precise forms of support that parents receive. This knowledge will empower us to discern the most productive strategies, interventions, and resources to deliver. Educational institutions possess the capacity to establish virtual support groups, employ online resources and instructional materials, foster efficient communication between educators and parents, and implement additional pertinent strategies (Soneson et al., 2023). By thoroughly analysing the available resources, one can acquire a more comprehensive comprehension of the tactics that can augment parental engagement and cultivate a feeling of satisfaction among parents regarding their child's educational pursuits.

Nevertheless, it is crucial to consider a counterargument that presents apprehensions regarding the dependability and efficacy of programs that provide parental assistance. Disparities in the accessibility of support systems during periods of lockdown within educational institutions, districts, or geographical areas may have resulted in unequal opportunities to obtain resources and aid (Vincent et al., 2023). However, various factors, including language barriers, may have shaped the potential impact of available assistance on parental benefit, restricted technological access, and levels of parental engagement (Giannotti et al., 2022). To promote fair and inclusive access and provide effective support to parents of neurodiverse learners, it is imperative to comprehensively examine the quality and extent of the existing support systems (Dong et al., 2020). The significance of this question resides in its relationship to the discourse surrounding the ramifications of COVID-19 lockdown measures on caregivers of neurodivergent learners in Aotearoa, as examined in the previous chapter.

The study aims to examine the support given to parents to emphasize the importance of parental involvement, collaboration, and readily available resources in facilitating remote learning for neurodiverse students. The study results can provide valuable insights for developing recommendations to improve support networks, promote effective communication between educational institutions and families, and enhance the overall quality of education for students with neurodiverse characteristics and their families. The implications for future

researchers can be derived from the findings of this study about the support provided to parents of children with neurodiversity. The research will make a valuable contribution to the extant body of literature concerning the efficacy of various assistance provided to families of students with neurological disparities in times of emergency (Goudeau et al., 2021). The findings of this study hold significance for future investigations on the impact of parental involvement on the academic achievement, motivation, and social and emotional growth of neurodiverse students. The research results can enhance the formulation of policies and interventions to enhance parental engagement in school-family partnerships.

To thoroughly discuss the support provided to parents of neurodiverse children during the COVID-19 lockdowns, it is imperative to understand the resources and support systems available for remote learning. Parents of students with neurodiversity can enhance their comprehension and assistance by researching efficacious strategies (Christner et al., 2021). The results of this study provide the framework for further exploration and innovation in online learning. It is hoped that by including this new material, we can better understand how to raise the bar for quality and accessibility in online classrooms. This claim, however, needs to be supported by sufficient evidence. The veracity of this assertion must be evaluated seriously, as must the extent to which the proposed research will contribute to the existing body of knowledge. The objective mentioned above can be accomplished through a comprehensive examination of the current support systems, an assessment of the accessibility and equity of the resources at hand, and a synthesis of the conclusions reached by prior scholars. This study's findings can contribute valuable insights for future research and improving support systems. However, this situation can enhance the ability of parents to safeguard their children's education and well-being amidst periods of crisis.

4.3.6. How can the online learning environment be improved to achieve high-quality student outcomes and ease and comfort for all household members?

This research question aims to enhance the overall well-being of family members who engage in online education by assessing various strategies and recommendations. Efforts to enhance the online learning environment can benefit all students, including those with neurological differences, by fostering the creation of inclusive and efficient teaching methods. The utilization of digital tools by educational institutions has the potential to enhance their

ability to meet the diverse needs of students, enabling them to deliver a more customized and tailored learning experience. Online learning can address the challenges faced by neurodivergent students in the classroom. Specifically, various digital resources and technology can enhance teachers' ability to meet their student's unique needs and learning preferences (Dabrowski, 2020). The flexibility of the classroom environment promotes inclusivity and support for students with neurodiversity, enabling them to engage with the material in a manner that suits their individual needs. Furthermore, the online classroom provides increased opportunities for collaboration and idea-sharing between students and teachers (Crothers, 2023). Online forums provide an inclusive platform for students from diverse backgrounds and varying abilities to actively engage in class discussions, share their ideas, and collaborate on projects (Büdy, 2021).

Providing a level playing field for students with neurological differences is advantageous. It promotes fairness and inclusivity, enabling them to actively participate in the learning process and make valuable contributions. Furthermore, the adaptability of online learning has the potential to benefit neurodiversity greatly. The study results indicated that teachers are crucial in improving online education quality by employing strategies catering to students' diverse learning preferences (Chamberlain et al., 2020). The method incorporates diverse materials that engage multiple senses and cater to different learning preferences. The study emphasizes incorporating interactive learning opportunities to enhance the educational process. The claim suggests that the discussed strategy can improve students' overall performance, increasing their chances of achieving positive results (Chan & Mo, 2023). This method is particularly beneficial for neurodiverse students due to its positive impact on their academic growth. In addition, placing importance on convenience and comfort for all household members helps create a positive and supportive teaching environment (Giannotti et al., 2022). This situation significantly impacts the well-being of students and their families, as it reduces stress levels.

The counterargument, on the other hand, raises reasonable concerns about whether it is possible or even desirable to enhance the online learning environment for every family member. Due to limited funds, technological constraints, and varying levels of digital competency, offering everyone an exceptional online learning experience may be challenging. It is also crucial to realize that, in the context of online education, meeting the needs of

everyone in the family requires substantial personalisation and adjustment (Goudeau et al., 2021). It is also worth noting that achieving such high customization and flexibility may be challenging when working within the confines of previously existing systems and processes. To improve the online classroom, the author emphasizes the need to weigh the advantages and disadvantages of different strategies. The diversity of children and their families must be considered in this analysis (Gillespie-Lynch et al., 2017). The author adopts a critical attitude, arguing that the pros and cons of these changes must be considered carefully. This review should include the expenses and interruptions from changing the virtual classroom. The study also suggests that any improvements should be available to everyone, stressing the need to accommodate a wide range of student and family circumstances. The study highlights the need to assess the pros and cons of enhancing the online learning environment.

Looking at what has already been done, we can develop strategies that help the home life and the children's grades in lockdown-type situations. This perspective emphasizes the need to use academic research to inform the development of effective online teaching and learning strategies. The present body of research has examined many different perspectives on what makes for a productive online learning environment (Marques et al., 2022). These factors span a wide range, including students' and parents' involvement, technology's simplicity, and teachers' interactions with students. Researchers are interested in these subfields because of the importance of online education and the complexity of the elements at play. The results of this research stress the importance of several factors that improve the quality of online education. There must be continual and reliable connectivity to the internet, tailored approaches to instruction, and knowledgeable technical support. If given more thought, the digital classroom might be more effective and user-friendly (Hyndman, 2023). Experts in online education can determine the most effective ways of training by conducting a comprehensive analysis of the current literature. In addition, this method facilitates the identification of knowledge gaps, highlighting areas needing more investigation. This type of study might help improve the quality of online education for the entire family, which would be a major step forward for the approach.

This research might significantly contribute to ongoing efforts to enhance the quality of the digital classroom. This study may shed light on key areas needing improvement by delving into many aspects of online education. The value of this work extends well beyond its

immediate context since it may assist in shaping and steering future research in this field (Re & Cornoldi, 2013). This suggests that the findings serve as a guide for future studies in related fields. In particular, the paper highlights the necessity of incorporating user input into the design of online learning experiences and exploring alternative approaches to education and development. The parents of children appreciate these facets of online education and hence realize the need for ongoing improvement. The push for "innovative instructional approaches" in online learning reflects this need for new methods. That commitment to enhancing online education's quality and efficacy is admirable (Saline, 2021).

Furthermore, the user's attention to creating user-friendly platforms demonstrates an awareness of the value of providing students with accessible and uncomplicated online learning environments. This idea reflects the rising value of a pleasant user experience and straightforward navigation in educational technology (Samji et al., 2022). Findings from this study may also be useful in shaping future educational policies, standards, and teacher training initiatives. Teachers may benefit from these programs because they provide the skills to design interactive and inclusive online learning environments.

The findings of this research may illuminate the impact of COVID-19 lockdown regulations on Aotearoa parents of neurodiverse children. This study examines a range of interventions designed to enhance the quality of online learning (Shaw et al., 2022). It considers the problems parents and children face in this environment and offers guidance for resolving them. The results may have implications for several aspects of the online classroom, as the author explains (Soriano-Ferrer et al., 2021). There are recommendations for enhancing the school's technology infrastructure, developing more user-friendly tools, expanding teacher professional development opportunities, and establishing more dependable lines of communication and support. By paying attention to these details, online education's overall quality and efficiency may be enhanced.

4.4. Chapter Summary

This chapter analysed methods for optimizing the online learning environment to promote better student outcomes while ensuring convenience and satisfaction for all household members. It examined online education's challenges and potential improvements,

utilizing existing academic literature and empirical research. Recommendations are provided for potential research endeavours and the advancement of online learning approaches. The following section of this document explores the empirical observations obtained from the conducted research. It provides a comprehensive analysis of the consequences arising from the implementation of COVID-19 lockdown measures on parents residing in Aotearoa who are responsible for the well-being of neurodiverse learners. The analysis involves assessing the acquired knowledge, the availability of support systems, the learning atmosphere experienced, the instructional methods educators use, and strategies for improving the virtual learning environment. The chapter explores the implications of the study's results, analysing their significance within the context of neurodiverse learners and providing recommendations for future investigation and application.

The final chapter will thoroughly integrate the study's findings, restating the research objectives and summarizing the significant contributions to the respective field. The upcoming discourse will involve an assessment of the consequences resulting from the discoveries, coupled with a comprehensive exploration of their intrinsic constraints. Furthermore, this study will delve into and clarify potential areas for future research. The primary objective of the conclusion chapter is to provide a cohesive and comprehensive summary of the study, highlighting the significance of the research in understanding the impact of COVID-19 lockdowns on parents of neurodiverse learners in Aotearoa. Furthermore, its objective is to offer valuable perspectives for formulating tactics that facilitate the advancement of their education within the context of remote learning environments.

CHAPTER SIX

5. CONCLUSIONS

5.1. Chapter Introduction

The previous chapter examined the impact of COVID-19 lockdown measures on the families of neurodiverse students in Aotearoa. The study examined the delivery methods employed in classes, the types of support available to students, and potential enhancements for the online learning environment.

The chapter concludes the thesis. It provides an overview of the study's significant findings and key insights. The primary objective of this study was to shed light on the impact of COVID-19 lockdown measures on the educational experiences of neurodiverse students. The study's research questions guided its investigation into various topics, such as parents' perspectives in Aotearoa, the impact of lockdowns on the school climate, instructional approaches employed by educators, and strategies for improving the virtual classroom environment. The process of data analysis and conducting literature reviews enables researchers to draw numerous meaningful conclusions. During COVID-19 lockdowns, parents of neurodiverse learners in Aotearoa faced distinct challenges that impacted the educational prospects of their children. The study emphasized the importance of acknowledging the distinct needs of neurodiverse students and providing personalised support and accommodations in remote learning environments.

5.2. Thesis Review

This thesis aimed to analyse the impact of COVID-19 lockdowns on the educational opportunities of neurodiverse students in Aotearoa to gain a deeper understanding of parental perspectives. The primary objective of this study was to discover valuable insights that can inform effective home-schooling strategies for online education. The introductory chapter provided an overview of the study's subject and significance, along with an examination of the challenges posed by the COVID-19 pandemic. The study's objectives and methodologies were delineated, accompanied by the inclusion of the underlying research questions.

Chapter Two reviewed the literature relevant to the thesis topic. It explored research and theory about teaching students with learning differences, online education, parental participation, and the impact of COVID-19. This study examined existing literature to identify gaps in knowledge and provide direction for future research.

Chapter Three detailed the study technique, research strategy, data-gathering procedures, and ethical considerations. This study explored the perspectives and experiences of parents in Aotearoa with neurodiverse students during the COVID-19 lockdowns through a mixed-method approach phenomenology approach. Chapter Four presented the research findings. These examined the insights gained from Aotearoa parents, the operational aspects of the school during lockdowns, the instructional methods employed by teachers, and potential enhancements for the virtual classroom. Chapter Five incorporated critical analysis, positive and negative arguments, and insights from existing literature to support the conclusions.

However, synthesize the preceding chapter's primary findings and deliberate on their implications for forthcoming research endeavours and clinical implementations. The study provided recommendations for enhancing support systems, instructional methods, and the design of online learning environments. It underscored the significance of investigating the effects of COVID-19 lockdowns on parents of neurodiverse learners in Aotearoa. The purpose and goals of the research are restated, and a summary of the chapter's major results and key findings is provided. The conclusion of the thesis underscores the importance of customizing instruction to meet the unique needs of neurodiverse students. It promotes communication and collaboration among family, school, and community stakeholders. Additionally, it highlights the need to develop more effective strategies for instructing students in their natural environments.

5.3. Key findings

This research examines the effects of COVID-19 lockdowns on parents of neurodiverse learners in Aotearoa and shares lessons learned from their experiences. These findings provide valuable insights into the lessons that can be learned from these circumstances. Recognizing that the pandemic imposed limitations on the researcher's investigation is crucial. The data

collection process was limited to an online survey due to technical constraints, which may have introduced selection bias. In addition, the nation faced the consequences of cyclones, leading to a state of emergency in the capital city where the researcher was situated. This unexpected event significantly hindered the start of the study. Despite these limitations, the findings provide valuable insights in various important areas. Parents' perspectives on how lockdown measures affected their children's educational experiences significantly varied. Several factors, including limited access to learning materials, technical constraints, and the need for additional support, have created a complex educational environment. Educators' diligent efforts in providing online instruction were acknowledged, along with the challenges of meeting the needs of students with different learning preferences.

Parental guidance is crucial for achieving success in distance education. Some parents found it easy to get the help they needed, while others faced challenges accessing the necessary support. The importance of establishing effective communication channels, fostering collaborations between educational institutions and families, and providing personalised support for students with neurodiverse needs was highlighted. The study's findings highlight the importance of consistently enhancing the virtual classroom's quality. Improving accessibility, user interface design, technical support, and parental involvement were important considerations for optimizing the online learning experience for individuals with neurodiversity and ensuring convenience and comfort for all household members.

This study's findings should be interpreted cautiously due to limitations imposed by online survey methodology, cyclones' influence, and emergencies' presence. When attempting to draw general conclusions or interpret the data, it is crucial to consider these limitations. Despite its limitations, this study offers valuable insights into the coping strategies utilized by parents of neurodiverse students in Aotearoa during the COVID-19 lockdowns. The study also highlights the importance of collaboration and continuous improvements in teaching methods for enhancing the academic performance of neurodiverse students in online learning settings.

5.4. Limitation

This research encountered several limitations that should be acknowledged. The primary data collection method, an online survey, limited the depth and richness of the data. Incorporating face-to-face interviews or observations would have yielded more nuanced insights regarding the experiences of parents and learners. Moreover, using an online survey format may have resulted in selection bias, as individuals with greater technological access and comfort with online surveys were more inclined to participate. Moreover, the occurrence of cyclones and the subsequent declaration of a state of emergency in the primary capital city substantially influenced the research undertaking. External factors caused delays and limitations in recruiting participants and collecting data. The researcher could not conduct interviews or gather firsthand perspectives, which would have enhanced the understanding of parents' and learners' experiences during the lockdowns.

5.5. Recommendations

This study's results and limitations provide several suggestions for future research and practice. A mixed-methods approach, combining online surveys with qualitative methods such as interviews or observations, can provide a comprehensive understanding of the difficulties experienced by neurodiverse students and their families during times of crisis. Comprehensive data regarding the challenges encountered and the necessary assistance could be collected. Additionally, efforts should be made to enhance the accessibility of online learning resources and support services for individuals from diverse backgrounds, including those with neurodiverse conditions. Addressing the diverse needs of students with varying neurodiversity profiles necessitates effective communication, readily accessible resources, and personalised support.

Further research is needed to explore the potential benefits of utilizing artificial intelligence and other emerging technologies to enhance the educational experience for online students, particularly those with neurological differences. Artificial intelligence (AI)-based tools, adaptive learning platforms, and assistive technology promise to address individual learner needs, deliver tailored education, and foster engagement in virtual classrooms. Further research is needed to enhance the efficacy and implementation of online learning methods.

5.6. Thesis Closing

This study provides insights into the impact of COVID-19 lockdowns on the families of neurodiverse students in Aotearoa and their key takeaways from the experience. The findings have provided valuable insights into the challenges faced by neurodiverse learners in online learning environments and the support they need. These insights were obtained despite the limitations of the online survey method and external circumstances. In the future, it is important to prioritize equitable access and support, explore the potential of AI and emerging technologies, and address the limitations of online learning through qualitative and quantitative research methods. Implementing these recommendations can enhance our understanding and approaches to supporting neurodiverse students facilitating inclusive and personalised online education for all learners. This study provides a foundation for future research that explores the potential of artificial intelligence and other advanced technologies in enhancing online education and expanding access to higher education.

6. REFERENCES

Abd Halim, M., Foozy, C. F. M., Rahmi, I., & Mustapha, A. (2018). A review of live survey application: SurveyMonkey and SurveyGizmo. *JOIV: International Journal on Informatics Visualization*, 2(4–2), 309–312.

ADHD in New Zealand – Jenn has ADHD. (n.d.). Retrieved August 25, 2023, from https://jennhasadhd.com/2021/10/30/adhd-in-new-zealand/

ADHD is more common than you think | ADHD NZ - ADHD NZ. (2023). https://www.adhd.org.nz/adhd-is-more-common-than-you-think.html

Alhazmi, A. A., & Kaufmann, A. (2022). Phenomenological qualitative methods applied to the analysis of cross-cultural experience in novel educational social contexts. *Frontiers in Psychology*, *13*, 1495.

Andersen, H. V., & Jensen, R. H. S. (2018). Assistive learning technologies for learners with ADHD and ASD: A review 2006-2016. *Læring Og Medier (Lom)*, *11*(19).

Arthur-Kelly, M., Butterfield, N., & Gordon, C. (2006). Classroom Management: Creating a Positive Learning Environment on JSTOR. In *Thomson*. https://www.jstor.org/stable/j.ctt1xw9ng

Ataro, G. (2020). Methods, methodological challenges and lesson learned from phenomenological study about OSCE experience: Overview of paradigm-driven qualitative approach in medical education. *Annals of Medicine and Surgery*, *49*, 19–23.

Averett, K. (2021). Remote Learning, COVID-19, and Children With Disabilities. *AERA Open*, *7*, 233285842110584. https://doi.org/10.1177/23328584211058471

Bambra, C., Riordan, R., Ford, J., & Matthews, F. (2020). The COVID-19 pandemic and health inequalities. *J Epidemiol Community Health*, *74*(11), 964–968.

Barkley, R. A. (2015). History of ADHD. In *Attention-deficit hyperactivity disorder: A handbook for diagnosis and treatment, 4th ed.* (pp. 3–50). The Guilford Press.

Benton, L., Vasalou, A., Khaled, R., Johnson, H., & Gooch, D. (2014). Diversity for design: a framework for involving neurodiverse children in the technology design process. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 3747–3756.

Berryman, M., SooHoo, S., & Nevin, A. (2013). *Culturally responsive methodologies*. Emerald Group Publishing.

Berryman, M., SooHoo, S., Nevin, A., Ford, T., Nodelman, D. J., Valenzuela, N., & Wilson, A. (2013). Culturally responsive methodologies at work in education settings. *International Journal for Researcher Development*.

Bhamani, S., Makhdoom, A. Z., Bharuchi, V., Ali, N., Kaleem, S., & Ahmed, D. (2020). Home learning in times of COVID: Experiences of parents. *Journal of Education and Educational Development*, *7*(1), 9–26.

Bhar, S. (2019). Introducing phenomenological research methodology in sustainable consumption literature: Illustrations from India. *International Journal of Qualitative Methods*, *18*, 1609406919840559.

Bonal, X., & González, S. (2020). The impact of lockdown on the learning gap: family and school divisions in times of crisis. *International Review of Education*, *66*(5–6), 635–655.

Botting, N., Toseeb, U., Pickles, A., Durkin, K., & Conti-Ramsden, G. (2016). Depression and anxiety change from adolescence to adulthood in individuals with and without language impairment. *PloS One*, *11*(7), e0156678.

Bozkurt, A., Jung, I., Xiao, J., Vladimirschi, V., Schuwer, R., Egorov, G., Lambert, S., Al-Freih, M., Pete, J., & Olcott Jr, D. (2020). A global outlook to the interruption of education due to COVID-19 pandemic: Navigating in a time of uncertainty and crisis. *Asian Journal of Distance Education*, *15*(1), 1–126.

Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *The Lancet*, *395*(10227), 912–920. https://doi.org/10.1016/S0140-6736(20)30460-8

Büdy, B. (2021). Embracing neurodiversity by increasing learner agency in nonmajor chemistry classes. *Journal of Chemical Education*, *98*(12), 3784–3793.

Burton, K. (2018). *How Dyslexia Affects Our Students*.

Cachia, M., & Millward, L. (2011). The telephone medium and semi-structured interviews: a complementary fit. *Qualitative Research in Organizations and Management: An International Journal*.

Chamberlain, L., Lacina, J., Bintz, W. P., Jimerson, J. B., Payne, K., & Zingale, R. (2020). Literacy in lockdown: Learning and teaching during COVID-19 school closures. *The Reading Teacher*, *74*(3), 243–253.

Chan, T. M. S., & Mo, Y. H. K. (2023). The socio-cultural interpretation of parental stress of chinese parents of children with Dyslexia: Implications for social work practice. *Child and Adolescent Social Work Journal*, *40*(1), 131–141.

Christner, N., Essler, S., Hazzam, A., & Paulus, M. (2021). Children's psychological well-being and problem behavior during the COVID-19 pandemic: An online study during the lockdown period in Germany. *PloS One*, *16*(6), e0253473.

Costley, C., Elliott, G., & Gibbs, P. (2014). Key Concepts for the Insider-Researcher. *Doing Work Based Research: Approaches to Enquiry for Insider-Researchers*, 1–7. https://doi.org/10.4135/9781446287880.N1

Crothers, C. (2023). Regular Surveys on New Zealanders. *Aotearoa New Zealand Journal of Social Issues*, *3*(1).

Cuthbertson, L. M., Robb, Y. A., & Blair, S. (2020). Theory and application of research principles and philosophical underpinning for a study utilising interpretative phenomenological analysis. *Radiography*, *26*(2), e94–e102.

Dabrowski, A. (2020). *Teacher wellbeing during a pandemic: Surviving or thriving?*

Darragh, L., & Franke, N. (2022). Lessons from Lockdown: Parent Perspectives on Home-learning Mathematics During COVID-19 Lockdown. *International Journal of Science and Mathematics Education*, *20*(7), 1521. https://doi.org/10.1007/S10763-021-10222-W

Day, A.-M. (2021). Disabling and Criminalising Systems? Understanding the Experiences and Challenges Facing Justice Experienced, Neurodiverse Children in the Education and Youth Justice Systems. *Understanding the Experiences and Challenges Facing Justice Experienced, Neurodiverse Children in the Education and Youth Justice Systems*.

Deater-Deckard, K., & Panneton, R. K. (2018). *Parental stress and early child development*. Springer.

Dong, C., Cao, S., & Li, H. (2020). Young children's online learning during COVID-19 pandemic: Chinese parents' beliefs and attitudes. *Children and Youth Services Review*, *118*. https://doi.org/10.1016/J.CHILDYOUTH.2020.105440

Ellis-Thompson, A., Higgins, S., Kay, J., Stevenson, J., & Zaman, M. (2020). Remote Learning: Rapid Evidence Assessment. *Education Endowment Foundation*.

Fernandes, B., Biswas, U. N., Mansukhani, R. T., Casarín, A. V., & Essau, C. A. (2020). The impact of COVID-19 lockdown on internet use and escapism in adolescents. *Revista de Psicología Clínica Con Niños y Adolescentes*, *7*(3), 59–65.

Fleming, J. (2018). Recognizing and Resolving the Challenges of Being an Insider Researcher in Work-Integrated Learning. *International Journal of Work-Integrated Learning*, *19*(3), 311–320.

Fokides, E., Chronopoulou, M. I., & Kaimara, P. (2019). Comparing videos and a 3D virtual environment for teaching school-related functional skills and behaviors to students with ADHD or developmental dyslexia, displaying challenging behaviors: a case study. *Research and Practice in Technology Enhanced Learning*, *14*(1), 1–19. https://doi.org/10.1186/S41039-019-0117-0/TABLES/5

Geng, G. (2011). Investigation of Teachers' Verbal and Non-verbal Strategies for Managing Attention Deficit Hyperactivity Disorder (ADHD) Students' Behaviours within a Classroom Environment. *Australian Journal of Teacher Education*, *36*(7). https://www.researchgate.net/publication/254591521_Investigation_of_Teachers'_Verbal_and_Non-verbal_Strategies_for_Managing_Attention_Deficit_Hyperactivity_Disorder_ADHD_Students'_Behaviours_within_a_Classroom_Environment

Giannotti, M., Mazzoni, N., Bentenuto, A., Venuti, P., & de Falco, S. (2022). Family adjustment to COVID-19 lockdown in Italy: Parental stress, coparenting, and child externalizing behavior. *Family Process*, *61*(2), 745–763.

Gill, P., Stewart, K., Treasure, E., & Chadwick, B. (2008). Methods of data collection in qualitative research: interviews and focus groups. *British Dental Journal*, *204*(6), 291–295.

Gillespie-Lynch, K., Bublitz, D., Donachie, A., Wong, V., Brooks, P. J., & D'Onofrio, J. (2017). "For a long time our voices have been hushed": Using student perspectives to develop supports for neurodiverse college students. *Frontiers in Psychology*, 544.

Goodmon, L. B., Leverett, R., Royer, A., Hillard, G., Tedder, T. D., & Rakes, L. (2014). The Effect of Therapy Balls on the Classroom Behavior and Learning of Children with Dyslexia. *Undefined*. https://www.semanticscholar.org/paper/The-Effect-of-Therapy-Balls-on-the-Classroom-and-of-Goodmon-Leverett/1584965cfe9fc6d14d7a0e17b8fb95361417dd43

Goudeau, S., Sanrey, C., Stanczak, A., Manstead, A., & Darnon, C. (2021). Why lockdown and distance learning during the COVID-19 pandemic are likely to increase the social class achievement gap. *Nature Human Behaviour*, *5*(10), 1273–1281.

Gray, C., & Climie, E. A. (2016). Children with attention deficit/hyperactivity disorder and reading disability: A review of the efficacy of medication treatments. *Frontiers in Psychology*, *7*, 988.

Hand, C. J. (2023). Neurodiverse undergraduate psychology students' experiences of presentations in education and employment. *Journal of Applied Research in Higher Education*.

Hart, N., Fawkner, S., Niven, A., & Booth, J. N. (2022). Scoping review of yoga in schools: Mental health and cognitive outcomes in both neurotypical and neurodiverse youth populations. *Children*, *9*(6), 849.

Hollo, A., Wehby, J. H., & Oliver, R. M. (2014). Unidentified language deficits in children with emotional and behavioral disorders: A meta-analysis. *Exceptional Children*, *80*(2), 169–186.

Hood, N. (2020). Learning from lockdown: What the experiences of teachers, students and parents can tell us about what happened and where to next for New Zealand's school system. *The Education Hub*.

Hoskins, T. K., & Jones, A. (2017). *Critical conversations in kaupapa Maori*. Huia Publishers.

Howard, K., Katsos, N., & Gibson, J. (2019). Using interpretative phenomenological analysis in autism research. *Autism*, *23*(7), 1871–1876.

Hyndman, R. (2023). *Support for Disabled Children's Education in New Zealand Primary Schools during the Covid-19 Pandemic: Five Teachers' Perspectives*. The University of Auckland.

Jamsen, J., & Corley, K. (2007). E-survey methodology. In *Handbook of research on electronic surveys and measurements* (pp. 1–8). IGI Global.

Jena, P. K. (2020). Online learning during lockdown period for covid-19 in India. *International Journal of Multidisciplinary Educational Research (IJMER)*, *9*.

Jones, T. L., & Prinz, R. J. (2005). Potential roles of parental self-efficacy in parent and child adjustment: A review. *Clinical Psychology Review*, *25*(3), 341–363.

Kapp, S. K. (2020). *Autistic Community and the Neurodiversity Movement Stories from the Frontline*.

Kellems, R. O., Frandsen, K., Hansen, B., Gabrielsen, T., Clarke, B., Simons, K., & Clements, K. (2016). Teaching multi-step math skills to adults with disabilities via video prompting. *Research in Developmental Disabilities*, *58*, 31–44. https://doi.org/10.1016/J.RIDD.2016.08.013

Khan, I. (2020). Attention Deficit and Hyperactivity Disorder Among Adult Learners: Diagnosis and Pedagogy. *Revista Argentina De Clinica Psicologia*, *29*. https://www.researchgate.net/publication/354131218_Attention_Deficit_and_Hyperactivity_Disorder_Among_Adult_Learners_Diagnosis_and_Pedagogy

Konicarova, J. (2014). Psychological principles of learning language in children with ADHD and Dyslexia. *Activitas Nervosa Superior*, *56*(3), 62–68. https://doi.org/10.1007/BF03379610

Kyle MacDonald: Covid 19 coronavirus: It's OK to feel anxious about swift shutdown - NZ Herald. (2020). New Zealand Herald. https://www.nzherald.co.nz/lifestyle/kyle-macdonald-covid-19-coronavirus-its-ok-to-feel-anxious-about-swift-shutdown/65K342GP3O2C4V4H4VYG3XKUNM/

Laxton, D., Cooper, L., & Younie, S. (2021). Translational research in action: The use of technology to disseminate information to parents during the COVID-19 pandemic. *British Journal of Educational Technology*, *52*(4), 1538–1553.

Liam Dann: Covid 19 coronavirus shock: How big is this global economic shock? How long will recovery take? - NZ Herald. (2020). NZ Herald. https://www.nzherald.co.nz/business/liam-dann-covid-19-coronavirus-shock-how-big-is-this-global-economic-shock-how-long-will-recovery-take/GFOVFDY73ZKKQTK5GN77Z4FQZ4/

Liontou, T. (2019). Foreign language learning for children with ADHD: evidence from a technology-enhanced learning environment. *European Journal of Special Needs Education*, *34*(2), 220–235. https://doi.org/10.1080/08856257.2019.1581403

Liu, X., Kakade, M., Fuller, C. J., Fan, B., Fang, Y., Kong, J., Guan, Z., & Wu, P. (2012). Depression after exposure to stressful events: lessons learned from the severe acute respiratory syndrome epidemic. *Comprehensive Psychiatry*, *53*(1), 15–23.

Lucas, M., Nelson, J., & Sims, D. (2020). Schools' Responses to COVID-19: Pupil Engagement in Remote Learning. *National Foundation for Educational Research*.

Māori population estimates: At 30 June 2021 | Stats NZ. (2021). https://www.stats.govt.nz/information-releases/maori-population-estimates-at-30-june-2021

Marques, B., McIntosh, J., Muthuveerappan, C., & Herman, K. (2022). The Importance of Outdoor Spaces during the COVID-19 Lockdown in Aotearoa—New Zealand. *Sustainability (Switzerland)*, *14*(12). https://doi.org/10.3390/SU14127308

Mayer, B., & Boston, M. (2022). Residential built environment and working from home: A New Zealand perspective during COVID-19. *Cities*, *129*, 103844. https://doi.org/https://doi.org/10.1016/j.cities.2022.103844

Mwaura, P. G. (2014). *Home-based factors influencing students' performance in KCSE in public day secondary schools in Lari district, Kiambu county*. http://erepository.uonbi.ac.ke/handle/11295/77344

Nizza, I. E., Smith, J. A., & Kirkham, J. A. (2022). Portraying improvement in the management of chronic pain: A multi-modal longitudinal interpretative phenomenological analysis study. *Frontiers in Pain Research*, *3*, 901271.

Ortiz, L. A. (2020). Reframing neurodiversity as competitive advantage: Opportunities, challenges, and resources for business and professional communication educators. *Business and Professional Communication Quarterly*, *83*(3), 261–284.

Patterson, C. (2018). Constructing narrative and phenomenological meaning within one study. *Qualitative Research Journal*, *18*(3), 223–237.

Perelmutter, B., McGregor, K. K., & Gordon, K. R. (2017). Assistive technology interventions for adolescents and adults with learning disabilities: An evidence-based systematic review and meta-analysis. *Computers & Education*, *114*, 139–163.

Petitmengin, C., Remillieux, A., & Valenzuela-Moguillansky, C. (2019). Discovering the structures of lived experience: Towards a micro-phenomenological analysis method. *Phenomenology and the Cognitive Sciences*, *18*(4), 691–730.

Petrie, C., Aladin, K., Ranjan, P., Javangwe, R., Gilliland, D., Tuominen, S., & Lasse, L. (2020). *Quality education for all during Covid-19. Report from hundrED. org in partnership with the OECD*.

Pianta, R. C., & Stuhlman, M. W. (2004). Teacher-Child Relationships and Children's Success in the First Years of School. *School Psychology Review*, *33*(3), 444–458.

Pine, R., Bruckner, K., Mbinta, J., Twemlow, R., & Anderson, S. (2022). Perceptions of Parents and Caregivers in New Zealand: Educational Experiences of their Children with Tourette Syndrome. *International Journal of Disability, Development and Education*, 1–14.

Polónyiová, K., Belica, I., Celušáková, H., Janšáková, K., Kopčíková, M., Szapuová, Ž., & Ostatníková, D. (2021). Comparing the impact of the first and second wave of COVID-19 lockdown on Slovak families with typically developing children and children with autism spectrum disorder. *Autism*, *2022*(5), 1046–1055.

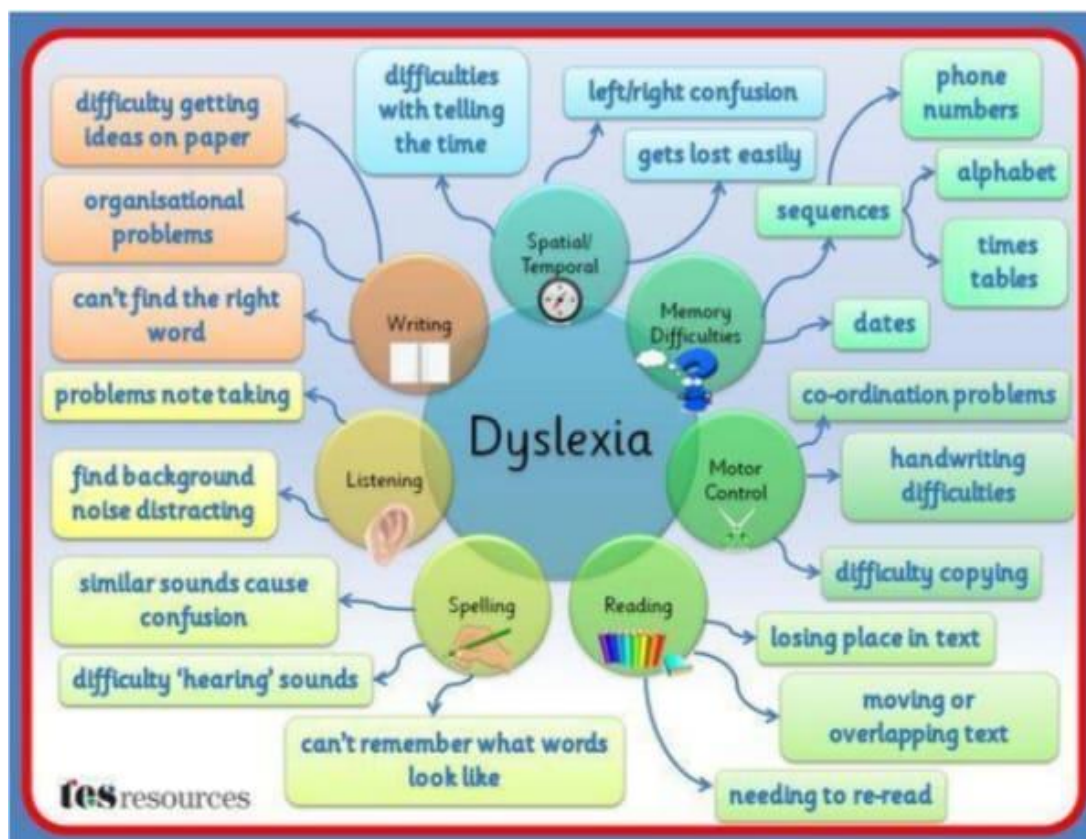https://doi.org/10.1177/13623613211051480/ASSET/IMAGES/LARGE/10.1177_13623613211051480-FIG1.JPEG

Priego-Parra, B. A., Triana-Romero, A., Pinto-Gálvez, S. M., Ramos, C. D., Salas-Nolasco, O., Reyes, M. M., Ramos-de-la-Medina, A., & Remes-Troche, J. M. (2020). Anxiety, depression, attitudes, and internet addiction during the initial phase of the 2019 coronavirus disease (COVID-19) epidemic: A cross-sectional study in México. *MedRxiv*, 2020–2025.

Protopapas, A., & Parrila, R. (2018). Is Dyslexia a Brain Disorder? *Brain Sciences*, *8*(4). https://doi.org/10.3390/BRAINSCI8040061

Quinn, M., & Lynch, A. (2016). Is ADHD a 'real' disorder? *Support for Learning*, *31*(1), 59–70. https://doi.org/10.1111/1467-9604.12114

Randle, Q. (2013). So what does" Set Fire To The Rain" really mean? A typology for analyzing pop song lyrics using narrative theory and semiotics. *MEIEA Journal*, *13*(1), 125–147.

Re, A. M., & Cornoldi, C. (2013). Spelling errors in the copy of a text by children with dyslexia and ADHD symptoms. *Journal of Learning Disabilities*.

Saline, S. (2021). Thriving in the new normal: How COVID-19 has affected alternative learners and their families and implementing effective, creative therapeutic interventions. *Smith College Studies in Social Work*, *91*(1), 1–28.

Samji, H., Wu, J., Ladak, A., Vossen, C., Stewart, E., Dove, N., Long, D., & Snell, G. (2022). Review: Mental health impacts of the COVID-19 pandemic on children and youth – a systematic review. *Child and Adolescent Mental Health*, *27*(2), 173–189. https://doi.org/10.1111/CAMH.12501

Sarrett, J. C. (2018). Autism and accommodations in higher education: Insights from the autism community. *Journal of Autism and Developmental Disorders*, *48*, 679–693.

Schilling, D. L., Washington, K., Billingsley, F. F., & Deitz, J. (2003). Classroom seating for children with attention deficit hyperactivity disorder: Therapy balls versus chairs. *The American Journal of Occupational Therapy*, *57*(5), 534–541.

Segre, G., Campi, R., Scarpellini, F., Clavenna, A., Zanetti, M., Cartabia, M., & Bonati, M. (2021). Interviewing children: the impact of the COVID-19 quarantine on children's perceived psychological distress and changes in routine. *BMC Pediatrics*, *21*(1). https://doi.org/10.1186/S12887-021-02704-1

Severinsen, J. (2018). *Davis Learning Strategies in New Zealand Schools Action Research Inquiry 2018*.

https://static1.squarespace.com/static/5a42ca28f9a61e659497f19f/t/5db8fe3de7e33d565be5a62a/1572404801371/Severinsen-2018-NZ-report.pdf

Shah, R., & Absoud, M. (2021). The failure of provision for neurodiverse children during the covid-19 pandemic. *Bmj*, *375*.

Shah, R., Venkatesh Raju, V., Sharma, A., & Grover, S. (2020). *Impact of COVID-19 and Lockdown on Children with ADHD and Their Families-An Online Survey and a Continuity Care Model*. https://doi.org/10.1055/s-0040-1718645

Shaw, S. C. K., Hennessy, L. R., & Anderson, J. L. (2022). The learning experiences of dyslexic medical students during the COVID-19 pandemic: a phenomenological study. *Advances in Health Sciences Education*, 1–18.

Shmulsky, S., Gobbo, K., & Vitt, S. (2021). Culturally Relevant Pedagogy for Neurodiversity. *Https://Doi.Org/10.1080/10668926.2021.1972362*. https://doi.org/10.1080/10668926.2021.1972362

Simon, J., & Smith, L. T. (2001). *A Civilising Mission? Perceptions and Representations of the New Zealand Native Schools System*. https://www.researchgate.net/publication/234756258_A_Civilising_Mission_Perceptions_and_Representations_of_the_New_Zealand_Native_Schools_System

Smith, C., Tani, M., Yates, S., & Dickinson, H. (2023). Successful School Interventions for Students with Disability During Covid-19: Empirical Evidence from Australia. *Asia-Pacific Edu Res*, *32*, 367–377. https://doi.org/10.1007/s40299-022-00659-0

Smith, L. T. (2015). *Kaupapa Māori research-some kaupapa Māori principles*.

Smith, S., Eatough, V., Smith, J., Mihai, R., Weaver, A., & Sadler, G. P. (2018). 'I know I'm not invincible': An interpretative phenomenological analysis of thyroid cancer in young people. *British Journal of Health Psychology*, *23*(2), 352–370.

Soneson, E., Puntis, S., Chapman, N., Mansfield, K. L., Jones, P. B., & Fazel, M. (2023). Happier during lockdown: a descriptive analysis of self-reported wellbeing in 17,000 UK school students during Covid-19 lockdown. *European Child and Adolescent Psychiatry*, *32*(6), 1131–1146. https://doi.org/10.1007/S00787-021-01934-Z/FIGURES/4

Soriano-Ferrer, M., Morte-Soriano, M. R., Begeny, J., & Piedra-Martínez, E. (2021). Psychoeducational challenges in Spanish children with dyslexia and their parents' stress during the COVID-19 pandemic. *Frontiers in Psychology*, *12*, 648000.
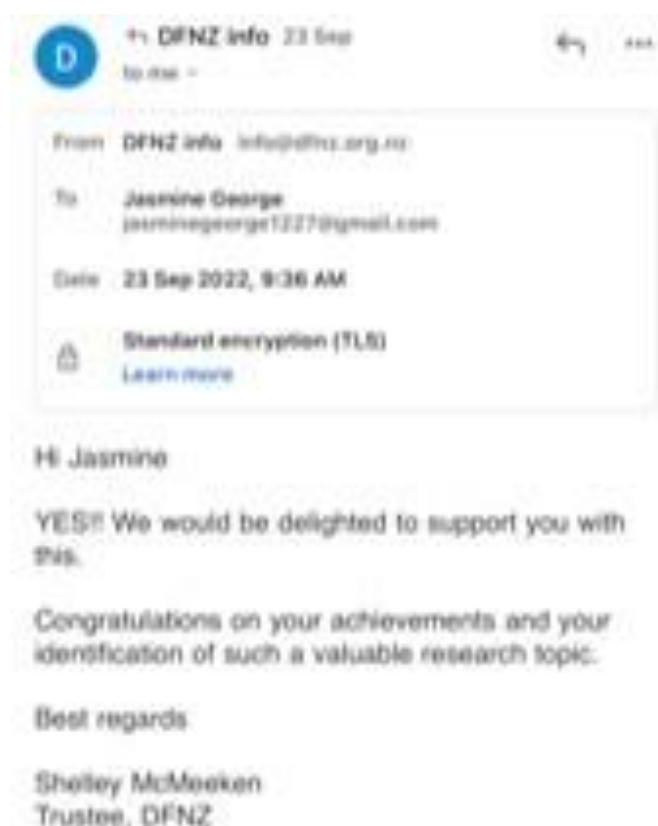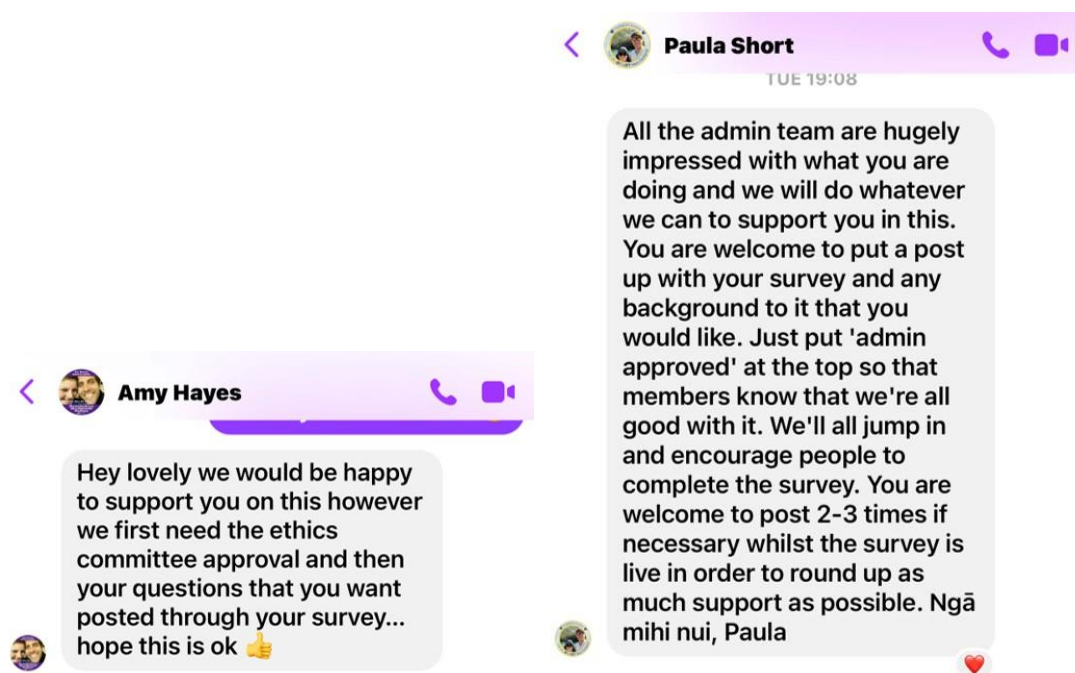
Strandmark, M. (2015). Method development at Nordic school of public health NHV: Phenomenology and grounded theory. *Scandinavian Journal of Public Health*, *43*(16_suppl), 61–65.

Suizzo, M., & Stapleton, L. M. (2007). Home-based parental involvement in young children's education: Examining the effects of maternal education across US ethnic groups. *Educational Psychology*, *27*(4), 533–556.

Sundler, A. J., Lindberg, E., Nilsson, C., & Palmér, L. (2019). Qualitative thematic analysis based on descriptive phenomenology. *Nursing Open*, *6*(3), 733–739.

Teusner, A. (2016). Insider research, validity issues, and the OHS professional: One person's journey. *International Journal of Social Research Methodology*, *19*(1), 85–96.

Urcia, I. A. (2021). Comparisons of adaptations in grounded theory and phenomenology: Selecting the specific qualitative research methodology. *International Journal of Qualitative Methods*, *20*, 16094069211045474.

Vincent, C., Oliver, C., & Pavlopoulou, G. (2023). Lessons from lockdown: Autistic students, parents and mainstream schools. *British Educational Research Journal*, *49*(3), 522–537.

vom Lehn, D. (2019). Phenomenology-based ethnography for management studies and organizational analysis. *British Journal of Management*, *30*(1), 188–202.

White, P. J., & Devitt, F. (2021). Creating personas from design ethnography and grounded theory. *Journal of Usability Studies*.

Wilson, D., Mikahere-Hall, A., & Sherwood, J. (2022). Using indigenous kaupapa Māori research methodology with constructivist grounded theory: generating a theoretical explanation of indigenous women's realities. *International Journal of Social Research Methodology*, *25*(3), 375–390.

Wilson, M., & Savery, N. (2013). Stories of resilience: learning from adult students' experiences of studying with dyslexia in tertiary education. *Journal of Adult Learning Aotearoa New Zealand*, *40*(1), 110–123. https://www.researchbank.ac.nz/handle/10652/2595

Yang, J. P., Nhan, E. R., & Tung, E. L. (2021). *Psychological Trauma: Theory, Research, Practice, and Policy*.

APPENDICES

Appendix One - Areas in which people with dyslexia face problems (Burton, 2018)

Appendix Two - Copy of Support Messages/Emails

Paula Short
TUE 19:08

All the admin team are hugely impressed with what you are doing and we will do whatever we can to support you in this. You are welcome to put a post up with your survey and any background to it that you would like. Just put 'admin approved' at the top so that members know that we're all good with it. We'll all jump in and encourage people to complete the survey. You are welcome to post 2-3 times if necessary whilst the survey is live in order to round up as much support as possible. Ngā mihi nui, Paula

Amy Hayes

Hey lovely we would be happy to support you on this however we first need the ethics committee approval and then your questions that you want posted through your survey... hope this is ok 👍

↩ DFNZ info 23 Sep
to me ▾

From: DFNZ info info@dfnz.org.nz
To: Jasmine George jasminegeorge1227@gmail.com
Date: 23 Sep 2022, 9:36 AM
🔒 Standard encryption (TLS)
Learn more

Hi Jasmine

YES!! We would be delighted to support you with this.

Congratulations on your achievements and your identification of such a valuable research topic.

Best regards

Shelley McMeeken
Trustee, DFNZ

P a g e 125 | 128

From **Andrea Tong** atong@age.school.nz

To **Jasmine George**
jasminegeorge1227@gmail.com

Date **23 Sep 2022,**
12:11 PM

🔒 **Standard encryption (TLS)**
Learn more

Kia ora Jasmine,

Hope you're well. Thanks for your message on Messenger - absolutely fine for you to post your survey on the AGE Whanau Page 😊

Mauri ora,
Andrea

--
Andrea Tong
Principal

Telephone: +64 21 975380
Facebook
Instagram
Website
P O Box 33515, Takapuna, Auckland, 0740
AGE School

↩ ADHD New Zealand 20 Sep ↩ •••
to me ^

From **ADHD New Zealand** info@adhd.org.nz

To **Jasmine George**
jasminegeorge1227@gmail.com

Date 20 Sep 2022, 12:44 PM

🔒 Standard encryption (TLS)
Learn more

Hi Jasmine,

Thank you for your email. I would be more than
happy to help with your Master's Thesis
Research.   I personally feel your project's focus
is incredibly relevant and valuable – especially as
I have two neurodiverse children myself, and
know of our own personal struggles through the
whole Lockdown period with education etc.

I would be very keen to put your e-survey on our
ADHD Facebook page, as well as the Adults with
ADHD and Parents of Children with ADHD
pages. We generally get a very good response
from our ADHD Community to Research surveys,
so I think you would get a great deal of interest.

Appendix Three – Copy of ethics approval letter.

TE WHARE WĀNANGA O AWANUIĀRANGI

28.11.2022

Student ID: 2021001334
Jasmine George 4/52 Taharoto Road Takapuna Auckland, 0622

Tēnā koe i roto i ngā tini āhuatanga o te wā,
The Ethics Research Committee Chairperson has reviewed your response to the Ethics Committee feedback.

We are pleased to inform you that your revised ethics application has been approved. The committee commends you on your hard work to this point and wishes you well with your research.

Please ensure that you keep a copy of this letter on file and include the Ethics committee document reference number: EC2022.10 on any correspondence relating to your research. This includes documents for your participants or other parties.

Please also enclose this letter of approval in the back of your completed thesis as an appendix.

If you have any queries regarding the outcome of your ethics application, please contact us on our freephone number 0508926264 or via e-mail ethics@wananga.ac.nz.

Nāku noa, nā Ashlee Te Naiti
Ethics Research Committee Secretary Phone: 0508 92 62 64