An enquiry into the mental health benefits of attending an autism group facilitated by Enrich +, using pre and post measures to evaluate anxiety reduction

A thesis

submitted in partial fulfilment

of the requirements for the degree

of

Master of Applied Psychology

(Behaviour Analysis)

at

The University of Waikato

by

Ashli Macdonald

THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

2022

Abstract

Autism spectrum disorder (ASD) is estimated to affect one in every hundred New Zealanders. Males are more frequently affected by ASD than females, as evidenced by a 4:1 ratio, implying that females are frequently underrepresented in research. These individuals have poor social and communication skills, as well as repetitive patterns of behaviour. Comorbidities are prevalent in the autistic community, with more than 70% of individuals having at least one co-occurring condition. Anxiety and depression are of the utmost concern for the autistic community, with individuals experiencing generalised anxiety disorder (GAD) and social anxiety disorder (SAD) at a significantly higher rate than their neurotypical peers. Many ASD-specific group interventions are being developed in response to the growing number of diagnoses. There are numerous approaches to social skill interventions; however, many of these interventions focus on the core deficits of ASD, with very few incorporating mental health approaches. This study used a mixed methods formative evaluation approach to identify mental health and anxiety reduction benefits of attending a programme for females with ASD. The programme aims to encourage the participants to develop independence, extend their social circles, build friendships, and gain a sense of belonging. Participants included three females on the autism spectrum aged 15 to 32 who attended the programme on a regular basis. Direct observations, along with pre and post self-reported questionnaires and semi-structured interviews, were intended to be used to collect both quantitative and qualitative data, however, due to covid-19 disruptions not all research activities were able to be carried out. Findings suggest that regular attendance and participation in a facilitated autism group can potentially aid in anxiety reduction. Due to a limited sample size and the inability to gain sufficient data, the results of this study are inconclusive, however, it is still worthwhile to further evaluate autism-based groups and the impact they have on mental health and anxiety reduction.

Acknowledgements

Firstly, I would like to acknowledge and thank our participants, as well as the local organisation we worked alongside for their willingness to participate and assist us with this research during such unpredictable times.

I would like to thank my supervisor, Associate Professor Angelika Anderson, for the constant support and guidance that I received throughout this research project. This has been a very valuable experience and I have learnt a lot from your feedback and advice.

Lastly, I would like to thank my partner, family, friends and work colleagues, your constant love and support throughout this year has been astounding and truly appreciated.

Table of Contents

List of Figures

List of Tables

Introduction

Autism is a form of neurodevelopmental disorder typically characterised by early impairments in social skills, communication, and uncommon sensory behaviours (Lecavalier et al. 2014; Lord, et al. 2018). The DSM 5 criteria for Autism consists of several different specifiers which are categorised in to two main criteria, deficits in social communication and social interaction, and restricted, repetitive patterns of behaviours, interests, or activities. (Turns, Ramisch, & Whiting, 2019). Early Autism diagnosis is strongly advised in order to gain access to interventions and resources as soon as possible, as well as to reduce levels of distress experienced, which will benefit the individual's overall development. According to the current literature, those diagnosed later in life face greater hardships and difficulties in accessing the necessary services which can create further hardships and effect their overall quality of life (Downes, et al. 2020).

ASD specific to females

Due to a 4:1 male to female diagnostic ratio as indicated in the DSM5, the current Autism research focuses primarily on males as compared to females. The predominance of male ASD cases, which is a consistent finding in the current literature, is a key reason for this disparity (Stroth, et al. 2019). Autistic females frequently exhibit signs of intellectual disability, and as a result, they may go unnoticed or misdiagnosed (American Psychiatric Association, 2013). The findings of the few studies that included females indicate key differences to their male counterparts, such as lower IQ and overall functioning, fewer repetitive behaviours, and higher etiological risks (Lundstrom, et al. 2019). Males have more atypical interests and fascinations that often stand out to others, whereas female's interests tend to be more gender normative and thus do not stand out as much in comparison (Eckerd, 2020).

Another major concern for females with ASD is the development of friendships; females face more difficulties than males due to factors such as greater interpersonal sensitivity, higher anxiety levels, and their predisposition to camouflage social difficulties (Ryan, et al. 2020). Autism affects people in diverse ways at various stages of life, according to current research. Furthermore, emerging evidence suggests that females are more sensitive to the changes experienced when attempting to expand their social circles and make friends, particularly during adolescence (Suckle, 2021). Females are often thought to be more socially competent than males due to the camouflage of autistic symptoms, which is most common in

high functioning females. Camouflaging refers to sophisticated copying of behaviours and/or masking certain personality traits. Camouflaging is also thought to play a role in the late or incorrect diagnosis of Autism in females (Tubio-Fungueirino, et al. 2020). It is evident that a deeper understanding of the experiences of females with Autism Spectrum Disorder is required to benefit this population and ensure that these individuals receive adequate care.

Mental Health and Anxiety for those with ASD

Although not a core symptom of ASD, individuals tend to experience a wide range of mental health difficulties which have a significant impact on their quality of life and wellbeing (Schiltz, et al. 2021). Gara et al. (2020) discovered that, in addition to the core symptoms of ASD, these individuals frequently experience severe anxiety symptoms, as well as many also experiencing additional comorbid psychiatric disorders. These individuals are clearly at a higher risk of developing anxiety or an anxiety disorder; however, this can potentially lead to chronic distress, worsened core symptoms, and amplified behavioural troubles. Because of the overall high prevalence of mental health difficulties in these people, specifically anxiety, several challenges with identification and treatment have arisen.

Pin Soh et al. (2020) discuss how individuals with ASD tend to be perceived negatively by others due to differences in their speech, interests, and social behaviours. As a result of these perceptions, others frequently minimise interactions with autistic people. Additionally, autistic individuals experience various forms of harassment and bullying, often leading to social isolation; all of which are common stressors for mental health issues. The article continues to focus on Autism-related differences and experiences, as well as how they may increase risk and contribute to elevated levels of distress, anxiety, and phobias. When compared to neurotypicals, those with Autism can be affected on a variety of levels, including neurobiological, neurocognitive, psychosocial, and sensory. With the added difficulty of living with elevated anxiety in addition to the core symptoms of ASD, these individuals continue to be impacted in their learning and day-to-day functioning, resulting in a reduction in quality of life for many youths.

Most often individuals with ASD experience both internalising and externalising challenges and because of this, autistic individuals are known to experience elevated levels of anxiety disorders, depression, irritability, and dysregulated outbursts, as well as poor emotional regulation (Cage et al., 2017; Lei et al., 2018; Rodgers, et al. 2020). In recent meta-analyses, co-occurring disorders such as attention deficit hyperactivity disorder

(ADHD), anxiety, sleep wake disorders, depression, obsessive-compulsive disorder, and schizophrenia were found to be more prevalent in the autistic population than in the general population, indicating that the mental health needs of these individuals should be of greater concern (Dreiling, et al. 2021).

Comorbid anxiety and Autism Spectrum Disorder

Anxiety has been identified as one of the most common mental health conditions experienced by autistic children. Extensive research has found that the pattern and intensity of anxiety symptoms found in autistic children were similar to symptoms found in neurotypical children; however, this begins to differ in youth, and the way anxiety manifests can differ, causing additional difficulties for autistic individuals (den Houting, et al. 2018). Preliminary evidence suggests that anxiety symptoms are related to quality of life in autistic individuals, independently of the core ASD symptoms (Smith, Ollendick, & White, 2019).

Anxiety is frequently associated with elevated or additional symptoms in Autism, such as sensory predispositions, social skill difficulties, impaired functioning, and mental illnesses. Many of these symptoms are already experienced as part of the core ASD symptoms, however, a comorbid anxiety diagnosis can exacerbate social deficits, particularly in social situations where an individual is aware of his or her own social difficulties. Anxiety symptoms can also lead to more concerning issues such as self-harming behaviours, depression, social avoidance, and academic problems in some individuals (Nathanson, & Rispoli, 2022, South, Rodgers, & Van Hecke, 2017). There are many different triggers for anxiety, however, autistic individuals often experience many more triggers on a daily basis, some of these include: transitions, unexpected changes to routine, unstructured time, unfamiliar places and people, sensory stimuli, and social demands. Often these triggers will lead to an immediate anxiety response, or the individual may try to deal with the stressors and in turn have a more extreme response later in the day. Due to emotional regulation difficulties, these individuals may struggle to manage their responses and develop coping strategies (Middletown Centre for Autism, 2020). It is clear that comorbid anxiety can exacerbate autistic individuals' difficulties, and it is likely that additional support and interventions will be required to ensure these individuals' needs are met.

Addressing anxiety alongside social skills to improve overall mental health

Due to the extensive amount of available research, it is feasible that there is a link between social skill abilities and anxiety experiences for individuals with Autism. Connor, et

al., (2019) found that young adults with ASD have a high rate of co-occurring conditions such as anxiety and depression, which are linked to lower social participation and higher rates of unemployment. They go on to state that poor social skills foster low self-efficacy in social situations, which leads to anticipatory anxiety, increased social isolation, depression, and a lack of motivation to improve overall social competence and performance (Spain, et al., 2018).

Adolescence and youth are critical stages of development for these individuals as they are more susceptible to mental health challenges as social demands increase (Joshi, et al. 2012). Greater mental health difficulties were associated with greater social responsiveness difficulties and poorer social skills, according to Ratcliffe, et al. (2015). Symptoms of anxiety such as excessive worry and distress in social situations can make it extremely difficult to form genuine relationships, resulting in the majority of autistic people having very few close friends or acquaintances with whom to navigate the social world (Bellini, 2006). As a result of these findings, it is suggested that evidence-based social skill interventions are crucial in mitigating the negative effects of social deficits alongside mental health difficulties.

Appropriate social skills have been discovered to be a pre-requisite for social competence, and therefore, successful interventions that improve social skills should also improve social competency (Pallathra, et al. 2019; Silveira-Zaldivar, Ozerk, & Ozerk, 2020). Afsharnejad et al. (2021) investigated the experiences of adolescents and their parents' following attendance of the KONTAKT social skills group training. After completing 16 sessions of social skills training, significant improvements in foundational skills were identified, as well as various other consistent patterns of improvement. Specific improvements were seen in social understanding, empowerment, communication, and the establishment and maintenance of relationships. Many of the parents were satisfied with the outcomes of the KONTAKT group, attributing positive changes to the attendance of a social skills group. It is evident that there is a substantial amount of support for the use of group based social skill interventions, and they are now being used extensively worldwide to progress social skill development and provide positive outcomes for many individuals.

Autism based group interventions

The number of interventions available to address the diverse needs of the autistic community is varying yet limited. Following the introduction of group-based interventions, and the positive outcomes associated, Autism-based group interventions have become widely

used in the autistic community. Group based interventions are considered a popular form of treatment for individuals with ASD diagnoses and can also be beneficial to educate and reduce stress in parents and family members (Corona, et al. 2019; Weiss, et al. 2013). Social functioning impairments are a defining feature of Autism, and due to increased social demands in adolescence and youth these impairments become more pronounced at that time. Group based interventions focus particularly on school aged individuals and youth, addressing social difficulties and fostering social skills. Despite the widespread use of group interventions for autistic youth, only a small amount of rigorous research has been conducted and further investigations are still required to determine the overall efficacy of these groups (Gates, Kang, and Lerner, 2017; Gengoux, et al. 2021).

According to Kyllianen et al. (2020), the development of social evidence-based intervention programs for children and adolescents with Autism is a primary objective for improving these individuals' quality of life. They continue to reflect on numerous efficacy studies and the promising results in social competence and friendship development. These groups are critical for people with Autism because social skill deficits can have a serious effect on their adaptive, academic, and psychological functioning. The key aim of these groups is to improve overall social skills by enhancing both social performance and social understanding (Wolstencroft, et al. 2018). There are various additional learnings throughout this intervention also. Benefits for implementing social skills groups, include, increased observational learning, increased social interaction, and promotion of generalisation (Leaf, et al. 2016).

Various different social groups have since emerged tailored to the specific needs of autistic individuals. Salem-Guirgis, et al. (2019) discuss the use of interventions and programmes that teach mindfulness to both individuals and their parents. They go on to say that mindfulness-based interventions are emerging as a promising form of support for these individuals' and families' emotional and behavioural difficulties. Music therapy has also been used to improve social skills; research has shown that music therapy can improve social behaviours and joint attention in people with ASD (LaGasse, 2014). It is clear that promising advances have been made in a wide range of interventions for autistic individuals; however, as evidenced by the current literature, additional research is still required to ensure the reliability and validity of these interventions.

By incorporating intervention strategies for social skills and anxiety, this study will contribute to a steadily growing body of research that may aid in the development of better mental health outcomes for ASD youth.

Literature Review

Introduction

Autism is a long-term neurodevelopmental disorder characterised by impairments in social skills and communication, as well as repetitive patterns of behaviour and fixations. One in every hundred individuals in today's society are diagnosed with ASD; however, males are more frequently affected, as evidenced by a 4:1 male to female ratio (Lecavalier, et al. 2014). Many individuals with Autism also have high rates of anxiety and are known to have poor emotional regulation (Lei & Ventola, 2018).

Mental health issues are prevalent today among all of society, yet individuals with an Autism Spectrum Disorder (ASD) diagnosis are at a greater risk. Evidence suggests that this is indicated through elevated levels of behavioural and/or psychiatric disorders among individuals with ASD, as well as an increased number of hospitalisations and emergency room visits specifically for mental health purposes (Vasa, Hagopian & Kalb, 2020). In particular, many studies have found that anxiety disorders are most common and occur in around 40% of youth with an ASD diagnosis, as compared to other age groups.

Numerous studies also discuss these individuals' fears of loud sounds, other unusual phobias, social distress, and general nervousness (Kerns, et al. 2014). The presence of an anxiety disorder can also increase the severity of the core ASD symptoms and typically contributes to impairment in psychosocial functioning. For individuals with ASD, it is suggested that the increased risk of having a comorbid anxiety disorder is likely due to higher levels of cognitive functioning, increasing their environmental awareness and peers' perceptions (Sharma, Gonda, & Tarazi, 2018).

Typical treatments for the core difficulties of ASD include behavioural interventions such as those based on applied behaviour analysis (ABA), and cognitive behavioural therapy (CBT). Other treatments include the use of medications to target symptoms, social skills interventions, and group therapies. Although there is currently no cure for Autism, these interventions aide in reducing the core symptoms of ASD (Hasselbusch, 2008). Both individual based and group-based therapies are used widely and have been seen to be effective for youth. Specifically, many CBT treatments have placed an emphasis on group-based therapies incorporating anxiety management and cognitive strategies to treat comorbid anxiety. Many studies have evaluated CBT interventions or have targeted anxiety through therapy, yet very little is discussed regarding the mental health benefits of attending Autism

specific groups (Reaven, et al. 2012). Therefore, addressing anxiety and whether attendance of these groups reduces anxiety would fill a void in the existing literature

Autism

Autism is a form of neurodevelopmental disorder associated with cognitive deficits; it is also a part of a set of disorders known as Autism Spectrum Disorder (ASD). ASD can be described by social impairments, restricted interests, and rigid repetitive behaviours. (Lahin, et al. 2013). Individuals diagnosed with Autism typically experience a range of difficulties with language skills, as well as social behaviours and understandings of interactions, and engagement in play. These individuals also have difficulties with cognitive/thinking skills; particularly difficulties thinking and behaving in a flexible manner. All individuals with ASD are unique and no case is the same, however, at some point in their lives, individuals will experience either a delay or difficulty in all of these developmental areas (Ministry of Health, 2020).

The American Psychiatric Association (2013) classify ASD severity in three distinct levels: level 1 – requiring support, level 2 – requiring substantial support and level 3 – requiring very substantial support. Each level is defined both by social communication and restricted, repetitive behaviours. Initiating social engagements, holding discussions, reacting to social overtures from others, and attempting to establish friends are all challenges experienced by individuals with level 1 ASD severity. These people frequently struggle to switch between activities, exhibit organisational issues, and often have difficulties with independence. Level 2 difficulties include both verbal and nonverbal communication impairments. Typically, despite having supports in place, these individuals experience social impairments and will only speak in simple sentences, limit their interactions to their own special interests, and have unusual nonverbal communication. Distress and trouble shifting focus or behaviour are common in these individuals. Level 3 impairments are significant and include deficits in verbal and nonverbal communication, functional impairments, and a lower incidence of initiating social interactions. These individuals also experience great difficulty when responding to social overtures. They experience a great level of distress and also have a challenging time altering their focus.

Kerig et al. (2012) discuss ASD and specifically the key deficits associated with this disorder from an early age. Specifically, deficits in communication are of the highest severity in most cases, with some individuals experiencing mutism and non-communicative speech

such as echolalia. Often phrases used are quite peculiar and overall, these individuals have a very literal and precise speech repertoire. Most individuals also have limited and fixed interests and behaviours, and most often they have very rigid routines meaning that they are unable to adapt to change well. These fixed and rigid behaviours are explained by deficits in executive functioning specifically concerning planning and organisation of non-routine behaviours. For most, difficulties arise when planning ahead and when attempting to be flexible, these issues tend to persist throughout their lives and worsen in crucial developmental stages such as puberty. These issues are thought to limit the ability of individuals with ASD to adapt and acquire independence over their lifetimes (Frith & Happe, 2005).

It is apparent in the current literature that as individuals with ASD age, their experiences of the symptoms associated with their disorder are significantly worsened, this occurs more specifically in adolescence and young adulthood. Picci and Scherf (2015) proposed a two-hit model of Autism, which outlines two key deficits that are crucial in the experiences of ASD. The first hit refers to structural brain abnormalities experienced early in life which often led to atypical functioning at a young age. Explicitly, early brain development has been seen to cause altered development during infancy and the toddler stage. The second hit refers to adolescence and could be due to developmental stages at this age such as puberty and the hormones experienced alongside puberty. This stage requires individuals to develop new skills and behaviours needed for transitioning into adulthood.

Another key consideration significant to a diagnosis of ASD is sensory processing and how individuals with an ASD diagnosis respond to different sensations. Atypical ‘sensory responses’ have been identified in children as young as six months old for many years and can also be seen as an initial indicator of ASD in the early years of life. Typically, abnormalities are found in relation to the basic five senses: seeing, hearing, tasting, smelling, and touching, these abnormalities are most often experienced through hypersensitivity, hyposensitivity, and sensory overloads (Crane, Goddard, & Pring, 2009). Responses to the different sensations vary on a case-by-case basis, and behaviours can range from minor to severe, if in distress it is possible that some stimuli may lead to individuals engaging in aggressive or self-injurious behaviours. Most often, these types of behaviours typically arise due to the individual being unable to convey their basic needs and wants. Although these symptoms are prevalent in childhood, it is also likely that individuals with ASD may

experience sensory processing difficulties throughout adolescence and into adulthood (Marco, et al. 2011).

Fong et al. (1993) highlighted six overall consistent themes identified in parental concerns for their adolescents with Autism, these were 1) behavioural concerns, such as aggression, destructive and impulsive behaviours, 2) social and communicative concerns, such as atypical or inappropriate social behaviour including difficulties communicating and relating to others, 3) family-related concerns, such as restricted personal lives and the constant need for supervision, 4) education and related services, such as choosing and accessing the applicable services, 5) relationships with professionals such as ineffective communication and critiques from professionals and lastly, 6) independence and future concerns such as the need for residential or vocational services. Another study conducted by Schall and McDonough (2010) consisting of three adolescent ASD case studies provided supporting evidence as to the needs of these individuals whilst at such an important developmental stage of their lives. The case studies identified the need for intense transitioning services as well as the need for services to provide further teaching and instruction around social skill and communication development. The themes identified by Fong et al. (1993) are consistent with many other parent-reported concerns in the current available literature, and therefore, it is important that considerations are made to address these issues when working with autistic individuals, especially throughout crucial developmental stages

Autism in New Zealand

The current New Zealand literature on Autism is very scarce and although there is no national registry in New Zealand (NZ) and very few estimates have been made, Bowden, et al. (2020) identified nearly 10,000 individuals aged 0-24 with ASD in NZ. Roughly over 68% of this group, also identified as having a mental health issue and half of this group identified as having multiple issues. According to the World Health Organization (WHO) (2022), approximately one out of every hundred children have Autism; however, in 2021, Fombonne, MacFarlane, and Salem conducted a multi-country meta-analysis and discovered that prevalence rates are consistent across countries, with a median prevalence of .97%.

The current NZ literature focuses greatly on the diagnosis process of ASD, from the perspectives of both the individuals and their parents. Over the past ten years both in NZ and globally there has been an increasing number of ASD diagnoses made during adolescence

and adulthood, this is likely due to changes in diagnostic criteria and a growing community awareness. It is well known that receiving an ASD diagnosis at a young age comes with a variety of social, practical, and emotional benefits for the individuals, families of the individuals and the wider society. Evans, et al. (2021) discuss how receiving a diagnosis can often been seen as a 'gateway' to access supports for many which will aide in reducing daily challenges and increasing overall engagement.

Eggleston, et al. (2019) reviewed the experiences of NZ parents when obtaining an ASD diagnosis and further support. The findings of this study suggested that on average parent concern regarding a possible diagnosis arose when the child was 3.2 years of age, followed by help seeking at 3.5 years of age; yet the overall mean age for receiving an ASD diagnosis was 6.6 years of age. This average age of 6.6 shows a significant delay in accessing a diagnosis and beginning early intervention. More interestingly, over half of the parents involved in this study reported overall satisfaction with the ASD diagnostic process. Another key finding of this study was that Māori and Pacific Islanders are at risk of being disadvantaged in accessing education, healthcare, and other support services, yet over half of the Māori and Pacific Islander parents involved in this study also reported that they were satisfied with the ASD diagnostic process. Due to the need for early intervention, this is very problematic for Māori and Pacific Islanders as they become accustomed to these disadvantages (Tupou et al. 2021).

Despite a limited evidence base for early intervention effectiveness, research in this area is growing, with many findings indicating that the earlier and more intensive the intervention, the better the potential outcomes (Pasco, 2018). Early intervention is widely supported in the autistic community; however, little is known about early intervention in NZ, including what is available and to what extent. Kasilingam, Waddington, and Van Der Meer (2021) investigated the use of early intervention among the autistic population in NZ. Their findings indicate that on average, children were receiving roughly 8.7 hours of intervention per month, as opposed to the additional 37 hours per month that parents would like them to receive. Other findings indicate that the variety of early intervention methods available is limited, and that there is a need for additional options, as well as an increase in the number of intervention hours available to these individuals. As a result, the lack of adequate early intervention methods in NZ leads to cascading effects and increased needs in older populations.

In 2008 the Ministries of Health and Education released the NZ Autism Spectrum Disorder Guidelines, these guidelines provide evidence-based information not only for individuals on the spectrum, but also their families, social agencies, and health, disability, and education staff. The guidelines overall aim is to aid the health, education, and social outcomes for individuals with an ASD diagnosis and since 2008, there have been numerous updates which called for a second edition of the guidelines to be developed in 2016. These guidelines are used throughout NZ across services to aid the development of individuals with ASD and recommend the best fit practices (Ministry of Health, 2016). A study conducted by Thabrew and Eggleston (2018) compared NZ's current approach to assessment and intervention for children and adolescences, with the outlined recommendations in the NZ ASD Guidelines. This study identified numerous difficulties within NZ for those with ASD, these included the increasing levels of ASD diagnosis in comparison to the limited resources and mental health services currently available for children and adolescents, the DHBs focus on assessment and diagnosis and not long-term care and management, limited respite care facilities, and a lack of regular communication between health professionals and service providers.

Although the majority of the NZ literature focuses on children and the diagnostic process, a study conducted by Anderson, Carter, and Stephenson (2020) used an online survey to address university students on the spectrum specifically. Participants consisted of 102 individuals with an ASD diagnosis from eleven different universities throughout NZ and Australia. Findings discovered that overall mental health issues and academic requirements were of the greatest concern for students, yet the available supports were not being accessed by these individuals despite the success of them. Over 60% of the participants reported having thoughts of self-harm and suicidal ideation, as well as many individuals admitting they have previously made attempts to end their lives. The study reported a critically high result, indicating the need for urgent mental health care, which is likely to be ongoing. These results also indicate a need for further research targeting youth and adults with ASD in NZ and Australia, specifically targeting and reducing the effects of mental health alongside ASD.

Autism specific to Females

For many years it is has been widely known and accepted by society that Autism is more common in males than it is in females and most often when females are diagnosed with ASD, they tend to be affected more severely than are males. Despite these facts, the current literature and growing number of ASD diagnoses have revealed that females are typically

under-represented in research due to uneven participant ratios, the fact that females are diagnosed at a later age on average, and that many females are either undiagnosed or incorrectly diagnosed (Happe, 2019).

When it comes to ASD, friendships are really important, especially for females as opposed to males. There are clear gender disparities among neurotypical persons when it comes to developing and maintaining friendships, which is largely due to females being more sensitive and empathic. For females with ASD a typical response is to ‘camouflage’ the social difficulties that they experience, and they also tend to ‘internalise psychological distress’ to a greater extent than males do. Females with ASD have also been reported to engage in imitative behaviours to help preserve friendships. However, this approach is unlikely to sustain friendships beyond adolescence and therefore, autistic females tend to experience greater difficulties maintaining friendships overall (Ryan et al. 2020). Typically, for males’ close relationships are formed through activity or object related topics like sports, but for females, relationships are formed through the sharing of thoughts and emotions, with a focus on both their personal and social lives; an aspect of life that females with ASD inevitably struggle with (Mademtzi, et al. 2018).

A key distinction between females and males with an ASD diagnosis is the social aspect of their lives. Females with ASD often have issues with social interaction and communication, just like males, but indicators are often less evident in females, which can lead to these symptoms being overlooked. Honeybourne (2017) found that many females with ASD experience difficulties expressing themselves as well as that social demands can bring on extreme feelings of anxiety for these individuals. Many females also have difficulty recognising and understanding their own and others' emotions, which can lead to problems interacting and misinterpreting social expectations. Another important characteristic of Autism is honesty, for these individual’s honesty can lead to a lack of ability to filter discussions and form relationships, creating additional difficulties.

Other key findings indicate that females with Autism tend to internalise their anguish, which might later develop as anxiety or mood and eating disorders, whereas males are able to better externalise their distress through aggression. Leedham, et al. (2020) investigated the experiences of females who were diagnosed with ASD later in life. They discovered that many females felt disempowered while trying to comprehend themselves in a perplexing world, which amplified self-doubt, humiliation, and a negative self-image. For many of their

participants these feelings typically arose pre-diagnosis, however, following a diagnosis the participants' sense of independence grew, giving them the ability to take control of and make meaning of their own experiences. These results show how important a diagnosis may be in transforming a person's life for the better.

Despite the fact that the current literature on females with Autism is limited, it is clear that additional research on females with ASD and how they are affected in contrast to members of the opposite sex is required. Females are more likely to be diagnosed later in life, which might provide further challenges. Key variations in developing and sustaining connections are likely to make this process more difficult for females as well, and as a result their social lives can be severely disrupted. Due to the rising incidence of ASD diagnoses in both males and females, further research is clearly needed to meet the expanding requirements of females, while the present literature focuses primarily on males.

Autism and Social Skills

Individuals with an ASD diagnosis frequently struggle with their general range of social skills, according to the current literature. Individuals with developmental disabilities, such as ASD, confront obstacles and stressful events in the same way that everyone else does, but they have weaker or limited individual resources, such as social skills. Stressful events may also differ due to their disabilities such as bullying and stigmatisation or loss of adaptive functioning when disregarded or averted by others (Sturmey, 2017). When it comes to nonverbal behaviours, people with ASD are usually impaired, and they are often unaware of the impact their actions have on others. Atypical social development in ASD is thought to result in atypical interests that their peers may not share which can lead to additional difficulties socialising and making friends.

The majority of young people with ASD also suffer with the practical components of social contact, such as managing topics, reciprocity, tone, and gaze (Carter, et al. 2014). Difficulties interacting socially and understanding social cues result from atypical social development, as well as unusual interests that are unlikely to be shared by their peers and impairments in information-processing. Afsharnejad et al. (2020) discuss how, adolescence is a time of significant change for many people, but especially for those with ASD, which often corresponds with an increasing interest in friendships and the need for appropriate social skills. The core difficulties associated with ASD as well as the typical demands that come with adolescence often bring about hardship for many youths across several domains of their

life. Particularly, evidence suggests that these individuals often have fewer friendships, and have lower education, employment and independent living levels because of the additional hardships faced.

Grossberg (2019) highlights the significance of adolescence being a time of change for many people on the Autism spectrum. During adolescence, these individuals face numerous challenges such as becoming more aware of how they are socially marginalised, the risk of bullying, and they become more susceptible to the dangers and pressures of social media and the wider internet. Other typical deficits, apparent in the current literature in adolescents with ASD include a lack of recognition regarding appropriateness in social contexts, abnormal patterns of speech, disregard of the listener and their participation when having conversations, trouble understanding and expressing emotions, as well as, difficulties understanding sarcasm, and metaphors (White, Koenig, & Scahill, 2010).

Autism is likely to have a detrimental impact on a person's ability to form a positive social identity, compromising one's psychological well-being. Autistic persons, for example, confront the issue of retaining a good sense of self despite belonging to a group that continually faces stigmatisation (Cooper, Smith & Russell, 2017). As social expectations increase, late adolescence and young adulthood are also vulnerable stages for mental health issues. Low self-efficacy in social circumstances is a result of poor social skills, which can lead to anticipatory anxiety, depression, social isolation, and a lack of motivation to exercise social competence, resulting in lesser social opportunities (Conor, et al. 2020). Although much research has been done in this area to improve our understanding of the limitations that these people face, more work is needed to distinguish subgroup differences and symptom intensity in order to better understand how to treat these people. If left untreated, social skill impairments can lead to subsequent mental health issues, emphasising the significance of early intervention and targeted therapies (Pallathra, et al. 2018).

Social Skill Interventions

Social skills interventions typically consist of individuals with ASD and sometimes other intellectual disabilities being brought together to participate in group activities and socialisation to help them expand and develop their range of social skills. Group-based therapies are presently the most extensively utilised method for addressing social skill development in school-aged, adolescent, and young people with ASD, and there is a large body of evidence in favour of this. Despite the widespread use of group-based therapies, their

efficacy remains unknown, and the research supporting this is still expanding (Gates, Kang & Lerner, 2017).

Group approaches are used with individuals of all ages and are typically mediated by either a teacher or clinician, peer mediated or a mixture of the two (Reichow & Volkmar, 2009). Social skills groups are a form of intervention strategy where three or more participants are simultaneously taught a range of social behaviours. Such behaviours include handling disagreements, sportsmanship, and social interaction. Due to the promising results of such groups, social skills groups are now known to be one of the five most frequently applied interventions to improve social behaviour for individuals on the Autism spectrum (Leaf, et al. 2017). Afsharnejad et al. (2020) state that previous group-based social skills interventions have provided positive results in the development of social skill knowledge, social readiness, adaptive functioning and in reducing the severity of ASD symptoms.

There are many varying approaches to social skills groups, with some being groups specific to particular hobbies and others being more generalised. LEGO® therapy is a commonly used approach for building social skills in children and adolescents with ASD. The primary objectives of LEGO® therapy are to inspire behavioural change and teach social and communication skills by utilising natural interests and play (Lindsay, Hounsell, & Cassiani, 2017). Equivalent to this, a Minecraft step-by-step guide was developed by Dundon and Scott (2019) to teach social skills to autistic individuals in which Minecraft was used as tangible reinforcement. This approach was seen to be effective specifically due to participants being enticed by the use of technology and the ability to learn whilst playing video games.

A robotics camp with the overarching goal of reducing social anxiety and enhancing vocational and social skills was another approach to a social skills group for adolescents with ASD. This group was created specifically for those who are interested in robotics, with the goal of increasing social engagement among peers. Kaboski, et al. (2015) found that this type of approach to a social skills intervention for ASD was promising and overall, social anxiety was reduced, however, no significant increases in social skills were found. Another social skills approach for ASD is the Program for the Education and Enrichment of Relational Skills (PEERS), which is a form of social skills intervention intended for individuals with ASD that includes and encourages parent engagement. PEERS is an empirically supported intervention and has shown benefits in reducing family chaos and distress and enhancing parent self-efficacy (Karst, et al. 2015). Corona, et al. (2019) also reported positive results when

conducting PEERS resulting in improved social skills, as well as decreased social impairment and parental stress following completion. Due to these findings and the wider supporting literature, PEERS is now implemented widely among individuals of the ASD community and their parents.

As the number of ASD diagnoses is rising, so is the demand for services and providers. Social skills are an important part of life, and for most people with ASD, further training and instruction is required. The majority of therapy aiming at improving social skills in people with ASD are group-based, and there are relatively few other options. Individuals are most often encouraged to learn together in a social setting, and because of this, they then have the opportunity to socialise and put their newly acquired skills to the test. Technology-based, theatre-based, cognitive-behavioural therapy, and a variety of school-based interventions are just a few of the current emerging social skill group approaches, however this field is continuously growing, and many developments are still to be made (Wieckowski & White, 2017).

Autism and Mental Health Comorbidity

Due to the increasing prevalence of ASD, and the increased risk and harmful effects of developing depression and anxiety in adolescence, increasing numbers of investigations are being made into mental health comorbidities associated with Autism (Greenlee, Winter & Johnson, 2020). Depression and anxiety are the most common mental health disorders in individuals with ASD, with these disorders being far more prevalent than other mental illnesses. In comparison, the autistic population experiences anxiety and social anxiety disorder (SAD) to a considerably greater level than the non-autistic population, and the prevalence of depression in the autistic community is 34% (Cage, Di Monaco, & Newell, 2017).

According to Fodstad (2019), almost 70% of individuals with ASD have at least one co-occurring condition, these conditions usually begin in childhood and continue throughout adolescence and adulthood. These concerns may include disorders such as anxiety, schizophrenia, attention deficit hyperactivity disorder (ADHD), obsessive-compulsive disorder (OCD) and many more. Anxiety, depression, and suicidality are examples of internalising challenges, while aggression, dysregulated outbursts, and irritability are examples of externalising difficulties. Both internalising and externalising difficulties

can have a significant impact on an autistic person's well-being and quality of life, as well as those who care for them across their lifespan (Rodgers & South, 2020).

According to a diagnostic interview procedure conducted by Stadnick, et al. (2017) with parents of children with ASD an interesting finding was that 90% of children receiving recommended mental health services satisfied the criteria for at least one additional mental health problem. However, it is also well understood that ASD symptoms such as repetitive behaviours and social avoidance can also resemble symptoms of other prevalent mental disorders, making diagnosis particularly difficult and especially important for this population. Therefore, in order to inform the development, execution, and proper administration of evidence-based therapies for individuals with ASD, it is apparent that accurate identification of comorbid symptoms and disorders is crucial (Fuentes, Hervas, & Howlin, 2020).

McLeod, Hawbaker and Meanwell (2021) emphasise the importance of acknowledging how experiences of mental health may differ between individuals with ASD and their neurotypical peers. They continue to state that of the very little information we do know, difficulties with mental health comorbid with Autism extend into adulthood. In the neurotypical population rates of anxiety and depression are seen to decline when transition into adulthood begin, whereas, for individuals on the Autism spectrum both anxiety and depression rates increase throughout adulthood and symptoms tend to worsen.

Due to having general skill deficits, individuals with ASD are likely to experience difficulties in emotion differentiation. The lack of ability to regulate emotions and low psychological wellbeing in these individuals has a significant impact on their overall physical and mental health and creates further difficulties when trying to understand their own emotions and the emotions of others (Erbas, et al. 2013). According to Russell, et al. (2016), unmet needs in young individuals with ASD caused by mental co-morbidity, increase stress for both the individual and the caregiver. Their recent study also found that there is a great need for evidence-based mental health treatment specifically for individuals with ASD, including thorough assessments of probable ASD as well as co-morbid mental health issues. Evidence suggests that psychological therapies can be successful in adults with ASD if the therapy has previously been tailored to the needs of the individual.

Since the number of individuals with ASD developing mental health conditions is on the rise, it is clear that more needs to be done to address the mental health issues that these individuals are dealing with. Considering that mental health comorbidities can have a major

influence on everyday functioning and quality of life, it is indeed critical that they focus on treating the causes of these disorders rather than just the symptoms, and that these individuals are treated as soon as possible.

Anxiety

Anxiety can be described as a negative mood or state of mind portrayed by physical symptoms of tension and concerns for the future. Most often anxiety is experienced as feelings of unease, an increased heart rate or tension in the muscles and nervous behaviours (Barlow, Durand & Hofmann, 2018). Anxiety is an internalising form of mental illness which means the distress is personal and experienced purely by the individual. Symptoms are typically enduring, unwanted, and distressing; however, they do not tend to violate social norms (Kerig et al. 2012). Generalized anxiety disorder (GAD), Social anxiety disorder (SAD), phobias, and panic disorder all fall into the category of the anxiety disorders. GAD symptoms are typically characterised by anxious feelings about a variety of things on the majority of days over a period of time exceeding six months (Ministry of Health, 2021).

According to Kerns et al. (2014), co-occurring anxiety is prevalent in todays' society with roughly 40% of adolescents diagnosed with ASD experiencing it. They continue to emphasise the link between co-occurring anxiety and poor individual and family functioning. Evidence suggests that anxiety is more apparent in youth with ASD than it is in their peers who are typically developing or have either a conduct problem or attention deficit hyperactivity disorder (ADHD) (Wood, & Gadow, 2010). Anxiety symptomatology emerges in childhood for the majority of the population with this co-occurring disorder and persists throughout life, affecting daily living in primary school, adolescence, and adulthood (Adams, Simpson, & Keen, 2020). Despite the fact that the exact origin of anxiety in ASD is unknown, it is believed that various deficits consistent with ASD, as well as other risk factors such as heredity, acute or chronic stress, and overall family functioning, are likely to contribute to this occurrence (van Steensel, et al. 2014).

When an individual with ASD also has an anxiety diagnosis, the anxiety symptoms are likely to worsen the core ASD symptoms, leading to increased behavioural difficulties and life interruption (Lang, et al. 2010). Anxiety can manifest itself in autistic people in rather different ways than it does in the general population, symptoms may include social discomfort, compulsive behaviours and difficulties when dealing with change or making decisions. Anxiety is particularly prominent in individuals with ASD, and those who suffer

from it find their opportunities and quality of life severely constrained (Parr, et al. 2020). Although few studies have examined quality of life in individuals with ASD, Smith, Ollendick, and White (2019) conducted research to determine if anxiety impacts quality of life in adults of the ASD population. Their findings suggest that anxiety symptoms in ASD do have an impact on quality of life, and they continue to recommend that, as a result of these findings, further evaluations for adolescents with ASD and anxiety and the impact it has on their quality of life should be undertaken.

Social anxiety and generalised anxiety are two anxiety disorders that are most frequently seen in youth samples with ASD (White, et al. 2009). Unlike GAD, SAD symptoms can manifest themselves physically, behaviourally, and cognitively. Increased heart rate, sweating, and shaking are physical signs, while behavioural issues include avoidance of social situations, which might involve refusal, a preference to be alone, and minimal eye contact, all of which are already included in the ASD behavioural profile. Negative thought patterns, self-worry, and concerns regarding others' negative evaluations are among the cognitive symptoms of SAD (Maddox & White, 2015). For children with ASD and high levels of anxiety symptoms, there is also a greater risk of social communication impairment over time. This is typically due to avoidance of social situations, which leads to fewer opportunities to practice and develop social skills, resulting in lower social skills overall. It is clear that the symptoms of both ASD and anxiety can have life-altering consequences for both the individual and their loved ones. The expanding body of evidence emphasises the need of addressing skill deficits in order to promote overall social and emotional well-being (Duvekot, et al. 2018).

Interventions for Anxiety reduction

According to meta-analytic research, nearly 40% of children with ASD have a comorbid anxiety disorder, and as a result of this, the demand for interventions in this field is also on the rise (Johnco, & Storch, 2015). There are a variety of treatments for reducing anxiety alongside skill building in individuals with ASD, and the literature in this area is continually increasing. Rodgers and Ofield (2018) conducted a review of the current research on treating co-occurring anxiety in ASD and discovered that cognitive behaviour therapies when adapted to the needs of the individuals are highly effective in treating anxiety symptoms and teaching applicable skills. Many developments are being made in treatments delivered via technology and virtual reality technology has also seen promising results in

helping individuals to overcome their fears. Other effective treatments include emotional literacy training, mindfulness-based techniques, and the use of pharmacology.

Storch, et al. (2015) discuss the use of pharmacology to treat comorbid anxiety symptoms. Upon diagnosis, individuals with a comorbid anxiety disorder are frequently advised to utilise medication as a first-line treatment or in conjunction with other therapies. Serotonin reuptake inhibitors (SRIs) are the most common medications for treating anxiety in ASD and this is now a popular strategy used among youth. Although there is limited evidence in support of utilising SRIs to treat anxiety in ASD, a few case studies have found that they are effective. Despite this, data suggests that pharmacological therapies are not always the best option, and that they may not be appealing or appropriate to the parents of these individuals. Rast, et al. (2021) contribute to the body of knowledge on medication use in children and adolescents with ASD by providing recent estimates of psychotropic drug usage and its associations. They conclude that youth with ASD had high medication usage rates, with antidepressants and mood stabilisers being most commonly prescribed.

Another common form of therapy used widely in the autistic community is CBT, CBT is an evidence-based psychosocial form of therapy originally developed for the treatment of depression in adults. Many advancements have been achieved since then, and CBT is currently an extensively used therapy for treating anxiety in children and adolescents also. CBT was originally designed to teach people how to detect unhelpful ideas, evaluate automatic thoughts, and change negative thinking to realistic and adaptive. Once potential benefits for treating individuals with ASD were established, CBT became widely used for treating anxiety and further modifications were required to ensure suitability and effectiveness for the ASD community (Perihan, et al. 2020).

Although CBT interventions are preferred, alternate treatment techniques for anxiety reduction and skill building in individuals with ASD also include behavioural therapy, Acceptance and Commitment therapy (ACT), emotional regulation, intolerance of uncertainty (IU), and creative arts-based approaches. Behavioural therapy appears to be a promising treatment option, and while research in this area is scarce, studies that have been undertaken have shown significant success in reducing general anxiety. Lei, et al. (2017) investigated whether using Pivotal Response Treatment (PRT) in young people with Autism reduced anxiety. As part of their investigation, they conducted a 16-week PRT programme, and they discovered that after participating in this study, the parents of these individuals

reported significant reductions in their children's anxiety and overall internalising symptoms. Although this programme has yielded successful results, more research is needed to assess the efficacy and reliability of PRT and other behavioural therapies. ACT has received little attention, but because of its efficacy in treating anxiety in neurotypicals, specifically by targeting emotional avoidance and recognition, it is likely that this therapy will be useful in assisting skill-building and treating the ASD community as well. Likewise, emotional regulation is thought to be promising treatments if they were to be attempted in the ASD community (Keefer, et al. 2018).

Youth with an Autism diagnosis encounter significantly more difficulties when obtaining and receiving therapy as compared to their neurotypical peers. These barriers develop notably in areas such as attention, socialisation, communication, and cognition. As a result, anxiety-based treatments administered to usually developing populations may be ineffective in those of the ASD population and modifications may be required (Selles, & Storch, 2013). Mental health concerns are regarded the top priority for Autism research, with a particular emphasis on the development of anxiety-reduction therapies being identified as one of the top five research objectives (South, Rodgers, & Van Hecke, 2017).

Kerns, et al. (2016) highlight how CBT has been adjusted for both group and individual settings, and how both have been found to be beneficial. Although both effective, individual therapies tailored to a participants specific qualities may be more beneficial given the variability of phenotypes in ASD, whereas group therapy approaches may make it harder to customise intervention methods to the needs of participants. As per the findings of existing treatment outcome studies, CBT may result in clinically significant decreases in anxiety, improved use of beneficial coping techniques, and increased independence and daily life skills in ASD youth (Van Steensel et al., 2014).

Another form of CBT is the Coping Cat Program, which was developed to treat children and adolescents with SAD and GAD but has since been adapted for use in the ASD community. McNally et al. (2013) evaluated the use of this program in children with Autism and found that the children who completed a 16-week coping cat program saw a significant reduction in overall anxiety symptoms when compared to their peers who received either regular treatment or no treatment. Furthermore, participants had a lower overall number of psychiatric diagnoses at the end of treatment, suggesting that the Coping Cat programme can potentially help individuals with symptoms of co-occurring internalising and externalising

disorders also. They concluded that this approach could be a viable and effective way to reduce anxiety in children with ASD.

Bemmer, et al. (2021) assessed the potential advantages and acceptability of a group CBT intervention in adolescents with ASD, focusing primarily on social anxiety and overall social functioning. Exposure tasks, social skill development, cognitive restructuring, and behavioural trials were all components of the intervention. Overall, their findings reported significant improvements in the desired outcome measures, as well as a reduction in social anxiety symptoms and an improvement in social functioning. These findings as well as the findings of many other studies support the efficacy of cognitive behavioural therapy in the treatment of social anxiety and overall mental health in autistic adolescents and young adults (Reaven et al. 2012). Many past studies have looked into the benefits of group-based CBT interventions, but few have looked into the efficacy and impact of group social skill interventions on anxiety reduction. Spain, Blainey, and Vaillancourt (2017) explored group CBT for social interaction anxiety and social skills in adults with ASD. Their participants were eighteen males with Autism diagnoses, and the study spanned eleven weeks. Overall, self-reported anxiety levels improved dramatically after the intervention, although there were no significant improvements in general anxiety. The qualitative feedback provided information stating that the intervention was acceptable and helpful in building coping mechanisms and expanding their knowledge base, as well as decreasing avoidance behaviours and reducing social anxiety.

According to the extensive current literature, it is apparent that CBT is a widely used and accepted therapy for treating individuals with ASD, specifically, aiding in anxiety reduction. For many individuals on the Autism spectrum, cognitive behavioural therapy and mindfulness-based stress reduction may be equally beneficial in lowering anxiety symptoms, as well as autistic symptoms, rumination, and increasing overall mood. Both therapies were shown to be equally effective in treating comorbid anxiety in ASD (Sizoo, & Kuiper, 2017). Delli, et al. (2018) reviewed therapy alternatives for anxiety in individuals with ASD and found that modified CBT and social recreational programmes were the most successful and beneficial across the 137 studies they reviewed. This was attributed to the therapies' positive outcomes as well as their adaptability and suitability for group intervention. Despite these findings, it is important to consider the diverse needs of individuals with Autism and that some interventions may not be appropriate for everyone. Puleo and Kendall (2011), for example, discovered that kids with comorbid anxiety and considerable rather than minor

autistic symptoms responded much better to family CBT as compared to individual CBT. It is evident that there is a significant need for tailored therapies for all individuals with ASD.

Conclusion

A review of the current literature has established our understanding of Autism in relation to mental health comorbidities, anxiety, and the demands that youth in this community experience. As individuals age, their ASD symptoms tend to worsen, emphasising the importance of early intensive therapy, effective transitional help, and additional social and communication skills training. Despite the fact that a significant amount of study has been done to improve our understanding of social skills and the limitations that these people face, more work is needed to distinguish subgroup variations and symptom intensity so that we can better understand how to treat them. Almost everybody with ASD is likely to develop mental health issues, although for youth with ASD who are at such a formative stage in their lives, these challenges appear to be accentuated, hence the demand grows.

Furthermore, females with ASD diagnoses are clearly at a disadvantage since males dominate the ASD population and therefore, females' symptoms are frequently disregarded. Females are more likely to be severely affected by ASD than males, especially if diagnosed later in life, and it is critical that these differences are considered. It is clear that females with ASD are underrepresented in current studies, and particularly there is minimal group-based therapy focused only on social skills and anxiety reduction for female adolescents with ASD. Considering that mental health comorbidities, particularly anxiety, can have a substantial influence on daily functioning and quality of life, it is crucial to manage these symptoms as soon as possible to avoid life-changing repercussions. In conclusion, many interventions and treatments have been adapted for individuals with mental health disorders and ASD symptoms, including both individual and group-based therapy and the overall evidence is growing, however, further developments are still yet to be made and additional research is still required.

Research Aims

This study had two aims:

1) To investigate whether attendance of a facilitated Autism group produces any significant mental health benefits.
2) To evaluate anxiety reduction, if any, using pre and post measures.

Method

Participants

There were three participants involved in this research. All participants were females over the age of 15 who had a diagnosis of Autism spectrum disorder (ASD) who regularly attended a local Autism group programme. This programme is specifically designed for autistic female youth.

Participants were recruited by a psychologist, employed by the local organisation, with prior rapport with many of the attendees.

To participate in this project, participants were required to be able to appropriately answer the required questions for the research and attend the Autism-based programme facilitated by a local organisation on a regular basis. Three participants met the inclusion criteria. All participants were provided with an information sheet and provided written consent to participate. Due to Participant 1 being underage, her parents were provided with a copy of the information sheet, and they consented for their daughter to participate (Appendix A). A written assent form was also provided for the participant under age (Appendix B).

At the time of recruitment Emily* was 15 years old and had a diagnosis of ASD; she was still attending high school part time. Mary* was 17 years old and had a diagnosis of ASD; she was currently being home schooled. Sarah* (*pseudonyms) was 32 years old and had a diagnosis of ASD; she had a casual farm hand job.

Settings

The primary setting was an office of an organisation supporting those with developmental disabilities, located in a provincial town in NZ. The office was a large

building consisting of private meeting rooms and a large open activity space. Interviews took place in either of the private meeting rooms, and over the phone. The private meeting rooms were quiet enough to be able to record the interviews and ensure confidentiality. The phone interviews were held in quiet rooms of the participants' home and my own home.

Video observations were to be collected throughout the duration of the Autism group programme, however, due to COVID-19 and NZ going into a lockdown, as well as increased anxiety levels in participants the programme was unable to continue and video observations were not able to be collected. These observations were to be conducted throughout the programme to assess participant involvement and any physical manifestations of anxiety. Starting a conversation, being able to argue, displaying physical signs of anxiety, active engagement, and responding to others were all target behaviours. If observations had been conducted, data would have been analysed using a momentary time sampling method, along with IOA, to determine whether or not target behaviours were displayed, and then graphed for further investigation. Video observations may have provided more insight into participant anxiety while in the program's natural environment, as well as their overall social engagement.

Materials and equipment

Participants' anxiety was assessed using pre and post self-report measures: i) using anxiety measures (ASC-ASD, and ASA-A) and, ii) semi structured interviews.

Materials I anticipated to use for the video observations included my personal cell phone as a video recording system; an iPhone 12 pro, a 32GB USB flash drive and a momentary time sampling data collection sheet.

Measures

The Anxiety Scale for Children – Autism Spectrum Disorder

The Anxiety Scale for Children – Autism Spectrum Disorder (ASC-ASD) was derived from The Revised Children's Anxiety and Depression Scale (RCADS) in 2015 by Rodgers, et al. It is designed to assess four sub-scales of anxiety: separation anxiety, uncertainty, performance anxiety and anxious arousal. Throughout the development of the ASC-ASD, polychoric factor analyses were conducted and resulted with evidence of good reliability and validity. Additionally, the ASC-ASD showed promising psychometric

properties including good internal consistency, validity and one month test-retest reliability (Rodgers, et al. 2016). The ASC-ASD was found to be a useful tool for assessing anxiety symptomatology in autistic children (den Houting, et al. 2018).

The Anxiety Scale for Adults – Autism Spectrum Disorder

The Anxiety Scale for Adults – Autism Spectrum Disorder (ASA-A) was adapted from the ASC-ASD in collaboration with professionals and autistic adults by Rodgers, et al. (2015). The ASA-A is designed to measure anxiety in autistic adults, it includes a general anxiety factor as well three additional subscales: social anxiety, anxious arousal, and uncertainty. Preliminary evaluations of the measurement properties of the ASA-A were conducted following the development of this measure, findings suggest that the scale will be useful in future research and clinical contexts. The ASC-ASD and ASA-A are the first measures to be developed and validated specifically for autistic individuals and have shown to be accurate in measuring anxiety.

Table 1.

ASC-ASD Maximum and Minimum Scores.

	Minimum score	**Maximum score**
Performance Anxiety (PA)	0	15
Anxious Arousal (AA)	0	18
Separation Anxiety (SA)	0	15
Uncertainty (U)	0	24
Overall Score	0	72

Overall score ≥ 20 may indicate the presence of a significant level of anxiety.

Note. Table adapted from https://research.ncl.ac.uk/neurodisability/leafletsandmeasures/anxietyscaleforchildren-asd/asc-asdscoringguidelines/Scoring%20Guidelines%20ASC-ASD%20Parent%20%20Child%20versions.pdf

Table 2

ASA-A Maximum and Minimum Scores.

	Minimum score	Maximum score
Social Anxiety (SA)	0	18
Anxious Arousal (AA)	0	27
Uncertainty (U)	0	15
Overall Score	0	60

Overall score ≥ 28 may indicate the presence of a significant level of anxiety.

Note. Table adapted from https://research.ncl.ac.uk/neurodisability/leafletsandmeasures/anxietyscaleforautism-adultsasa-a/asa-ascoringguidelines/ASA-A%20Scoring%20UPDATED.pdf

Table 1 indicates the maximum and minimum scores possible for the ASC-ASD, as well as an indicative cut-off for overall score and Table 2 indicates the maximum and minimum scores possible for the ASA-A, as well as an indicative cut-off for overall score.

Semi-Structured Interviews

The pre and post semi-structured interviews were created by the researcher and were intended to gain additional information from participants regarding any experiences of anxiety before and during the group, the impact COVID-19 may or may not have, and what they like and dislike about the group. A copy of the semi-structured interview questions can be found in Appendix C.

Technology

My HP Notebook- 15s-du0034tu was used to record interviews through voice recording and I also used the calculator throughout to calculate the descriptive statistics. My iPhone 12pro was used to call participants to conduct phone interviews and was also anticipated to be used as a video recording system for video observations. I also intended to use a 32GB Sandisk Cruzer USB flash drive to transfer data to my home drive on a university password protected computer.

Dependent Variable

The dependent variable for this research was anxiety. Anxiety is an unpleasant emotional state characterised by vague apprehension, restlessness, feelings of uneasiness and dread, as well as other physical sensations such as excessive perspiration, chest tightness, difficulty breathing or feeling breathless, and feelings of nausea (American Psychiatric Association, 2013; Nemeh, & Longe, 2021). Anxiety was assessed using semi-structured interviews, and anxiety measures (ASC-ASD & ASA-A). The in-person interviews were recorded, so they could be replayed and summarised accurately. The phone interviews were not able to be recorded, although thorough notes were taken throughout to ensure all relevant information was recorded. Questionnaires were conducted as a part of the programme and were held in a large activity room. Due to all group participants engaging in the questionnaire, the room is large enough that participants were able to answer the questions in quiet, as well as confidentially.

Independent variable

The independent variable for this research was the facilitated Autism programme aimed at increasing essential life, social, and relationship skills for female youth with ASD.

The aim of the programme was to adopt a group approach to encourage development of an individual's independence, to extend their social circles, build friendships, and gain a sense of belonging. Group sessions consisted of various teaching sessions which are relevant to life skills and are taught with the aim of expanding the participants understanding and knowledge base of social skills and mental health, as well as, aiding their overall skill development. These teachings aimed to reduce participant anxiety, improve overall mental health, and alleviate any fears the participants may have.

Format

The Autism group ran once a week during the period of the school terms, between 1pm and 2pm. Due to the COVID-19 disruptions, the group was extended for an additional week in term 3 and was held in the first week of the school holidays. There were between three to five youth, who attended regularly, with at least two facilitators present including myself. There was no facilitator involvement included in this research. The programme was pre-planned by staff, and weekly sessions involved structured learning time, specifically developing skills to aide anxiety and social skill development, as well as free social time near the end of the session. Sessions focused on a weekly topic, including emotional intelligence, decision making and social dilemmas, team building and managing emotions.

The structure of the group was determined by the type of activity or skills being addressed each week. A typical session would begin with general conversations and greetings as individuals arrived, followed by a simple question and answer ice breaker activity. The group would come together and be encouraged to participate in the activity, which would usually be followed by general conversation about the week or current news. This would take roughly 10 minutes, and then be followed by the structured activity. The structured activity took 30 minutes, followed by free time, in which the participants could socialise and have a juice and some biscuits. Free time usually consisted of conversation, and game playing within the office. The group would end at 2pm, however, participants with their own transport were able to stay and converse if they liked.

Research Design

This project was a mixed methods formative evaluation including qualitative data and pre and post measures. The project aimed to evaluate and inform a pre-existing intervention.

Ethics Approval

Ethics approval for this research was obtained from the Human Research Ethics Committee at the University of Waikato (HREC(HEALTH)2021#42 for this research project to be conducted.

Procedure

Prior to the development of this research, pre-existing connections had been established between the university and participating organisation. My supervisor and I, initiated contact with the intended organisation to gain permission and consent to collaborate in an enquiry into the mental health benefits of attending an Autism group, using pre and post

measures to evaluate anxiety reduction. The organiser of the Autism group at the participating organisation provided permission to conduct this project. Due to my current employment with the participating organisation, I worked alongside the group organiser to build rapport and identify potentially suitable participants for research. Following participant recruitment, the programme began, and I attended weekly to gather data. The group was then disrupted by the Covid-19 pandemic and the programme was cancelled due to NZ entering a state of lockdown. Following this, and due to increased anxiety levels in participants, the programme was able to resume, however, participant attendance was reduced, and difficulties were encountered whilst attempting to gather data making video observations not possible.

Covid-19

Covid-19 and the government enforced lockdown caused significant disruptions to this research project and caused the facilitated Autism group to be paused for several weeks, bringing data collection to a halt. Because of these disruptions, and due to limited attendance, and increased levels of anxiety because of the pandemic, only one of the post-treatment interviews were able to be collected, limiting data for comparisons to be made. I also intended to conduct video observations throughout the term to later analyse through momentary time sampling and Inter Observer Agreement (IOA) for signs of anxiety to assess participation in the group, however, despite these intentions, and due to the impact Covid-19 had on the group, video observations were not able to be conducted for further analysis.

Results

ASC-ASD and ASA-A

The aim of this aspect of the research was to use both the ASC-ASD and ASA-A to provide information about participant anxiety prior to and following research to evaluate and compare whether regular attendance of an Autism group facilitated by a local organisation reduces anxiety.

Table 3 shows the ASC-ASD pre-treatment and post-treatment scores for Emily* for overall score and each subscale: performance anxiety, anxious arousal, separation anxiety, and uncertainty. Table 4 shows the ASA-A pre-treatment and post-treatment scores for both Mary* and Sarah* for overall score and each subscale: social anxiety, anxious arousal, and uncertainty (*pseudonyms).

Table 3

ASC-ASD scores for Emily

Participant	Pre-treatment score					Post-treatment score					Increase or decrease				
	PA	AA	SA	U	OS	PA	AA	SA	U	OS	PA	AA	SA	U	OS
Emily*	14	12	8	22	56	7	11	14	17	49	D	I	I	D	D

Note. *Pseudonyms. PA =Performance anxiety, AA = Anxious arousal, SA = Separation anxiety, U= Uncertainty, OS = Overall score, D = Decrease, I = Increase, N/C = no change.

Table 4

ASA-A scores for Mary and Sarah

Participant	Pre-treatment score				Post-treatment score				Increase or decrease			
	SA	AA	U	OS	SA	AA	U	OS	SA	AA	U	OS
Mary*	13	7	13	33	4	10	10	24	D	I	D	D
Sarah*	6	4	7	17	6	1	4	11	N/C	D	D	D

Note. *pseudonyms. SA = Social anxiety, AA = Anxious arousal, U = Uncertainty, OS = Overall score, D = Decrease, I= Increase, N/C = no change.

Table 3 displays the results of the ASC-ASD for Emily pre and post participation in the facilitated Autism group. Emily received an overall score of 56 in her pre-treatment questionnaire and an overall score of 49 in her post-treatment questionnaire. Both her pre-treatment and post-treatment overall scores were higher than 20 which may indicate a significant level of anxiety; however, reductions were seen across subscales with the overall score decreasing.

Table 4 displays the results of the ASA-A for Mary and Sarah, pre and post participation in the facilitated Autism group. Mary received an overall score of 33 in her pre-treatment questionnaire and an overall score of 24 in her post-treatment questionnaire. Her pre-treatment score was higher than 28 which may have indicated a significant level of anxiety, however, due to reductions across subscales, her post-treatment score did not indicate a statistically significant level of anxiety, and her overall score had decreased.

Sarah received an overall score of 17 in her pre-treatment questionnaire and an overall score of 11 in her post-treatment score. Neither of her scores indicated a significant level of anxiety at the time of testing as compared to the other participants. Aside from no changes seen in social anxiety, reductions were seen across all other subscales and her overall score decreased (Rodgers, et al. 2016; Rodgers, et al. 2019).

Overall scores showed reduction for all participants at the post-treatment assessment, which suggests that regular attendance of a facilitated Autism group was associated with a reduction in anxiety.

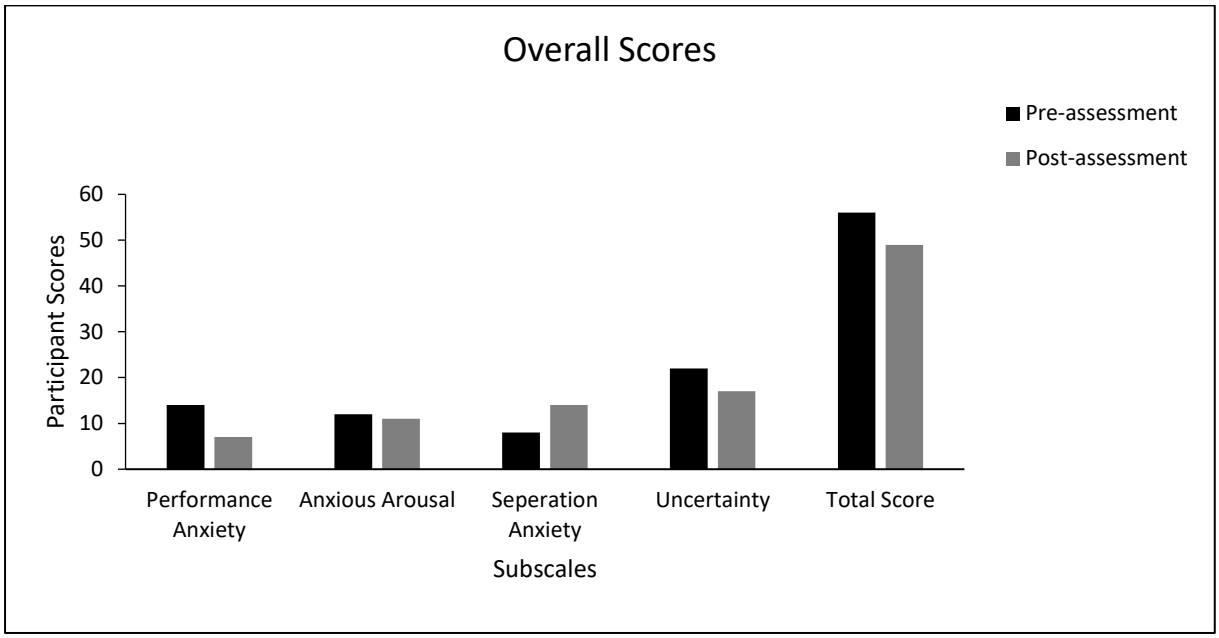

Figure 1. Overall scores for Emily

Figure 1 shows pre and post ASC-ASD factor scores for performance anxiety, anxious arousal, separation anxiety, and uncertainty, as well as an overall score for all subscales combined. The results suggest that there was a reduction in anxiety for Emily, specifically in performance anxiety, and uncertainty.

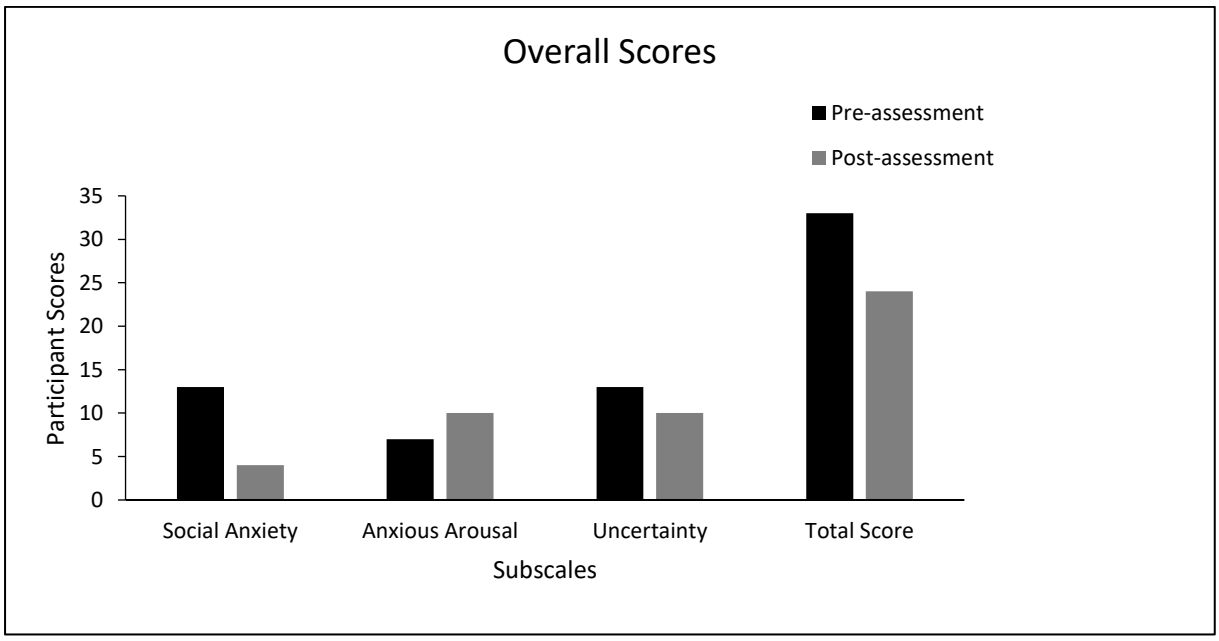

Figure 2. Overall scores for Mary.

Figure 2 shows pre and post ASA-A factor scores for social anxiety, anxious arousal, and uncertainty, as well as an overall score for all subscales. These results suggest that there was reduction in anxiety for Mary, specifically in social anxiety and uncertainty.

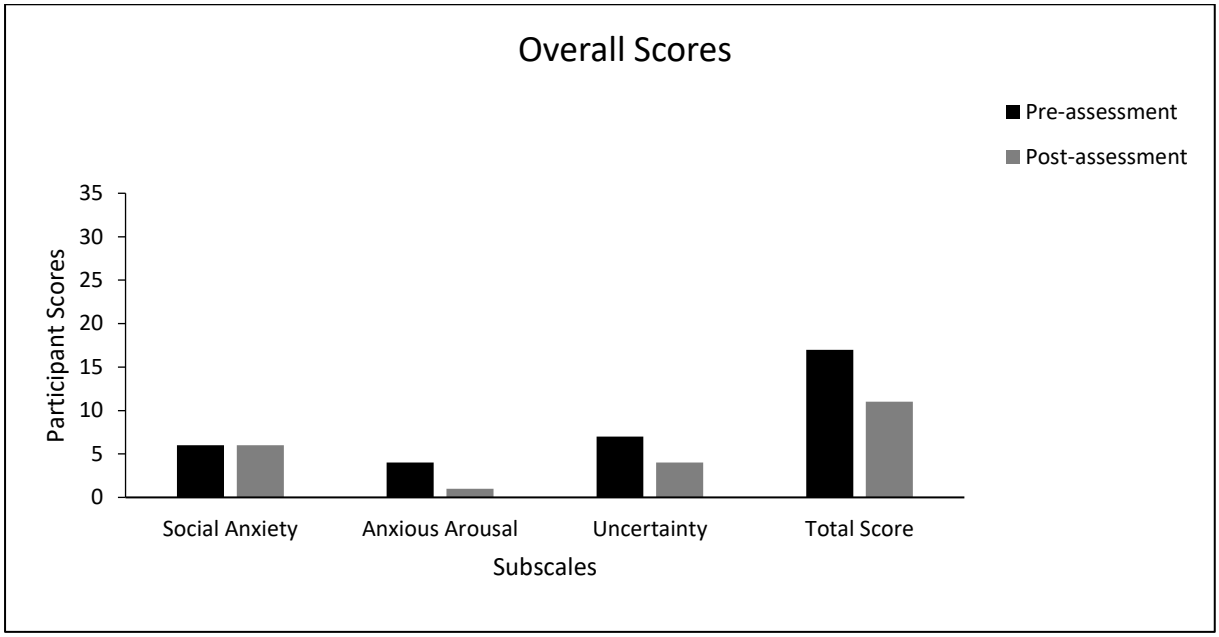

Figure 3. Overall scores for Sarah.

Figure 3 shows pre and post ASA-A factor scores for social anxiety, anxious arousal, and uncertainty for Sarah, as well as an overall score for all subscales. These results suggest that there was an evident reduction in anxiety, specifically in the anxious arousal and uncertainty subscales.

Semi-structured interviews

All participants were asked a series of questions both prior to and following one terms attendance of the facilitated Autism group as part of the semi-structured interviews. Due to Covid-19 disruptions, the impact it had on the group and heightened anxiety levels, only one post-treatment interview was able to be conducted and this was held over the phone. A copy of the semi-structured interview can be found in Appendix C.

If all interviews were able to be completed, I believe that I would have been able to gain a more extensive insight into anxiety reduction and further data regarding the participants' attitudes and whether they changed following regular attendance of a facilitated

Autism group. It is also believed that gathering further feedback from the participants, specifically what they liked and disliked about the group and what they wanted to alter, would improve the group's development and potentially future outcomes.

Interview responses are as follows:

Emily

In the first interview, Emily reported that she experiences anxiety and when asked what typically triggered her anxiety, Emily reported that her triggers were crowds of people, loud noises, bright lights, and new situations. In relation to the Autism group, Emily hoped to learn how to talk to people as well as social and general skills. When asked if she thought attending the Autism group improved or worsened her mental health, she reported that she thought it improved her mental health due to not thinking negatively during this time, as well as that the strategies that she learnt during the group help her at home.

During the second interview, following the completion of the group for the term, Emily reported that she enjoyed getting to see different people and having fun whilst attending as it gave variation to her days. Emily reported that the group was what she expected but that she had not made friends.

When asked about her anxiety, Emily reported that attending the group sometimes made her feel anxious when she was late or not the first in attendance. Emily reported that she believes the group improves her mental health by helping her to be busy and distracting her. When asked what skills she had learnt through attending the Autism group, Emily reported that she had learnt how to communicate with others more appropriately.

Emily's responses indicate that she does experience anxiety and that attending the Autism group occasionally made her feel anxious if she did not arrive early or before the other participants. Emily reported having expanded her skill set as well as that the group improved her mental health, which suggests that regular attendance of an Autism group may be beneficial to mental health.

Mary

Due to Covid-19 disruptions only a pre-treatment interview was conducted. In the interview, Mary identified that she experiences anxiety and when asked what typically caused her to feel anxious, Mary reported that Covid-19 made her feel a little bit anxious. In relation to the Autism group and what she hoped to learn, Mary reported that she wanted to develop

confidence, get better at talking, conversation and develop general life and social skills. When asked if she thinks attending the facilitated group improved or worsened her mental health, she reported that she thought it may be better due to being able to socialise and have person to person contact.

Mary's responses indicate that she does experience anxiety and that Covid-19 often makes her feel anxious. Mary reported that she believes attending the group improves her mental health which suggests that regular attendance of an Autism group may be beneficial to her mental health.

Sarah

Due to Covid-19 disruptions only a pre-treatment interview was conducted. In the interview, Sarah identified that she experienced very minimal anxiety and when asked what typically triggers her anxiety, Sarah reported that having nothing to do, having no support and being by herself triggered anxiety. In relation to the group and what she hoped to learn, she reported that she wanted to make friends and develop coping mechanisms for her bad days. When asked if she believed that attending the facilitated Autism group improves or worsens her mental health, Sarah reported that it improves her mental health due to helping her to develop coping mechanisms for when she is feeling down and increases her opportunities for socialisation.

Sarah's responses indicate that she experiences a minimal amount of anxiety and that having nothing to do and being on her own typically makes her feel anxious. Sarah also reported that she believes attending the group has helped her to develop coping mechanisms and overall, it improves her mental health which suggests that regular attendance of an Autism group may be beneficial to mental health.

Themes

The interview scripts were reviewed in depth, and two themes emerged from the qualitative data across participants.

Desire for more social contact

This theme emerged from the response of all participants. This came up as a theme in relation to an outcome of the facilitated group and why the participants enjoy attending the group. An overall aim of the group is to provide a safe environment where participants can get to know one another, socialise, and have the opportunity to build friendships. Emily

stated that she enjoys the group because she gets along with people, Mary reported that she enjoys listening to others and being able to talk to others and Sarah reported that she enjoys being around others and getting out of the house and not being so lonely. Co-occurring anxiety in Autism is commonly associated with social avoidance and other social difficulties which limits the opportunities for these individuals to practice and apply their social skills. This then leads to minimalised social contact which can result in feelings of loneliness for autistic individuals (Suzuki, Oi, & Inagaki, 2020; White and Roberson-Nay, 2009).

Improving mental health

This theme emerged from responses regarding the Autism group and whether it improves or benefits overall mental health. All participants reported that they either expected or believed the facilitated Autism group improves their overall mental health. An overall aim of the group is to provide the participants with applicable skills which they can apply to several aspects of their lives. When asked how attendance improved mental health, Emily stated “not thinking of negative thoughts and it helps at home using the strategies”. Mary stated, “to socialise and have person to person contact” and Sarah stated, “to socialise and learn coping mechanisms for sad or down feelings”. Mental health disorders are prevalent in autistic youth and treating these disorders, alongside the core symptoms of ASD is crucial. Vasa, Hagopian, and Kalb (2020) highlight the importance of treating mental health disorders in autistic individuals and how identification and treatment of the struggles they face can benefit overall mental health and improve quality of life.

Summary

Overall, the combined responses from the ASC-ASD, ASA-A and semi-structured interviews provide information about experiences of anxiety for all participants. Initial responses gathered at the beginning of research show that all participants reported experiencing anxiety to some extent and that all participants reported that attending the facilitated Autism group improves their overall mental health. The results of the pre-treatment and post-treatment ASC-ASD and ASA-A show at least a slight reduction in anxiety for all participants also. These results suggest that regular attendance of a facilitated Autism group may provide mental health benefits and aid in anxiety reduction.

Discussion

This study made an enquiry into the mental health benefits of attending a facilitated Autism group, using pre and post measures to evaluate anxiety reduction. This study had two aims:

1) To investigate whether attendance at a facilitated Autism group has any significant mental health benefits
2) To evaluate anxiety reduction, if any, using pre and post measures.

As shown in the results of the ASC-ASD and ASA-A, all participants showed a reduction in at least one of the anxiety subscales as well as, in overall score. The results of this study show that regular attendance and participation in a facilitated Autism group can potentially aid in anxiety reduction. There is little research available on widely used effective interventions for reducing anxiety in people with ASD. Previous studies have found various forms of CBT and mindfulness-based interventions be effective and widely used to reduce anxiety in ASD (Sizoo, & Kuiper, 2017; Storch et al. 2015). The findings of this study suggest that facilitated Autism-based groups may reduce anxiety and be an effective intervention for anxiety reduction in autistic individuals, however, overall, the results are inconclusive due to a limited sample size and the inability to gain sufficient data for comparison due to covid-19 disruptions.

According to the results of the semi-structured interviews given at the start of data collection, all participants indicated that the facilitated Autism group improved their general mental health. Themes identified in participant responses were desire for more social contact and improving mental health. For the one participant who was able to complete a post interview, her responses suggest positive outcomes following attendance of the group. The participant stated that she had also expanded her communication skills which helped her to socialise and communicate more appropriately in various environments. As a result, the participant reported that her overall mental health had improved.

Because only one of the three post-interviews was conducted, the amount of data available for comparison was limited. If all interviews had been conducted, it is expected that a better understanding of the participants' experiences, as well as additional information about the impact of attending the programme on anxiety, would have been obtained. These findings suggest that facilitated Autism groups provide preliminary results that suggest that such

groups are able to improve the mental health of their participants and regular attendance may also aid in anxiety reduction. These results would have been strengthened somewhat if a consistent pattern across participants was achieved.

Participant responses to the semi-structured interviews were also not as expected, and despite creating open-ended questions and having built prior rapport with the participants, responses were very short and contained minimal detail. Ideally, I would have liked to gain more in-depth responses to conduct greater comparisons and gain greater insight into the experiences of the participants.

It is important to consider that this research project included vulnerable people who may have communication difficulties as a result of their ASD diagnosis. Individuals with ASD who experience social impairments often struggle with communication and conversational skills (Koegel et al. 2016). Tozer, Atkin, and Wenham (2014) highlight how verbal and written skills are the basis of most academic research, which disadvantages people with communication and cognitive impairments and makes data collection and interpretation much more difficult in research. Therefore, it is possible that participant responses were short and of minimal detail due to impairments in communication and social skills. Afsharnejad et al. (2021) emphasise the importance of wording and administration methods used in self-report measures with autistic people in order to accurately represent their views. Therefore, this suggests that in-depth responses could be obtained in future research if interview questions were tailored to the needs of the individual.

Overall Considerations

Due to the disruptions caused by Covid-19 and the duration of the lockdown that occurred during data collection, minimal data was able to be collected and as a result, participant engagement decreased. Participant engagement likely decreased due to heightened levels of uncertainty and anxiety during this period of time, which meant that alternative forms of communication were not possible, and responses gathered were limited. If all anticipated research activities were able to be undertaken, I hypothesise that further investigations would have been conducted and greater conclusions drawn in regard to participant anxiety and overall participation, allowing for a better understanding of whether attendance at a facilitated Autism group has any significant mental health benefits and reduces anxiety.

Strengths

As reported by the participants throughout their interviews, they believed that the facilitated Autism group provided teachings and learnings which were able to be generalised and used in many different aspects of their lives. While research regarding the teachings and learnings included in Autism based social skills groups is limited (Leaf et al. 2017) this study suggest that skills learnt are of benefit and may be able to be generalised. In the semi-structured interviews conducted, participants commented on their enjoyment of the group in previous terms and the current term so far. The post-treatment interview conducted, reported that expectations were met following the conclusion of the group. This shows that the procedures used to teach the meaningful skills are likely to be used again in the future, supporting the social validity of the Autism group. This also supports previous findings that social skills interventions provide positive results in the development of social skills knowledge (Afsharnejad et al. 2020; Matthews et al. 2018)

Limitations

The Covid-19 lockdown implemented by the NZ government in response to the pandemic was a significant limitation of this research. Participant recruitment was conducted during a time of uncertainty, in which many individuals were instructed to stay home if they were unwell, or at a greater risk. Due to these instructions and high levels of uncertainty caused by the pandemic, a smaller number of individuals did indeed attend the group, resulting in a far smaller sample size than anticipated.

Due to heightened levels of anxiety surrounding Covid-19 at the beginning of data collection, as well as social distancing rules, difficulties arose arranging video observations and ensuring all participants were visible. Three weeks into data collection, Waikato was put into a lockdown which resulted in an immediate stop to the group and my data collection. This resulted in the overall time schedule being reduced and video observations were not able to be collected throughout. Because video observations were not conducted, only pre and post measures were used in this research, limiting findings and conclusions made. Ideally, I would have liked to additionally include a numerical scale as a research activity to regularly gauge participants' experiences and levels of anxiety.

Another limitation occurred as inter-observer agreement was intended to be collected, however, due to not being able to collect all intended data, inter-observer agreement was not

achievable in this research. As anticipated, I would have liked to gain the appropriate data to further conduct inter-observer agreement to enhance data reliability.

Future research

This study represents a preliminary enquiry into the mental health benefits of attending a facilitated Autism group and whether attendance aides in anxiety reduction and in doing so this study has highlighted the potential impact a facilitated Autism group can have on participant mental health outcomes. Future studies should aim to consider the greater needs of persons with ASD and how these needs may implicate data collection during times of uncertainty. In addition, due to the lack of current research in this area, future studies should aim to further investigate facilitated Autism groups for females, especially in regard to mental health and anxiety reduction. This would benefit many females with ASD who experience comorbid mental health disorders.

Conclusion

There are a limited number of studies which support the use of facilitated Autism groups to improve and aid overall mental health. The results of this study provide additional information to support this method, however, in this instance, results are inconclusive due to an insufficient amount of data having been collected. This study does not provide a sufficient amount of data to demonstrate the efficacy of facilitated Autism groups and the mental health impacts they have on females with ASD. However, it is still worthy for further exploration within this subject, with results indicating these methods provided some benefit to the participants involved.

References

Adams, D., Simpson, K., & Keen, D. (2020). Exploring anxiety at home, school, and in the community through self-report from children on the autism spectrum. *Autism Res, 13*(4), 603-614. https://doi.org/ 10.1002/aur.2246

Afsharnejad, B., Falkmer, M., Black, M. H., Alach, T., Lenhard, F., Fridell, A., Coco, C., Milne, K., Chen, N.T.M, Bolte, S., & Girdler, S. (2020). Cross-Cultural Adaption to Australia of the KONTAKT© Social Skills Group Training Program for youth with autism spectrum disorder: A Feasibility Study. *Journal of Autism and Developmental Disorders, 50*(12), 4297-4316.

Afsharnejad, B., Falkmer, M., Picen, T., Black, M. H., Alach, T., Fridell, A., Coco, C., Milne, K., Perry, J., Bolte, S., & Girdler, S. (2021). "I met someone like me!": autistic adolescents and their parents' experience of the KONTAKT social skills group training. *Journal of autism and developmental disorders, 52*(4), 1458-1477. https://doi/org/10.1007/s10803-021-05045-1

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental Disorders: DSM-5* (5th ed.). Arlington, VA: American Psychiatric Association.

Anderson, A. H., Carter, M., & Stephenson, J. (2020). An on-line survey of university students with Autism Spectrum Disorder in Australia and New Zealand: Characteristics, Support Satisfaction and Advocacy. *Journal of Autism and Developmental Disorders, 50*(2), 440-454. https://doi.org/10.1007/s10803-019-04259-8

Barlow, D. H., Durand, V. M., & Hofmann, S. G. (2018). Abnormal Psychology: An Integrative Approach (8th ed.). Cengage Learning.

Barry, T. D., Klinger, L. G., Lee, J. M., Palardy, N., Gilmore, T., & Bodin, S. D. (2003). Examining the Effectiveness of an Outpatient Clinic–Based Social Skills Group for High-Functioning Children with Autism. *Journal of Autism and*

Developmental Disorders, 33(6), 685-701. https://doi.org/10.1023/B:JADD.0000006004.86556.e0

Bemmer, E. R., Boulton, K. A., Thomas, E. E., Larke, B., Lah, S., Hickie, I. B., Guastella, A. J. (2021). Modified CBT for social anxiety and social functioning in young adults with autism spectrum disorder. *Molecular Autism, 12*(1), 1-11. https://doi.org/10.1186/s13229-021-00418-w

Bowden, N., Thabrew, H., Kokaua, J., Audas, R., Milne, B., Smiler, K., Stace, H., Taylor, B., & Gibb, S. (2020). Autism spectrum disorder/Takiwatanga: An integrated data infrastructure-based approach to autism spectrum disorder research in New Zealand. *Autism: the international journal of research and practice, 24*(8), 2213-2227.

Cage, E., Di Monaco, J., & Newell, V. (2018). Experiences of Autism acceptance and mental Health in autistic adults. *Journal of Autism and Developmental Disorders, 48*(2), 473-484. https://doi.org/10.1007/s10803-017-3342-7

Carter, E. W., Common, E. A., Sreckovic, M. A., Huber, H. B., Bottema-Beutel, K., Gustafson, J. R.,Dykstra, J., & Hume, K. (2014). Promoting social competence and peer relationships for adolescents with Autism Spectrum Disorders. *Journal of Remedial and Special Education, 35*(2), 91-101. https://doi.org/10.1177/0741932513514618

Conor, A., Sung, C., Strain, A., Zeng, S., & Fabrizi, S. (2020). Building skills, confidence, and wellness: psychosocial effects of soft skills training for young adults with Autism. *Journal of Autism and Developmental Disorders, 50*(6), 2064-2076. https://doi.org/ 10.1007/s10803-019-03962-w

Cooper, K., Smith, L. G. E., & Russell, A. (2017). Social identity, self-esteem, and mental health in Autism. *European journal of social psychology, 47*(7), 844-854. https://doi.org/10.1002/ejsp.2297

Corona, L. L., Janicki, C., Milgramm, A., & Christodulu, K. V. (2019). Brief Report: Reductions in parenting Stress in the Context of PEERS—A Social Skills Intervention for Adolescents with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, *49*(12), 5073–5077. https://doi.org/10.1007/s10803-019-04201-y

Crane, L., Goddard, L., & Pring, L. (2009). Sensory processing in adults with autism spectrum Disorders. *Autism, 13*(3), 215-228. https://doi.org/10.1177/1362361309103794

Delli, C. K. S., Polychonopoulou, S. A., Kolaitis, G. A., & Antoniou, A. S. G. (2018). Review of Interventions for the management of anxiety symptoms in children with ASD. *Neuroscience and biobehavioral reviews, 95*, 449-463. https://doi.org/10.1016/j.neubiorev.2018.10.023

Den Houting, J., Adams, D., Roberts, J., & Keen, D. (2018). Exploring anxiety symptomatology in school-aged autistic children using an autism-specific assessment. *Research in autism spectrum disorders, 50*, 73-82. http://doi.org/10.1016/j.rasd.2018.03.005

Downes, N., Lichtle, J., Lamore, K., Oreve, M-J., & Cappe, E. (2020). Couples' experiences of Parenting a child after an autism diagnosis: a qualitative study. *Journal of autism and developmental disorders, 51*(8), 2697-2710. http://doi.org/ 10.1007/s10803-020-04744-5

Dreiling, N. G., Cook, M. L., Lamarche, E., & Klinger, L. G. (2021). Mental health project ECHO Autism: Increasing access to community mental health services for autistic individuals. *Autism: the international journal of research and practice,* 136236132110280 – 13623613211028000. https://doi.org/10.1177/13623613211028000

Dundon, R., & Scott, C. (2019). *Teaching Social Skills to Children with Autism using Minecraft: A Step by Step Guide.* Jessica Kingsley Publishers.

Duvekot, J., Ende, J., Verhulst, F. C., & Greaves-Lord, K. (2018). Examining bidirectional effects between the Autism spectrum disorder (ASD) core symptom domains and anxiety in children with ASD. *Journal of child psychology and psychiatry, 59*(3), 277-284. https://doi.org/ 10.1111/jcpp.12829

Eckerd, M. (2020). Detection and Diagnosis of ASD in females. *Journal of health service psychology (online), 46*(1), 37-47. http://doi.org/10.1007/s42843-020-00006-1

Erbas, Y., Ceulemans, E., Boonen, J., Noens, I., & Kuppens, P. (2013). Emotion differentiation in autism spectrum disorder. *Research in Autism Spectrum Disorders, 7*(10), 1221–1227. https://doi.org/10.1016/j.rasd.2013.07.007

Evans, K., van der Meer, L., Eggleston, M. J. F., Taylor, L. J., Thabrew, H., Waddington, H., &Whitehouse, A. J. O. (2021). A survey of autistic adults from New Zealand on the autism diagnostic process during adolescence and adulthood. *Journal of Autism and Developmental Disorders.* https://doi.org/10.1007/s10803-021-04983-0

Eggleston, M. J. F., Thabrew, H., Frampton, C. M. A., Eggleston, K. H. F., & Hennig, S. C. (2019). Obtaining an autism spectrum disorder diagnosis and supports: New Zealand parents' experiences. *Research in Autism Spectrum Disorders, 62,* 18-25. https://doi.org/ 10.1016/j.rasd.2019.02.004

Fodstad, J. C. (2019). Editorial: Special Issue on Mental Health Issues in Autism Spectrum Disorder. *Review Journal of Autism and Developmental Disorders*, *6*(3), 243–245. https://doi.org/10.1007/s40489-019-00178-7

Fombonne, E., MacFarlane, H., & Salem, A. C. (2021). Epidemiological surveys of ASD: advances and remaining challenges. *Journal of autism and developmental disorders, 51*(12), 4271-4290.

Fong, L., Wilgosh, L., & Sobsey, D. (1993). The Experience of Parenting an Adolescent with Autism. *International Journal of Disability, Development and Education, 40*(2), 105-113.

Frith, U., & Happe, F. (2005, October 11). Autism Spectrum Disorder. *Current Biology, 15*(9), R786-R790.

Fuentes, J., Hervas, A., & Howlin, P. (2020). ESCAP practice guidance for autism: a summary of Evidence-based recommendations for diagnosis and treatment. *European child and adolescent psychiatry, 30*(6), 961-984. http://doi.org/10.1007/s00787-020-01587-4

Gates, J. A., Kang, E., & Lerner, M. D. (2017) Efficacy of group social skills interventions for youth With autism spectrum disorder: a systematic review and meta-analysis. *Clinical psychology review, 52*, 164-181. http://doi.org/10.1016/j.cpr.2017.01.006

Gara, S. K., Chhetri, A. G., Montaser, A., Abbasi Sassi, A. A., & Rutkofsky, I. H. (2020). The sensory abnormalities and neuropsychopathology of autism and anxiety. *Cureus, 12*(5) http://dx.doi.org/10.7759/cureus.8071

Gengoux, G. W., Schwartzman, J. M., Milan, M. E., Schuck, R. K., Ruiz, A. A., Weng, Y., Long, J., & Hardan, A. Y. (2021). Enhancing social initiations using naturalistic behavioral intervention: outcomes from a randomised controlled trial for children with autism. *Journal of autism and developmental disorders, 51*(10), 3547-3563. http://doi.org/10.1007/s10803-020-04787-8

Greenlee, J. L., Winter, M. A., & Johnson, M. (2020). Depression symptoms in adolescents with autism spectrum disorder: A contextual approach to mental health comorbidities. *Journal of Adolescence, 85*, 120–125. https://doi.org/10.1016/j.adolescence.2020.10.005

Grossberg, B. N. (2019). *Autism and your teen: tips and strategies for the journey to adulthood.* American Psychological Association.

Happe, F. (2019). What does research tell us about girls on the autism spectrum? In B. Carpenter, F. Happe, & J. Egerton, *Girls and Autism: educational, family and personal perspectives* (1st ed., pp. 10-15). Routledge.

Hasselbusch, A. (2008). New Zealand Autism Spectrum Disorder Guideline. Ministry of Health: NZ.

Honeybourne, V. (2017). *Educating and supporting girls and young women with Asperger's and Autism: a resource for education and health professionals*. Routledge.

Johnco, C., & Storch, E. A. (2015). Anxiety in youth with autism spectrum disorders: implications for treatment. *Expert review of neurotherapeutics, 15*(11), 1343-1352. https://doi.org/10.1586/14737175.2015.1111762

Joshi, G., Wozniak, J., Petty, C., Martelon, M. K., Fried, R., Bolfek, A., Kotte, A., Stevens, J., Furtak, S. L., Bourgeois, M., Caruso, J., Caron, A., & Biederman, J. (2012). Psychiatric comorbidity and functioning in a clinically referred population of adults with autism spectrum disorders: a comparative study. *Journal of autism and developmental disorders, 43*(6), 1314-1325. http://doi.org/10.1007/s10803-012-1679-5

Kaboski, J. R., Diehl, J. J., Beriont, J., Crowell, C. R., Villano, M., Wier, K., & Tang, K. (2014). Brief Report: A Pilot Summer Robotics Camp to Reduce Social Anxiety and Improve Social/Vocational Skills in Adolescents with ASD. *Journal of Autism and Developmental Disorders, (45)*12, 3862-3869.

Karst, J. S., Van Hecke, A. V., Carson, A. M., Stevens, S., Schohl, K., & Dolan, B. (2015). Parent and Family Outcomes of PEERS: A Social Skills Intervention for Adolescents with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders, 45*(3), 752–765. https://doi.org/10.1007/s10803-014-2231-6

Kasilingam, N., Waddington, H., & Van Der Meer, L. (2021). Early intervention for children with Autism Spectrum Disorder in New Zealand: What children get and what parents want. *International journal of disability, development, and education, 68*(4), 521-537. http://doi.org/10.1080/1034912X.2019.16906949

Keefer, A., White, S. W., Vasa, R. A., & Reaven, J. (2018). Psychosocial interventions for internalizing disorders in youth and adults with ASD. *International review of psychiatry, 30*(1), 62-77. https://doi.org/10.1080/09540261.2018.1432575

Kerig, P. K., Ludlow, A., & Wenar, C. (2012). *Developmental Psychopathology* (6th ed.). McGraw-Hill Education.

Kerns, C. M., Kendall, P. C., Berry, L., Souders, M.C., Franklin, M.E., Schultz, R. T., Miller, J., & Herrington, J. (2014). Traditional and Atypical Presentations of Anxiety in Youth with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders, 44*(11), 2851-2861.

Kerns, C. M., Wood, J. J., Kendall, P. C., Renno, P., Crawford, E. A., Mercado, , R. J., Fujii C., Collier, A., Hoff, A., Kagan, E. R., Small, B. J., Lewin, A. B., & Storch, E. A. (2016). The treatment of Anxiety in Autism Spectrum Disorder (TAASD) Study: Rationale, design and methods. *Journal of child and family studies, 25*(6), 1889-1902. https://doi.org/10.1007/s10826-016-0372-2

Koegel, L. K., Ashbaugh, K., Navab, A., & Koegel, R. L. (2016). Improving empathic communication skills in adults with autism spectrum disorder. *Journal of autism and developmental disorders, 46*(), 921-933. https://doi.org/10.1007/s10803-015-2633-0

Kylliainen, A., Hakkinen, S., Eranen, S., Rantanen, K., Ebeling, H., Bolte, S., & Helminen, T. M. (2020). Social competence group intervention (SOCO) for children with autism spectrum disorder: a pilot study. *Scandinavian journal of psychology, 61*(6), 835-845. http://doi.org/10.1111/sjop.12675

LaGasse, A. B. (2014). Effects of a music therapy group intervention on enhancing social skills in Children with autism. *The journal of music therapy*, *51*(3), 250-275. http://doi.org/10.1093/jmt/thu012

Lahiri, D. K., Sokol, D. K., Erickson, C., Ray, B., Ho, C.Y., & Maloney, B. (2013). Autism as early neurodevelopmental disorder: evidence for an sAPPa-mediated anabolic pathway. *Frontiers in Cellular Neuroscience*, *7*(94), 1-13. http://doi.org/10.3389/fncel.2013.00094

Lang, R., Regester, A., Lauderdale, S., Ashbaugh, K., & Haring, A. (2010). Treatment of anxiety in autism spectrum disorders using cognitive behaviour therapy: A systematic review. *Developmental Neurorehabilitation*, *13*(1), 53–63. https://doi.org/10.3109/17518420903236288

Leaf, J. B., Leaf, J. A., Milne, C., Taubman, M., Oppenheim-Leaf, M., Torres, N., Townley- Cochran, D., Leaf, R., McEachin, J., & Yoder, P. (2017). An Evaluation of a Behaviorally Based Social Skills Group for Individuals Diagnosed with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, *47*(2), 243–259. https://doi.org/10.1007/s10803-016-2949-4

Lecavalier, L., Wood, J. J., Halladay, A. K., Jones, N. E., Aman, M. G., Cook, E. H., Handen, B. L., King, B. H., Pearson, D. A., Hallett, V., Sullivan, K. A., Grondhuis, S., Bishop, S. L., Horrigan, J. P., Dawson, G., & Scahill, L. (2014). Measuring Anxiety as a Treatment Endpoint in Youth with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders, 44*(5), 1128–1143. https://doi.org/10.1007/s10803-013-1974-9

Leedham, A., Thompson, A. R., Smith, R., & Freeth, M. (2020). 'I was exhausted trying to figure it out': The experiences of females receiving an autism diagnosis in middle to late adulthood, *Autism: the international journal or research and practice, 24*(1), 135-146. https//doi.org/10.1177/1362361319853442

Lei, J., Sukhodolsky, D. G., Abdullahi, S. M., Braconnier, M. L., & Ventola, P. (2017). Reduced anxiety following Pivotal Response Treatment in young children with autism spectrum disorder. *Research in autism spectrum disorders, 43-44*, 1-7. https://doi.org/10.1016/j.rasd.2017.09.002

Lei, J., & Ventola, P. (2018). Characterising the relationship between theory of mind and anxiety in Children with Autism Spectrum Disorder and typically developing children. *Research in autism spectrum disorders, 49*, 1-12. https://doi.org/10.1016/j.rasd.2018.01.005

Lindsay, S., Hounsell, K. G., & Cassiani, C. (2017). A scoping review of the role of LEGO® therapy for improving inclusion and social skills among children and youth with autism. *Disability and Health Journal, (10)*2, 173-182. https://doi.org/10.1016/j.dhjo.2016.10.010

Lundstrom, S., Marland, C., Kuja-Halkola, R., Anckarsater, H., Lichtenstein, P., Gillberg, C., & Nilsson, T. (2019). Assessing autism in females: the importance of a sex-specific comparison. *Psychiatry Research, 282,* 112566-112566. https://doi.org/10.1016/j.psychres.2019.112566

Maddox, B. B., & White, S. W. (2015). Comorbid Social Anxiety disorder in adults with Autism Spectrum disorder. *Journal of autism and developmental disorders, 45*(12), 3949-3960. https://doi.org/ 10.1007/s10803-015-2531-5

Mademtzi, M., Singh, P., Shic, F., Koenig, K. (2018). Challenges of females with Autism: A parental perspective. *Journal of Autism and Developmental Disorders, 48*(4), 1301-1310. https://doi.org/ 10.1007/s10803-017-3341-8

Marco, E. J., Hinkley, L. B. N., Hill, S. S., & Nagarajan, S. S. (2011). Sensory Processing in Autism: A Review of Neurophysiologic findings. *Journal of Pediatric research, 69*(8), 48-54. https://doi.org/10.1203/PDR.0b013e3182130c54

Matthews, N. L., Orr, B. C., Warriner, K., DeCarlo, M., Sorenson, M., Laflin, J., & Smith, C. J. (2018). Exploring the effectiveness of a peer-mediated model of the PEERS curriculum: a pilot randomized control trial. *Journal of autism and developmental disorders*, *48*(7), 2458-2475. https://doi.org/10.1007/s10803-018-3504-2

McLeod, J. D., Hawbaker, A., & Meanwell, E. (2021). The health of college students on the Autism spectrum as compared to their neurotypical peers. *Autism: the international journal of research and practice*, *25*(3), 719-730. https://doi.org/10.1177/1362361320926070

McNally Keehn, R. H., Lincoln, A.J., Brown, M.Z., & Chavira, D. A. (2013). The coping cat program for children with anxiety and autism spectrum disorder: a pilot randomized controlled trial. *Journal of autism and developmental disorders*, *43*(1), 57-67. https://doi.org/10.1007/s10803-012-1541-9

Ministry of Health. (2021). Anxiety. Ministry of Health- Manatu Hauora. https://www.health.govt.nz/your-health/conditions-and-treatments/mental-health/anxiety

Ministry of Health. (2020). Autism Spectrum Disorder. Ministry of Health- Manatu Hauora. https://www.health.govt.nz/your-health/conditions-and-treatments/disabilities/autism-spectrum-disorder

Ministry of Health New Zealand. (2016). New Zealand Autism Spectrum Disorder Guideline second edition. Ministry of Health. New Zealand Autism Spectrum Disorder Guideline | Ministry of Health NZ

Nathanson, E. W., & Rispoli, K. M. (2022). School psychologists' assessment practices for students with co-occurring anxiety and Autism Spectrum Disorder. *Journal of applied school psychology*, *38*(2), 177-204. http://doi.org/10.1080/15377903.2021.1941468

Nemeh, K. H., & Longe, J. L. (2021). Anxiety. *The Gale Encyclopedia of Science, 1*, 283- 284. Rodgers, J., Farquhar, K., Mason, D., Brice, S., Wigham, S., Ingham, B., Freeston, M., & Parr, J. R. (2020). Development and initial evaluation of the anxiety scale for autism-adults. *Autism in adulthood, 2*(1), 24-33. http://doi.org/10.1089/aut.2019.0044

Pallathra, A. A., Cordero, L., Wong, K., & Brodkin, E. S. (2019). Psychosocial interventions targeting social functioning in adults on the autism spectrum: a literature review. *Current psychiatry reports, 21*(1), 1-11. http://doi.org/10.1007/s11920-019-0989-0

Parr, J. R., Brice, S., Welsh, P., Ingham, B., Le Couteur, A., Evans, G., Monaco, A., Freeston, M., & Rodgers, J. (2020). Treating anxiety in autistic adults: Study protocol for the Personalised Anxiety Treatment-Autism (PAT-A©) pilot randomised controlled feasibility trial. *Trials, 21*(1), 265–265. https://doi.org/10.1186/s13063-020-4161-24

Pasco, G. (2018). The value of early intervention for children with autism. *Paediatrics and child health, 28*(8), 364-367. http://doi.org/10.1016/j.paed.2018.06.001

Perihan, C., Burke, M., Bowman-Perrott, L., Bicer, A., Gallup, J., Thompson, J., & Sallese, M. (2020). Effects of Cognitive Behavioural Therapy for reducing anxiety in children with high functioning ASD: a systematic review and meta-analysis. *Journal of autism and developmental disorders, 50*(6), 1958-1972. https://doi.org/10.1007/s10803-019-03949-7

Picci, G., & Scherf, K. S. (2015). A Two-Hit Model of Autism: Adolescence as the second hit. *Journal of Clinical Psychological Science, 3*(3), 349-371. http://doi.org/10.1177/2167702614540646

Puleo, C. M., & Kendall, P. C. (2011). Anxiety disorders in typically developing youth: Autism Spectrum symptoms as a predictor of cognitive-behavioral treatment. *Journal of autism and developmental disorders, 41*(3), 275-286. https://doi.org/10.1007/s10803-010-1047-2

Rast, J. E., Anderson, K. A., Roux, A. M., & Shattuck, P. T. (2021). Medication used in youth with Autism and Attention-Deficit/Hyperactivity Disorder. *Academic pediatrics, 21*(2), 272-279. https://doi.org/10.1016/j.acap.2020.05.015

Reaven, J., Blakeley-Smith, A., Culhane-Shelburne, K., & Hepburn, S. (2012). Group cognitive behavior therapy for children with high-functioning autism spectrum disorders and anxiety: a randomized trial. *Journal of child psychology and psychiatry, 53*(4), 410-419.

Reichow, B., & Volkmar, F. R. (2009). Social skills interventions for individuals with autism: evaluation for evidence-based practices within a best evidence synthesis framework. *Journal of Autism and Developmental Disorders, 40*(2), 149-166. https://doi.org/10.1007/s10803-009-0842-0

Rodgers, J., & Ofiled, A. (2018). Understanding, recognising, and treating co-occuring anxiety in Autism. *Current developmental disorders reports,* (1), 58-64. https://doi.org/10.1007/s40474-018-0132-7

Rodgers, J., & South, M. (2021). Commentary: Thinking flexibly about mental health and autism – a commentary on Ozsivadjian et al. (2020). *Journal of Child Psychology and Psychiatry, 62*(6), 725–727. https://doi.org/10.1111/jcpp.13340

Rodgers, J., Wigham, S., McConachie, H., Freeston, M., Honey, E., & Parr, J. R. (2016). Development of the anxiety scale for children with autism spectrum disorder (ASC-ASD). *Autism research, 9*(11), 1205-1215. http://doi.org/10.1002/aur.1603

Russell, A. J., Murphy, C. M., Wilson, E., Gillan, N., Brown, C., Robertson, D. M., Craig, M. C., Deeley, Q., Zinkstok, J., Johnston, K., McAlonan, G. M., Spain, D., & Murphy, D. G. (2016). The mental health of individuals referred for assessment of autism spectrum disorder in adulthood: A clinic report. *Autism: The International Journal of Research and Practice, 20*(5), 623–627. https://doi.org/10.1177/1362361315604271

Ryan, C., Coughlan, M., Maher, J., Vicario, P., & Garvey, A. (2020). Perceptions of friendship among girls with Autism Spectrum Disorders. *European journal of special needs education,* 1-15. https://doi.org/10.1080/08856257.2020.1755930

Salem-Guirgis, S., Albaum, C., Tablon, P., Riosa, P. B., Nicholas, D. B., Drmic, I. E., & Weiss, J. A. (2019). MYmind: a concurrent group-based mindfulness intervention for youth with Autism and their parents. *Mindfulness, 10*(9), 1730-1743. http://doi.org/10.1007/s12671-019-01107-9

Schall, C. M., & McDonough, J. T. (2010). Autism spectrum disorders in adolescence and early adulthood: characteristics and issues. *Journal of Vocational Rehabilitation, 32*, 81-88.

Schiltz, H. K., McVey, A. J., Dolan Wozniak, B., Haendel, A. D., Stanley, R., Arias, A., Hecke, A. V. (2021). The role of loneliness as a mediator between autism features and Gordon, N., & Van mental health among autistic young adults. *Autism: the international journal of research and practice, 25*(2), 545-555. http://doi.org/10.1177/1362361320967789

Selles, R. R., & Storch, E. A. (2013). Translation of Anxiety treatment to youth with autism spectrum disorders. *Journal of child and family studies, 22*(3), 405-413. https://doi.org/10.1007/s10826-012-9593-1

Sharma, S. R., Gonda, X., & Tarazi, F. I. (2018). Autism Spectrum Disorder: Classification, diagnosis, and therapy. *Journal of Pharmacology and Therapeutics, 190*, 91-104.

Silveira-Zaldivar, T., Ozerk, G., & Ozerk, K. (2020). Developing social skills and social competence in children with autism. *International electronic journal of elementary education, 13*(3), 341-363. http://doi.org/10.26822/IEJEE.2021.195

Sizoo, B. B., & Kuiper, E. (2017). Cognitive behavioural therapy and mindfulness based stress Reduction may be equally effective in reducing anxiety and depression in adults with autism spectrum disorders. *Research in developmental disabilities, 64*, 47-55. https://doi.org/10.1016/j.ridd.2017.03.004

Smith, I. C., Ollendick, T. H., & White, S. W. (2019). Anxiety moderates the influence of ASD severity on quality of life in adults with ASD. *Research in autism spectrum disorders, 62*, 39-47. https://doi.org/ 10.1016/j.rasd.2019.03.001

South, M., Rodgers, J., & Van Hecke, A. (2017). Anxiety and ASD: current progress and ongoing Challenges. *Journal of Autism and Developmental Disorders, 47*(12), 3679-3681. https://doi.org/10.1007/s10803-017-3322-y.

Spain, D., Blainey, S. H., & Vaillancourt, K. (2017). Group cognitive behaviour therapy (CBT) for social interaction anxiety in adults with autism spectrum disorders (ASD). *Research in autism spectrum disorders, 41-42*, 20-30. https://doi.org/10.1016/j.rasd.2017.07.0054

Spain, D., Sin, J., Linder, K. B., McMahon, J., & Happe, F. (2018). Social anxiety in autism spectrum disorder: a systematic review. *Research in autism spectrum disorders, 52*, 51-68. http://doi.org/10.1016/j.rasd.2018.04.007

Stadnick, N., Chlebowski, C., Baker-Ericzén, M., Dyson, M., Garland, A., & Brookman- Frazee, L. (2017). Psychiatric comorbidity in autism spectrum disorder: Correspondence between mental health clinician report and structured parent interview. *Autism: The International Journal of Research and Practice, 21*(7), 841–851. https://doi.org/10.1177/1362361316654083

Storch, E. A., Lewin, A. B., Collier, A. B., Arnold, E., De Nadai, A. S., Dane, B. F., Nadeau, J. M., Mutch, P. J., & Murphy, T. K. (2015). A randomized controlled trial of cognitive-behavioral therapy versus treatment as usual for adolescents with autism spectrum disorders and comorbid anxiety. *Depression and anxiety*, *32*(3), 174-181. https://doi.org/10.1002/sa.22332

Storch, E. A., Nadeau, J. M., Rudy, B., Collier, A. B., Arnold, E. B., Lewin, A. B., Mutch, P. J., & Murphy, T. K. (2015). A case series of cognitive-behavioral therapy augmentation of antidepressant medication for anxiety in children with autism spectrum disorders. *Children's health care, 44*(2), 183-198. https://doi.org/10.1080/02739615.2014.906310

Stroth, S., Paye, L., Kamp-Becker, I., Wermter, A-K., Krach, S., Paulus, F. M., & Moller- Pinzler, L. (2019). Empathy in females with autism spectrum disorder, *Frontiers in psychiatry, 10,* 428-428. http://doi.org/10.3389/fpsyt.2019.00428

Sturmey, P. (2017). Have a Happy, Fun, Assertive Life! (Avoid Depression, Anxiety, loneliness, and suicide! In J.B Leaf, *Handbook of Social Skills and Autism Spectrum Disorder Assessment, Curricula, and Intervention,* (1st ed., pp. 27-43). Springer International Publishing. https://doi.org/ 10.1007/978-3-319-62995-7

Suckle, E. K. (2021). DSM-5 and challenges to female autism identification, *Journal of autism and developmental disorders, 51*(2). http://doi.org/10.1007/s10803-020-04574-5

Suzuki, K., Oi, Y., & Inagaki, M. (2020). The relationships among autism spectrum disorder: traits, loneliness, and social networking service use in college students. *Journal of autism and developmental disorders, 51*(6), 2047-2056. http://doi.org/10.1007/s10803-020-04701-2

Thabrew, H., & Eggleston, M. (2018). Spectrum of care: current management of childhood autism Spectrum disorder (ASD) in New Zealand. *Australasian Psychiatry: Bulletin of the Royal Australian and New Zealand College of Psychiatrists, 26*(3), 294 - 298.

https://doi.org/10.1177/1039856217716290

Tozer, R., Atkin, K., & Wenham, A. (2014). 'My brother likes meeting new people, but don't ask him any direct questions': involving adults with autism plus learning disability in a qualitative research project. *British journal of learning disabilities, 42*(4), 292-300. http://doi.org/10.1111/bid.12073

Tubio-Fungueirino, M., Cruz, S., Sampaio, A., Carracedo, A., Fernandez-Prieto, M. (2020). Social camouflaging in females with autism spectrum disorder: a systematic review. *Journal of autism and developmental disorders, 51*(7), 2190-2199. http://doi.org/10.1007/s10803-020-04695-x

Tupou, J., Curtis, S., Taare-Smith, D., Glasgow, A., Waddington, H. (2021). Maori and autism: a scoping review. *Autism, 25*(7), 1844-1858. https://doi.org/10.1177/13623613211018649

Turns, B., Ramisch, J., & Whiting, J. (Eds.). (2019). Systemically Treating Autism: A Clinician's Guide for Empowering Families (1st ed.). Routledge. https://doi.org.ezproxy.waikato.ac.nz/10.4324/9781315141831

Van Steensel, F. J. A., Bogels, SM, Magiati, I., & Perrin, S. (2014). Anxiety in individuals with ASD: Prevalence, phenomenology, etiology, assessment and interventions. *Comprehensive guide to Autism*, 601-623. https://doi.org/10.1007/978-1-4614-4788-7_31

Vasa, R. A., Hagopian, L., & Kalb, L. G. (2020). Investigating mental health crisis in youth with autism spectrum disorder. *Autism Research, 13*(1), 112-121.

Weiss, J. A., Viecili, M. A., Sloman, L., & Lunsky, Y. (2013) Direct and indirect psychosocial outcomes For children with autism spectrum disorder and their parents following a parent-involved social skills group intervention. *Journal of the Canadian academy of child and adolescent psychiatry, 22*(4), 303-309.

White, S.W., Koenig, K., & Scahill, L. (2010). Group Social Skills instruction for adolescents with high-functioning Autism Spectrum Disorders. *Focus on Autism and Other Developments, (25)*4, 209-219.

White, S. W., Oswald, D., Ollendick, T., & Scahill, L. (2009). Anxiety in children and adolescents with Autism spectrum disorders. *Clinical Psychology Review, 29*(3), 216-229. https://doi.org/10.1016/j.cpr.2009.01.003

White, S. W., & Roberson-Nay, R. (2009). Anxiety, social deficits, and loneliness in youth with autism spectrum disorders. *Journal of autism and developmental disorders, 39*(7), 1006-1013. http://doi.org/10.1007/s10803-009-0713-8

Wieckowski, A. T., & White, S. W. (2017). Emerging social skills interventions for individuals with Autism. In J.B Leaf, *Handbook of Social Skills and Autism Spectrum Disorder Assessment, Curricula, and Intervention,* (1st ed., pp. 27-43). Springer International Publishing. https://doi.org/ 10.1007/978-3-319-62995-7

Wolstencroft, J., Robinson, L., Srinivasan, R., Kerry, E., Mandy, W., & Skuse, D. (2018). A systematic review of group social skills interventions, and meta-analysis of outcomes, for children with high functioning ASD. *Journal of Autism and developmental disorders, 48*(7), 2293-2307. http://doi.org/10.1007/s10803-018-3485-1

Wood, J. J., & Gadow, K. D. (2010). Exploring the nature and function of anxiety in youth with Autism Spectrum Disorders. *Clinical Psychology, 17*(4), 281-292. https://doi.org/10.1111/j.1468-2850.2010.01220.x

Appendix A – Information and consent forms

Ψ **School of Psychology**

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

Associate Professor Angelika Anderson
School of Psychology, Waikato University
Phone: [redacted]
Email: [redacted]

Ashli Macdonald
Student Researcher
Phone: [redacted]
Email: [redacted]

CLIENT PARTICIPANT INFORMATION SHEET

To whom it may concern,

You are invited to participate in a research project conducted by Ashli Macdonald, with Associate Professor Angelika Anderson from the School of Psychology at the University of Waikato. This project is part of the requirement for the completion of Ashli's Master of Applied Psychology in Behaviour Analysis at the University of Waikato and is sponsored by the university. Please read this information sheet in full. If you would like further information about the project, please contact Associate Professor Anderson via the contact details above or [redacted] on either [redacted] or [redacted].

What is the aim of the research?
This research aims to make an enquiry into the mental health benefits of attending an Autism group facilitated by [redacted], using pre and post measures to evaluate anxiety reduction.

1. To evaluate whether attendance of the [redacted] group reduces anxiety using pre and post questionnaires.
2. To investigate mental health benefits associated with attending [redacted], if any.
3. To investigate the participants' own experience of the group and the impact they believe the group has on their anxiety.

Who will the participants be?
To be recruited for this research, the client participant must meet the following inclusion criteria:

- Regularly attends the [redacted] programme.
- Has a diagnosis of Autism Spectrum Disorder

What will the participants have to do?

Following gaining informed consent, activities participants will engage in are:

- Complete a self-reported anxiety questionnaire as pre and post measures.
- Partake in video observations in the group's natural environment: recording behaviour throughout the duration of the programme.
- Participate in semi-structured interviews regarding their personal experience of the group and the impact attendance has on their anxiety.

It is expected that total participation will be 10-12 weeks.

Results: What are the expected benefits to the participants?
The client participant will benefit from increasing their knowledge base around the benefits of attending the [redacted] programme in relation to their mental health and it is likely they will gain increasing knowledge about their own mental health also. It is predicted that their participation will provide a greater benefit to [redacted] through the development of an evaluative tool, and the possible improvement of services. Results will be presented within my master's thesis. It is also possible that results will be published in a journal article and/or presented at a conference. A summary of the results can be forwarded to the any interested participant on request, as can a copy of any published journal articles. Please contact the researchers if you would like to see a copy of the results.

Confidentiality
Participation in this project will remain confidential and no identifying information will be disclosed to anyone outside of the study. Codes and pseudonyms will be assigned to all participants to ensure no data can be traced back to any participants. The participants will not be identifiable in the presentation of any results.

Storage of data
Data will be stored on password protected devices with virus protection throughout this project and data will be backed up regularly to an external hard drive to ensure data is not lost. On completion of my thesis all data will be given to my supervisor, [redacted], to be stored on a password-protected university drive for five years. Only [redacted] and I will have access to the data at any time. After five years the data will be destroyed by deleting the electronic files.

Right to withdraw
Participation in this project is voluntary and participants are under no obligation to give consent to participate. All participants have the right to withdraw from the project at any time, for any reason, and with no consequence up until two weeks after data collection is complete.

If at any time you would like to withdraw, you may contact [redacted] or [redacted].

What happens now?

If you want to participate in the study, please complete and sign the attached consent form and return it to me. If you have any questions regarding the project, please contact either [redacted] or [redacted].

Yours Sincerely,

Ashli Macdonald and [redacted]

This research project has been approved by the Human Research Ethics Committee of the University of Waikato. Any questions about the ethical conduct of this research may be sent to the Secretary of the Committee, email humanethics@waikato.ac.nz, postal address, Gate 1, Knighton Road, Te Kura Kete Aronui, University of Waikato, Te Whare Wananga o Waikato, Private Bag 3105, Hamilton

School of Psychology
Associate Professor Angelika Anderson
School of Psychology, Waikato University
Phone: [redacted]
Email: [redacted]

Ashli Macdonald
Student Researcher
Phone: [redacted]
Email: [redacted]

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

PARENT/ CAREGIVER INFORMATION SHEET

Dear Parents/Guardians,

Your child has been invited to participate in a research project conducted by Ashli Macdonald, with Associate Professor Angelika Anderson from the School of Psychology at the University of Waikato. This project is part of the requirement for the completion of Ashli's Master of Applied Psychology in Behaviour Analysis at the University of Waikato and is sponsored by the university. Please read this information sheet in full. If you would like further information about the project, please contact Associate Professor Anderson via the contact details above or [redacted] on either [redacted]

What is the aim of the research?
This research aims to make an enquiry into the mental health benefits of attending an Autism group facilitated by [redacted], using pre and post measures to evaluate anxiety reduction.

1. To evaluate whether attendance of the [redacted] group reduces anxiety using pre and post questionnaires.
2. To investigate mental health benefits associated with attending [redacted], if any.
3. To investigate the participants, own experience of the group and the impact they believe this group has on their anxiety.

Who will the participants be?
To be recruited for this research, the client participant would have met the following inclusion criteria:

- Regularly attends the [redacted] programme.
- Has a diagnosis of Autism Spectrum Disorder

What will the participants have to do?
Following gaining informed consent, activities participants will engage in are:

- Complete a self-reported anxiety questionnaire as pre and post measures.
- Partake in video observations in the group's natural environment: recording behaviour throughout the duration of the programme.

- Participate in semi-structured interviews regarding their personal experience of the group and the impact attendance has on their anxiety.

It is expected that total participation will be 10-12 weeks.

Results: What are the expected benefits to the participants?
The client participant will benefit from increasing their knowledge base around the benefits of attending the [redacted] programme in relation to their mental health and it is likely they will gain increasing knowledge about their own mental health also. It is predicted that their participation will provide a greater benefit to [redacted] through the development of an evaluative tool, and the possible improvement of services. Results will be presented within my master's thesis. It is also possible that results will be published in a journal article and/or presented at a conference. A summary of the results can be forwarded to the any interested participant on request, as can a copy of any published journal articles. Please contact the researchers if you would like to see a copy of the results

Confidentiality
Participation in this project will remain confidential and no identifying information will be disclosed to anyone outside of the study. Codes and pseudonyms will be assigned to all participants to ensure no data can be traced back to any participants. Neither the care facility nor participants will be identifiable in the presentation of any results.

Storage of data
Data will be stored on password protected devices with virus protection throughout this project and data will be backed up regularly to an external hard drive to ensure data is not lost. On completion of my thesis all data will be given to my supervisor, [redacted], to be stored on a password-protected university drive for five years. Only [redacted] and I will have access to the data at any time. After five years the data will be destroyed by deleting the electronic files.

Right to withdraw
Participation in this project is voluntary and participants are under no obligation to give consent to participate. All participants have the right to withdraw from the project at any time, for any reason, and with no consequence up until two weeks after data collection is complete.

If at any time you would like to withdraw, you may contact [redacted] or [redacted].

What happens now?
If you want to participate in the study, please complete and sign the attached consent form and return it to me. If you have any questions regarding the project, please contact either [redacted] or [redacted]

Yours Sincerely,

Ashli Macdonald and [redacted]

This research project has been approved by the Human Research Ethics Committee of the University of Waikato. Any questions about the ethical conduct of this research may be sent to the Secretary of the Committee, email humanethics@waikato.ac.nz, postal address, Gate 1, Knighton Road, Te Kura Kete Aronui, University of Waikato, Te Whare Wananga o Waikato, Private Bag 3105, Hamilton

Ψ School of Psychology

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

Associate Professor Angelika Anderson
School of Psychology, Waikato University
Phone: [redacted]
Email: [redacted]

Ashli Macdonald
Student Researcher
Phone: [redacted]
Email: [redacted]

CLIENT PARTICIPANT ASSENT INFORMATION SHEET

To whom it may concern,

You are invited to take part in a research project conducted by Ashli Macdonald, with Associate Professor Angelika Anderson from the School of Psychology at the University of Waikato. This project is part of the requirement for the completion of Ashli's Master of Applied Psychology in Behaviour Analysis at the University of Waikato and is sponsored by the university. Please read all of this information sheet. If you would like more information about the project, please contact [redacted] via the contact details above or [redacted] on either [redacted] or [redacted].

What is the aim of the research?
This research wants to find out about the mental health benefits of attending an Autism group facilitated by [redacted], using pre and post measures to evaluate anxiety reduction.

1. To find out if the [redacted] group helps girls feel less anxious, using pre and post questionnaires.
2. To find out about other mental health benefits of attending [redacted]
3. To find out about your own experience of the group and the effect you think the group has on your anxiety.

Who will the participants be?
To take part in this research, you need to:

- Regularly attends the [redacted] programme.
- Have a diagnosis of Autism Spectrum Disorder

What will the participants have to do?
After gaining informed consent, activities you will:

- Fill in a self-reported anxiety questionnaire at the start and end of the programme.

- Have Videos recorded in the group's natural environment to record behaviour.
- Have Semi-structured interviews about how you find the group and the effect taking part has on your anxiety.

We think this project will last 10-12 weeks.

Results: What are the expected benefits to the participants?
We hope you will benefit because we will know more about how attending the [redacted] programme affects your mental health. You may also learn more about your own mental health. We think that your participation will help [redacted] develop an evaluative tool, and improvement their services. Results will be presented within my master's thesis. It is also possible that results will be published in a journal article and/or presented at a conference. A summary of the results can be forwarded to the any interested participant on request, as can a copy of any published journal articles. Please contact the researchers if you would like to see a copy of the results.

Confidentiality
Participation in this project will remain confidential and no one outside of the project will find out about your part in it. Codes will be used to make sure no data can be traced back to the participants. You will not be identifiable in the presentation of any results.

Storage of data
Data will be stored on password protected devices with virus protection and data will be backed up regularly to an external hard drive to ensure data is not lost. On completion of my thesis all data will be given to my supervisor, [redacted], to be stored on a password-protected university drive for five years. Only [redacted] and I will have access to the data at any time. After five years the data will be destroyed by deleting the electronic files.

Right to withdraw
Participation in this project is voluntary and you do not have to agree to take part. All participants have the right to stop being part of this project at any time, until two weeks after data collection is complete, for any reason. No one will be upset with you.

If at any time you would like to stop, you may contact [redacted] or [redacted].

What happens now?
If you want to join in the study, please complete and sign the attached assent form and return it to me. If you have any questions about the project, please contact either [redacted] or [redacted].

Yours Sincerely,

Ashli Macdonald and [redacted]

This research project has been approved by the Human Research Ethics Committee of the University of Waikato. Any questions about the ethical conduct of this research may be sent to the Secretary of the Committee, email humanethics@waikato.ac.nz, postal address, Gate 1, Knighton Road, Te Kura Kete Aronui, University of Waikato, Te Whare Wananga o Waikato, Private Bag 3105, Hamilton

Note: Some information in these forms has been covered as it provides personal information which may identify participants or the local organisation involved.

Ψ School of Psychology

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

Client participant CONSENT FORM

Please retain a copy of this form for your personal records.

Research Project: An enquiry into the mental health benefits of attending an Autism group facilitated by [redacted] using pre and post measures to evaluate anxiety reduction.

Name of participant: _____

I have received a copy of the Information Sheet describing the research project and have been given sufficient time to read it. Any questions that I have, relating to the research, have been answered to my satisfaction. I understand that I can ask further questions about the research at any time during my participation, and that I can withdraw my participation at any time.

I understand that I can ask to have the observations stopped at any time.

When I sign this consent form, I will retain ownership of the collected data, but I give consent for the researcher to use the data for the purposes of the research outlined in the Information Sheet.

I understand that my identity will remain confidential in the presentation of the research findings.

Please complete the following checklist. Tick (✓) the appropriate box for each point.	**YES**	**NO**
1. I have read the Participant Information Sheet (or it has been read to me) and I understand it.		
2. I have been given sufficient time to consider whether or not to participate in this study.		
3. I am satisfied with the answers I have been given regarding the study and I have a copy of this consent form and information sheet		
4. I understand that taking part in this study is voluntary (my choice) and that I may withdraw from this study at any time without penalty		
5. I have the right to decline to participate in any part of the research activity		
6. I know who to contact if I have any questions about the study in general.		
7. I understand that the information supplied by me could be used in future academic publications.		
8. I consent to participating in video recordings of behaviour while participating in the [redacted] programme.		
9. I understand that participation in this study is confidential and that no material, which could identify them personally, will be used in any reports on this study.		
10. I wish to receive a copy of the findings		

Participant:	_____	Researcher:	_____
Signature:	_____	Signature:	_____
Date:	_____	Date:	_____
Contact Details:	_____	Contact Details:	_____
	_____		_____

Ψ School of Psychology

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

Parent/ Caregiver CONSENT FORM

Please retain a copy of this form for your personal records.

Research Project: An enquiry into the mental health benefits of attending an Autism group facilitated by [redacted] using pre and post measures to evaluate anxiety reduction.

Name of participant: _____

I have received a copy of the Information Sheet describing the research project and have been given sufficient time to read it. Any questions that I have, relating to the research, have been answered to my satisfaction. I understand that I can ask further questions about the research at any time during my participation, and that I can withdraw my participation at any time.

I understand that I can ask to have the observations stopped at any time.

When I sign this consent form, I will retain ownership of the collected data, but I give consent for the researcher to use the data for the purposes of the research outlined in the Information Sheet.

I understand that my identity will remain confidential in the presentation of the research findings.

Please complete the following checklist. Tick (✓) the appropriate box for each point.	**YES**	**NO**
1. I have read the Participant Information Sheet (or it has been read to me) and I understand it.		
2. I have been given sufficient time to consider whether or not to consent for _____ to participate in this study.		
3. I am satisfied with the answers I have been given regarding the study and I have a copy of this consent form and information sheet		
4. I understand that taking part in this study is voluntary (my choice) and that I may withdraw _____ from the study at any time without penalty		
5. I have the right to decline for _____ to participate in any part of the research activity		
6. I know who to contact if I have any questions about the study in general.		
7. I understand that the information supplied by me could be used in future academic publications.		
8. I consent to_____ participating in video recordings of behaviour while participating in the [redacted] programme.		
9. I understand that participation in this study is confidential and that no material, which could identify them personally, will be used in any reports on this study.		
10. I wish to have my face blocked out in video recordings.		
11. I wish to receive a copy of the findings		

Participant:	_____	Researcher:	_____
Signature:	_____	Signature:	_____
Date:	_____	Date:	_____
Contact Details:	_____	Contact Details:	_____
	_____		_____

Appendix B – Assent form

Ψ School of Psychology

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

Client participant ASSENT FORM

Please retain a copy of this form for your personal records.

Research Project: An enquiry into the mental health benefits of attending an Autism group facilitated by [redacted], using pre and post measures to evaluate anxiety reduction.

.

Name of participant: _____

I have a copy of the Information Sheet describing the research project and have been given enough time to read it, or have it read to me. Questions I had about the research, have been answered. I know that I can ask more questions about the research at any time, and that I can stop taking part at any time.
I know that I can ask to have the observations stopped at any time.
When I sign this assent form, I will still own the collected data, but it's ok for the researcher to use the data for the their research as in the Information Sheet.
I know that my identity will stay confidential in any reports.

Please complete the following checklist. Tick (✓) the appropriate box for each point.	**YES**	**NO**
1. I have read the Participant Information Sheet (or it has been read to me) and I understand it.		
2. I have been given enough time to think about whether or not to assent to participate in this study.		
3. I am satisfied with the answers I have been given about the study and I have a copy of this consent form and information sheet		
4. I know that taking part in this study is my choice, and that I may stop at any time without penalty		
5. I have the right to not participate in any part of the research		
6. I know who to contact if I have any questions about the study in general.		
7. I know that the information supplied by me could be used in future academic publications.		
8. I assent to being video recorded in training and generalisation sessions		
9. I know that taking part in this study is confidential and that no material, which could identify me personally, will be used in any reports on this study.		
10. I wish to have my face blocked out in video recordings.		
11. I wish to receive a copy of the findings		

Caregiver:	_____	Researcher:	_____
Signature:	_____	Signature:	_____
Date:	_____	Date:	_____
Contact Details:	_____	Contact Details:	_____
	_____		_____

Appendix C – Semi-structured interview questions

Ψ School of Psychology

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

Semi-structured Interview Questions

1. What do you expect to get out of attending the [redacted] programme?
    - Do you expect to learn anything in particular?
    - Follow up question: Did you get what you were expecting out of the programme this term?
2. What do you enjoy about the [redacted] programme?
    - Why do you enjoy these things?
    - Have you made any new friends?
3. What do you not enjoy about the [redacted] programme?
    - Is there any particular reason why you do not enjoy these things?
4. Is there anything you would change about the programme?
    - If so, what?
5. Do you experience anxiety?
    - What typically causes you to feel anxious?
    - Does attending the [redacted] programme make you feel anxious?
6. Do you think attending [redacted] improves or worsens your mental health?
    - How?
7. What skills have you learnt through attending [redacted]?
    - Prompt for personal, social, relationship and life skills