

**AUTISTIC YOUTHS' EXPERIENCES WITH EMERGENCY REMOTE
LEARNING DURING COVID-19: A PERSPECTIVE ON WELL-BEING**

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DURING COVID-19: A PERSPECTIVE ON WELL-BEING

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DEDICATION

To the families who generously shared their time and experiences with me, without whom this study would not have been possible.

ABSTRACT

School closures due to the COVID-19 pandemic resulted in a shift to emergency remote learning, particularly affecting autistic students who experienced disruptions to school-based supports and social interactions. This mixed-methods study explored the experiences and perceptions of autistic youths and their mothers of emergency remote learning during the first several months of the COVID-19 pandemic (March to June 2020), with a focus on well-being. Data was gathered from nine autistic youth (ages 10 to 17), alongside their mothers, through questionnaires and semi-structured interviews. Autistic youths and their mothers reported that remote schooling came with a spectrum of benefits and challenges. The youths' experiences of remote schooling are described through three common themes: (1) social, (2) emotional, and (3) academic. In considering the interactions between the youth and their context, their challenges of remote schooling seemed to be influenced by the anxiety levels, severity of social responsiveness restrictions, and their comfort with technology. Limited social opportunities, teaching supports, and classroom structure seemed to negatively impact the youths' well-being and supportive relationships. The use of technology did not substitute in-person social interactions during remote schooling, but did offer youths an alternative approach for connecting with others. Professionals who work with autistic youths may benefit from understanding their remote schooling experiences using a thriving framework to better support their social, emotional, and educational needs during the recovery from the pandemic and beyond.

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LIST OF ABBREVIATIONS

ASC-ASD	Anxiety Scale for Children – Autism Spectrum Disorder
ASD	Autism Spectrum Disorder
COVID-19	Coronavirus Pandemic
SRS-2	Social Responsiveness Scale, Second Edition

CHAPTER 1: Introduction

The shift to emergency remote learning during the pandemic affected many students, but the interruptions of school-based supports and engagement opportunities that came with the pandemic were particularly challenging for students with autism spectrum disorder (ASD; Aishworiya & Kang, 2020; Ashbury et al., 2020; Eshraghi et al., 2020). Separation from school was difficult in part because school is where these students find opportunities to develop social and communication skills (Santillan et al., 2019; Stenhoff et al., 2020), skills that are crucial for the well-being of autistic youths (Danker et al., 2019a). Autistic youths often seek social engagement but may not have the skills and practice needed to successfully do so (Santillan et al., 2019). The magnitude of social changes associated with the pandemic presented additional challenges for autistic people because of co-morbid conditions, such as anxiety (Asbury et al., 2020; Eshraghi et al., 2020). Since so much social learning happens in school spaces, the current study is designed to explore how shifting to an online mode of class delivery impacted their social engagement and well-being.

Utilizing a strength-based approach to understanding well-being (framework of thriving) of autistic youth is important for understanding their lived experiences and the factors that support successful lives. Research on the lived experiences of autistic people has historically taken a deficits-based approach by focusing on problem areas and the remediation of the associated negative effects (Weiss & Burnham Riosa, 2015). A solely deficit-framed perspective often fails to recognize the strengths associated with ASD and the overall well-being of autistic youths (Brown et al., 2021). There is a role for positive psychology in looking beyond deficiencies in individuals and placing focus on the characteristics of well-being and contexts that foster thriving (Burnham Riosa et al., 2017; Weiss & Burnham Riosa, 2015). Although

research has typically viewed autistic youth from a problem-centred lens (Burnham Riosa et al., 2017), the construct of thriving among this population is a growing area of interest (Weiss & Burnham Riosa, 2015).

Several studies on autism during COVID-19 focused on families' perceptions, mental health, and experiences managing at-home education (degli Espinosa et al., 2020; Dhiman et al., 2020; Manning et al., 2020; Majoko & Dudu, 2020). Research has also outlined the vulnerabilities of autistic youth, alongside the challenges experienced due to COVID-19 and subsequent school closures, however many of the consequences of these challenges have yet to be explored (Eshraghi et al., 2020; Narzisi, 2020; Stenhoff et al., 2020). Stenhoff and colleagues (2020) conducted a review on supports for autistic students during distance education, but much remains to be known about how their use of technology affected social engagement.

Given the gaps in the literature on the perceptions of autistic youth, this study aims to explore the experiences and perceptions of autistic youths and their parents of emergency remote learning during the first few months of the pandemic, with a focus on well-being. Moreover, since school closures due to pandemics and other factors should be expected in the future (Stenhoff et al., 2020), this study may provide insights on the possible facilitative effects of technology during online learning to help determine the practicality of this delivery method.

Purpose

The current study aims to explore the experiences and perceptions of autistic youth and their mothers of emergency remote learning during COVID-19 from March to June 2020, in relation to their well-being. Specifically, this study investigates the social engagement of autistic youth while using technology during emergency remote learning, with consideration of their social responsiveness, anxiety, and comfort with technology. The study explores how supportive

relationships, particularly non-familial relationships, were affected by the shift from in-person instruction to online learning during COVID-19, with respect to the well-being of autistic youth.

The current study is framed by the following research questions:

- 1). How do the autistic youths and their parents conceptualize the youths' sense of well-being during emergency remote learning?
- 2). To what extent did the youths' anxiety, social responsiveness, and comfort with technology affect their experiences during emergency remote learning?
- 3). How do autistic youths and their parents describe the experience of emergency remote learning during the first several months of the pandemic?

CHAPTER 2: Literature Review

In March 2020, the World Health Organization declared COVID-19 as a pandemic (World Health Organization [WHO], 2020). In British Columbia, the Provincial Health Officer advised the Ministry of Education to suspend in-class instruction for K-12 students as a proactive measure (Dove et al., 2020). The Chief Medical Officer in Alberta implemented a similar public health order that led to province-wide school closures for K-12 students (Alberta Health, 2020). Across the nation, and beyond, schools moved to online delivery methods. According to the United Nations (2020), children with disabilities that depend on face-to-face services are the least likely to benefit from the online delivery methods (United Nations [UN], 2020). Indeed, for the 80% of students with special education needs that relied on school-based services (Masonbrink & Hurley, 2020), the abrupt shift to distance education was a big change. For many autistic students, online delivery limited the benefits they usually receive from a school space, such as social participation, a sense of community, and direct support from teachers.

Autism Spectrum Disorder

Diagnostic Criteria

According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5; American Psychiatric Association [APA], 2013), the first core diagnostic criterion of ASD relates to persistent deficits in social communication and social interaction. Difficulties are experienced across multiple contexts and are identified by impairments in social-emotional reciprocity; non-verbal communication; and developing, maintaining, and understanding relationships (APA, 2013). The social functioning domain is very heterogeneous in ASD; deficits in social communication vary according to individual factors, such as age (Bottema-Beutel & Frisch, 2020). Autistic individuals tend to have difficulty imitating others, which is an important

skill for success in early social interactions (Heimann et al., 2016; Taylan et al., 2021). Autistic children may have unusual gaze patterns and use limited eye contact, which can make it challenging for them to interpret nonverbal cues (Bottema-Beutel & Frisch, 2020; Jones et al., 2017). Autistic children may also find it difficult to engage in pretend play and cooperative play with peers, which can impact the development of relationships appropriate to their developmental level (Lin et al., 2017; Doernberg et al., 2021). The ability to understand social and emotional behaviours tends to be limited in autistic children, so they may face difficulties understanding the thoughts, feelings, and desires of others (Dijkhuis et al., 2019).

The second core diagnostic criterion of ASD relates to restrictive, repetitive patterns of behaviour, interests, or activities (APA, 2013). In this domain, at least two of the following four characteristics outlined must be present: (a) stereotyped or repetitive motor mannerisms, use of objects, or speech (e.g., basic motor stereotypies, idiosyncratic language); (b) insistence on sameness, inflexible adherence to specific procedures, routine patterns of verbal or nonverbal behaviour (e.g., distress at minor changes, difficulty with transitions, rigid thinking patterns); (c) restrictive, fixated interests abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects, extremely circumscribed or perseverative interests); and (d) hyper-reactivity or hypo-reactivity with sensory inputs (e.g., adverse reaction to certain sounds of textures, excessively smelling or touching objects). Though typically developing children also exhibit restricted and repetitive behaviours, these behaviours tend to be more frequent and severe during development for autistic children (Berry et al., 2018). The characteristics of ASD can differ depending on the severity of symptoms, developmental level, and age, therefore the DSM-5 uses specifiers to report individual characteristics during diagnosis (APA, 2013). The DSM-5 also uses severity level ratings (level 1, level 2, level 3) for social communication characteristics

and restricted, repetitive behaviour during diagnosis to indicate the level of support the individual requires.

There has been a shift in terminology in autism research from person-first language (i.e., person with autism) to identity-first language (i.e., autistic person) to describe individuals with an ASD diagnosis (Bury et al., 2020). Identity-first language acknowledges that autism is a central feature that cannot be separated from the person, whereas person-first language may perpetuate societal stigma that the diagnosis is an undesirable attribute (Vivanti, 2020). To recognize and place value on the diagnosis that is central to the identity of individuals with an ASD diagnosis (Bury et al., 2020), this paper uses identity-first language.

Functioning in ASD

Cognitive deficits are not a part of the diagnostic criteria for ASD, but impairments in intellectual or adaptive functioning may be co-morbidities (APA, 2013; Bishop-Fitzpatrick et al., 2017). The presentation of ASD may come along with significant cognitive impairments and also above-average IQ levels, so considerations of intellectual functioning are helpful when determining supports for individuals (Nowell et al., 2017a). Autistic individuals may have difficulties with conceptual thinking, in comparison to concrete tasks (Constable et al., 2018). Autistic individuals may also experience deficits in memory and imitation, which are basic processes that facilitate learning (Habib et al., 2019; McAuliffe et al., 2020).

Adaptive functioning involves age-related skills that facilitate independence and competence when interacting with the world (Uljarević et al., 2018). For example, autistic children may exhibit impairments in adaptive functioning skills, including difficulties with daily living skills (Lee et al., 2020). The deficits in adaptive skills have been recognized across the life span of autistic individuals irrespective of intellectual functioning (Uljarević et al., 2018).

Interventions for autistic children tend to be developed to prioritize adaptive skills, since adaptive functioning is critical in navigating one's environment (Lee et al., 2020).

ASD may be accompanied with a range of associated difficulties (Posserud et al., 2018), such as motor difficulties (Licari et al., 2020), challenging and disruptive behaviours (Rattaz et al., 2018), and medical problems including epilepsy, gastrointestinal problems, and sleep problems (Tye et al., 2019). The psychiatric conditions that commonly co-occur with ASD include anxiety disorder, attention deficit hyperactivity disorder, depression, and oppositional defiant disorder (Rosen et al., 2018). Autistic youth may experience increased anxiety problems as they become aware of their social difficulties and increased demands to fit in (van Steensel & Heeman, 2017). Youths tend to avoid social interactions if they feel anxious, further limiting opportunities for autistic individuals to develop social skills (Spain et al., 2017). The academic performance of autistic students may also be impacted by anxiety problems (Syriopoulou-Delli et al., 2019).

Adolescence

Adolescence is characterized as a dynamic period of physical and psychological development (Özdemir et al., 2016). During the transition into adolescence, youths begin shifting their focus from their family to friends and social groups (Özdemir et al., 2016). In addition to peer relationships becoming more salient during adolescence, youths begin to develop more complex peer relations (e.g., romantic relationships, Connolly et al., 2014) and tend to place increased value on their peers' expectations and opinions (Brown & Larson, 2009). Friendships become more stable throughout adolescence as youths are able to maintain intimate and exclusive friendships (Branje et al., 2007; Kerig et al., 2011).

Adolescence is also a time of identity exploration. During adolescence, individuals begin to identify the characteristics that represent their sense of self, as they discover who they are and how they fit in the world (Steinberg & Morris, 2001). Identity formation (e.g., forming a clear sense of personal identity) is a central developmental task in adolescence, as described by Erickson's (1993) psychosocial development theory. The various biological, cognitive, and social changes during adolescence encourage youths to reflect on themselves and who they would like to become (Crocetti, 2017). Youths that are unable to establish a sense of self by exploring identity alternatives may be left in a state of confusion (i.e., role confusion; Crocetti, 2017; Erickson, 1993). Marcia (1966) elaborated on Erickson's theory through the identity status model, which suggests two processes of identity formation: exploration (consider various identity alternatives) and commitment (select alternatives and engage in relevant activities). Youth that are successful in the commitment process tend to report high levels of well-being (Crocetti, 2017; Karas et al., 2015).

Social Engagement in School

Inclusive classrooms are important for the social engagement of autistic youths because classrooms are where autistic youth spent the most time with peers and familiar adults (Garrad et al., 2019; Meindl et al., 2020; Stevens & Wurf, 2020). Yet, physical proximity to peers in classrooms itself is not enough to improve social engagement among autistic students (Sreckovic et al., 2017). Without purposeful interventions, autistic students are often peripheral in their classroom social networks and are less connected to the classroom social network compared to their typically developing peers (Santillan et al., 2019). Autistic students may experience increased peer rejection and bullying because their typically developing peers view their behaviours to be odd (Kapp, 2018).

Social Participation

Social participation is described as engagement in activities that allow individuals to have meaningful interactions with others (Germani et al., 2017; Taheri et al., 2016) and is an important predictor of physical and mental well-being (Ghanouni et al., 2019). Social participation provides opportunities for the formation of friendships, in both unstructured events (e.g., volitional time with friends) or structured events (e.g., formal social events) (Taylor et al., 2017). Though schools provide opportunities for autistic students to interact with their peers in structured and unstructured settings (Santillan et al., 2019), autistic students typically spend more time in solitary activities and less time in group activities compared to typically developing peers (Sreckovic et al., 2017). The presence of an adult or peer in a facilitator role can improve the social participation and engagement of autistic students (Ghanouni et al., 2019; MacCormack et al., 2015). The social participation of autistic youth is predicted by individual factors, including understanding of social situations and behaviours, and environmental factors, such as available services and inclusion with peers at school (Ghanouni et al., 2019).

Technology

Autistic youth often demonstrate an affinity for screen-based technology (Hedges et al., 2018) and report high levels of use of technology for a broad range of recreational purposes and academic study (Hedges et al., 2018; Kuo et al., 2014; Laurie et al., 2018). Among the general population, online social relationships can inhibit meaningful social connections, relative to in-person interactions, partly because of the greater anonymity present online (Lieberman & Schroeder, 2020). Despite the view of online socializing as less substantive than in-person socializing, the use of online social media and the internet to communicate and socialize can provide opportunities for social engagement and improve the social challenges faced by autistic

youth (Hedges et al., 2018; van Schalkwyk et al., 2017). Autistic youth report that their use of technology in school and home settings increases independence, improves anxiety and increases social opportunities (Hedges et al., 2018). Some research suggests social media use among autistic youth is associated with high friendship quality, where the internet seems to supplement the offline communication and experiences for this population (van Schalkwyk et al., 2017). The features of social media may be particularly suitable for autistic youth because interacting through social media requires less decoding of complex social information and has fewer structured rules of engagement than in-person socializing (van Schalkwyk et al., 2017).

Online Learning

Online learning provides an accessible and flexible learning environment and is often used in post-secondary institutions (Adams et al., 2019). Online learning may reduce some of the challenges and stressors present in face-to-face learning, as it provides flexibility in time and location of learning, as well as opportunities for asynchronous activities and engagement (Adams et al., 2019). Prior to the pandemic, participation in distance and online learning for K-12 increased across Canada; British Columbia and Alberta had the highest proportion of students engaged in online learning for the 2018–2019 school year (Barbour & LaBonte, 2019). Despite the benefits of online learning, it may be inaccessible for those who have limited access to internet-enabled devices, reliable internet (Thompson & Copeland, 2020), and necessary software applications (Alamri & Tyler-Wood, 2017). While we have much to learn about the experiences of online learning for autistic students (Adams et al., 2019), several studies have explored the experiences of online learning among students with disabilities in higher-education settings (Adams et al., 2019; Richardson, 2017) and teacher perspectives (Crouse & Ride, 2018), while others have outlined considerations for more inclusive online learning (Burgstahler, 2015;

Thompson & Copeland, 2020). In higher-education settings, autistic students have reported feeling disoriented when navigating online learning environments because they struggle with too many options and require clarity of the assigned activities. In general, all aspects of course design should offer consistency, reinforcement, and explicit expectations for optimal online learning outcomes among neurodiverse students (Thompson & Copeland, 2020). While some pedagogical principles from in-person instruction translate into strategies and approaches for online context, both autistic students and their teachers would benefit from targeted supports to implement specialized instructional practices (Crouse et al., 2018).

Emergency Remote Learning

The term *emergency remote learning* was introduced by Hodges et al. (2020) to describe the teaching situation during the COVID-19 pandemic and differentiate it from the kind of well-planned distance education and correspondence learning designs that have been used effectively for years (the current study also uses “remote schooling” to describe emergency remote learning). Unlike online learning, emergency remote learning began with an abrupt change in delivery method because of a global crisis (Hodges et al., 2020); in Alberta, many teachers had less than a week to transition to online formats. Since the goal of emergency remote learning was to quickly establish instructional support, the potential beneficial features of online learning environments for students with special needs were not present under the emergency remote learning approach during the pandemic (Fournier et al., 2020).

A study by Stenhoff and colleagues (2020) of the transitions from school-based instruction to remote schooling for autistic students demonstrated that transitioning to home-based learning was more challenging for autistic students than their typically developing peers. Though autistic students are often drawn to screen-based technology, the transition to distance

education was difficult because autistic students were required to learn curricular content through a novel modality (i.e., online instruction) with fewer of the reinforcers, prompts, and skill repertoires that helped them during in-person schooling. Moreover, some autistic students faced additional challenges if the device they used for online learning was also the device they used for playing video games. In turn, the dual-purpose of technology (work, play) meant that many youths were distracted during remote emergency schooling. Another challenge that came with remote schooling was related to the support roles of caregivers as they were regularly asked to provide academic and regulatory support in the home environment. This was particularly challenging if they were not familiar with curricular expectations, teaching methods, and online educational programs and if their work schedules and childcare responsibilities prevented the development of a routine for home-based learning (Stenhoff et al., 2020).

COVID-19 and ASD

The abrupt changes from COVID-19 have had profound consequences for autistic individuals, including disruption of routines and the disintegration of social support networks (Ashbury et al., 2020). Since a hallmark feature of ASD is restricted and repetitive patterns of behaviours, disruptions in routines due to COVID-19 may have exacerbated behavioural and emotional difficulties for this population (Eshraghi et al., 2020; Lee, 2020; Singh et al., 2020) and worsened their mental health and well-being (Aishworiya & Kang, 2020; Ashbury et al., 2020). According to Narzisi (2020), high levels of anxiety may have contributed to a “developmental breakdown” (p. 2) for some autistic youth as they struggled to make sense of the COVID-19 pandemic experience. Additional difficulties included the disruption of daily habits and structures, challenges that came with navigating social distancing requirements, and reductions in access to helpful therapies and interventions (Eshraghi et al., 2020). Whitley and

colleagues (2020) explored the experiences of families supporting children with special needs during emergency remote learning. Parents recognized the importance of relationships, including teachers, support staff, and peers, which served as the foundation for positive and successful emergency remote learning. Given the importance of peer relationships, many parents were left concerned about their child's emotional and social well-being since limited efforts were made to connect peers during emergency remote learning.

Since many autistic youth display an affinity for technology, online learning may be an effective tool for this population if appropriate supports are put in place (Eshraghi et al., 2020). In fact, many high-functioning autistic students have indicated a preference for online learning and have resisted the transition back to school-based instruction (Reicher, 2020). While high-functioning autistic students may perform well in the academic curriculum, many often struggle to comprehend the *hidden curriculum* which entails the implicit norms, values, and behaviours that exist in the general learning environment but are not formally communicated or established (Reicher, 2020; Alsubaie, 2015). Since the *hidden curriculum* is comprised of understanding social skills and rules that are not explicitly taught, understanding the hidden curriculum can be a significant barrier for high-functioning autistic students (Reicher, 2020). While some autistic students have shown a preference for and performed well during online learning (Reicher, 2020), understanding the effects of this delivery method on social engagement opportunities and well-being of this population is critical to investigate the benefits and feasibility of online learning.

Theoretical Framework

The current study uses the theoretical framework of thriving to explore the perspectives of autistic youths and their parents of their experiences with remote emergency learning during the first several months of the COVID-19 pandemic. Thriving is a multidimensional construct

that represents the well-being and positive development of an individual (Brown et al., 2017; Carver, 1988; King et al., 2018; Niemiec, 2018), and has been used as a theoretical framework for studies of autistic youths (e.g., Diener et al., 2016; Quinn et al., 2019). Specifically, psychological thriving demonstrates a high level of functioning, growth of skills and knowledge, and success in relationships (Carver, 1998; Brown et al., 2017). The construct of thriving reflects meaningful contributions to oneself, others, and community according to one's potential, which are not only important to the success of society but are predictive of positive youth development (Hershberg et al., 2014). Despite the growing body of research on the well-being of youth (Barry et al., 2017; Danker et al., 2019a), there is still much to be known about the definition and conceptualization of the term 'well-being' when it comes to youth (Danker et al., 2016; Powell & Graham, 2017).

The framework of thriving is the culmination of youth studies that have evolved over the last seventy years or so. During the middle of the 20th century, most of the research on youth focused on finding ways to reduce delinquency (Damon, 2004). A series of longitudinal studies that followed at-risk youth from birth to middle age (e.g., Werner, 1995) concluded in the 1980s and 1990s represented a new approach for youth studies: the study of resiliency. Research on youth invulnerability (Burke, 1980) and resilience (Werner, 1995) represented a shift from conceptualizing youths from a deficit-based lens and instead recognized the strengths of youths (Damon, 2004). Resiliency research provided broad approaches to understanding the factors of success, but did so by focusing specifically on vulnerable youths (e.g., children born in poverty, children with drug-addicted parents; Werner, 1995). One of the first strength-based approaches came from the Search Institute which identified the internal and external developmental assets that emphasized the strengths, talents, and interests of youths (Benson & Scales, 2009; Scales et

al., 2000). The Thriving Indicators Project in the early 2000s described thriving as a developmental process that involves the person-context relationship. The conceptual basis of thriving was further advanced by Benson and Scales (2009) who described the interplay between the *spark* (passions and interests) within young people that drives development and their context to nurture those sparks. Positive youth development, a framework to study the thriving of young people, has grown over the last two decades and is now considered to be a principal theoretical framework for understand youth development and needs (Benson & Scales, 2018).

Within the developmental domain, thriving is conceptualized as the bi-directional interplay over time between a young individual and contexts that support development (Benson & Scales, 2009). A thriving person is growing and moving forward (Benson & Scales, 2009). With this, thriving reflects both current well-being and an upward developmental trajectory (Benson & Scales, 2009). Youth people thrive when they have an identified passion, positive emotions, intrinsic motivation, sense of purpose, optimism about future, prosocial orientation, and personal spiritual development (Benson & Scales, 2009). The core passion that an individual self-identifies is referred to as the *spark*, in which the young person must be intrinsically motivated to pursue and nurture this spark (Benson & Scales, 2009). The young person's developmental context in the process of thriving includes people and places, where adult role models help create opportunities to pursue passions and provide encouragement and appropriate pressure to help the young person move forward (Benson & Scales, 2009). The young person plays an active role in shaping and changing their developmental context, in addition to the developmental contexts acting on the young person by motivating, inspiring, and helping them. Since every individual is described by a unique combination of the thriving characteristics through various paths, young individuals do not need to demonstrate high levels of each

characteristic to be considered thriving (Benson & Scales, 2009). Young people should be described as more or less thriving oriented, instead of identified as thriving or not (Benson & Scales, 2009). As a multidimensional construct that provides indicators of success (Benson & Scales, 2009), considerations of thriving contribute to a holistic framework of individual success and development.

Variables for Thriving

Psychosocial variables that facilitate thriving are categorized into two groups: personal enablers and contextual enablers (Brown et al., 2017). Personal enablers are the attitudes and behaviours that support thriving, such as: (1) positive perspective (self-esteem; hopefulness about future; Schmid et al., 2011); (2) religiosity and spirituality (Dowling et al., 2004); (3) proactive personality (intentional self-regulation to select and attain goals; Gestsdottir et al., 2011); (4) motivation (intrinsically motivated by personal talents and interests; Benson & Scales, 2009); (5) knowledge and learning (academic performance; Lerner et al., 2005; and (6) social competencies (skills needed to manage social interactions; Benson et al., 1998).

Contextual enablers are situational variables that foster engagement and promote thriving (Carver, 1998; Brown et al., 2017). Some examples of contextual enablers include: (1) challenge environment; (2) attachment and trust; and (3) family support. First, a challenge environment is one that provides appropriate levels of difficulty (not too difficult, not too easy) (Brown et al., 2017, Carver, 1998). Situations that may be perceived as being too easy or too difficult will impede thriving (Brown et al., 2017, Carver, 1998). Second, interpersonal relationships that are formed on secure attachment and trust can promote thriving (Brown et al., 2017, Carver, 1998). Third, family support and parental involvement seems to foster thriving in adolescents (Brown et al., Theokas et al., 2005).

Positive Youth Development: A Framework for Thriving

Positive youth development is a relational developmental systems theory embedded in thriving that is specific to young people (Lerner et al., 2014). This strengths-based framework of development aims to understand and help young people by engaging with key contexts in their environment (Lerner et al., 2014). The mutually-beneficial individual \Leftrightarrow context relations, known as adaptive developmental regulations, are interactions between the strengths of the young person and their ecological assets (i.e., developmental assets in their ecologies; Lerner et al., 2011). Specifically, growth in positive youth development should make the young person more likely to thrive and make contributions to their ecology (e.g., to self, family, community, and society) and less likely to engage in risk and problem behaviours (e.g., internalizing and externalizing problems; Lerner et al., 2011; Lerner et al., 2014). Youth are more likely to reflect thriving when there is a strong match between the individual's strengths (e.g. functional cognitive and behavioural skills) and their ecological resources (e.g. home, school, and community; Lerner et al., 2010).

According to positive youth development, thriving is operationalized through the *Five Cs* (Eccles & Gootman, 2002). The Five Cs include: (a) competence (positive view of one's actions in the social, academic, cognitive, and vocational domains); (b) confidence (internal sense of overall positive self-efficacy and self-worth); (c) connection (positive bidirectional bonds with people and institutions); (d) character (respect for societal and cultural rules); and (e) caring or compassion (sympathy and empathy for others; Lerner et al., 2005). In addition, when all Five Cs are present in a young person, Lerner et al. (2003) have suggested the emergence of an overarching sixth "C", contribution, as the fulfillment of the Five Cs leads to contributions to others.

Thriving and ASD

The research on positive psychology and positive youth development in ASD is still in its early stages (Weiss & Burnham Riosa, 2015; Dykshoorn & Cormier, 2019), but what is already clear is that individual and contextual factors specific to the autistic experience (social responsiveness, effects of comorbidities) can influence one's sense of thriving. For example, autistic youth who also had an intellectual disability were less likely to thrive than youth with intellectual disability only (Weiss & Burnham Riosa, 2015). Autistic youth with intellectual disabilities have difficulties with functioning in the social domain in home, school, and community environments. The construct of thriving needs to be examined in populations with developmental disabilities, including autistic youth, who do not have an intellectual disability (Weiss & Burnham Riosa, 2015). Since levels of thriving are related to both individual and contextual factors (Lerner et al., 2010) and participation at home and school are mediators for thriving in this population (Weiss & Burnham Riosa, 2015), the current study explores social engagement and supports, in relation to thriving in autistic youth.

Social Engagement and Well-Being. Social engagement is extremely important for a sense of well-being. In a study conducted by Danker et al. (2019b), teachers conceptualized well-being as consisting of three domains which are needed for autistic students to experience well-being: peer relationships, sense of safety, and social engagement. Positive social relationships can increase social participation and self-efficacy for autistic youths, as well as decrease negative emotional outcomes such as loneliness and isolation (Platos & Wojaczek, 2018). Considering the importance of social relationships for the well-being of autistic students (Danker et al., 2016), positive relationships with non-familial peers and adults (educators and classmates) are very important for autistic youth (Danker et al., 2019a). Participation in social activities in home,

school, and community environments are also considered to be essential for the well-being of children, including those with ASD (Ghanouni et al., 2019). Specifically, participation in social activities is associated with thriving in autistic youth, in which these individuals thrive less because of decreased participation levels and social deficits (Weiss & Burnham Riosa, 2015). Social engagement opportunities need to be provided to autistic youth for increased social participation and supportive relationships (Taheri et al., 2016).

CHAPTER 3: Methods

The current study is a mixed methods study and utilizes a concurrent nested design, as quantitative and qualitative data were collected at the same time (Kroll & Neri, 2009). In this study, greater emphasis was placed on the qualitative data (QUAL + quan), in which the quantitative data was embedded in it to provide descriptive data and expand on the qualitative data of the study (Kroll & Neri, 2009). A mixed method research design was used to gain a more comprehensive understanding of the experiences of emergency remote learning of autistic youth, in relation to their well-being. Quantitative methods (survey, questionnaires, scales) provided information on youths' social responsiveness, anxiety, comfort with technology, and sense of well-being, while qualitative methods (interviews) provided perspectives of emergency remote learning and deeper insights into the participants' social experiences during the pandemic. Perspectives of autistic individuals are often excluded from research because of barriers related to the communicative difficulties that are diagnostic characteristics of this population (Rasmussen & Pagsberg, 2019) in addition to the challenges presented by communication difficulties. With appropriate awareness and considerations, the inclusion of autistic individuals in research is important and possible. To explore the perspectives of autistic youths, this study included interviews, as they are a commonly used and powerful tool to understand experiences and perceptions (Fontana & Frey, 2000).

Participants

This study used a purposeful sampling technique, whereby participants were selected using criterion sampling. Snowball sampling was used to recruit participants. Youth and adult participants were recruited from the provinces of British Columbia, Alberta, and Ontario. Autistic youths participated in this study alongside their parents (i.e., all "parents" were

mothers). The conditions of this study required that the participants had a diagnosis of ASD, had the ability to participate in a conversation, and attended class with age-similar peers. This study relied on the self-report of an ASD diagnosis, as similar processes have been used in several studies (Elias & White, 2018; Lin et al., 2012; Sosnowy et al., 2018). The study was advertised through social media, including Facebook and Instagram, with a particular focus on parent support communities. Recruitment was sought through contact centres that provide interventions and support services for autistic individuals, such as PerfectFit Behaviour Consulting Company, as well as non-profit organizations and societies, such as Canucks Autism Network and Hollyburn Family Services. Participants were recruited until the point of data saturation. Youth participants were given a digital Amazon.ca gift card valued at \$25.

Measures

This study had two phases. During the first phase of data collection, parents and their children completed surveys of standardized questionnaires and researcher-developed scales. The second stage of data collection involved a telephone interview with the youth and their parent. The survey questions (Phase 1) were administered using Qualtrics software prior to the interview. Semi-structured interviews (Phase 2) were conducted by the researcher for the qualitative portion of the study. One youth participant (Lucas) did not want to complete his portion of the interview over the phone. To accommodate for Lucas' preferences for a private interview, I provided Lucas' mother with a list of the interview questions and he recorded his interview with his mother.

Demographics

The demographic survey consisted of nine questions relating to gender, age, grade level, school district, inclusion in the general classroom, ethnic origin, household income, siblings, and

comorbidities. (See Appendix A for the full demographic survey.) Parents selected their child's gender identification; options included male, female, transgender, other, and the option to not respond. Parents indicated their child's age and grade level. Questions about gender identification and age/grade were included to ensure participants met the inclusion criteria. Parents reported their family's household income on a 5-point scale from under \$5,000 to more than \$250,000 per year. This question was asked because a correlate of limited social participation is low family income (Shattuck et al., 2011). Parents indicated the number of siblings their child has living in the same household, since siblings may be a social support and provide social opportunities for autistic youth (Lasgaard et al., 2010; Ben-Itzhak et al., 2019). Parents were also asked to indicate whether their child has any diagnosed comorbidities, such as attention deficit hyperactivity disorder, anxiety, depression, intellectual disability, and obsessive-compulsive disorder; co-morbidities are prevalent within the autistic population (Ooi et al., 2011).

Demographic questions regarding household income, number of siblings, and ethnic origin were included in the survey so the participants could be described. However, those factors (household income, siblings, and ethnic origin) were not included in the analysis because the small sample size limited the comparisons that could be drawn across the sample.

Social Responsiveness Scale, Second Edition (SRS-2)

The SRS-2 is used to measure the social responsiveness of autistic people (Constantino & Gruber, 2012). The SRS-2 is a 65-item rating scale that measures the characteristics of social behaviour (15-20 minutes). The SRS-2 is a well-known screening tool; measurements of this scale align with the criteria outlined in the DSM-5 (Bruni, 2014). The form was administered online using the digital version. Items on this scale are scored on a 4-point Likert scale, ranging

from *not true* to *almost always true* (Bruni, 2014). The SRS-2 has five subscales: social awareness, social cognition, social communication, social motivation, and restricted interests and repetitive behaviour. The social awareness subscale (8-item) measures an individual's ability to recognize social cues (e.g., "Is aware of what others are thinking or feeling"). The social cognition subscale (12-item) assesses the interpretation of social behaviour (e.g., "Gives unusual or illogical reasons for doing things"). The social communication subscale (22-item) measures reciprocal communication in social situations (e.g., "Gets frustrated trying to get ideas across in conversations"). The social motivation subscale (11-item) assesses how much an individual is motivated to take part in social interactions with others (e.g., "Avoids starting social interactions with peers or adults"). Lastly, the restricted interests and repetitive behavior subscale (12-item) measures stereotypy and restricted interests (e.g., "Thinks or talks about the same thing over and over"). The SRS-2 has adequate internal consistency ($\alpha = 0.95$; Bruni, 2014). Adequate interrater reliability is also reported for parent ratings, with correlations of 0.77 (Bruni, 2014). Overall total score and subscale scores are provided as *T*-scores to indicate mild, moderate, or severe deficits (Bruni, 2014).

Anxiety Scale for Children – Autism Spectrum Disorder (ASC-ASD)

Anxiety was measured using the Anxiety Scale for Children – Autism Spectrum Disorder (ASC-ASD) (Rodgers et al., 2016), a 24-item questionnaire designed for that purpose. This study used the child and parent version of the scale (see Appendix B). The parent and youth were asked to complete this scale based on their perspectives at the time of data collection. This scale was derived from a validated anxiety measure for typically developing children, the Revised Children's Anxiety and Depression Scale (Chorpita et al., 2000). The ASC-ASD consists of four sub-scales including: separation anxiety, uncertainty, performance anxiety, and anxious arousal.

Participants rated items on a 4-point Likert scale from *never* to *always*. This measure demonstrates good to excellent internal consistency for the parent ($\alpha = 0.94$) and child ($\alpha = 0.94$) versions, along with excellent one month test-retest reliability for the parent ($r = 0.84$) and child ($r = 0.82$) versions (Rodgers et al., 2016). This scale provides a total score, as well as a score for each subscale.

Thriving

The parent report scale of the Cs of positive youth development was adapted from Weiss and Burnham Riosa (2015) and was originally derived from the 4-H study of positive youth development by Lerner et al. (2005). This scale assesses well-being in terms of youth's levels of competence, confidence, connection, character, caring, and contribution (Weiss & Burnham Riosa, 2015). Parents rated their degree of agreement to six statements about each of the characteristics of positive youth development on a 5-point Likert scale, ranging from *strongly disagree* to *strongly agree* (see Appendix C). Parents provided ratings in relation to present time. This measure has strong internal consistency ($\alpha = 0.85$; Weiss & Burnham Riosa, 2015).

Technology Use and Social Engagement Survey

The 25-item researcher-developed survey on technology use and social engagement was created for the purposes of the current study (see Appendix D for the full survey). Youth participants indicated the number of hours they generally spent on electronic devices playing games, messaging people, and watching video-based entertainment on the weekdays and weekends. Youths reported whether the number of hours spent doing each activity increased, decreased, or stayed the same compared to the start of the pandemic (March to June 2020). Youths were asked to share what social media platforms they generally use to interact with others. Questions about technology use were included to get a sense of how often and for what

purposes did the youths typically use their devices. Youths were asked to respond to the remaining questions (18 items) thinking back to the start of the pandemic (March to June 2020). Youths rated their agreement to four statements about their comfort with technology on a 5-point Likert scale, ranging from *strongly agree* to *strongly disagree*. Youths reported how often they interacted with their teacher, teacher assistant, classmates, and friends online on a 5-point Likert scale, ranging from *never* to *several times a day*. Youths rated their agreement to four statements about the importance of their interactions with their teacher, teacher assistant, classmates, and friends on a 5-point Likert scale, ranging from *strongly agree* to *strongly disagree*. Youths reported whether they returned to in-person instruction when schools re-opened. Youths also rated their agreement to five statements about their overall experience with remote schooling, accessibility to their teacher and teacher assistant, and whether they felt connected and supported. Questions about social engagement were included to determine how often the youths interacted with others during remote schooling and how important those interactions were to them.

Semi-Structured Interview

Phase 2 of this study included semi-structured interviews with parents alone at first, and then with youths. The interviews began as structured with specific and close-ended questions and then transitioned to a semi-structured, open-ended question format once the participant was more comfortable (Rasmussen & Pagsberg, 2019). As recommended by Rasmussen and Pagsberg (2019), the youth and parent were sent an email before the interview that outlined the expectations and structure of the interview, along with the list of interview questions (see Appendix E). Breaks were provided to the participants during the interview, as needed. The parent and youth were asked about their remote schooling experiences between March to June

2020; they answered questions based on five topics: (a) conceptualizations of youth well-being (answered by parents), (b) the youths' general usage of technology (answered by parents and youths), (c) experience and perceptions of emergency remote learning (answered by parents and youths), (d) the social engagement opportunities they had during emergency remote learning (answered by parents and youths), and (e) changes in supportive relationships (answered by parents and youths). While the interview questions were determined prior to the interviews, the format of semi-structured interviews allows for some flexibility was necessary to respond to the answers provided. See Appendix F for the list of questions. To protect the youth participants, their interviews were conducted in the presence of each youth's mother. To maintain confidentiality, pseudonyms were either chosen by the participants or assigned by the researcher.

Procedure

First, the researcher confirmed the eligibility of the youth when first contacted by parents that were interested in participating in this study. The parents confirmed their child's diagnosis by providing the date of the diagnosis, the youth's age at the time of the diagnosis, and the professional who provided the diagnosis. The researcher also asked the parents to confirm their child's age and whether their child participated in their school's emergency remote learning program during school closures due to COVID-19. See Appendix G for a sample email template that was used to determine participant eligibility.

Once the inclusion criteria are confirmed, assent and consent forms were emailed to the parent (see Appendix H). Youths and parents confirmed their willingness to participate in the study by completing assent and consent forms that outlined the study and the confidentiality of their data. Youth and parents had the option to withdraw from the study at any time by notifying the researcher and were assured that all data and recordings would have been removed from the

study and confidentially destroyed and deleted. No participants chose to withdraw from this study. After obtaining consent, youth and parents were assigned pseudonyms.

In phase 1, parents were emailed a link for the parent survey (using the software Qualtrics), which included demographic questions, SRS-2 measures, thriving measure, and parent version of the ASC-ASD. The link for the digital SRS-2 measure was emailed separately. Parents were also emailed the link for the youth survey, which included the Technology Use and Social Engagement survey and the child version of the ASC-ASD. Upon completion of the surveys, the parents were contacted by the researcher to set up an interview.

All interviews were recorded using a digital recorder, which was password protected to ensure confidentiality. The audio recording will be retained for two years, after which all data will be destroyed or deleted. Following the completion of the interview, the youth and parent were debriefed. The debrief form was also emailed to them at this time (see Appendix I), in addition to the \$25 gift card. At the end of the study, participant data from the surveys was exported from Qualtrics and the interviews were transcribed. Additionally, member checking was used for validity checking (i.e., to allow participants to confirm or update the transcript) (Birt et al., 2016). One transcript was manually transcribed and the other eight interviews were transcribed using voice-to-text software (Google Recording) and confirmed by the researcher. The interview transcripts were emailed to parents to provide them an opportunity to review and revise their transcript. No participants chose to revise their transcript.

Descriptive Statistics

Descriptive statistics were used to characterize the sample and analyze data from the measures in this study. From the demographic section, the mean and standard deviation were calculated for participants' age. Frequency distributions were calculated for gender, ethnic

origin, household income, siblings, and comorbidities. The *T*-scores from the SRS-2 were used to describe the social responsiveness of the youth participants. The mean scores and standard deviations were calculated from total scores from the thriving measure and both self and parent reports of the ASC-ASD. From the Technology Use and Social Engagement Survey, the mean scores for the importance and frequency of interactions during emergency remote learning were provided. All survey measures were used to provide descriptive statistics to describe the sample. In addition, analyses of the ASC-ASD, the SRS-2, and the Technology Use and Social Engagement Survey were used in conjunction with the qualitative data from the semi-structured interviews to describe the youths' experiences of emergency remote learning.

Thematic Analysis

Interviews were analyzed using thematic analysis, using NVivo software (version 1.3.1). Thematic analysis is widely used qualitative research method to identify patterns of meaning within data (Braun & Clarke, 2006). Thematic analysis can be used across a range of theoretical approaches and is a flexible analytic tool that can provide a rich analysis of data (Braun & Clarke, 2006). Since there are different orientations in thematic analysis, it is important to be clear on how thematic analysis will be approached (Braun & Clarke, 2006; Terry et al., 2017). An inductive, semantic and realist approach was applied in this study. An inductive approach was used because the codes and themes were generated from and strongly related to the data (Nowell et al., 2017b; Terry et al., 2017). With a semantic approach, the themes captured the explicit meaning of the data and mirror what the participants said in the interviews (Braun & Clarke, 2006; Terry et al., 2017). A realist approach reflected the focus on reporting the assumed reality evident in the data (Terry et al., 2017). Thematic analysis is useful for analyzing the

perspectives of various participants, identifying similarities and differences, and exploring unanticipated understandings (Braun & Clarke, 2006).

Braun and Clarke's (2006) six-phase process was used to ensure the thematic analysis process was conducted in a rigorous and structured manner. The process involved six steps: (1) familiarization with data, (2) creating initial codes, (3) generating themes, (4) reviewing themes, (5) defining and naming themes, (6) writing up the report (Braun & Clarke, 2006). Thematic analysis is not a linear process and requires a constant back and forth among the six steps (Braun & Clarke, 2006; Nowell et al., 2017). A sample of the thematic analysis (see Table 1) demonstrates the creation of codes, categories, and themes from a passage of the interview transcript. Participant characteristics (demographics, SRS-2, technology use, anxiety, and thriving measures) provided contextual information for each participant. Following the six phases, Braun and Clarke's (2006, p. 96) checklist of 15 criteria was used to ensure a good quality thematic analysis was generated (see Appendix J).

Step 1. Familiarization with data is a critical step in the thematic analysis process (Terry et al., 2017). I read each transcript three times, made observational notes, and identified initial patterns. This step provided the first opportunity to absorb and engage with the dataset (Terry et al., 2017).

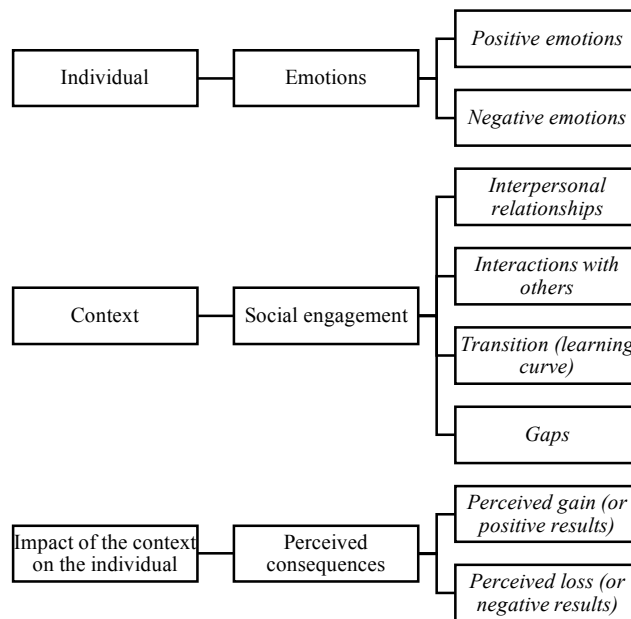
Step 2. The second step involves systemically and thoughtfully creating codes related to specific parts of the dataset (Terry et al., 2017). Once I was familiar with the data set, I generated initial codes by which I identified and labelled the features of the data using phrases. The coding process is flexible because codes were revised later in the analysis process to capture specific concepts more clearly (Terry et al., 2017).

Step 3. Following initial coding, I constructed themes using the list of codes I identified across the dataset. After examining the codes, I analyzed the codes to identify potential

categories. I grouped categories to highlight the overarching and meaningful themes. I created an initial thematic map as visual aid to understand the potential themes I generated and their relationship with each other and the dataset as a whole (see Figure 1; Terry et al., 2017). The process of developing themes was informed by the theoretical framework of thriving; analysis at this step aligned with the framework of thriving as defined as a bi-directional interaction between the individual and the context.

Figure 1

Initial Thematic Map

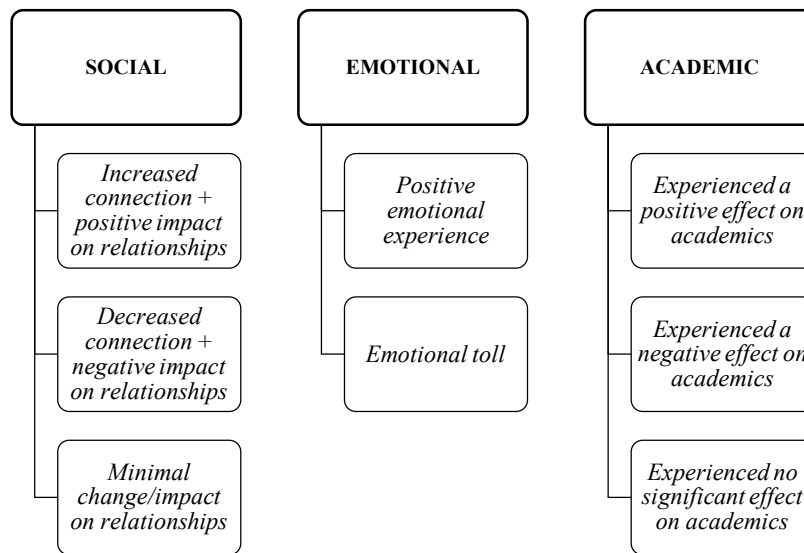


Step 4. Initial themes were refined or rejected in the Reviewing Themes step (Terry et al., 2017). While reviewing the themes, I looked to ensure the themes represented a good fit with the codes, dataset, and research questions. First, I reviewed the codes that formed each theme to determine whether they seemed to form a coherent pattern (Braun & Clarke, 2006). Themes that did not seem to be a fit were revised. Next, I considered the validity of each theme in relation to the entire data set to determine whether the themes reflected the meanings of patterns evident in the entire data set. It was important to ensure the themes were distinct, as well as related to each

other. Once I had reviewed all of the themes, I created a revised thematic map of the data (see Figure 2).

Figure 2

Revised Thematic Map



Step 5. The fifth step involves defining and further refining the generated themes, by capturing the essence of each theme (Braun & Clarke, 2006). I developed a detailed analysis of individual themes and subthemes. It was important to not only consider the themes themselves, but also in relation to each other (Braun & Clarke, 2006).

Step 6. The previous steps all contributed to the development of this final step (Terry et al., 2017). The sixth and final step involved producing a write-up of the report with the reviewed themes. I wove specific data extracts within the analytic narrative to provide evidence of the themes within the data (Braun & Clarke, 2006). The reviewed themes from step four were updated upon careful review of the data extracts. The final themes represent patterns of meaning identified across all participants. The themes that emerged from step six represent areas of

general agreement across participants, except for themes of emotional benefits and positive academic effects which were discussed by fewer than half the participants (see Table 2).

Table 1

Example of Thematic Analysis on A Section of Transcript

Transcription	Coding	Category	Theme
He was really excited to do it to do it. He's like, oh yeah, I can, you know, that's gonna be really good.	Excitement	Positive emotions	Emotional
But like I said then there's being just here on his own and not having anybody.	Lonely	Experienced social loss	Social
You know right there they're there it started with well I don't know what I'm doing. I can't get through it. The motivation was pretty much gone.	Motivation	Academic progress	Academic
And it was like a fight every every day to try to get stuff done.	Stressful	Negative emotions	Emotional
Like okay, you have to be on there for the same amount of time you would be normally in school and you have to be getting this stuff done and and he's like well I don't know what I'm supposed to do and I don't understand this.	Challenges with online format	Gaps in online format	Social
	Impact on learning	Academic progress	Academic
He needs to have that, he needs somebody there.	Support needed	Gaps in online format	Social
He didn't go to school. Basically he had no school because nothing was getting done.	Impact on learning	Academic progress	Academic

Table 2*Prevalence of Quotations Used by Participants by Themes*

*Parents	*Youths	Social		Emotional		Academic	
		Increased connection	Decreased connection	Emotional Benefit	Emotional Toll	Positive effect	Negative effect
Cat	Beau	T	Q t	-	Q	Q	q
Helen	Connor	T t	Q q	-	Q q	T q	T
Violet	Delaney	Q q	Q q	Q	-	Q	Q q
Maya	Derek	-	Q q	-	Q	-	Q
Emma	Dipper	Q t	q	Q	-	Q	-
Thelma	Louise	-	Q	-	Q	-	T
Amanda	Lucas	-	Q	-	Q	-	Q
Maria	Tony	Q	Q q	-	Q	-	Q q
Sophie	William	-	q	-	Q	T	Q

Q = direct quotation used by parent; q = direct quotation used by youth; T = topic was discussed by parent, but a direct quotation was not used; t = topic was discussed by youth, but a direct quotation was not used.

*Names of parents and youths are pseudonyms either chosen by the participants or assigned by the researcher

CHAPTER 4: Results and Findings

Results and findings are aligned with the research questions and are presented in three sections: (1) results of survey measures, (2) youth profiles, and (3) thematic analysis of transcripts.

The first research question (“How do the autistic youths and their parents conceptualize the youth’s sense of well-being during emergency remote learning?”) is examined in the section entitled Conceptions of Well-Being during the Pandemic.

The second research question (“To what extent did the youths’ anxiety, social responsiveness, and comfort with technology affect their experiences during emergency remote learning?”) is explored in two ways. First, results from the survey measures are described and presented in tables, including: (a) Social Responsiveness Scale, Version 2; (b) Anxiety Scale for Children – Autism Spectrum Disorder; and (c) Technology Use and Social Engagement survey. Second, the profiles of each of the nine youth participants provide context for their experiences and perspectives on an individual level, with a focus on their social responsiveness, anxiety, and comfort with technology.

The third research question (“How do autistic youth and their parents describe the experiences of emergency remote learning during the first several months of the pandemic?”) is explored in the final section (Thematic Analysis). Direct quotations from the interview transcripts are included to illustrate the themes.

Demographics

The nine youth participants in this study were between the ages of 10 and 16 ($M=13$; $SD=2$) and attended school in grades ranging from grade 5 to grade 12. Two of the nine youths were female. The ethnic backgrounds of five of youths were European; three were Other North

American and one was African. Six of youths had one sibling. Common comorbidities included anxiety diagnosis (n=4) and attention deficit hyperactivity disorder diagnosis (n=3). All youths were in the general classroom for most of the day prior to school closures and participated in the interviews with their mothers. Most parents (n=6) reported their family’s household income was under \$99,999 a year. Three of the parents reported a household income over \$100,000 a year. See Table 3 for demographic information including age, grade, ethnic origin, siblings, and comorbidities.

Table 3
Demographic Characteristics of Youths

Youth	Gender	Age	Grade	Ethnic Origin	Sibling(s)	Comorbidities
Beau	Male	15	12	Other North American	1	None
Tony	Male	13	8	European	0	Developmental Co-Ordination Disorder; Sensory Processing
Derek	Male	16	10	Other North American	1	Anxiety
Delaney	Female	13	8	European	1	Anxiety
Dipper	Male	10	5	European	0	Attention Deficit Hyperactivity Disorder
Connor	Male	12	6	European	2	Anxiety; Learning disability
William	Male	12	6	European	1	Attention Deficit Hyperactivity Disorder
Louise	Female	15	10	Other North American	1	Attention Deficit Hyperactivity Disorder; Anxiety; Depression
Lucas	Male	11	5	African	1	Borderline Personality Disorder

Conceptions of Well-Being during the Pandemic

Youths were asked scaling questions about how they conceptualize their well-being. The youths rated their sense of well-being on a scale from 1 (low sense of well-being; worst life possible) to 6 (high sense of well-being; best version of their life possible) during the first few months of emergency remote learning and again at the time of the data collection. For many of the youths in the current study, the pandemic was not a time of thriving. Most of the youths reported higher levels of well-being at the time of data collection than during the first several months of emergency remote learning. Conversely, three youths (Dipper, Louise, and Lucas) said that their sense of well-being was slightly higher during the first months of the pandemic than at the time of data collection. For William, there was no change in well-being (scored five out of six for both time periods). See Table 4 for the parent reported thriving scores for the youth participants, as well as the youths' self-reported scores for their sense of well-being during the first several months of the pandemic and also at time of data collection.

Parents' conceptualizations of their children's sense of well-being was explored in two ways: (1) thriving measure and (2) conceptualization of well-being in general and during remote schooling. When asked to rate the level of thriving experienced by their children, the parents' rated their children's thriving as low on all six items. Mean scores ranged from 2.33 to 3 across the six items. The contribution category (i.e., help others and themselves) had the lowest mean score ($M = 2.33$, $SD = 1.11$), which suggested that of all the categories of thriving, the parents felt that their children's contribution to others was low. The character category (i.e., know between right and wrong) had the highest mean score ($M = 3$, $SD = 1.32$). The parents of youths with severe social restrictions based on his SRS-2 scores (Lucas, Louise, and William), rated their overall thriving as low compared to the rest of the youths (see Table 4).

Table 4*Parent Ratings of Thriving Scores and Youth Ratings of Sense of Well-being*

Youths	COMP	CONF	CONN	CHAR	CARI	CONT	M (SD)	*WM	*WP
Beau	3	4	4	4	3	3	3.50 (0.55)	2	4
Connor	3	4	4	3	3	3	3.33 (0.52)	3	5
Delaney	3	3	3	4	4	3	3.33 (0.52)	3	5
Derek	2	3	2	3	2	3	2.50 (0.55)	2	4
Dipper	2	4	3	2	3	3	2.83 (0.75)	4	3
Louise	3	1	2	3	3	1	2.17 (0.98)	5	3
Lucas	1	2	1	0	0	0	0.67 (0.82)	5	3
Tony	3	3	4	4	4	3	3.50 (0.55)	3	4
William	2	1	2	4	3	2	2.33 (1.03)	5	5
M across items (SD)	2.44 (0.73)	2.78 (1.20)	2.78 (1.09)	3.00 (1.32)	2.78 (1.20)	2.33 (1.11)			

Note. COMP = competence, CONF = confidence, CONN = connectedness, CHAR = character, CARI = caring, CONT = contribution, WM = well-being during March 2020, WP = well-being at “present” (i.e., time of survey and data collection)

*Ratings completed by youth participants

When asked to describe what well-being meant for their youth, the mothers’ answers included three core components: (1) physiological factors, (2) absence of negative behaviours, and (3) meaningful social connections.

First, parents identified overall physical health, healthy food choices, sleep, and decreased pain as important components of their child’s well-being (e.g., “Making sure that, you know, that the food choices are healthy and that we’re taking care of ourselves and exercising and all those sort of things,” Cat). Second, the absence of negative behaviours observed in their child served as an indicator of well-being for parents. Parents said they knew their child was thriving when they had fewer meltdowns, less negative attitude, reduced anxiousness, and decreased stress. For example, Maria said that well-being for her son was being a “contented child that is not stressed out.” The absence of negative behaviours was especially important to the mothers of youths with moderate-to-severe restrictions. Third, meaningful connections were

an important component of well-being for the parents in this study. Parents shared that meaningful social relationships take the form of socializing and having fun with friends, as well as feeling supported and listened to, with a sense of belonging and safety. For example, Helen said that well-being for her child includes “a sense of safety and belonging and connecting with people.” See Appendix K for direct quotations from the parents’ interview transcripts in relation to their conceptualization of well-being.

Parents reported that their child’s behaviours and social connections were significantly impacted during remote schooling, which affected the child’s well-being. Four parents (Cat, Maya, Thelma, and Amanda) observed increased negative behaviours, including dysregulation and increased anxiousness, in their children during remote schooling. On the other hand, Emma said that Dipper had few meltdowns and anxious feelings during remote schooling. Violet noticed a combination of effects from remote schooling (fewer meltdowns but increased anxiety and stress). One parent (Sophie) reported no significant impact on her child’s well-being, however, she expressed concern about her child’s lack of meaningful social connections. Two parents (Helen and Maria) did not report significant differences in negative behaviours, they noticed a negative impact on their child’s well-being with increased feelings of low mood and frustration because of the social isolation. Six parents recognized the lack of belonging and connection their children experienced through digital means during remote schooling.

Measures and Data

Social Responsiveness Scale, Second Edition (SRS-2)

The results of the SRS-2 suggest that the participants represent a range of social responsiveness: three of the youth participants had scores in the severe range (Louise, Lucas, William), three youths had scores in the moderate range (Connor, Delaney, Dipper), and three

youths with scores in the mild range or within normal limits (Beau, Derek, Tony). See Table 5 for the *T*-scores of subcategories for each youth participant.

Table 5

SRS-2 T-Scores of Youths

Parents	Youths	AWR	COG	COM	MOT	RRB	Total
Cat	Beau	57	57	59	50	57	57
Helen	Connor	79	76	68	56	77	73
Violet	Delaney	62	67	67	62	72	69
Maya	Derek	47	57	55	73	64	60
Emma	Dipper	70	72	71	62	73	72
Thelma	Louise	67	84	>90	89	>90	>90
Amanda	Lucas	>90	>90	>90	75	>90	>90
Maria	Tony	64	55	54	54	66	58
Sophie	William	70	76	77	60	87	78

Note. AWR = social awareness; COG = social cognition; COM = social communication; MOT = social motivation; RRB = restricted interests and repetitive behaviour; within normal limits = <59, Mild = 60–65, Moderate = 66–75, Severe = >76. Results from the SRS-2 scores do not determine an ASD diagnosis, rather these scores provide insight on the social impairments experienced by the youths.

Anxiety Scale for Children – Autism Spectrum Disorder (ASC-ASD)

According to the results of the ASC-ASD, the youth participants had high levels of anxiety. As demonstrated in Table 6, ratings of the youths and parental perspectives of the youths’ anxiety did not always align. For example, Maria and Tony had the largest discrepancy between their scores and Sophie and William had the smallest discrepancy between their scores. Across all respondents, the uncertainty subscale had the highest sum scores and the anxious arousal subscale has the lowest sum scores. See Table 6 for the parent report and youths’ self-report of the ASC-ASD sum scores.

Table 6*ASC-ASD Sum Scores of Youths*

Respondents	PA	AA	SA	U	T	M
Parent: Cat	4	0	0	2	6	0.25
Youth: Beau	10	3	2	6	21	0.88
Parent: Helen	0	6	4	12	22	0.92
Youth: Connor	0	2	1	12	15	0.63
Parent: Violet	10	5	6	11	32	1.33
Youth: Delaney	11	6	8	16	41	1.71
Parent: Maya	3	9	3	7	22	0.92
Youth: Derek	5	7	10	7	29	1.21
Parent: Emma	3	1	5	4	13	0.54
Youth: Dipper	6	4	9	12	31	1.29
Parent: Thelma	13	6	8	22	49	2.04
Youth: Louise	7	6	8	15	36	1.50
Parent: Amanda	1	2	0	5	8	0.33
Youth: Lucas	7	7	1	12	27	1.13
Parent: Maria	12	4	11	12	39	1.63
Youth: Tony	6	1	0	2	9	0.38
Parent: Sophie	2	1	2	9	14	0.58
Youth: William	6	0	0	2	8	0.33

Note. PA = Performance anxiety, AA = Anxious arousal, SA = Separation anxiety, U = Uncertainty, T = Total sum, M = Mean; a total score of ≥ 20 may indicate significant anxiety

Technology Use and Social Engagement. Despite the challenges they faced at times navigating the technology and communicating through messaging systems, the youths valued the online interactions they had during the pandemic. Most of the youths, except for Louise (“disagree”) and Delaney (“neutral”), considered their interactions with teachers during emergency remote learning to be important to them. Most youths rated their interactions with their friends as being important to them during emergency remote learning, except for Derek and Lucas who said they were “neutral” on the issue. On average, the youths rated their interactions with teachers (M = 3.88) as about as important as interactions with their friends (M = 3.89).

Based on the youths' ratings, interactions with classmates during class were considered of least importance ($M = 2.78$). See Table 7 for the youths' ratings on the importance of their interactions during emergency remote learning.

Table 7

Importance of Interactions During Emergency Remote Learning

	Beau	Connor	Delaney	Derek	Dipper	Louise	Lucas	Tony	William	Mean
Interactions with my teacher(s) were important to me during remote learning.	4	4	3	4	5	2	4	4	5	3.88
Interactions with my teacher assistant was important to me during remote learning.	3	4	N/A	4	3	2	4	4	3	3.37
Interactions with my classmates (during class) was important to me during remote learning.	3	4	3	3	3	2	3	3	1	2.78
Interactions with my friends was important to me during remote learning.	5	4	4	3	4	4	3	4	4	3.89

Note. Strongly disagree =1, Disagree=2, Neutral=3, Agree=4, Strongly agree=5

The youths reported that they interacted regularly with their teacher, teaching assistant, classmates, and friends but those interactions were not always daily occurrences. The youths interacted with their teachers ($M = 3.22$) as often as they interacted with their friends ($M = 3.22$). Interactions with their teacher assistant was rated as the least frequent by youths ($M = 2.12$). Five of the youths reported that they never interacted with their teacher assistant during emergency remote learning. All youths interacted with their teachers online to some degree. Most youths ($n=7$) interacted with their friends at least weekly during school closures. See Table 8 for the frequency of interactions youths reported during emergency remote learning.

Table

Frequency of Interactions During Emergency Remote Learning

	Beau	Connor	Delaney	Derek	Dipper	Louise	Lucas	Tony	William	Mean
How often did you interact with your teacher online during remote learning (i.e. video chat, telephone call, email, messaging)?	2	4	3	3	5	2	4	3	3	3.22
How often did you interact with your teacher assistant online during remote learning (i.e. video chat, telephone call, email, messaging)?	1	4		5	1	1	1	3	1	2.12
How often did you interact with your classmates during class online (i.e. video chat, telephone call, email, messaging)?	2	4	2	4	5	2	4	4	1	3.11
How often did you interact with your friends online (i.e. video chat, telephone call, email, messaging)?	4	1	4	5	5	2	1	4	3	3.22

Note. Several times a day=5, Daily=4, Every few days=3, Weekly=2, Never=1

Most of the youths preferred in-person socializing over online socializing. When asked how much they agree with the statement “I preferred socially interacting with my friends online more than in-person,” only William and Louise said they *agree* or *strongly agree*. Except for two youths who did not have much experience with using social media platforms and software, the youth participants were very experienced when it came to communicating online. Several of the youths reported that they spent over six hours or more on weekdays and weekends interacting electronic devices playing games, socializing with others, and watching videos. The youths’ full survey responses for the Technology Use and Social Engagement survey are included in Appendix L.

Profiles

Group-wide comparisons of the youths' perspectives of emergency remote learning provide a general view of their collective experiences, however the unique experience of each youth participant needs to be understood on its own. As informed by the results of the SRS-2 and through conversations with the youths and their mothers, the following profiles provide a look at each youths' strengths, challenges, and experiences.

Beau

At the time of data collection, Beau was a 15-year-old in grade 12, which meant that he was younger than his classmates. When I interviewed Beau, he was set to graduate later on in the school year. He enjoyed browsing Twitter, listening to podcasts and music, and texting his friends. Beau had a “strong group of friends” with whom he played video games, watched movies, and went on walks. In addition to his close friends at school, Beau had several familial supportive relationships, including relationships with his parents, uncles, and grandparents.

According to the SRS-2, Beau demonstrated no significant deficits in any of the five categories. Cat, Beau's mom, reported that while his classmates were “all well established in technology,” Beau did not have experience with online platforms, such as Discord and Instagram, prior to the pandemic. Cat noticed that he became more social following the pandemic, which she attributed to him feeling more comfortable with technology and him maturing during that time. Cat found that the overall lack of connections during remote schooling helped Beau realize his desire to have social interactions and opportunities to connect with others. Cat arranged opportunities for Beau to meet his friends during remote schooling. Cat reported that Beau did not enjoy video calls because he found there were “so much more work” to have online conversations during group video calls. Beau told me that picking up on nonverbal

communication cues was difficult online because he has no access to “body language” and “physical stimulus” during video chats. Specifically, the virtual class meetings were overwhelming for him and he found it hard to communicate. As a result, Beau preferred audio calls. Beau and his mother had different perspectives on his level of anxiety; Beau felt that he had high levels of anxiety and his mother reported that he had low levels. No comorbidities were reported.

Cat said that learning to communicate online was challenging and awkward for Beau. As Beau became more comfortable with technology, Cat noticed that Beau texted and played video games with his friends more often than he did before remote schooling. While Beau felt comfortable interacting with his friends online, he shared that he preferred face-to-face interactions. Beau did not like his overall experience with remote schooling, however, by his own account he felt healthy and connected to others during remote schooling. Beau told me he spent one hour socializing online on weekdays and two hours on weekends.

Connor

Connor was a 12-year-old in grade 6 who liked to listen to audio books, play video games, and pass the time with card games. Connor was involved in various afterschool clubs, including Magic Club—a group that bonded over a shared appreciation for illusions. Helen, Connor’s mom, described him as an “introvert at heart, but likes people.” According to his mother, Connor’s “fairly active social life” included several close friends at school. Helen noticed that even though it took Connor a while to connect with his friends, he generally got along with others his age and tended to connect more with adults. Prior to the start of the COVID-19 pandemic, Helen reported that Connor became more social and independent than he

had ever been. Connor had various supportive relationships in his life, including those with his family, teachers, and counsellor.

Of the five SRS-2 categories, Connor demonstrated severe restrictions in his social awareness, social cognition, and restricted interests and repetitive behaviours. While Helen did not have to do much to help Connor maintain his friendships prior to the pandemic, remote schooling changed that. Helen spent significant time helping Connor create messages and facilitate online conversations with others during remote schooling. Connor's moderate restrictions in his social communication meant that he found it difficult to text his friends; his learning disability also limited his ability to communicate by text. Social motivation was not Connor's difficulty, as he wanted to maintain a connection with his friends and reached out to them during remote schooling. Unfortunately, the friends did not get back to him. Connor and his mother had different perspectives on his level of anxiety; Connor indicated that he had low levels of anxiety and his mother reported that he had high levels of anxiety. Co-morbidities included anxiety and a learning disability.

While Helen played an important role supporting Connor and creating online social engagement opportunities for Connor during remote schooling (e.g., clubs and after-school programs), Connor did not seem to consider those interactions to be "real" since they were online. Connor said that he did not like his overall experience with remote schooling, especially as he struggled to connect with his peers. Connor said that he felt "neutral" in terms of feeling comfortable interacting with his friends online. Despite his interactions with friends being important to him, his efforts to socialize online were often unreciprocated. As a result, Connor preferred socializing with others in-person instead of online. He also regularly attended his virtual class meetings to check in with his teacher, as he reported it was important for him to be

able to connect to his teacher and education assistants. Connor reported that he did not spend any time messaging or socializing with others using electronic devices during remote schooling.

Delaney

Delaney was a 13-year-old in grade 8, who liked to browse on Pinterest and play Minecraft. Delaney had a sewing business and sold her items at a local shop. Delaney was part of a large social network but her mom, Violet, reported that Delaney tended to be in the periphery of her group and had few close friends. Delaney preferred doing activities with her friends, instead of sitting and talking with them. Her supportive relationships included her family, extracurricular program teacher, and the librarian at the public library. Delaney was involved in “as many clubs as she could be” (Violet) before the pandemic.

As per the SRS-2, Delaney demonstrated moderate restrictions in social cognition, social communication, and restricted interest and repetitive behaviour. Violet said that she found it stressful not having her peers present in the classroom to have a “benchmark” in terms of seeing what others were doing and what was expected of her academically and socially. Though Delaney reported she did not feel comfortable interacting with her friends virtually, she regularly messaged them on their group chat. Delaney prioritized interactions with her friends during remote schooling, even though her social awareness and social motivation were mildly restricted, according to the SRS-2. Violet played a role in helping Delaney navigate her social relationships, by asking Delaney how things were going in her friendships and what she would like out of them. Violet shared that she “didn’t push [Delaney] too much” during the initial transition to remote schooling because it was a stressful time. Delaney and her mother both agreed that Delaney had high levels of anxiety, which was also listed as a comorbidity.

Violet reported that the asynchronous format of remote schooling meant there were few social engagement opportunities. Violet felt that this format of schooling put Delaney's "relationships on hold." Delaney told me that she did not feel comfortable interacting with her friends online during remote schooling and did not like the virtual class meetings, as she was unable to have one-on-one conversation with her peers during those meetings. According to Violet, Delaney felt isolated during remote schooling, but enjoyed connecting online because it was not as "socially exhausting" and it relieved some of the "social pressure" of being in a classroom. Although Delaney experienced some weakened connections with her friends, her familial supportive relationships strengthened because of more time with family. Violet said that Delaney felt anxious to meet her friends in person because she was worried about potentially being exposed to the COVID-19 virus. Overall, Delaney shared that she did not enjoy remote schooling since she did not feel connected to her friends. Delaney spent less than one hour every day using electronic devices to socialize with others.

Derek

At the time of data collection, Derek was a 16-year-old in grade 10 who liked to watch movies and go hiking. His social network consisted of friends from his community who went to a different school than him. Derek had a couple of close friends that were good supports, with whom he regularly exchanged messages. He enjoyed playing interactive video games and skateboarding with his friends. In addition to his friend circle, Derek felt supported through his relationships with his mom Maya, his brother, his extended family members, and his girlfriend.

Maya shared that Derek liked the social aspect of being in a physical classroom, even though he struggled to "jump right in there" (Maya) and be a part of social groups. This observation aligned with his moderate restrictions in social motivation, as per the SRS-2. Maya

supported Derek by encouraging him to meet up with his friends. She did not need to help Derek message his friends, as he was able to do so independently. According to Derek's SRS-2 scores, his restricted interests and repetitive behaviours were in the mild range. He had no significant difficulties in the social awareness, social cognition, and social communication. Derek and his mother both agreed that Derek had high levels of anxiety. Comorbidities included anxiety.

Derek's family did not have Wi-Fi available in the home so Derek connected to remote schooling through data on his iPad or cellphone. Maya reported that using hotspot data was difficult because the signal was glitchy and was often too weak to download documents. Maya shared that Derek enjoyed the social aspect of school but when he did not get social engagement opportunities he tended to feel more isolated and became frustrated. While Maya reported that there were no significant changes to Derek's social life as a result of remote schooling, Derek shared that he missed his friends and felt like his "bonds kind of broke off" during that time. Derek felt comfortable interacting with his friends online, though he preferred face-to-face communication. Overall, Derek did not feel healthy or connected to others during remote schooling and preferred in-person schooling. Derek told me he spends three hours using electronic devices to socialize with others on weekdays and six or more hours on weekends.

Dipper

When I spoke with Dipper, he was 10-years-old and in grade 5. He was involved in several after school programs, such as gymnastics, soccer, and clubs. Dipper had several close friends. His various familial and non-familial supportive relationships included his grandparents, friends, and home support team members.

As reported by the SRS-2, Dipper experienced moderate restrictions in social awareness, social cognition, social communication, and restricted interests and repetitive behaviours. During

the initial transition to remote schooling, Emma, Dipper's mom, shared that she offered him support and guidance in terms of navigating virtual conversations. The structured class meetings worked well for Dipper, especially given the difficulty he had with restricted interests and repetitive behaviours. Dipper's deficits in social motivation were mild; Dipper was generally motivated to engage in the social interactions his mother facilitated for him. Dipper and his mother had different perspectives on his level of anxiety; Dipper indicated that he had high levels of anxiety and his mother reported that he had low levels. Co-morbidities include attention deficit hyperactivity disorder.

Dipper moved to a new school in September 2019. Emma reported that Dipper did not feel supported by his education assistant when it came to making friends, something that Dipper felt reduced his sense of well-being. During remote schooling, Dipper's social and emotional well-being improved because he was able to connect with his peers in a supportive online environment without his education assistant present. Emma was relieved that the set-up of remote schooling included opportunities to have one-on-one interactions with his teacher, which helped Dipper feel included in the various opportunities to interact with his classmates during virtual class meetings. Similarly, Dipper reported feeling comfortable interacting with his friends and teacher online during remote schooling, especially given such interactions were important to him. Emma shared Dipper narrowed his social network and was able to strengthen the supportive relationships where he felt respected. Dipper shared that he liked his overall experience with remote schooling, though did not feel connected to others because of the lack of face-to-face interactions. Dipper shared that he spent three hours socializing with others on electronic devices on weekdays and four hours on weekends.

Louise

Louise was a 15-year-old in grade 10, who enjoyed volunteering at her local animal shelter and playing with animals. Thelma, Louise's mom, said Louise's social network consisted of a few friends with common interests, as well as familial and non-familial supportive relationships with adults. Thelma described Louise as social; Louise was happy to attend school regularly and found that in-person social contact helped with her self-regulation. According to Thelma, Louise's friends tended to be supportive and understanding.

According to the SRS-2, Louise's social cognition, social communication, social motivation, and restricted interests and repetitive behaviour was severely restricted. With weakness in social cognition and social communication, Thelma told me that Louise struggled to understand "how do I communicate when...I communicate differently as is" (Thelma). Louise required extensive support from her parents to create and send messages to friends. Thelma played a significant role in facilitating her social network by making phone calls, sending messages, and setting up opportunities for social engagement without Louise knowing. Corresponding to her SRS-2 scores, Louise had difficulties with change and thrived on routine and structure. Louise and her mother both reported that Louise had high levels of anxiety. Co-morbidities include chronic pain, attention deficit hyperactivity disorder, selective mutism, and depression.

Thelma felt frustrated with the lack of planning by the schools and felt that there was no plan in place for students with individualized education plans. Several of Louise's supportive relationships weakened and her social network shifted following remote schooling. Louise's selective mutism significantly impacted her online social communication skills, which presented additional challenges (e.g., finding the right way to describe what she wants to say via message).

According to Thelma, Louise found it “overwhelming” to have video meetings because it was not a platform she was used to for social communication purposes. Louise reported she did not feel healthy or connected to others during the first few months of remote learning. Despite disliking remote schooling, Louise noted that she preferred interacting with her friends through online platforms instead of in-person. When I asked Louise whether she felt comfortable interacting with her friends online during remote schooling, she told me that she felt “neutral.” Louise told me that she spent three hours on electronic devices socializing with others on weekdays and four hours on weekends.

Lucas

Lucas is an 11-year-old in grade 5 who liked to play basketball, ride his scooter, and play chess. Lucas had little to no screen time prior to remote schooling. Lucas had one friend with whom he occasionally played after school. However, Lucas sometimes ignored the friend at school which led Amanda, Lucas’ mother, to believe that Lucas did not really have any friendships at school. With the exception of his relationships with his behavioural intervention team members, Lucas’ supportive relationships were limited to his family members. Prior to the pandemic, Lucas participated in various community events and groups with his family.

According to the SRS-2, Lucas’ social awareness, social cognition, social communication and restricted interests and repetitive behaviour were severely restricted. Amanda shared that Lucas was unable to navigate online platforms and send chats to others, as it was “almost like a new language” for him. Amanda described Lucas to be “rule-bound,” thus he found online communication to be difficult since he was unsure what the rules were. Lucas required significant support from Amanda during class meetings, as he struggled with grammar and typing out messages. Amanda also has a significant role in facilitating Lucas’ social network; she

supported Lucas' social development by calling his friends' parents and participating in various community events. Additionally, Lucas' social motivation was moderately restricted; he attempted to connect with his peers during class meetings, he was largely unsuccessful with his weakness in social communication (e.g., limited verbal communication). Lucas and his mother had different perspectives on his level of anxiety; Lucas felt that he had high levels of anxiety and his mother indicated that he had low levels of anxiety. Co-morbidities include borderline personality disorder and a learning disability.

Amanda told me that she was stressed by the lack of supports from Lucas' education assistants and school counsellor. While Lucas continued to have his familial supportive relationships in his life during remote schooling, his non-familial supportive relationships languished. Lucas said that he did not feel healthy or connected to others during the pandemic. He also said that, even though he missed his friends, he did not virtually interact with them during this time period. Lucas did not feel comfortable interacting with his friends online through social media platforms. The only thing Lucas noted he liked about remote schooling were the opportunities to interact with his classmates and friends during class meetings. Lucas shared that he preferred face-to-face interactions instead of online. Lucas told me that he did not spend any time messaging others using electronic devices.

Tony

Tony was a 13-year-old in grade 8 who liked watching videos on YouTube, playing Dungeons and Dragons, and going swimming. Maria, Tony's mother, described him as quite social and as having "really close-knit relationships." Tony had supportive friends of varying ages in his social network and he liked to do "creative play," draw comics, and write stories with them. According to Maria, Tony had a "really good sense of technology," though he only began

to use technology to socialize with his friends during remote schooling. Tony's supportive relationship included those with his family, including his parents, grandparents, aunt, and cousins, as well as his community support worker and behavioural interventionist.

As per the SRS-2, Tony demonstrated mild restrictions in social awareness. His restricted interests and repetitive behaviours were in the moderate range. These results corresponded with Maria's perceptions that although he sometimes struggled to pick up on social cues, Tony had "meaningful social relationships." Tony generally liked to be social but when he was feeling socially anxious his mother would encourage him to leave the house and socialize with his friends. As Tony grew up, he required less of his mother in terms of maintaining his relationships; instead, Maria focused on encouraging him to socialize with his well-established social network. To minimize the isolation that came with remote schooling, Maria reported she went "out of [her] way" to set up opportunities for Tony to connect with others through virtual game apps and Zoom calls. Tony and his mother had different perspectives on his levels of anxiety; Tony indicated that he had high levels of anxiety and his mother reported that he had low levels of anxiety. Comorbidities included developmental co-ordination disorder and sensory processing disorder.

Tony alternated between living with his mom in British Columbia and his dad in Manitoba during remote schooling. While Tony tended to socialize less with his classmates overall, his relationships with his close group of friends and family were strengthened. Tony told me that he felt comfortable interacting with his friends online during remote schooling. Maria shared that Tony and his classmates stayed on class meetings all day to chat or play video games. When schools re-opened, Tony and his friends created a chat room where they socialized and played video games in the evenings. Despite their efforts to connect in the evenings, Tony shared

he did not feel as connected as he would like to be with his friends during remote schooling.

Tony said that while he did not like class meetings, it was better than just sitting at home.

Overall, Tony reported that he did not feel healthy and connected to others and preferred talking to others face-to-face. Tony shared that he would spend three hours using electronic devices to message others during the weekdays and four hours on the weekends.

William

William was a 12-year-old and in grade 6. He enjoyed watching videos on YouTube and playing video games, including Minecraft and Roblox. William told me that his one friend did not live close, but they were able to connect virtually. In addition to his one friend, William's supportive relationships consisted of his family—he was particularly close with his older sister—and his teacher. Prior to September 2019, William was homeschooled for a few years.

Of the SRS-2 categories, William demonstrated severe restrictions in social cognition, social communication, and restricted interests and repetitive behaviours. His social awareness was moderately restricted. Sophie reported that when William interacted with his friends they “hang out” or engage in activity-based interactions, with limited surface-level conversations. With weaknesses in social communication, Sophie reported William struggled to use his cell phone to text his friends and instead found it easier to talk on phone or do a video call. Sophie shared that William tends to be “oblivious to the other kids” and “doesn't even know their names.” William confirmed that he never interacted with his classmates during remote schooling and said that interactions with his classmates were not important to him. William's social motivation was considered to be mildly restricted, but he preferred to be “able to know others [his peers] a bit better.” William and his mother both reported that William had low levels of anxiety. Co-morbidities include attention deficit hyperactivity disorder.

Sophie supported William by encouraging him and creating opportunities for him to interact with his peers. She also played an important role in trying to maintain a relationship with the parents of William's friends to ensure that those friendships continued. Sophie said she felt worried about William's limited social network, as "he only has one friend in this whole planet." According to this mom, William found it hard to communicate with his friend via text and instead preferred video calls. William reported that remote schooling was "a lot better than interacting with the other kids," since he did not like to interact with his peers and instead enjoyed talking to his teacher. William reported he felt somewhat healthy and connected to others since his primary connections were with his one friend and YouTube, which he continued to have during remote schooling. William shared he felt comfortable interacting with his friend online during remote schooling and preferred to socially interact online rather than in-person. William shared that he would spend one hour using electronic devices to message others during the weekdays and weekend.

Thematic Analysis

During the interviews, mothers and youths were asked to describe their perspectives of their experiences during the first several months of emergency remote learning (March to June 2020). The perspectives of emergency remote learning of the parents and youths are presented in three main areas of focus: social, emotional, and academic. These areas of focus are presented as three themes and corresponding sub-themes.

Theme 1: Social

The 'social' theme captures the perceived changes autistic youth experienced in the level of connections (i.e., how connected they felt) during emergency remote learning. All parents highlighted the social consequences of emergency remote learning in some capacity, whether

they perceived increased, decreased, or minimal change in their child's connections with others. This theme is divided into two subthemes: positive impact on social relationships (i.e., increased connection) and negative impact on social relationships (i.e., decreased connection). Several mothers identified both positive and negative impacts and are included in more than one section. Of the nine mothers, three reported that the pandemic had little to no effect on the social lives of the youths ("Honestly, it didn't change a whole lot" Sophie) either because they youths had no school friends prior to the pandemic (William, Dipper) or because the youth's friends were not school friends ("Derek has his own social life and it's outside of school too so I don't really think that that's been impacted a lot" Maya). For the other seven pairs of participants, remote emergency learning had a big impact on the youths, in positive and negative ways.

Positive Impact on Social Relationships. Even though emergency remote learning reduced the face-to-face time that students had with their teachers, some parents and youths found that, in some ways, their social relationships improved. Of the nine mothers, five identified positive impacts on their youths' social relationships during remote schooling. The mothers that reported positive impacts of emergency remote learning on their child's social development tended to be those youth that were not severely restricted according to their SRS-2 scores. In fact, those mothers reported that several supportive relationships were strengthened during remote schooling. Of the five mothers that reported that the pandemic schooling had a positive impact on relationships, four mothers said that regular interactions with teachers were important. For example, Helen noticed Connor would attend his online class meeting every day "just to connect with the teacher and to feel a part of that," even though Connor's classmates did not always attend. These direct interactions provided connection with teachers and others, which was what the youths really wanted. Emma noticed that the one-on-one time with Dipper's teacher

improved his trust of his teacher (e.g., “level of trust and wanting to perform for them just goes way up”). For those youth that already had a positive relationship with their teachers, the one-on-one time further enriched those relationships (e.g., “I think having already had a good relationship with the teacher was helpful once going to remote learning,” Violet). The youths also felt that direct interactions with the teachers were helpful; all reported feeling that their interactions with teacher were important to them and they could connect with their teacher when needed.

Regular connection with peers was also important for social well-being. The youths and their parents (n=4) told me regular online contact with select friends helped strengthen those relationships, as they had more time to connect (e.g., “He has a very close group of friends that has really strengthened over COVID as well because of those, you know, phone conversations and Zoom calls and all of those things,” Maria). Three parents identified that familial supportive relationships were strengthened through the pandemic. Improved familial relationships improved the youths’ sense of well-being at home in terms of parents (e.g., “He came more connected with me at home, which was cool,” Emma) and also extended family members, including grandparents and cousins (e.g., “COVID has strengthened the relationships with my side of the family,” Maria).

In addition to increased connections with youths’ supportive relationships, parents shared that remote schooling helped their youths discover how to socialize in ways other than through face-to-face interactions. For example, Maria shared that Tony, who had no significant deficits in his SRS-2 scores (T-score=58), was able to strengthen his friendships because he identified ways to communicate virtually (e.g., “COVID is actually given him some tools to keep being social without wanting to get out,” Maria). Emma noticed that Dipper’s virtual class meetings provided

him an opportunity to socialize with the classmates with whom he did not typically connect (e.g., “It’s a great opportunity for back and forth for learning turn taking and just finding things in common with people,” Emma). For someone like Beau, the use of texting and other digital means continued after the schools re-opened: “They text each other all the time which he wasn’t doing before” (Cat).

Negative Impact on Social Relationships. While some benefits to social well-being were identified, the impact of emergency remote learning on social relationships was generally negative. All of the mothers said that their youths felt disconnected during remote schooling, both in terms of relationships with peers and with adults. Speaking to the impact on Beau’s social life during remote schooling, Cat shared “I think [his social life] went down to nothing during that time.” As Violet noted, there were fewer opportunities to connect: “It wasn’t that same level of possibilities of social interactions,” Violet).

The youths were vocal about the lack of connection they experienced, despite having the desire to connect with their friends. Delaney recognized that one impact of remote learning was that she lost connection with friends: “For the majority of people, I definitely lost a bit of connection, especially from my friends.” Derek echoed a similar experience as he relied on in-person social interactions prior to the pandemic: “a bit of our bonds kind of broke off because we can’t do the things we wanted to do.” William told me that he had “no interaction [with] the other kids at all.” The parents and youths sometimes held different views of their social interactions. For example, Dipper said that he felt limited in his social capacity (e.g., “I didn’t feel connected because I’m because like, we literally couldn’t see each other face to face”), and his mom said that remote schooling had an overall positive impact on his social life (“He was

able to just talk with friends that respected him and was still able to work through social things. So, it was good for us.”).

Parents outlined several factors that contributed to their youths’ weakened social relationships. Navigating online interactions was difficult for all three of the youth with severe restrictions (according to the SRS-2). Thelma said, of Louise’s social efforts: “I think she found that very difficult especially as an autistic teenager to go, how do I communicate when I’m already I communicate differently as is.” For Lucas, communication on online platforms was “almost like a new language” according to his mother, which made it difficult for him to engage in online chats.

Perhaps unsurprisingly, socializing during the pandemic was difficult for those with modality difficulties, such as those youth with severe restrictions to their social responsiveness, but the youth with mild restrictions also had difficulty socializing at times. Those mothers reported that while their youths were able to initiate online conversations, sometimes their friends did not respond. That lack of connection may not have only been due to social differences. As suggested by Helen, Connor’s peers may have not connected with him because of issues accessing the Internet: “I know Connor tried very hard during that time to connect with some of his friends but...I don’t know if all of them would have had, you know, Wi-Fi at home.” Parents recognized the shift from activity-based interactions to online interactions was challenging, especially for youth also diagnosed with a learning disability. Lucas’ mother, Amanda, explained the difference between activity-based interactions and online interactions like this:

Because online the communication is with an output, which Lucas has a learning disability. And so basically, it's written...so he doesn't have to be articulate, you know,

and think about grammar and spelling and that stuff, you know. He really struggles with that.

Beau, who had no significant restrictions according to the SRS-2 scores, highlighted his challenges with online interactions, specifically with video calls:

Well, online you lose a lot of like physical stimulus or visual stimulus that you get when you're actually sitting next to someone and talking to them. Because there's like, you know, like body language is generally lost because most cameras are portrait shots and audio compression and video compression can make it hard to tell sometimes like inflection and posture.

Even when online communication was possible, it was difficult for many youths. Some parents reported their youths did not feel the same sense of connection virtually as they did face-to-face. Parents recognized the importance of in-person social interactions (e.g., “She needs that social contact, she needs, she needs the in person [contact] to help regulate,” Thelma). Amanda described the difference between virtual and face-to-face interactions for Lucas: “It didn't seem real to him at all, the online thing. As if they weren't real people, they were pictures of school friends.” Dipper explained his preference to interact with others face-to-face: “I didn't feel connected because...we literally couldn't see each other face to face.” According to his mother, the lack of connection had a lasting impact on Lucas:

I really feel like he lost a lot of social skills. Like I've been almost having to coach last night, for example ... like what does a friendship look like to you and he seems to have gone back with. He actually said when people give you things, that's friendship.

Thelma further emphasized how the limited connection during school closures has caused challenges, as “literally it put us back years, years of work with her to get her, where she was pre-COVID.”

Theme 2: Emotional

As noted by all nine mothers, the first several months of the pandemic was an emotional time for the youths. All parents (n=9) recognized the emotional impact of emergency remote schooling, whether their youths had a positive experience, a negative emotional experience, or a mixed experience. The ‘emotional’ theme is divided into two subthemes: emotional benefit and emotional toll.

Emotional Benefit. For Dipper and Delaney, the reduced pressure of in-person schooling had a positive effect on their emotional well-being. For example, Emma reported that remote schooling was a “game changer for [Dipper’s] anxiety levels.” Emma said that, during the first few months of the pandemic, Dipper’s anxious behaviours (e.g., lip licking) stopped because he was not in a “constant state of anxiety with either his educational assistant or his peers” as he might have been in-person. Delaney also found some benefits to remote schooling. Violet noticed that although Delaney felt somewhat isolated, Delaney had a positive emotional experience because she was “able to slow things down a bit” and have some flexibility in her day during remote schooling.

Emotional Toll. Most parents (n=7) reported that emergency remote learning came with an emotional toll for their youths. Maria told me that to some degree Tony “struggled with depression” during remote schooling because “he went from seeing his friends every day to not seeing them.” According to Maya, Derek felt “depressed” and “isolated” with limited social engagement during remote schooling. Maya explained how Derek’s self-esteem was impacted

because of the limited support with his learning during this time: “He lost a lot of self-esteem feeling like ‘I can't do this, I'm you know, I'm stupid. I can't figure this out.’” As mentioned earlier, Connor felt frustrated because he tried to send messages to his friends during remote schooling but did not get any responses. Amanda described how navigating the online space and chats was “emotionally hard” for Lucas and “really negatively affected him in terms of his self-worth,” as he struggled to successfully send messages to his classmates. Amanda described Lucas’ experience with online communication as “absolutely overwhelming.” Amanda went on to say that when Lucas became upset he would become dysregulated and start “banging the iPad, and banging the table, and banging the chair.” Cat shared that Beau felt overwhelmed with the shift to having to communicate with others online:

He didn't like to go on to, like, a class Zoom. [It] was too overwhelming. There's too many people. Everyone's talking at the same time. He can't, you know, it's not an easy way to communicate for him and so just didn't want to do it anymore.

According to Thelma, Louise found certain aspects of online communication (e.g., video chats) to be overwhelming (“she just couldn't handle the change”). Thelma noticed that Louise experienced increased separation anxiety and social anxiety during remote schooling (“We slid backwards with everything like social emotional”). Louise’s teachers also expressed concerns about Louise’s well-being, as Thelma shared that she was encouraged to “focus on [Louise’s] mental health and her well-being” by her teacher. In describing William’s experience during remote schooling, Sophie shared that “there were a lot of tears last year.”

Theme 3: Academic

Despite the challenges that came with emergency remote learning, the effects on academic well-being were not entirely negative. Schooling was more difficult during remote

learning overall but, for some youths, remote schooling provided more options for work timelines, reduced pressure on outcomes, and more autonomy. The ‘academic’ theme relates to the impacts of remote schooling on their academic progress. All nine parents acknowledged varying degrees of impact on their youths’ education experience. This theme is divided into two subthemes: positive impact on academics and negative impact on academics. Several mothers reported both positive and negative impacts and are included in more than one section.

Positive impact on academics. The academic benefits of remote schooling tended to come to those youths whose social responsiveness was the least restricted, according to the results of their SRS-2 scores. Of the five parents that identified some benefit from remote learning on their children’s academic goals, four were parents of youths with less-than-severe restrictions. According to two parents, remote schooling was better than in-person schooling because remote schooling came with fewer restrictions. Cat believed that Beau benefited from not being distracted by his classmates, as well as Beau not distracting them (“he does great without the distractions of his classmates,” Cat). Apart from decreased distractions, Cat did not notice a significant impact on Beau’s academic progress (“We fortunately didn’t see it affect his academics”). In the case of William, whose SRS-2 scores reported severe restrictions, his mother has similar observations: “I think he liked that he didn’t have to deal with all of the classmates making noises” (Sophie). Two of the parents said that their children did better with remote learning because, as parents, they were able to help their children. Violet explained that she was able to help Delaney with her schoolwork since she “knew what she was learning and what she was doing,” and was able to create “authentic learning experiences” for her through activities such as baking to learn about fractions. Connor shared that his parents were available to support him on his school work (“Mom and dad were able to support and help me with the work I needed

to,” Connor). Parents (n=2) also acknowledged the impact of decreased social pressure and anxiety had on their youths’ learning. Emma shared Dipper’s experience with the online format:

I wish it worked as well for other people, but for us, whoof, game changer for his anxiety levels. And his marks and his learning just went way through the roof because...he wasn't in a constant state of anxiety with either his [educational assistant] or his peers.

For some youths, the format of remote schooling meant that more energy could be focused on academic work. According to Violet, Delaney felt less pressure to be social during remote schooling, which allowed Violet and Delaney more time to focus on academic goals.

Negative impact on academics. Despite the potential for academic benefits identified by some of the participants, remote schooling tended to be associated with reductions in academic well-being. Most parents (n=8) reported that their youth experienced a negative impact on their academic progress. Parents with youth with varying restrictions (i.e., severe to no significant restrictions) all reported their youths’ learning was negatively affected during remote schooling. Specifically, Violet addressed how a negative impact on Delaney’s learning (i.e., not understanding school work) also seemed to have negatively impacted her emotionally (“Not just that it impacted her academically, but just emotionally and mentally to be like hey I'm not, I'm not getting this,” Violet).

Eight parents told me that the lack of structure during remote schooling negatively impacted their youths’ academic progress. For Lucas, whose total SRS-2 scores were in the severe range (T-score = >90), his mother noticed that he was unable to take regular “movement breaks” during virtual class meetings because he would miss the information his teacher gave. In speaking about Louise, whose total SRS-2 scores were also in the severe range (T-score = >90), Thelma emphasized how critical routine and structure is for autistic youth like hers (“Our kid

needs that routine, that structure. They need it. They thrive on it,” Thelma). Maya shared Derek’s experience with the lack of structure in regard to assignment deadlines:

And there's no there's no real like accountability from the school on him to be hey like you know you have to have these turned in by this time it kind of thing. And without that structure of knowing that he has this much time to do this much work and you know, and all that he doesn't, he doesn't do well.

Completing school tasks was difficult for two of the youths because the home was too distracting. Delaney told me she found it difficult to complete her school work in a home environment because she got easily distracted (“I was really just distracted doing that [homework] with all the stuff around me”). Lucas’ mother explained his experience as: “He wasn't really learning anything because he was so outrageously distracted.” One parent, Cat, did not report any negative impact on her youth’s learning, however, Beau shared he got easily distracted because of the lack of structure and routine of remote schooling (“It was very, very easy to get off track without being [in person]”).

According to four parents, the change in structure caused the youths to be less motivated for school work. Sophie said that William procrastinated because he found the assignments to be difficult. Violet reported that Delaney found it stressful not being in a physical classroom to see how her classmates were doing and having them as a “benchmark” to motivate herself. According to Maya, Derek’s decreased motivation to complete school work was because of the lack of support during remote schooling (“Without the motivation to actually sit down and do it because it was like, okay, nobody's there to help if I need help. So why bother?” Maya).

Teacher support was limited during remote learning. Tony said that he found it difficult to contact his teacher during remote schooling and was not able to “just walk up to their desk” if

he had a question about an assignment. Another challenge for Tony was that he lost his academic supports at that time, which impacted his learning during remote schooling (“[He] lost all of those exceptions that were unique to him on his IEP, right? And so he didn't have any of those supports for exemption, exceptions that he normally had,” Maria). Maya reported she was not surprised that school work was not getting done, since Derek did not receive the same level of support as in-person schooling. Maya explained Derek’s experience like this:

You see a kid that struggles and then, you know, kind of leave them to do his own thing. And so, yeah. And nothing of course is going to get done, which is on him too. You know, but nothing of course, is getting done. And, so you go from a kid who's already struggling to having zero marks like having no, no marks, no grades because there's nothing being turned in.

The technological aspects of remote schooling interfered with youths’ learning. Parents with youths with severe restrictions (n=2) reported their youths had difficulty navigating technology for their learning. Sophie reported William found it frustrating at times to figure out how to submit his work online. In speaking about Lucas’ experience, Amanda shared:

He was absolutely unable to complete any learning while online and I had to print everything off onto paper (Okay) that the teacher gave, so he wasn't able to, you know, it was a fill in the box thing, I would have to take screenshots and then print it off.

Two parents recognized how limited accessibility to internet negatively impacted their youths’ education experience. Maria shared how they did not "have fantastic Wi-Fi connections” living in a more rural area. Maya reported that since Derek only had access to his cellphone data sometimes the connection was “glitchy,” which limited Tony’s ability to fully participate in remote schooling. Both Maria and Maya emphasized the selective accessibility of remote

schooling, in terms of how their families were not the only ones with restricted access to secure Internet.

CHAPTER 5: Discussion

The purpose of the current study was to explore the experiences and perceptions of autistic youth and their mothers of emergency remote learning during COVID-19 from March to June 2020, in relation to their well-being. The abrupt shift to emergency remote learning presented difficulties for many students, but the impact of those difficulties on autistic students often went beyond those experienced by their typically developing peers (Ashbury et al., 2020; Genova et al., 2021). The findings of this study suggest that the autistic youths did not thrive during remote schooling. With fewer school supports and opportunities for social engagement, the developmental contexts for youths drastically changed during remote schooling. As a result, youths were impacted on an individual level; risky behaviours and anxiety increased during that time. Youths with more severe social restrictions required additional ecological supports, such as help from their mother to communicate with their friends and classmates. Youths' sense of academic competence was affected by decreased interactions with teachers. Youths needed access to ecological resources during remote schooling, including socialization opportunities with friends and classmates and support from teachers and educational assistants. Unfortunately, many of the participants in the current study did not feel that they got the ecological supports they needed.

The following section discusses five findings that emerged when parents and youths were asked to describe their experiences during emergency remote learning. First, not all of the elements of thriving included in the positive youth development thriving framework were equally valued by the parents and the youths themselves. Second, while the first several months of the pandemic were not generally a time of thriving, there were benefits that came with the new approaches and modalities based on the youths' range of social abilities. Third, youths with

difficulties with social responsiveness (as measured by the SRS-2) had a more challenging time during the pandemic than those with fewer difficulties. Fourth, the social isolation that came because of remote schooling meant that youths used technology to communicate with others, which impacted their well-being and relationships in positive and negative ways. The suggestions offered by parents to alleviate some of the negative consequences of the social isolation during remote schooling are outlined. Lastly, the lack of structure and limited supports associated with the online format impacted youth's sense of academic success. These findings are discussed in relation to the thriving framework (e.g., individual ↔ context relationship). Lastly, implications for educators and mental health professionals, as well as the limitations of this study, are addressed in this section.

Conceptions of Well-Being and Thriving Framework

The components of positive youth development (5Cs) are generally considered equally important for thriving, but not all components of the positive youth development framework were equally valued in the conceptions of thriving by the mothers in the current study. While the parent participants in the current study held different priorities in terms of how they defined thriving, all parents identified connectedness as a central component of the youths' sense of well-being. The finding that connectedness is an important part of parents' sense of well-being for their children aligns with findings of research on parents' hopes for their autistic children (Chen et al., 2019; Finke et al., 2019). A study by Finke et al. (2019) explored the hopes of parents with autistic children in terms of their long-term outcomes for their child. Parents with children across all age groups (preschool to adults) expressed hope for their child to have increased supportive relationships with their peers, with emphasis on having reciprocal friendships with people who support and spend time with them (Finke et al., 2019). Finding social opportunities for autistic

youths to engage in reciprocal conversation and maintain a sense of connectedness, especially during crises like the pandemic, will help support their well-being.

It was also important to most mothers that opportunities to demonstrate competence (social and cognitive) were considered as a part of the youths' sense of well-being. Parents emphasized their child's ability to behave and self-regulate in relation to their conceptualization of well-being. It was important to the mothers that their children demonstrate competence, which is in line with studies on thriving in autistic youth that show a sense of competence tends to be low compared to the other dimensions of thriving (Simpson et al., 2022; Weiss & Burnham Riosa, 2015). In a study by Simpson et al. (2022), parents' ratings indicated that autistic youths' social and cognitive skills at school, home, and other social settings require support. These skills may correspond with the difficulties in social communication skills that are a part of the ASD diagnostic criteria (Simpson et al., 2022). Most mothers recognized competence as an important part of their children's well-being and felt that their child may require additional supports from parents and educators to succeed in social, academic, and cognitive domains.

Youths' contributions to family, community, and society were not priorities for mothers in their conceptualization of well-being. Some parents did recognize the importance of their child's contribution to themselves by staying healthy (e.g., healthy eating, exercising, getting enough sleep). This finding aligns with studies on thriving of autistic youths, in which youths had low levels of contributions compared to the other dimensions (Simpson et al., 2022; Weiss & Burnham Riosa, 2015). As an apex component, contribution tends to come only after the other five Cs are fulfilled (Lerner et al., 2014), which may explain why the mothers placed importance on the other dimensions in their conceptualization of well-being. The mothers' conceptualization of their children's well-being was mirrored by the parent-reported thriving scores, in which the

low scores for contribution corresponded with the overall low thriving scores across all dimensions.

Severity of Deficits

The current study did not include enough participants to conduct group comparisons, according to ratings of social responsiveness. However, the results of the current study suggest that the severity of social responsiveness deficits seemed to affect the nature of the difficulties experienced by the autistic youth. The youths in the current study whose SRS-2 results suggested they have social responsiveness restrictions in the severe range told me that they found it difficult to adapt to the associated outcomes during school closures, a finding that is in line with the results of similar studies (Di Renzo et al., 2020; Hannawi et al., 2022). A study by Hannawi et al. (2022) reported that male youths with moderate to severe ASD symptoms were negatively impacted by the pandemic, because those youths used electronic devices to watch videos instead of socializing with peers. Within the individual ↔ context relationship, the severity of social responsiveness deficits indicated differences in youths' skills and strengths. The new context of remote schooling seemed to be more challenging for youths with limited skills and so they required more support (e.g., youths with more severe social deficits). The lack of alignment between the strengths and ecological assets for these youths did not tend to promote thriving. In the current study, youths with severe social restrictions found it difficult to socialize during the pandemic because they struggled to communicate online. Four out of the six youths with moderate-to-severe social restrictions felt neutral or did not feel comfortable interacting with others online. This finding aligns with the work of Azevedo Machado et al. (2021), in which youths with severe ASD symptoms tended to find that digital socialization modalities and disruptions in routines negatively impacted their abilities to socialize. Autistic youths with severe

social restrictions will likely benefit from additional supports from parents and educators to foster thriving.

Youths in the current study with mild or no significant social deficits (according to the SRS-2) told me that they felt disconnected but they compensated for that by learning ways to socialize with their peers online. Youths with social responsiveness deficits in the mild range tended to become more comfortable interacting with peers online, even if they preferred in-person socializing than socializing online. Interviews with the youths suggested that the digital modalities used during remote schooling alleviated social pressures for some youths with moderate-to-mild restrictions, a phenomenon that has been noted by others (Saline, 2021; Reicher, 2020). Remote schooling seemed to support the well-being and learning of youths with mild restrictions because the social demands that generally exist in the classroom setting were largely eliminated (Reicher, 2020). Autistic youths with mild social responsiveness restrictions seemed to have adapted to the context they were living in during the first few months of the pandemic and may have benefited from the relief of social pressures and demands during remote schooling.

Parents of youths with severe restrictions and more challenging needs had to take on additional responsibilities to support their youths' needs during emergency remote learning, a findings that extends the results of previous research (O'Connor Bones et al., 2021). Parents of youths with severe social restrictions that provided more direct support to their children represented an attempt to reduce the adaptive and developmental gap between the individual and the context. Further, there is a positive association between the severity of ASD characteristics and parental stress (Lecavalier & Wiltz, 2006; Lyons et al., 2010; Clauser et al., 2021), which was also reported during emergency remote learning (Manning et al., 2021). Parents of youths

with severe ASD symptoms tend to experience more stress than parents of youths with mild symptoms (Manning et al., 2021). Situations like the pandemic increase stress and responsibility tend to impact the quality of family relationships and parenting styles (Bozkus-Genc & Sani-Bozkurt, 2022). Recognizing that autistic youths with severe restrictions will likely require more direct additional supports during events such as school closures may be helpful to identify ways to best support the needs of autistic youths and reduce stress for parents. The increased alignment between the youths' strengths and ecological assets (e.g., additional support and resources) will promote thriving (Lerner et al., 2010).

Social Isolation

For nearly all students, remote schooling meant isolation. Limited social contact was common during school closures, as reported by this current study and others (Amorim et al., 2020; Pellicano et al., 2022), but what may not be clear is how the students felt about the lack of face-to-face socializing. Reduced social opportunities may not be seen as entirely negative by autistic individuals, a group of people that have been called “natural quarantiners” (Cassidy et al., 2020, p. 110). Youth in the current study were not the only ones that considered the social isolation during the pandemic as comforting and beneficial (Amorim et al., 2020; Pellicano et al., 2022). For some youths, staying at home provided greater flexibility and alleviated certain social pressures and demands of social interactions. That said, virtual social interactions were overwhelming for some youths.

Youths used electronic devices to communicate with friends and classmates during remote schooling, even though most youths preferred to socialize face-to-face than online. The finding that youths used technology to socialize during remote schooling but did not prefer the replacement of face-to-face contact with online alternatives extends the results of previous

research (Pellicano et al., 2022). Pellicano et al. (2022) explored autistic individuals' experiences of social isolation during the pandemic, in which participants reported an overwhelming loss of valuable social experiences. Individuals found online interactions to be difficult and effortful and missed in-person interactions with their friends, which seemed to contribute to psychological distress experienced by many people (Pellicano et al., 2022). While the use of electronic devices may have relieved some of the negative effects of social isolation during remote schooling, face-to-face social interactions remain crucial for the well-being of autistic youth. The use of technology offered youths new avenues to connect with their friends, with many youths continuing to use online approaches when schools re-opened. In-person interactions are important to support youths' well-being, thus online interactions should be viewed as a supplement to face-to-face interactions instead of being a replacement.

Decreased social engagement opportunities tended to have an overall negative impact on the well-being and social relationships of the autistic youths, something that was particularly true for youths who had established friendships prior to the pandemic. Within the positive youth development model, limited social engagement represented decreased ecological resources that promote healthy development and contribute to youths' thriving. Youths experienced disruption to their positive relationships and less thriving in connectedness because of the decreased social opportunities to engage in bidirectional interactions during remote schooling. The finding that youths' well-being was impacted because of social isolation during the pandemic extends the work of Asbury and Toseeb (2022) and Stadheim and colleagues (2022). In a study by Asbury & Toseeb (2022), parents of autistic youths reported high levels of anxiety in their children, as well as psychological distress (e.g., increased challenging and negative behaviours) during the first few months of the pandemic. The negative impact on youths' well-being was exacerbated by the

loss of supports and structure, as well as the social isolation that came with the pandemic (Asbury & Toseeb, 2022). Autistic youths demonstrated increased negative emotional responses (sadness, anxiety, anger) in response to the decreased socialization during the pandemic (Stadheim et al. 2022). Social isolation left youth feeling distressed because they were not able to interact with their friends as often as they wanted to, even though the desire and need to interact with friends became more pronounced for some youths during remote schooling (Pellicano et al., 2020). Providing youths socialization opportunities to maintain social contact with their friends and classmates may support their well-being during periods of social isolation, including the pandemic.

Despite the weakened social connections with friends and teachers, youths' relationships with family members strengthened during the pandemic. The reported positive family outcomes during the pandemic correspond with the work of Stadheim et al. (2022). The positive family outcomes were a result of spending more time together talking, playing games, and eating, which contributed to an increased sense of closeness among family members (Stadheim et al., 2022). Amidst the various negative consequences of isolation during the pandemic, increased family interconnectedness seemed to contribute to youths' well-being.

Parents suggested supports and social engagement opportunities that may have been helpful for youths to adjust to their new context during remote schooling. Some parents acknowledged the importance of youths having consistent one-on-one time with their teachers and education assistant to connect with them. This finding aligns with the work of Asbury et al. (2020), who reported that parents felt insufficiently supported and particularly vulnerable with the loss of their children's tailored supports during remote schooling. Parents also acknowledged the increased need for autistic children to see familiar faces during school closures, including

their teacher and educational assistant (Asbury et al., 2020). In the current study, Amanda identified school counsellors as important resources to support youths while they navigated the transition during remote schooling. Parents' recommendation of having access to counsellors through remote services to provide their children with psychological support aligns with the findings of Bozkus-Genc & Sani Bozkurt (2022) and Mumbardó-Adam et al., (2021). Parents suggested how more online social engagement opportunities for youths to interact with their peers, such as online clubs, may provide support to youths to maintain connections during social isolation. Cat and Thelma emphasized the need for small group activities to provide youths an opportunity to connect with others without feeling overwhelmed in a large group. Autistic youths need to be better supported to maintain social contact, as they found online social interactions to be difficult and missed the face-to-face interactions with others (Pellicano et al., 2022). Autistic youths not only experienced loss of social relationships, but of tailored supports during remote schooling. The parents' suggestions on how autistic youths can be better supported during school closures is valuable to consider for future recommendations.

Educational Experience

For many of the youths in this study, the increase in flexibility that came with emergency remote learning came with a decrease in structure. In this study, the lack of structure during emergency remote learning seemed to have a negative impact on youths' learning. Online formats often require rich, autonomous motivation to remain engaged in learning (Schuck & Lambert, 2020), something which several youths in this study lacked. A study by Colizzi et al. (2020) reported that parents of autistic youths struggled to manage their youths' structured activities and as a result youths presented more intense and frequent behavioural challenges. Youths experienced decreased interactions with and support from their teachers and teaching

assistants during remote schooling compared to before the pandemic, as also noted by several studies (Asbury et al., 2020; Kalvin et al., 2021; Simpson & Adams, 2022). Virtual class meetings allowed youths to see and interact with their teachers, however youth emphasized how online interactions were not the same as being in a classroom with their teacher. This finding extends the work of Pellicano et al. (2022), who reported that autistic youth found online interactions with others to not be the same as physical interactions. All youths lost personalized one-on-one support from educational assistants, so direct parental involvement was needed. Parents of autistic youths had to take on additional responsibilities and adopt pedagogical roles, as they became increasingly engaged in their children's learning during remote schooling (Bozkus-Genc & Sani Bozkurt, 2022). In considering the practicality of the online delivery format, autistic youths should be offered increased structure to support their learning and decrease the burden on parents to act as teaching assistants.

The new context during remote schooling with decreased supports from schools and limited access to resources negatively impacted the youths' learning. Without the supports available during in-person instruction, many youths did not have the skills and strengths to match the new context they were in. Within the Five Cs of positive youth development, youths were likely thriving less in the competence category (e.g., academic competence), with potential negative effects on their grades and attendance given the lack of structure during remote schooling. The loss of supports, combined with the new context during remote schooling did not promote healthy development in youths.

Implications for Educators

The findings of this study add to our understanding of the lived experiences of autistic youths during emergency remote learning and have practical implications for educators who

work with autistic youth. Educators should recognize how the range of social abilities of autistic youths may impact their social life, well-being, and learning, especially during times of crisis, such as a global pandemic. The youths and adult participants in the current study acknowledged that educators played important roles in promoting well-being of youths during emergency remote learning (Singh et al., 2020). Perhaps more so than their neurotypical peers, autistic youths need a tailored approach when it comes to accomplishing their academic goals. Some youths also need supports for their social goals. In particular, youths with more severe restrictions will likely require additional support from teachers and teaching assistants to maintain their friendships and to engage in social learning during school closures. Especially for those with social and communication difficulties, it can be difficult to connect with others in video conferences with many attendees. Small group sessions or reduced class sizes (Bozkus-Genc & Sani Bozkurt, 2022) can provide youths opportunities to meaningfully connect with their peers online, a view that was emphasized by the mothers in this study. School counsellors can conduct sessions to check in with youths, discuss well-being, and model regulation exercises, such as deep breathing and visualization, as suggested by Singh et al. (2020) and Strear et al. (2021). School counsellors can help by developing online tools for students, including creating virtual calming rooms where students can self-regulate (Strear et al., 2021).

When it comes to supporting autistic students in remote schooling, teamwork was essential. Parents and schools must work together to support the well-being and education of autistic youth (O'Connor Bones et al., 2021). Collaborative communication between parents and schools is the best way to ensure consistent practices and supports across both school and home settings (Azad & Mandell, 2016). The additional support roles that the parents in the current study took on during remote schooling meant that parents learned about the strengths and

challenges of their child's learning and social capacities. Educators should strive to maintain contact with parents to receive updates and feedback about youths' learning and well-being. Maintaining contact with parents on online formats will likely be supportive to both youths and parents (Smith et al., 2016). Despite the efforts of educators to support students, parents of autistic youths often feel they have to advocate for social, financial, educational, and healthcare supports (Ewles et al., 2014). Various factors affect parents' level of effectiveness: (1) financial status (Smith-Young et al., 2020); (2) education and skills (Ewles et al., 2014); (3) time commitment (Smith-Young et al., 2022); and (4) severity of child's ASD symptoms (Smith-Young et al., 2020). In the current study, several parents said that their advocacy efforts were slightly muted because they were cognizant of the pressures experienced by educators. Nonetheless, parents shared that they expected that the additional insights they gained through directly supporting their children will inform future efforts for appropriate supports in the future. Professionals can support parent advocacy efforts by understanding the barriers parents encounter and by recognizing the value of their inputs (Smith-Young et al., 2022).

Implications for Mental Health Professionals

To support autistic youths, mental health professionals need to understand the experiences of autistic youths during emergency remote learning. Many autistic youths would benefit from the kind of support that mental health professionals offer for navigating changes in peer relationships during and after the pandemic and the subsequent impact on youths' well-being. Providing emotional regulation strategies and resources (e.g., muscle relaxation, positive self-talk) to reduce anxiety during uncertain times can be a big help (Singh et al., 2020). Mental health professionals should also consider how to offer more accessible and effective remote services to autistic youths (Bozkus-Genc & Sani Bozkurt, 2022; Singh et al., 2020). Access to

phone and virtual counselling services can help more youths get the supports they need, especially if those services reflect their preferences and needs (Bozkus-Genc & Sani Bozkurt, 2022; Spain et al., 2021; Stadheim et al., 2022). Online services do not replace in-person services; however, they offer families an additional option to access mental health services (Pellicano et al., 2022). Parents themselves may seek counselling services, considering the additional demands and stress on parents during remote schooling (Althiabi, 2021; Narzisi, 2020).

Limitations

There are several limitations to this study. The first limitation was the sample. While the small sample size allowed me to focus on the experiences of the nine families, it also limited the generalizability of the findings of this study. As such, the findings of this study are limited to the perspectives and experiences of the nine parents and their youths, and may not be generalized to the broader population. Additionally, the recruitment approaches used in this study may have inadvertently excluded parents that were not a part of online support groups.

The second limitation relates to the sex ratio of the youths in this study. Even though the sex ratio of youths in this study (seven males, two females) generally aligned with the sex ratios in the diagnostic rates of ASD (4:1 males to females; Halladay et al., 2015; Kirkovski et al., 2013; Lai et al., 2014; Nag et al., 2018), two female youth participants were not enough to evaluate the effect of sex on the responses. Sex differences have been recognized in how impairments in social communication are displayed (Ratto et al., 2019). Autistic male and female youths have qualitatively different friendship experiences (Cola et al., 2022). Female autistic youth tend to maintain emotionally intimate friendships, whereas males tend to have friendships that are centred around activities and interests (Cola et al., 2022; Sedgewick et al., 2015). Since

the sample in this study does not have an equal number of males and females, such sex differences could not be explored. A sample with more equal male-to-female ratio could provide another avenue for research to investigate sex differences among youths' experience with emergency remote learning.

The third limitation of this study is the degree to which the perspectives of the youths were represented. While youths completed surveys and participated in interviews, the parents' perspectives were more frequently included than those of the youths. The perspectives of youths may have been limited by social communication difficulties that are a part of the ASD diagnosis. Nonetheless, providing youths with an opportunity to voice their perspectives and experiences of emergency remote learning is a strength of this study. Interview modality may have been a limiting factor as well. Youths were only given the option to complete the interview with me via telephone, with the exception of one participant who opted to record his responses with his mother. Future studies may elicit richer youth contributions through options, such as Photovoice, which is an approach designed to meaningfully engage autistic youths (Danker et al., 2019a).

The fourth limitation is that all the parents that participated in this study with youths were mothers. While there are fathers who are actively involved in their youths' lives, their perspectives were not captured in this study. The perspectives of fathers have typically been underrepresented in research on autistic youth (Lashewicz et al., 2019). To consider the fathers' perspectives of their youths, future studies may benefit from recruiting parents with balance of males and females.

Lastly, another limitation is that data collection did not include measures of the youth participants' academic success in school prior to emergency remote learning or measures of the pedagogical practices that were perceived as effective. Although relevant and important

considerations, these factors were not included in this study because they did not represent the primary focus of this work as guided by the research questions that framed this study. Future studies should focus on the academic success of autistic youths during school closures to inform effective pedagogical practices to online learning.

Conclusion

Despite these limitations, the current study provides an understanding of the experiences of autistic youths of emergency remote learning during the COVID-19 pandemic from March to June 2020. Supporting autistic youths' well-being during emergency remote learning was difficult for many families who experienced decreased social interactions, fewer teaching supports, and minimal classroom structure. While inter-group comparisons were not possible with the sample of the current study, the findings suggest that youths' experiences during emergency remote learning were affected by the youths' anxiety levels, their level of social responsiveness, and their level of comfort with technology. The use of technology during emergency remote learning offered youths means to connect with their peers and teachers, however, it did not replace in-person social interactions with the important people in their lives. Regular one-on-one communication and small group meetings were helpful for youths to maintain social contact and support their well-being in online formats. Parents, educators, and mental health professionals must collaborate to ensure the social, emotional, and educational needs of autistic youths are supported in their transition from this pandemic crisis and beyond.

References

- Adams, D., Simpson, K., Davies, L., Campbell, C., & Macdonald, L. (2019). Online learning for university students on the autism spectrum: A systematic review and questionnaire study. *Australasian Journal of Educational Technology*, 35(6), 111-131.
<https://doi.org/10.14742/ajet.5483>
- Aishworiya, R., & Kang, Y. Q. (2020). Including children with developmental disabilities in the equation during this COVID-19 pandemic. *Journal of Autism and Developmental Disorders*, 1–4. <https://doi.org/10.1007/s10803-020-04670-6>
- Akar, F. (2015). Purposes, causes and consequences of excessive internet use among Turkish adolescents. *Eurasian Journal of Educational Research*, 60, 35-56.
10.14689/ejer.2015.60.3
- Alamri, A., & Tyler-Wood, T. (2017). Factors Affecting Learners With Disabilities–Instructor Interaction in Online Learning. *Journal of Special Education Technology*, 32(2), 59–69. <https://doi.org/10.1177/0162643416681497>
- Alberta Health. (2020, March 16). Record of Decision – CMOH Order 01-2020.
<https://open.alberta.ca/dataset/d7e19190-89ac-4383-b148-76aafe905e69/resource/441334a7-5fbb-4230-ab2b-61751064d23e/download/health-cmoh-record-fof-decision-cmoh-01-2020.pdf>
- Alsubaie, M. A. (2015). Hidden curriculum as one of current issue of curriculum. *Journal of Education and Practice*, 6(33), 125-128.
- Althiabi Y. (2021). Attitude, anxiety and perceived mental health care needs among parents of children with Autism Spectrum Disorder (ASD) in Saudi Arabia during COVID-19

- pandemic. *Research in developmental disabilities*, 111, 103873.
<https://doi.org/10.1016/j.ridd.2021.103873>
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). <https://doi.org/10.1176/appi.books.9780890425596>
- Amorim, R., Catarino, S., Miragaia, P., Ferreras, C., Viana, V., & Guardiano, M. (2020). The impact of COVID-19 on children with autism spectrum disorder. *Revista De Neurología*, 71(8), 285.
- Asbury, K., Fox, L., Deniz, E., Code, A., & Toseeb, U. (2020). How is COVID-19 affecting the mental health of children with special educational needs and disabilities and their families? *Journal of Autism and Developmental Disorders*.
<https://doi.org/10.1007/s10803-020-04577-2>
- Asbury, K. & Toseeb, U. (2022). A Longitudinal Study of the Mental Health of Children and Adolescents with Autism and their Parents during COVID-19 : Part 2, Qualitative Findings. *Autism*.
- Azad, G., & Mandell, D. S. (2016). Concerns of parents and teachers of children with autism in elementary school. *Autism : the international journal of research and practice*, 20(4), 435–441. <https://doi.org/10.1177/1362361315588199>
- Azevedo Machado, B., Silva Moro, J., Massignam, C., Cardoso, M., & Bolan, M. (2021). Fear, changes in routine and dental care for children and adolescents with autism spectrum disorder in the COVID-19 pandemic: A survey with brazilian parents. *Special Care in Dentistry*, <https://doi.org/10.1111/scd.12683>
- Barbour, M. K., & LaBonte, R. (2019). *State of the nation: K-12 e-learning in Canada, 2019 edition*. <https://k12sotn.ca/wp-content/uploads/2020/02/StateNation19.pdf>

- Barry, M. M., Clarke, A. M., & Dowling, K. (2017). Promoting social and emotional well-being in schools. *Health Education*, 117(5), 434-451. <https://doi.org/10.1108/HE-11-2016-0057>
- Ben-Itzhak, E., Nachshon, N., & Zachor, D. A. (2019). Having Siblings is Associated with Better Social Functioning in Autism Spectrum Disorder. *Journal of Abnormal Child Psychology*, 47(5), 921–931. <https://doi.org/10.1007/s10802-018-0473-z>
- Benson, P. L., Leffert, N., Scales, P. C., & Blyth, D. A. (1998). Beyond the 'village' rhetoric: Creating healthy communities for children and adolescents. *Applied Developmental Science*, 2(3), 138-159. https://doi.org/10.1207/s1532480xads0203_3
- Benson, P. L., & Scales, P. C. (2009). The definition and preliminary measurement of thriving in adolescence. *The Journal of Positive Psychology*, 4(1), 85-104. <https://doi.org/10.1080/17439760802399240>
- Benson, P. L., & Scales, P. C. (2018). Thriving and sparks. In R. J. R. Levesque, *Encyclopedia of adolescence* (2nd ed.). Springer Science+Business Media. Credo Reference.
- Berry, K., Russell, K. & Frost, K. (2018). Restricted and repetitive behaviors in autism spectrum disorder: A review of associated features and presentation across clinical populations. *Current Developmental Disorders Reports*, 5, 108–115. <https://doi.org/10.1007/s40474-018-0139-0>
- Birt, L., Scott, S., Cavers, D., Campbell, C., & Walter, F. (2016). Member checking: A tool to enhance trustworthiness or merely a nod to validation? *Qualitative Health Research*, 26(13), 1802-1811. <https://doi.org/10.1177/1049732316654870>
- Bishop-Fitzpatrick, L., Mazefsky, C. A., Eack, S. M., & Minshew, N. J. (2017). Correlates of social functioning in autism spectrum disorder: The Role of social cognition. *Research in Autism Spectrum Disorders*, 35, 25–34. <https://doi.org/10.1016/j.rasd.2016.11.013>

- Bottema-Beutel K., & Frisch M.K. (2020). Understanding and addressing social communication difficulties in children with autism. In Vivanti G., Bottema-Beutel K., & Turner-Brown L. (Eds.). *Clinical guide to early interventions for children with autism: Best practices in child and adolescent behavioral health care*. Springer. https://doi.org/10.1007/978-3-030-41160-2_3
- Bozkus-Genc, G., & Sani-Bozkurt, S. (2022). How parents of children with autism spectrum disorder experience the COVID-19 pandemic: Perspectives and insights on the new normal. *Research in Developmental Disabilities, 124*, 104200-104200. <https://doi.org/10.1016/j.ridd.2022.104200>
- Branje, S. J., Frijns, T. O. M., Finkenauer, C., Engels, R., & Meeus, W. I. M. (2007). You are my best friend: Commitment and stability in adolescents' same-sex friendships. *Personal Relationships, 14*(4), 587-603.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Brown, D. J., Arnold, R., Fletcher, D., & Standage, M. (2017). Human thriving: A conceptual debate and literature review. *European Psychologist, 22*(3), 167-179. <https://doi.org/10.1027/1016-9040/a000294>
- Brown, B. B., & Larson, J. (2009). Peer relationships in adolescence. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology* (pp. 74–103). Wiley.
- Brown, H. M., Stahmer, A. C., Dwyer, P., & Rivera, S. (2021). Changing the story: How diagnosticians can support a neurodiversity perspective from the start. *Autism : the international journal of research and practice, 25*(5), 1171–1174. <https://doi.org/10.1177/13623613211001012>

- Bruni, T. P. (2014). Test review: Social responsiveness scale–second edition (SRS-2). *Journal of Psychoeducational Assessment, 32*(4), 365-369.
<https://doi.org/10.1177/0734282913517525>
- Burgstahler, S. (2015). Opening doors or slamming them shut? Online learning practices and students with disabilities. *Social Inclusion, 3*(6), 69-79.
<http://dx.doi.org/10.17645/si.v3i6.420>
- Burke, S. O. (1980). The invulnerable child. *Canadian Journal of Nursing Research Archive, 48*-53.
- Burnham Riosa, P., Chan, V., Maughan, A., Stables, V., Albaum, C., & Weiss, J. A. (2017). Remediating deficits or increasing strengths in autism spectrum disorder research: A content analysis. *Advances in Neurodevelopmental Disorders, 1*(3), 113-121. <https://doi.org/10.1007/s41252-017-0027-3>
- Bury, S. M., Jellett, R., Spoor, J. R., & Hedley, D. (2020). "It Defines Who I Am" or "It's Something I Have": What Language Do [Autistic] Australian Adults [on the Autism Spectrum] Prefer?. *Journal of autism and developmental disorders, 10.1007/s10803-020-04425-3*. Advance online publication. <https://doi.org/10.1007/s10803-020-04425-3>
- Carver, C. S. (1998). Resilience and thriving: Issues, models, and linkages. *Journal of Social Issues, 54*(2), 245–266. <https://doi.org/10.1111/0022-4537.641998064>
- Cassidy, S. A., Nicolaidis, C., Davies, B., Rosa, S. D. R., Eisenman, D., Onaiwu, M. G., & Waisman, T. C. (2020). An expert discussion on autism in the COVID-19 pandemic. *Autism in Adulthood, 2*, 106–117.

- Chen, J., Cohn, E. S., & Orsmond, G. I. (2019). Parents' future visions for their autistic transition-age youth: Hopes and expectations. *Autism*, 23(6), 1363–1372.
<https://doi.org/10.1177/1362361318812141>
- Chorpita, B. F., Yim, L. M., Moffitt, C. E., Umemoto L. A., & Francis, S. E. (2000). Assessment of symptoms of DSM-IV anxiety and depression in children: A revised child anxiety and depression scale. *Behaviour Research and Therapy*, 38, 835-855.
- Clauser, P., Ding, Y., Chen, E. C., Cho, S.-J., Wang, C., & Hwang, J. (2021). Parenting styles, parenting stress, and behavioral outcomes in children with autism. *School Psychology International*, 42(1), 33–56. <https://doi.org/10.1177/0143034320971675>
- Cola, M., Yankowitz, L. D., Tena, K., Russell, A., Bateman, L., Knox, A., Plate, S., Cubit, L. S., Zampella, C. J., Pandey, J., Schultz, R. T., & Parish-Morris, J. (2022). Friend matters: Sex differences in social language during autism diagnostic interviews. *Molecular Autism*, 13(1), 5-5. <https://doi.org/10.1186/s13229-021-00483-1>
- Colizzi, M., Sironi, E., Antonini, F., Ciceri, M. L., Bovo, C., & Zocante, L. (2020). Psychosocial and Behavioral Impact of COVID-19 in Autism Spectrum Disorder: An Online Parent Survey. *Brain sciences*, 10(6), 341.
<https://doi.org/10.3390/brainsci10060341>
- Connolly, J., McIsaac, C., Shulman, S., Wincentak, K., Joly, L., Heifetz, M., & Bravo, V. (2014). Development of romantic relationships in adolescence and emerging adulthood: Implications for community mental health. *Canadian Journal of Community Mental Health*, 33(1), 7–19. <https://doi.org/10.7870/cjcmh-2014-002>
- Constable, P. A., Ring, M., Gaigg, S. B., & Bowler, D. M. (2018). Problem-solving styles in autism spectrum disorder and the development of higher cognitive functions. *Autism : the*

- international Journal of Research and Practice*, 22(5), 597–608.
<https://doi.org/10.1177/1362361317691044>
- Constantino, J. N., & Gruber, C. P. (2012). *Social Responsiveness Scale–Second Edition (SRS-2)* [Measurement instrument]. Western Psychological Services.
- Crocetti, E. (2017). Identity formation in adolescence: The dynamic of forming and consolidating identity commitments. *Child Development Perspectives*, 11(2), 145-150. <https://doi.org/10.1111/cdep.12226>
- Crouse, T., & Rice, M. (2018). Learning to serve students with disabilities online: Teachers' perspectives. *Journal of Online Learning Research*, 4(2), 123-145.
- Damon, W. (2004). What Is positive youth development? *The Annals of the American Academy of Political and Social Science*, 591, 13-24.
<https://doi.org/10.1177/0002716203260092>
- Danker, J. (2019). Enhancing the well-being of students on the autism spectrum: Learning from students, parents, and teachers. Routledge.
- Danker, J., Strnadová, I., & Cumming, T. (2016). School experiences of students with autism spectrum disorder within the context of student wellbeing: A review and analysis of the literature. *Australasian Journal of Special Education*, 40(1), 59-78.
doi:10.1017/jse.2016.1
- Danker, J., Strnadová, I., & Cumming, T. M. (2019a). Picture my well-being: Listening to the voices of students with autism spectrum disorder. *Research in Developmental Disabilities*, 89, 130–140. <https://doi.org/10.1016/j.ridd.2019.04.005>
- Danker, J., Strnadová, I., & Cumming, T. M. (2019b). "They don't have a good life if we keep thinking that they're doing it on purpose!": Teachers' perspectives on the well-being of

- students with autism. *Journal of Autism and Developmental Disorders*, 49(7), 2923–2934. doi: [10.1007/s10803-019-04025-w](https://doi.org/10.1007/s10803-019-04025-w)
- Deckers, A., Muris, P., & Roelofs, J. (2017). Being on Your Own or Feeling Lonely? Loneliness and Other Social Variables in Youths with Autism Spectrum Disorders. *Child Psychiatry and Human Development*, 48(5), 828–839. <https://doi.org/10.1007/s10578-016-0707-7>
- degli Espinosa, F., Metko, A., Raimondi, M., Impenna, M., & Scognamiglio, E. (2020). A model of support for families of children with autism living in the covid-19 lockdown: Lessons from Italy. *Behavior Analysis in Practice*, 1–9. <https://doi.org/10.1007/s40617-020-00438-7>
- Dhiman, S., Sahu, P. K., Reed, W. R., Ganesh, G. S., Goyal, R. K., & Jain, S. (2020). Impact of COVID-19 outbreak on mental health and perceived strain among caregivers tending children with special needs. *Research in Developmental Disabilities*, 107, 103790. <https://doi.org/10.1016/j.ridd.2020.103790>
- Diener, M. L., Wright, C. A., Dunn, L., Wright, S. D., Anderson, L. L., & Smith, K. N. (2016). A creative 3D design programme: Building on interests and social engagement for students with autism spectrum disorder (ASD). *International Journal of Disability, Development, and Education*, 63(2), 181-200. <https://doi.org/10.1080/1034912X.2015.1053436>
- Dijkhuis, R., Gurbuz, E., Ziermans, T., Staal, W., & Swaab, H. (2019). Social attention and emotional responsiveness in young adults with autism. *Frontiers in Psychiatry*, 10, 426. <https://doi.org/10.3389/fpsy.2019.00426>
- Di Renzo, M., Di Castelbianco, F. B., Vanadia, E., Petrillo, M., D'Errico, S., Racinaro, L., & Rea, M. (2020). Parent-reported behavioural changes in children with autism spectrum

- disorder during the Covid-19 lockdown in Italy. *Continuity in Education*, 1(1), 117–125.
DOI: <http://doi.org/10.5334/cie.20>
- Doernberg, E. A., Russ, S. W., & Dimitropoulos, A. (2021). Believing in make-believe: Efficacy of a pretend play intervention for school-aged children with high-functioning autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 51(2), 576–588. <https://doi.org/10.1007/s10803-020-04547-8>
- Dove, N., Wong, J., Gustafson, R., Corneil, T. (2020). *Impact of school closures on learning, child and family well-being during the COVID-19 pandemic*. BC Centre for Disease Control & BC Children’s Hospital. http://www.bccdc.ca/Health-Info-Site/Documents/Public_health_COVID-19_reports/Impact_School_Closures_COVID-19.pdf
- Dowling, E. M., Gestsdottir, S., Anderson, P. M., von Eye, A., Almerigi, J., & Lerner, R. M. (2004). Structural relations among spirituality, religiosity, and thriving in adolescence. *Applied Developmental Science*, 8, 7–16. 10.1207/S1532480XADS0801_2
- Dykshoorn, K., & Cormier, D.C. (2019). Autism spectrum disorder research: Time for positive psychology. *Autism-Open Access*, 9(1), 1-7. 10.4172/2165-7890.1000235
- Eccles, J. S., & Gootman, J. A. (Eds.). (2002). *Community programs to promote youth development*. National Academy Press.
- Elias, R., & White, S. W. (2018). Autism Goes to College: Understanding the Needs of a Student Population on the Rise. *Journal of autism and developmental disorders*, 48(3), 732–746. <https://doi.org/10.1007/s10803-017-3075-7>
- Erikson, E. H. (1993). *Childhood and society*. WW Norton & Company.

- Eshraghi, A. A., Li, C., Alessandri, M., Messinger, D. S., Eshraghi, R. S., Mittal, R., & Armstrong, F. D. (2020). COVID-19: Overcoming the challenges faced by individuals with autism and their families. *The Lancet Psychiatry*, 7(6), 481-483. [https://doi.org/10.1016/S2215-0366\(20\)30197-8](https://doi.org/10.1016/S2215-0366(20)30197-8)
- Ewles, G., Clifford, T., & Minnes, P. (2014). Predictors of advocacy in parents of children with autism spectrum disorders. *Journal on Developmental Disabilities*, 20(1), 73.
- Finke, E. H., Kremkow, J. M. D., Drager, K. D. R., Murillo, A., Richardson, L., & Serpentine, E. C. (2019). “I would like for my child to be happy with his life”: Parental hopes for their children with ASD across the lifespan. *Journal of Autism and Developmental Disorders*, 49(5), 2049-2068. <https://doi.org/10.1007/s10803-019-03882-9>
- Fontana, F., & Frey, J. (2000). The interview: From structured questions to negotiated text. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 645–672). Sage.
- Fournier, E., Scott, S., & Scott, D. E. (2020). Inclusive leadership during the COVID-19 pandemic: How to respond within an inclusion framework. *International Studies in Educational Administration*, 48(1), 17-23.
- Garrad, T. A., Rayner, C., & Pedersen, S. (2019). Attitudes of Australian primary school teachers towards the inclusion of students with autism spectrum disorders. *Journal of Research in Special Educational Needs*, 19(1), 58-67. <https://doi.org/10.1111/1471-3802.12424>
- Genova, H. M., Genova, H. M., Arora, A., Arora, A., Botticello, A. L., & Botticello, A. L. (2021). Effects of school closures resulting from COVID-19 in autistic and neurotypical children. *Frontiers in Education*, 6. <https://doi.org/10.3389/educ.2021.761485>

- Germani, T., Zwaigenbaum, L., Magill-Evans, J., Hodgetts, S., & Ball, G. (2017). Stakeholders' perspectives on social participation in preschool children with Autism Spectrum Disorder. *Developmental neurorehabilitation*, 20(8), 475–482.
<https://doi.org/10.1080/17518423.2016.1214188>
- Gestsdottir, S., Urban, J. B., Bowers, E. P., Lerner, J. V., & Lerner, R. M. (2011). Intentional self-regulation, ecological assets, and thriving in adolescence: A developmental systems model. In R. M. Lerner, J. V. Lerner, E. P. Bowers, S. Lewin-Bizan, S. Gestsdottir, & J. B. Urban (Eds.), *Thriving in childhood and adolescence: The role of self-regulation processes*. *New Directions for Child and Adolescent Development*, 133, 61–76.
- Ghanouni, P., Jarus, T., Zwicker, J. G., Lucyshyn, J., Chauhan, S., & Moir, C. (2019). Perceived Barriers and Existing Challenges in Participation of Children with Autism Spectrum Disorders: "He Did Not Understand and No One Else Seemed to Understand Him". *Journal of autism and developmental disorders*, 49(8), 3136–3145.
<https://doi.org/10.1007/s10803-019-04036-7>
- Habib, A., Harris, L., Pollick, F., & Melville, C. (2019). A meta-analysis of working memory in individuals with autism spectrum disorders. *PloS one*, 14(4), e0216198.
<https://doi.org/10.1371/journal.pone.0216198>
- Halladay, A. K., Bishop, S., Constantino, J. N., Daniels, A. M., Koenig, K., Palmer, K., Messinger, D., Pelphrey, K., Sanders, S. J., Singer, A. T., Taylor, J. L., & Szatmari, P. (2015). Sex and gender differences in autism spectrum disorder: summarizing evidence gaps and identifying emerging areas of priority. *Molecular autism*, 6, 36.
<https://doi.org/10.1186/s13229-015-0019-y>

- Hannawi, A. P., Knight, C., Grelotti, D. J., & Trauner, D. A. (2022). Impact of COVID-19 Pandemic-Associated Social Changes on Boys with Moderate to Severe Autism. *Advances in neurodevelopmental disorders*, 1–5. Advance online publication. <https://doi.org/10.1007/s41252-022-00257-7>
- Hedges, S. H., Odom, S. L., Hume, K., & Sam, A. (2018). Technology use as a support tool by secondary students with autism. *Autism: The International Journal of Research and Practice*, 22(1), 70–79. <https://doi.org/10.1177/1362361317717976>
- Heimann, M., Nordqvist, E., Strid, K., Connant Almrot, J., & Tjus, T. (2016). Children with autism respond differently to spontaneous, elicited and deferred imitation. *Journal of intellectual disability research : JIDR*, 60(5), 491–501. <https://doi.org/10.1111/jir.12272>
- Hershberg, R. M., DeSouza, L. M., Warren, A. E., Lerner, J. V., & Lerner, R. M. (2014). Illuminating trajectories of adolescent thriving and contribution through the words of youth: Qualitative findings from the 4-H Study of positive youth development. *Journal of Youth and Adolescence*, 43(6), 950–970. <https://doi.org/10.1007/s10964-014-0102-2>
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The Difference Between Emergency Remote Teaching and Online Learning. *Educause Review*. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- Jefsen, O. H., Rohde, C., Nørremark, B., & Østergaard, S. D. (2020). Editorial perspective: COVID-19 pandemic-related psychopathology in children and adolescents with mental illness. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*. <https://doi.org/10.1111/jcpp.13292>

- Jones, R. M., Southerland, A., Hamo, A., Carberry, C., Bridges, C., Nay, S., Stubbs, E., Komarow, E., Washington, C., Rehg, J. M., Lord, C., & Rozga, A. (2017). Increased eye contact during conversation compared to play in children with autism. *Journal of Autism and Developmental Disorders, 47*(3), 607-614. <https://doi.org/10.1007/s10803-016-2981-4>
- Kalvin, C. B., Jordan, R. P., Rowley, S. N., Weis, A., Wood, K. S., Wood, J. J., Ibrahim, K., & Sukhodolsky, D. G. (2021). Conducting CBT for anxiety in children with autism spectrum disorder during COVID-19 pandemic. *Journal of Autism and Developmental Disorders, 51*(11), 4239-4247. <https://doi.org/10.1007/s10803-020-04845-1>
- Kapp, S. K. (2018). Social Support, Well-being, and Quality of Life Among Individuals on the Autism Spectrum. *Pediatrics, 141*(Suppl 4), S362–S368. <https://doi.org/10.1542/peds.2016-4300N>
- Karas, D., Ciecuch, J., Negru, O., Crocetti, E., Branje, L. (2015). Relationships between identity and well-being in italian, polish, and romanian emerging adults. *Social Indicators Research, 121*(3), 727-743. <https://doi.org/10.1007/s11205-014-0668-9>
- Kerig, P. K., Schulz, M. S., & Hauser, S. T. (2011). *Adolescence and beyond: Family processes and development*. Oxford University Press.
- King, P. E., Barrett, J. L., Greenway, T. S., Schnitker, S. A., & Furrow, J. L. (2018). Mind the gap: Evolutionary psychological perspectives on human thriving. *The Journal of Positive Psychology, 13*(4), 336-345. <https://doi.org/10.1080/17439760.2017.1291855>
- Kirkovski, M., Enticott, P. G., & Fitzgerald, P. B. (2013). A review of the role of female gender in autism spectrum disorders. *Journal of Autism and Developmental Disorders, 43*(11), 2584-2603. <https://doi.org/10.1007/s10803-013-1811-1>

- Kroll, T., & Neri, M. (2009). Designs for mixed methods research. In S. Andrew & E. J. Halcomb (Eds.), *Mixed methods research for nursing and the health sciences* (pp. 31-49). Wiley-Blackwell. <https://doi.org/10.1002/9781444316490.ch3>
- Kuo, M. H., Orsmond, G. I., Coster, W. J., & Cohn, E. S. (2014). Media use among adolescents with autism spectrum disorder. *Autism: The International Journal of Research and Practice*, 18(8), 914–923. <https://doi.org/10.1177/1362361313497832>
- Lai, M., Lombardo, M. V., & Baron-Cohen, S. (2014). autism. *The Lancet (British Edition)*, 383(9920), 896-910. [https://doi.org/10.1016/S0140-6736\(13\)61539-1](https://doi.org/10.1016/S0140-6736(13)61539-1)
- Lashewicz, B. M., Shipton, L., & Lien, K. (2019). Meta-synthesis of fathers' experiences raising children on the autism spectrum. *SAGE Publications*. <https://doi.org/10.1177/1744629517719347>
- Lasgaard, M., Nielsen, A., Eriksen, M. E., & Goossens, L. (2010). Loneliness and social support in adolescent boys with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 40(2), 218–226. <https://doi.org/10.1007/s10803-009-0851-z>
- Laurie, M. H., Warreyn, P., Uriarte, B. V., Boonen, C., & Fletcher-Watson, S. (2019). An International Survey of Parental Attitudes to Technology Use by Their Autistic Children at Home. *Journal of autism and developmental disorders*, 49(4), 1517–1530. <https://doi.org/10.1007/s10803-018-3798-0>
- Lecavalier, L., Leone, S., & Wiltz, J. (2006). The impact of behaviour problems on caregiver stress in young people with autism spectrum disorders. *Journal of Intellectual Disability Research*, 50(3), 172-183. <https://doi.org/10.1111/j.1365-2788.2005.00732.x>
- Lee, J. (2020). Mental health effects of school closures during COVID-19. *The Lancet Child & Adolescent Health*, 4(6), 421.

- Lee, V., Duku, E., Zwaigenbaum, L., Bennett, T., Szatmari, P., Elsabbagh, M., Kerns, C.,
Mirenda, P., Smith, I. M., Ungar, W. J., Vaillancourt, T., Volden, J., Waddell, C.,
Zaidman-Zait, A., Thompson, A., & Georgiades, S. (2020). Temperament influences the
relationship between symptom severity and adaptive functioning in children with autism
spectrum disorder. *Autism: The International Journal of Research and Practice*, *24*(8),
2057–2070. <https://doi.org/10.1177/1362361320933048>
- Lerner, R. M., Dowling, E. M., & Anderson, P. M. (2003). Positive youth development: Thriving
as the basis of personhood and civil society. *Applied Developmental Science*, *7*(3), 172-
180.
- Lerner, R. M., Lerner, J. V., & Benson, J. B. (2011). Positive youth development: research and
applications for promoting thriving in adolescence. *Advances in child development and
behavior*, *41*, 1–17. <https://doi.org/10.1016/b978-0-12-386492-5.00001-4>
- Lerner, R. M., Lerner, J. V., Almerigi, J. B., Theokas, C., Phelps, E., Gestsdottir, S., Naudeau,
S., Jelicic, H., Alberts, A., Ma, L., Smith, L. M., Bobek, D. L., Richman-Raphael, D.,
Simpson, I., Christiansen, E. D., & von Eye, A. (2005). Positive youth development,
participation in community youth development programs, and community contributions
of fifth-grade adolescents: Findings from the first wave of the 4-H study of positive youth
development. *The Journal of Early Adolescence*, *25*(1), 17-71.
<https://doi.org/10.1177/0272431604272461>
- Lerner, R. M., von Eye, A., Lerner, J. V., Lewin-Bizan, S., & Bowers, E. P. (2010). Special issue
introduction: The meaning and measurement of thriving: a view of the issues. *Journal of
Youth and Adolescence*, *39*(7), 707–719. <https://doi.org/10.1007/s10964-010-9531-8>

- Lerner, R. M., Wang, J., Chase, P. A., Gutierrez, A. S., Harris, E. M., Rubin, R. O., & Yalin, C. (2014). Using relational developmental systems theory to link program goals, activities, and outcomes: the sample case of the 4-H Study of Positive Youth Development. *New directions for youth development*, 2014(144), 17–30. <https://doi.org/10.1002/yd.20110>
- Lieberman, A., & Schroeder, J. (2020). Two social lives: How differences between online and offline interaction influence social outcomes. *Current opinion in psychology*, 31, 16–21. <https://doi.org/10.1016/j.copsyc.2019.06.022>
- Licari, M. K., Alvares, G. A., Varcin, K., Evans, K. L., Cleary, D., Reid, S. L., Glasson, E. J., Bebbington, K., Reynolds, J. E., Wray, J., & Whitehouse, A. (2020). prevalence of motor difficulties in autism spectrum disorder: Analysis of a population-based cohort. *Autism research : official journal of the International Society for Autism Research*, 13(2), 298–306. <https://doi.org/10.1002/aur.2230>
- Lin, S. C., Yu, S. M., & Harwood, R. L. (2012). Autism spectrum disorders and developmental disabilities in children from immigrant families in the United States. *Pediatrics*, 130 Suppl 2, S191–S197. <https://doi.org/10.1542/peds.2012-0900R>
- Lin, S., Tsai, C., Li, H., Huang, C., & Chen, K. (2017). Theory of mind predominantly associated with the quality, not quantity, of pretend play in children with autism spectrum disorder. *European Child & Adolescent Psychiatry*, 26(10), 1187-1196. <https://doi.org/10.1007/s00787-017-0973-3>
- Lyons, A. M., Leon, S. C., Roecker Phelps, C. E., & Dunleavy, A. M. (2010). The impact of child symptom severity on stress among parents of children with ASD: The moderating role of coping styles. *Journal of Child and Family Studies*, 19(4), 516-524. <https://doi.org/10.1007/s10826-009-9323-5>

- MacCormack, J. W. H., Matheson, I. A., & Hutchinson, N. L. (2015). An exploration of a community-based LEGO® social-skills program for youth with autism spectrum disorder. *Exceptionality Education Canada*, 25(3), 13.
- Majoko, T., & Dudu, A. (2020). Parents' strategies for home educating their children with Autism Spectrum Disorder during the COVID-19 period in Zimbabwe. *International Journal of Developmental Disabilities*, 0(0), 1–5.
<https://doi.org/10.1080/20473869.2020.1803025>
- Manning, J., Billian, J., Matson, J., Allen, C., & Soares, N. (2020). Perceptions of families of individuals with autism spectrum disorder during the COVID-19 crisis. *Journal of Autism and Developmental Disorders*. <https://doi.org/10.1007/s10803-020-04760-5>
- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology*, 3(5), 551–558. <https://doi.org/10.1037/h0023281>
- Masonbrink, A. R., & Hurley, E. (2020). Advocating for children during the COVID-19 school closures. *Pediatrics*, 146(3). <https://doi.org/10.1542/peds.2020-1440>
- Mazurek, M. O., Shattuck, P. T., Wagner, M., & Cooper, B. P. (2012). Prevalence and correlates of screen-based media use among youths with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 42(8), 1757–1767. <https://doi.org/10.1007/s10803-011-1413-8>
- McAuliffe, D., Zhao, Y., Pillai, A. S., Ament, K., Adamek, J., Caffo, B. S., Mostofsky, S. H., & Ewen, J. B. (2020). Learning of skilled movements via imitation in ASD. *Autism research : Official journal of the International Society for Autism Research*, 13(5), 777–784. <https://doi.org/10.1002/aur.2253>

- Meindl, J. N., Delgado, D., & Casey, L. B. (2020). Increasing engagement in students with autism in inclusion classrooms. *Children and Youth Services Review, 111*, 104854. <https://doi.org/10.1016/j.chidyouth.2020.104854>
- Morrison, C. M., & Gore, H. (2010). The relationship between excessive Internet use and depression: a questionnaire-based study of 1,319 young people and adults. *Psychopathology, 43*(2), 121–126. <https://doi.org/10.1159/000277001>
- Mumbardó-Adam, C., Barnet-López, S., & Balboni, G. (2021). How have youth with Autism Spectrum Disorder managed quarantine derived from COVID-19 pandemic? An approach to families perspectives. *Research in developmental disabilities, 110*, 103860. <https://doi.org/10.1016/j.ridd.2021.103860>
- Nag, H. E., Nordgren, A., Anderlid, B. M., & Nærland, T. (2018). Reversed gender ratio of autism spectrum disorder in Smith-Magenis syndrome. *Molecular autism, 9*, 1. <https://doi.org/10.1186/s13229-017-0184-2>
- Narzisi, A. (2020). Handle the autism spectrum condition during coronavirus (COVID-19) *Stay At Home* period: Ten tips for helping parents and caregivers of young children. *Brain Sciences, 10*(4), 207. <https://doi.org/10.3390/brainsci10040207>
- Niemiec, R. M. (2020). Six functions of character strengths for thriving at times of adversity and opportunity: a theoretical perspective. *Applied Research in Quality of Life, 15*(2), 551-572. <https://doi.org/10.1007/s11482-018-9692-2>
- Nowell, K.P., Goin-Kochel, R., McQuillin, S., & Mire, S. S. Intellectual functioning and autism spectrum disorder: Can profiles inform identification of subpopulations?. (2017a). *Review Journal of Autism and Developmental Disorders, 4*, 339–349. <https://doi.org/10.1007/s40489-017-0118-0>

- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017b). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16(1), 1-13. <https://doi.org/10.1177/1609406917733847>
- O'Connor Bones, U., Bates, J., Finlay, J., & Campbell, A. (2021). Parental involvement during COVID-19: Experiences from the special school. *European Journal of Special Needs Education, ahead-of-print*(ahead-of-print), 1-14. <https://doi.org/10.1080/08856257.2021.1967297>
- Ooi, Y. P., Tan, Z. J., Lim, C. X., Goh, T. J., & Sung, M. (2011). Prevalence of behavioural and emotional problems in children with high-functioning autism spectrum disorders. *The Australian and New Zealand journal of psychiatry*, 45(5), 370–375. <https://doi.org/10.3109/00048674.2010.534071>
- Özdemir, A., Utkualp, N., & Pallos, A. (2016). Physical and psychosocial effects of the changes in adolescence period. *International Journal of Caring Sciences*, 9(2), 717.
- Pellicano, L., Brett, S., de Houting, J., Heyworth, M., Magiati, I., Steward, R., Urbanowicz, A., & Stears, M. (2020). I want to see my friends: The everyday experiences of autistic people and their families during COVID-19. *The University of Sydney*. <https://www.sydney.edu.au/content/dam/corporate/documents/sydney-policy-lab/everyday-experiences-of-autistic-people-during-covid-19---report---july-2020>
- Pellicano, E., Brett, S., den Houting, J., Heyworth, M., Magiati, I., Steward, R., Urbanowicz, A., & Stears, M. (2022). COVID-19, social isolation and the mental health of autistic people and their families: A qualitative study. *Autism*, 26(4), 914–927. <https://doi.org/10.1177/13623613211035936>

- Platos, M., & Wojaczek, K. (2018). Broadening the Scope of Peer-Mediated Intervention for Individuals with Autism Spectrum Disorders. *Journal of autism and developmental disorders*, 48(3), 747–750. <https://doi.org/10.1007/s10803-017-3429-1>
- Posserud, M., Hysing, M., Helland, W., Gillberg, C., & Lundervold, A. J. (2018). Autism traits: The importance of "co-morbid" problems for impairment and contact with services. Data from the Bergen Child Study. *Research in developmental disabilities*, 72, 275–283. <https://doi.org/10.1016/j.ridd.2016.01.002>
- Powell, M. A., & Graham, A. (2017). Wellbeing in schools: Examining the policy–practice nexus. *The Australian Educational Researcher*, 44(2), 213-231.
- Quinn, B. P., Stark, M. D., Hunter, A. K., Evans, A., & Hennessey, K. A. (2019). Purpose in adolescents diagnosed with an autism spectrum disorder. *Journal of Adolescence (London, England.)*, 73(1), 53-62. <https://doi.org/10.1016/j.adolescence.2019.03.001>
- Rasmussen, P. S., & Pagsberg, A. K. (2019). Customizing methodological approaches in qualitative research on vulnerable children with autism spectrum disorders. *Societies*, 9(4), 75.
- Rattaz, C., Michelon, C., Munir, K., & Baghdadli, A. (2018). Challenging behaviours at early adulthood in autism spectrum disorders: topography, risk factors and evolution. *Journal of intellectual disability research: JIDR*, 62(7), 637–649. <https://doi.org/10.1111/jir.12503>
- Ratto, A. B., Kenworthy, L., Yerys, B. E., Bascom, J., Wieckowski, A. T., White, S. W., Wallace, G. L., Pugliese, C., Schultz, R. T., Ollendick, T. H., Scarpa, A., Seese, S., Register-Brown, K., Martin, A., & Anthony, L. G. (2018). What about the girls? Sex-

- based differences in autistic traits and adaptive skills. *Journal of autism and developmental disorders*, 48(5), 1698–1711. <https://doi.org/10.1007/s10803-017-3413-9>
- Reicher, D. (2020). Debate: Remote learning during COVID-19 for children with high functioning autism spectrum disorder. *Child and Adolescent Mental Health*, 25(4). <https://doi.org/10.1111/camh.12425>
- Richardson, J. T. E. (2017). Academic attainment in students with autism spectrum disorders in distance education. *Open Learning*, 32(1), 81-91. <https://doi.org/10.1080/02680513.2016.1272446>
- Riosa, P. B., Chan, V., Maughan, A., Stables, V., Albaum, C., & Weiss, J. A. (2017). Remediating deficits or increasing strengths in autism spectrum disorder research: A content analysis. *Advances in neurodevelopmental Disorders*, 1(3), 113-121.
- 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: Official Journal of the International Society for Autism Research*, 9(11), 1205–1215. <https://doi.org/10.1002/aur.1603>
- Rosen, T. E., Mazefsky, C. A., Vasa, R. A., & Lerner, M. D. (2018). Co-occurring psychiatric conditions in autism spectrum disorder. *International review of psychiatry*, 30(1), 40–61. <https://doi.org/10.1080/09540261.2018.1450229>
- Saline, S. (2021). Thriving in the new normal: How COVID-19 has affected alternative learners and their families and implementing effective, creative therapeutic interventions. *Smith College Studies in Social Work*, 91(1), 1-28. <https://doi.org/10.1080/00377317.2020.1867699>

- Santillan, L., Frederick, L., Gilmore, S., & Locke, J. (2019). Brief report: examining the association between classroom social network inclusion and playground peer engagement among children with autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities, 34*(2), 91-96.
<https://doi.org/10.1177/1088357619838275>
- Sarkar, M., & Fletcher, D. (2014). Ordinary magic, extraordinary performance: Psychological resilience and thriving in high achievers. *Sport, Exercise, and Performance Psychology, 3*(1), 46–60. <https://doi.org/10.1037/spy0000003>
- Scales, P. C., Benson, P. L., Leffert, N., & Blyth, D. A. (2000). Contribution of developmental assets to the prediction of thriving among adolescents. *Applied Developmental Science, 4*(1), 27–46. https://doi.org/10.1207/S1532480XADS0401_3
- Schmid, K. L., Phelps, E., Kiely, M. K., Napolitano, C. M., Boyd, M. J., & Lerner, R. M. (2011). The role of adolescents' hopeful futures in predicting positive and negative developmental trajectories: Findings from the 4-H Study of Positive Youth Development. *The Journal of Positive Psychology, 6*(1), 45–56. <https://doi.org/10.1080/17439760.2010.536777>
- Schuck, R. K., & Lambert, R. (2020). “Am I doing enough?” Special educators’ experiences with emergency remote teaching in spring 2020. *Education Sciences, 10*(320), 320. <https://doi.org/10.3390/educsci10110320>
- Sedgewick, F., Hill, V., Yates, R., Pickering, L., & Pellicano, E. (2015;2016;). Gender differences in the social motivation and friendship experiences of autistic and non-autistic adolescents. *Journal of Autism and Developmental Disorders, 46*(4), 1297-1306. <https://doi.org/10.1007/s10803-015-2669-1>

- Singh, S., Roy, D., Sinha, K., Parveen, S., Sharma, G., & Joshi, G. (2020). Impact of COVID-19 and lockdown on mental health of children and adolescents: A narrative review with recommendations. *Psychiatry research*, *293*, 113429.
<https://doi.org/10.1016/j.psychres.2020.113429>
- Simpson, K., & Adams, D. (2022). Brief report: Covid restrictions had positive and negative impacts on schooling for students on the autism spectrum. *Journal of Autism and Developmental Disorders*, <https://doi.org/10.1007/s10803-022-05451-z>
- Simpson, K., Clark, M., & Adams, D. (2022). Profiles and predictors of thriving in children on the autism spectrum. *Child : Care, Health & Development*, <https://doi.org/10.1111/cch.12974>
- Shattuck, P. T., Orsmond, G. I., Wagner, M., & Cooper, B. P. (2011). Participation in social activities among adolescents with an autism spectrum disorder. *PloS One*, *6*(11), e27176.
<https://doi.org/10.1371/journal.pone.0027176>
- Smith, S. J., Burdette, P. J., Cheatham, G. A., & Harvey, S. P. (2016). Parental role and support for online learning of students with disabilities: A paradigm shift. *Journal of Special Education Leadership*, *29*(2), 101-112.
- Smith-Young, J., Chafe, R., & Audas, R. (2020). "Managing the wait": parents' experiences in accessing diagnostic and treatment services for children and adolescents diagnosed with autism spectrum disorder. *Health services insights*, *13*, 1178632920902141.
<https://doi.org/10.1177/1178632920902141>
- Smith-Young, J., Chafe, R., Audas, R., & Gustafson, D. L. (2022). "I know how to advocate": Parents' experiences in advocating for children and youth diagnosed with autism

- spectrum disorder. *Health services insights*, 15, 11786329221078803.
<https://doi.org/10.1177/11786329221078803>
- Sosnowy, C., Silverman, C., & Shattuck, P. (2018). Parents' and young adults' perspectives on transition outcomes for young adults with autism. *Autism: The international journal of research and practice*, 22(1), 29–39. <https://doi.org/10.1177/1362361317699585>
- 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, 20-30. <https://doi.org/10.1016/j.rasd.2017.07.005>
- Sreckovic, M. A., Hume, K., & Able, H. (2017). Examining the efficacy of peer network interventions on the social interactions of high school students with autism spectrum disorder. *Journal of autism and developmental disorders*, 47(8), 2556–2574.
<https://doi.org/10.1007/s10803-017-3171-8>
- Stadheim, J., Johns, A., Mitchell, M., Smith, C. J., Braden, B. B., & Matthews, N. L. (2022). A qualitative examination of the impact of the COVID-19 pandemic on children and adolescents with autism and their parents. *Research in developmental disabilities*, 125, 104232. <https://doi.org/10.1016/j.ridd.2022.104232>
- Steinberg, L., & Morris, A. S. (2001). Adolescent development. *Annual Review of Psychology*, 52, 83-110. [10.1891/194589501787383444](https://doi.org/10.1891/194589501787383444)
- Stenhoff, D. M., Pennington, R. C., & Tapp, M. C. (2020). Distance education support for students with autism spectrum disorder and complex needs during COVID-19 and school closures. *Rural Special Education Quarterly*, 39(4), 211-219.
<https://doi.org/10.1177/8756870520959658>

- Stevens, L., & Wurf, G. (2020). Perceptions of inclusive education: A mixed methods investigation of parental attitudes in three Australian primary schools. *International Journal of Inclusive Education*, 24(4), 351-365.
<https://doi.org/10.1080/13603116.2018.1464068>
- Strear, M., Duffy, H., & Sunde, A. (2021). When schools go dark, school counselors shine: School counseling during a global pandemic. *American Institutes for Research*. <https://www.air.org/resource/when-schools-go-dark-school-counselors-shine-school-counseling-during-global-pandemic>
- Syriopoulou-Delli, C. K., Polychronopoulou, S. A., Kolaitis, G. A., & Antoniou, A. G. (2019). Views of teachers on anxiety symptoms in students with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 49(2), 704–720.
<https://doi.org/10.1007/s10803-018-3752-1>
- Taheri, A., Perry, A., & Minnes, P. (2016). Examining the social participation of children and adolescents with Intellectual Disabilities and Autism Spectrum Disorder in relation to peers. *Journal of Intellectual Disability Research: JIDR*, 60(5), 435–443.
<https://doi.org/10.1111/jir.12289>
- Taylan, S. B., Bakkaloğlu, H., & Ökcün-Akçamuş, M. Ç. (2021). Imitation and intention understanding in typically developing children and children with autism spectrum disorder. *Early Child Development and Care*, 1-16.
<https://doi.org/10.1080/03004430.2021.1900152>
- Taylor, J. L., Adams, R. E., & Bishop, S. L. (2017). Social participation and its relation to internalizing symptoms among youth with autism spectrum disorder as they transition

- from high school. *Autism research : official journal of the International Society for Autism Research*, 10(4), 663–672. <https://doi.org/10.1002/aur.1709>
- Terry, G., Hayfield, N., Clarke, V., & Braun, V. (2017). Thematic analysis. In Willig, C., & Stainton Rogers, W. (Eds.), *The SAGE handbook of qualitative research in psychology* (2nd ed., pp. 17-37). SAGE Publications.
- Theokas, C., Almerigi, J. B., Lerner, R. M., Dowling, E. M., Benson, P. L., Scales, P. C., & von Eye, A. (2005). Conceptualizing and modeling individual and ecological asset components of thriving in early adolescence. *The Journal of Early Adolescence*, 25(1), 113–143. <https://doi.org/10.1177/0272431604272460>
- Thompson, K. M., & Copeland, C. (2020). Inclusive considerations for optimal online learning in times of disasters and crises. *Information and Learning Sciences*, 121(7/8), 481-486.
- Tye, C., Runicles, A. K., Whitehouse, A., & Alvares, G. A. (2019). Characterizing the interplay between autism spectrum disorder and comorbid medical conditions: An integrative review. *Frontiers in psychiatry*, 9, 751. <https://doi.org/10.3389/fpsy.2018.00751>
- Uljarević, M., Hedley, D., Nevill, R., Evans, D. W., Cai, R. Y., Butter, E., & Mulick, J. A. (2018). Brief report: Poor self-regulation as a predictor of individual differences in adaptive functioning in young children with autism spectrum disorder. *Autism Research: Official Journal of the International Society for Autism Research*, 11(8), 1157–1165. <https://doi.org/10.1002/aur.1953>
- United Nations. (2020). *Policy brief: The impact of COVID-19 on children*. Retrieved from: <https://unsdg.un.org/resources/policy-brief-impact-covid-19-children>
- van Schalkwyk, G. I., Marin, C. E., Ortiz, M., Rolison, M., Qayyum, Z., McPartland, J. C., Lebowitz, E. R., Volkmar, F. R., & Silverman, W. K. (2017). Social media use,

- friendship quality, and the moderating role of anxiety in adolescents with autism spectrum disorder. *Journal of autism and developmental disorders*, 47(9), 2805–2813.
<https://doi.org/10.1007/s10803-017-3201-6>
- van Steensel, F., & Heeman, E. J. (2017). Anxiety levels in children with autism spectrum disorder: A meta-analysis. *Journal of child and family studies*, 26(7), 1753–1767.
<https://doi.org/10.1007/s10826-017-0687-7>
- Vivanti G. (2020). Ask the editor: What is the most appropriate way to talk about individuals with a diagnosis of autism?. *Journal of autism and developmental disorders*, 50(2), 691–693. <https://doi.org/10.1007/s10803-019-04280-x>
- Weiss, J. A., & Burnham Riosa, P. (2015). Thriving in youth with autism spectrum disorder and intellectual disability. *Journal of Autism and Developmental Disorders*, 45(8), 2474–2486. <https://doi.org/10.1007/s10803-015-2412-y>
- Werner, E. E. (1995). Resilience in Development. *Current Directions in Psychological Science*, 4(3), 81–85. <http://www.jstor.org/stable/20182335>
- Whitley, J., MacCormack J., Matheson, I., Specht, J., Sider, S., & Maich, K. (2020, November). *Diversity via distance*. EdCan Network. <https://www.edcan.ca/articles/diversity-via-distance/>
- World Health Organization. (2020). Timeline: WHO’s COVID-19 response.
<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/interactive-timeline#event-71>

Appendix A
Demographic Survey

Start of Block: Block 2

Please type your pseudonym (fake name) here:

End of Block: Block 2

Start of Block: Block 1

Please answer the following demographic questions about your child.

What gender does your child identify with?

- Male (1)
- Female (2)
- Transgender (3)
- Non-binary (4)
- Other (5)
- Prefer not to respond (6)

How old is your child?

10 (1)

11 (2)

12 (3)

13 (4)

14 (5)

15 (6)

16 (9)

17 (10)

Other. Please specify (11) _____

What grade level is your child in?

- Grade 4 (1)
- Grade 5 (2)
- Grade 6 (3)
- Grade 7 (4)
- Grade 8 (5)
- Grade 9 (6)
- Grade 10 (8)
- Grade 11 (9)
- Grade 12 (10)
- Other. Please specify: (11) _____

What school district is your child's school located in?

Before school closures due to COVID-19 in March 2020, was your child in the general classroom for the majority of the day (i.e. not participating in independent study for most of the day)? Please explain.

What is your child's ethnic origin?

- North American Aboriginal (1)
 - Other North American (2)
 - European (3)
 - Carribean (4)
 - Latin, Central, and South American (5)
 - African (6)
 - Asian (7)
 - Oceania (8)
 - Other. Please specify: (9) _____
 - Prefer not to respond (10)
-

What is your family's household income?

- Under \$5,000 a year (1)
 - \$5,000 to \$19,999 a year (2)
 - \$20,000 to \$34,999 a year (3)
 - \$35,000 to \$99,999 a year (4)
 - \$100,000 to \$249,999 a year (5)
 - More than \$250,000 a year (6)
 - I do not know or prefer not to respond (7)
-

How many siblings does your child have in the **same** household? (i.e. biological, half, step, adopted, foster)

- 0 (1)
 - 1 (2)
 - 2 (3)
 - 3 (4)
 - 4 or more (5)
-

Does your child have any diagnosed co-occurring conditions?

- Attention deficit hyperactivity disorder (1)
- Anxiety (2)
- Depression (3)
- Intellectual Disability (4)
- Obsessive-compulsive disorder (5)
- Other. Please specify: (6) _____
- Not applicable (7)

End of Block: Block 1

Start of Block: Block 2

Appendix B

Anxiety Scale for Children – Autism Spectrum Disorder – Child version (ASC-ASD)[©]

The following items will be rated “never,” “sometimes,” “often,” or “always.”

1. All of a sudden I feel really scared for no reason at all
2. I worry what other people think of me
3. My heart suddenly starts to beat too quickly for no reason
4. I feel scared when I have to take a test in case I make a mistake
5. I worry people will bump into me or touch me in busy or crowded environments
6. I am afraid of being in crowded places (like shopping centers, the movies, buses, busy playgrounds) in case I am separated from my family
7. I worry that I will do badly at my school work
8. I suddenly feel as if I can't breathe when there is no reason for this
9. I am afraid of new things, or new people or new places
10. I am afraid of entering a room full of people
11. I worry when I go to bed at night because I don't like to be away from my parents/ family
12. When I have a problem I feel shaky
13. I suddenly start to tremble or shake when there is no reason for this
14. When I don't know what will happen, I can't do things
15. I worry when I think I have done poorly at something
16. I always need to be prepared before things happen
17. I feel afraid that I will make a fool of myself in front of people
18. I worry about being away from my parents
19. I worry that something awful will happen to someone in my family
20. I would feel scared if I had to stay away from home overnight because I like to be close to my parents/ family
21. I worry about being in places that are too loud, or too bright or too busy
22. I suddenly become dizzy or faint when there is no reason for this
23. I worry if I don't know what will happen e.g. if plans change
24. I worry that something bad will happen to me

Anxiety Scale for Children – Autism Spectrum Disorder – Parent version (ASC-ASD -P) ©

The following items will be rated “never,” “sometimes,” “often,” or “always.”

1. My child suddenly gets a scared feeling when there is nothing to be afraid of
2. My child worries what other people think of him/her e.g. that he/ she is different
3. My child’s heart suddenly starts to beat too quickly for no reason
4. My child feels scared when taking a test in case they make a mistake or don’t understand the questions
5. My child worries that people will bump into him/ her or touch him/ her in busy or crowded environments
6. My child is afraid of being in crowded places (like shopping centres, the movies, buses, busy playgrounds) in case he/ she is separated from his/ her family
7. My child worries about doing badly at school work
8. My child suddenly feels so anxious he/ she feels as if he/she can't breathe when there is no reason for this
9. My child is afraid of new things, or new people or new places
10. My child is afraid of entering a room full of people
11. My child worries when in bed at night because he/ she does not like to be away from his her parents/ family
12. When my child has a problem, he/she feels shaky
13. My child suddenly starts to tremble or shake when there is no reason for this
14. Feeling unsure stops my child from doing most things
15. My child worries when he/she thinks he/she has done poorly at something in case people judge him/ her negatively
16. My child always needs to be prepared before things happen
17. My child feels afraid that he/she will make a fool of him/herself in front of people
18. My child worries about being away from me
19. My child worries that something awful will happen to someone in the family
20. My child feels scared to be away from home because his/ her parents are familiar with his/ her bedtime routine
21. My child worries about being in certain places because it might be too loud, or too bright or too busy
22. My child suddenly becomes dizzy or faint when there is no reason for this
23. My child worries if they don’t know what will happen next e.g. if plans change
24. My child worries that something bad will happen to him/her

Appendix C

Thriving Measure

The following questions will be rated on a 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree).

1. My child has the skills to succeed in school, in social situations with friends and adults, in play, and at home. My child knows how to behave and does what is needed to do well.
2. My child believes that he/she can succeed and do what is needed to do well in the family, in school, in social situations with friends and adults, in play and in other areas that are important to him/her (for example, sports, music, religious activities).
3. My child has positive relationships with his/her parents, siblings, and other family members, and with friends, teachers, coaches, or mentors.
4. My child knows what is right and wrong; and does the right thing; My child is open to others' perspectives and believes in social justice for all. My child is honest.
5. My child cares about other people. He or she is concerned about whether others have what they need (shows sympathy) and shows a sense of compassion (empathy). My child is both sympathetic and empathetic to others.
6. My child tries to do things to help the family, to help neighbors, and to help the community. My child tries to also help himself/herself by staying healthy (eating right, exercising, getting enough sleep).

Appendix D

Technology Use and Social Engagement Survey

End of Block: Default Question Block

Start of Block: Block 1

Please mark the **best** response to the following questions.

When you have some free time, how many hours do you usually spend on electronic devices (such as smartphones, laptops) playing games? Please mark one box for weekdays and one box for weekend.

	No time (1)	Less than 1 hour (2)	About 1 hour (3)	About 2 hours (4)	About 3 hours (5)	About 4 hours (6)	About 5 hours (7)	6 hours or more (8)
Weekdays (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weekends (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thinking back to the first four months of the pandemic (March to June, 2020) when you were doing schooling from home, how did your technology use for playing games compare to now?

- I used technology to play games less than I do now (1)
 - About the same (2)
 - I used technology to play games more than I do now (3)
-

When you have some free time, how many hours do you usually spend on electronic devices (such as smartphones, laptops) messaging and socializing with people you know? Please mark one box for weekdays and one box for weekend.

	No time (1)	Less than one hour (2)	About 1 hour (3)	About 2 hours (4)	About 3 hours (5)	About 4 hours (6)	About 5 hours (7)	6 hours or more (8)
Weekdays (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weekends (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thinking back to the first four months of the pandemic (March to June, 2020) when you were doing schooling from home, how did your technology use for messaging and socializing with others compare to now?

- I used technology to play games less than I do now (1)
- About the same (2)
- I used technology to play games more than I do now (3)

When you have some free time, how many hours do you usually spend on electronic devices (such as smartphones, laptops) watching television, videos (e.g., TikTok, YouTube), or other video-based entertainment? Please mark one box for weekdays and one box for weekend.

	No time (1)	Less than one hour (2)	About 1 hour (3)	About 2 hours (4)	About 3 hours (5)	About 4 hours (6)	About 5 hours (7)	6 hours or more (8)
Weekdays (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weekends (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thinking back to the first four months of the pandemic (March to June, 2020) when you were doing schooling from home, how did your technology use for watching videos compare to now?

- I used technology to play games less than I do now (1)
- About the same (2)
- I used technology to play games more than I do now (3)

Page Break

I use the following social media platforms to interact with others: (select all that apply)

- Instagram (1)
 - Facebook (2)
 - Twitter (3)
 - TikTok (4)
 - Snapchat (5)
 - Other. Please specify: (6) _____
-

For the following questions, please think back to the first four months of the pandemic (March to June 2020), when schools were closed and classes were shifted online.

I used social media platforms to interact with my friends during remote learning.

- Strongly Agree (1)
 - Agree (2)
 - Neutral (3)
 - Disagree (4)
 - Strongly disagree (5)
-

I felt comfortable interacting with my friends online during remote learning.

- Strongly Agree (1)
 - Agree (2)
 - Neutral (3)
 - Disagree (4)
 - Strongly disagree (5)
-

I felt comfortable interacting with my teacher/ teaching assistant during remote learning.

- Strongly Agree (1)
 - Agree (2)
 - Neutral (3)
 - Disagree (4)
 - Strongly disagree (5)
-

I preferred socially interacting with my friends online than in-person.

- Strongly Agree (1)
 - Agree (2)
 - Neutral (3)
 - Disagree (4)
 - Strongly disagree (5)
-

How often did you interact with your teacher online during remote learning (i.e. video chat, telephone call, email, messaging)?

- Several times a day (1)
 - Daily (2)
 - Every few days (3)
 - Weekly (4)
 - Never (5)
-

How often did you interact with your teacher assistant online during remote learning (i.e. video chat, telephone call, email, messaging)?

- Several times a day (1)
 - Daily (2)
 - Every few days (3)
 - Weekly (4)
 - Never (5)
-

How often did you interact with your classmates during class online (i.e. video chat, telephone call, email, messaging)?

- Several times a day (1)
- Daily (2)
- Every few days (3)
- Weekly (4)
- Never (5)

How often did you interact with your friends online (i.e. video chat, telephone call, email, messaging)?

- Several times a day (1)
 - Daily (2)
 - Every few days (3)
 - Weekly (4)
 - Never (5)
-

Interactions with my teacher(s) were important to me during remote learning.

- Strongly agree (1)
 - Agree (2)
 - Neutral (3)
 - Disagree (4)
 - Strongly disagree (5)
-

Interactions with my teacher assistant was important to me during remote learning.

- Strongly agree (1)
- Agree (2)
- Neutral (3)
- Disagree (4)
- Strongly disagree (5)

Interactions with my classmates (during class) was important to me during remote learning.

- Strongly agree (1)
 - Agree (2)
 - Neutral (3)
 - Disagree (4)
 - Strongly disagree (5)
-

Interactions with my friends was important to me during remote learning.

- Strongly agree (1)
 - Agree (2)
 - Neutral (3)
 - Disagree (4)
 - Strongly disagree (5)
-

Upon schools re-opening and returning to in-person instruction, did you go back to school?

- Yes, I went back to in-person instruction. (1)
 - No, I continued with remote learning. (2)
 - Other. Please specify: (3) _____
-

Overall, I liked my experience with remote learning.

- Strongly agree (1)
 - Agree (2)
 - Neutral (3)
 - Disagree (4)
 - Strongly disagree (5)
-

I could connect with my teacher whenever I had any issues.

- Strongly agree (1)
 - Agree (2)
 - Neutral (3)
 - Disagree (4)
 - Strongly disagree (5)
-

I could connect with my teacher assistant whenever I had any issues.

- Strongly agree (1)
 - Agree (2)
 - Neutral (3)
 - Disagree (4)
 - Strongly disagree (5)
-

I felt supported during remote learning.

- Strongly agree (1)
 - Agree (2)
 - Neutral (3)
 - Disagree (4)
 - Strongly disagree (5)
-

I felt connected during remote learning.

- Strongly agree (1)
- Agree (2)
- Neutral (3)
- Disagree (4)
- Strongly disagree (5)

End of Block: Block 1

Start of Block: Block 2

Appendix E

Email Template for Interviews

Email Subject Line: Emergency Remote Learning Research Study

Hi _____,

This is a reminder that you and your child are scheduled for an interview on _____ at _____ as part of the Emergency Remote Learning Study. I will be conducting the interview with you and your child. The entire session should take about 1 hour. I will start by conducting a brief interview with you. Then, your child will be asked to join the session. The list of questions that will be asked in the interview have been attached. After this interview, I will provide a debrief to you and your child and go over any questions you may have. You will be asked to remain for the entire interview. I encourage you to set up a space with minimal distractions for the duration of this interview. Breaks will be provided, if needed.

The interview questions will cover five broad topics:

1. Participants' conceptualization of well-being
2. Participants' usage of technology
 - Devices used to stay in touch with friends
3. Participants' experience and perceptions of emergency remote learning
 - Like and dislikes about emergency remote learning
4. Social engagement opportunities they had during emergency remote learning
 - Interacting with others using technology
5. Changes in supportive relationships
 - Relationships with people the participant gets along with

Please let me know if you have any other questions or concerns. If there is any additional information that would be helpful for me to know for the purposes of this interview, please feel free to contact me.

Regards,

Millie Batta
M.Ed. Counselling Student
604-653-0200
millie.batta@uleth.ca

Appendix F

Parent Interview Questions

Well-Being:

1. How do you conceptualize well-being for your child? What does well-being look like for you?
2. How would you say online learning has affected ____'s social and emotional well-being?

Technology Use:

1. What devices does ____ have access to? What purposes does ____ use those devices for? In what ways does ____ use technology to connect with others?
2. How much "screen time" does ____ get? How did this change during online learning?
3. How did ____ use their device(s) to stay in touch with their class and friends?

Emergency Remote Learning:

1. Did your child have classroom supports during emergency remote learning? Before?
2. Please explain your child's experience with emergency remote learning. Example?
3. What worked well with emergency remote learning?
4. What did not work well with emergency remote learning? What were barriers to emergency remote learning?
5. What was the most challenging part for ____ about emergency remote learning?

Social Engagement:

1. What opportunities for social engagement or interactions did ____ have during remote learning? (ie. Class meetings; Small groups/clubs)
2. What would have helped you or supported ____ to be more socially engaged during emergency remote learning at home?
3. What factors supported the interactions between ____ and their teacher/EA to help with emergency remote learning?
4. How would you say ____'s social life has been impacted with schools being online?
5. How would you describe ____'s social involvement/participation before COVID?
6. How would you describe ____'s social involvement/participation during emergency remote learning?
7. How have you helped ____ in their social engagement and participation?

Social Supports:

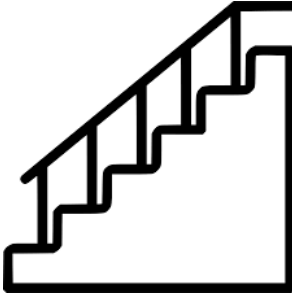
1. What supports could have ____ benefited from during emergency remote learning?
2. Can you tell me a bit about the supportive relationships in ____'s life?
3. Can you tell me about ____'s social network?
4. What has been your role in facilitating ____'s social network?
5. How does ____ get along with their friends?
6. What does ____ like to do with their friends?

Is there anything else you would like to add about your emergency remote learning experience during COVID-19?

Youth Interview Questions

Well-Being:

1. Here is a picture of a set of stairs. The top of the stairs is you living your best life. The bottom is you living your worst possible life. In general, where do you think you are on the stairs? (Number 1 – 6)
2. Thinking back to the first four months of the pandemic when your school was online instead of in the classroom, where were you on these stairs? (Number 1 – 6)



Technology Use:

1. What is the purpose of your device? (social vs. non-social purposes)
2. How much “screen time” do you get? Did this change during online learning?
3. How did you use your device(s) to talk to your friends?

Emergency Remote Learning:

1. Did you like online school?
2. Can you describe what online school looked like for you at your school? What was your experience with online school? Provide an example.
3. What were some of your favourite things to do when school was online? / What went well with online school? / What did you like about online school?
4. What did you not like about school being online? / What did not work well with online school? / What did you dislike about online school?

Social Engagement:

1. Do you prefer talking to other people in person or online?
2. What did you like to do in your free time when school was online?
3. How did you connect with your friends when school was online?
4. How did you find the video conferencing meetings? What did you like? Dislikes?
5. How did you prefer interacting with others?

Social Supports:

1. Did you miss your friends when schools were closed? Class? Teacher?
2. To what extent did you feel you were able to feel healthy and connected to others?
3. I would like you to think of someone in your life you get along with.
 - a. Who is this person? / Are you related? / How do you know them?

- b. What do you like to do with this person? How did that change when school was online?
 - c. How did you communicate with this person when school was online? How often did you talk?
 - d. Did you find it easier to talk to them online?
4. I would like to talk to you about your friends. Think about one friend that is around your age. Can you tell me about them?
- a. What do you like to do with your friend? How did that change when school was online?
 - b. How did you communicate with them when school was online? How often did you talk?
 - c. Did you find it easier to talk to them online?

Appendix G

Email Template for Study Eligibility

Dear _____,

Thank you for your interest in this study!

I would like to gather some more information to determine your child's eligibility for this study. Please answer the following questions:

1. Does your child have a diagnosis of autism spectrum disorder?
 - a. Please provide the date of the diagnosis, how old your child was at the time of the diagnosis, and the professional who provided the diagnosis (e.g., doctor, psychologist, ect).
2. Is your child able to use verbal language to participate in an interview?
3. What is the age of your child?
4. Did your child participate in their school's emergency remote learning program when schools were closed due to COVID-19?

Please let me know if you have any questions. I look forward to hearing back from you.

Regards,

Millie Batta
M.Ed. Counselling Student
604-653-0200
millie.batta@uleth.ca

Appendix H

Assent Form

ONLINE SOCIAL ENGAGEMENT AND ITS IMPACT ON WELL-BEING AMONG YOUTH WITH AUTISM SPECTRUM DISORDER DURING COVID-19

Millie Batta
M.Ed. Counselling Psychology Student
University of Lethbridge
604-653-0200
millie.batta@uleth.ca

Why are you here?

My name is Millie Batta from the University of Lethbridge. I want to see if you would like to be in my study. I want to learn about your experience of online school during COVID-19.

What is expected of you?

If you agree to be in my study, you will do one survey and answer some questions in an interview. The survey and interview will take about 30 minutes. There is no known harm from being in my study.

Who will know you are in my study?

Other people will not know if you are in my study. I will be the only one who will see your answers. I will put your answers with the answers of others who are in my study so no one can tell what answers came from you. When I tell other people about my research, I will not use your name.

Where will the study take place?

You can take part in this study from your home.

Do I have to be in the study?

No. Your parents or guardian have to agree for you to be in my study and then you get to decide if you want to be in my study. If you don't want to be in my study, no one will be mad at you. If you want to be in the study and then change your mind later, you can do that too. You can stop being in my study at any time by telling me.

Will the study help me?

The study will not help you directly but you will help me understand more about emergency remote learning when schools were closed during COVID-19. You will receive a \$25 digital Amazon.ca gift card to appreciate the time you took to answer the questions.

What if I have questions?

You can ask me questions at any time. My phone number and email address are at the top of this page. You can also ask your parents or guardian if you have any questions because the study has

Consent Form

ONLINE SOCIAL ENGAGEMENT AND ITS IMPACT ON WELL-BEING AMONG YOUTH WITH AUTISM SPECTRUM DISORDER DURING COVID-19

Millie Batta
M.Ed. Counselling Psychology Student
University of Lethbridge
604-653-0200
millie.batta@uleth.ca

Dear Parents or Guardians,

My name is Millie Batta of the Education Department at the University of Lethbridge under the supervision of Dr. Jeffrey MacCormack. You and your child are being invited to participate in a research study looking at the experiences of youth with autism spectrum disorder (ASD) during emergency remote learning. The purpose of this research is to gain a better understanding of the social well-being of youth with ASD during COVID-19.

This research project has two phases. In the first phase, you will complete an online survey (about 25 minutes). In the second phase, I will interview you (alone) and then you and your child (together) by telephone (about an hour in total).

There are no anticipated risks or discomforts related to this research. By participating in this research, your child will help me learn more about how students with ASD socially engaged during school closures and the impact on their well-being. The benefits of participating in this study include the opportunity to participate in and understand the processes involved in a research study. You may also feel like you are contributing significantly to research on ASD. Apart from this, you will not benefit directly from participation in this research. Following the interview, your child will receive a \$25 digital Amazon.ca gift card as a token of appreciation for their time.

Given the nature of the study, you and your child will not be anonymous since identifying information will be collected in the demographic information of the survey and you will participate in an interview. Several steps will be taken to protect your you and your child's confidentiality. You will be provided pseudonyms during this study. Audio files will be password protected and only I will have access to them. The interview recording will be retained for 2 years and then will be confidentially deleted. Privacy cannot be guaranteed for the host of the online survey (e.g. Qualtrics).

Participation in this research is completely voluntary. Your child may choose to not participate. You and your child may skip any questions if you prefer not to respond without any penalty. You may also withdraw your child from the study at any time for any reason simply by notifying me. If you and your child stop participating, all data and recording will be removed from the study and confidentially destroyed.

The results from this study will be presented in a Master's thesis, and in other scholarly presentations and publications. At no time, however, will your child's name be used or any identifying information revealed. If you wish to receive a copy of the final report, you may contact me at millie.batta@uleth.ca or the contact information provided above.

If you require any additional information about this study, please call me at 604-653-0200 or email me millie.batta@uleth.ca, or you may also contact my supervisor, Dr. Jeffrey MacCormack, at (403) 329-2433 or jeffrey.maccormack@uleth.ca. Questions regarding your child's rights as a participant in this research may be addressed to the Office of Research Ethics, University of Lethbridge (Phone: 403-329-2747 or Email: research.services@uleth.ca).

This research study has been reviewed for ethical acceptability and approved by the University of Lethbridge Human Participant Research Committee.

A copy of this consent form will be given to you to keep for your records and reference.

I have read the above information regarding this research study on emergency remote learning, and consent for my child to participate in this study. Please note: If you are unable to sign the consent form, you may type out your signature. Alternatively, you can send me an email at millie.batta@uleth.ca acknowledging that you have read the consent form and provide consent to participate in this study with your child.

_____ (Printed Name of Child Participant)

_____ (Printed Name of Parent/Guardian)

_____ (Signature of Parent/Guardian)

_____ (Date)

_____ (Printed Name of Researcher)

_____ (Signature of Researcher)

_____ (Date)

Appendix I

Debrief Form

ONLINE SOCIAL ENGAGEMENT AND ITS IMPACT ON WELL-BEING AMONG YOUTH WITH AUTISM SPECTRUM DISORDER DURING COVID-19

Purpose of the Study:

We previously informed you that the purpose of the study was to gain insight on the experiences and perceptions of youth with autism spectrum disorder during emergency remote learning amidst the COVID-19 pandemic. Specifically, this study looked at how the social engagement activities were affected when students participated in emergency remote learning because of school closures. From this, the impact on the well-being of students was investigated.

The COVID-19 pandemic led to school closures worldwide in attempt to limit the spread and impact of the disease. With the shift to online formats, students with autism spectrum disorder (ASD) experienced interruptions in access to school-based supports and social networks. Opportunities for social engagement are important for youth with ASD to increase social interactions, along with their well-being. Moreover, technology may provide increased social engagement opportunities, considering youth with ASD often exhibit an affinity to technology. Thus, it is valuable to investigate the effects of the online delivery method on social engagement opportunities and the well-being of this population to investigate the practicality of online learning.

There were no hypotheses made prior to this study because this research is exploratory. Therefore, there was not concealment of specific research hypothesis to obtain certain information in this study.

Final Report:

If you would like to receive a copy of the final report when it is completed, you may contact me at millie.batta@uleth.ca.

Useful Contact Information:

This study foresees no risks or discomforts, however if for any reason the participant feels distressed after completing this study, please feel free to contact the services provided here. Information for crisis lines, chats, and other services for BC residents are available at <https://youthinbc.com/>. Additionally, you can call the Kid's Help Phone at 1-800-668-6868 to speak to a professional counsellor.

If you have any questions or concerns come up regarding this study, its purpose, or procedures, please feel free to contact me at 604-653-0200 or millie.batta@uleth.ca, or you may also contact my supervisor, Dr. Jeffrey MacCormack, at jeffrey.maccormack@uleth.ca.

If you have any questions concerning your rights as a participant, you may contact the Office of Research Ethics, University of Lethbridge (Phone: 403-329-2747 or Email: research.services@uleth.ca).

Thank you for your participation in this study! Your participation is greatly appreciated.

Appendix J

15-Point Checklist of Braun and Clarke's (2006) Criteria for Thematic Analysis

Process	Criteria
Transcription	1. The data have been transcribed to an appropriate level of detail, and the transcripts have been checked against the tapes for 'accuracy.'
Coding	2. Each data item has been given equal attention in the coding process 3. Themes have not been generated from a few vivid examples (an anecdotal approach), but instead the coding process has been thorough, inclusive and comprehensive. 4. All relevant extracts for all each theme have been collated 5. Themes have been checked against each other and back to the original data set. 6. Themes are internally coherent, consistent, and distinctive.
Analysis	7. Data have been analysed – interpreted, made sense of - rather than just paraphrased or described 8. Analysis and data match each other – the extracts illustrate the analytic claims 9. Analysis tells a convincing and well-organised story about the data and topic. 10. A good balance between analytic narrative and illustrative extracts is provided.
Overall	11. Enough time has been allocated to complete all phases of the analysis adequately, without rushing a phase or giving it a once-over-lightly.
Written report	12. The assumptions about, and specific approach to, thematic analysis are clearly explicated. 13. There is a good fit between what you claim you do, and what you show you have done – i.e., described method and reported analysis are consistent. 14. The language and concepts used in the report are consistent with the epistemological position of the analysis. 15. The researcher is positioned as active in the research process; themes do not just 'emerge.'

Appendix K

Direct Quotations of Parents' Conceptualization of Youth's Well-Being in General and During Emergency Remote Learning

Parents	Well-being in General	Well-being During Remote Learning
Cat	<p>“It's about he feels primarily, that he feels safe and supported so that he has that level of comfort to ask if he needs help to seek out sense wherever he needs. And also, so that he's able to then prioritize and focus on the things that he wants to achieve and then also that he is socializing at a level with he is comfortable with.”</p> <p>“Making sure that, you know, that the food choices are healthy and that we're taking care of ourselves and exercising and all those sort of things</p> <p>“I think for me the big things very base of it is that he feels safe and supported at all times.”</p>	<p>“So, I think that he's recovered now that he's back in school for sure, but during there was a lot of challenge to like, making good choices about socialization.”</p> <p>“But the contact with teachers became challenging which I think also like increased some of that sense of anxiety and a little bit of equation as well. So yeah, I think that they're for sure the biggest impact was probably in that good choices about who he's going to socialize with and not getting drawn in.”</p>
Helen	<p>“I think you know a physical health and wellness of course. So specially with COVID in mind, you know staying healthy uhm has much as possible like getting time outside, eating well, sleeping well, those kinds of things.”</p> <p>“Also the mental health side of it so feeling a sense of safety and belonging and connecting with people.”</p> <p>“Autonomy or uhm like that he has some decision making ability and make choices and have things in his life the way he chooses and his own degree as well.”</p>	<p>“They [schools] had some fun things to kinda create a sense of community and engagement in those first few months as well.”</p> <p>“I don't think there was any sense of being part of a community for Connor at least in that [online] setting.”</p>
Violet	<p>“I think, you know, her well-being is pretty good when she's not too busy and not too overscheduled and she has time for herself.”</p>	<p>“I did notice I could with the remote learning there wasn't necessarily that same level of meltdowns and overwhelmed feelings at the end of the</p>

“I think being a bit more playful and having a little bit more energy and less melt downs. Less, you know, negative attitudes those sorts of things.”

day that there had been when we were at school.”

“It was her first shorter periods of time online so I mean socially that way, but it wasn't a socially exhausting for her, but she, she did feel more isolated.

“We were pretty particular about following the rules. And, you know, not sort of bending the rules of having friends over and that sort of things. So so she did feel kind of isolated and then there was that heightened anxiety.”

“The wanting to follow rules and then the anxiety of getting sick and definitely influenced her her social relationship because she, you know, might get invited to hey, You want to go do that. So you want to go do that, but then there was the stress about it and I think she wasn't didn't really they incredibly connected to anyone during those four months.”

Maya “I think just feeling like you've got a safe spot like this. He's yeah I just you know, somewhere that he feels comfortable and safe and and and he's a pretty happy kid most of the time. So you know, just kind of knowing that that there's somebody listening to what he's saying.”

“When he doesn't have that social aspect, even if it's you know like with just with teachers or someone being kind of right there, he is more, he feels more isolated and gets frustrated easier. And as far as I'm trying to, you know, do work or anything like that, it's you see you see the stress.”

“It actually caused a lot of anguish for him.”

“Kind of got like depressed and and there was a lot of anxiety about, you know, what was going to happen and how he could make it work.”

Emma “I would say conceptualizing well-being would be him developing in a couple

“His everything got better exponentially, when he started doing homeschooling and then he was able to just talk with

key areas, uhm executive functioning, resilience.”

“I think the most important thing is learning to read social cues and learning to be resilient.”

“So, he can always have the self-confidence and self-esteem to be himself regardless of outside factors and then also working on things, like, for most kids to grow and gain the skills and learn more about the worlds as much as possible in these, you know, pre-adult years.”

Thelma “I would say probably a day that has less pain in it because she lives chronic pain on top of everything else. On top of being autistic.”

“A day where she's able to attend school, have fun with her friends.”

“Generally speaking, her well-being is mostly for her. It's tied to it because we can go see animals. We do what we do volunteering at the SPCA to go and play with animals, to go and play with dogs and cats because that's something that helps.”

“For her, it's generally having a day that isn't full of anxiety attacks.”

Amanda “Well-being looks like Lucas is calm and able to get through is every day without meltdowns.”

“Being regulated.”

friends that respected him and was still able to work through social things. So, it was good for us.”

“We slid backwards with with everything like social emotional.”

“We had an increase in separation anxiety, and increase a massive increase in social anxiety. She does have selective mutism and that, that increased.”

“When we went to remote learning that that itself like she didn't go anywhere, she stayed home. There was no, whatever, was very limited social interaction.”

“It was an absolutely negative thing.”

“It's really affected his level of focus, and he became dysregulated afterwards. So although he was happy with the idea of having this screen and the online learning, he wasn't really learning anything because he was so outrageously distracted. And then he would become dysregulated quite shortly after like almost immediately after having to come off the screen and

the teachers saying, okay, we're done for the day.”

“Lucas has issues making friends anyway. This is part of this autism and the learning disability but it actually made him feel worse because other kids were able to navigate the online space and they might send each other DMs, or more within the chat, They might chat with each other and Lucas completely unable to do that. So really negatively affected him in terms of his self-worth. And what he thought about himself.”

“He actually felt quite alienated.”

Maria “I think well-being for him is a contented child that that is not stressed out. I can tell he’s enjoying life.”

“I think back that to March 2020, it was a gong show like an absolute gong show.”

“It would be fair to say he struggled with depression but definitely, I think this whole world did right to some degree where our normal activities could not be done and more. And there was, you know, he went from seeing his friends every day to not seeing them. So there definitely was, it definitely was a, it took an emotional toll for sure.”

Sophie “Whether he’s happy or not. For the most part I think he is.”

“It didn't impact his life very much at all to be honest.”

“Physically, he keeps growing. He's particular on food but somehow he seems to stay healthy, so I don't know.”

“I do worry from a social standpoint because he only has one friend in this whole planet and that friend is farther away now.”

Appendix L

Youth's Complete Survey Responses for Technology Use and Social Engagement Survey

	Youth								
	Beau	Connor	Delaney	Derek	Dipper	Louise	Lucas	Tony	William
I used social media platforms to interact with my friends during remote learning.	1	2	3	3	5	4	1	4	3
I felt comfortable interacting with my friends online during remote learning	4	3	1	4	5	3	1	5	5
I felt comfortable interacting with my teacher/teaching assistant during remote learning.	4	4	1	2	5	1	4	3	5
I preferred socially interacting with my friends online than in-person.	2	1	1	2	3	5	1	2	4
Interactions with my teacher(s) were important to me during remote learning.	4	4	3	4	5	2	4	4	5
Interactions with my teacher assistant was important to me during remote learning.	3	4		4	3	2	4	4	3
Interactions with my classmates (during class) was important to me during remote learning.	3	4	3	3	3	2	3	3	1
Interactions with my friends was important to me during remote learning.	5	4	4	3	4	4	3	4	4
Overall, I liked my experience with remote learning.	2	2	1	4	5	1	2	2	4
I could connect with my teacher whenever I had any issues.	4	4	5	4	3	2	2	3	4
I could connect with my teacher assistant whenever I had any issues.	3	4		4	2	2	1	3	3
I felt supported during remote learning.	5	4	2	4	4	2	2	4	4
I felt connected during remote learning.	3	2	2	4	4	2	2	3	3
Upon schools re-opening and returning to in-person instruction, did you go back to school?	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes
How often did you interact with your teacher online during remote learning (i.e. video chat, telephone call, email, messaging)?	2	4	3	3	5	2	4	3	3
How often did you interact with your teacher assistant online during remote learning (i.e. video chat, telephone call, email, messaging)?	1	4		5	1	1	1	3	1

How often did you interact with your classroom during class online (i.e. video chat, telephone call, email, messaging)?	2	4	2	4	5	2	4	4	1
How often did you interact with your friends online (i.e. video chat, telephone call, email, messaging)?	4	1	4	5	5	2	1	4	3
WEEKDAYS: When you have some free time, how many hours do you usually spend on electronic devices (such as smartphones, laptops) playing games?	3 hours	3 hours	Less than 1 hour	3	4 hours	6 or more hours	No time	4 hours	1 hour
WEEKEND: When you have some free time, how many hours do you usually spend on electronic devices (such as smartphones, laptops) playing games?	4 hours	3 hours	Less than 1 hour	3	6 or more hours	6 or more hours	No time	6 or more hours	1 hour
Thinking back to the first four months of the pandemic (March to June, 2020) when you were doing schooling from home, how did your technology use for playing games compare to now?	Same	More than now	More than now	Same	Same	More than now	Same	More than now	Same
WEEKDAYS: When you have some free time, how many hours do you usually spend on electronic devices (such as smartphones, laptops) messaging and socializing with people you know?	1 hour	No time	Less than 1 hour	3	3 hours	3 hours	No time	3 hours	1 hour
WEEKEND: When you have some free time, how many hours do you usually spend on electronic devices (such as smartphones, laptops) messaging and socializing with people you know?	2 hours	No time	Less than 1 hour	6 or more hours	4 hours	4 hours	No time	4 hours	1 hour
Thinking back to the first four months of the pandemic (March to June, 2020) when you were doing schooling from home, how did your technology use for messaging and socializing with others compare to now?	Less than now	Same	More than now	Same	Same	Same	Same	More than now	Same
WEEKDAYS: When you have some free time, how many hours do you usually spend on electronic devices (such as smartphones, laptops) watching television, videos (e.g., TikTok, YouTube), or other video-based entertainment?	1 hour	Less than 1 hour	1 hour	4 hours	3 hours	5 hours	No time	2 hours	3 hours

WEEKEND: When you have some free time, how many hours do you usually spend on electronic devices (such as smartphones, laptops) watching television, videos (e.g., TikTok, YouTube), or other video-based entertainment?	2 hours	Less than 1 hour	2 hours	6 or more hours	4 hours	4 hours	1 hour	2 hours	3 hours
Thinking back to the first four months of the pandemic (March to June, 2020) when you were doing schooling from home, how did your technology use for watching videos compare to now?	Same	Same	More than now	Same	Same	Same	Same	Same	More than now
I use the following social media platforms to interact with others:	Twitter	None	Instagram	Instagram, TikTok, Snapchat	Skype, Zoom	Instagram, Facebook, Discord		Discord	