Parental Self-Efficacy During the COVID-19 Pandemic: Parents' Experiences Supporting the Learning of their Child(ren) with Special Educational Needs

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Abstract

Schools closed as a result of the COVID-19 pandemic with the expectation that learning continue from home. This presented a unique challenge for parents of children with special educational needs as during this time levels of stress were high and access to supports were low. The purpose of this mixed methods study was to explore and describe parents of children with SEN's experiences with at-home learning as it relates to their learning-specific parental self-efficacy, perceived stress and perceived support from their child's school. Quantitative analysis revealed that learning-specific PSE was significantly and negatively related to perceived stress. Parents did not differ in their perception of school supports. While qualitative analysis revealed many similarities between groups, it also revealed nuanced differences that show that parents of high and low PSE experienced the school closures differently. Overall, the findings of this study provide evidence that parents with high and low parental self-efficacy differ in their experiences of supporting the learning of their children with SEN. This study serves to add to the limited body of literature on learning-specific PSE, as well as inform the efforts of schools and other professionals in supporting the parents of children with SEN and their families.

Introduction

In March of 2020, the world came to a stop with the onset of the COVID-19 pandemic. In response, many countries implemented public health measures to curb the spread of the virus including stay-at-home orders, which forced the closure of schools. With schools closed, much of children's education was moved to remote learning and expected to continue at home. As a result, parents were propelled into not only caring for their children throughout the day when they would otherwise be at school, but a new role that involved supporting their children's learning. Despite having likely engaged in learning activities with their children in the past, in the form of homework or reading books together, for example, full-time at-home learning required parents to engage effectively with educational materials, be competent in navigating online spaces, and perhaps most importantly, support their child's efforts to learn.

Among the parents engaging in distance learning activities were those who have children with special educational needs. The term special educational needs (SEN) refers to a broad, heterogenous group of students who require a range of resources within schools to be successfully academically and/or socially (UNESCO, 2017). Most have neurodevelopmental disabilities, including learning disabilities, autism spectrum disorder or attention-deficit/hyperactivity disorder. The term SEN was chosen in this study to represent *all* students who receive additional supports and services at school. It is an inclusive term in that it considers those with formal identifications or diagnoses, but also those with education-related needs who do not have, or have not yet had the chance to obtain, a formal diagnosis.

Children with SEN experience neurological, emotional, behavioural, and/or physical challenges that can affect the ease and ways with which they learn best (OME, 2018). As such, these children typically receive a range of specialized supports such as an individual education/behaviour plan (IEP), the allocation of an educational assistant (EA), access to therapists (e.g., occupational) and/or assistive technology (BC Ministry of Education, 2016). Considering these supports that are required by children to access learning, many parents of children with SEN likely faced an especially complex undertaking when schools closed, related to supporting their children learn. As such, investigating these parents' experiences during at-home learning provides an opportunity to discover how they experienced their shifting role and what influenced their efforts to support the learning of their child with SEN.

In considering parent efforts in supporting learning, one factor that is known to determine an individual's perseverance is self-efficacy. As Bandura (1977) describes, self-efficacy is an individual's belief whether or not they are able to perform a particular task or behaviour. If an individual has high self-efficacy beliefs, they are not only more likely to attempt the task or activity, but to persist in the face of adversity. In contrast, those with low self-efficacy beliefs are less likely to try and execute a particular behaviour, and are more likely to give up when obstacles arise. That being said, self-efficacy alone is not enough to produce behaviour. Desirable outcomes, encouragement, sufficient skills, among other variables influence self-efficacy in positive ways to promote an individual's decision to engage in a task or behaviour. On the other hand, stress, failures, lack of support and information can have a negative affect, making behaviour less likely (Bandura, 1977; Coleman & Karraker, 1998). Self-efficacy is a useful construct to explore in understanding parents support of their child's learning during COVID-19.

With the pandemic inducing stress all over the world (Rossi et al., 2020; Wakode et al., 2021; Yang et al., 2020), and connections with others being limited due to public health measures (e.g., social distancing and refraining from gathering; WHO, 2020; Government of Ontario, 2021), this provided a unique opportunity to better understand how parent self-efficacy interacts, specifically, with stress and support from others. With regards to school closures and parents of children with SEN, the pandemic has created not only a new parenting role to be discovered, but does so within a highly stressful context with limited ability to reach and receive support. As such, this study investigates how the perception of both stress and support from the school varies between parents with high self-efficacy beliefs related to supporting their child's learning[1], and those with low self-efficacy beliefs, within the context of the pandemic. The findings of this study shed light on the relationships between self-efficacy, stress and perceived school supports among parents of children with SEN and add to the limited body of research we have pre-, during and post-pandemic on the interaction between these variables for this population. Going further, these findings serve to inform efforts to improve self-efficacy among parents and to ultimately support learning for children with SEN.

Literature Review

Context: The COVID-19 Pandemic

Recognizing the toll the pandemic would likely have on parents, many researchers investigated parents' experiences and levels of stress during peak-COVID-19 when lockdown orders were in place and schools were closed. As expected, parental stress increased significantly during the pandemic with many parents reporting social distancing and school/childcare closures as causes of this stress. Also concerning is that many of these parents reported very high levels of depression and anxiety (Calvano et al., 2021). In another study, suitably titled *Parents are Stressed!*, researchers found a similar trend, wherein parents' perceived stress levels rose significantly from pre-COVID times to the height of the pandemic (i.e., stay-at-home orders in effect; Adams et al., 2021). While these levels did decrease when children went back to schools, the level of stress parents were experiencing did not return to pre-COVID levels. When asked their primary stressors, again, changes in their children's routines, as well as the demands of their children's online schooling were among the most common sources of stress for parents during this time. Importantly, parents indicated that they were actively engaged in coping strategies like keeping in touch with family and friends virtually, and ensuring their children remained on a schedule (Adams et al., 2021). This finding demonstrates that parents, while experiencing difficulties during this time, still recognize the importance of resilience, in an effort to ensure positive outcomes for both themselves and their children.

Chen and colleagues (2020) also investigated the mental health of parents during the pandemic, however in this case, they looked at parents of children with SEN specifically, citing the vulnerability of this group. Among several measures used were the General Health Questionnaire, Perceived Social Support, and the Parenting Stress Index. Findings showed that parents of children with autism spectrum disorder (ASD) were more likely than parents of children with other SENs to experience poorer mental health, that is, higher levels of stress and the presence of negative mental health symptoms (e.g., low mood, difficulty concentrating). They also found that social support (i.e., support from friends or family) was associated with better mental health for parents. Based on these results, the authors concluded that ensuring parents have ample support, as well as reducing their parental pressures, are important steps to take in promoting their mental well-being (Chen et al., 2020).

Like Chen and colleagues, Greenway and Eaton-Thomas (2020) acknowledged the particular importance of exploring the experiences of parents of children with SEN. In this study, however, the authors investigate how parents of children with SEN were finding the experience

of at-home learning. More specifically, they examined parents' satisfaction with the supports they had received from the school and their child(ren)'s teacher, and whether this experience differed between parents of high or low socio-economic status (SES), or the type of SEN their child had. Overall, the experiences of parents did not differ based on SES or type of SEN, however, many other important findings were noted. The majority of parents (92%) reported that this was their first time homeschooling their child(ren) and when asked about resources and supports provided by the school, almost two thirds of parents indicated that they were receiving materials and support. Unfortunately, half of parents indicated that what they were receiving was not appropriate for their child(ren), in that the resources provided were the same as those a child without SEN would have been receiving. Not surprisingly then, just under half of this group reported being dissatisfied with resources and supports provided by the school (Greenway & Eaton-Thomas, 2020).

Parents also indicated that they were not receiving enough support for their child(ren)'s educational *or* psychological needs (Greenway & Eaton-Thomas, 2020). Of particular concern is that just under half of parents reported feeling negatively about homeschooling, as well as feeling unprepared. A significant number of parents reported feeling "not up for the job" and that they were worried they would let their children down. While these authors did not look at parental self-efficacy related to learning specifically, their findings regarding parents' feelings towards homeschooling (e.g., not having sufficient skills to carry out the task, not feeling competent to perform the task), are characteristic of low self-efficacy which highlights the need to investigate the construct, and its related variables, further.

This brief overview of the effects of the pandemic on parents, especially those of children with SEN, highlight a few important factors: levels of stress, perceived support, and feelings and beliefs towards supporting their child(ren)'s learning. Not only did parents have higher levels of stress than prior to the pandemic, but having the additional responsibility of supporting their child(ren)'s learning presented additional challenges. Moreover, while social support (i.e., from friends and family) seemed to be helpful, the support parents received from schools was perceived to be inadequate and inappropriate for both the parent and their child(ren). Evidence from Greenway and Eaton-Thomas' study also suggests that parent's efficacy expectations towards supporting their children's learning may be low, pointing to an area left to be explored.

Parental Self-Efficacy, Stress, and the Role of Support

As noted by Bandura (1977), one factor that can negatively influence self-efficacy beliefs is stress (i.e., high physiological arousal). Stress affects self-efficacy beliefs by affecting performance, that is, high arousal elicits poorer performance which serves as feedback to the individual that they are incapable of successfully executing that behaviour. In turn, self-efficacy beliefs are diminished. This relationship has been demonstrated by researchers over time, across several domains and populations (e.g., Chung et al., 2017; McKay et al., 2014; Ye et al., 2018). Like stress, support from others has been shown to influence individuals' self-efficacy beliefs. While stress tends to dampen self-efficacy beliefs, support from others often enhances individuals' sense of efficacy (e.g., Karademas, 2006; Liu & Aungsuroch, 2019). For parenting in general, the link between the presence of support and higher parental self-efficacy has been established (e.g., Leahy-Warren et al., 2011; Razurel et al., 2017). Of particular importance in this case however, is the relationship between parental self-efficacy, stress and support, related to parents helping their children learn.

When looking at parental self-efficacy (PSE) related to supporting children's learning, much of the literature comes from research on parental *involvement*, the behavioural outcome of having sufficient efficacy and skills needed to support a child's educational activities. As pointed out by Hoover-Dempsey and colleagues (1992), the authors of the parental involvement process (PIP) model which highlights self-efficacy related to learning as being a key predictive factor of parent involvement, "parents most likely become involved when they believe that their involvement will "make a difference" for their children" (p. 288). Indeed, parents who are more efficacious in their ability to help their child learn showed significantly more instances of classroom volunteering and engaging in learning activities with their children in the home (Hoover-Dempsey et al., 1992).

Supporting evidence for the significance of PSE related to learning comes from studies such as Liu and Leighton's (2021), which investigates how PSE related to learning is related to children's achievement. Using the R-PIP model (Hoover-Dempsey et al., 2005), the authors found that PSE related to learning had the largest direct effect on children's math achievement, where higher levels of efficacy were associated with better outcomes. Moreover, parents' sense of efficacy in this domain was affected by specific invitations from the school to become involved where these invitations fostered higher levels of PSE related to learning (Liu & Leighton, 2021). While the focus of this study was primarily on how PSE related to learning

affected child-specific outcomes and not the parental experience, it sheds light on the significance of parent's sense of efficacy in supporting their children's educational needs. It also highlights the importance of relationships and collaboration between educators and families.

Another study that did investigate school-family relationships related to self-efficacy, was that of Harpaz and colleagues (2021). The authors sought to investigate the role of parents' help-seeking behaviours from teachers. While this concept is not directly related to *levels* of perceived support, it offers insight into how support can affect efficacy, and the ways in which it does not. The authors discuss how parents display two types of help-seeking behaviours: autonomous and dependent. Autonomous help-seeking refers to parents seeking out advice and/or knowledge from teachers that can help them build skills to manage their children, as opposed to dependent help-seeking where parents are looking for teachers to solve their problems for them (Harpaz et al., 2021). While parental self-efficacy was not related to autonomous help-seeking behaviours, it was significantly and negatively correlated with dependent help-seeking behaviours. More specifically, parents who sought out teacher's support in order for the teacher to solve the problem at hand had lower parental self-efficacy beliefs (Harpaz et al., 2021). Again, while this does not provide direct evidence for the positive influence of support on parental self-efficacy, it sheds light on the possibility that the *type* of support matters.

A handful of studies that focus on learning-specific PSE and the experiences of parents of children with ADHD also provide evidence for the importance of high efficacy beliefs for both parent- and child-related factors. For instance, Rogers and colleagues (2009) investigated how the parental experience differed between parents of children with ADHD and those without. The authors studied a host of factors related to parental involvement in children's educational activities as laid out by the PIP model (Hoover-Dempsey et al., 2005), including learning-specific PSE and relationships with their children's teacher and school. It was found that parents of children with ADHD felt less efficacious towards being able to support their children's learning efforts and had less time and energy to put towards educational involvement, as compared to parents of children without ADHD (Rogers et al., 2009). Parents of children with ADHD also felt less welcome at their child's school and received more invitations from teachers for involvement. While the latter finding appears positive, the authors highlighted that frequent contact from the school could indicate or influence negative relationships between parents and

educators as teachers may view ADHD symptomology a result of familial or parenting factors (Rogers et al., 2009). Of importance in this study is the finding that parents of children with ADHD felt less efficacious, despite having similar perceived knowledge and skills, as well as beliefs around their role in becoming involved than parents of children without ADHD. This suggests that other factors exist that are contributing to lower feelings of efficacy in the domain of learning for these parents.

Also in relation to ADHD, Kosmerly (2020) looked at parents of pre-school aged children displaying symptoms of ADHD and their learning-specific PSE. They found that efficacy, when considered with symptoms of ADHD, could play a role in helping children transition into school, improving the quality of interactions with the kindergarten teacher, and involvement in home-based learning activities. Wendel and colleagues (2020) looked at a similar age group (4- and 5-year-old children) displaying symptoms of ADHD within the context of the COVID-19 pandemic. The authors found that parents perceived their children's ADHD symptoms to have gotten worse from pre-pandemic times (Winter 2019) to during the pandemic (Spring 2020) and that overall, ADHD symptoms were significantly and negatively correlated with learning-specific PSE. While the authors did not observe significant within-person changes in parents' beliefs that would affect involvement (e.g., learning-specific PSE) throughout the pandemic, they highlighted the unique crisis and subsequent changes to parents' responsibilities related to their children's learning brought on by the pandemic as an area to be further investigated. Moreover, they acknowledge the promising finding that parents' efficacy did not worsen during the pandemic.

From these studies on parents of children with ADHD, it is evident that learning-specific parental self-efficacy is an important factor to consider when exploring the experiences of parents of children SEN, particularly within the context of the COVID-19 pandemic. These studies further highlight the complexities of not only supporting children with SEN in their educational activities, but that of creating and maintaining good family-school relationships, as well.

In a further study, Good (2001) also specifically investigated the relationship between parental self-efficacy and parental involvement within parents of children with SEN. Consistent with the claims of Hoover-Dempsey and colleagues, Good (2001) found that learning specific PSE was significantly related to the time parents spent engaging in learning activities with their

children. What is particularly important about their finding is that, of all of the variables related to parental involvement, PSE related to learning was *only* associated with time spent engaging in *additional* learning activities with their children, such as playing educational games, or reading books together. It was not related to other educational tasks like making phone calls, volunteering in the school, or even engaging in helping with homework (Good, 2001).

Good (2001) also found that almost 40% of parents of children with SEN expressed a desire to become *more* involved in their children's educational activities, which included those that take place at home (e.g., reading books together). Conversely, it was also found that about two thirds of parents indicated they would like to spend the same, or less time engaging in learning activities with their children, specifically, helping with homework. Good (2001) hypothesized, based on comments from the parents, that:

> Homework may produce a stressful situation for the parent and child with a learning disability. It may take a disproportionate amount of time and energy to complete assignments sent home for the child with a learning disability compared to children without the unique learning needs, creating increasing demands on the parents. (p. 95)

In addition, the majority of parents in this study indicated that they were satisfied with the school's and teacher's efforts to include them in their child(ren)'s education and that they felt a strong sense of community and intra-family support. Of importance to the current study, parents indicated that having a strong support system is imperative in the education of their children with SEN (Good, 2001).

The findings from Good (2001) are notable. There was an inherent lack of choice for parents when schools were closed as the expectation was that children continue learning from home. Learning involves much more than a teacher providing material; environment, routine, and access to immediate academic and social-emotional support are key factors in facilitating learning (Davis & Florian, 2004). These responsibilities inevitably fell upon the shoulders of parents. Not only did Good (2001) highlight the important role PSE related to learning has in the time parents spend engaging in educational activities with their children with SEN, but it also sheds light on parent's feelings around supporting their child with SEN's learning. In particular, findings from the studies conducted by Good (2001) and Rogers et al. (2009) highlight the unique experiences parents have of stress and the importance of support from not only friends and family, but educators, when supporting the education of their children with SEN. As

mentioned previously, with the parents already experiencing higher levels of stress and in need of support during the pandemic, these previous findings highlight the significance of exploring parent's experiences with supporting the learning needs of their children with SEN during this time.

The Current Study

Upon reviewing the literature, it is evident that self-efficacy, stress, and support are significantly related in various domains, and especially related for parents supporting the learning needs of their children with SEN. That being said, the relationship between all three of these variables have seldom been studied together, and has yet to be studied within the context of the global pandemic. Again, with schools closed and the COVID-19 pandemic inducing additional stress and negatively impacting the access to, and perception of support, it is important to investigate parents' efficacy beliefs during such a difficult time. As such, this study explores how parents of differing levels of parental self-efficacy related to supporting their child(ren)'s educational activities[1] are experienced both stress and perceived support from their child(ren)'s school during the COVID-19 pandemic. The following questions were investigated using data from a survey completed by Canadian parents of children with SEN, following school closures in the spring of 2020.

Research Question

1. Do parents of children with SEN with high or low learning-specific self-efficacy differ in a) their levels of perceived stress and b) how much perceived support they received from school during COVID-19 closures?
2. What are the experiences of parents of children with SEN who have high or low learning-specific self-efficacy in supporting at-home learning during COVID-19 related to self-efficacy, stress and perceived school supports?

Theoretical Framework

This study is grounded by Self-Efficacy Theory (Bandura, 1977). Self-efficacy theory is a theory of behavioural change that purports that actions occur as a result of the interaction between outcome expectations and efficacy expectations (Bandura, 1977). Efficacy expectations, or self-efficacy, refers to an individual's belief regarding their ability to successfully perform a

[1] When referring to the current study and it's findings, PSE will refer to learning-specific parental self-efficacy, unless otherwise specified.

specific behaviour. These beliefs determine an individual's willingness to begin or attempt to execute a certain behaviour or task, how much effort they put into performing this behaviour, and how long they are likely to persist in the face of adversity (Bandura, 1977). Self-efficacy is a cyclical construct such that, when a person successfully performs a behaviour or task, their self-efficacy beliefs are constructed or enhanced, increasing the likelihood of performing that behaviour again in the future and/or maintaining that behaviour through difficult circumstances. In contrast, if a person fails to execute a behaviour, their self-efficacy beliefs related to that task will diminish or fail to be constructed making it unlikely that they persist when obstacles are presented, and less likely that they will attempt this behaviour in the future. Furthermore, there are two scenarios in which a person may not perform an action, regardless of their efficacy expectations: there is no desirable outcome or incentive to perform and/or the person does not possess the skills necessary to complete the action (Bandura, 1977).

There are also variables outside the specific circumstances that can influence self-efficacy beliefs: performance accomplishments, vicarious experiences, verbal persuasion, and arousal (Bandura, 1977). Performance accomplishments refer to how outcomes of behaviour can raise or damage efficacy beliefs with successful attempts increasing self-efficacy and repeated failures damaging self-efficacy. That being said, individuals with strong beliefs are less affected by occasional failures than those with weak or unstable self-efficacy beliefs (Bandura, 1977). Vicarious experiences refer to the observation of someone else performing a behaviour. These experiences, while effective to some degree in increasing personal efficacy beliefs are weaker and more susceptible to change. Encouragement, or what Bandura (1977) called *verbal persuasion*, can also help individuals build positive self-efficacy beliefs, although these can be extinguished quickly with failed attempts. Lastly, Bandura (1977) discusses the impact of stress on performance. It is noted that the high physiological arousal that accompanies feelings of stress typically elicits poorer performance. As a result, efficacy beliefs tend to be higher during times of less stress and lower physiological arousal.

In sum, self-efficacy, or efficacy expectations, are a cognitive mechanism that set the foundation for whether or not a behaviour occurs. This mechanism does not act in isolation, and is affected by both external and internal factors, making self-efficacy an essential topic of study when seeking to understand how and why people behave in the ways they do. Given that efficacy expectations are specific to behaviours, self-efficacy is intuitively task-specific, meaning efficacy

beliefs can change depending on what task or action they relate to. As such, efficacy beliefs about parenting gives rise to the construct of *parental self-efficacy*.

Parental Self-Efficacy

Recognizing the significant impact parent's behaviour can have on their children, developmental researchers coined the term *parental self-efficacy*, to refer to a parent's belief in their ability to execute parenting tasks and influence their child and the environment that will generate positive outcomes (Ardelt & Eccles, 2001; Coleman & Karraker, 1998; Hoover-Dempsey & Sandler, 1997). Moreover, in order to possess high parental self-efficacy beliefs, a parent must have knowledge about appropriate responses to certain situations, confidence in their ability to perform those tasks, the belief that their children will respond reliably, and lastly, the belief that important others will support their parenting efforts (Elder, 1995).

Consistent with the aims of the current study, Hoover-Dempsey and Sandler (1997) discuss learning-specific parental self-efficacy, and how it relates to parental involvement in the educational activities of their children. In this way, parental involvement is the action or task at hand within the overarching self-efficacy framework, and positive outcomes for both child (e.g., child's own increased sense of efficacy in learning) and parent (e.g., feelings of success in the parenting role) are the incentives to perform (Hoover-Dempsey & Sandler, 1997).

As such, parent's beliefs about whether or not they are capable of helping their child learn are instrumental in whether they become involved, and how long they are able to persist in spite of challenges, to achieve the desired outcomes. More specifically, Hoover-Dempsey and Sandler (1997) explain in a way that is consistent with Elder's findings, that parents high in learning-specific parental self-efficacy generally view themselves as having the necessary skills in this domain, and hold the belief that in becoming involved, positive outcomes are likely to follow. Parents with high efficacy beliefs in this area also tend to be resilient when facing difficulties such as personal sense of inadequacy or their child's inability to meet educational demands. In contrast, parents with low efficacy in this domain are more likely to succumb to challenges and in some cases, fail to initiate involvement due to fears around incompetence in supporting their child's learning (Hoover-Dempsey & Sandler, 1997).

Taken together, self-efficacy theory provides a framework in which behaviour from all domains can be applied and investigated. When applied to parental involvement in learning

activities, parental self-efficacy provides a tool to not only discover what influences determine parents' involvement but why and how they persist through difficulties in the process.

Methodological Framework

Study Design

A sequential explanatory mixed-methods design (quan - QUAL) was used for its ability to provide both a general overview of the research problem and a more in-depth look into participants' views and experiences (Ivankova et al., 2006). First, a quantitative analysis was conducted to identify, in general, if similarities or differences between groups exist, then using this information, a content analysis of the qualitative data was conducted to elaborate on the quantitative findings. In this way, the qualitative data was privileged as it explored parents' experiences in detail which was the aim of this study – providing interpretation, clarification and substantiation of the quantitative findings. The data was integrated during the reporting and interpretation phases of the study using narration to integrate and describe the results yielded from data analysis (Fetters et al., 2013).

Measures

The survey completed by participants explored various factors related to parenting a child with SEN and learning and living at home during the COVID-19 pandemic. It consisted of 22 closed-ended questions and 8 open-ended questions (see Appendix A). Closed-ended questions covered topics such as demographic information (i.e., province, family structure, relationship to child) and child variables (i.e., child age, grade, diagnosis/main identification, and school/classroom placement prior to the closure of schools). The survey also included specific scales measuring parents' perceptions and experiences of academic and social/emotional support from the school, their child's peer relationships, stress, and learning-specific PSE. The open-ended questions explored parents' perceptions of their most significant challenge, resources and supports, relationships with their child and their child's school, their priorities during school closures, as well as any perceived benefits of the time at home.

For the purpose of this study, 3 scales and 6 out of the 8 open-ended questions were used to answer the research questions. These scales and items are listed and discussed in detail below.

Parental Involvement Project-Parent Questionnaire (PIPQ)

The parental self-efficacy scale of the PIPQ was selected for its ability to assess parental self-efficacy related to helping children succeed in their learning and academic activities

(Hoover-Dempsey et al., 2005). The PIPQ-SE has been shown to have strong psychometric properties, with very good internal consistency (α = 0.84; Kosmerly, 2020; α = 0.74; Rogers et al., 2009). For the purpose of this survey, 5 of the original 7 items were retained, including "I know how to help my child do well in school", "I don't know if I'm getting through to my child", "I don't know how to help my child make good grades in school", "I feel successful about my efforts to help my child learn" and "I don't know how to help my child learn". We removed two items that we deemed irrelevant in a pandemic context (one relating to the influence of peers and one to school performance). One pandemic-related item was added, "I feel less confident in helping my child now that schools are closed". The scale was adjusted from the original 6-point Likert scale to a 5-point Likert scale with the inclusion of a "not applicable" response option, to align with the rest of the survey. The adjusted scale exceeded acceptable reliability levels with a Cronbach's alpha of 0.90.

Perceived Stress Scale (PSS)

The 4-item version of the perceived stress scale (PSS-4) was used to assess participants current levels of perceived stress. As Cohen et al. (1983) acknowledged in the development of the measure, while some events can be objectively rated as being stressful, an individual's perception of how stressful an event or situation is can have a significant effect on how they feel. As such, while it can be assumed that the onset of the COVID-19 pandemic is an objectively stressful event, it is important to still acknowledge and measure the varying levels of stress that individuals feel during this time. The psychometric properties of the PSS have been evaluated several times in a variety of samples (e.g., Huang et al., 2020; Warttig et al., 2013), most often yielding acceptable reliability levels (α = 0.47-0.77).

While the 10- and 14-item versions generally report more sound internal consistency scores (e.g., Lesage et al., 2012; Mitchell et al., 2008), the 4-item version of the measure was selected given the already substantial length of the full survey, and the fact that the psychometric properties for the 4-item scale still remained in the acceptable range (e.g., α = 0.73; Lesage et al., 2012). In the present study, the PSS-4 returned a Cronbach's alpha value of 0.78.

Perceived School Supports Scale

The Perceived School Supports Scale is comprised of 10 items that capture how supported participants felt by educators during at-home learning/school closures. These items were developed and selected by the research team, which consisted of teachers, teacher

educators, and researchers in the field. The items were determined to capture the intended purpose of obtaining parents' perceptions regarding levels of and satisfaction with academic and social/emotional support provided by educators from their children's schools.

Items on this scale were presented to participants as statements, to which they were to rate their level of agreement on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). Participants were also able to select a "not applicable" response option. Of the 10 items on the scale, 6 items explored offerings from the school related to supporting the academic well-being of the child, through supporting the caregiver/parent or helping the child directly (e.g., "Teachers have been supportive of my efforts to help my child with school work."). The remaining items addressed offerings from the school related to the child's social and/or emotional well-being (e.g., "School support staff have been supportive of my child's social and/or emotional well-being"). The Perceived School Supports Scale yielded a Cronbach's alpha of 0.92, demonstrating high reliability and consistency in the way that participants perceive supports from schools.

Qualitative Data Sources

Responses from 6 open-ended questions from the survey were selected for qualitative analysis:

1) "What was the most significant challenge you are experiencing during this time with regards to your child(ren)?"

2) "What resources or supports would help you with the particular challenges you are experiencing in supporting your child(ren)?"

3) "What resources or supports have you found to be most helpful during this time in supporting your child(ren)?",

4) "What benefits or positive aspects, if any, have you noticed during this time supporting your child(ren)?"

5) "Have the school closures affected your relationship with your child(ren) at all? If so, in what ways?", and

6) "Have the school closures affected your relationship with your child(ren)'s school at all? If so, in what ways?".

These questions were selected to provide insight into parents' experiences with their children during at-home learning. More specifically, it was thought that these 6 questions were

likely to yield information on what may have been contributing to parent's stress, what tasks they felt less-efficacious about, and how they experienced support from the school. Participant responses to these questions are quite short, consisting typically of a few words or a sentence or two at the most.

Procedure

Recruitment and Participants

Ethical approval for the study was first obtained from the University of Ottawa Research Ethics Board. Participants were recruited to complete the survey through social media channels such as Facebook and Instagram via paid advertisements and through provincial advocacy organizations. Eligibility criteria stated that participants must be a parent or guardian of a child or adolescent enrolled in school (e.g., not normally homeschooled), that has a special educational need. More specifically, their child receives special educational services, has a formal diagnosis or identification, and/or has an individual education or behaviour plan or program. Parents interested in taking part followed a survey link provided in the advertisement. At the beginning of the survey, participants were presented with a consent to participate option, then if they agreed, went on to complete the survey which included both closed (e.g., rating scale) and open-ended questions. Surveys were completed in either English or French.

Of 397 total survey responses, 164 were excluded for being incomplete (i.e., having not completed the survey up until and including the perceived stress scale), leaving 263 in the overall sample. For the purpose of the current study, participants were divided into two groups based on their overall parental self-efficacy scores: high PSE and low PSE. Upon reviewing the literature, it was clear that there was no agreed upon way of defining what constitutes high or low self-efficacy (e.g., Bandura et al., 1996; Cummings et al., 2010; Hamidi et al., 2018; Tarning et al., 2019). As such, it was determined that the mean PSE score ($N = 2.96$), plus or minus one half of the standard deviation (SD = 0.98) would be used to divide the groups. A full standard deviation was not used as it would have excluded almost two thirds of the sample (66%) and it was felt that one half of a standard deviation would be sufficient to provide contrast, while retaining a majority of the sample (69%).

Using this approach, the high-end cut off score for the low PSE group was 2.47, yielding 85 participants. Parents in this group reported an average PSE score of 1.84 on a 5-point Likert scale, with a standard deviation of 0.40. The low-end cut off score for the high PSE group was

3.45, yielding 97 participants. Parents in this group reported an average PSE score of 3.99 on a 5-point Likert scale, with a standard deviation of 0.44. Participants who scored between 2.47 and 3.45 (N = 81) were excluded from analyses, leaving 182 participants in the overall sample.

Of the 182 total respondents, the majority were mothers (91%) and, while most were in Ontario (58%), all provinces had some representation. There were no participants in the territories. Most families in this sample had one (30%) or two children (40%), and had only a single child with SEN (1: 76%, 2: 19%, 3: 3%). Parents who had more than one child with SEN were asked to complete the survey with only one child in mind, with the option of completing additional surveys for each additional child with SEN. The majority of parents reported that their child had only one main identification or diagnosis (51%), while 27% reported two and 13% reported three. Parents in this sample reported that their children were receiving, on average, 4 different types of supports at school, prior to school closures. Almost all of the children in the sample attended public school (93%) with 78% attending elementary level classes (K/P-8) and 21% attending secondary level classes (9-12). Most children were in regular classroom placements before the COVID-19 school closures, some were in a special education classroom or school, and the rest shared their time between regular and special education classrooms. The average age of children was 10 years old. Of all the parents in the sample, 86% indicated that they were engaging in learning activities with their children. The other 14% indicated that they were not engaging in learning activities with their children with the common reasons for this being that the work provided by the school was not appropriate for their child (n = 9), they felt they did not have the skills necessary to support their child's learning (n = 9) and not having enough time (n = 8). A summary of demographics between groups can be seen in Table 1.

Table 1

Summary of Demographic Variables in the High and Low PSE Groups

Demographic Variable	High PSE Group (%)	Low PSE Group (%)
Participant		
Mother	88.7	92.9
Father	5.2	3.5
Other	5.3	3.6
Locations		
Ontario	62.9	52.9
British Columbia	15.5	14.1
Nova Scotia	8.2	7.1

Demographic Variable	High PSE Group (%)	Low PSE Group (%)
Alberta	6.2	12.9
Other	7.2	13.0
Number of Children in Family		
1	36.1	22.4
2	36.1	43.5
3+	17.5	23.5
Number of Children with SEN in Family		
1	81.3	73.5
2	15.6	22.9
3	3.1	3.6
Average Age of Child	10.9*	10.2*
School Type		
Public	95.9	90.6
Private	4.1	9.4
Grade Level		
Elementary	63.9	64.7
Secondary	35.1	35.3
Number of Main Identifications/Diagnoses	1.7*	2.0*
Classroom Placement		
Regular Classroom	70.1	65.9
Mixed Regular & Special Education	9.3	12.9
Special Education Classroom	18.6	17.6
Number of Supports	4.2[a]	4.3[a]
Parental Involvement		
Engaging in Learning Activities	86.6	84.7
Not Engaging in Learning Activities	13.4	15.3

Note. Demographic variables between groups did not differ significantly.

* Value represents an average frequency as opposed to a percent.

Data Analysis

As per the mixed-methods study design both quantitative and qualitative analyses were conducted in a sequential fashion before being mixed at the point of the findings.

Quantitative

Two independent-samples t-tests were conducted to determine whether or not individuals of high and low PSE differed in their levels of perceived stress and perceived support from their child(ren)'s school during COVID-19 school closures. The independent variable in this study was self-efficacy (i.e., high or low) and the dependent variables were perceived stress, as measured by the Perceived Stress Scale (PSS) and perceived supports from the school, as

measured by the Perceived School Supports Scale. The quantitative analysis was conducted in IBM SPSS.

Qualitative

Following the quantitative analysis, a content analysis was conducted using the responses to the selected open-ended questions. The total number of responses for each question ranged from 63 to 94 responses in the high PSE group and 50 to 74 responses in the low PSE group. The definition of content analysis and related procedure used in this study is described by Hsieh and Shannon (2005) as "a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns" (p. 1278). In considering the brief nature of the responses, often two or three words, it was determined that the data would need to be analyzed in relation to the question the participants were asked for context. For example, the response 'flexible schedule' needed to be understood in relation to the question about benefits of COVID-19, particularly since the same response was provided by parents in relation to the question about the challenges of COVID-19. Furthermore, due to the range in length of responses and concern for over-interpretation in the initial phases, it was decided that the coding would commence without using the quantitatively-measured variables as established codes (e.g., stress, self-efficacy, supports). As such, an inductive approach was used, that is, allowing codes and categories to emerge from the data naturally (Hsieh & Shannon, 2005).

To reduce any bias, I was blinded to the status of high or low learning-specific PSE, that is, the qualitative data was organized into high and low PSE groups by my supervisor. This process entailed exporting the qualitative data from SPSS into an Excel file and removing labels of high and low PSE. Given that the number of participants in each group differed, additional response sets in the high PSE group were exported into a separate sheet in the file to be coded. My supervisor chose the response sets to be removed for the initial coding based on the number and length of responses; those with the fewest and shortest responses were removed to balance the two groups and avoid revealing the groups. The groupings within the Excel file were then imported to NVivo (released in March 2020) for analysis.

Consistent with the protocol laid out by Hsieh and Shannon (2005) for conventional content analysis, and similar to the thematic analysis protocol put forth by Nowell and colleagues (2017), I first began the analysis by familiarizing myself with the data. This was achieved by

completing two full read-throughs of each data set and on the second read through, making notes of my initial impressions of the data. Each data set was analyzed concurrently, that is, I started by analyzing the responses for a specific question in one group (e.g., high PSE) then moved to the other group to analyze the responses to that same question. I repeated this process until all 6 pre-determined questions were coded. After both groups were fully coded, I made notes on the initial codes and began revising and organizing specific codes in code groupings and potential themes. Then, both groups were analyzed for a second time using the revised code structure. In order to improve trustworthiness, specifically the credibility of the analyses, a co-researcher coded at least 40% of the data independently, after which we collaborated in the development of the themes. Once both groups were analyzed and themes were named, I was informed as to the identification of each group and engaged in a cross-group analysis, highlighting similarities and differences.

Mixed Methods Analysis

Integration of the data occurred following the analysis of the quantitative and qualitative strands, during the interpretation and reporting phase. Two levels of integration occurred at this point: integration through data transformation and integration through narration (Fetters et al., 2013). To begin, themes and subthemes determined in the content analysis of the qualitative data were transformed into frequency counts. Typically, these counts are merged with the quantitative data, but as Fetters and colleagues (2013) note, this is not a requirement and that the transformed data can simply be compared to results obtained in the quantitative data. This approach was used in the current study to highlight similarities and differences between groups. Furthermore, a narrative approach was taken on a more general level to interpret the results of the two groups, using the *weaving* approach. Weaving involves reporting both quantitative and qualitative findings together, using themes to organize the data. Guiding themes were selected based on their relevance to the variables of interest in this study (i.e., learning-specific PSE, stress, support from the school).

Results

Quantitative Findings

Two independent-samples *t*-tests were used to test the first research question wherein level of learning-specific PSE (high, low) was the independent variable and perceived stress and perceived support from the school were the dependent variables. Prior to conducting the

analyses, all variables were assessed for independence, normality and homogeneity. All variables met the required assumptions of independent-samples *t*-tests.

There was a significant difference in levels of perceived stress between parents with high learning-specific PSE ($M = 6.45$, $SD = 2.81$) and parents with low learning-specific PSE ($M = 8.75$, $SD = 3.01$). Parents with high learning-specific PSE reported lower levels of perceived stress than parents with low learning-specific PSE, who reported higher levels of perceived stress, $t\ (180) = -5.33$, $p < .001$, $d = -.79$.

Parents with high learning-specific PSE ($M = 3.17$, $SD = 0.95$) and those with low learning-specific PSE ($M = 3.08$, $SD = 0.91$) reported similar ratings of perceived support from the school. The difference was not significant, $t\ (180) = 0.66$, $p = .514$).

Qualitative Findings

Following the content analysis, findings emerged within four main categories relating to the perceptions of parents of children with SEN during COVID-19 school closures, namely challenges, benefits, resources and supports, and relationships. Emerging themes and subthemes are described within each of these broad categories. To ensure transparency, language used to describe trends in the qualitative findings reflect specific ranges in the differences in frequencies of responses between groups within that theme or subtheme. As such, terms such as similar/no difference refer to scores less than 10 percent different in frequency between groups, trending/seems to differ refer to differences in frequencies between 10 and 20 percent, and differ/differs refer to differences in frequencies 20 percent or greater.

Main Challenges of COVID-19 School Closures

While parents reported a variety of significant challenges and concerns they were facing during the period of school closures, three themes emerged that captured the majority of parent's experiences: difficulty supporting learning, overall well-being, and general parenting difficulties. The first and last of these also include several sub-themes that provide more detailed understanding of the broad theme. As can be seen in Table 2, the frequency with which the themes and the subthemes were noted by participants is provided by high and low PSE group.

Table 2

Main Challenges of COVID-19 School Closures

Themes	High PSE		Low PSE	
	N	%	N	%
Difficulty Supporting Learning	42	40.4	43	43

Themes	High PSE		Low PSE	
	N	%	N	%
Difficulty Supporting Child Academically and Getting Work Completed	17	40.5	27	62.8
Insufficient, Inaccessible and/or Inappropriate Materials and Resources Needed to Facilitate Learning	18	42.9	8	18.6
Lack of Communication and Support from the School	7	16.7	8	18.6
Well-Being	36	34.6	35	35.0
General Parenting Difficulties	26	25.0	22	22.0
Balancing Multiple Roles	15	57.7	6	27.3
Difficulties with Parenting Duties	11	42.3	16	72.7

Difficulty Supporting Learning. This theme captures parents' experiences who had difficulties supporting and facilitating their child(ren)'s learning during school closures. More specifically, parents who reported these challenges described having trouble getting school work completed, not having the appropriate learning materials for their child, and not receiving communication or support from the school. One parent shared their concerns that the materials provided by the school were not appropriate for their child: "the work sent home was very basic (not a lot of thought put into it) and a lot of links to things to look up ourselves". Another parent described that they faced difficulties supporting their child's learning, experiencing, "major resistance from my son. Yelling, screaming, defiance, refusal, submitting work that isn't done, not following directions, won't reach out to teachers for help. Won't do ONE. SINGLE. THING if someone isn't sitting right beside him breaking down and directing every single step".

Difficulty supporting learning was the most frequently referenced challenge for parents of both high and low PSE groups. That being said, parents differed in the specific barriers they were facing that made supporting their child(ren)'s learning difficult. For instance, the majority of parents in the low learning-specific PSE group indicated that they did not feel adept supporting their children's learning and assisting them children in getting school work completed. On the other hand, parents in the high and low PSE group experienced difficulties in both supporting their children in completing school work, and having the sufficient, appropriate and accessible learning materials and resources to facilitate learning. A similar proportion of parents in both groups reported limited communication and support from the school as a challenge in supporting their child's learning.

Well-Being. The second most common challenge parents experienced was related to their own or their child's, well-being. This theme captures concerns ranging from a parent's own

feelings of exhaustion as a result of no respite care, to parent's concerns for their child's ability to participate in social opportunities and feel connected to others. For instance, "the most significant difficulty is with dealing with the mental health of my child who has special needs. She is sad, depressed, feels helpless. She is also always right there with us, and we are not able to access respite care". Other parents expressed concerns over their child's behaviour like this parent who said, "therapies are not available at this time, and he is becoming dysregulated and aggressive". Parents of both high and low PSE groups reported similar rates of concerns for theirs, their child's and/or their families well-being during the period of at-home learning.

General Parenting Difficulties. The third theme that emerged was general parenting difficulties. Parents whose responses were captured by this theme described the challenge of needing to provide constant supervision for their child while they were at home, difficulty maintaining a household routine, a general lack of support, and difficulty balancing their multiple roles. Illustrating this, one parent noted that their main challenge was "keeping everyone occupied and getting along" within their household. Another parent explained how their role as a parent, an educator, and an educator for their own child presented a unique challenge, "balancing the need to work from home with the ability to support my child's learning and even the need to provide supervision. As an educator myself, the increasing demand to provide synchronous learning has been a hardship as I complete a lot of work early in the morning or in the evening in order to be present for my child".

Interestingly, while nearly three quarters of parents with low PSE reported difficulties with general parenting duties, parents with high PSE diverged from those in the low PSE group, reporting difficulties in balancing their multiple roles.

Benefits and Positive Aspects of COVID-19 School Closures

When asked to describe what benefits or positive aspects parents observed during their time at home with their children, five themes emerged: child's academic and developmental growth, family dynamics, overall well-being, flexibility in schedule, and finally, no benefits or positive aspects noticed. Parents from both high and low PSE groups reported similar frequencies of responses within the themes, with the exception of flexibility in schedule and not observing any benefits or positive aspects observed (see Table 2). These findings are explored below.

Table 3

Benefits and Positive Aspects of the COVID-19 School Closures

Themes	High PSE		Low PSE	
	N	%	N	%
Academic & Developmental Growth	16	15.1	9	12.7
Family Dynamics	47	44.3	29	40.8
Improved Relationships & More Time Spent Together	23	48.9	16	55.2
Parent's Ability to Learn About and Support Child	24	51.1	13	44.8
Well-Being	26	24.5	16	22.5
Flexibility in Schedule	14	13.2	--	--
No Benefits or Positive Aspects Observed	3	2.8	17	23.9

Family Dynamics. The positive impact of COVID-19 school closures on family dynamics was noted by about half of parents in the high and low PSE groups. Parents described being able to spend more time together as a family and the strengthen of family relationships. For instance, one parent noticed that her child was "interacting more with his sister than he ever did before" and went on to say that they felt that this was "good for the sibling relationship". Parents also discussed that spending vastly more time with their child, including supporting their learning, allowed them to learn more about their child's strengths and needs. Reflections included those that highlight the parent's own ability to support their children: "at home I can pick and choose the moments where I feel he can focus on learning and he benefits from the constant one on one support which is impossible in a classroom". Parents of high and low PSE described similar experiences within this theme of the benefits of the COVID-19 school closures.

Well-Being. While many participants described the negative impact of COVID-19 school closures on well-being, benefits for family's mental, emotional, social and physical well-being were also noted. Both high and low PSE groups described ways in which time at home has emotional benefits for themselves and/or their children. For instance, one parent shared that their "child has significantly less school-related stress and anxiety with the learning from home format. He finds school days too long and often cannot find focus in the classroom".

A smaller proportion of parents highlighted benefits of COVID-19-related school closures for the social and physical well-being of themselves and their children. Overall, about a quarter of parents from both groups expressed that during this period supporting their children at home they observed improvements in their own and their children's well-being.

Academic and Developmental Growth. A less common but notable benefit observed by parents was the academic and developmental improvements of their children. While some parents commented on specific academic gains like improved math skills or reading comprehension, others described skill-based or developmental improvements such as improvements in speech and their child developing computer skills.

Flexibility in Schedule. The final benefit noted by parents was in relation to increased scheduling flexibility. As a result of pandemic-related changes like school closures, parents were afforded more control over where they needed to be and when they needed to be there. Parents also described how it was a relief to not have the usual hustle and bustle of getting their children to and from school and how the household felt more "relaxed" as they could "go with the flow". One parent described how school closures had afforded the family time to conduct controlled medication reviews for their child, something that was not possible when the child was still at school because of the possibility of "triggering escalations".

Interestingly, the flexibility in schedule theme only emerged in the high PSE group. While parents in the low self-efficacy group mentioned benefits related to being at home, not a single parent in this group specifically mentioned that having flexibility in their scheduling was a benefit of this period of time.

No Benefits or Positive Aspects. The final theme observed within the benefits reported by parents was just the opposite, that there were no benefits or positive aspects about this time supporting their children at home. While clearly not a theme that captures benefits, we felt it important to include this 'non' theme in order to highlight the experiences of participants in the two groups. Not noting any benefits is in itself, an important finding. Only three parents in the high PSE group reported not identifying any benefits resulting from COVID-19 school closures, in contrast to nearly a quarter of the participants in the low PSE group. In fact, this theme was more prevalent in the low PSE group than academic and developmental growth and overall well-being. This quote from a parent in the low PSE group captures the sense of loss experienced by parents and their families who, when asked what benefits they had noted, replied that there were "none, this has been absolutely awful from top to bottom from a learning and emotional standpoint. My daughter is crushingly lonely, frustrated, and sad, and I have been stressed and worried about the future."

Helpful and/or Desired Resources and Supports

Following being asked what types of challenges they were facing, parents were asked what resources and supports would have been useful in supporting themselves and their families in light of those challenges, as well as what resources and supports they *were* receiving that were most helpful. Three themes captured parents' responses: educational materials and delivery methods, educational supports, and well-being supports. Within each theme emerged sub-themes that further describe parent's experiences (see Table 3).

Table 4

Helpful and/or Desired Resources and Supports

Themes	High PSE		Low PSE	
	N	%	N	%
Material and Delivery	70	41.9	50	38.5
Face-to-Face Learning (e.g., virtual, in-person)	18	25.7	23	46.0
Appropriate and Accessible Materials, Delivery & Expectations	20	28.6	16	32.0
Specific Learning Programs, Materials, Books	32	45.7	11	22.0
Educational Support	50	29.9	45	34.6
School & Educator Involvement and Support	21	42.0	18	40.0
1-on-1 Support for Child	10	20.0	17	37.8
Communication and Feedback from Teachers and the School	19	38.0	10	22.2
Well-Being Support	47	28.1	35	26.9
Professional Supports and Therapies	26	55.3	22	62.9
Being Around and Feeling Connected to Others	21	44.7	13	37.1

Material and Delivery. Within both groups, having the right educational materials and delivery methods were the most common resource and support that were desired or found useful by parents. Three subthemes were found: 1) face-to-face, or synchronous, learning, 2) appropriate and accessible learning materials, delivery methods, and expectations, and 3) specific learning programs, materials, and books.

The first subtheme refers to parent's belief that their children needed to be taught in real time by teachers and educational assistants, whether that be virtually via video conferencing or in-person by opening the schools. Parents described the limited nature of asynchronous learning options provided by schools for their child's learning and their wish for "a teacher that engaged with the class, a Zoom or Microsoft teams meeting. Something more than silly print-outs to color".

Parents also expressed a need for learning materials that were appropriate for their child's

grade level and ability, those that were formatted in ways that made them accessible, as well as learning expectations that were congruent with where their child was at academically, while keeping in mind the unique circumstances of the pandemic. One parent addressed the issue of inappropriate learning materials, describing wanting "work from the school which my son can actually do. He is capable of a lot but they have been sending work that is too abstract or difficult".

Lastly, parents reported that specific learning programs, software, materials and books were useful in supporting their child's learning. These ranged from Learning Management Systems like Google Classroom, to curriculum books, reading programs like Lexia Core5, and even social media sites with learning-related activities.

While the spread of responses in both groups was fairly even, the groups differed in their most commonly reported type of resource and support they found to be helpful. Parents in the high PSE group more frequently reported that specific learning programs, materials and books were helpful and/or desired, whereas parents in the low PSE group more often reported a value of having face-to-face learning for their child.

Educational Support. Parents expressed a need for educational support for themselves and their children, from the school and educators. Responses within this theme were further grouped into the following subthemes: 1) school and educator involvement and support, 2) 1-on-1 support for their child, and 3) communication and guidance from teachers and the school.

Parents expressed a need for an educational assistant for their child and appreciating their child's teacher's involvement in the learning process. Some referenced how it would be helpful for the teachers or school to be involved more frequently or on a regular basis. In addition to valuing the involvement and support of their child's school and teachers, parents were explicit in expressing the need for 1-on-1 support for their child, whether that be from the teacher or an educational assistant, an external tutor, or even themselves. Finally, parents highlighted the benefits of communication from their children's teachers and other school personnel, with some voicing a need for further guidance from teachers on how to teach their children effectively at home.

Within this theme, parents from both groups showed trends towards different types of education support that were reported by each group. For parents with high PSE, the need for 1-on-1 support for their children was not as common as educator involvement or communication,

with about one fifth of parents in the group citing this a wanted resource and support. Conversely, parents in the low PSE group were less likely report communication or guidance from the school in comparison to the desire for educator involvement and 1-on-1 support for their children.

Well-Being Support. Parents expressed two domains of supports and resources that helped with their own and their family's well-being. The first and most common, accounting for over half of the responses in this theme, was professional supports and therapies. This included therapists, social workers, psychologists, autism service professionals, and nurses. Moreover, parents reported respite care as another type of support that was useful or desired during this time at home. Parents found it helpful to be around and have the support from loved ones, and to feel connected to others, socially. One parent expressed how connecting to others was helpful for them: "honestly, just talking to other parents going through similar experiences is comforting that I'm not the only one struggling to help my child succeed". Perceptions and experiences were similar across the high and low PSE groups.

Relationship Changes during COVID-19 School Closures

In the final set of questions, parents were also asked if and how their relationships with their child and with their child's school had changed as a result of school closures. Several parents in both groups indicated that their relationships remained the same with their child and their child's school, be that positive or negative to begin with, however the majority indicated that their relationships did, in fact, change (see Table 4). While some parents indicated this change with a simple yes or no response, others elaborated on the nature of their relationships pre- and post-school closures.

Relationship with Child. Parents in both groups described negative and positive outcomes of school closures. Parents who felt the relationship between themselves and their child had worsened recounted several contributing factors such as having to "play the role of teachers aide". Other parents expressed more general outcomes like feeling "significantly less capable as a mother". It was also described how the negative effects of the pandemic on parents had, by extension, negatively affected their child, "my anxiety and exhaustion did impact my behaviour at times which in turn impacted my child's". These quotes highlight just a few of the negative effects the school closures had on parent-child relationships.

Table 5

Parents Relationship with their Child during COVID-19 School Closures

Themes	High PSE		Low PSE	
	N	%	N	%
Relationship Has Not Changed	14	18.9	8	13.8
Relationship Has Changed	60	81.1	50	86.2
Positive	36	60.0	16	32.0
Negative	24	40.0	34	68.0

Alternatively, other families experienced positive changes within their relationships. Parents often felt that having more time together was positive for their relationship with their child. Others expressed improvements related to having more flexibility in their schedule, "we have grown closer as we don't have such a busy schedule that we are struggling with behaviour. Damon[2] has liked establishing a routine and this helped a lot". These two examples highlight just some of the positive outcomes expressed by parents.

The overwhelming majority of parents felt that their relationship with their child had changed as a result of school closures, however, the nature of this change differed for parents of high and low PSE. Parents in the high PSE group reported more positive changes to their relationship with their child, whereas parents with low PSE observed more negative impacts (see Table 4).

Relationship with the School. Parents in the high and low PSE groups described the changes, or non-changes in their relationship with their child's school that they experienced as a result of school closures (see Table 5). Parents who experienced positive changes in their relationship with their child's school described more frequent and effective communication and felt more supported by the school, sharing that "the school has been very good at being supportive and has gone the extra bit to stay in contact and connected with my children". A few parents in the high PSE group had even described feeling relieved during this time as it gave them a break from negative experiences they were having with the school prior to closures.

Table 6

Parents' Relationship with their Child's School during COVID-19 School Closures

[2] Name has been changed for anonymity.

Themes	High PSE		Low PSE	
	N	%	N	%
Relationship Has Not Changed	34	54.8	15	27.3
Relationship Has Changed	28	45.2	40	72.7
Positive	11	39.3	13	32.5
Negative	17	60.7	27	67.5

Parents who felt that their relationship with their child's school changed in a negative way often felt frustrated and disappointed with the school, sometimes referring to poor communication and support. For instance, one parent described how "the teacher refuses to make accommodations for children with needs or provided feedback". Another parent described feeling "alienated", as they did not have an idea of what was happening with the school after they closed due to COVID-19.

Parents in the high PSE group were, for the most part, evenly split between those that observed changes and those that did not. Conversely, nearly three quarters of parents in the low PSE group reported that their relationship with the school had changed. Within both groups, the parents who felt their relationship with their child's school had changed, more often felt it had changed negatively.

Mixing of Quantitative and Qualitative Findings

This section brings together the quantitative and qualitative findings. This is done through a narrative approach, by first describing the similarities between groups, followed by a summary of the findings that differed between the high and low PSE groups.

Similarities Between Groups

The qualitative findings revealed that parents from both high and low PSE groups had shared experiences of the COVID-19 school closures in many ways. Overall, nearly half of parents struggled with supporting the learning of their children with SEN and when it came to feeling supported by the school, both groups felt similarly. This similarity was reflected in the quantiative findings, where high and low PSE groups did not differ in their perception of supports provided by the school. Parent's perceptions of support from the school ranged from feeling totally supported to not at all supported, with some not feeling strongly either way. Furthermore, parents found it valuable to have the involvement of educators and support from the school, as well as the appropriate learning materials and delivery methods for their children. Lastly, of the parents who indicated that their relationships with their child's school had changed,

the majority indicated that this change was negative, illustrating further the parent's common experiences related to supporting their child, academically, during the COVID-19 school closures.

The qualitative data also showed that parents struggled similarly across the two PSE groups with supporting their own and their family's well-being and found it helpful to have professional support (e.g., therapists, nurses) for these concerns. It was also reported that being around and feeling connected to loved ones was helpful. While parents also found it difficult to manage their parental duties, they felt it was positive to have more family time and saw that relationships within their families, improved. When it came to their relationship with their child with SEN, specifically, most parents felt that their relationship had changed, the nature of the change differed for parents of high and low PSE.

While parents of high and low PSE shared in their overall experiences according to the qualitative responses and to the perceptions of school support from the quantitative data, there were nuances that illustrate how parents of high and low PSE experienced the COVID-19 school closures differently.

Differences Between Groups

High Parental Self-Efficacy. While parents of both levels of PSE found it difficult to support their child's learning, they differed on what exactly they found challenging. For parents with high PSE, they found it generally difficult to assist their children and get work completed in addition to not having the appropriate and/or accessible materials and delivery methods for their child. Parents of high PSE found specific learning programs (e.g., Lexia Core5), books (e.g., curriculum), and materials (e.g., laptop) most helpful in facilitating learning for their child, while also valuing the involvement and support from the school. These parents also found it helpful to be in communication with the school and receive their feedback on their own and their child's learning efforts. The majority of parents with high PSE felt that their relationship with their child's school had not changed as a result of the COVID-19 school closures.

As noted above, parents from both groups experienced difficulties with their parenting duties. That being said, parents with high PSE struggled most with balancing their roles as parents such as working from home, maintaining the household, and supporting their child's learning during school closures. They also found being home beneficial to having more scheduling flexibility and over half of parents in this group found that their relationships with

their child improved during the COVID-19 school closures. This group of parents perceived this period of the pandemic as significantly less stressful as compared to parents in the low PSE group.

Low Parental Self-Efficacy. The majority of parents with low PSE found it difficult to support their child's learning and assist their child in getting work completed. Parents in this group tended to want or found it helpful for their child to have synchronous learning whether that was virtually or in-person and expressed a need for 1-on-1 support. Almost three quarters of parents with low PSE felt that their relationship with the school had changed and over half of these parents felt this change was negative.

In addition to struggling with supporting their child's learning, parents with low PSE were more often reported that they struggled with their parenting duties like cleaning and keeping their children occupied. While parents of high PSE noticed the benefit of having more flexibility in their schedule, parents with low PSE did not mention this as a benefit of the COVID-19 school closures. In fact, nearly a quarter of parents with low PSE reported that they saw no benefit to this time at home. Just as these parents felt their relationship with their child's school had changed in a negative way, they also felt that their relationship with their child had worsened, as well. These findings are considered alongside the fact that this group of parents experienced significantly higher levels of stress than the parents with high PSE during COVID-19 school closures.

Discussion

The two aims of this study were to first, identify whether parents differed in their perceived levels of stress and support from the school as a function of their level of learning-specific parental self-efficacy, and second, to explore and describe parents' experiences of the COVID-19 school closures as it relates to the aforementioned factors. Considering the implied responsibility of parents to support their child's learning during school closures and the existing relationship between PSE, stress and support, it is important to understand if and how parents of differing levels of PSE experienced the COVID-19 school closures with their children with SEN. First, I will discuss the current findings generally and how they compare to findings of other researchers who also investigated the experiences of parents with SEN with remote learning. Then, I will discuss on a deeper level, potential interpretations of similarities and differences between parents with high and low PSE, drawing from Self-Efficacy Theory (Bandura, 1977).

While the findings are discussed linearly, it is important to highlight the interactive nature of these variables as they relate to, and are situated within, different contexts. Particularly, the findings are discussed with the parent experience at the core and situated within the broader context of the pandemic. Furthermore, it is also important to acknowledge that while the stress and support are discussed in relation to levels of parental self-efficacy, other variables that were not investigated in this study, like severity of the child's needs, have been shown to also relate to PSE (Kosmerly, 2020; Wendel et al., 2020) and could have had an effect on the parents in this sample.

General Discussion

When it came to parental stress, it was found that parents of high and low PSE differed significantly. Specifically, parents of high PSE reported lower levels of perceived stress than parents with low PSE, who reported higher levels of perceived stress. This finding is not surprising given that the nature of the relationship between stress and self-efficacy is well-established across domains (e.g., Chung et al., 2017; McKay et al., 2014; Ye et al., 2018). In regards to parenting, the relationship between general parental self-efficacy and stress in parents of children with SEN has also been noted (e.g., Jandrić & Kurtović, 2021; Kabiyea & Manor-Binyamini, 2019, MacInnes, 2009). That being said, there is currently no literature that examines the relationship between *learning-specific* parental self-efficacy and perceived stress.

Not so clear-cut is the finding that parents of high and low PSE did *not* differ significantly on their perceived support from the school. As Hoover-Dempsey and colleagues (2005) explain in relation to Bandura's work on self-efficacy, the involvement and support of schools and other important figures in a parent's life "exert significant influence on parent's sense of efficacy for helping their children succeed in school" (p. 109). Studies have shown a positive relationship between support and self-efficacy in non-parenting domains (e.g., Karademas, 2006; Liu & Aungsuroch, 2019) and in relation to parenting duties outside of supporting their child's learning (e.g., Leahy-Warren et al., 2011; Razurel et al., 2017). While the relationship between learning-specific PSE and school support specifically, has not been directly studied, it *has* been found that positive parent-school relationships have a significant and positive effect on learning-specific PSE (Liu & Leighton, 2021). Taken together, it was expected that parents with high PSE would feel more supported than parents with low PSE, but this was not the case.

Both high and low PSE groups reported an average score of approximately 3.00 for perceived support from school, reflecting the mid-point of the range, with as many parents in both groups reporting positive and negative perceptions of provided support. Other studies have also investigated how supported parents felt by their child's school during COVID-19 school closures and found mixed results. For instance, while Thorell and colleagues (2022) found that parents of children with SEN largely felt unsupported by their child's school, Nusser (2021) found that parents of children with SEN felt mostly supported. Greenway-Eaton and Thomas (2020) reported that approximately half of their sample felt dissatisfied with school supports while the other half felt satisfied. That being said, none of these studies looked at school support in relation to PSE. These findings, along with the current finding regarding school support, suggest that while support from the school may contribute to self-efficacy beliefs, there are likely other factors influencing the relationship between parental self-efficacy and perceived school support, particularly during a pandemic.

Qualitatively, many of the study findings are consistent with those of other researchers who asked parents of children with SEN similar questions with regards to their experiences supporting the needs of their children during COVID-19 school closures. In particular, nearly every theme and/or subtheme that emerged from the current study data on the challenges and benefits of the COVID-19 school closures for parents with SEN, was reflected by the work of Roy and colleagues (2022) and Shaw and Shaw (2021; see Appendix A). Parents of children with SEN were found to have struggled with similar aspects of supporting their child's learning, balancing their multiple roles, and maintaining a sense of well-being for themselves and their families. Moreover, parents from these studies also found it beneficial to have the time at home with their families, the added scheduling flexibility offered by remote learning/working, and the ability to learn more about their children. Roy et al. (2022) also found that a "sizable minority" of parents of children with and without SEN noted no benefits to the COVID-19 school closures. While these authors did not investigate parental self-efficacy, Shaw and Shaw (2021) did find that a subtheme, which they deemed 'parents' perceived lack of understanding/ability', emerged which seems to capture parents' beliefs about their ability to support their child's learning on some level. This is important to note as it highlights the impact learning-specific parental self-efficacy can have on parents' experiences with remote learning.

Another finding that is supported by the literature is that the majority of parents in this study indicated that their relationship with their child had changed as a result of school closures. This finding is consistent with that of Vaterlaus and colleagues (2021) who found that only 30% of parents (i.e., parents of children without SEN) indicated their relationship had remained the same. The authors reported both positive and negative changes to the relationships as did parents in the current study. Essler and colleagues (2021) also investigated the parent-child relationship, where the quality of the parent-child relationship changed from times of strict restrictions to that of loosening restrictions. This provides additional evidence that supports the fact that COVID-19 restrictions, like school closures addressed in this study, seem to have an effect on the parent-child relationship.

Overall, it appears that many of the experiences described by parents with SEN in this study echo the voices of parents of children with and without SEN from other studies, demonstrating consistency in the research findings.

Stress and Learning-Related Self-Efficacy

As mentioned previously, when exploring levels of stress, it was found that parents with high and low PSE differed significantly wherein parents with high PSE reported lower levels of stress than parents with low PSE. Since the relationship between learning-specific PSE and stress had yet to be explored, there are several possible interpretations for this finding.

One possible explanation for the difference in levels of perceived stress of parents with high and low PSE is that self-efficacy *buffers* against stress. Recalling the foundational tenants of self-efficacy theory, high self-efficacy beliefs are largely influenced by mastery experiences (i.e., successfully executing a specific task) and these beliefs are typically more resistant to occasional failures (Bandura, 1977). Considering also that stress can negatively impact performance (Bandura, 1977), high self-efficacy beliefs in turn seem to have a buffering effect. Research has shown that parents' beliefs that they are able to successfully execute certain parenting tasks is, in fact, protective against the negative effects of stress (Coleman & Karraker, 1997; Elder, 1995; Raikes & Thompson, 2005). For instance, Raikes and Thompson (2005) found that parental self-efficacy moderated the relationship between income and stress wherein parents with higher self-efficacy reported less stress than those with low self-efficacy despite having similar financial hardships. While socioeconomic status was not considered in this study, findings like those of

Raikes and Thompson (2005) highlight the impact that financial and social factors also have on parental stress.

In regards to the current study, parenting a child with SEN in addition to the circumstances of the COVID-19 pandemic presented a unique situation where stress became especially relevant. Not only do researchers acknowledge that parenting a child with SEN can be more stressful than parenting a child without SEN (Ben-Naim et al., 2019; MacInnes, 2009), but assisting a child with SEN with homework may also present a unique challenge that can be psychologically demanding for parents (Good, 2001). As an example, Adams et al. (2021) found that the COVID-19 pandemic created additional stress for parents, with the primary sources for this stress being the change in their children's routines and the need to support their child's learning. Similarly, the current findings show that parents with high and low PSE reported difficulty supporting their child's learning as being their most common challenge. However, parents of high PSE felt less stress than parents with low PSE, illustrating a possible buffering effect.

Additional responses from participants in the current study reveal nuanced differences between parents with low and high PSE during school closures which, along with current research findings, provide further insight into why parents with high and low PSE differed in their perception of stress. Parents with low PSE seemed to have a more negative experience of the COVID-19 school closures than parents with high PSE. Many did not see any benefits to this time at home with their children and felt that their relationships with both their child and their child's school had worsened. These findings suggest other contributing factors as to why parents of high and low PSE differed in their levels of stress that were not explored in the current study. For example, one factor that may be influencing parent stress is the severity of the child's needs. Again, while this study does not investigate severity of child's needs, many studies support a relationship between these two variables where the more significant the need, the higher a parent's level of stress (e.g., Ben-Naim et al., 2019; Essler et al., 2021; MacInnes, 2009); this relationship may certainly have been exacerbated during school closures when parents took on the additional role of educator and full-time caregiver.

In the current study, it was found that most parents reported that their relationship with their child had changed as a result of the school closures. The difference, however, was that parents with high PSE more often felt this was a positive change and parents with low PSE saw

this change as negative. Tarsuslu and colleagues (2021) found that parents who had a more positive relationship with their child experienced less stress during COVID-19 than parents who experienced more conflict, or a more negative relationship, with their child. Similarly, while Essler et al. (2021) did not study parents of children with SEN specifically, they investigated the relationships between childrens' well-being and behaviour problems, parental stress, parental-self efficacy and the quality of the parent child-relationship across time during the COVID-19 pandemic. It was found that both parental self-efficacy and having a more positive parent-child relationship were protective against the negative effect of strict COVID-19 restrictions on children's behaviour. It is possible that parents with high PSE were better able to manage the demands of the COVID-19 school closures as they related to their child's behaviour and well-being leading to less strain on the parent-child relationship. As a result, the more positive parent-child relationship of parents with high PSE buffered against stress leading to the difference in reported stress levels.

It is also possible that the ability to observe and acknowledge positive aspects of the COVID-19 school closures more generally, affected perceived stress among differing levels of PSE. In fact, Herbert and colleagues (2020) discussed how parents who perceived more benefits to the lockdowns as opposed to challenges, tended to report lower levels of stress than parents who identified more of the difficult aspects of lockdowns. A comparable finding in the current study is the observation that while parents overall experienced similar challenges as a result of school closures, they differed on their perception of the positive aspects of this time. Parents with low PSE were unable to identify any observable benefits or positive aspects to COVID-19 school closures far more often than their high PSE counterparts. Moreover, a sizable minority parents with high PSE identified a benefit to school closures that not one parent with low PSE mentioned (i.e., scheduling flexibility). Finally, parents with high PSE differed in that they found that the change in their relationship with their child had been positive as opposed to negative. These findings alongside those of Herbert et al. (2020) suggest that it is possible that parents with high PSE were more apt to see "silver linings", which may have buffered against the stress of the COVID-19 pandemic measures. More specifically, the fact that parents with high PSE were able to note an additional benefit to school closures, seldom indicated no benefits and believed that their relationship with their child had improved, may have served a protective role against the

negative effects of stress, leading to the finding that parents with high PSE percieved significantly less stress than parents with low PSE.

Support and Learning-Related Self-Efficacy

While parents differed in their levels of perceived stress, parents with high and low PSE shared in their experiences of perceived support. As mentioned above, literature on self-efficacy and support provides evidence of a relationship between level of PSE and school support, however this was not found in the current study.

One finding that may provide insight into the lack of relationship between learning-specific PSE and school support in this study is that of Harpaz and colleagues (2021). The authors shed light on the fact that the *type* of support matters when it comes to looking at parents of differing levels of self-efficacy. While parents of high and low PSE did not differ in their perceptions of school support, and both expressed a value for the support and involvement of educators, they did differ in what types of support their desired and/or found helpful. Parents with low PSE seemed to more often express a need or value for 1-on-1 support for their child, whereas parents with high PSE tended to value specific learning programs, books or tools that they could use with their child. It is possible that the desire for educator involvement and individual support signified the parent's need for the educators to maintain the teaching/support role for their child as opposed to themselves, signifying a more dependent help-seeking orientation (Harpaz et al., 2021).

Another interpretation of the preference of parents in the low PSE group for educator-led support and instruction is that they were less apt to adopt the role responsibilities associated with supporting their child's learning at home. This concept is known as *parental role construction* and is defined by Hoover-Dempsey and colleagues (2005) as "parents' beliefs about what they are supposed to do in relation to their children's education and the patterns of parental behavior that follow those beliefs" (p. 107). The authors explain how these beliefs are shaped by the expectations of important others, and parents' perceptions of what they should do to effectively support their child's learning (Hoover-Dempsey et al., 2005). Given that in order to feel efficacious parents must feel they possess the knowledge, confidence and conviction that they are able to successfully execute a given parenting task (Elder, 1995), it is possible that parents with low PSE did not feel that the responsibility of supporting their child's learning was part of their duties as parents.

Research that investigates aspects of role construction, learning-specific parental self-efficacy and involvement in educational activities, supports this interpretation. Green and Hoover-Dempsey (2007) found that role activity beliefs, which encompass a parent's belief on how active they should be in their child's educational activities, are significantly and positively related to learning-specific PSE. Thus parents who feel less confident in their ability to support their child tend to hold the belief that they should be less involved in their child's educational activities. Thus, parents in the present study with low PSE, whose attempts at supporting their child's learning may have also been negatively affected by stress, might have felt that the best approach to their child's education during school closures was to have an educator directly assisting their child. For parents of high PSE, their preference for specific tools, materials and resources might reflect the belief that they should be more involved in their child's education and as such, had a desire and/or value for resources that they could use personally to support their child during COVID-19 school closures.

Limitations

There are several limitations of the study that are important to note. First, parents who participated in the study were resourced in ways that other parents might not be. Participants had access to technology (e.g., devices, internet) as well as the time and relevant skills (e.g., spoke French or English, could navigate the text and virtual survey interface) to complete the survey. Future research would benefit from offering multiple participation options to include a more diverse sample.

Another limitation is that the findings are solely based on parent-perception as the study did not investigate or utilize other sources of information pertaining to, for example, alternative perspectives (e.g., of the child or school) or actual offerings from the school during COVID-19 school closures. This study also did not consider or control for demographic variables which may have influenced the similarities and differences found in this study. Importantly with regards to the qualitative analysis, the questions participants were asked did not specifically ask about the variables of interest (i.e., stress and school support) and while these were open-ended questions, responses tended to be quite short which did not lend itself to a deductive analysis. It is recommended that future research include multiple sources of data and take into consideration other variables that may affect the relationships between parental self-efficacy, stress, and school support.

Conclusions & Implications

Evident in the discussion of the study findings is the fact that there is no single, or simple, explanation for why and how parents of children with SEN experienced the COVID-19 school closures in the ways they did, particularly relating to their level of self-efficacy. More than likely, perceived stress and school support impact learning-specific PSE, alongside many other contributing factors that were not considered in this study, like socio-economic status or severity of their child's needs. While pandemic measures are being lifted and schools have opened, the importance of home-based learning and parental involvement has not lost relevance. Neither has the need to support parents of children with SEN. Parents' involvement in their educational activities has been and will continue to be a beneficial factor for child outcomes (Liu & Leighton, 2021; Wong et al., 2018), particularly home-based support vs. school-based involvement (Boonk et al., 2018). As such, for parents of children with SEN, who are at risk of stress and other mental health challenges (Chen et al., 2020; Ye et al., 2021), and whose children who typically face difficulties in their learning by definition (OME, 2018), finding ways to foster learning-related self-efficacy and positive and effective learning experiences is critical.

The findings in this study shed light on parents' experiences related to their child's learning including what sorts of challenges parents of children of SEN, what benefits they feel emerge from that experience, the resources and supports they found helpful or valued, all in relation to their level of parental self-efficacy. Given that parental self-efficacy is recognized as a malleable, social construct (Bandura, 1977; Hoover-Dempsey et al., 2005), it serves as an important target for improving the experience of parents and their families (e.g., Rimestad et al., 2020; Whittaker & Cowley, 2012). Efforts to enhance parents' efficacy can be tailored by context, including the role of the parent in the learning process, the particular needs of the child, and the available resources of the family, to ensure parents do not become overwhelmed or discouraged, ultimately disengaging from learning activities with their children (Hoover-Dempsey & Sandler, 1995).

This study also illustrates the importance of supports outside of school. Findings suggest that a positive outlook might affect, at least in part, parents experience of stress and/or their belief systems. In this way, it may also be important to provide parents of children with SEN, particularly those with low PSE, the appropriate supports (e.g., professional or personal) that can foster their ability to find the positive aspects of difficult situations and circumstances. Lastly,

this study emphasizes the important roles the parent-child relationship and parental self-efficacy have on mitigating the effects of parents' stress on the child, and more so, the effects a child's needs can have on a parents' level of stress.

In conclusion, this study serves to add to the ever-growing body of literature on efficacy, stress and supports, as well as to the little amount of literature on learning specific parental self efficacy, perceived stress and school support. Additionally, it offers unique insight into how parents of children with SENs experienced the first wave of COVID-19 school closures as it relates to their self-efficacy. This ultimately provides researchers and educators the opportunity to learn more about how best families of children with SEN can be supported, going forward in a world with and without the COVID-19 pandemic.

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Appendix A

Measures

Item	Rating Scale
Perceived Stress Scale (PSS)	
• In the last month, how often have you felt that you unable to control the important things in your life?	5-point Likert scale (Never to very often)
• In the last month, how often have you felt confident about your ability to handle your personal problems?	
• In the last month, how often have you felt that things were going well?	
• In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	
Learning-Specific Parental Self-Efficacy Scale	
• I know how to do well in school.	5-point Likert scale (Strongly disagree to strongly agree), Not Applicable
• I don't know if I'm getting through to my child.	
• I don't know how to help my child make good grades in school.	
• I feel successful about my efforts to help my child learn	
• I don't know how to help my child learn.	
• I feel less confident in helping my child now that schools are closed.	
School Supports Scale	
• Teaching staff have been supportive of my efforts to help my child with school work.	5-point Likert scale (Strongly disagree to strongly agree), Not Applicable
• School administrators (principals, vice-principals) have been supportive of my efforts to help my child with school work.	
• School support staff (educational/teaching assistants) have been supportive of my efforts to help my child with school work.	
• Teaching staff have helped my child directly with school work.	
• School support staff (educational/teaching assistants) have helped my child directly with school work.	
• Teaching staff have been supportive of my child's social and/or emotional well-being.	
• School administrators (principals, vice-principals) have been supportive of my child's social and/or emotional well-being.	
• School support staff (educational/teaching assistants) have been supportive of my child's social and/or emotional well-being.	
• I'm pleased with the types of academic supports we've received from the school.	
• I'm pleased with the types of social and/or emotional supports we have received from the school.	

Appendix B

Table B1

Challenges and Benefits of COVID-19 School Closures as Perceived by Parents of Children with SEN Across Studies

Current Qualitative Study Findings	Shaw & Shaw (2021)	Roy et al. (2022)*
	Challenges	
Difficulty supporting learning > Insufficient, inaccessible and/or inappropriate materials and resources needed to facilitate learning	Infrastructure > Resources	Delivery[b]
Difficulty supporting learning > Difficulty supporting learning and getting work done	Infrastructure > Parents' perceived lack of understanding/ability Impact on child > Home environment/context > Difficulty keeping child motivated	Child lack of motivation[b] Difficulty with child staying on task[a]
General parenting difficulties > Balancing multiple roles	Impact on parent > Relationships > Different role parent/teacher Impact on Parent > Time > Too many competing responsibilities Impact on Parent Time > Balance between parent's and child's work	Balancing work and remote learning for parents
Well-Being	Impact on parent > Mental health	Lack of social interaction[b]
	Benefits	
Benefits > Family dynamics> Family time and improved relationships	Impact on parent > Relationships	Benefits > More family time
Benefits > Family dynamics > Parent's ability to learn about and support child	Impact on parent > Relationships > Learnt about child's likes/dislikes	Benefits > Better parent understanding of child's learning style, needs, curriculum
Benefits > Flexibility in schedule	Impact on child > Home environment/context > Flexibility of activities	Benefits > Flexibility in scheduling/way of learning
Benefits > Well-Being	Impact on child > home environment/context > child less stressed and anxious	Benefits > Lower child stress/anxiety

Current Qualitative Study Findings	Shaw & Shaw (2021)	Roy et al. (2022)*
Benefits > Child's academic and developmental growth		Benefits > Increase child's independence/confidence
Benefits > No benefits or positive aspects		Benefits > No benefits, worsening for child

***** Sample included both parents with and without children with SEN
[a] Parents of children with SEN more likely to endorse this theme
[b] Parents of children with SEN less likely to endorse this theme