



I Felt Like I was Going Crazy: Understanding Mother's and Young Children's Educational Experiences at Home During COVID-19

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Abstract

The COVID-19 disruptions to children's education have been a major issue for families. This study examined how demographic, family, and mental health characteristics of 375 low-income children and their mothers from the City of Toronto were associated with children's educational experiences at home during COVID-19. Many mothers (82.3%) reported that they and their children (80.0%) experienced challenges related to children's education at home during the pandemic. However, a small percentage of mothers (1.1%) reported that this mode of learning was better for them and their children (4.3%). The most frequently reported challenges faced by mothers was taking on the role of a teacher (43.7%) and balancing their children's remote learning with other responsibilities (19.4%). The most frequently mentioned challenges faced by children was that children lacked both motivation (21.1%) and socialization (21.1%) and had difficulty focusing (26.9%). White mothers from households with higher income and with a higher number of adults in the home reported that their children experienced higher levels of challenges related to their education at home. Maternal and child challenges with children's education at home were also related to higher levels of maternal and child mental health challenges. Our findings suggest that the online educational experiences set up following the onset of the pandemic were difficult for many children and mothers to implement in the home. Given the significant associations of these challenges with child and maternal mental health, we encourage educators to provide flexibility, empathy, and support with learning from home to both children and mothers.

Keywords Early childhood education and care · Distance education · Child mental health · Maternal mental health

Introduction

In Canada, over 5.6 million students were enrolled in formal school during the 2018/2019 school year. Beyond the public health crisis and economic recession, COVID-19 has caused significant disruption for families with school-aged children. Globally, 87% of children attending schools had to transition from in-person to remote learning for at least some period (UNESCO, 2020). Given the importance that school plays on a myriad of developmental outcomes and life trajectories (Heckman et al., 2010; Smart et al., 2017; Wang & Holcombe, 2010), it is imperative that we understand what the impact of the COVID-19 disruption to the education system was on child and family well-being.

COVID-19 public health measures resulted in stay-at-home orders, that in many places meant having to implement educational experiences at home. The novelty of this type of schooling and the reduction in interactions between students, teachers, and their peers have been associated with significant levels of challenges for children and their mothers alike (Timmons et al., 2020, 2021). It is therefore imperative that we understand the impacts of the COVID-19 disruption to the education system on familial well-being (Burdina et al., 2019; Tuckman, 2007). In the current study, we draw on data from a larger, longitudinal study of low-income families, conducted in partnership with the City of Toronto, Children's Services Division. This study followed a sample of nearly 900 participants with the aim of studying the effects of exposure to early childhood education and care services on child and family outcomes. A wave of data collection was collected early on during the COVID-19 pandemic, which is the focus of this study. This study uses a mixed methods design, where mothers' open-ended responses were thematically coded for the challenges and benefits that both they

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and their children experienced. We then tested how family demographics were associated with these challenges and benefits. Finally, using data from maternal reports on their own and their child's mental health, we tested the relationships between mothers and children's educational experiences at home and maternal stress, anxiety, depression, and children's internalizing and externalizing problems.

Importance of In-person Early Education and Schooling

Children's developmental trajectories are influenced by their environments (Perlman et al., 2007; Villanueva et al., 2016). The dynamic interplay between the developing child and their surroundings influences a wide range of outcomes including children's social, cognitive, and emotional development (Maggi et al., 2010). The benefits of attending school on children's academic performance are well documented in the developmental literature (Morrissey et al., 2014; Wang & Holcombe, 2010). For example, educational achievement has been shown to have a strong relationship with one's later employment and income status (Heckman et al., 2010; Smart et al., 2017). In addition to the intellectual development acquired and its importance for children's lifelong outcomes (Heckman et al., 2010), attending school—in-person specifically—impacts children and their families' day-to-day functioning (Bayham & Fenichel, 2020; Cappella et al., 2013; Chen et al., 2018).

Schools have been shown to support children's physical health by promoting daily physical activity through structured physical education classes and extracurricular activities (i.e., organized sports; Chen et al., 2018). In addition, school provides children with abundant play and socialization opportunities through peer interactions (Cappella et al., 2013), formation of friendships (Furrer & Marchand, 2020), and cooperative learning (Slavin, 2015). Moreover, because children spend a large proportion of their waking hours in school (Climie, 2015), it is an ideal environment to provide accessible mental health-services for them (Bayham & Fenichel, 2020).

While attending school has critical implications for children, having their children attend school in-person is advantageous for parents as well (Dhuey & Lamontagne, 2019; Pelletier & Corter, 2005). As a source of out-of-home care for children, schools enable parental labor force participation, particularly among mothers (Dhuey & Lamontagne, 2019). For example, Dhuey and Lamontagne (2019) found that a provincial-wide shift from part- to full-day kindergarten was associated with increased maternal labor supply, specifically among non-immigrant, single mothers residing in urban areas.

To summarize, the developmental literature has continuously established the abundant positive outcomes of

attending in-person school for both children and their families. Being cognizant of these implications, it is important to understand how disruption to children's schooling can impact both parties—especially when such disruption is seen on a global scale.

COVID-19 and Early Education Disruption

In March 2020, the World Health Organization declared COVID-19 a global pandemic (World Health Organization, 2020). As of June 2021, the total number of COVID-19 deaths worldwide had exceeded 3.76 M (World Health Organization, 2021) with upward of 25,000 deaths in Canada (Government of Canada, 2021). This pandemic has disrupted families' lives across the globe through the prolonged social isolation orders, closures of non-essential services, significant job loss and economic recession (Detsky & Bogoch, 2020; Lee, 2020). In the early months of the pandemic shutdown, many Canadians lost their jobs or worked less than half their usual hours and many were required to work from home (Lemieux et al., 2020). In conjunction with these social and economic implications, families with school-aged children experienced further disruption in their daily routines in having to transition their children's schooling to remote learning (Courtney et al., 2020; Wang et al., 2020). Following the mandated transition to remote learning for publicly funded schools in March 2020, the Ontario Ministry of Education implemented the first phase of the *Learn at Home Initiative*. This initiative is an online portal that consists of math and literacy resources enabling children to pursue their schooling at home (Office of the Premier, 2020; Government of Ontario, 2020). Remote learning during the early months of the pandemic differed from traditional in-person learning in its delivery, as schools primarily focused on shifting the academic curricula online versus the actual teaching and delivery of the content (Daniel, 2020). Subsequently, remote learning was delivered synchronously and/or asynchronously (Timmons et al., 2020). Moreover, the duration of instruction children received from their teachers was also significantly reduced. Starting in the fall of 2020, however, Ontario families had the option to send their child(ren) to in-person school with various health and safety measures (e.g., mandatory masking) in place, or to switch to remote learning. Over the course of the 2020/2021 academic year, there were several periods in which in-person schools were required to shift to full-time online delivery to contain increasing rates of COVID-19 in that province.

Challenges Faced by Children and Families with Educational Experiences at Home

These unprecedented changes in children's education have been challenging for children, and their families. It is

essential, however, to recognize how this shift in learning disproportionately affects vulnerable populations—such as low-income families—and is further widening existing educational disparities (Masonbrink & Hurley, 2020). For remote learning, it is essential for students to have access to the internet and a device (Van Nuland et al., 2020). The digital divide between income classes, however, may prohibit some students from participating in their online classes. Secondly, many low-income families rely on in-person school programs as a form of childcare (Dhuey & Lamontagne, 2019). With the halt of in-person school, many parents—specifically mothers—were required to shift their own obligations to accommodate for childcare closures (Alon et al., 2020; Andrew et al., 2020). Statistics Canada (2021) reported that there was a 44% increase in the number of employed mothers who were working less than half their usual hours from January 2020 to January 2021.

Concern over academic and socio-emotional developmental deficits in children are shared by parents and teachers (Timmons et al., 2020, 2021). The lack of engagement with remote learning seen in some students is cause for concern given the multitude of research—pre-pandemic—that has repeatedly established associations between children’s motivation and short and long-term academic achievements (Broussard & Garrison, 2004; Dev, 1997). Moreover, diminished opportunities for peer collaboration, normally provided in in-person schooling, impedes children’s social development (Cappella et al., 2013; Furrer & Marchand, 2020).

Given their relative lack of autonomy, young learners require substantial instruction and guidance from an authoritative figure to meet their appropriate academic goals (Jeynes, 2007). In the classroom, this role is fulfilled by the teacher. With the onset of the pandemic and having to have the majority of children’s educational experiences at home however, parents—mostly mothers—found themselves having to quickly adopt the role of “teacher” (Alon et al., 2020; Cheng et al., 2021). The level of technical and organizational skills required to complete online learning is beyond the abilities of kindergarten and primary students (Samuelsson et al., 2020; Timmons et al., 2021). While many parents did participate in their children’s schooling prior to the pandemic (Jeynes, 2007; Pelletier & Corter, 2005), educational experiences at home during the pandemic requires significantly greater level of involvement and comprehension of the material assigned to children on the parents’ part. For instance, a study conducted in the UK found that more than a third of working mothers spend 20 hours or more weekly on their children’s schooling during the pandemic (Cheng et al., 2021). Consequently, many parents found taking on a teacher role to be challenging (Cheng et al., 2021; Hjálmsdóttir & Bjarnadóttir, 2021; Timmons et al., 2020, 2021). A qualitative study done by Timmons et al. (2021) captured the

specific challenges of remote learning reported by Ontarian families with children in early education. The authors found that parents were apprehensive of their abilities to support their children’s remote learning given their lack of knowledge and professional skill set that teachers habitually would possess (Timmons et al., 2021).

The role strain hypothesis (Marks, 1977) claims individuals can only allocate their attention and energy in a finite number of ways. Peterson et al. (2018) argue that employed mothers who juggle their job and domestic responsibilities have a harder time fulfilling all their obligations. It is therefore understandable that this new role as a teacher would only further exacerbate the challenges of work-life balance faced by these mothers, especially as many mothers have been working from home during the pandemic (Hjálmsdóttir & Bjarnadóttir, 2021). In addition, it seems likely that this role strain may be exacerbated by demographic characteristics such as education of mothers (Cheng et al., 2021). Working mothers with higher education attainment have been found to spend significantly more time participating in their children’s remote learning than working mothers with lower educational attainment (Cheng et al., 2021; Minello et al., 2021). These findings may be related to the fact that mothers who have higher educational attainment are more likely to work from home because of the pandemic (Messacar et al., 2020). Additionally, the cognitively demanding school and/or employment responsibilities associated with higher education levels may cause increasing stress for parents working from home further compromising their ability to balance their work/home life balance (Minello et al., 2021).

Mental Health Impacts of COVID-19

With cumulative disruptions, it is unsurprising then that COVID-19 has had significant impact on familial mental health. Over half of families in Canada have reported exacerbated mental health symptoms since March 2020 at which point over one third of families indicated feeling moderate to severe anxiety and stress (Statistics Canada, 2020).

Children have experienced deterioration in mental health with higher levels of frustration and sadness (Lee, 2020; Lee et al., 2020; Wang et al., 2020) and conduct problems (Ezplezeta et al., 2020), in addition to the increased incidence of mood and anxiety disorders (Courtney et al., 2020). Recent studies have shown that these unprecedented changes associated with the transition to remote learning in part contribute to the mental health decline in children in higher grades (Cheng et al., 2021; Tang et al., 2021). For instance, a study conducted by Tang et al. (2021) found anxiety to be the most prevailing mental health problem among primary, junior, and senior secondary students with the authors attributing this to the sudden change in the mode of learning. Conversely,

Courtney et al. (2020) argued that home quarantine and remote learning may work in favour of certain populations of students (specifically those with social and performance anxiety, or agoraphobia) by alleviating their symptoms of anxiety.

During the COVID-19 pandemic, several studies have found declines in maternal mental health including increases in maternal depression (Racine et al., 2021), anxiety (Davenport et al., 2020), and stress (Lee et al., 2020). A study conducted by Calarco et al. (2020) in the US found that mothers who assumed greater childcare responsibilities reported greater levels stress and anxiety. The literature on the psychological impacts of COVID-19, however, also revealed that not everyone was affected the same way (Hamza et al., 2020; Saleem et al., 2021). For instance, a study conducted by (Saleem et al., 2021) found that select groups of mothers and children did not see this expected decline in mental health, but instead experienced either stability or improvement in their mental health following the onset of the pandemic.

While low-income populations and single-parent households were disproportionately negatively impacted by the COVID-19 pandemic (Gross et al., 2020), there is reason to believe that families with higher income and education status may be experiencing their own unique challenges (Minello et al., 2021). Research shows that the gender divide in having to give up employment obligations to fulfill childrearing responsibilities may be harder for higher-income mothers (Minello et al., 2021; Hjalmsdóttir & Bjarnadóttir, 2021) who may have more to lose career wise. Moreover, it is possible that children and families with lower income and educational status (relative to their more affluent counterparts) who have experienced more adversity prior to COVID-19 have developed higher levels of resiliency (Orthner et al., 2004). Given this range in mental health impact, it is important to identify the factors that are contributing to the poor maternal and child mental health outcomes experienced by many, but not all, mothers and children.

To summarize, the recent literature that has emerged since the onset of the pandemic have shown the challenges faced by both mothers and children alike regarding their children's educational experiences at home (Timmons et al., 2020, 2021). In addition, we see the deterioration in mental health across different family members (Lee et al., 2020; Racine et al., 2021). However, no studies have investigated the relationship between the two in an early education context. Moreover, no studies have been conducted on a substantial ($N = 378$) low-income sample from a multicultural and diverse such as the Greater Toronto Area. Thus, our study will be the first to utilize both qualitative and quantitative analyses to investigate the impact of familial educational

experiences at home during COVID-19 across demographic factors and its impact on familial mental health.

Project Goal

The COVID-19 pandemic has serious implications for maternal and child mental health and wellbeing, particularly for those living in poverty. One major impact, and the focus of this paper, has been on examining familial experiences with children's school, delivered during the pandemic. It is vital to understand the challenges being faced by this demographic and how these challenges are contributing to the mental health of both mothers and their children. While several studies have investigated the impacts of COVID-19 on children's schooling, to our knowledge, no study—until now—has investigated how mothers' qualitatively describe their children's educational experiences at home and how these relate to their mental health scores, specifically for families with children in the early school years. Understanding the lived experiences of families during COVID-19 will provide insight on how families are coping with the changes brought on by COVID-19. Specifically, we address the following research questions:

1. What are the experiences and challenges low-income families are facing with children's educational experiences at home brought on by COVID-19?
2. Are demographic characteristics related to the challenges that families faced during the transition and implementation of learning from home? We expect that mothers with higher education will report that they and their children are experiencing more challenges with their children's educational experiences at home.
3. How do educational experiences at home relate to mental health of mothers and children during COVID-19? We expect that mothers and children who face higher levels of challenges with regards to children's educational experiences will also have higher levels of mental health problems.

Methods

Participants

The data in this study are from a larger research project conducted in collaboration with the Child Services division at the City of Toronto, Canada's largest city. The original sample was recruited from the city of Toronto's childcare subsidy waitlist. In Ontario subsidies are allocated to families in which parents work or study full-time and who meet the City of Toronto's financial eligibility criteria. Eligible families are low-income. The original

sample consisted of 895 families with a 72% consent rate to participate in the study. Recruitment took place between 2014 and 2016 and since then several waves of data have been collected. Thus, the sample spanned between the ages of 4–6 when the COVID-19 pandemic began. To be included in this study, parents needed to have responded to a survey collected during the first year of the COVID-19 pandemic.

A total of 378 families took part in the COVID-19 survey, but three did not respond to any of the open-ended questions included in the current study. Therefore, our final sample was 375 families. Fifteen families were dropped because they did not have their children in formal schooling, which was the focus of the current study. An additional 10 participants who were fathers were dropped because we focused on maternal experiences, leaving us with a sample of 350 mothers. Just less than half (44.6%) of the children in the sample were girls and half (50.0%) had a sibling. A total of 18.5% of mothers had less than a college certificate, most had a college diploma or some university (39.0%), some had a bachelor's degree (25.9%) and few had a master's degree or above (16.6%). Average mother's age in the sample was 36.3 years (range 23–53, $SD=5.70$). The average child's age in the sample was 5.3 years (range 4.0–6.5, $SD=0.59$). A significant portion (39.4%) of the families were single parent households. The majority (70.4%) of mothers identified as being non-White. In 67.4% of households at least one family member reported that English was the primary language spoken in the home. The average income of the households in the sample was between \$50,000 and \$59,999. This is significantly lower than the average household income in Toronto of \$104,378 (City of Toronto, 2017). The average number of adults this income supported was 1.7, ranging from 1 to 4. Finally, for mothers who were born outside of the country, the average years in Canada was 21.6, ranging from 4 years to 44.8 years. Overall, this is a diverse and low-income sample consisting of parents who are often hard to reach for research purposes.

Procedures

Participants for the larger study were recruited from the subsidy waitlist for childcare in the City of Toronto. To be eligible for the larger study families had to (1) have a child between 3 and 8 months of age, (2) requested subsidized care for when their child was 12 months old, (3) have no other children on the subsidy waitlist, and (4) requested centre-based care. For this study, data collection began less than 2 months after the World Health Organization declared that COVID-19 is a pandemic (World Health Organization, 2020). Specifically, data was collected from May 2020 to January 2021. Parents were called and administered a survey

over the telephone collecting information on family demographics and mental health and qualitative information from mothers on their children's educational experiences at home.

Measures

Response to and Changes from COVID-19

Using open ended questions parents were asked to describe the challenges they and their child experienced regarding the child's educational experiences after the onset of the pandemic. Specifically, parents were asked two open-ended questions:

1. "What challenges, if any, HAS YOUR CHILD experienced regarding their educational experience at home?"
2. "What challenges, if any, HAVE YOU experienced regarding their educational experience at home?"

Family Demographics

The following child and family characteristics were collected in this study: family income (measured on an ordinal scale from \$0–\$9,999 to over \$100,000), parent age (23 to 53 years of age), home language (English/Non-English), ethnicity (White/Minority), immigration (Years in Canada; 2 years to 45 years), highest level of education (measured on an ordinal scale from less than a college diploma to a master's degree or above) household composition (sole/two parents), number of adults income supports (1 to 4 adults), child's gender (boy/girl), child age (ranging from 4.0 to 6.5 years of age), presence of sibling (yes/no).

Children's Mental Health

Mothers were asked to complete the parent version of the Strengths and Difficulties Questionnaire (SDQ) to measure children's mental health (Goodman, 1997). The SDQ consists of 25 items across five subscales, which are: (1) Hyperactivity, (2) Emotional Problems, (3) Conduct Problems, (4) Peer Problems, and (5) Prosocial Behavior. Each item is scored from 1 to 3, ranging from 'Not true at all', 'Somewhat true' or 'Certainly true'. A total score is computed by taking a sum for each item in the subscale. A child can get a score from 0 to 10.

Maternal Mental Health

Three very brief measures were administered to test maternal mental health. The Generalized Anxiety Disorder

Scale (GAD-2; Donker et al., 2011) and Patient Health Questionnaire (PHQ-2; Löwe et al., 2005) were used to gather information on maternal anxiety and depression scores, respectively. Each measure consists of two items. Scores of three or higher indicate the presence of anxiety and/or depression (Donker et al., 2011; Löwe et al., 2005).

The Cohen Perceived Stress Scale (PSS-4; Lee, 2012) was used to gather information on maternal stress scores. Mothers rated four items assessing frequency of stress symptoms experienced in the last month on a five-point Likert scale, ranging from 'Never' (0) to 'Fairly often' (4). Total scores range from 0 to 16, with the average maternal stress score on the PSS-4 being 3.06 (Lee, 2012; Muhammad & Gagnon, 2010). The PSS-4 has high internal consistency ($\alpha=0.7$; Lee, 2012).

Data Analysis

Qualitative Coding and Analysis

To address the first research question, the six-phase guide to performing thematic analysis proposed by Braun and Clarke (2006) was followed for coding of the qualitative data in the present study. Initially, the lead authors carefully reviewed all participants' responses from the open-ended question and independently generated preliminary codes. Upon converging, codes were discussed, collated into potential themes, and a codebook was created with coherent labels, descriptions, and example responses. To ensure consistency and clarity of thematic coding, inter-rater reliability checks at the item level were conducted as an additional step. The research assistant coded 10% of all responses for each question, which were double-coded and checked for level of agreement by the lead author. Across items, the average Cohen's Kappa was 0.92 (ranging from 0.8 to 1.0) for the 'child' challenges' question, and 0.94 (ranging from 0.7 to 1.0) for the 'mother' challenges' question. After checking reliability, discrepancies were resolved by both researchers.

Quantitative Analysis

Once the educational experiences question was coded, to address the second research question, the relationship between challenges of educational experiences at home and demographic characteristics were explored through a series of chi-squared tests of independence (kendall's tau-b) and independent samples t-test tests (with bootstrapping of 1000). To address the third research question, whether educational challenges during COVID-19 are related to maternal or child mental health, a similar series of chi-square and t-tests of independence were conducted. Levene's test for

equality of variances were performed, outputs were adjusted accordingly. Only educational challenge codes that were reported by 10% or more of mothers were used in quantitative analyses.

Results

Qualitative Responses to Educational Experiences at Home During COVID-19

Thematic coding was conducted on mothers' reports of the educational challenges they and their children experienced after the onset of the COVID-19 pandemic. For explicit coding descriptions and examples, see Table 1.

Mother's Challenges with Educational Experiences at Home

Thematic coding identified (1) if mothers reported facing challenges and (2) individual reasons for the challenges with their children's educational experiences that mothers experienced. Mother's overall level of challenges with their children's educational experiences at home, was coded as either mother experienced challenges, or mother did not experience challenges. Most mothers (82.3%) faced some level of challenges with their child's education experiences at home after the onset of the COVID-19 pandemic. Of the 17.7% of mothers who reported not facing any challenges, a very small number of mothers (1.1%) reported that their child's educational experience during COVID-19 offered some advantages over their experiences prior to the onset of the pandemic.

The second area of investigation found eight themes of challenges that mothers themselves experienced, see Table 1. Almost half of the mothers reported having to take on a role as a teacher as a challenge of their child's educational experiences at home during the pandemic. This was followed by difficulty balancing their children's school with their own work and/or schooling, childcare, and other tasks. Additional challenges mothers faced related to the child's educational experiences included challenges with resources and technology, poor mental health, giving up, and that their child was too young.

Children's Challenges with Educational Experiences at Home

Thematic coding identified (1) if mothers reported that their children faced challenges and (2) individual reasons for the challenges children experienced. The first area of a child's overall level of educational challenges experienced,

Table 1 Experiences regarding educational experiences at home during COVID-19

Coding theme	N (%)	Description	Examples
Child challenges	350		
Difficulty focusing	93 (26.9)	The child has difficulty focusing and/or listening during distance education	Child “has trouble focusing because there is no teacher.”
Child lacks motivation	74 (21.1)	The child lacks motivation and does not want to engage or participate in distance education	“Hard to get them to be motivated.” Child “loses interest in some school activities (e.g., yoga, arts and crafts)”
Child lacks socialization	73 (21.1)	The child lacks social interaction and misses their friends and teacher	“The social piece was missing so it was more ineffective than in person learning.”
Child too young	28 (8.0)	The parent expresses that their child is too young (for online school)	“There have not been any challenges since child is still young.”
Other behavioural issues	16 (4.6)	The child has other behavioural issues not addressed by themes above	“Short temper.”
Issues with technology/resources	16 (4.6)	The parent expresses that there is some issue with accessing and/or using the technology and/or resources	“Had issues with the internet and computer.”
Child does not understand	6 (1.7)	The child does not understand the current circumstances, such as why schools are closed and why they are doing their schooling online	“Hard because we couldn't print work for her.” “Hard for child to understand what COVID is and the reality of it.” “Didn't understand why sitting and doing work on the computer was needed.”
Child understands	4 (1.1)	The child understands the current circumstances	“No challenges, he understands what is going on.” Child “was missing going to school. But he understands the situation.”
Maternal challenges	350		
Role as a teacher	154 (43.7)	The parent expresses that adopting this novel “teacher” role to be difficult	“Some work that was sent wasn't suitable for a parent, and only for a teacher.” “I would have to encourage her to learn.”
Difficulty balancing	101 (28.6)	The parent expresses that they are busy and a hard time balancing tasks to give attention to their child's online learning and/or care	“I can't dedicate enough time to child's schooling experience because I am busy.” Mother is “not able to provide proper education and care every day I have a baby as well.”
Resources/technology	32 (9.1)	The parent expresses an issue with accessing technology/resources	Child's “supposed to do some zoom activities for schoolwork but he's staying at a cottage where they don't have good internet connection.”
Mental health	19 (5.1)	The parent is experiencing stress, anxiety, and/or some other mental health issue	“It's very hard and stressful.” “I felt like I was going crazy.”
Own curriculum	18 (5.1)	The parent follows their own plan regarding their child's online learning	“Someone sent TDSB public school curriculum, and I followed that.”
Gives up	17 (4.9)	The parent has lost motivation/patience regarding their child's online learning. The parent gave up on their child's online school	“I lost motivation to teach because I knew that they would be entering school soon.” Mom was “Not trying to teach him anything.”
Child young	14 (4.0)	The parent expresses that their child is too young (for online school)	“It's a lot because he's young so he can't work independently.” “Kids are still young.”
Tried best	6 (1.7)	The parent expresses that they are trying their best with their child and online schooling	Mom tried her “best in Spring with remote learning.” Mom is “working so hard to give her proper educational experience.”

was coded as either child is facing any level of educational challenges, or the child did not experience educational challenges. Most children (80.0%) experienced some level of educational challenges after the onset of the COVID-19 pandemic. Within the 20.0% of children who did not face any educational challenges, mothers reported that 4.3% of all children were doing better. The most often reported specific educational challenges that mothers reported their children faced during the COVID-19 pandemic were having trouble focusing, lacked motivation, and lack of opportunities to socialize. A nontrivial number of mothers also reported that they believed their children were too young to part take in educational experiences at home and that their children experienced issues with technology (e.g., internet issues that permitted them from taking part in educational experiences at home). A small but notable number of parents reported that their children had a hard time and were not understanding the current circumstances. For example, one mother reported that their child did not understand the sudden switch to learning at home and having to complete all their schoolwork on a laptop.

Demographic Differences and Educational Experiences at Home

We examined the associations between maternal reports of their own and their children's challenges with education at home, and family demographics were tested. Significant differences were only found for total household income level, the number of adults in the home an income supports and ethnicity of mothers. Specifically, in households

with a higher number of adults, mothers reported higher rates of child boredom ($M = 1.82$, $SD = 0.58$) versus those with lower numbers of adults ($M = 1.60$, $SD = 0.55$); $t(97) = -2.61$, $p = 0.012$, $d = 0.56$. Mothers in low income ($\$0$ – $\$39,999$) and middle-income ($\$40,000$ – $\$79,000$) households were less likely to report that their children lacked socialization (17.5% and 17.7%, respectively) compared to children in higher income households of above $\$80,000$ (31.5%); $r_t = 0.12$, $p = 0.026$. Finally, White mothers were significantly more likely to report that their child faced overall challenge (88.9%) than non-White mothers (79.0%), $\Phi = -0.118$, $p = 0.040$.

Educational Experiences at Home and Maternal Mental Health

We examined the impact of challenges reported by mothers regarding their own (i.e., overall, role as a teacher, and ability to balance) and their children's (i.e., overall, difficulty focusing, lack of motivation and lack of socialization) on maternal mental health scores (Table 2). Only significant results are reported in text. Across all challenges experienced by mothers, none were related to their anxiety scores. However, mothers who reported they experienced overall levels of challenge with their children's educational experienced at home had significantly higher of stress and depression scores. Interestingly, mothers who also reported challenges faced with taking on a role as a teacher had higher rates of depression than those who did not report this type of challenge. All three maternal mental health scales were

Table 2 Educational experiences at home during COVID-19 and maternal mental health outcomes

		Maternal stress				Maternal anxiety				Maternal depression			
		X	SD	<i>t</i>	<i>p</i>	X	SD	<i>t</i>	<i>p</i>	X	SD	<i>t</i>	<i>p</i>
Child-level													
Experiencing challenges	Yes	5.43	3.29	−4.70	<0.001	1.84	1.71	−2.02	0.04	1.53	1.52	−2.02	0.02
	No	3.36	2.94			1.37	1.68			1.12	1.33		
Focusing	Yes	5.70	3.39	−2.17	0.02	1.87	1.75	−0.73	0.47	1.74	1.50	−2.11	0.03
	No	4.78	3.28			1.71	1.70			1.35	1.48		
Motivation	Yes	5.63	3.34	−1.71	0.09	2.00	1.73	−1.36	0.17	1.60	1.46	−0.94	0.34
	No	4.85	3.31			1.68	1.70			1.41	1.50		
Socialization	Yes	5.53	3.50	−1.50	0.14	1.81	1.63	−0.33	0.74	1.64	1.73	−1.25	0.21
	No	4.86	3.27			1.73	1.73			1.39	1.41		
Maternal-level													
Experiencing challenges	Yes	5.35	3.30	−2.38	0.01	1.82	1.70	−1.62	0.83	1.53	1.51	−4.18	<0.001
	No	3.36	2.95			1.41	1.71			1.02	1.31		
Role as a teacher	Yes	5.20	3.21	−0.93	0.36	1.82	1.69	−0.68	0.49	1.68	1.59	−2.56	0.01
	No	4.86	3.43			1.69	1.73			1.26	1.38		
Balancing	Yes	5.33	3.46	−1.10	0.29	1.97	1.74	−1.50	0.14	1.47	1.47	−2.22	0.84
	No	4.88	3.27			1.66	1.69			1.43	1.50		

Bold values denote statistical significance at the $p < 0.05$ level

related to mothers' reports of the challenges that children experienced. Specifically, mothers who reported that their children experienced challenges with their educational experiences at home had higher levels of stress, anxiety, and depression. Furthermore, children whose mothers reported they had difficulty focusing had higher rates of both stress and depression.

Educational Experiences at Home and Children's Mental Health

We examined the impact of mother's challenges with educational experiences at home (overall, role as a teacher, and ability to balance) and their children's (i.e., overall, difficulty focusing, lack of motivation and lack of socialization) on children's mental health (Table 3). Reports by mothers that their children's educational experiences at home were challenging was significantly associated with children's conduct and hyperactivity problems. Mothers who reported challenges with having a role as a teacher scored their children significantly higher on the peer problems factor of the SDQ. Regarding child-level challenges, reported by mothers, children who faced challenges had significantly higher emotional problems, hyperactivity, peer problem and prosocial scores. Furthermore, children whose mothers reported they faced challenges focusing faced significantly higher emotional and peer problems.

Discussion

The developmental literature has consistently demonstrated the importance of attending school for child development (Heckman et al., 2010; Smart et al., 2017). The swift and involuntary shift from in-person school to educational experiences at home during the early months of the pandemic caused disruption to daily function and subsequently some level of challenge for both children and their families. The results of this study help provide insights on how low-income mothers and children are coping during the forced transition from in-person to educational experiences at home during COVID-19. Specifically, we examined qualitative responses provided by mothers on what the challenges were regarding children's educational experiences at home. We then assessed whether family demographics were associated with the challenges reported and determined if those facing challenges with educational experiences at home were more likely to have higher rates of mental health challenges.

Experiences and with Educational Experiences at Home

Most children in our sample faced some level of challenge related to learning from home. Most notably, mothers reported that over a quarter of children had trouble focusing, while a nontrivial proportion of children lacked motivation and found the lack of socialization difficult during their educational experiences at home during COVID-19. These findings align with Timmons et al.'s (2020) findings that parents and teachers shared concern about children's academic attainment and achievement during educational experiences at home and the significantly fewer social opportunities children had. Finally, some mothers reported that their children were too young to participate in learning at home. This is understandable given the level of technical and organizational skills required of these early learners to complete their schooling online (Samuelsson et al., 2020; Timmons et al., 2021).

Similar to their reports about children, most mothers reported that they themselves faced some level of challenge during their children's educational experiences at-home during COVID-19. Almost half of mothers reported that they struggled with their newly appointed role of "teacher" in addition to being a mother. This finding is consistent with that of other recent qualitative studies that captured parents' struggle with taking on a role as a teacher (Cheng et al., 2021; Hjalmsdóttir & Bjarnadóttir, 2021; Timmons et al., 2020, 2021). Our study, however, is the first to demonstrate this on a larger scale among a large sample of mothers with children in early education in a multicultural and diverse region like the Greater Toronto Area. Finally, many mothers reported that they had trouble balancing a wide range of responsibilities including doing their own work and/or schooling, or other tasks within the household. For most mothers, overseeing their children's educational experiences at home during COVID-19 was an added responsibility that took up a substantial amount of time (Cheng et al., 2021).

These findings suggest that the children may not find the tasks educators assign online to be engaging and that mothers may find it hard to support children in completing these tasks. This is reflected in the large proportion of children who had difficulty paying attention and being motivated with their education at home, and their mothers who had difficulty adopting the "teacher" role. Given the challenges posed by educational experiences at home (for both children and their mothers) during the pandemic we encourage educators to re-evaluate the curricula being implemented online because what is engaging in the classroom may not be engaging in a virtual space. We also encourage educators to communicate with mothers to understand the reality of families' physical environments and how to better manage distractions in the home. Based on feedback from mothers, educators can adapt

Table 3 Educational experiences at home during COVID-19 and child mental health outcomes

	Emotional						Conduct						Hyperactivity						Peer Problem						Prosocial											
	X		SD		t		p		X		SD		t		p		X		SD		t		p		X		SD		t		p					
Child-level																																				
Challenges	Yes	1.74	1.79	1.79	1.73	-3.03	0.01	1.86	1.73	-1.42	0.13	4.41	2.56	-1.92	0.05	1.80	1.81	-2.30	0.02	8.76	1.54	2.53	0.02	9.22	1.30											
	No	1.19	1.20	1.57				1.53	1.57			3.75	2.27			1.37	1.27																			
Focusing	Yes	1.93	1.87	1.98	1.93	-1.98	0.05	1.80	1.93	-0.07	0.95	4.60	2.69	-1.41	0.18	2.09	1.90	-2.42	0.03	8.78	1.59	0.51	0.64	8.87	1.47											
	No	1.52	1.63		1.62			1.79	1.62			4.17	2.51			1.58	1.63																			
Motivation	Yes	1.74	1.79	1.79	1.73	-0.61	0.54	2.05	1.73	-1.49	0.14	4.38	2.46	-0.38	0.70	1.85	1.49	-0.75	0.39	8.88	1.33	-0.18	0.87	8.84	1.55											
	No	1.60	1.68		1.69			1.72	1.69			4.25	2.59			1.68	1.78																			
Socialization	Yes	1.45	1.72	1.06	1.69	1.06	0.31	1.77	1.69	-0.34	0.74	4.28	2.27	-0.01	0.99	1.58	1.70	0.76	0.45	8.95	1.27	-0.62	0.53	8.82	1.56											
	No	1.68	1.70		1.78			1.85	1.78			4.28	2.64			1.75	1.73																			
Mother-level																																				
Challenges	Yes	1.68	1.74	1.12	1.77	-1.12	0.21	1.88	1.77	-2.14	0.01	4.41	2.58	-2.05	0.04	1.73	1.74	-0.27	0.77	8.84	1.43	0.37	0.71	8.92	1.83											
	No	1.41	1.49		1.27			1.36	1.27			3.66	2.41			1.66	1.63																			
Role as a teacher	Yes	1.72	1.81	0.82	1.80	-0.82	0.45	1.81	1.80	-0.17	0.87	4.55	2.32	-1.71	0.09	1.93	1.88	-2.10	0.04	8.84	1.41	0.15	0.88	8.86	1.58											
	No	1.56	1.61		1.63			1.78	1.63			4.07	2.72			1.54	1.57																			
Balancing	Yes	1.45	1.62	1.23	1.73	1.23	0.20	1.83	1.73	-0.26	0.81	4.40	2.53	-0.57	0.56	1.46	1.46	1.73	0.06	8.91	1.39	-0.47	0.62	8.83	1.55											
	No	1.70	1.73		1.70			1.78	1.70			4.23	2.58			1.82	1.81																			

Bold values denote statistical significance at the $p < 0.05$ level

activities by varying modalities and give alternative tasks for children.

Demographic Differences in Educational Experiences at Home

The relationship between demographic characteristics and maternal and child challenges with learning at home were explored. Across demographic variables collected in the study, associations were only found with children challenges. Specifically, White mothers were more likely to report that their children faced challenges with their educational experiences at home during COVID-19. In addition, mothers from higher-income families reported that one of the challenges children experienced with learning from home was that their children lacked socialization. It is possible that children of mothers with higher incomes and educational attainment had more out of home and socialization opportunities (Zimmer et al., 1995) prior to the COVID-19 pandemic than children with non-White mothers with lower incomes and education levels. Alternatively, children from households with lower income may have faced more adversity prior to COVID-19 and have higher levels of resiliency than children from higher socioeconomic backgrounds (Orthner et al., 2004). Lastly, we found a positive association between children's lack of motivation in terms of learning from home and the number of adults that are supported by the family income.

Typically, researchers have found that compared to higher income/higher education families, at-risk families experience higher rates of educational challenges (Dhuey & Lamontagne, 2019; Masonbrink & Hurley, 2020). However, during the COVID-19 pandemic, in this sample of low-income families, we see that those with higher resources (i.e., income) and those of non-minority status (i.e., White) face challenges with learning at home more than lower income non-White families. These findings highlight the importance in needing to understand the conditions that low-income minority families face regarding their children's education. This has implications for practitioners who support low-income families, in that, these families may need additional supports during and after the pandemic with resources being allocated based on familial need.

Educational Experiences at Home and Mental Health of Mothers and Children

We investigated the relationship between challenges of educational experiences at home reported by mothers and maternal and child mental health outcomes. First, we explored the relationship between maternal challenges of their children's educational experiences at home and their own mental health (i.e., stress, anxiety, and depression). Maternal reports of educational challenges were not related to their anxiety

scores. We found that mothers who experienced challenges with their children's education at home had higher levels of perceived stress and depression scores than mothers who did not report facing challenges. Mothers who reported facing challenges regarding taking on the teaching role had higher levels of depression compared to those who did not report those challenges. These findings are consistent with that Calarco et al. (2020) who found higher levels of stress and anxiety among mothers who assumed greater childcare responsibilities with the onset of the pandemic. Our study, however, shows how responsibilities surrounding children's schooling specifically can add to the maternal mental decline observed (Lee et al., 2020; Racine et al., 2021).

We then examined how challenges faced by children regarding their educational experiences at-home during COVID-19 impacted their mothers' mental health. Mothers with children who faced overall challenge in their educational experiences at home had significantly higher rates of stress, anxiety, and depression scores than mothers whose children did not face challenges with learning at home. Similarly, mothers with children who had difficulty focusing during their educational experiences at home had higher levels of stress and depression. To our knowledge, no studies have specifically examined maternal mental health outcomes related to children's challenges. However, given the higher rates of maternal mental health challenges during COVID-19 (Racine et al., 2021), these findings potentially further explain the mechanisms behind the decline observed.

Lastly, we explored challenges of learning at home for mothers and children on children's mental health. We found that children who had mothers who experienced overall challenges had higher levels of conduct problems and hyperactivity compared to children whose mothers that did not report such challenges. In addition, mothers who reported having challenges with playing the role of their child's teacher had children with significantly higher peer problems. This finding is consistent with the literature that found increases in student's stress, anxiety, and depression due to the unprecedented changes in their education (Tang et al., 2021). Our study, however, is one of the first to assess how mothers' challenges with their children's educational experiences at home during COVID-19 is associated with children's mental health in an early childhood education context.

Educators are encouraged to show empathy, be compassionate towards, and take into account the experiences of children *and* their mothers. Emotional validation of children and mothers, and recognition of the challenges they may be facing with children's education at home are critical during the pandemic—especially given the mental health findings described above. Educators should acknowledge that not all mothers are trained or equipped to take on this teacher role at home. In this study, 5% of mothers reported that they had

given up on their children's education at home. Although this is a small percentage, it may be the case that these children are particularly in need of strong educational support.

Limitations and Future Research

While the findings of this paper have shed light on the struggles associated with learning from home for low-income families with school-aged children, this study has important limitations. This study has a moderate sample size; however, some themes of challenges (i.e., issues with technology/resources) were only reported by a small subsample of participants. Secondly, since the data utilized in this study is self-reported by mothers—it is important to consider the possibility that the mother's own mental health issues can distort their perceptions of their children's problems (Gartstein et al., 2009). However, the measures included in this study show good reliability and validity in capturing children's mental health scores. Furthermore, because this study is cross-sectional and observational, we cannot make causal conclusions about the relationships between family demographics, challenges related to educational experiences at home and maternal and child mental health.

Future research should aim to replicate our findings. In addition, this study does not examine the prior predictors of what influences the educational challenges experienced by these families. Understanding family and child characteristics that preceded that pandemic can help to identify individuals and families who are in need of support and enhance targeted interventions appropriately. Furthermore, future research should investigate the longevity of these findings—expand about whether these families improve or not or what happens over time.

Conclusion

Understanding the nature and prevalence rates of challenges with children's education at home that are faced by families can shed light on risk factors that contribute to the significant mental health decline observed among children and mothers since the onset of the pandemic (Cheng et al., 2021; Tang et al., 2021).

Our study has answered several important questions about what the challenges children and mothers face regarding educational experiences at home. Our qualitative responses indicate that very young children, and their families, are experiencing a range of challenges coping with children learning from home during COVID-19. Interestingly, a non-trivial number of families found that learning from home was a positive experience during COVID-19. The types of challenges experienced from at home learning are related to the number of adults within a household, a family's household income, and their ethnicity. These findings allow us

to flag families that may need additional supports during COVID-19. Importantly, the educational challenges faced by children and mothers are directly related to their own mental health. Furthermore, the challenges faced at an individual level (i.e., by children and/or mothers) were associated with higher levels of mental health challenges by family members. This has important implications and suggests that future research and interventions be applied at a familial level when supporting low-income families and their experiences with their children's educational experiences at home during COVID-19.

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Declarations

Conflict of interest The authors declare that they have no conflict of interest.

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