Research Article

"It just fits my needs better": Autistic students and parents' experiences of learning from home during the early phase of the COVID-19 pandemic

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Abstract

Background and aims: The COVID-19 pandemic has caused unprecedented disruption to people's lives, especially for families, whose children have been taken out of schools during lockdown restrictions and required to learn from home. Little is known, however, about the perceived impact of the lockdown restrictions on the educational experiences of autistic children and young people – a group whose conventional schooling experiences are already often challenging. In this study, we sought to (1) understand these experiences from the perspectives of autistic young people and their parents, and (2) identify the underlying sources of positive experiences at this challenging time, in order to inform the ways in which autistic children might flourish at school in more normal times.
Methods: Ninety-one Australian participants, including 16 autistic young people aged 12–18 years, 32 autistic parents and 43 non-autistic parents of autistic young people aged 3–18 years, took part in semi-structured interviews about their experiences of life during the initial phase of the COVID-19 pandemic. The interviews were subjected to reflexive, thematic analysis to identify themes and subthemes for each research question.
Results: Overall, our participants initially found the transition to learning from home extremely challenging, with parents reporting that the support received from schools was far from adequate. After that initial period of transition, however, many autistic children reported flourishing at home both educationally and personally. For these children and families, we identified three key ingredients essential to this flourishing, including: (i) the importance of connected, trusting relationships ('people'); (ii) the sensory and social safety of home ('place'); and (iii) the flexibility to pace and structure learning to suit the individual child ('time').
Conclusions: While the initial COVID-19 lockdown presented many challenges to children learning at home, there were aspects of this otherwise-unsettling situation that enabled children to thrive and from which we can learn for the future.
Implications: These findings have important implications for understanding how and when autistic children might thrive in institutional educational settings once the pandemic subsides, focusing on the relationships between teachers and students, the nature of the physical learning environment and the need for greater flexibility in planning the school day.

Keywords

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Introduction

During the early phase of the COVID-19 pandemic, more than a billion students around the world were taken out of schools during lockdown restrictions and thrust into learning-from-home[1] contexts (The World Bank, 2020). Many students faced intense educational challenges during this time, as schools and teachers rapidly sought to move curricula online. This disruption, however, has likely had a disproportionate impact on those who might already be vulnerable in some way – including autistic[2] children and young people (Organisation for Economic Co-operation & Development [OECD], 2020; Pellicano & Stears, 2020). As yet, we do not fully understand how this experience impacted upon autistic students or what we might learn from this experience for the return to more conventional schooling experiences once the pandemic has eased.

The studies conducted thus far present a mixed set of experiences. On the one hand, schooling from home might be thought of as a distinctively difficult learning environment for many autistic children and young people, especially given the associated COVID-19-related stressors (Corbett et al., 2021; Pellicano et al., 2021; Toseeb et al., 2020). Autistic children might well be expected to have struggled even more than non-autistic children as a result of changing expectations and learning environments, untrained and unprepared parents substituting as teachers, the absence of regular supports and accommodations, less explicit instruction, increased delivery of undifferentiated curriculum, and stressful home conditions. Many autistic children and young people also have co-occurring mental health issues, especially anxiety and depression (Lai et al., 2019; Simonoff et al., 2008), which are likely to have been exacerbated during the pandemic for a variety of reasons, including discontinuity of care (Oakley et al., 2020; Pellicano et al., 2021).

Furthermore, many autistic children receive specialist support in school and benefit from close communication and collaboration between families and schools – both of which were at risk of disruption during the pandemic with the sudden shift to remote learning. Strong family-school relationships ensure that parents, teachers and ideally the students themselves share knowledge and expertise to foster autistic children's educational outcomes and socioemotional wellbeing (Azad & Mandell, 2016; Lilley, 2019). The few existing studies on families' experiences during COVID-19 suggest that it was this sharing of specialist knowledge that they often missed the most. For example, in Latzer et al.'s (2021) qualitative study, Israeli parents of autistic children, most of whom attended specialist education, expressed concerns about not having the knowledge or means to meet their children's developmental needs. A survey of 339 UK-based families of children with special educational needs, most (81%) of whom were autistic, echoed these findings: only 40% of parents reported that the level of support provided to aid their children's learning during the pandemic had been adequate (Toseeb et al., 2020). Indeed, these families reported wanting specialised professional advice from teachers and other school staff on how to support their children's academic and mental health needs, as well as educational activities that were specifically tailored to their children's needs and consistent with their support plans.

On the other hand, schooling from home, even in such unsettling circumstances, might also have presented some distinct advantages for autistic students (Reicher, 2020). Home environments, after all, offer less potential for the sensory and social overwhelm that often blights the autistic experience in formal schooling (Aubé et al., 2020; Cresswell et al., 2019; Jones et al., 2020; Maïano et al., 2016; Mamas et al., 2021; Williams et al., 2019; see Reicher, 2020, for discussion) – which is an often-cited reason for parents deciding to homeschool their autistic children (see O'Hagan et al., 2021, for review). In line with this view, some studies have reported that the removal of many everyday pressures commonly experienced in school settings has resulted in some autistic children being more relaxed (Asbury et al., 2021; Rogers et al., 2021) and communicative (Mumbardó-Adam et al., 2021) during the COVID-19 lockdowns. The attentiveness of many parents during this period may also have enabled autistic children to make more significant headway with their learning than may be possible within a broader classroom environment where they receive less intense one-to-one support (Latzer et al., 2021).

In the current study, a research team composed of both autistic and non-autistic researchers sought to understand these issues more fully, adopting in-depth qualitative methods with parents of autistic children *and* with autistic young people themselves, whose voices have been notably absent from the emerging research on COVID-19 (see Corbett et al., 2021, for an exception). Specifically, we asked what were the educational experiences of Australian autistic children (≤ 18 years) during the initial stage of the COVID-19 pandemic? And, when there were positive experiences, what were the underlying source(s) of those experiences? Such knowledge should inform the conditions under which autistic children might flourish in institutional educational settings in more normal times.

Method

Context

On 21st March 2020, ten days after the World Health Organization declared the COVID-19 outbreak a pandemic, the number of confirmed COVID-19 cases in Australia exceeded 1,000 (Open Society, Common Purpose Taskforce, 2021). It was also the date that the Australian states and territories, with the active support of the federal

government, began to implement strict 'stay-at-home' orders similar to those deployed in most other advanced democracies at the time, with the addition of international border closures and limitations on domestic travel between states (Bromfield & McConnell, 2021). Through this process, non-essential services were forced to close, instructing their employees to work from home where possible; strict limits were placed on social gatherings; and, most relevant to this study, schools began to make in-person attendance optional in most states and territories, with children encouraged to learn from home at the beginning of Term Two (approximately April – July 2020; see Ewing and Vu, 2021, for details of Australian state and territory policies). The states in which the majority (75%) of our participants resided had the firmest restrictions: parents from New South Wales and Victoria were told to "keep their students at home if possible" and their Departments of Education instructed schools to deliver education remotely throughout Term Two. Consequently, by early May, an estimated 95% of students from Foundation/Kindergarten to Year 12 in New South Wales and Victorian government schools were learning from home (just over two million students; Australian Bureau of Statistics, 2020). Schools, including special schools, were encouraged to maintain face-to-face provision for all vulnerable students, including autistic children and young people (Department for Education, Skills & Employment, 2020), but not all did so.

Participants

On the 6th May 2020, we posted an advert on social media inviting people to participate in our study. Within 48 h, we had received 150 expressions of interest, 144 of whom met the study's eligibility criteria: they were English speaking; willing and able to convey in-depth their everyday experiences of the COVID-19 pandemic; and, for parents, had a child, of any age, who had received a clinical diagnosis of an autism spectrum condition, according to DSM-IV-TR or DSM-5 criteria (American Psychiatric Association, 2000, 2013). These participants were invited to complete individual semi-structured interviews via their preferred means of communication (over Zoom, phone, email or live text-based chat) (see Pellicano et al., 2021, for details). Here, we focus on the 91 Australian participants – 16 autistic young people and 75 parents of autistic children who were ≤18 years and were in school or early childhood education – who responded specifically about their experiences of remote learning during the pandemic.

Autistic young people. We spoke to 16 autistic young people, aged 12–18 years, including five girls, eight boys, two with non-binary gender and one who was gender-questioning (Table 1). All had received an independent clinical diagnosis of Asperger's syndrome (n = 5), autism (n = 2) or autism spectrum disorder (n = 9), on average, at the age of 8 years 4 months (SD: 3;8; range = 2–16 years). Twelve young people (75%) reported co-occurring

diagnoses of often-multiple neurodevelopmental and/or psychiatric conditions, most notably anxiety and/or depression (Table 1).

All young people were living with their families during the study period, except for one young person who had been admitted to a long-stay hospital facility due to mental health issues. The remaining 15 young people were either staying at home and following the social distancing rules as outlined by government authorities (n = 11) or self-isolating because someone in their family had an existing medical condition or was categorised as high risk (n = 4). No young person had been diagnosed with, or was suspected of having, COVID-19 at the time of interview.

Parents of autistic children. Seventy-five parents of autistic children were interviewed. Most parents were women (n = 72; 96%), of predominantly white ethnic background and moderate-to-high socioeconomic status. Thirty-two (43%) reported either having received an independent clinical diagnosis of autism (n = 24) at an average age of 41.00 years (SD = 6.49) or self-identified as autistic (n = 8), thus forming an 'autistic parent' group, while the remaining 43 (57%) formed a 'non-autistic parent' group (Table 1).

Of the 75 parents, 57 (76%) reported staying at home and following the social distancing rules as outlined by government authorities, 14 (19%) reported self-isolating due to being classified as high risk (n = 10), due to a pre-existing health condition (n = 3) or suspected COVID-19 symptoms (n = 1), and three parents (4%) were interviewed after restrictions had eased and reported living their lives as normal (one 'preferred not to say').

Together, the 75 parents reported on 104 autistic children aged 3–18 years (see Table 2). Most children identified as a boy/man (n = 67; 64%), were enrolled in mainstream school settings (n = 74; 71%) and had one or more co-occurring conditions (n = 81; 78%), most commonly ADHD and anxiety disorder.

Procedure

Ethical approval for this study was received from the Human Research Ethics Committee at Macquarie University (Project ID 6665). All participants provided written informed consent prior to taking part.

All interviews were conducted between 19th May and 29th June 2020. To begin, parents were asked to complete a brief (10-min) online survey, powered by LimeSurvey, to elicit information about their and each of their children's demographic, diagnostic and schooling information. Participants answered questions about their and their children's age, gender, ethnic/racial background, autism and/or other co-occurring diagnoses, education, occupational status and COVID-related information.

Next, participants took part in individual, semi-structured interviews via their preferred means of communication. Participants were asked open-ended questions about

Table 1. Participant characteristics.

	Autistic young people (n = 16)	Parents of autistic children (n = 75)	
		Autistic parents (n = 32)	Non-autistic parents (n = 43)
		Mean (SD), range, or N (%)	
Age (years)	14.95 (2.08) 12.14–18·41	42.41 (5.51) 32.88–54.48	41.96 (7.46) 23.58–58.62
Age at autism diagnosis (years)	8.38 (3.72) 2–16	41.00 (6.49) 28–52[a]	N/A
Interview duration (min)	28.81 (11.02) 19.20–50.40	56.42 (18.46) 21.80–86.30	50.63 (16.12) 16.50–79.52
Gender			
Woman/girl[b]	5 (31%)	31 (97%)	41 (95%)
Man/boy[c]	8 (50%)	1 (3%)	2 (5%)
Non-binary	2 (12%)	0	0
Other	1 (6%)	0	0
Place of residence			
Australian Capital Territory	0	0	2 (5%)
New South Wales	5 (31%)	10 (31%)	20 (46%)
Queensland	3 (19%)	3 (9%)	4 (9%)
South Australia	1 (6%)	3 (9%)	2 (5%)
Victoria	6 (38%)	13 (41%)	13 (30%)
Western Australia	1 (6%)	3 (9%)	2 (5%)
Living arrangements			
With partner only	-	0	3 (7%)
With partner & children	-	25 (78%)	30 (70%)
With children only	-	4 (12%)	9 (21%)
With relatives	-	3 (9%)	1 (2%)
Highest educational qualification			
Completed primary school	-	1 (3%)	0
Completed Year 10	-	1 (3%)	2 (4%)
Completed high school	-	4 (12%)	3 (7%)
Vocational training	-	3 (9%)	5 (12%)
Undergraduate degree	-	9 (28%)	9 (21%)
Postgraduate degree	-	14 (44%)	24 (56%)
Pre-COVID-19 occupational status			
Part-time employment	-	5 (16%)	13 (30%)
Full-time employment	-	8 (25%)	13 (30%)
Self-employed	-	5 (15%)	3 (7%)
Studying	-	2 (6%)	4 (9%)
Full-time parent	-	10 (31%)	9 (21%)
Unable to work due to disability	-	1 (3%)	0
Prefer not to say	-	1 (3%)	1 (2%)
Co-occurring conditions[d]			
ADHD	5 (31%)	12 (38%)	3 (7%)
Anxiety disorders	9 (56%)	17 (53%)	12 (28%)
Autoimmune disorders	0	8 (25%)	6 (14%)
Bipolar disorder	-	0	1 (2%)
Chronic fatigue syndrome	0	1 (3%)	0
Chronic pain	0	7 (22%)	3 (7%)
Depression	5 (31%)	22 (69%)	11 (26%)
Drug/alcohol dependence	-	0	0
Dyslexia	1 (6%)	2 (6%)	1 (2%)
Dyspraxia	0	0	0
Eating disorders	2 (12%)	3 (9%)	2 (5%)
Epilepsy	0	0	0
Gastrointestinal issues	0	11 (34%)	5 (12%)
Intellectual disability	0	0	0
OCD	1 (6%)	1 (3%)	0

Table 1. Continued.

	Autistic young people (n = 16)	Parents of autistic children (n = 75)	
		Autistic parents (n = 32)	Non-autistic parents (n = 43)
Personality disorders	-	0	1 (2%)
PTSD	0	10 (31%)	2 (5%)
Schizophrenia disorders	-	0	0
Sleep disorders	4 (25%)	5 (16%)	3 (7%)
Prefer not to say	0	1 (3%)	1 (2%)

Notes. Data are M (SD), range or n (%). Percentages may not sum to 100% due to rounding issues. N/A = not applicable. [a]n = 24; [b]Included transgender women; [c]Included transgender men; [d]Participants could select all options that applied to them. Percentages therefore do not add to 100.

their day-to-day experiences of the pandemic and its perceived impact on their living, working and learning arrangements, social relationships, access to services and sense of wellbeing (see Supplementary Materials for full interview schedule). We provided participants with the primary interview questions ahead of the interview to accommodate processing differences. Young people had the option of being interviewed alongside their parents or another support person, but all opted to be interviewed on their own.

Interviews were predominantly conducted over Zoom (n = 70, 72%; over the phone, n = 14, 17%; or over email, n = 13, 13%) and varied between 16.50 and 86.30 min (M = 49.69, SD = 19.30; Table 1). All team members were involved in interviewing participants, conducting at least 10 interviews each. Where possible, autistic collaborators were allocated interviewees whose desired interview format (e.g., email/live-text chat) aligned with their own communication preferences. All Zoom or telephone interviews were recorded and transcribed verbatim. Parents' transcripts were returned to them for review, to check for accuracy and remove any potentially identifying or other details.

Community involvement

This study adopted a participatory approach. The last author conceived of the study, drew on existing funding to support it and put together a team of non-autistic academic partners (EP, SB, IM, MS, & AU) and autistic researchers and advocates (JdH, MH and RS), including an autistic parent of autistic children (MH) to design and implement this study during the initial phase of the COVID-19 pandemic. Considerable efforts were made to ensure that influence was shared within the team – that each team member's input and expertise was integral to the success of the project – and that autistic experience was prioritised in research design, implementation of the methods (including interviewing participants) and analysis. Working together in this way ensured that our methods were designed to be

respectful and supportive of our autistic participants, especially our autistic young people, including: all study information documents were designed to be accessible; participants could choose among several formats for their interviews; the language and presentation of all correspondence aligned with the values of the autistic community; and the results were interpreted through a strengths-based, rather than deficits-based, lens.

Data analysis

Our analysis was informed by team members' experience and training in education (EP), psychology (EP, JdH, IM and SB), allied health (AU) and public policy (MS), and by their relevant positionalities as autistic researchers (MH, JdH, RS). We followed Braun & Clarke; (2006, 2019) method for reflexive thematic analysis within an essentialist framework, in which our goal was to report the meanings and experienced reality of the participants. The analytic process began during data collection, where the team met regularly to engage in reflexive discussions, including to identify patterns in the data and to examine (dis)similarities between team members' own experiences of life during COVID-19 and our participants' experiences. It was during these meetings that we discussed the importance of analysing the data in such a way that they should inform the conditions under which autistic children could thrive in regular education settings once the pandemic had subsided. The addition of a second research question to address this issue was influenced in particular by the experience of schooling with MH's own autistic children, both prior to and during the pandemic. Once all interviews had been transcribed, one senior researcher (EP) immersed themselves in the data, reading all transcripts twice, taking notes on striking and recurring observations and applying codes to each transcript (managed in NVivo, version 12). Initially, codes were developed for each participant group (autistic young people, autistic parents, non-autistic parents) and were refined through discussion so that the same coding framework was applied to all transcripts. While we

sought to identify several common themes and subthemes across the groups, we were also alert to a wide variety of differences both between groups (autistic parents, non-autistic parents and autistic young people), within groups, and within individuals over time – all of which we sought to draw out in the results presented below. EP generated draft thematic maps for each research question showing potential themes and subthemes and these maps and all relevant quotes were reviewed and revised by MH multiple times, before being reviewed by and extensively discussed with the research team. Analysis was therefore iterative and reflexive in nature (Braun & Clarke, 2006, 2019).

Results

The themes and associated subthemes for each research question are presented in turn. They are numbered below and presented in bold and italics, respectively (see also Figures 1 and 2). Illustrative quotes (with participant IDs, YP: Young person; AUTParent: Autistic parent; NAParent: Non-Autistic parent) are provided below.

Research question 1: What were the educational experiences of Australian autistic children during the initial stage of the COVID-19 pandemic?

Theme 1.1: The initial transition to remote learning was hard. Participants found the initial transition to remote learning to be a particularly challenging time (see Figure 1). As one parent put it: "This isn't classic home schooling. This is crisis schooling" (235-AUTParent).

Participants *found it challenging to adapt to their new-found learning environment* (subtheme 1.1.1). Parents spoke of how their children were deeply unsettled by the sudden and swift changes and struggled "immensely with the idea of doing school at home" (211-AUTParent). Young people agreed: "school is school, and home life is home life" (101-YP). They spoke of how the space could not always be set up for effective learning, especially for multiple children engaging in different activities, and that parents' new role of teacher was difficult, in part because "it's a different relationship, different expectations" (315-AUTParent).

Both young people and parents spoke of *their difficulties navigating the (online) learning tasks and expectations* (subtheme 1.1.2). Young people were confused "trying to figure out what to do… it was a bit of a mess, honestly" (116-YP). They found it difficult to decipher the task instructions, which were "quite open-ended" (231-AUTParent) and often "big chunks of information" (213-AUTParent). They also "struggled with the executive functioning" (325-NAParent) and "not knowing what to do and how to submit work" (205-AUTParent), as well

as participating in online classes: "in real life you can just raise your hand and wait for however long, but they [teachers] can't really see you over Zoom" (113-YP). This young person's mother had also noticed that her daughter's usual help-seeking strategies were no longer available: "she really struggles with instructions. But being at school she can always ask other kids to help her. But now that her friends aren't there, she has no help like that" (206-AUTParent). As one parent put it: "it was like watching a child try and play an incredibly complex board game, without any information on the rules, or pieces needed to play it and the child not able to speak, or hear, to get that information" (211-AUTParent). As a result, young people felt that they were not "absorbing as much" (105-YP).

Participants reported further that they or their children *found it difficult to stay on track with their schoolwork* (subtheme 1.1.3). For young people, there were multiple reasons for this loss of focus, including their "wifi being so bad that it often conks out" (113-YP), the online nature of the work ("I have fallen behind quite a bit because some of my classes, like my forensics class, are quite hard to do over Zoom"; 103-YP), "just being worried in the back of my mind" (105-YP), or due to "getting distracted into doing other stuff" (111-YP). Parents agreed, especially when "you're in a room by yourself… on your laptop, there's a lot of temptation just to do whatever you want" (308-NAParent).

It was not surprising, then, that *some children desperately wanted to reinstate their normal routines* (subtheme 1.1.4). In the words of one final-year high school student: "I'm done with changes for now. I want everything normal for a bit" (116-YP). Some children were reported to have "remained at school til the very end, until schools closed" (211-AUTParent), while others were "very keen to get back to school" (336-NAParent); "it [school] helps her to stay on track" (224-AUTParent). For those who had resumed school once restrictions had eased, some parents described how "the kids have been happier" (333-NAParent) and "didn't want to come home" (314-NAParent), especially with fewer children in class, at least initially. One child reportedly said: "'Mum, I've learned more today than I've learned the entire time off. I'm going back tomorrow'" (231-AUTParent).

Theme 1.2: Parents felt poorly supported by schools. Some parents reported that they had "had great support from [child's] school and teacher and the information provided was fantastic" (306-NAParent), but these sentiments were rare. Instead, parents repeatedly described being "disappointed in his school since the Corona hit us all" (312-NAParent), often attributing the "cumulative stress" (234-AUTParent) to the scant support they received from schools.

Parents reported that *children's individualised support was scarce or had disappeared* (subtheme 1.2.1). They described "needing to do everything via technology with minimal
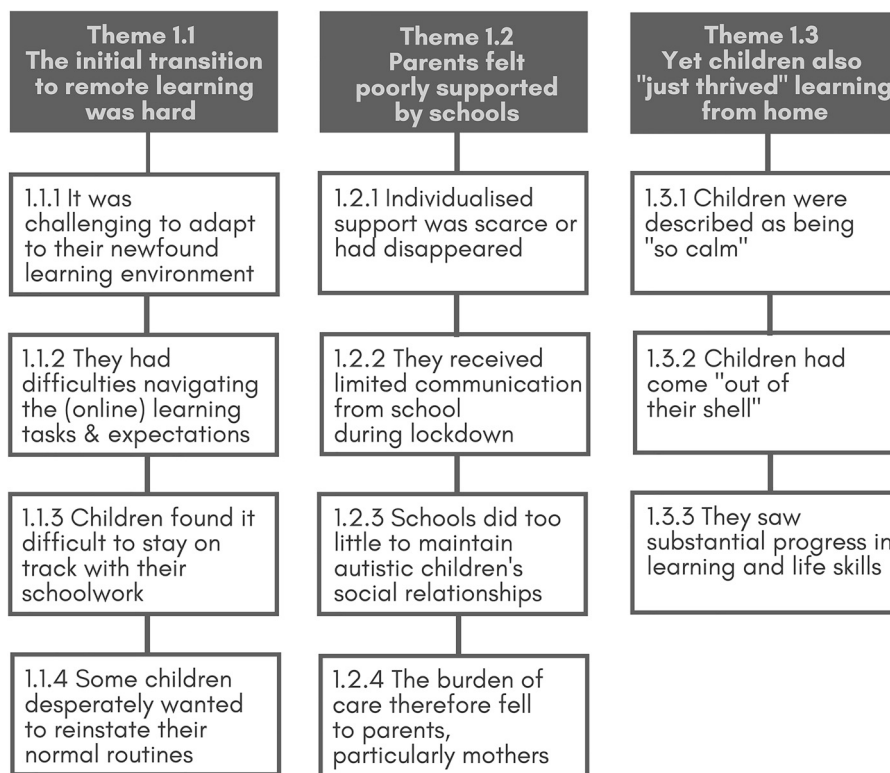
Theme 1.1 The initial transition to remote learning was hard	Theme 1.2 Parents felt poorly supported by schools	Theme 1.3 Yet children also "just thrived" learning from home
1.1.1 It was challenging to adapt to their newfound learning environment	1.2.1 Individualised support was scarce or had disappeared	1.3.1 Children were described as being "so calm"
1.1.2 They had difficulties navigating the (online) learning tasks & expectations	1.2.2 They received limited communication from school during lockdown	1.3.2 Children had come "out of their shell"
1.1.3 Children found it difficult to stay on track with their schoolwork	1.2.3 Schools did too little to maintain autistic children's social relationships	1.3.3 They saw substantial progress in learning and life skills
1.1.4 Some children desperately wanted to reinstate their normal routines	1.2.4 The burden of care therefore fell to parents, particularly mothers	

Figure 1. The educational experiences of Australian autistic children during the initial stage of the COVID-19 pandemic: themes and sub-themes.

contact" (306-NAParent). Parents were frustrated that "none of the supports were in place" (202-AUTParent). For those children with individualised education plans (IEPs) and/or who had a full-time aide at school, many reported that the work was not "appropriate to his developmental level" (304-NAParent), even describing being "sent work that [child] couldn't possibly do" (206-AUTParent). For parents of children attending special schools, "teachers could not provide the home-schooling materials, because everyone's got different needs" (307-NAParent). Instead, parents reported being told by teachers to "just do what he can do" (220-AUTParent); "they were happy just to get anything from him, really" (320-NAParent). Some parents reported feeling that the expectations set were far too low for their child, as one mother explained:

I would then get an email from his teacher saying, 'okay in this particular activity, don't do that activity, this is what I want you to do with him'. It was just things that were really basic… We just got the, 'well instead of doing persuasive text and writing a column of fact and opinion over this book we've just read, don't read the book, don't do this activity. Just get him to write two sentences about his day'. When you have a child who's already behind, not

having that more personalised work, how much further behind is he going to be? (310-NAParent)

Parents further felt that the remote-learning activities were neither accessible nor engaging: "The worksheet style of learning… he was so bored" (230-AUTParent). Another parent reported that their child had "actually said 'the work they're sending me is just a waste of time. They're just time fillers to keep me busy'. It didn't feel like there was any learning in that" (325-NAParent).

While some parents reported that they were in regular contact with their children's teachers, most told us that they had received *limited communication from school during lockdown* (subtheme 1.2.2). While parents appreciated how "everyone's underprepared and overwhelmed" (218-AUTParent), they were nevertheless disappointed that "priority wasn't given to those families with special needs" (333-NAParent), who "are often forgotten about in these kinds of situations" (349-NAParent). Some described, rather alarmingly, that they had received no communication from school: "Not so much as a smoke signal. Absolutely nothing… I would have expected in a unit where there's seven, eight [autistic] kids, that there would have been that kind of reaching out" (225-AUTParent).

Teaching aides and those who usually support children in class were reported to be absent: "We didn't hear from

[child's support workers] at all" [329-NAParent). Another parent said, "Learning support from school, it's just disappeared" (231-AUTParent). They were sympathetic to the pressures on teachers but would have appreciated "even just a handover call from the school" (343-NAParent), "just to check in on an individual basis" (333-NTParent).

Parents also felt that schools' focus had been very much "on the academic side" (205-NAParent) and *did too little to maintain autistic children's social relationships* (subtheme 1.2.3) or "their connectedness to the school" (229-AUTParent). Parents described how "[child] hasn't got a lot of friends" (346-NAParent) and that school was the main source of these friendships: "when schooling ended, basically all his social interaction with friends his age ended" (345-NAParent). Parents were frustrated that schools did not do "anything to support contact with peers" (201-AUTParent), especially given that "having a connection with people is really, really important" (225-AUTParent).

Non-autistic parents were particularly concerned that this lack of peer interaction meant that their children had "become more socially isolated" (313-NAParent) and were now "out of practice with how to interact" (345-NAParent). One parent described how she had seen "a massive change in [child's] ability to read body language and interpret a person's mood… causing her a huge amount of anxiety" (309-NAParent). They felt that "any advancement that we have made with him learning to communicate with other kids, I think has gone backwards" (338-NAParent), "it's all gone out the window" (324-NAParent).

The reported lack of support meant that *the burden of care fell to parents, particularly mothers* (subtheme 1.2.4), who were "suddenly homeschooling and trying to be therapists and having no respite" (331-NAParent). Parents spoke of how remote learning "required all of my attention to get any of the work done" (337-NAParent), physically having to "sit with him the whole time. If I walked away to grab something or go to the bathroom, we would lose our focus" (310-NAParent). This was particularly challenging for working and single mothers ("the lack of support and not getting a break… you're their everything 24/7"; 314-NAParent), those who had a pre-existing health condition ("it created a perfect storm"; 229-AUTParent) and/or who identified as autistic: "my nerves have just been frayed from constantly being switched on" (209-AUTParent).

Such constant attention was required particularly for children in the early or primary school years ("[child's] learning to read so we're doing letters and how to hold your pencil. She can't self-teach that. It's just impossible"; 209-AUTParent), but also by older children: "The 16-year-old, I just let her be. I assumed that she'd know what she was doing. That was a mistake. She had no idea what she was doing" (330-NAParent). Parents also spoke of needing to advocate for their children with school authorities "or she would constantly slip through the gaps" (302-NAParent).

Non-autistic parents felt particularly strained by "literally having no break at all" (307-NAParent) and feeling "worried that the kids are not doing the required work" (328-NAParent) or that they were not being an effective teacher. Autistic parents felt these strains too, but the increased stress of "doing all this at-home schooling in the middle of a pandemic when there's so many other stressors" (229-AUTParent), combined with the lack of structure in the day and the "the intensity of constantly being in each other's presence" (233-AUTParent) meant that they were regularly "in survival mode" (227-AUTParent). They repeatedly reported how difficult it was to manage "the sheer amount of noise" (218-AUTParent), the strains on their "executive functioning skills" (215-AUTParent) and on their physical and mental health, which resulted in symptoms of burnout ("I know I've experienced massive fatigue… I cannot seem to feel rested"; 235-AUTParent) and "shutdown" (232-AUTParent).

Theme 1.3: Yet children also "just thrived" learning from home. Despite all the stresses and strains on families, and the changes and ever-present uncertainties, many autistic children and young people eventually settled into learning from home with some even described as having "thrived under these conditions" (205-AUTParent).

This surprisingly positive conclusion had three aspects. First, *children were described as "so calm"* (302-NAParent) (subtheme 1.3.1). Young people themselves reported being "definitely less stressed right now" (110-YP) and "more relaxed" (104-YP). Parents also felt that their children were "the happiest she has ever been" (219-AUTParent), "less anxious, more communicative" (208-AUTParent) and "more comfortable being at home than he would in a school environment" (320-NAParent). Participants directly compared their current experiences with the many challenges that their children usually experienced in regular school pre-COVID-19, including the often-overwhelming sensory input ("it's stressful… the crowds, noise, bright lights; 109-YP) and unpredictability of others: "He mentioned specifically that working at home, he didn't have to worry about kids throwing stuff across the room, and shouting out, and ruffling each other's hair, and all those things that people do" (223-AUTParent). During regular learning, these challenges usually resulted in "really, really frequent meltdowns" (340-NAParent) and "fights with the school to get more support for her" (302-NAParent). Instead, during remote learning, these additional stressors were not there, which meant that their children were "happier and really blossomed" (230-AUTParent).

Second, they also described how their *children had come "out of their shell"* (334-NAParent) (subtheme 1.3.2). Parents gave examples of "dramatic changes" (302-NAParent) in their child's behaviour during

remote learning, how they were more themselves: "when he's really tired, he gets really dark under his eyes. He didn't have that. So yes, there were definite benefits" (332-NAParent). Other parents reported that their children were "initiating a lot more with us and spending a lot more time out in the shared family area" (227-AUTParent) and "asking all these questions, wanting to cook every day… she doesn't even wear her headphones around the house anymore!" (219-AUTParent). Children had reportedly developed confidence in their "ability to self-regulate" (209-AUTParent), and "that he's capable of learning independently" (223-AUTParent). Young people also felt that they had "learned a few more things about myself" (105-YP).

Finally, participants also reported seeing *substantial progress in learning and life skills* (subtheme 1.3.3). Some young people felt that remote learning was "much better than actual school" (108-YP); they "learned more at home" (106-YP) and "have been getting more things done" (102-YP). Parents described that, during

Table 2. Characteristics of the autistic children (n = 104), as reported by their parents (n = 75).

	Autistic parent group (n = 32)	Non-autistic parent group (n = 43)	Total (n = 75)
		Mean (SD), range, or N (%)	
Total number of autistic children	n = 49	n = 55	n = 104
Number of autistic children in family			
One child	16 (50%)	35 (81%)	51 (68%)
Two children	15 (47%)	7 (16%)	22 (29%)
Three children	1 (3%)	0	1 (1%)
Six children	0	1 (2%)	1 (1%)
Children's age	9.57 (3.19) 3.98–18.25	9.87 (4.30) 3.30–18.42	9.72 (3.80) 3.30–18.42
Children's gender			
Girl	20 (41%)	12 (22%)	32 (31%)
Boy	27 (55%)	40 (73%)	67 (64%)
Non-binary	2 (4%)	1 (2%)	3 (3%)
Prefer not to say	0	2 (4%)	2 (2%)
Co-occurring diagnoses			
None	14 (28%)	9 (16%)	23 (22%)
ADHD/ADD	22 (45%)	14 (25%)	36 (35%)
Anxiety disorders	26 (53%)	21 (38%)	47 (45%)
Cerebral palsy	1 (2%)	0	1 (1%)
Depression	2 (4%)	6 (11%)	8 (8%)
Dyslexia	5 (10%)	1 (2%)	6 (6%)
Dyspraxia	4 (8%)	2 (4%)	6 (6%)
Eating disorders	1 (2%)	4 (7%)	5 (5%)
Epilepsy	1 (2%)	1 (2%)	2 (2%)
Hearing loss	0	1 (2%)	1 (1%)
Intellectual disability	1 (2%)	13 (24%)	14 (13%)
PTSD	2 (4%)	0	2 (2%)
Sleep disorders	5 (10%)	7 (13%)	12 (12%)
Tourette Syndrome	0	2 (4%)	2 (2%)
Vision impairment	1 (2%)	0	1 (1%)
Current school setting			
Mainstream with no extra support	15 (31%)	10 (18%)	25 (24%)
Mainstream with extra support	20 (41%)	29 (53%)	49 (47%)
Autism-specific class within a mainstream school	1 (2%)	2 (4%)	3 (3%)
General disability class within a mainstream school	0	3 (5%)	3 (3%)
Home-schooled	5 (10%)	1 (2%)	6 (6%)
Special school	0	5 (9%)	5 (5%)
Early childhood	5 (10%)	2 (4%)	7 (7%)
Other	3 (6%)	3 (5%)	6 (6%)

Note. The parent of one of our 16 young participants was not interviewed; therefore, details of 15 of the 16 young person participants are included in this table.

learning-at-home, they had "seen a bit more speech happening and more words coming and more communication" (349-NAParent). One parent of a non-speaking child recounted how "surprised" she was about her child's gains:

> I don't know what happened, but he started recognising all the pictures on the Proloquo2Go. Before he couldn't even recognise pictures no matter how I tried… but now he can read, and he started typing as well. So, it's from nowhere to somewhere. It's like a miracle (307-NAParent)

Parents also highlighted how "his teachers have commented that his fine motor skills have improved, his pencil grip has improved" (304-NAParent). One parent described the improvement her child made in handwriting: "He was doing his Ss and his Cs in three parts. Couldn't make a curve to save himself. And now, after eight weeks of it, he's writing for pleasure, which is just stunning" (226-AUTParent). Others also noted the "massive amount of ground he made in such a short space of time, he's taken the next level step for maths, and his writing has become so legible" (338-NAParent).

Research question 2: What was the underlying source(s) of children and young people's positive learning-from-home experiences?

We identified three key sources of children's engagement in remote learning despite these "heightened stress environments" (320-NAParent) (see Figure 2). As one young person put it:

> It [remote learning] just fits my needs better. It's more of a relaxed environment and I don't have to be in a loud place with loud people all the time… The resources are more available. It's easier to get into the lessons. I can wear literally whatever I want without being judged (102-YP)

Theme 2.1.1: People. One key reason why children and young people engaged and sometimes "thrived" under these learning-from-home conditions was their deep connections with people who cared for them, who understood their strengths, interests and needs, and who could alter the learning environment to respond to them.

Although parents often found remote learning "exhausting and full on" (343-NAParent) (see subtheme 1.1.1), they *could support their children's specific needs and preferences* (subtheme 2.1.1). Being able to give them "more one-on-one attention and time" (306-NAParent), especially
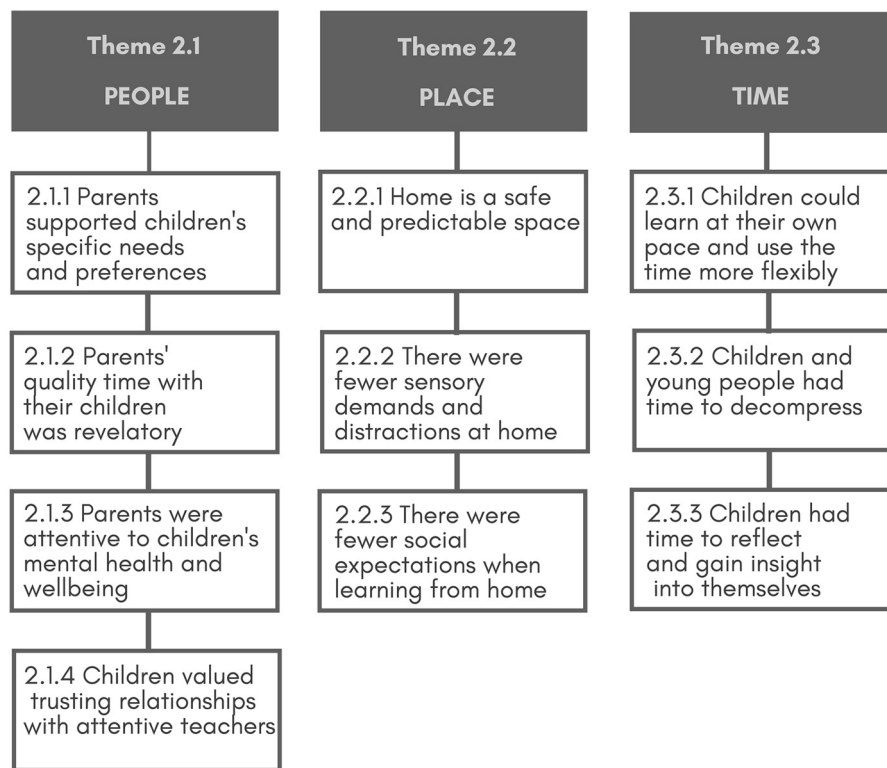

Figure 2. The underlying sources of children and young people's positive learning-from-home experiences: themes and sub-themes.

"more quality time" (229-AUTParent), enabled parents to differentiate activities, implement breaks, "be more interactive" (349-NAParent) and "just really follow her interests" (234-AUTParent). They described how they "set her schoolwork to do that I knew she was capable of doing" (324-NAParent), "scaffolded him in the way that he actually needs" (321-AUTParent), "tried to weave in the concepts to learn into our play" (233-AUTParent), and "made it fun and took it really slow" (343-NAParent). They gave rich examples of the ways in which they followed their children's leads, as one parent explained:

> He decided he wanted to play archery. So, we worked out how to go find an archery set and we bought one. And he would just come up with these, he always does, he always comes up with off-the-wall ideas and we facilitate them. And so I feel like, because there was more space and time and we're all stuck at home, we were able to facilitate his experimental mind (345-NAParent)

Parents described how this was made easier because children were being 'taught' by people "that he trusts" (225-AUTParent), who "get her" (209-AUTParent): "I know exactly what he's like, what he wants, doesn't want, so I could actually implement the perfect programme for him" (307-NAParent). They also emphasised how this effective working was a two-way street: "Once we got into our own rhythm and found what worked for both of us, he really flourished" (211-AUTParent). Young people also highlighted the ways in which they felt cared for: "I don't need anyone else [to help me]. My mum's good enough. She's more than good enough actually" (105-YP). They described how they "learnt new skills from my mum" (106-YP) and "can just talk to my dad about [schoolwork] if I need" (107-YP). This sense of mutual trust also extended to other relationships: "I think she's probably done more work than she actually has done through the year because she's got someone [support worker] that she's willing to listen to and guide" (325-NAParent), and "is able to push him a little bit further than maybe we can, or even school can" (332-NAParent).

Parents reported that they *found this quality time with their children revelatory* (subtheme 2.1.2). Through "spending more time with her and getting to know her better" (330-NAParent) as well as being "actively involved in his learning" (343-NAParent), they discovered how much their child had "fallen behind" (319-NAParent), how "the work is very difficult for her" (232-AUTParent), "how hard it was to teach him" (206-AUTParent), and that "his behaviour was masking the fact that he had gaps in his learning" (230-AUTParent). It also provided them with "the opportunity to really identify his learning difficulties" (210-AUTParent). Parents further emphasised that they could now see their child's potential: "Sometimes

you get into a habit or routine that you, I wouldn't say give up, but just accept that's the ceiling of their ability they're hitting. It actually changed my perspective of kids with special needs" (307-NAParent).

Parents described how *they were also attentive to children's mental health and wellbeing* (subtheme 2.1.3), not just their academic learning: "I had just gone, 'we're doing mental health first, school second'" (209-AUTParent). They felt that "we're the people best placed to try and keep an eye on wellbeing" (348-NAParent). Autistic parents in particular seemed more relaxed about schooling from home than non-autistic parents, "just giving space and time when needed, not forcing things when it's not warranted and giving a bit of leeway" (221-AUTParent). They described being acutely aware of how "very stressed" (229-AUTParent) their children were and that "when he comes home from school, he's just exhausted, drained and snappy and cranky". They explained that "being autistic, I know what it is to burn out" (224-AUTParent). As a result, they "had to make a conscious choice to ensure our kids have their mental health intact" (212-AUTParent), that "he would just have that mental health break" (202-AUTParent).

Participants also highlighted how much they and their *children valued trusting relationships with attentive teachers* (subtheme 2.1.4). One young person described this in detail:

> So, if I have just a really, really bad week, some teachers have said 'it's okay to contact me. Just email me and I'll email you back. I think it's not an option I probably will use, but I think it's just the sense of having someone backing me. It helps quite a bit (101-YP)

Parents emphasised that, for their children, "rapport is key… and takes a long time to build" (320-NAParent). They described how much their children valued teachers with whom they "had a really good bond and felt very safe" (227-AUTParent) – and what could happen when that trust was lost: "It's really interesting how much she will do for someone she respects and cares about. If she has written you off in her head, that's it. You're dead. You're gone" (305-NAParent). One parent described the lengths to which her child's teacher and teacher's aide had gone to maintain the relationship with her child during lockdown, "to get her involved in any aspect of her schooling. It's been incredible. They even dropped off a school desk, some things from her classroom, her class chair, her table, to recreate a setting that she'd be familiar in" (333-AUTParent). Children were more engaged in their schoolwork when their teachers took the time to work through issues with them and respected their views: "what worked temporarily was that the teacher had a big

meeting with [child] just one-on-one, and they worked out their own plan on her terms" (235-AUTParent).

Theme 2.2: Place. The second key ingredient was place. Young people and parents alike often described how, even given initial challenges in adjusting to schooling from home, *home is a safe and predictable space* for them and their children (subtheme 2.2.1). One young person described how much they came to enjoy learning from home:

> I'm in my little safe space. Because I feel like if I do get upset, I can just press cancel on the Zoom call. I don't have to embarrass myself and run out of class or whatever… And I get to fidget a lot more because nobody's paying attention to me and so my concentration's greater (105-YP)

They also highlighted how exhausting and draining school can be where interactions with their peers could be unpredictable, "it's just you have just no idea what could happen" (101-YP). Instead, parents described how "our house is pretty calm" (202-AUTParent), "it's a familiar environment for him" (304-NAParent) and that "[child] feels very comfortable here – this is his safe place" (314-NAParent).

Both young people and parents emphasised that *there were fewer sensory demands and distractions at home* than at regular school (subtheme 2.2.2). Young people noted that it was quieter at home – they were "not hearing all the loud people in the corridor outside" (105-YP), as one young person explained:

> I learnt just as much [at home], if not maybe a lot more efficiently than I would if I was at school, seeing as to how you're in a classroom surrounded by all these other people. All you've got is, you're at home, at your desk, just listening, you can just hear all the information (112-YP)

Parents agreed that "my children have really loved the quiet" (334-NAParent). They described the "big sensory onslaught" (WVQF-NAParent) of regular school but at home, "her sensory meltdowns and anxiety meltdowns lessened" (324-NAParent) and they were "much happier and relaxed" (233-AUTParent).

Participants further described how *there were fewer social expectations when learning from home* (subtheme 2.2.3). For the most part, children and young people only needed to deal with one set of social expectations – their parents' – not multiple versions of often inflexible and unpredictable adult and peer expectations. One young person explained:

> People-ing takes up energy to have a conversation, to be normal. And that's hard for me and I don't… Think of it

like running. I don't want to run perpetually, so I have to have a break at some point. And people-ing is hard and I'm not a marathon runner (109-YP)

They emphasised that they were "definitely less stressed right now" (110-YP), which they felt had a positive impact on their schooling: "I always feel I need to impress everyone and so then I find it hard to ask for help. And that's much easier at home when I can just Google something without feeling self-conscious about Googling it, or just look in the textbook" (107-YP). Parents also felt that "not having the pressure of social interactions, leaving the house and 'being normal'" (224-AUTParent) resulted in a "less intimidating and a better schooling experience" (330-NAParent).

Theme 2.3: Time. The third key component was time. Young people and parents repeatedly reported they had "more freedom" (107-YP) and were less beholden to fixed timetables, which was perceived to be beneficial to their and their children's learning and mental health.

While young people felt that, at school, "sometimes everything can get a little bit intense" (112-YP), they reported often feeling less stressed during lockdown because *they could learn at their own pace and use the time more flexibly* (subtheme 2.3.1). One young man explained: "I could get tasks set for the entire week and I would be able to do them at my own time at my own pace, as long they were done by the Friday. I just found that a lot easier than the structured time of 70 min for each lesson" (108-YP). Another young person explained further why these less-regulated schedules were beneficial: "if my routine's more flexible, I think I'm more adaptable to different situations in terms of stress" (101-YP).

These sentiments were also echoed by parents, who reported that "he could get his work done within a couple of hours" (338-NAParent), and "do the subjects he didn't like first, and get them out of the way, and then concentrate on the subjects he did like, and spend as much time as he wanted to" (223-AUTParent). One parent explained that greater flexibility meant that "she's in control of what she's learning… of what happened to her during the day, what she chose to do, how much she chose to do, when she took her breaks, that sort of thing… she's just calm, confident, happy" (231-AUTParent). Parents also reported that they and their children benefited from "fewer transitions in her day" (322-NAParent), "that flexibility to take a break" (315-NAParent), to "fit in what we fit in" (331-NAParent), and to keep going when children were "on a roll" (220-AUTParent).

This less-regulated time meant that *children and young people had time to decompress* (subtheme 2.3.2). Young people spoke of how they "get to wake up late which is really good and during breaktime in class I can go around the house and talk to my family" (113-YP). Participants described how "school changed their whole timetable"

(318-NAParent), reduced the length of their classes with longer breaks in between: "The schedule is very, very strained [but] I get a load of time to just have five, ten minutes to sit back and stretch and relax, which is nice" (105-YP). Parents agreed: "[child] gets so stressed at school... that decompression time that he normally needs after school to be able to function, he has that normally built into his day now" (308-NAParent). As a result, parents felt that their children were "much more chilled" (308-NAParent), "more settled" (322-NAParent) and "emotionally, she was improving so much" (204-AUTParent). Young people also felt that being able to take things a bit slower had a positive effect on their wellbeing: "even things like having a slightly longer lunch break, little things like that I was able to appreciate a little bit more and stay a little bit more positive about" (112-YP).

Their less-structured days meant that *they had time to reflect and gain insight into themselves* (subtheme 2.3.3). As one young person put it: "now we have time. We can slow down, focus more on us than stuff we have to get done" (109-YP). Young people reported having "learned a few more things about myself" (105-YP), including that "I do not take enough care of myself enough" (109-YP), that "sometimes, I need to take a break from what's going on" (110-YP) or "simply have just a moment of shouting and swearing at the world by myself, which is quite helpful" (101-YP). Parents echoed these sentiments: "she didn't have time and space in our previous life for that reflection... now she feels quite empowered" (219-AUTParent).

Young people and parents also described gains in their or their children's confidence, having "learnt from this situation that I can work by myself and when I get to a pressure that I would normally be really scared, I've learned that no, actually, you can work through this... I think I'm more inclined to trust myself and trust that I know what I'm doing" (107-YP). One parent provided an example of this:

> Having him home has been really good. Being given a task, I would sit with him and really spend that time to really remedy a lot of his anxiety around things and focusing on, all right, let's get your first fail out. Let's get one answer down that we know is wrong, just get it out. And then we can work out how we stuffed up and move from there. It's been really good to rebuild his trust in himself (221-AUTParent)

Young people also felt that they had become more resilient as a result of learning from home: "If I can handle relatively well quite a big change in my life and not completely break down, I think that's building on my character" (101-YP). Parents also reported having witnessed increased flexibility in their children ("expecting the unexpected sort of lesson is a bit of a silver lining"; 339-NAParent). They also saw their children "making some efforts to try to self-

soothe, by going for a walk each day just for a bit of fresh air and mental health" (305-NAParent) and "building some really good skills for high school, understanding around organising and pacing, prioritising" (309-NAParent).

Discussion

In this study, we sought to understand the educational experiences of autistic young people and their parents during a particularly unsettling time. While the transition to schooling from home was initially challenging for parents and children alike, and parents reported feeling that they and their children were unsupported by schools, many autistic children nevertheless reportedly flourished at home both personally and educationally after that initial period of transition. Our in-depth qualitative methods allowed us to pinpoint more precisely the potential reasons for this flourishing. Specifically, we identified three possible sources: the importance of connected, trusting relationships ('people'), the sensory and social safety of home ('place'), and the flexibility to pace and structure learning to suit the individual child ('time').

The results of our investigation might initially appear paradoxical. Undoubtedly autistic children and their parents struggled intensely with key aspects of the transition to schooling from home, especially given the notable absence of the supports that often accompany formal education. Our findings therefore corroborate reports from around the world, that parents of autistic children found remote learning challenging and did not feel they received adequate support to meet their children's academic and mental health needs (Latzer et al., 2021; Toseeb et al., 2020). Nonetheless, we found that some aspects of schooling from home appeared to have directly benefitted many. The time investment from parents, combined with the calmer, less time-intense, less sensory-overwhelming and less scheduled environment of the home, seemed to have contributed to a notable uplift in many children's experiences – experiences that parallel closely those of neurotypical children. For example, Ewing & Vu; (2021) analysis of public responses on Twitter during the initial phase of the pandemic revealed that parents often tweeted about the positive effects of learning from home, reportedly appreciating "'slowing down', being less busy with fewer distractions... with the time and opportunities to get to know their children better and appreciate them as individuals" (p. 81).

Although seemingly contradictory, the results of our study map remarkably well onto our knowledge about conventional schooling for autistic students. Autistic children and young people often struggle in formal educational institutions for a host of reasons (Goodall, 2018; Hodges et al., 2020). They regularly encounter sensory challenges within the physical school environment (Jones et al., 2020); complex social expectations and interactions (Mamas et al., 2021; Williams et al., 2019); social isolation and

bullying (Aubé et al., 2020; Maïano et al., 2016); a multitude of transitions (Makin et al., 2017; see also Nuske et al., 2019); low presumption of competence and expectations engendered in part by the predominance of a deficits-based model of autism (Biklen, 2020; Jorgensen, 2018); and limited attention to their specific needs, strengths and preferences (Makin et al., 2017), including being in the care of teachers and school staff who lack confidence in understanding how to include their autistic students (Roberts & Webster, 2020; Robertson et al., 2003). Such challenges often result in the educational exclusion of autistic students (Barnard et al., 2000; Brede et al., 2017; Lilley, 2015), as well as an increased incidence of school refusal (Munkhaugen et al., 2017; Ochi et al., 2020) and mental health complications (Crane et al., 2019).

For many autistic children, the persistent negative experiences of conventional schooling can be profoundly detrimental to their sense of self and wellbeing (Danker et al., 2019). It is perhaps less surprising than it first appears, then, that many autistic children and their parents found the mandatory learning-from-home context positive, after an initial period of adaptation. Despite the hugely suboptimal circumstances of lockdown schooling from home, the difficulties of this educational context were strikingly less detrimental than the barriers presented by conventional schooling for many autistic young people.

Critically, we identified three key pre-conditions for their positive remote learning experiences – people, place and time – that align with existing findings of what makes a successful educational experience for autistic students. The first such pre-condition is the building and maintaining of strong, trusting relationships between autistic students and their teachers. Autistic students report having better school experiences when they feel greater school connectedness and a sense of belonging (Anderson, 2020; Hodges et al., 2020), especially when fostered by deep connections with their teachers and other school staff (Makin et al., 2017), who celebrate their students' unique differences and meet their needs with innovative, strengths-based approaches (Hodges et al., 2020). Indeed, Brede et al. (2017) found that a mutually trusting student-teacher relationship was perceived to be the strongest predictor for educational re-engagement for a group of autistic learners who had been repeatedly excluded from school.

The importance of an educational process that is responsive to each individual child, and of having teachers and school staff that care deeply for the children who they teach, has been well articulated for neurotypical children (Noddings, 1984; Owens & Ennis, 2005). In the context of the classroom, 'caring' goes beyond the interpersonal pragmatics of a caring personality to imply a "space where teachers are invested in meeting the needs of individual children and where children are able to take responsibility for themselves and their own experience" (Wood, 2015, p. 260). This relational view of education is especially relevant for autistic children, given its attention to fulfilling needs (Murray, 2002; Noddings, 2010) and to valuing autonomy, interdependence, community, equity and inclusion (Tichnor-Wagner & Allen, 2016; Wood, 2015).

In the current learning-from-home context, parents appear to have provided just such educational 'care' during lockdowns – although, notably, this did not happen easily. While, for the most part, our parent participants were not trained teachers, their 'care' was often grounded in a profound knowledge of their child's strengths, interests and needs, an acceptance of their child's autistic identity, and a pre-existing mutually trusting relationship. Many parents appear therefore to have been able to offer their children the exact qualities of an ethics of care that characterise the most successful teacher-student relationships.

Unfortunately, these parent-child dynamics are in stark contrast to the lived reality of many autistic students' conventional schooling experiences. Most relationships between autistic students and their teachers are qualitatively poorer than those of similarly aged non-autistic students, or students with intellectual disabilities, and are often characterised by less closeness and more conflict (Blacher et al., 2014; Caplan et al., 2016; Robertson et al., 2003). From teachers' perspectives, autistic children's challenging or 'problem' behaviours increases conflict in the teacher-child relationship. Conversely, an autistic child's aptitude for engaging in expected (that is, 'non-autistic') social skills predicts a closer teacher-child relationship (Blacher et al., 2014; Caplan et al., 2016). In other words, the more 'autistic' a child acts in the classroom (e.g., the extent of their immersion in passions or externalised stereotypical behaviours), the more the relationship is defined by conflict, rather than care. Such persistent links between 'autisticness' and conflict may speak to a bidirectional misunderstanding (Milton, 2012) between teacher and child, which may be especially apparent for those students with complex or high support needs (Angell et al., 2009), and may well contribute to the autistic child's often significant sense of exclusion, rejection, social distress, and anxiety in the classroom (Fernandes, 2019).

Recent studies examining teachers' perspectives of remote learning during COVID-19 have reported the stress caused by the abrupt changes to their working practices, but also their deep concern for their particularly vulnerable students and their willingness "to go the extra mile" (Gudmundsdottir & Hathaway, 2020, p. 244; see also Bubb & Jones, 2020; Kim & Asbury, 2020; Schuck & Lambert, 2020), with many suggesting that they will have more "frequent and more authentic collaborative working" relationships in the future (Crane et al., 2021). Although we did not interview teachers in our study, our participants did not report experiencing this 'going the extra mile' caring from school staff. Rather, they highlighted how disappointed they were at the limited communication they received from schools, and the lack of learning material

that was engaging, accessible, or tailored to their children's developmental level. There are several possible explanations for this discrepancy in experiences across studies. First, teachers may have simply assumed that most parents were capable and had the capacity to shoulder the role of teaching from home. Given that teachers regularly refer to parental active- or even over-involvement in their autistic child's education (Schultz et al., 2016; Zablotsky et al., 2012), and those teachers often see individual parents adopting an advocacy role, it is possible that they (albeit mistakenly) equated parental involvement with teaching proficiency.

Second, our participants' negative experiences might have been fuelled by problems in communication. Azad et al.'s (2018) study on parent-teacher communication showed that neither parents nor teachers wanted to approach the other for greater involvement, and both felt frustrated by the others' perceived lack of confidence in their own expertise. In other words, it is possible that teachers (at least of our participants) felt that parents were the experts who did not need their input and support, and parents felt unable to ask for more support and input from teachers (cf. Bubb and Jones, 2020).

Third, it is possible that teachers were struggling themselves with coping with the pandemic and/or simply did not know how best to support autistic children remotely, especially when children began to disengage with online learning. Given that educators' level of knowledge and understanding of autism – as reported by both teachers and parents – is one potential explanation for poorer autistic student outcomes (Anderson, 2020; Majoko, 2016; O'Hagan et al., 2021; Roberts & Simpson, 2016), it is plausible that teachers might simply not have known what tangible steps to take to support their autistic students effectively at a distance (Haspel & Lauderdale-Littin, 2020). They might also have relied too heavily on stereotypes about autism, mistakenly assuming that their autistic students could not, or did not want, to connect with their teachers and peers during this time. They may have – again, mistakenly – assumed that lockdown would 'suit' autistic students, a narrative that was pervasive throughout the lockdowns (Eloise, 2020; Lamberts, 2020), without recognising the unique challenges the pandemic posed to their autistic students and their families (Friedman, 2021). It is deeply unfortunate that some of those advising teachers on how to engage autistic students in online 'distance' learning (Stenhoff et al., 2020) perpetuated such ideas, making no mention of maintaining strong, trusting relationships with their students or of preserving a sense of school inclusion and belonging.

One important additional finding was that many of our participants felt that there *was* a benefit to learning occurring within the locus of the safe physical space of the home. Classroom and school sensory stress and overload can be a source of deep distress for many autistic children (Anderson, 2020; Ashburner et al., 2008), and sensory demands are cited as a significant source of anxiety for autistic students in the classroom (O'Hagan et al., 2021). Our parents – and our autistic young people themselves – were able to manage their and their child's sensory environment proactively to prevent the overwhelm so often associated with the classroom. They reported enjoying the "quiet" that the lockdowns had created, and the more familiar, predictable social interactions encountered at home as opposed to school, all of which appeared to have positive implications for their learning and engagement.

The final pre-condition for participants' thriving during remote learning was time less structured by others. Children and young people were freed from the rigid and strictly imposed timing structures of formal schooling, which meant that learning could take place within more personalised, relevant structures to match the individual child and their needs and preferences on a particular day. Consequently, young people could choose when they needed breaks, choose how they organised their learning over a day and a week, adopt a pace that was most suited to their style of learning and capacity for continuous engagement, and take autonomy over the organisation of their day to fit their own, changing needs. The removal of prescribed or regulated timings seemed to offer our participants opportunities to regulate their own behaviour and ensure their wellbeing.

The benefits of less-regulated time are not unique to our participants. Bubb and Jones (2020), who elicited the views of Swedish neurotypical students during the initial phase of the pandemic, noted that they also reported the positive effects of "flexible school days when they organised their own daily routines, worked at their own pace and experienced independence" (p. 220). This premise is not a radical one: as has been argued by self-determination and causal agency theories (Chiu, 2021; Wehmeyer et al., 2021), all children (including autistic children and young people) prefer to have and actively require a developed sense of autonomy and flexibility to foster educational engagement (Assor, 2012; Deci et al., 1991). It is unsurprising, then, that when our autistic young people were able to exercise autonomy over their scheduling, they experienced increased engagement and wellbeing.

Perhaps what is surprising, though, is that our participants' experiences directly counter commonly-held assumptions about autistic people's reliance on externally imposed structure, routines, and rules (Banda & Grimmett, 2008; Kidder & McDonnell, 2015; McDonald et al., 2018; McLay et al., 2019). Many of our participants did crave routines, but their experiences also spoke to their concurrent drive to establish *their own* routines to match the individual rhythms of their interests and needs, which are often variable and fluid depending on the context. This observation is vital for a return to 'normal' school environments, which often are overly rigid and structured. Such approaches tend not to

foster children's autonomy (Späth & Jongsma, 2020), and are not responsive to the needs of individual children on a particular day in a particular context. Our participants' experiences indicate that educational staff need to be especially attentive to the issue of flexibility and autonomy for autistic children because they are so often denied opportunities to have a say in the decisions that affect them, including at school (Williams, 2018). Indeed, autistic students' need for autonomy is often sacrificed for their perceived need for predictable routine (Wilkenfeld & McCarthy, 2020). As felt by our participants, a self-prescribed routine, which responds to the student's fluctuating needs, presents its own kind of predictability and security.

One final issue noted by our participants was that their autistic children's schools routinely failed to provide any support for friendships during lockdown. This oversight may be due to prevailing stereotypes about diminished autistic social motivation (Chevallier et al., 2012; Itskovich et al., 2021; see Pellicano et al., 2021, for discussion). Nevertheless, this lack of support for social connection goes against key recommendations from a rapid evidence assessment on remote learning in the UK (Education Endowment Foundation, 2020), which concluded that interactions with peers can enhance motivation and improve academic outcomes, and that educators should maintain social connections between students where possible. The OECD has also highlighted the importance of maintaining relationships for the wellbeing of students and school staff, for both the connectedness it brings and the "normalcy and regularity" (2020, p. 8) it offers. It is worrying that autistic children's social needs were so routinely overlooked in our sample, a lapse that caused undue distress to the autistic young people we interviewed. More needs to be done to build and maintain autistic children's social connections as the pandemic continues and when it eases.

Limitations

There are several limitations of this study. First, our sample was self-selecting in nature. It is therefore possible that those who had particularly challenging experiences and/or who had received little support from their children's schools were more likely to respond to an invitation to voice their views in our study. That said, our large sample, particularly for a qualitative study, generated a nuanced set of findings that are compatible with existing research. Second, and relatedly, our findings may not be fully representative of the autistic population. Our parent participants reported themselves to be predominantly well educated and of white racial/ethnic background; their children largely attended mainstream education with little or no support; and our younger autistic participants were, for the most part, able to articulate their experiences. The challenges that parents and their children described may well be an *underestimate* of those experienced by those with spoken language difficulties or who require

higher levels of support, or those from more diverse backgrounds, especially those who are socially disadvantaged in some way, who have been hit the hardest by the COVID-19 pandemic and its associated restrictions (Creswell et al., 2021; Pellicano & Stears, 2020).

Conclusion

This is the only study, of which we are aware, to have captured the views of parents of autistic children and autistic young people themselves on remote learning during the initial phase of the COVID-19 pandemic. These findings have important implications for understanding how and when autistic children might thrive in institutional educational settings once the pandemic subsides. We hope that this study will spur further research on the relationships between autistic students and their teachers, the nature of the physical learning environment and the need to give autistic students greater flexibility and control over their time and the rhythm of their learning.

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Supplemental material

Supplemental material for this article is available online.

Notes

1. We use the terms 'schooling from home', 'learning from home' or 'remote learning' to distinguish the situation during the COVID-19 pandemic in which educational activities set by teachers were delivered or supervised by parents due to stay-at-home orders and temporary school closures imposed by authorities, from 'homeschooling', a deliberate choice by parents, who take responsibility for the education of their child, primarily in the home.
2. In the autistic community, identity-first language, e.g., 'autistic person', is often preferred to, and considered less stigmatizing than, person-first language, e.g., 'person with autism' (Gernsbacher, 2017; Kenny et al., 2016). We therefore use

identity-first language throughout, unless participants themselves have used person-first language, which we retain in their quotes.

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