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Family stress during the COVID-19 pandemic: a qualitative analysis

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ABSTRACT

Objective This study aimed to understand experiences with stress and coping strategies used among families in the COVID-19 pandemic.

Design/Setting This qualitative study took place in the pediatric outpatient clinics of a large academic medical centre in the USA between March and July of 2021.

Participants Parents (over the age of 18 years) of children under the age of 18 years were invited to complete a 30-minute semistructured interview.

Primary and secondary outcome measures Participants were asked about types of stressors experienced during the COVID-19 pandemic and coping strategies used. All interviews were audio recorded and transcribed. In the grounded theory tradition, transcripts underwent thematic analysis.

Results A total of 26 participants completed interviews, including 88% (n=23) women, 85% (n=22) reported having children under the age of 10 years and 65% (n=17) were 30–50 years of age. Themes that emerged included the compounding effect of COVID-19 stressors, in which participants described multiple, intersecting sources of stress. One parent noted, “I worked two different jobs, since the other job I had counted on working, I lost because of COVID. And so, working from home, also with the kids, was stressful.” The second theme reflected the challenges for children with virtual schooling due to decreased educational support. The third theme was the need for parental self-care. The fourth theme was finding the silver lining in which parents noted unforeseen opportunities for resilience by spending time in nature and activities promoting family bonding.

Conclusions Parents indicated need for self-care, connecting with their child(ren) and spending time in nature. Future work should develop approaches to support families in these areas when facing complex stressors, especially during a pandemic or other times of crisis.

STRENGTHS AND LIMITATIONS OF THIS STUDY

Thematic analysis of qualitative interviews with parents revealed novel themes on the impact of pandemic on family life.

This study may not fully capture the experiences of parents of adolescents, as most of the study’s participants had children under the age of 10 years.

The COVID-19 pandemic’s impact on our society has been rapidly changing and the results of this study only reflect the experiences of parents during one point in time during the pandemic.

Increased risk of mental health issues in children and parents. It is important to understand the effects of COVID-19 mitigation strategies and the impact it has had on children and parents.

The multitude of stressors faced by parents and children during the COVID-19 pandemic may pose risks for their mental and physical health. A 2021 meta-analysis examining studies of child and adolescent mental health indicates that one in five children globally are experiencing clinically elevated depression symptoms and one in four children are experiencing clinically elevated anxiety symptoms. Given the risks the COVID-19 pandemic may pose for parents’ and children’s mental and physical health, it is important to understand specific factors that may place parents and children at risk.

One factor placing some families at risk during the COVID-19 and other pandemics may be stress. A family member’s stress may directly increase that of another, and external stress may lead to compromised caregiving. Additionally, structural and social factors disproportionately affect stress levels of families of lower socioeconomic status, as well as those of minority racial or ethnic communities. Thus, it is important to understand the stressors that all parents have experienced during the COVID-19 pandemic.

While there have been several quantitative studies of parents’ stress during the pandemic, there has been little qualitative research gaining a deep understanding of

INTRODUCTION

As of September 2022, over 96 million COVID-19 cases have been reported in the USA with over 1 million related deaths. Since the onset of the pandemic, the USA has implemented policies to curb the surge of COVID-19 spread, such as temporary school closures, stay-at-home orders and periods of quarantine. These mitigation efforts have been associated with reductions in the COVID-19 infection rates in many states and around the world but may contribute to
parent perspectives on stressors and coping experiences during the virtual school year of the COVID-19 pandemic. This study aimed to understand parents’ experiences with stress and coping strategies used among families with children during the COVID-19 pandemic.

**METHODS**

**Design and setting**

This study sought to gain detailed parent perspectives on their experiences with stress and coping strategies during the COVID-19 pandemic. Qualitative interviews were used, since they facilitate in-depth descriptions of experiences and perspectives about a specific topic from participants. This study was guided by grounded theory, which involves inductively developing coding categories and themes based on review of study data. Interviews were conducted among parents of paediatric patients in a large clinic in the Midwest between March and July of 2021.

**Patient and public involvement**

Patients and the public were not involved in the design, conduct, reporting or dissemination of this research.

**Participants**

This study sought to recruit a convenience sample of parents of children with and without chronic illnesses, so that potentially unique COVID-19-related stress and coping strategies could be represented. Thus, recruitment took place through flyers placed at a general paediatrics clinic that was part of a large, urban, academic medical centre in the Midwest, as well as an allergy clinic in the same urban area, which recruited parents of children with asthma. Eligible prospective participants included parents of children who were 17 years or younger.

**Facilitator guide and training**

A focused facilitator interview guide (a script of interviewer instructions and questions) was developed to explore parents’ stress and coping strategies used during the COVID-19 pandemic. Open-ended questions were asked to understand family stressors and additional questions were asked focusing on specific possible stressors, including housing and job insecurity and virtual schooling.

Demographic measures included gender and age of parents, as well as number and ages of children, and whether their child had a diagnosis of asthma. Three trained investigators completed interviews. Training consisted of instructional guides about qualitative interviews, observing at least one qualitative interview and completing practice interviews with feedback from an experienced trainer. The interviewers did not know the interviewees.

**Virtual interviews**

Interviews were conducted using the virtual conferencing platform Webex. Previous studies have successfully used phone interviews to discuss sensitive health information. Toward the objectives of mirroring a phone interview approach and encouraging openness from participants, video cameras were turned off. Participants did not have previous relationships with the research team but were given information about the study purpose. Participants were asked to complete the interview in a private, comfortable location and were compensated a $30 stipend. Interviews ranged in duration from 15 to 45 min. All interviews were audio recorded and transcribed using the Webex program’s automatic transcription feature. Transcripts were then manually cleaned to ensure accuracy.

**ANALYSIS**

All cleaned interview transcripts underwent thematic analysis. Theoretical saturation was assessed. Throughout data collection, investigators reviewed each transcript toward identifying the point at which no new ideas and themes emerged. Theoretical saturation was determined to have occurred after 26 interviews.

Four trained, experienced investigators conducted thematic analysis using the constant comparative method and the software program Dedoose. Investigators included two undergraduate student researchers (one male and one female) whose main role was to serve as trained coders. A third investigator (female), who was a trained coder and paediatrician with a medical degree, lent expertise from that lens. A fourth investigator, who was a trained coder with a master’s degree, brought methodological expertise. Inductive reasoning was used to develop a codebook and identify themes in the grounded theory tradition. Thematic analysis included three phases.

In the first phase, transcripts were reviewed by all four investigators, who worked toward developing an initial codebook applicable to all transcripts. Investigators independently reviewed each transcript and developed individual codebooks. The investigators then met and compared individual codebooks to develop a merged codebook incorporating all four investigators’ perspectives. The resultant merged codebook included superordinate codes, which were major concepts that emerged from the data, as well as sub-ordinate codes, which were subcategories of the super-ordinate codes.

In the second phase of thematic analysis, investigators refined the codebook and then applied it to all transcripts. Two investigators independently coded the same three transcripts and compared their respective coded transcripts toward refinement of the codebook to improve consistency. Code names and definitions were then revised. Investigators independently coded the remaining transcripts, holding regular meetings to address whether additional codes were needed, and to arrive at a consensus about excerpts that did not clearly fit into super-ordinate or sub-ordinate codes. A third investigator served as a tie breaker when there were disagreements.
In the third phase, investigators synthesised codes to develop themes. All four investigators reread coded content, and individually, each collapsed super-ordinate and sub-ordinate codes into larger groups. Investigators then met and developed a merged list of collapsed codes. Through continued reflection and discussion, themes were identified. A consensus was used to determine theme names and representative quotations.

RESULTS
Twenty-six participants completed this qualitative study; they were 88.5% (n=23) female and 65.4% (n=17) between the ages of 36 and 50 years. The mean participant age was 39.23 years (SD 6.08). About 57.7% (n=15) of participants reported having more than one child at home; 73.1% (n=19) reported having a child/children between 0 and 5 years of age; and 53.9% (n=14) reported having a child/children 6–10 years of age. See table 1 for full demographic data.

The major themes were as follows: (1) intersecting stressors for parents: job stress, lack of childcare and increased screen time; (2) stressors for both parents and children due to virtual schooling; (3) the need for self-care; (4) finding the silver lining in being outdoors in nature and spending time together as a family to mitigate stress and promote coping during the pandemic.

Intersecting stressors for parents: job stress, lack of child care, increased screen time
In the first theme, parents described how sources of stress such as job stress, lack of childcare and increased screen time for children intersected and made each more difficult to navigate.

Job stress
Participants described job stress as a stressor. Over half of participants (n=16, 61%) reported job stress during the pandemic due to losing a job, changing jobs or working in a different way. One participant shared, “We just had to relearn schedules and how to make things flow so that everybody got to do what they needed to do during the day, especially us parents having to work from home.” Another commented, “The problem with working from home is that you can always be working.” Another participant described their work as being in a state of flux: “Our jobs have been in a constant state of change. Going remote, being transitioned, for me, I work in health care. So, being moved and reallocated I’m learning a lot of new workflows, [and working] different hours.” Similarly, one participant commented, “I am a teacher at the [redacted] school, and the pandemic impacted our ability to teach in person. So, we had to really change all of our curriculum to being virtual instead of in person. So, it was a lot, a big investment to figure out new ways to teach. It definitely changed all of our jobs.”

Lack of childcare
Participants often described how their job stress intersected with a lack of childcare. The stress of having children at home while working was succinctly described by one participant: ‘How do you do your job and how do you take care of your kid at the same time?’ One participant described the way their life shifted without childcare: ‘We were used to having full time childcare and then we had a period of about 4 or 5 months where we didn’t have any childcare. So, I think that just made balancing work and childcare, or taking care of our child with both of us working full time, a little bit more challenging.’ Another participant described how their life changed to take care of their kids: ‘We had to revolve our lives around the kids.

Table 1  Demographic and descriptive information for mindfulness qualitative interviews

<table>
<thead>
<tr>
<th>Demographic characteristic (N=26)</th>
<th>n (%)</th>
</tr>
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<tbody>
<tr>
<td>Gender</td>
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</tr>
<tr>
<td>Female</td>
<td>23 (88.46)</td>
</tr>
<tr>
<td>Male</td>
<td>3 (11.54)</td>
</tr>
<tr>
<td>Other</td>
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</tr>
<tr>
<td>Participant age</td>
<td></td>
</tr>
<tr>
<td>18–35</td>
<td>8 (30.77)</td>
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<tr>
<td>36–50</td>
<td>17 (65.38)</td>
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<tr>
<td>51+</td>
<td>1 (3.85)</td>
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<tr>
<td>Participant mean age (SD)</td>
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<td>Mean (SD)</td>
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</tr>
<tr>
<td>Number of parents with any number of children ages</td>
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<tr>
<td>0–5</td>
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</tr>
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<td>6–10</td>
<td>14 (53.85)</td>
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<td>11–15</td>
<td>4 (15.38)</td>
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<tr>
<td>Number of children reported in each household</td>
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</tr>
<tr>
<td>1</td>
<td>11 (42.30)</td>
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<tr>
<td>2</td>
<td>12 (46.15)</td>
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<td>3</td>
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<tr>
<td>5</td>
<td>1 (3.85)</td>
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<tr>
<td>Mean number of children reported in each household</td>
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<tr>
<td>Mean (SD)</td>
<td>1.81 (0.98)</td>
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<tr>
<td>Number of parents reported with children with chronic medical condition</td>
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<td>No</td>
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<td>Participants who experienced housing insecurity</td>
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<td>Participants who experienced job stress</td>
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<td>Yes</td>
<td>16 (61.54)</td>
</tr>
<tr>
<td>No</td>
<td>10 (38.46)</td>
</tr>
</tbody>
</table>
which is completely fine, and finding a new normal for them was 100% our priority. But it was a struggle.' Intersecting stressors sometimes lead to unique solutions to accomplish work: ‘I ended up writing a 60-page dissertation proposal by sitting in my car in a church parking lot.’

**Increased screen time**

Participants reported that the intersection of job stress and lack of childcare led to more screen time for children. One participant said, “When I work from home and the kids are here, they’re kind of left to their own devices because my husband works a regular full workday. And if I don’t have a babysitter or something, they’re going to have to play on their own while I’m on a Zoom call. A lot of times, they default to wanting to be on their iPad, and if I’m in a meeting where they have to be quiet, that has to be the necessary thing.” One participant described guilt about children using screens while parents are busy: “I feel guilty because there was so much screen time this year, especially with school.” Some participants expressed concerns about negative consequences of too much screen time. For example, one participant described, “We are on our devices a lot more. And I think I’ve noticed that my children have been a little more irritable and just [having] more issues with behavior.”

**Stressors for both parents and children due to virtual schooling**

In the second theme, participants reported challenges in assisting their children with virtual schooling and finding quiet spaces for all family members to work.

**Children overwhelmed**

Participants reported children feeling overwhelmed during the virtual school day with excessive screen time, lack of in-person social interactions and lack of educational support. One participant stated, “I recall my daughter’s first day with her teacher, and she just rested her head on the kitchen table and said, ‘This is terrible. It’s just too much’. It was like the burnout that you’d see on a corporate attorney’s face at the eleventh hour, and it was sad.” Another participant shared, “I was just shocked that I was just shocked that we went from kind of really protecting our kids from not giving them a whole lot of screen time to just watching them absolutely burn out on a lot of screen time on zoom meetings for half a day.”

**Parents as teachers**

Participants often described themselves functioning as teachers supervising their children through the virtual school day, often while multitasking their own workday. One participant reported, “Both boys have just, they don’t learn well talking through a screen, so they really needed someone to sit down with them and go through their assignments and help them along that way.” Many participants shared that they did not feel prepared to be a co-teacher; one participant said, “Trying to make sure she’s learning what she’s supposed to be learning, with me as her teacher, has been stressful.” Other participants lamented that their children were not learning as much during the virtual school day. One participant reported that there was ‘a lack of forward momentum in her academic abilities just because she wasn’t in person with somebody, encouraging her to be a little bit more motivated’. Another participant commented that their child has ‘improved very little since the end of kindergarten to the end of 1st grade’. One participant summed up the stress of serving as a teacher by saying, “I would just say, with a large percentage of the education relying on my shoulders, it’s been stressful for me. And then, just trying to make sure she’s learning what she’s supposed to be learning, with me as her teacher, has been stressful.”

**Missing out on school support and peers**

Participants described children missing out on educational support that is typically available through in-person learning. One participant commented that their children did not receive speech therapy and support from a reading specialist during the pandemic though they had that support when school was in person. Another participant lamented, “My one son has an IEP [Individualised Education Plan], and I don’t really think he got any extra help during that time.” Participants also reported difficulty in peer interactions. One participant commented that ‘It was very difficult to develop social interactions in a new school system without being physically with the other students’.

**Technology issues and overload**

Participants described the technological issues associated with the educational learning platforms, including inconsistent Wi-Fi. Participants reported that excess screen time was difficult to monitor, and one participant noted, “There’s been just a continuous need to reset boundaries around that.” Another participant commented, “I was just shocked that we went from kind of really protecting our kids from not giving them a whole lot of screen time to just watching them absolutely burn out on a lot of screen time on zoom meetings for half a day.”

**The need for self-care**

In the third theme, participants acknowledged the need for self-care during the COVID-19 pandemic. Specifically, addressing physical health and mental health, and engaging in hobbies were methods that parents felt were beneficial, but at times hard to sustain.

**Physical health**

Participants reported taking time to be alone and exercising more by hiking, biking, taking more walks and going to the gym. One participant reported that ‘physical activity usually helps de-escalate any stress I have’. Another participant reported, “I am taking more walks. I am working remotely and have the ability to do that.” Similarly, one participant said, “I enjoy exercising, so I tend to run or ride my bike most days, probably about 5 or 6 times a week.”
**Mental health**

In discussing mental health, one participant reported the importance of sleep and solitude: ‘The kindest gift I can give myself is a decent night’s sleep, even though my inclination is to stay up until 2:00 AM and get work done, but we’re all up at 6:30 or 7:00, so, it’s counterproductive when I do that… I’m never ever alone. I miss being alone so much’. Another participant remarked that they appreciated ‘Just being alone…I think that’s really a helpful thing for your own person, to be alone for a little bit and get in your thoughts’. Some participants described mindfulness as beneficial: ‘Mindfulness has definitely helped me stay calm’. Another participant remarked that when they feel completely overwhelmed, they take ‘…15 minutes to just breathe, think about what brings me joy, gratitude’. One participant described how they found their walking, running and swimming activities to be ‘very meditative’.

**Hobbies**

Participants also described engaging in hobbies such as gardening, cooking and reading as important parts of self-care. One participant remarked, ‘I love cooking and cutting out the stress of commuting for my job… I have more time to spend cooking, and we’re able to make more elaborate meals, and it’s just a really fun experience in doing that!’ Another participant shared, ‘I suppose gardening is a new thing that I’m interested in. It was very much related to my love of food. I only garden for edible things, but food has really kind of been a staple of my culture and my life, and so those kinds of hobbies outside of work have been consistent for me, even pre-pandemic. Continuing those during the pandemic, I think, probably gave me a sense of normalcy, when everything else in the world wasn’t that normal.’

**Finding the silver lining: spending time in nature and with the family**

A fourth theme was engaging in simple experiences in nature and spending time together as a family to stay resilient through the pandemic.

**Immersion in nature**

Participants expressed simple strategies to immerse oneself in nature to mitigate stress. One participant shared, ‘We pack up and go to the farm, and just enjoy the animals and the simplicity of that.’ Another participant indicated the importance of nature to combat the stress of excessive screen time by stating: ‘Typically, I just go outside and just sit. I know it sounds so lame, but I am so engaged throughout the day, and staring at a screen all day, that I really have learned that I just truly enjoy looking at flowers, walking around, taking a breath.’ One participant described that sitting and being still in nature ‘brings me back to center and just feeling the air on my face, feeling the sun on my skin. I mean, that that truly brings me back to center.’

**Family activities**

Participants reported taking more walks, riding bikes, gardening, cooking, having barbecues/backyard fun and going to local playgrounds. In addition, participants described an increase in other family activities such as hiking, camping, boating, skiing and exploring state parks and other outdoor areas such as the farmer’s markets, the zoo and the arboretum. While participants described these activities as centring for themselves, they also viewed them as mindful activities that were refreshing. One participant recalled spending time outdoors as a ‘simple way to kind of re-center, regroup’, while another viewed family appreciation of nature as a valuable tool during the pandemic: ‘We have a great sunset from our house, and we physically try to make the kids just stop and watch the sunset. I mean, maybe that’s not every day, but often, I would say, as far as just being aware of and appreciating our surroundings. We’re kind of a big nature family. We really try to incorporate that in everything we do with the kids.’

**DISCUSSION**

This study examined parents’ views of stress and coping strategies during the COVID-19 pandemic. Four themes emerged: intersecting stressors for parents: job stress, lack of childcare and increased screen time; stress for both parents and children due to virtual schooling; the need for parents to engage in self-care; and finding the silver lining in being outdoors in nature and spending time together as a family.

A critical finding was that many participants reported multiple compounding stressors during the COVID-19 pandemic. These compounded stressors involved job stress, such as the adjustment to parents’ own virtual work, which was exacerbated by the need to assist children with virtual school while childcare support was lacking. Overall, many parents described themselves as being overwhelmed by these inter-related stressors during the pandemic. This finding is consistent with research which indicates that early in the COVID-19 pandemic, stress on family cohesion was mediated by the co-parental conflict, impacted by the stress of parenting and work demands and financial stress. This is important since parental stress can lead to harsh parenting, which may negatively impact the child. In fact, recent studies show that in parents with higher perceived stress during the COVID-19 pandemic, there was an associated higher child abuse potential. Findings suggest the importance of interventions targeting parental stress during times of crisis to ensure child and family well-being.

A second major finding was that participants reported coordinating children’s virtual schooling was a stressor for parents and children. Participants commented on how working during COVID-19 while trying to help their child with online schooling was stressful. This is consistent with studies demonstrating parental stress that was increased during the weekdays compared with the weekends during
the pandemic.\textsuperscript{13} Additionally, parents’ skills and comfort with technology, the number of hours that children were on screens as well as access to broadband contributed to the stress of virtual schooling. According to a recent online survey, the number of hours that children were on screens (watching televisions and playing video games) during the pandemic increased significantly from 2.6 to 5.9 hours a day during pandemic-related school closures.\textsuperscript{12} Lower parent involvement and parental stress were associated with increased screen time usage in children from lower household income.\textsuperscript{12}

Parents in our study were also concerned about broadband issues, consistent with recent studies indicating that 26% of adults in the USA worried a lot or some about paying for their high-speed internet and 90% acknowledging that the internet has been essential or important for them personally during the coronavirus outbreak.\textsuperscript{21} Furthermore, technology inequities are consistent with educational inequities that have been recognised to exist within our national educational system\textsuperscript{22} and may have been heightened during the pandemic. A recent study indicates that for 59% of families with lower incomes, children face a lack of reliable internet at home, no computer at home or needing to use a smartphone to complete schoolwork.\textsuperscript{23} Thus, improving access to broadband may be of particular importance during a pandemic especially for families with lower incomes.

The third theme was the need for self-care to mitigate the stress of parenting during the pandemic. While participants described numerous ways that they engaged in self-care, one approach was to seek solitude. This finding may reflect compounding stressors, making it difficult for parents to find time for themselves. Thus, parents may have an overarching need for solitude or time away from their family, given the limitations the pandemic placed on their free time.

Additionally, some participants mentioned mindfulness as a way to provide self-care. Mindfulness is defined as ‘paying attention in a particular way: on purpose, in the present moment and non-judgementally’.\textsuperscript{24} Participants described mindful activities such as sitting still, reflecting, breathing, meditating, doing yoga and walking meditation as being beneficial. Recent studies indicate that mindfulness-based practices such as yoga and meditation are increasing, and over 12%–14% of workers in the USA have engaged in a mindful practice (meditation, tai chi, qigong or yoga) in the past year.\textsuperscript{25} Findings suggest that some parents may already be aware of beneficial coping strategies to use during pandemics. A recent study showed that mindful emotion regulation of US parents was directly associated with increased perceived social support and decreased loneliness during the COVID-19 pandemic.\textsuperscript{14} With the interest in parents using mindfulness as self-care and the possible beneficial effects of perceived increased support and decreased loneliness, an opportunity exists to support parents with mindfulness skills.

The fourth theme was that many participants described finding the silver lining by spending time in nature and with family. One possible explanation for this is that being outdoors in nature offered safe relief from the many stressors, such as work and computer screens, posed by the pandemic. Additionally, outdoor activities were promoted as a way to stay active and maximise social distancing to avoid being exposed to the coronavirus. These activities may have benefited the overall physical and mental health of families during the pandemic since previous research suggests that nature positively influences mental health of children and adolescents.\textsuperscript{26–29} Thus, while families spent more time outdoors in an effort to avoid crowded indoor public spaces during the pandemic, current research supports that spending time outdoors is beneficial for physical and mental health.

There were several limitations to this study. First, this study may not fully capture the experiences of parents of adolescents, as most of the study’s participants had children under the age of 10 years. Future studies should examine the pandemic experiences of parents of adolescents. Another potential limitation is that social desirability bias may have influenced some participants to respond in favourable ways to the interviewer. Additionally, for the participants in this study, we did not do member checking for the qualitative data. Finally, few participants experienced housing insecurity or job loss, and findings may not reflect the experiences of individuals who experienced these significant stressors. Future studies are needed on this topic. The COVID-19 pandemic’s impact on our society has been rapidly changing and the results of this study only reflect the experiences of parents during one point in time during the pandemic.

CONCLUSION
This study suggests that even when there is job and housing security, parents can be stretched thin and become overwhelmed while serving as workers, caregivers and teachers simultaneously. This stress may independently impact the health of parents and children and may also impact the relational health between family members. Paediatricians and other healthcare professionals may consider screening to identify these intersecting parent stressors during pandemics and directing families to available national and local community resources. Healthcare professionals may recommend the use of evidence-based approaches, such as mindfulness practices and time in nature, to mitigate the impact of pandemic-related stress on families.

Contributors MM—concept and design, planning, analysis, interpretation of data, writing and final approval. MM is responsible for the overall content as guarantor. BK—concept and design, planning, analysis, interpretation of data, writing and final approval. HR—interpretation of data, analysis, writing and final approval. LE—acquisition of data, analysis, interpretation of data, writing and final approval.

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Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not required.

Ethics approval This study involves human participants and the University of Wisconsin Education and Social/Behavioral Sciences Institutional Review Board approved this study (ID 2020-1628).

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement All data relevant to the study are included in the article or uploaded as supplemental information.

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