

Article

U.S. Parents' Reports of Assisting Their Children with Distance Learning during COVID-19

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Abstract: COVID-19 has caused increased stress among U.S. adults, with many reporting concerns assisting their children with distance learning due to school closures. This study surveyed U.S. parents—most of whom were middle-aged, White, affluent, and female—to learn what types of distance learning activities parents engaged in with their children during COVID-19; whether these types of activities varied by the child's age; and whether there was an association between engaging in these activities and stress. Most parents engaged in Monitoring, Teaching or Technology support activities with their children. Although these activities varied by child's age, parents who reported engaging in any distance learning activity reported increased stress.

Keywords: coronavirus; distance learning; stress; education



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1. Introduction

According to the U.S. Census [1], 93% percent of school-age children in the United States engaged in some form of distance learning during COVID-19 while in-person classes were suspended. This dependence on distance learning raises many questions about the role of parents in assisting their children with distance learning and the relation between aspects of distance learning and stress [2]. This paper addresses the impact of COVID-19 on the role that parents reported playing in their children's education.

Studies investigating aspects of the home learning environment during COVID-19 have focused primarily on children in preschool and the first few years of school [3–6]. However, the demands and expectations of schooling change as children age. Therefore, it is critical to expand the focus from the early years of school through twelfth grade. Additionally, it is important to learn which, if any, distance learning activities are associated with stress for parents [6,7]. Such information will be helpful and important as in-person school resumes. Educators may use this information to plan and tailor educational programs based on the learning experiences children had during the COVID-19 pandemic. Policymakers may use this information to retain the effective aspects of virtual learning even after the pandemic has ended [2].

Educators and psychologists have long talked about the importance of children's home and school environments for their well-being [8,9]. However, we do not know how Bronfenbrenner and Morris' [10] "home microsystem" (i.e., home context) during COVID-19 interacts with the "macrosystem" (i.e., societal influences) and the "chronosystem" (i.e., changes over time).

As Benner and Mistry [11] noted, macro-level crises, such as the COVID-19 pandemic, can and do have long-lasting effects on children's development. They describe life course theory [12] and its relevance for understanding children's development during and following the COVID-19 pandemic. "Human development is viewed as a tapestry of intertwined

developmental trajectories . . . with critical transition points . . . and linked lives . . . , all of which are influenced by young people's daily ecological contexts, larger social structures and the broader sociohistorical context (p. 236)." Thus, it is critical to document the home learning environments of children of different ages during the COVID-19 pandemic as their home learning experiences during COVID-19 may well predict their subsequent academic trajectories [13] even after in-person classes reopen. It also is important to document the impact of distance learning on parents' well-being.

We turn next to a brief summary of children's home learning environments. This is followed by a review of parents' stress during COVID-19. We conclude the Introduction with information about the present study.

1.1. Children's Home Learning Environment

Several theorists have discussed the importance of parents' involvement in their children's education and the reasons for their involvement [14–18]. For example, parents may become involved in their children's education if they believe it is part of their parenting role, if they have the time and skills to do so, and if their children's school makes them feel welcome [19]. Although not everyone finds positive effects from parents' involvement [20], there do appear to be at least small positive effects across most studies [8,9,21,22]. Studies also have found some differences in the academic domains in which families are involved with their children. Although most parents view it as important to have their children do literacy and mathematics activities at home and to assist their children with these, they focus more on literacy than mathematics [23]. Perhaps relatedly, parents feel more confident to assist their children with literacy than mathematics activities [5,24].

It is important to realize that the research mentioned thus far in this section included mainly children in preschool and early elementary school. In addition, this research predates the COVID-19 pandemic, so these children were attending in-person classes and parents were supplementing the learning their children received in school. Thus, parental expectations pre-COVID-19 presumably differed from during COVID-19 when parents were asked to play a much greater role because classes were meeting virtually. Moreover, how parents interact with older children may differ from how they interact with younger ones during distance learning.

Stites et al. [6] conducted a different online survey with parents of preschoolers to document the types of distance learning activities they did and their thoughts about this form of instruction. They distributed their survey on various list-serves catering to preschool parents and to preschools. About 162 parents, most of whom were mothers, White and highly educated, completed an online Qualtrics survey. The majority reported engaging in more literacy than mathematics activities with their children. In response to questions about difficulties parents had with distance learning, about 30% reported not receiving sufficient information from the children's teachers to appropriately facilitate their children's educational growth and being stressed from needing to engage in distance learning among, other issues (financial and vocational issues, lack of childcare). Similar concerns have been noted by teachers of preschoolers and by parents of young children with special needs [25,26].

1.2. Parents' Stress during COVID-19

There is a growing body of research about the stressors families are facing during COVID-19 [27–31]. For example, Prime et al. [30] posited that the social disruptions families experienced during the pandemic can adversely impact the short-term and long-term well-being of the family. Relatedly, Adams et al. [32], using a short-term longitudinal design with 433 parents of children between the ages of 5 and 18 years, found that parent-reported stress increased during COVID-19. Note that their initial assessment before COVID-19 was based on parents' retrospective reports. One of the commonly reported stressors was online schooling demands. Interestingly, however, parent-reported stress decreased when assessed later during the pandemic, although it was still higher than before the onset

of COVID-19. Why parents' stress decreased is unclear. Is it because they adjusted to demands placed upon them or were they just doing fewer activities with their children? Barnett and Jung's [33] results with 981 U.S. parents of children eight years and younger showed a decrease in parent-reported reading activities over time. Seventy-one percent of parents reported reading to their children at least three times a week in December 2020 (during COVID-19) compared to 85% of the parents during the prior spring (at the start of COVID-19).

A related line of research has considered parents' anxiety assisting children with homework [34,35]. This can be a source of stress for parents depending upon their confidence with the topic and other issues. For example, Maloney et al. [36] found that parents who were anxious about their own mathematics skills had children who became more anxious when they worked together on homework.

The current authors used an online survey with 832 U.S. participants during May 2020 to assess the relation between stress experienced during COVID and alcohol consumption [37]. Most of the respondents were female and White. Respondents who reported being under more stress during COVID-19 consumed a greater number of alcoholic beverages and drank on a greater number of days than those who did not report experiencing stress. Commonly reported stressors included having to socially distance from others, having less time to spend with family members and friends, and schools and daycare centers being closed.

Despite the research on stressors experienced by families during the pandemic, there have been few empirical reports about what learning activities children are doing at home during this time or its relation to parental stress. Given the important role that parents play in their children's education, we need to learn what children were doing at home during the COVID-19 pandemic and its relation to parental stress.

1.3. The Present Study

Although there has been an increase in research on the impact of COVID-19 on U.S. families, we still know very little about what occurred during distance learning with school-age children and its impact on parents. This study addressed three primary research questions. One, what types of activities do parents report engaging in during COVID-19 to assist their children with distance learning? We expected that parents would typically engage in Monitoring, Teaching, and Technology with their children. Based on this, we expected that these forms of interactions would be more prevalent than other types of interactions. Two, do the types of distance learning activities vary with the age of the child? We expected that parents of younger children would be more likely to report assisting with teaching than parents of older children. Three, is there an association between the type of distance learning activity parents reported engaging in and stress reported by them? Although we expected distance learning would cause parents some stress, given that there is not much research in this area, we were unable to formulate a hypothesis on which specific category of activity would be more stressful.

The results of this study will add to the growing body of knowledge on the impact of COVID-19 on families' educational activities. Developing a more complete picture of what occurred during COVID-19 will allow us to better understand children's development moving forward. We also anticipate that distance learning will continue in some manner even after COVID-19 is no longer the same threat it once was. Therefore, understanding the role of parents in such circumstances is important. It also is important to understand the fuller ecology of the family. That is, we know very little about the impact of parent involvement in children's learning on the parents. This study will provide information about what is stressful for them during distance learning.

2. Materials and Methods

2.1. Participants

The participants in this study came from a larger study ($N = 832$) of respondents to an online survey about stress during COVID-19 and alcohol use [37]. Respondents in the larger study were recruited from across the U.S. through social media sites (Facebook, Twitter, Instagram) and emails sent to various list-serves (e.g., U.S. Alcohol Policy Alliance, Alcohol, Tobacco, and Other Drugs' section of the American Public Health Association) in May 2020. Participants were offered a chance to win one of fifteen USD 25 Amazon gifts cards.

We restricted participants in the present study to those who responded to the questionnaire item affirming that they had children younger than 18 years old currently living at home ($N = 361$). Nearly three-fourths (78%) of those parents ($n = 281$) reported engaging in distance learning during COVID-19. Of those, 237 (84%) responded to a question about what activities they did for distance learning. Almost all the participants who responded were mothers (90%), White (87%), had at least earned a college degree (96%), and had incomes of USD 100,000 or more (81%; Table 1. The mean age of the sample in this study was 41.23 ($SD = 6.23$) years. The demographics of the participants included in this study were representative of the full sample surveyed but not of the broader U.S. population. We discuss this limitation in the Discussion section.

Table 1. Demographics.

Variable	Mean (SD) or %
Mothers	90%
Race–White	87%
Ethnicity–Hispanic	6%
Average Age of Parent (Years)	41 (6.20)
Annual Income \geq USD 100k	81%
Highest Level of Parent Education \geq Bachelor's Degree	96%

Nearly half of the participants had at least one child who was under the age of 6 years ($n = 175$; 49%) or at least one child who was between the ages of 6 and 11 years ($n = 169$; 47%). Almost a third of parents ($n = 99$; 27%) had at least one child who was between the ages of 12 and 17 years. Given that over half of the participants (61%) had multiple children who were often in different age groups, these numbers add up to more than the number of participants completing the survey.

2.2. Procedure

Our study was approved as exempt by our university's IRB (Protocol #: Y20SS20205). After receiving IRB approval, we sent a link to an online Qualtrics survey to the various list-serves mentioned above and also posted it on social media sites. Participants read the informed consent when they opened the link to the survey and were told that continuing with the survey meant they gave consent. The survey consisted of 55 questions that all participants were asked to answer. Those participants who reported that they had at least one child under the age of 18 currently living with them were asked to answer up to six additional questions about their experiences with distance learning during COVID-19. After completing the survey, participants were told that they could enter a raffle to win USD 25 (see description above) by opening a new form and providing their contact information.

2.3. Measures

Stress during COVID-19. We adapted The Pandemic Stress Index [38], a validated measure, and used the three-question measure to evaluate parental stress during COVID-19. The first question asked parents "How much is/did COVID-19 (coronavirus) impact your day-to-day life?" From the 5 response options, we created a dichotomous variable

with “0” for those who answered “not at all”, “a little”, or “much” and “1” for those who answered “very much” or “extremely”. The second question in the Index asked “how did COVID-19 impact your day-to-day life” but as the given answer choices (e.g., “increased food insecurity, employment/salary loss, increased health issues, etc.) were not directly relevant to distance learning we did not include that question in this study. The third question in the Index asked participants about any other issues concerning them during COVID-19. Participants were given six options and told to check all that apply. Most of the options were not directly relevant to this study (e.g., paying bills, getting medical assistance, family sickness, etc.) and therefore were not included in the analysis. We coded the one relevant option (i.e., “Not knowing what to do to support your children’s distance learning”) as “1” if participants checked that this issue concerned them, and “0” otherwise.

Distance learning activities engaged in with their children. Participants who answered that they had children under the age of 18 currently living with them, were then asked how many children lived in the household who were “age 5 years or under”, “between the ages of 6 and 11 years” and “between the ages of 12 and 17 years.” We created a variable for each of these age groups and also created a dichotomous variable indicating whether the parent had one child (“0”) or more than one child (“1”). Participants then were asked to answer two yes/no questions about whether their children were doing distance learning due to COVID-19 and whether they (the parents) had to assist their children with the distance learning. If participants answered yes to each of these questions, they were directed to answer an open-ended question that asked “What are you doing to assist each of your children with distance learning? <Please specify for each child>”.

Demographic questions. Participants were also asked to answer several demographic questions. They were asked what sex they were assigned at birth (male; female) and how do they describe themselves (male; female; transgender; do not identify as female, male, or transgender). The responses to both questions were essentially identical, so the responses to the former question were used in this study. Participants were asked to identify the racial group that described them (White; Black or African American; American Indian or Alaska Native; Native Hawaiian; Guamanian or Chamorro; Samoan; Other Pacific Islander; Asian; Other) and whether they were of Hispanic, Latino, or Spanish origin or descent (yes; no). They also were asked the highest grade or year of school they had completed (Some high school; High school diploma or GED; Some college credit, but no degree; Associate’s degree; Bachelor’s degree; Master’s degree; Doctorate degree; and Other professional degree beyond a Bachelor’s degree) and which range best described their total household income before income taxes (less than USD 19,999; USD 20,000–39,000; USD 40,000–59,999; USD 60,000–79,000; USD 80,000–99,999; USD 100,000–149,999; USD 150,000–199,999; more than USD 200,000).

The remainder of the 61-question survey asked about alcohol consumption (18 questions), lifestyle changes during COVID-19 (six questions), and other demographic questions (23 questions). We include here responses only to some of the demographic questions, those about distance learning, and parents’ self-reported stress—all of which are described above.

2.4. Coding of Data

Upon the completion of data collection, we downloaded the participants’ responses from Qualtrics. For responses to open-ended questions, we used an adapted form of Qualitative Consensual Coding (CQR) [39,40]. CQR is an inductive coding approach that involves a primary research team and uses constant comparison to arrive at coding decisions. Our primary research team consisted of four coders with varying backgrounds and levels of experience (two doctoral level coders with backgrounds in developmental psychology and early education, one other doctoral level associate, and one advanced undergraduate research assistant majoring in psychology). We began with a top-down approach by *a priori* identifying three pertinent categories for consideration—Monitoring children’s behaviors (“Monitoring”), assisting with Technology support (“Technology”), and Teaching academic content (“Teaching”). We then selected examples of each category

given by the respondents. After reviewing the data, it became apparent that three additional categories were required: communicating with teachers (“Communication”), providing encouragement and emotional support (“Encouragement”), and finding learning materials or other resources (“Resources”). Table 2 contains the six coding categories with definitions and examples of each.

Table 2. Description of coding categories with examples.

Coding Categories	Definitions	Sample Quotes from Parents
Monitoring	Includes any statement referencing making sure a child does a school-related task or activity	<ul style="list-style-type: none"> • “Remind to start work in the am and sometimes remind of or check assignments. Remind of weekly google meets with class” • “Make sure he wakes up for online class” • “Verify completion of assignments, verify submission of assignments, facilitate engagement with online interaction sessions”
Technology	Includes statements referencing: <ul style="list-style-type: none"> • Connecting to zoom/google classroom, etc. • Facilitating online classes 	<ul style="list-style-type: none"> • “Tech support” • “Playing camera person for her required video assignments” • “Getting child on Google Meet for class meetups” • “Occasional helping with task submission” • “Help with signing in sometimes” • “Troubleshooting equipment, Wi-Fi issues”
Teaching	Includes statements referencing: <ul style="list-style-type: none"> • Reading/Assisting with reading • Helping child engage with material • Checking accuracy of work/checking work • Completing work • Teaching concepts or grading work that the parent has found/created • Learning foreign languages in order to teach it to their children 	<ul style="list-style-type: none"> • “Reading together” • “Additional support as necessary” • “Helping if she has additional questions about assignments” • “Answer questions all throughout the day; reviewing all work before submission. Helping with art projects, gym class; music.” • “Going over assignments, helping to figure out how to complete them” • “Additional instruction” • “Clarifying directions, facilitate instruction as it is not provided by the school system” • “Assist with projects; oversee assignments”
Communication	Includes statements referencing: <ul style="list-style-type: none"> • Receiving or reading emails from anyone affiliated with the school (teachers, administrators, etc.) • Listening/attending sessions for parents 	<ul style="list-style-type: none"> • “Read emails from her teachers” • “Communicating with teachers via email.” • “Listen in on the homeroom session that has a part for parents” • “Reaching out to teachers regarding assignments.”
Emotional Support	Includes statements referencing: <ul style="list-style-type: none"> • Keeping students motivated • Encouraging reading or completion of tasks • Calming children • Telling children “they can do it” • Emotions 	<ul style="list-style-type: none"> • “Encouraging homework” • “The younger child has needed more emotional support and does not do well with this style of learning.” • “Keep older one focused, positive” • “Kid stress management”

Table 2. Cont.

Coding Categories	Definitions	Sample Quotes from Parents
Resources	Includes statements referencing:	
	<ul style="list-style-type: none"> Developing/administering supplemental quizzes and assignments 	<ul style="list-style-type: none"> “Purchased new chrome book” “Trying to add educational enrichment (educational shows, foreign language apps, etc.)”
	<ul style="list-style-type: none"> Going online to find additional handbooks or academic tasks 	<ul style="list-style-type: none"> “ABC Mouse” “Identify and engage them in supplemental learning activities”
	<ul style="list-style-type: none"> Engaging in programs such as ABC Mouse unless parent indicated these programs were for school 	<ul style="list-style-type: none"> “Develop and administer supplemental quizzes and assignments” “Designing all other education myself”

Coders examined each participant’s response and determined if any part of that response fell into any of the six categories for each of the three age groups. Each category was coded as either “0” or “1” for each of the three age groups. We also created an overall coding scheme to determine if the participant was engaging in these six categories for any of their children regardless of their age. Take for example, a participant who reported that they engaged in Monitoring their 12 to 17 year-old’s educational activities and Teaching their 6 to 11 year-old. For the older age group, we would have coded Monitoring as “1” and Teaching as “0”; for the younger age group, we would have coded Monitoring as “0” and Teaching as “1”. For both age groups, the other four categories would also have been coded as “0”. Overall, that participant’s response would get a “1” for Monitoring, a “1” for Teaching, and a “0” for Technology, Communication, Encouragement, and Resources. Although a participant could give several examples of one category (e.g., Monitoring), the participant’s response was just coded once for that category. Additionally, if the participant gave a response that did not specify which child it applied to, then it was coded as applying to all the children on whom they were reporting.

After the coders independently coded about 25% of the written responses, they met and discussed their coding. There was a high level of agreement in the coding and the relatively few disagreements were resolved by discussion. This process of independently coding about 25% of the responses and then comparing/contrasting and discussing the codes continued until all the responses were coded.

2.5. Analytic Plan

This is a cross-sectional design with structured and open-ended questions. We imported the data into Stata [41], where we conducted frequency counts, *t*-tests, and χ^2 -tests. We also conducted three logistical regressions (odds-ratio) because the outcome variable (stress) was dichotomous. In other words, as noted above, this variable was coded “0” or “1”. We then ran three logistic regressions—one for each predictor variable (Monitoring, Teaching, and Technology)—where we explored the interaction between each predictor variable and whether parents had more than one child. Co-variables were decided *a priori* and included gender, race, ethnicity, and age of respondent [9,42,43].

3. Results

Our analyses are organized as responses to the three questions posed in the Introduction. In addition, we also address spontaneous evaluative comments given by parents at the end of the section.

3.1. What Types of Activities Do Parents Report Engaging in during COVID-19 to Assist Their Children with Distance Learning?

The types of activities that parents reported engaging in with their children was consistent with our hypothesis, almost two thirds of the parents reported engaging in

Monitoring (63%) or Teaching (65%) activities during COVID-19 to assist their children with distance learning (Figure 1). Almost half (46%) reported engaging in Technology activities. About 10% of parents reported engaging in Communication (9%), Emotional Support (10%) and Resources (10%) activities. Given the relatively few parents who mentioned assisting their children with Communication, Emotional Support or Resources activities, we do not continue discussion of these categories.

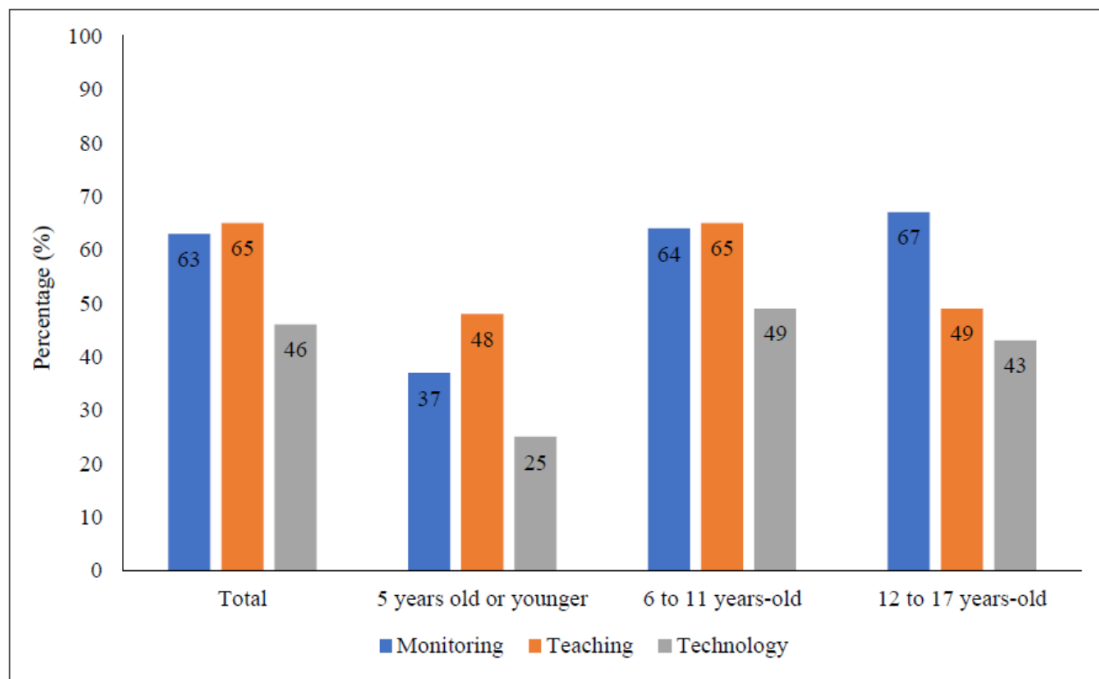


Figure 1. Types of Activities That Parents Reported Engaging in With Their Children.

3.2. Do the Types of Distance Learning Activities Vary with the Age of the Child?

Again, consistent with our hypothesis, the type of distance learning activity reported by the parent varied with the age of the child. Significantly more parents with children ages five years-old or younger reported engaging in Teaching activities (48%) with their children than in Monitoring (37%) or Technology activities (25%; $\chi^2(2, N = 91) = 10.40, p < 0.006$). However, among parents with children ages six to eleven years-old, almost equal numbers reported engaging in Monitoring (64%) or Teaching (65%) activities with significantly fewer engaging in Technology activities [49%; $\chi^2(2, N = 165) = 10.91, p < 0.004$]. Additionally, significantly more parents of children ages 12 to 17 years-old reported engaging in Monitoring activities (67%) than in Teaching (49%) or Technology activities (33%; $\chi^2(2, N = 78) = 17.37, p < 0.001$).

3.3. Is There an Association between the Type of Distance Learning Activity Parents Reported Engaging in and General COVID-19-Related Stress Reported by Them?

Most of the parents who reported engaging in distance learning also reported being “very much” or “extremely” stressed due to COVID-19 (80%). Interestingly, there were no significant differences in the percentage of parents reporting being stressed based on whether they had more than one child (76%) or only one child (72%; $t(214) = 1.28, p = 0.200$). There also were no significant differences in the percentage of parents reporting being stressed based on the activity in which they engaged ($p > 0.10$).

Parents who reported engaging in at least one of the three most-often reported types of activities (Monitoring, Teaching, or Technology) to assist their children with distance learning were 2.06 times more likely to report being very much or extremely stressed due to COVID-19 than parents who did not report assisting their children with distance learning

(OR = 2.06; CI (1.20, 3.53); $p = 0.009$). There also was no significant relation between the type of distance learning activity parents reported engaging in (Monitoring, Teaching, or Technology) or the number of children with whom they were engaging and reported stress, $p > 0.10$.

3.4. Is There an Association between the Type of Distance Learning Activity Parents Reported Engaging in and Specific Distance Learning-Related Stress Reported by Them?

Nearly three-fourths of parents who reported engaging in distance learning with their children (70%) reported being stressed by not knowing how to help their children with distance learning. Interestingly, there were no significant differences in the percentage of parents reporting being stressed based on whether they had more than one child (72%) or only one child (66%; $t(214) = -0.87, p = 0.386$). There were also no significant differences in the percentage of parents reporting being stressed based on the activity in which they engaged ($p > 0.10$).

Parents who reported engaging in at least one of the three most-often reported types of activities (Monitoring, Teaching, or Technology) to assist their children with distance learning were 3.69 times more likely to report being stressed by not knowing how to support their children with distance learning than parents who did not report assisting their children with distance learning (OR = 3.69; CI (2.20, 6.19); $p < 0.001$). For the most part, there was no significant relation between the type of distance learning activity parents reported engaging in (Monitoring, Teaching, or Technology) or the number of children with whom they were engaging and reported stress, $p > 0.10$. In other words, with one exception discussed below, engaging in *any* distance learning activity with *any* number of children was stressful for these parents.

Interestingly, however, there was one exception. Parents who reported engaging in Teaching activities with multiple children tended to be 5.14 times more likely to report being stressed by not knowing how to support their children with distance learning than other parents (OR = 5.14; CI (0.84, 31.51); $p < 0.077$).

3.5. Evaluative Comments Given by Parents

Although our questions did not ask parents to evaluate their feelings about what they were doing during distance learning, 19.5% of parents gave spontaneous evaluative comments. Two were positive (“Both girls are doing well in school.”; “It’s [distance learning] really cool actually . . . strange and awesome at the same time.”).

The remaining comments were negative. Most focused on not having enough time to do all the required tasks. (“It’s a lot”), (“ . . . I HATE distance learning and with the amount of work and direction it takes to complete or near complete each day, I wish I could opt for the kids to repeat their grade.”) Having enough time was particularly difficult when there was more than one child needing assistance (e.g., “With a 2nd grader and a 3rd grader, it [distance learning] is very time consuming”) or when parents had to juggle their work schedules with distance learning demands (e.g., “ . . . husband and I help when we are not at work”).

Other parents complained that too much work was required of them. (“We are overwhelmed”) and (“ . . . hired another person to help as 2 kids have different distance learning classes at the same time.”).

4. Discussion

Documenting what distance learning activities occurred during the COVID-19 pandemic with school age children is critical to helping the children successfully transition back to full-time in-person classes. The results of this study make an interesting addition to what we know about parents’ involvement in their children’s education (pre-pandemic) and significantly extend our knowledge of relevant activities during the pandemic.

4.1. What Types of Activities Do Parents Report Engaging in during COVID-19 to Assist Their Children with Distance Learning, and Does This Vary with the Age of the Child?

Parent involvement is considered by many to be critical for children's academic success [8]. However, prior to the pandemic for the majority of children in the U.S. who attended in-person classes, parents supplemented what occurred in school [6]. With the onset of the pandemic and the suspension of most in-person classes, parents' roles expanded.

Prior studies on distance learning during the pandemic mainly focused on children in early childhood and asked their parents what types of learning activities they engaged in with their children [6,25,33]. We expanded the age range to include children from prekindergarten through 12th grade. We also went beyond asking about reading and mathematics activities and asked about supporting activities (Teaching, Monitoring, and Technology). About two thirds of parents were involved with Teaching and Monitoring their children's progress (e.g., making sure assignments were completed). Forty-five percent assisted with Technology (e.g., helping with task submission and WI-FI issues).

This study considered a much wider age range than has been looked at by others. There were differences in how parents of children of different ages assisted with distance learning. Parents of children five years and younger were more likely to report Teaching followed by Monitoring and then Technology. Parents of children 6 to 11 years-old reported Monitoring or Teaching in equal amounts, followed by assisting with Technology. Parents of the oldest group of children, 12 to 17 years-old, reported Monitoring their children's work, followed by Teaching and then Technology. Another way to consider these data is that teaching and monitoring their children's progress were the primary activities that parents did regardless of the age of the child. The more limited reporting of assisting with Technology could have been due to the sample being more educated and affluent, thus having experience with technology. We return to this point in the Strength, Limitations, and Future Directions section.

As the work by Hoover-Dempsey and her colleagues shows [15,17,18], parents during pre-pandemic times were more likely to become involved if they believed demands from their school fit their skill level and time availability and if the demands were consistent with their beliefs about their role. As the spontaneous comments of some parents in this study indicated, these parents had difficulty adjusting their schedules to the increased demands on their time imposed by distance learning. Additionally, some of the parents in our study reported prioritizing, perhaps understandably, the demands of their jobs and needs of other children. As Jeynes [20] noted, many parents face barriers to being involved in their children's education when in-person classes are in session. These challenges appear to be compounded when distance learning is involved. These results are consistent with results with preschool age children [5].

4.2. Is There an Association between the Type of Distance Learning Activity Parents Reported Engaging in and Stress Reported by Them?

Two interesting findings occurred with these data. One, distance learning was a source of stress for these parents. It did not matter what type of activity the parent engaged in, the age of the child, nor, for the most part, the number of children. Parents who said they engaged in distance learning were more likely to report being stressed both generally by COVID-19 and specifically by distance learning than those who did not. Two, parents who engaged in teaching activities during distance learning with more than one child reported higher stress levels related to distance learning than those who did so with only one child.

Teachers and policy makers need to be aware of what kinds of home-based or distance learning activities they are asking parents to do [2]. Families are an ecological system. Stressing one aspect can have repercussions elsewhere. As noted in the Introduction, U.S. adults who were under more stress during COVID-19 report drinking more than those who were not [37]. Parents who are under stress are also more likely to engage in child neglect and abuse [30].

It is important to consider what can be done differently if the need for engagement in distance learning continues or occurs again. Educators should try to better tailor the

demands of distance learning to the availability and capability of the families. Recall that this was an educated and affluent set of families. Nevertheless, they found succeeding at distance learning difficult. Information from preschool teachers, many of whom were in centers catering to less affluent families, found the issues reported here were compounded with less affluent families [25]. Among the issues that teachers/educators need to consider is who is doing the instruction, what skill levels these parents have, what technology is available in the homes and how tech-wise the families are, and what are competing demands on the parents' time?

4.3. Strengths and Limitations

This paper makes important contributions to our knowledge of what parent-reported activities occurred at home for U.S. school children during the COVID-19 pandemic. Many of the schools in the U.S. turned to distance learning during this time, particularly for school-age children, which would have required the use of digital tools. Given the ongoing consequences of the pandemic in the U.S., and what may be a continuing need to implement distance schooling for many children it is critical to document what occurred at home.

The main limitation to this study is that our sample was not a random sample representative of the U.S. population; it was a convenience sample. Convenience samples are among the most commonly used in developmental science [44]. However, the nature of the sample limits generalizability of the findings and causal explanations [45,46]. The preponderance of highly educated parents in our sample is comparable to what has been found by others using such surveys in the U.S. [47–49]. Therefore, the findings may not necessarily apply to less educated parents or low-income families. Although about 80% of families in the U.S. have access to the internet at home, children from low-income backgrounds are less likely to have digital tools and internet access than their more affluent peers [50]. Relatedly, not only do families need access to digital devices and the internet, but they also need to have the time to assist their children. This, too, may vary by family income. Despite this significant limitation, the results of this study are important for increasing our understanding of activities during COVID-19. These results provide information about the types of digital learning activities taking place in homes during a period of unprecedented closures. This study provides initial data that may be used as a starting point to conduct longitudinal studies and to explore how the home literacy environment and digital usage changed throughout the pandemic [27].

Although our sample was clearly not representative of the U.S. parent population, we do not want to trivialize the data we did collect. Learning what a more educated population is doing can be considered an important first step to learning about a broader range of participants. Future research should use other surveying techniques, instead of only online ones, to recruit a more diverse and representative population.

Another limitation of this study is that we did not ask parents their viewpoints on the experience of engaging in distance learning. Nevertheless, about 20% spontaneously reported concerns they had. This is a lower percentage than that found by Stites et al. [6] with parents of preschool children. Future work should include actual questions about difficulties experienced by parents of these older children. This is important for teachers to better plan distance learning activities while minimizing stress on families.

We focused on parents who reported engaging in distance learning with their children. However, surprisingly, not all parents with children living at home did so. This may have been because these were parents of children not yet in preschool. If not, future work should explore what these families did to maintain their children's academic growth during the pandemic.

Despite the limitations to this study, we think these findings make an important contribution to understanding the home learning environments of children in the U.S. during a time when they were confined to their homes because of COVID-19.

5. Conclusions and Future Directions

Nearly three-fourths of the parents in our study—many of whom were middle-aged, White, affluent, and female—reported engaging in distance learning activities with their children. Consistent with our hypothesis, these parents were mainly involved in Teaching their children, Monitoring their children's work, and providing Technology support, with some differences across the types of activities due to the age of the child. Moreover, parents who reported engaging in at least one of these three types of activities were more likely to report being stressed due to COVID-19 or by not knowing how to support their children with distance learning compared with parents who did not report assisting their children with distance learning. Nearly 20% of parents gave spontaneous evaluative comments about the experience of doing distance learning; the majority of those comments were negative.

Overall, these findings extend the limited work that has been carried out to study what parents are doing during distance learning during the COVID-19 pandemic. We extended the age range of the children studied to include preschool through 12th grade children and focused on a broader range of learning and support activities than has been previously studied.

Even so, more research is still needed. Future studies should address five topics. One, as we noted, our sample is limited. Future research should attempt to include a wider set of demographic groups and compare responses across groups. Two, these data were collected in May 2020, early in the pandemic. If data were collected now, 18 months later, how would parents' responses have changed? As results from Barnett and Jung [33] show, responses and the nature of interactions changed over time. Three, are there differences in how parents respond and feel depending upon whether their children are receiving only virtual instruction or a combination of virtual and hybrid instruction? Four, what are the immediate and longer-term academic and social outcomes for children who received distance learning as they transition back to in-person school? Five, our results showed that engaging in distance learning was stressful for many parents. Research by Moè et al. [35] developed a successful homework intervention that decreased parents' stress doing homework. Attempts should be made to find ways to make distance learning less stressful for parents.

Our study provides preliminary data on what distance learning activities U.S. parents were engaging in during the early months of COVID-19 and documents the relation between engaging in these activities and stress. Teachers should use the information from this study to better understand what academic skills children of different ages might have coming back to in-person school after the pandemic and to tailor their programs to meet the needs of these returning children. These findings also should provide useful information for tweaking future distance learning programs.

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