




Thematic Analysis of Parent–Child Conversations About COVID-19: “Playing It Safe”

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Abstract

Caregivers have primary responsibility for teaching their children self-protective behaviors, including those behaviors recommended by the Center for Disease Control (CDC) to prevent the spread of COVID-19. Parents have an important role in scaffolding adherence to the CDC recommendations and in managing stress and regulate their emotions to adaptively cope during uncertain times like those facing communities nationwide. The present study is a qualitative, thematic analysis of parent-reported ($n = 210$; 64.8% female; average age = 39.33; 14.3% ethnic/racial minority) interactions with children (focal child age: 25.2% birth to 5 years old, 36.7% 6 to 11 years old, 37.6% 12 to 18 years old) about topics associated to COVID-19-related viral transmission suppression guidelines and stress/coping behaviors. Themes included discussions about personal and social hygiene, and parent reported sources of child stress, and child stress management efforts. Findings from our thematic analysis indicate parents are motivated to make scaffolding personal hygiene fun and engaging, signaling a positive, developmentally appropriate native approach to their role as sources of coping socialization. These findings also underscore the importance of providing information to parents in ways that can be translated to children in developmentally appropriate conversations about viral transmission suppression activities and stress management during disasters.

Keywords COVID-19 · Parenting · Caregiver stress · Scaffolding · Thematic analysis

Highlights

- This paper presents the results of a qualitative, thematic analysis of parent-reported ($n = 210$) interactions with children about topics related to COVID-19.
- Themes included discussions about personal and social hygiene, parent reported sources of child stress, and child stress management efforts.
- Findings indicate parents are motivated to make scaffolding personal hygiene fun and engaging, signaling a positive, developmentally appropriate approach to their role as sources of coping socialization.

The COVID-19 (SARS-COV-2) global pandemic altered the daily routines of families nationwide. In the United States, this led to stay at home orders, school closures, cancellation of activities, and other significant disruptions to family routines. COVID-19 is highly contagious, and efforts to halt the transmission of the virus have led to pervasive and

prolonged disruptions to daily life worldwide (CDC COVID Response Team 2020; Layne et al. 2020; Polizzi et al. 2020). Current research indicates high rates of COVID-related stressors caused by disruption to work/learning and daily routines, fear of infection, frustration and boredom, financial loss, circulation of misinformation, and limited access to reliable resources (Cluver et al. 2020; Presti et al. 2020; Ren et al. 2020), which are felt particularly keenly for those currently caring for children in their homes (Park et al. 2020; Pew Research Center 2020; Russell et al. 2020; Tambling et al. 2020). A better understanding of how caregivers communicate with children about COVID-19-related stressors has important implications for the understanding of the stressfulness of the pandemic, and for developing

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mechanisms to support parents during disasters, including providing resources for structuring conversations about COVID-19 with their children.

COVID-19-Related Education and the Socialization of Coping

Caregivers have primary responsibility for teaching their children self-protective behaviors, including those behaviors recommended by the Centers for Disease Control and Prevention (CDC) to prevent the spread of COVID-19. The CDC has released several recommendations related to social distancing and healthy hygiene behaviors (CDC 2020) that include appropriate hand washing, use of sanitizing liquids and gels, and social distancing guidelines for maintaining six feet of distance between individuals who do not live together, and wearing masks when in public places. The CDC has encouraged adherence to these guidelines to reduce the spread of COVID-19 and positively impact public health during the disaster. Caregivers have the added responsibility of explaining these guidelines, and their importance, to children while monitoring adherence behaviors among children.

Caregivers assist children in problem solving via scaffolding, which allows the child to achieve a goal that may not have been attainable without assistance (Vygotsky 1987; Wood et al. 1976). During the COVID-19 pandemic, parents have an important role in scaffolding adherence to the CDC recommendations regarding viral transmission prevention management behaviors necessary to slow the spread of COVID-19; the responsibility of managing disease symptoms in children relies heavily on parents and caregivers' abilities (Yoon et al. 2015). For example, one recent study found that parents understand the importance of handwashing, however, an alarming percentage (76%) of parents were unaware of the proper handwashing techniques (Mohamed et al. 2016). These results are of concern because youth are learning hygiene behaviors and disease prevention management skills through social learning, in which children can learn new behaviors by direct experiences or indirectly, through observation of behavior in others (Bandura and Walters 1977). While modeling good adherence and having explicit conversations with children about the necessity of healthy hygiene is essential, so are somewhat less tangible practices and explanations that accompany the recommendations to keep physical distance from friends and loved ones (Solomon 2020). Given the important and deeply treasured role of friendship during childhood, the loss of direct contact with peers can feel potent for children across a wide age range.

Additionally, parents are responsible for teaching their children how to manage stress and regulate their emotions to adaptively cope during uncertain times like those facing

communities nationwide. Disruptions to daily routines during shelter-in-place conditions are stressful, especially so for children for whom regular daily routines contribute to stability and predictability, and help manage stress and ameliorate poor mental health outcomes (Carleton 2016; Ellis and Hudson 2010; Sweeny 2018; Wang et al. 2020; Wisner et al. 2018). Caregivers must cope with their own distress related to the pandemic, and support their children as they manage stress. Some research (Tambling et al. 2020) suggests that parental anxiety interferes with the ability of adults to effectively promote CDC-recommended social distancing, personal hygiene, and other viral transmission prevention activities and national survey indicate greater anxiety symptoms during COVID-19 than observed prior to the pandemic (American Psychological Association 2020; Russell et al. 2020). These increased rates follow a pattern established in the literature, whereby increased anxiety after a community disaster are particularly heightened for parents (Kerns et al. 2014; Maeda and Oe 2017). Crucially, anxiety symptoms are associated with parents' misperceptions of child stress (Briggs-Gowan et al. 1996; Russell et al. 2020), and mental health difficulties—particularly depression symptoms—are known to disrupt positive parenting overall (Schechter et al. 2010; Taraban and Shaw 2018; van Ee et al. 2012). Taken together, there is cause for concern about how parents manage their own stress, while serving as the main source of coping socialization for their children (Kliewer et al. 1996). It is critical that we better understand what and how parents communicate with their children about COVID-19 transmission prevention, and disaster-related coping (Wisner et al. 2018). Such an understanding will not only assist in developing supports for parents and children, but in informing policy and public health educational needs that are unmet by the current guidelines.

Family members, particularly caregivers and children, have a unique responsibility to support one another during disasters and traumatic events. Research suggests that not only do family members experience distress upon seeing their family members' distress (Pfefferbaum and North 2008), but high levels of parental stress can increase child stress following a crisis (Proctor et al. 2007). Parental difficulties following disasters can limit children's post-traumatic growth (Hafstad et al. 2010), suggesting that the coping experiences of parents and children are closely tied. Families also impact one another in positive ways. Banford et al. (2015) found that parental support promoted positive post-disaster outcomes in youth. Furthermore, maternal active coping mechanisms, positive family environment, and high-quality parent-child relationships are associated with strong levels of post-disaster coping in children (Kliewer et al. 1996). Thus, a better understanding of the ways in which parents not only scaffold COVID-19 transmission prevention knowledge and practices, but also model and discuss coping during the disaster, is critical.

Current Study

Parents serve as a buffer for child stress and have a critical role in disaster response, both for themselves and for children in their care (Russell et al. 2020). Their role as a primary source of coping socialization is enacted directly through the conversations they lead with their children, and indirectly through the behavior they model. An understanding of the ways in which parents talk with children about the COVID-19 pandemic, including the CDC recommendations for viral transmission suppression, and coping skills related to COVID-19-related distress, is vital. By understanding how parents talk with children about the CDC recommendations for reducing the transmission of the virus, stakeholders can determine what policy or educational needs are unmet by the current guidelines. Further, a better understanding of the coping behavior parents observe and support in their children will inform the development of structured resources for parents and children during times of disaster.

The current study utilized data obtained from parents of minors living in their homes during last week of April, 2020, during the peak of the disease in the United States. Parents were queried about their attempts to speak with children about the COVID-19-related CDC recommendations and about their observations of their child's coping as part of a larger study of coping during the pandemic (Tambling et al. 2020). Results presented here include a qualitative, thematic, analysis guided by the following exploratory questions for research inquiry:

1. How did parents talk with their children about the CDC recommendations for viral transmission suppression of COVID? Did they report feeling prepared to have these discussions?
2. What coping behaviors did parents observe in their children?

Method

Participants

Data were obtained from parents 18 years or older who spoke English, reside in the United States at the time of the COVID-19 pandemic, and were caring for a child under the age of 18 in their home during the pandemic. All study materials were approved by the BLINDED FOR REVIEW IRB (X20-0075) prior to recruitment through MTurk for anonymous longitudinal participation in a study assessing coping and family experiences during COVID-19.

Participants were obtained through Amazon's Mechanical Turk (MTurk), an online worker platform that has shown to be fairly representative of the characteristics of a larger population, such as United States residents (Bartneck et al. 2015; Sheehan and Pittman 2016). MTurk evaluations for health research report data to be replicable and valid and underscore this platform's utility for many studies (Mortensen and Hughes 2018). Evidence indicates that MTurk workers' mental health approximates that of the general U.S. population (e.g., Elhai et al. 2016; Kim and Hodgins 2017; Mortensen and Hughes 2018). Online survey data management best practices include filtering out subjective inattentiveness cases, such as abnormally quick response times (Kees et al. 2017; Sheehan and Pittman 2016) given significant concerns noted about crowd-sourced convenience samples (Chandler and Shapiro 2016). Therefore, rigorous data management practices were used to authenticate inclusion of participant response attentiveness and individual, unique human respondent cases, as opposed to computerized bot responses. The first step taken was to screen the dataset for duplicate cases and global positioning verification within the US, deleting repeat cases. Second, responses completed in substantially less time than expected ($n = 1$; more than two standard deviations below the actual time to completion for the sample) were deleted. The larger sample (BLIND FOR REVIEW) with complete baseline measures of interest included 437 unique responses from caregivers collected from April 27–28, 2020, approximately 5 weeks following the first US COVID-19 quarantines. Respondents were 35.72 years old, on average ($SD = 8.66$, range = 18–72 years old). The group was about equally distributed in terms of gender, as 52.2% were male ($n = 219$). Several racial/ethnic groups were represented. 28.3% ($n = 125$) were of racial/ethnic minority.

For the purposes of the present study, only those cases with any completed qualitative responses were included in the analysis. Deleting listwise those cases with no qualitative response resulted in an analysis sample of 210 cases (64.8% female; average age = 39.33, range 18–65; 14.3% ethnic/racial minority). Caregivers provided responses on key variables of interest for a focal child, with focal child age categories for the current sample including 53 (25.2%) birth to 5 years old, 77 (36.7%) 6 to 11 years old, and 79 (37.6%) 12 to 18 years old. Demographic information about the sample is presented in Table 1.

Survey Items

In addition to providing information about caregiver demographics, including their age, gender, sexual orientation, race, and ethnicity, financial security ("Do you have enough money to meet your needs", rated on a scale from 1 "not at all" to "completely"), partner status (either partnered:

Table 1 Sample demographic information, $n = 210$

Variable	Caregivers ($n = 210$) M(SD) N (%)
Age	39.33 (9.0; range = 18–65) N (%)
Gender	
Male	73 (34.8%)
Female	136 (64.8%)
Transgender	1 (0.5%)
Race	
Black/African American	26 (12.4%)
Asian/Asian American	8 (3.8%)
Native Hawaiian/Other Pacific Islander	– (–)
American Indian/Alaska Native	2 (1.0%)
White	180 (85.7%)
Ethnicity	
LatinX	15 (7.1%)
Non-LatinX	195 (92.9%)
Sexual Orientation	
Straight/Heterosexual	184 (87.6%)
Gay or Lesbian	4 (1.9%)
Bisexual	22 (10.5%)
Current Marital Status	
Married	152 (72.4%)
Single	19 (9.0%)
Divorced	16 (7.6%)
Separated	2 (1.0%)
Widowed	3 (1.4%)
Living with, but no married	18 (8.6%)
Focal Child Age Category	
Birth to 5 years old	53 (25.2%)
6 to 11 years old	77 (36.7%)
12 to 18 years old	79 (37.6%)
Unknown	1 (<0%)
Current child attending childcare/school	
Yes	35 (16.7%)
No	175 (83.3%)
Current Living arrangement	
In home of parent/guardian	48 (22.9%)
People not related to	30 (14.3%)
People related to	123 (58.6%)
By yourself	7 (3.3%)
Prior COVID-19 employment	
No	22 (10.5%)
Yes, part-time	34 (16.2%)
Yes, full-time	154 (73.3%)
Current COVID-19 employment	
No	41 (19.5%)

Table 1 (continued)

Variable	Caregivers ($n = 210$) M(SD) N (%)
Age	39.33 (9.0; range = 18–65) N (%)
Yes, part-time	42 (20.0%)
Yes, full-time	127 (60.5%)
Enough money to meet needs	
Not at all	12 (5.7%)
A little	23 (11.0%)
Moderately	55 (26.2%)
Mostly	57 (27.1%)
Completely	63 (30.0%)
Geographic Region	
West	42 (20.0%)
Midwest	61 (29.0%)
South	74 (35.2%)
Northeast	33 (15.7%)

married or living with a significant other, or non-partnered: single, divorced or widowed), and the age of the child(ren) under 18 years old in their home, respondents selected a focal child on which to base their answers. Parents provided responses to a number of quantitative measures of their own and their child's coping (see BLIND FOR REVIEW for a description of survey procedures and outcomes, and the results of quantitative data analysis). Parents were also presented with several open response questions in which they were asked to respond to a prompt with written text. Qualitative questions were organized into two groupings, with one primary prompt and two follow up inquires. The questions posed were:

1. Please describe a scenario when you discussed one of the CDC recommendations with your child.
 - a. Do you think this was a successful conversation? Why or why not?
 - b. Did you feel prepared to have this discussion with your child? Why or why not?
2. Please describe a scenario when your child was trying to manage their stress due to COVID-19.
 - a. How, if at all, did you support your child during this time?
 - b. How do you think this was helpful to your child?

Analysis

Thematic analysis (Braun and Clarke 2006) was the guiding framework for the qualitative analysis. Thematic analysis, as a type of qualitative inquiry, examines patterns or themes

within the data by emphasizing both organization and a rich description of the data (Braun and Clarke 2006), and goes beyond content analyses which only explores implicit or explicit meaning within the text (Guest et al. 2012). Coding in thematic analysis aims to identify patterns within the data and group together similar statements using coding labels or nodes. Braun and Clarke utilize a reflexive approach, wherein the coding process leads to theme development built from coding labels or nodes (Braun and Clarke 2019).

Data Preparation

The six text responses to the questions listed above were extracted from the main data set, and then prepared in Nvivo version 12.0 as separate documents. Each researcher reviewed the entire set of documents prior to the beginning of coding, when data were then analyzed using a reflexive thematic coding scheme (Braun and Clarke 2019).

Thematic Coding

Thematic coding focused first on creating codes, followed by the development of categories that become themes that emerge from the data. Researchers used line-by-line coding to examine each part of the data (Charmaz 2006). In the initial round of coding, researchers read through the data, writing memos of early thoughts. In the second round of coding, researchers conducted a line-by-line coding using a thematic open coding framework (Braun and Clarke 2006). Following initial codes of each text line, open codes were then refined and grouped to develop the themes that emerged from the data.

Trustworthiness

The criteria set for demonstrating trustworthiness (i.e., transferability, dependability, credibility) set by Guba (1981) was utilized in the thematic analysis. Following Silverman's (2000) recommendations to enhance credibility, a recursive analysis process was used as researchers read through the entire dataset to gain a sense of overall content by keeping notes of observations, questions and ideas. An additional step to enhance credibility was utilized during the coding process when notes and observations were revisited to increase researchers' ability to capture all relevant and representative codes of the data as a whole. Members of the research team met at two critical points during the coding process—prior to line-by-line coding, and following line-by-line coding, but prior to developing themes. During the first meeting, the team discussed ideas, impressions, and overall responses to the data. In the second meeting, the team presented codes, and discussed early impressions of themes emerging from the data.

One member of the research team, the first author, coded one set of questions. A second member of the team, the second author, coded the other set of questions. The two coders in this study both identify as white women. One of the coders is a doctoral student and the other is an associate professor, with a background in counseling and behavioral health, from the same university department. While this study involved no direct interaction between the participants and the coders, a reflexive approach was still taken. The coders communicated heavily throughout the coding process, ensuring that the themes each coder found to emerge from the data were in fact evident to the other coder. Furthermore, the coders each have background in family theory and child development. Neither were serving as primary caretakers for minor children residing in their home at the time of the COVID-19 global pandemic.

All members of the team who completed a line-by-line read through of the data discussed openly their impressions, ideas, and coding process, and codes and themes developed represent consensus among members of the team with regard to themes and their inclusive codes. In order to ensure replicability, all procedures were documented. A final step to ensure trustworthiness, credibility and transferability was through the use of a thick description, while allowing the reader to experience the data to clarify connections made between selected categories and themes and the dataset overall (Silverman 2000; Strauss and Corbin 1990).

Findings

Data were obtained from two groupings of questions, one set related to having discussed a topic related to the CDC guidelines for COVID-19 transmission mitigation, and the second set relating to parents' observations of their child engaged in stress management. Given the disparate nature of the two sets, analyses were conducted independently, and findings are organized accordingly.

Thematic Analysis Code and Themes—CDC Guidelines

The thematic analysis process resulted in the emergence of 10 unique codes, which the researchers organized into three coherent themes. Overall, there were 231 coded statements. Table 2 provides a listing of codes and their frequencies. The frequency of each code's appearance provides useful information about the density and distribution of codes across the data. The most frequently occurring codes were "handwashing" and social distancing, with 82 and 52 instances of the code, respectively. Other codes, including "wearing masks" (31 instances) or "taking vague

Table 2 a Themes and codes—CDC guidelines. b. Themes and codes—Child Stress Management

Theme	Code	Number of Observations	
Personal hygiene	Handwashing	82	
	Face touching	10	
	Coughing/sneezing behaviors	4	
	Using sanitizer	4	
	Cleaning	2	
Social hygiene	Social distancing	52	
	Wearing masks	31	
	Sharing information	5	
None	Vague precautions	37	
	Disbelief	1	
Social Distancing	Cannot visit friends	17	
	Cannot go outside	11	
	Cannot go to school	9	
	Cannot visit family	3	
Emotions	Upset	5	
	Lonely	5	
	Bored	4	
	Afraid	4	
	Stressed	3	
	Frustrated	2	
	Mad	1	
	Sad	1	
	Tired	1	
	Depressed	1	
	Worried	1	
	Physical Activity and Play	Playing games	6
		General Exercise	3
Walking		3	
Playing with toys		3	
Dance		2	
Pretend Play		2	
Baseball		1	
Bicycling		1	
Running		1	
Trampoline		1	
Weightlifting		1	
Playing outside		1	
Technology Use		Video Chatting	6
	Watching TV	6	
	Playing video games	5	
	Cell phone use	1	
	Social media use	1	
Adaptation of Routine	Tablet use	1	
	More than usual	9	
	Staying home	3	
	Changing the daily routine	1	
Talking	Less than usual	1	
	New activity	1	
	Talking (generally)	9	
	Therapist	1	
Mindfulness Strategies	Psychologist	1	
	Yoga	3	
	Positivity	3	
	Mindfulness	2	
	Deep breathing	1	

Table 2 (continued)

Theme	Code	Number of Observations
Creative Outlet	Art	5
	Reading	2
	Music	1
None	News	6
	Alone time	5
	Change of school routine	5
	Hand washing	3
	Jokes and pranks	2
	Affection	2

precautions” (37 instances) appeared much less frequently. Such a distribution indicates the powerful and pervasive nature of handwashing as an understood part of the CDC guidelines for viral transmission mitigation.

Two clear themes emerged from the coding process: personal hygiene and social hygiene. These themes emerged through the coding process and provided thematic groupings for individual codes. Two codes emerged from the data that are not clearly associated with the larger themes, but which merit discussion. First, many parents reported taking *vague precautions* that were not clearly identified through any particular behaviors. For example, one parent reported, “to follow the basic rules”. Other parents reported, “playing it safe”, or “everyday actions to help stop the spread of germs”. While useful, these actions were not sufficiently specific to be clearly categorized into one of the emergent themes. Finally, it is worth note that one respondent indicated skepticism regarding the CDC guidelines, and stated that they spoke with the child about not following guidance. Despite these outliers, most codes were clustered around central themes.

Personal hygiene

The theme of personal hygiene emerged through coding, and this theme represented all behaviors that were self-directed and meant to enhance one’s personal bodily cleanliness or one’s home cleanliness. Codes which were included in this theme included: cleaning, handwashing, using sanitizer, face touching, and coughing/sneezing behaviors. *Handwashing* was, by far, the most frequently reported CDC guideline parents discussed with children, occurring 82 times (32% coverage). Parents reported discussing handwashing with their children in a range of different ways, but most impressed upon their children the importance of handwashing (“We talked about how to wash hands after watching the governor’s office talk about it on tv.”), and markers of handwashing sufficiency, such as the recommended length of time to hand wash (“I noticed my child quickly washes their hands in a few seconds. I showed

them how to properly wash their hands and for at least 20 s.”). Some parents reported that they used handwashing as a way to share information about viral transmission with their children, including one parent, who stated “We discussed why it is important to use enough soap when washing our hands, because COVID-19 has a lipid outer layer that soap can break down”. Other parents reported talking with their children about the importance of using hand sanitizer. References to *using sanitizer* were often simple phrases, and included statements such as, “Using hand sanitizer to get rid of the virus”. Less frequently occurring codes including *face touching* (“I talked with her about making sure we aren’t touching our face and eyes because it spreads quickly through those areas”) and *coughing/sneezing behaviors* (“Sneezing into a tissue”). Finally, a few parents reported talking with children about some behaviors related to home cleanliness. Cleaning behaviors parents reported included two instances related to cleaning with alcohol or sanitizer items brought home from the store. Overall, it seemed that parents spoke with children most about cleaning their hands and proper handwashing techniques.

Social hygiene

The second theme that emerged from the data related to the CDC guidelines was one related to social hygiene. Social hygiene practices including social distancing and limiting social contact were discussed. Codes associated with this theme include: social distancing, wearing masks, and sharing information. The most predominant code in the social hygiene theme was *social distancing*. Parents reported talking with children about maintaining six feet of space between individuals, and limiting unnecessary social contact. Parents shared things like, “I’ve told him that we have to stay away from people in general, and that when we are around people that we need to stay six feet away from them”. Others seemed to be responding to children’s questions, or offering explanations for the discontinuance of usual behaviors (“We talked about social distancing and why they can’t play with the neighbor”). Parents also reported talking with children about *wearing masks* while in public, and several instances of this behavior arose in the codes. Statements such as “My son was not pleased that he needed to wear a face mask outside the home. We discussed why it was recommended and necessary to keep others safe”. Some parents also reported making masks with children, or demonstrating proper mask use for children (“I discussed the importance of wearing a mask. How that can protect you. I also had them make their own maske [sic] with me. This way it was something they liked and we could discuss the topic while we worked.” Finally, a few parents reported *sharing information* with children about

the transmission of viruses, and how COVID-19 might be spread (“we did an activity on how germs are spread”).

Follow up questions

Taken together, the themes suggested that parents were sharing information with children about both personal hygiene and social hygiene, including key action items like handwashing, wearing of masks, and engaging in social distancing. Two follow up questions to the main CDC guidelines question prompted parents to assess whether or not they believed that they had been successful in their communication with the children, and whether they felt prepared to have the discussion with their children. Given that the prompt for these questions was worded in a fashion that produced primarily binary (yes/no) answers, limited analysis possibilities existed. With regard to the success of the conversation, it seems that the vast majority of parents thought their conversations with children about the CDC guidelines were successful. Only seven instances of “no” answers were reported, and only three of those had an explanation. One parent reported that the child continued to engage in old behaviors (sneezing without covering their mouth), one indicated that the child rarely listened, and one indicated a lack of child understanding (“child still verbalizing that he wants to go visit grandparents soon”). The vast majority of parents reported that the interactions were successful, and the most commonly reported reason for that evaluation was that the child was compliant with the suggested behavior (“the conversation was successful, since he has been very careful to wash his hands whenever required”), or indicated understanding of the parent’s comments (“I think they understood it”). Finally, with regard to the question about whether parents felt prepared to have this conversation with children, results were more mixed. Parents reported uncertainty, or lack of personal knowledge (“this is new”). Others reported difficulty with being able to describe the CDC guidelines in age-appropriate ways (“no, because I wasn’t sure how to explain it in an age-appropriate way so he would understand but also not get scared”). Despite some concern on the part of parents, the majority reported that they felt prepared to have conversations with children. Many parents reported that their knowledge of their child’s temperament, personality, and behavior made the conversation easier (“he’s mature”). Parents reported that they felt prepared for conversations and were able to emphasize personal knowledge (“I make sure to keep her well informed about different things”), clear communication (“We’re pretty open as a family as far as information and science go, and I was already educated on it”), simple statements (“it’s not rocket science - I want her to be safe”), and help from friends, family, and media (“I feel I have heard enough from the

news to be able to tell my child what has been going on”; “I had resources available such as the CDC website that explains regulations”).

Thematic Analysis Code and Themes—Child Stress Management

By thematically analyzing the responses, 56 unique codes concerning children’s coping behaviors emerged; these codes were then organized into seven themes, while six codes were unable to be grouped thematically. In whole, there were 116 coded statements. Table 2 provides a listing of codes and their frequencies. The most frequently occurring codes were “cannot visit friends,” which was coded 17 times and “cannot go outside,” which was coded 11 times. Some codes appeared only once, such as “cell phone use” or “social media.” However, once grouped into themes, concepts such as “social distancing,” with 40 total codes, and “technology use,” with 20 total codes, emerged as salient. Themes will be reported in three categories: parent reported sources of children’s stress, parent reported strategies children used to manage their stress, and parent reported indicators of children’s stress. Within these categories, themes will be reported in descending order of frequency.

Parent Reported Sources of Stress

Social distancing

The first theme that arose from the codes and fits into this category is social distancing. On 40 occasions, parents reported their children experienced stress because of social distancing restrictions, such as: *cannot go outside*, *cannot go to school*, *cannot visit family*, and *cannot visit friends*. This was the most commonly occurring theme, which aligns with parents’ reports of teaching their children about proper social hygiene. One parent commented, “She is my step-daughter and has not had time with her dad since stay at home started. It is difficult for her to adjust to this.” An additional parent shared, “He started to have a bit of a meltdown over missing school and friends.” Lastly, one parent mentioned, “She wanted to go outside and play with her friends but felt sad because she, nor her friends, could go outside on the playground”.

News

A unique code that emerged that fits into this category is *news*. Six times parents reported that the news was a source of stress for their children. While a less frequent code, this is a notable contribution because of the wide-spread use of news platforms to share information about COVID-19. For example, one parent shared, “They seem to get a bit stressed

out when seeing the news on the subject and try to distance themselves [sic] from the news.” Another parent commented, “He told me that he did not want to hear anything at all about COVID-19 on the news, from me, or from anyone else”.

Parent Reported Strategies to Manage Stress

Physical activity and play

The first theme that fits into this category is physical activity and play. Parents reported 25 instances of their children engaging in physical activity or play to manage their stress due to COVID-19. In regard to physical activity, the following activities were reported and coded: *baseball*, *bicycling*, *dance*, *general exercise*, *running*, *trampoline*, *walking*, and *weightlifting*. One parent commented, “He has started taking long walks around our 5 acres to give himself time alone and time to think. He’s always much more relaxed when he comes back inside.” In reference to play, the following activities were shared and coded: *playing games*, *playing outside*, *playing with toys*, and *pretend play* (which encompassed *make-believe friends*). For example, one parent shared, “When my son plays with our youngest daughter he sometimes acts out scenarios where someone is sick and how to deal with this”.

Technology use

The next theme evident within this category is technology use. This theme is comprised of 20 codes, in relation to stress management techniques, and parents reported that their children used the following activities: *cell phone use*, *social media use*, *tablet use*, *playing video games*, *watching TV*, and *video chatting*. For example, one parent mentioned, “At first the “staying away from friends and other family” was very difficult, but they found through voice and video chat that they can at least feel close and share things together.” Additionally, one parent commented, “When he’s worried he retreats into video games. That’s a world where he feels more in control and less anxious”.

Adaptation of routine

Another theme evident in regard to stress management is adaption of routine; 15 codes make-up this theme. One parents specifically referenced *changing the daily routine*; additionally, parents reported children engaging in an activity *more than usual* or *less than usual*, as well as children engaging in a *new activity* and *staying home*. One example is as follows, “They tend to get upset more frequently and act out, crying. They try to distract and play more with games or tv”.

Talking

Additionally, parents reported that their children used talking as a stress management strategy 11 times; three codes comprised this theme. *Talking* was generally mentioned, as well as specified with both a *therapist* and *psychologist*. For example, one parent described this as, “The way my son manages his stress is to involve others. Even if it’s just constantly talking to you.” Additionally, one parent shared, “The child spoke to his psychologist about emotions regarding schools in the area being closed due to Covid-19”.

Mindfulness strategies

Furthermore, nine instances of mindfulness strategies as methods of stress management were coded and composed this theme. Parents reported that their children practiced *mindfulness*, *deep breathing*, *yoga*, and *positivity*. For example, one parent commented, “My daughter was overwhelmed with the scariness of the situation so she has taken up yoga and meditation. She practices it every afternoon for sure, but also adds in extra time when she’s feeling worked up”.

Creative outlets

In addition, parents described creative outlets as a strategy used by their children to manage stress; this theme is comprised of eight codes, encompassing the following activities: *art*, *music*, and *reading*. One parent reported, “She wanted to go to a friend’s house. I told her she couldn’t because of the shutdown. She complained about it for a few minutes and then decided to work on a craft project to pass the time”.

Alone time

One unique code that represents a technique parents reported their children using to manage their stress is *alone time*; alone time was coded five times. For example, one parent reported, “She locked me out of her room the other day saying that she just needed some quiet alone time”.

Jokes and pranks

Another unique code documented two times as a method of children’s stress management is *jokes and pranks*. While only appearing a limited amount of times, it is important to note that some children resorted to making fun of the severity of the COVID-19 pandemic in order to cope with the stress of the situation. For example, one parent shared, “My son plays games with his friends online on the

computer and I have heard them make jokes about that “coronavirus”. I felt like they are just blowing off steam by making jokes which I think is healthy although I do try to make sure he keeps it tasteful and will chide him if it is not”.

Affection

Lastly, a unique code that represents a parent reported method of their children’s stress management is *affection*; this code occurred two times. One parent commented, for example, “She talks to me and her mom when she is stressed, and gets a little touchy”.

Parent Reported Indicators of Stress

Emotions

The first theme that was prominent in this category was emotions; 28 codes were identified that comprise this theme. Parents referenced a variety of emotional experiences expressed by their children while attempting to manage stress. These included *bored*, *afraid*, *lonely*, *mad*, *upset*, *sad*, *tired*, *frustrated*, *depressed*, *stressed*, and *worried*. For example, one parent mentioned, “I feel like there has been an uptick in the amount of video games he is playing lately. I think this is to combat loneliness, so I usually allow him to do so. Additionally, one parent shared, “She saw a lady coughing that did not have a mask on and she was afraid she was spreading it in the air. She was very upset and started crying to the point where I had to console her”.

Hand washing

A unique code that arose from the content of the stress management questions was that three parents noted *hand washing* as an indicator of stress. This suggests that these caregivers noted that the behavior of hand washing, while normally useful, in these instances seemed like an indicator of stress to them. Though small in number, such a finding is concerning, as a potentially useful and protective behavior may have been misused by parents of children. One parent shared, “every 20 s hand washing,” which indicates an extreme rate of practicing hand hygiene, and an indicator of stress that may warrant intervention.

Follow up Questions

It is clear that the parents’ responses could be grouped into three categories: parent reported causes of child stress, parent reported methods children used to manage their stress, and parent reported indicators of child stress. Parents

were asked how they supported their child in the process of stress management. Overwhelmingly, parents reported that they supported their children. One parent referenced allowing their child to engage in a desired activity by saying, “I let him. He needs an outlet.” Additionally, another parent commented on how they supported their child, “I explained to him that this is a fleeting moment.” The strategies parents reported to assist their children can be grouped into the following categories: spending time with their child, providing resources to their child, giving advice to their child, and offering general support. Parents who described spending time with their child mentioned becoming more involved with their child’s academic work, talking with their child, and playing with their child. Parents who described providing resources to their child mentioned giving their child necessary supplies and providing their child space for a desired activity. Parents who described giving advice to their child mentioned sharing coping skills with their child, giving strategies for stress management to their child, and providing information to their child. Lastly, parents who described generally supporting their child mentioned various ways to meet their child’s needs, including maintaining a positive attitude, leaving their child alone, or sharing their own concerns with their child. Other strategies mentioned include protecting, calming, encouraging, listening to, distracting, loving, reassuring, and motivating one’s child.

Additionally, parents were asked a follow up question about how helpful stress management was to their child. Parents described a variety of positive outcomes that resulted from the various stress management techniques. Specifically, parents described children as being happy, calm, encouraged, supported, cared for, and relaxed. For example, one parent mentioned, “She felt valued, cherished, and noticed. I notice her distress, we are talking through it, taking actions through it, and ensuring her worries and fears are valid, and I share them with her. She is not alone and she will never truly feel disconnected as she has mom and dad continuously by her side. Reassurance that this will not last, it is human nature for all of us to go through a rough patch, that does not define us, nor should we let it dictate our moods and actions. I think slowly she is taking back the reigns of her emotions and fears.” Furthermore, parents described children as being better equipped to manage the current situation because their child understood the current situation better, their child recognized it was important to take care of himself, and their child was given a “sense of coping. Also, parents described meeting children’s needs as beneficial outcomes of stress management, such as: their child being “given a break,” their child processing their feelings, their child seeing a friend they missed, their child feeling less lonely, their child getting their energy out. For example, one parent reported, “It gave structure and power

back to him when he felt uncertain about his own abilities. I think it helped him to understand his feeling are valid, and also taught him that you have to do what is best to protect others.” In addition, parents explained stress management as being helpful because their children followed instructions and CDC guidelines. Lastly, parents described stress management as affirming that there would be an end to the pandemic for their children; one parent commented, “Yes because it lets them know things are okay”.

Discussion

Anticipated mental health impacts from community-wide crises like the COVID-19 global pandemic indicate impacts will be pervasive and enduring (Brooks et al. 2020; Galea et al. 2020). These projections, while dire, underscore the importance of developing effective disaster responses to protect public health, particularly for vulnerable segments of the population. Research from similar disasters indicates these stresses and strains impact parents more than their non-caregiver counterparts with associated effects noted in children, especially so for parents reporting heightened distress (American Psychological Association 2020; Cluver et al. 2020; Russell et al. 2020; Tambling et al. 2020). Resources to support parents during the pandemic are sorely needed.

Findings from the thematic analysis suggest that parents are speaking with children regarding viral transmission suppression. In particular, parents reported that they spoke with children about personal and social hygiene, and did so in ways that were consistent with CDC recommendations. With regard to stress and coping, findings indicated that parents observed children both experiencing and responding to stress in a variety of ways. Overall, parents reported feeling comfortable and prepared to have conversations with children, and emphasized the importance of doing so, and in doing so in ways that were developmentally appropriate.

This study was not without limitations. First, the use of MTurk as a mechanism of data collection limits the generalizability of these results. It is possible that parents who are enrolled as workers on the platform are different from community parents in meaningful ways. They are more likely to have comfort and facility with technology, and may be more inclined to interact with children in certain ways. It was beyond the scope of the present work to examine such differences, but future researchers should consider other means of data collection. In a related challenge, the MTurk platform did not enable researchers to ask questions in a format that mimics an interview. There was no opportunity to ask clarifying questions, and no opportunity for follow up with participants to validate

the data, and improve trustworthiness through participant confirmation. We encourage future researchers to conduct interviews, or perhaps use focus groups, to obtain additional information about parents' interactions with children about COVID-19. The biases, preconceived notions, and knowledge of the researchers may have impacted the study findings. As with any qualitative analysis, the selves of the researchers may have influenced study procedures, and the researchers may be biased in particular ways. While we attempted to engage in a set of steps to maintain credibility and enhance trustworthiness, future researchers of different personal and academic backgrounds should address these, and similar questions about parent interaction. Despite these limitations, the findings of the present study provide useful, time-sensitive information about parent interactions with children during the COVID-19 global pandemic, and findings may be useful for those who interact with families through professional service organizations.

Implications

These findings indicate parents are motivated to make scaffolding personal hygiene fun and engaging, signaling a positive, developmentally appropriate native approach to their role as sources of coping socialization. Family service professionals and interventionists can build on this tactic by structuring specific recommendations that empower children to practice conscientious preventative behaviors in proactive, prosocial ways. For example, home visitors and family case workers shifting to virtual programming and distanced contacts with their families can incorporate conversation prompts and activity suggestions geared to the developmental readiness of children in the home, encouraging young children in preschool through the early primary grades to be health warriors, and older children and teenagers to be protectors of their peer tribes. These examples, when structured with activities and additional explanations appropriate for each given child, illustrate important elements of parent-child interactions known to buffer stress during disasters (Polozzi et al. 2020; Wisner et al. 2018): They identify concrete, positive roles children play in making positive contributions to their immediate and extended communities by addressing the control, coherence, and connectedness needs for children during COVID-19.

Psychoeducational resources can be coupled with public health information to provide materials that may be a particularly meaningful contribution to how parents engage with and support their children's coping behavior. Previous efforts to provide supports during earlier SARS quarantines indicates tele-health services (e.g., telephone health education resources) can be effective in lowering anxiety levels and increasing knowledge related to disease transmission (Chan et al. 2007). Coupling similar public health outreach

with parenting supports may prove fruitful for caregivers contending with supporting children's coping behavior. Responses from the present inquiry suggest that parents may not have a clear sense of when to provide help to regulate distress, versus when to use behavioral management strategies to reinforce desirable behavior and minimize disruptive, disrespectful or harmful behavior. For example, rather than simply "taking away the screens" to control access to upsetting information from the media, parents can limit exposure to news coverage about COVID-19 and taking care to contextualize and interpret media pieces on the pandemic for children will be a protective stress regulation step all parents can take ("Mental Health and Coping During COVID-19", 2020).

As the pandemic unfolds over the months ahead, parents may face the risk of exhaustion and burnout as a result of enduring parenting stress (Mikolajczak et al. 2018). Should fatigue from the emotional strains of quarantine and related changes in work, education, and child care routines extend into the following school year, human service professionals will need to strengthen resources to empower caregivers and bolster energies to sustain positive parenting behaviors that convey a sense of safety while balancing emphasis on precaution and protection.

Compliance with Ethical Standards

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

Ethical Approval The study and all protocol were reviewed and approved by the University of Connecticut Institutional Review Board, protocol X20-0075.

Informed Consent Informed consent was obtained from all participants.

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