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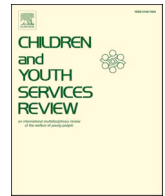
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Minority and low-SES families' experiences during the early phases of the COVID-19 pandemic crisis: A qualitative study

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ABSTRACT

Objectives: To explore minority and low-SES families' general experiences with the stay-at-home mandate initiated by the COVID-19 pandemic crisis.

Methods: Semi-structured qualitative interviews ($n = 31$) were conducted in May 2020 – six to nine weeks after the stay-at-home mandate was initiated in Chicago Heights, Illinois. Participants were randomly selected from the parent Chicago Heights Early Childhood Center (CHECC) study ($N = 2,185$). Thematic content analysis of transcribed semi-structured interviews were employed.

Results: During the early phases of the COVID-19 pandemic crisis, ethnic minority and low-SES families were generally comfortable in their homes, but both children and their parents experienced poor wellbeing, such as elevated stress. Families reportedly avoided social resources, despite low-SES. Upon reflection, parents expressed that the pandemic had changed them and, in some ways, the changes were positive.

Conclusion: Readily available crisis-oriented resources, for both children and parents, are needed to help families maintain or rebuild their sense of control over their lives during the early phases of a collective crisis (e.g., pandemic). Although early observations help to contextual families' initial experiences, examining long-term trends can inform meaningful policies and practices that both support how low-SES families buffer against COVID-19-related negative impacts and mitigate ethnic and SES inequities and disparities.

1. Introduction

In late 2019, a novel coronavirus (i.e., SARS-CoV-2) spread quickly from Wuhan, Hubei, China and sparked the global COVID-19 pandemic, which was declared on March 11, 2020. Within six months, COVID-19 cases were present in all countries across the world and the United States (US) had the highest number of confirmed COVID-19 cases (7,966,729) and related deaths (217,071) (World Health Organization [WHO], 2020). New variants (Omicron, Delta, and Alpha) have resulted in an increase number of infected people (437,333,859) and fatal cases (5,960,972) as we approach two years since the onset of the pandemic crisis (WHO, 2022).

Although the COVID-19 pandemic is unique, a collective crisis (a time of acute difficulty) is not. In addition to the COVID-19 pandemic, the US has experienced several collective crises including endemics (polio, measles), mass shooting events (Sandy Hook Elementary school shooting in Connecticut), terrorist attacks (September 11th suicide

attacks in New York), and natural disasters (Hurricane Katrina in Louisiana) – to name a few. The initial responses of leaders and populations to crises can offer lessons that can be applied to future crises, particularly important for vulnerable populations (e.g., low-SES and minority families) who have less resources to buffer against potential hardships (Hernández & Chang, 2018). Therefore, this paper explores the early experiences of low-SES minoritized families during the early phases of the COVID-19 crisis.

In response to the early phases of the pandemic (between March to October 2020), a total of 45 out of 50 state governors decreed some form of “stay-at-home” mandates whereby certain businesses were closed and residents were asked to curtail travel outside the home. The five states that did not have “stay at home” mandates did still have some restrictions; for example, all five of these states temporarily closed in-person school instruction. These directives were aimed at increasing physical distance among citizens to mitigate the COVID-19 spread.

In order to inform crises-oriented policies and practices, it is

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important to better understand how the COVID-19 pandemic and its related polices affected children and their families at the onset of the pandemic. A finding that emerged early on in the pandemic is that minority and low-socioeconomic-status (SES) families who had fewer resources to buffer against COVID-19 infection and related stressors fared more poorly than higher-income, white counterparts. For example, neighborhoods in New York City with a higher proportion of Black residents had fewer Covid-19 tests performed but recorded a larger proportion of positive COVID-19 tests (Liebermann-Cribbin, 2020). Further, Black adults and individuals with lower levels of education became more economically vulnerable during the pandemic (Perry & Aronson, 2021). More research is needed to better understand risk and protective factors that American low-SES families' experienced during the early phases of the COVID-19 crises, and this paper fills that gap.

1.1. Literature Review

Many studies have highlighted negative psychological effects in response to the onset of the COVID-19 pandemic, including anxiety, depression, and stress. A study conducted with 1,210 Chinese adults showed that 75.2 % were worried about their family members contracting the virus (Wang et al., 2020). Other studies have shown Spanish and Chinese individuals with pre-existing mental health issues who reported worsening conditions during the early phases of the COVID-19 pandemic (Fernández-Aranda et al., 2020; Tang et al., 2020a). In addition, a study of 2,266 Italians found that leaving one's domicile for work was associated with increased stress (Mazza et al., 2020). In the US, college undergraduates were more sedentary, anxious, and depressed during the Spring 2020 term compared with prior academic terms (Huckins et al., 2020). In another study that examined the psychological impacts from COVID-19 among 2,534 US college undergraduates, students who were women, were non-Hispanic Asian, in fair/poor health, of below average-relative family income, or who knew someone infected with COVID-19 experienced higher levels of psychological impacts, such as increased emotional distress including fear, irritability, sadness, and stress (Browning et al., 2021). Furthermore, a study of American parents with a child under the age of 18 found that compared to other racial and ethnic groups, Latino/a/x parents experienced the highest average number of stressors as a result of the COVID-19 stay-at-home orders (Brown et al., 2020).

Public health crises, including pandemics, can have long-term psychological outcomes. A 2013 study examined various disease-containment experiences (isolation, quarantine, mass prophylaxis, and community mitigation) with approximately 400 parents in California. The study found that criteria for post-traumatic stress disorder (PTSD) were met in 30 % of isolated or quarantined children based on parental reports, and 25 % of quarantined or isolated parents (Sprang and Silman, 2013). Similarly, alcohol abuse and dependence symptoms were elevated in Chinese hospital employees three years after the severe acute respiratory syndrome (SARS) outbreak (Wu et al., 2008; Wu et al., 2009). Respondents who had been quarantined were two to three times more likely to have high PTSD levels.

Researchers have also used technology to understand the immediate impacts of the COVID-19 pandemic crisis and associated quarantine measures through analysis of social media utilization. An analysis of 17,865 active Chinese Weibo users (one of the largest social media platforms in China) examined word frequency at the onset of the COVID-19 crisis, as well as emotional and cognitive indicators (Li et al., 2020). Researchers found that users were initially significantly more concerned during the pandemic about their health and family, and less concerned about leisure and friends. Similarly, analysis of nearly 10 million Google searches in the US found that topics related to anxiety, sleep disturbances, and suicidal ideation increased dramatically just before stay-at-home mandates were announced (Jacobson et al., 2020). Studies showed that during the initial phase of COVID-19, suicide death rates remained the same in Australia and even decreased in Norway, the UK,

and Peru (Coroners Court of Victoria, 2020; Qin, 2020; Office for National Statistics, 2020; Calderon-Anyosa, 2021). These declines in suicide rates in the initial phase of COVID-19 are not unexpected. Previous studies regarding suicide rates after national crises, such as the terrorist 9/11 attacks and Hurricane Katrina in 2005, have reported a decrease followed by a delayed increase (Bavel, 2020; Benedek et al., 2017; Kölves et al., 2013). For example, one study in Japan reported that there was a decrease in the suicide rate during the first COVID-19 outbreak followed by a rapid increase in the suicide rate during the second COVID-19 outbreak (Tanaka, 2021).

Furthermore, public dissemination of specific, up-to-date, and accurate health information (e.g., local outbreaks and available treatments) and precautionary measures (e.g., hand hygiene and mask wearing) in China were associated with lower levels of stress, anxiety, and depression (Wang et al., 2020). In a separate study with a Chinese sample, respondents reported increased sleep duration also alleviated their mental health symptoms (Tang et al., 2020b). Other coping strategies, among a Canadian sample, included decreased television consumption as well as video game and internet utilization (Colley et al., 2020). Healthcare workers in the US reported a reduction in stress as a result of a sense of camaraderie and teamwork with their coworkers, as well as when they shared jokes or humor with their coworkers (Rose et al., 2021). Another study of American adults over the age of 55 found that frequently reported coping strategies included physical exercise, outdoor activity, modification of routines, adjustment of attitudes, adherence to public health guidelines, and social connection (Finlay et al., 2021).

1.2. Current study

The current study used qualitative research methods to explore the general experiences of children and their parents during the early phases of the COVID-19 pandemic crisis – six to nine weeks after the initial March 21, 2020 stay-at-home mandate in Chicago Heights, Illinois. Much of the extant literature has used quantitative data that primarily evaluates outcomes; however, qualitative data can be used to evaluate processes and provide depth of understanding while capturing voices of frequently underrepresented individuals (Padgett, 2016). Therefore, the current study interviewed predominately low-SES parents, mostly from racial or ethnic minority groups (Latina/o/x/Black). Generally, this study population is considered vulnerable due to high rates of poverty, low rates of parental education, disparities in academic achievement between low- and high-SES children, high levels of federal aid utilization, and exposure to systemic discrimination and racism. Specifically, this study sample struggled to engage in education-related parental involvement pre-COVID, potentially making school closures particularly taxing. Prior to the onset of the COVID-19 pandemic, Perrigo et al (in press) found that these families faced challenges with parent/teacher communication, activating formal enrichment activities, limited time due to inflexible work schedules, and low levels of parental proficiency in education-related materials. Taken together, this study population had fewer resources to buffer against COVID-19-related stressors, likely exacerbating pre-existing inequities.

2. Methods

2.1. Study setting and participants

Participants were part of a larger longitudinal and randomized controlled trial, the Chicago Heights Early Childhood Center (CHECC) study based in Chicago Heights, Illinois. CHECC was implemented from 2010 to 2014 and examined mechanisms in preschool education using enhanced curricula (Fryer et al., 2015). A total of 2,185 households of children (three- and four-year-old) and their parents were enrolled, mostly from racial or ethnic minority groups from Chicago Heights and the surrounding areas. Families were randomized to one of the five

CHECC study conditions (see Table 1). Since the trial, CHECC parents and children continue to be followed annually; the last wave of data collection occurred in the Spring of 2020 when the children were between eight and 14 years old.

At the time of the current study (May 2020), Chicago Heights was following the state of Illinois' "stay-at-home" mandate (issued on March 21, 2020), which required all residents to stay at home with the exception of essential workers, such as health workers. The state's virus mitigation strategies included school and college closures, a halt of eviction enforcements, closure of sit-in dining at all bars and restaurants, and an overall restriction of large gatherings of people. Residents were required to only go out for essential items, including groceries or medical prescriptions.

2.2. Recruitment and procedures

The CHECC research team provided a list of all families residing in the Chicago Heights School District 170 (SD-170) during the COVID-19 pandemic ($n = 395$) based on the larger longitudinal and randomized controlled trial study (Fryer, Levitt, and List, 2015). Parents were recruited by one of four trained graduate research assistants via telephone to participate in qualitative individual interviews by a researcher who spoke the parents' preferred language, English or Spanish. Interviews were limited to families in SD-170 because it historically serves low-SES families, characterized by 28 % of individuals below the poverty line, an \$18,886 per capita or \$41,478 median household income, and 23 % of adults without a high school degree (US Census Bureau, 2018). SD-170 families also demonstrated, in the larger CHECC study, high levels of federal aid utilization, including foodstamps (48.8 %), supplemental nutrition program for Women, Infants, and Children (WIC; 41.8 %), and Medicaid (63.0 %).

Consistent with previous qualitative study samples (Jarrett and Coba-Rodriguez, 2019), the goal was to interview 20 parents or until saturation was reached. To fulfill this goal, a total of 35 parents were randomly selected using the lottery method on Microsoft Excel. Trained graduate research assistants then contacted the potential study participants via telephone. Parents were informed that individual interviews would explore how they and their children were coping during the early phases of the COVID-19 pandemic. Parents were informed that individual qualitative interviews would occur via telephone, complying with the state mandate. Interviews were conducted with the same graduate-level research assistant that initially contacted them. All interviews were audio-recorded and transcribed. Participants were offered a \$25 gift card for their participation. Thirty-one out of 35 parents agreed to participate, yielding an 89 % response rate and significantly

Table 1
CHECC Study Conditions.

Study Condition	Description
Control	The child and their parents did not receive any treatment interventions.
Preschool	9-month full day preschool for child, but no direct intervention for parents. 2 separate curricula: <i>Literacy Express + PreK Math</i> (focus on cognitive skills) and <i>Tools of the Mind</i> (focus on executive functions, including self-control).
Parent Program	9-month incentivized program for parents to learn how to teach at home. No direct intervention for the child. Parents met for bi-monthly sessions and were financially incentivized (in cash or money towards child's college) based on participation in the program and on their child's performance on tests and evaluations. Curriculum addressed both academic and executive function skill development.
Combined Program	9-month half day preschool for the child and a parenting program for the parents to learn how to teach their child at home. Curriculum emphasized on academic and executive function skills.
Kinderprep	2-month combined program administered in the summer prior to Kindergarten (combined program curriculum).

increasing the initial target sample size. Reasons that parents declined to participate included a recent surgery ($n = 1$) and reportedly being "too busy" ($n = 3$).

After informed consent procedures, each participant completed a semi-structured interview within the first three weeks of May 2020. Participants discussed their perspectives and general experiences during the COVID-19 pandemic through questions about the current stay-at-home order, overall well-being, social service resources, and potential pandemic-related benefits. Sample questions are listed below and the Institutional Review Board at the affiliated university approved the current study.

1. Can you describe how you have feel during this pandemic?
2. What are you most concerned about during this pandemic and why?
3. Are you familiar with any programs or resources in your neighborhood to help you during this pandemic?
4. Do you think there is anything good or positive that has come out of this pandemic, why or why not?

2.3. Data analysis

Individual interviews were audio-recorded and transcribed. The Spanish transcripts were not translated, which allowed Spanish-speaking researchers to analyze the data in its verbatim form. Three interviews had poor audio quality and were therefore not transcribed; consequently, a total of 28 interview transcripts were included in the analysis. The analysis employed deductive and inductive thematic coding (Hsieh and Shannon, 2005). Deductive codes were based on interview questions and inductive codes were based on participant responses. Data were coded according to Saldaña's (2015) first- and second-cycle coding method. During the first coding cycle, two researchers independently reviewed and open-coded the raw materials. They then undertook "consensus coding" together, a process used to establish agreement and increase the rigor and validity of coding in qualitative research (Padgett, 2008; Sandelowski and Barroso, 2002). Lists of codes developed individually by each investigator were subsequently discussed, matched, and integrated into a single codebook. A web-based qualitative data management program, Dedoose (2017), was used for coding and generated a series of categories arranged in a treelike structure connecting text segments as separate categories of codes or "nodes." Through repeated comparisons of these categories with one another, these nodes and trees were used to create a taxonomy of themes that included both *a priori* and emergent categories and new, previously unrecognized categories. Thematic content analysis was used to construct themes based on the inductive codes (Nowell et al., 2017). Differences and similarities between English- and Spanish-speakers were analyzed. The five CHECC study conditions were dichotomized (control or treatment) and also analyzed for similarities and differences. The study conditions were dichotomized due to the relatively small cell counts for some treatment groups, i.e., Preschool ($n = 2$).

3. Results

3.1. Descriptives

When qualitative interviews were conducted, the mean age of parents' was 43 years ($SD = 8.8$) and children's mean age was 12 years ($SD = 1.4$). Household composition averaged two adults and three children with a \$34,754 annual household income. More than half identified Spanish as their primary language, 67.7 % were married, and approximately 68 % had a high school diploma or higher levels of education, which is slightly lower than the local average of 80 % (World Population Review, 2022). Most participants identified as Hispanic (64.5 %, all of Mexican descent). See Table 2 for additional family characteristics.

Table 2
Family Characteristics.

	Full Sample (n = 31)		Control Group (n = 14)		Treatment Groups (n = 17)		English-Speakers (n = 13)		Spanish-Speakers (n = 18)	
	n	col%	n	col%	n	col%	n	col%	n	col%
<i>Ethnicity</i>										
Hispanic	20	64.5 %	8	57.1 %	12	70.6 %	2	15.4 %	18	100.0 %
Black	2	6.5 %	2	14.3 %	0	0.0 %	9	69.2 %	0	0.0 %
White	9	29.0 %	4	28.6 %	5	29.4 %	2	15.4 %	0	0.0 %
<i>Child's School Grade</i>										
Fourth	3	9.7 %	2	14.3 %	1	5.9 %	2	15.4 %	1	5.6 %
Fifth	10	32.3 %	7	50.0 %	3	17.6 %	6	46.2 %	4	22.2 %
Sixth	5	16.1 %	1	7.1 %	4	23.5 %	3	23.1 %	2	11.1 %
Seventh	8	25.8 %	1	7.1 %	7	41.2 %	2	15.4 %	6	33.3 %
Eighth	5	16.1 %	3	21.4 %	2	11.8 %	0	0.0 %	5	27.8 %
<i>Household Income</i>										
\$0 to \$36,000	22	71.0 %	11	78.6 %	11	64.7 %	9	69.2 %	13	72.2 %
\$36,000 to \$70,000	6	19.4 %	2	14.3 %	4	23.5 %	2	15.4 %	4	22.2 %
\$70,000 or more	2	6.5 %	1	7.1 %	1	5.9 %	2	15.4 %	0	0.0 %
<i>Members in Household</i>										
One to Three	4	12.9 %	2	14.3 %	2	11.8 %	3	23.1 %	1	5.6 %
Four to Five	19	61.3 %	9	64.3 %	10	58.8 %	8	61.5 %	11	61.1 %
More Than Five	8	25.8 %	3	21.4 %	5	29.4 %	2	15.4 %	6	33.3 %
<i>Parent's Education</i>										
No High School Diploma	10	32.3 %	5	35.7 %	5	29.4 %	1	7.7 %	9	50.0 %
High School Degree or GED	7	22.6 %	4	28.6 %	3	17.6 %	1	7.7 %	6	33.3 %
Vocational, Some College, or Associates	10	32.3 %	4	28.6 %	6	35.3 %	8	61.5 %	2	11.1 %
Bachelor's Degree	2	6.5 %	1	7.1 %	1	5.9 %	2	15.4 %	0	0.0 %
Masters, Graduate or Professional Degree	2	6.5 %	0	0.0 %	2	11.8 %	1	7.7 %	1	5.6 %
<i>Marital Status</i>										
Married	21	67.7 %	9	64.3 %	12	70.6 %	5	38.5 %	16	88.9 %
Single	10	32.3 %	5	35.7 %	5	29.4 %	8	61.5 %	2	11.1 %

3.2. Qualitative themes

Qualitative interviews lasted between 34 and 71 min, with an average length of 53 min. Analyses led to identification of four broad themes describing families' experiences during the pandemic: (1) Comfortable Stay-At-Home Mandate; (2) Poor Parent and Child Well-Being; (3) Social Resources Avoidance; and (4) Pandemic-Related Benefits. Table 3 demonstrates the number of participants who discussed each theme.

3.2.1. Comfortable Stay-At-Home mandate

With an average of five members per household, parents described their built and housing environments as generally "comfortable" in the context of the stay-at-home mandate. One parent stated, "It is a house but there are two rooms and we are renting one room. We are comfortable here." Despite the square footage of the housing structure, participants reported that they had adequate space during the stay-at-home mandate. Parents also described "sufficient space in the backyard" that allowed children to engage in outdoor play. Parents encouraged their children to play in the front yard or neighborhood

if they had a small yard or no yard. Psychologically, most parents reported "it doesn't feel like we are crowded." However, one parent reported feeling emotionally "tight."

Parents also described coming up with new home activities to keep their children both busy and entertained during the stay-at-home mandate. Families engaged in games that they had in their homes, but seldomly used. For example, board games (e.g., Monopoly), cultural games (e.g., *loteria*), dominos, and card games. Parents also purchased new activities, such as painting kits or puzzles, to supplement their children's enrichment.

"We do puzzles. [My children] have a puzzle like 2000 pieces on the table. They can't finish it [...] For a few moments one sits down, a little while later another sits down and we look for pieces but we cannot find them! They have many activities to pass the time."

Other indoor activities included family movie nights and leisure reading. Parents also reported increased outdoor activities, particularly as the weather in Chicago warmed up. One parent described an "unused trampoline" that was "finally being used thanks to the [stay-at-home mandate]." Parents also used the stay-at-home mandate as teaching opportunities with their children, such as deep cleaning or practicing the

Table 3
Qualitative Theme Counts.

		Full Sample	Control Group	Treatment Groups	English-Speakers	Spanish-Speakers
		n (%)	n (%)	n (%)	n (%)	n (%)
Comfortable Stay-At-Home Mandate	Comfortable Housing	20 (71 %)	7 (58 %)	13 (81 %)	6 (50 %)	14 (88 %)
	New Home Activities	19 (68 %)	8 (67 %)	11 (69 %)	7 (58 %)	12 (75 %)
	Minimizing Outings	18 (64 %)	5 (42 %)	13 (81 %)	4 (33 %)	14 (88 %)
Poor Parent and Child Well-Being	Mental Health Concerns	27 (96 %)	12 (100 %)	15 (94 %)	12 (100 %)	15 (94 %)
	Coping Strategies	21 (75 %)	10 (83 %)	11 (69 %)	8 (67 %)	13 (81 %)
Social Resources Avoidance	Resource Awareness	24 (86 %)	10 (83 %)	14 (88 %)	10 (83 %)	14 (88 %)
	Altruism	7 (25 %)	1 (8 %)	6 (38 %)	1 (8 %)	6 (38 %)
Pandemic-Related Benefits	Quality Family Time	28 (100 %)	12 (100 %)	16 (100 %)	12 (100 %)	16 (100 %)
	Post-Pandemic Benefits	16 (57 %)	8 (67 %)	8 (50 %)	8 (67 %)	8 (50 %)

language spoken at home. *"We are cleaning places where I have not cleaned before. I think [my son] does it because he feels desperate. And he has thrown [away] little things that really were no longer necessary here in the house."* Another parent stated:

"I have more time with them and they are learning more things. And I'm learning with them too because they tell me, 'Mom, in this time that we have, I'm going to teach you English' [...] And I teach him Spanish because I don't have him in Spanish classes."

Spanish-speaking parents were more likely (88 %) than English-speaking parents (33 %) to describe only going out for required essential items, such as groceries. One Spanish-speaking parent reported: *"We are always here in my house; we do not go out [...] Only when we have to get food or toilet paper, nothing else. But to be out in the street, nope!"*

3.2.2. Poor parent and child Well-Being

Ninety-six percent of parents described psychological concerns for both themselves and their children. One parent described her fear related to becoming ill with the virus or exposing loved ones: *"You try not to go out as often because you don't want to bring this pandemic into your own home. It's a matter of trying to keep my children safe, my family safe. That is very overwhelming and stressful."*

Parents described their children as *"desperately want[ing] to go out"* and reported a deterioration in their children's overall well-being. Parents characterized their children as *"frustrated," "bored," "irritable,"* or *"overwhelmed."*

"[My daughter] would breakdown and cry. She was worried about everybody that she knows and loves and cares about. I would notice she's connected to my hip and terrified of being in the dark or by herself or the basement. I was telling her teacher I noticed one day she was downstairs by herself watching TV and that just wasn't like her, so I went down there and I was like, 'Hey. What are you doing? Are you okay?' She's like, 'I'm sad.' I was like, 'Okay. You want to talk about it? You want to talk to mommy?' She just started crying and said that she's worried about daddy going to work and she doesn't want him to get sick, and she's worried about grandma [...] She just came out of nowhere and started yelling and she said, 'Grandma's old and I'm scared and I don't want my grandma to die!' She threw her hands over her face and just started crying, so I just grabbed her and hugged her and I tried to keep it together because I wanted to break down with her. It's really hard and I've been trying to keep her positive."

One parent expressed being concerned for her son's mental health. The mother reported that her son recently decreased communication while increased isolating behavior. She encouraged her son to increase his communication and told him that the qualitative interview for the current research study was a psychological consult. The parent stated:

"The thing that worries me the most is my son. He's constantly in his room. That's the one thing that honestly concerns me the most right now. I am trying to do as many outside activities with him [...] So I told him that I was going to start searching for a psychologist. I'm like if you're not going to talk to me, I'm going to find you help. You're going to talk to someone and let them know, express your feelings, express what's going on. If you're not talking to us then I'll have you talk to someone. So he thinks that's what I'm doing right now."

To combat mental health challenges, 75 % of parents described coping strategies that they utilized during the early phases of the pandemic. For example, parents reported their children engaged in painting or drawing and outdoor activities (e.g., neighborhood walks or fishing), and the families decreased their news and social media intake. *"At first [my children] were a little sad, but we started playing board games and all that. And now they are a little calmer. I don't let them watch the news much."* A few parents also described themselves as practicing *"calmness"*

as a coping mechanism. One mother reported that she tries to *"relax and remain calm"* and another mother reported *"taking things slowly and calmly."* Yet another mother reported she reminds herself that she cannot cope without calmness, stating *"what other options do I have?"*

3.2.3. Social resources Avoidance

Over 80 % of parents reported being aware of social resources, defined as services or goods. Many parents received information about social resources through SD-170 or their local churches, but they primarily learned about resources through word-of-mouth. Examples of social resources include food banks with canned foods as well as fresh produce, masks to prevent COVID-19 exposure, and food drives with hot meals (e.g., breakfast) that encouraged individuals to stay home. Few parents, however, reported accessing these resources during the early phases of the pandemic: *"There is a food bank, but I don't go. I also know about breakfast from the School District, but I also don't go for that."*

Reasons for not accessing social resources varied. Parents reported that they tried accessing resources (e.g., food bank), but by the time they arrived, there was no food. *"I went [to a food bank] and they ran out of milk. So I try to not go out because what do I gain if there is no milk? They don't have what they are supposed to give out."* In other cases, wait times were too long (e.g., two hours or more). To verify the number of household members, some organizations required parents to bring their children, a requirement that parents did not want to comply with due to fear of COVID-19 exposure. As a result, parents avoided social resources.

Some parents who did not access resources described their motivation as altruistic, especially among treatment groups (38 %) compared to control groups (8 %), as well as Spanish-speaking parents (38 %) compared to English-speaking parents (8 %). *"I prefer someone who needs it more than me to use [the resources]."* Another Spanish-speaking parent stated, *"I want other people who don't have anything to obtain [the resources.] I don't want to go and take things from them because right now, I have a little, but [I have] enough."*

Parents were also asked about their perceptions of government-related support in response to the COVID-19 pandemic. Many parents stated they were unaware of government support and therefore did not have an opinion on the matter. However, 14 % of participants referenced the local state government and US federal financial aid positively.

"The stimulus check and being able to collect unemployment – that's the only [thing] that has made this not a nightmare [...] But then when that money was released, then they were like, Okay, so how much longer do we have to do this? It gave me just that sense of ease for that moment."

3.2.4. Pandemic-Related Benefits

All 28 parents endorsed pandemic-related benefits, primarily quality time with loved ones that they believed established a *"deeper family union."* Another common benefit, from the parents' perspectives, was more available time without feeling rushed.

"I think that, for me at least, there's a lot more family time, a lot more time spent together. I feel like time doesn't feel so rushed all the time like it did. For me at least, I felt rushed all the time and constantly doing things, to where now I feel like I have a little bit more time to do extracurricular things with them."

Parents also reflected on potential long-term changes that they anticipated post-pandemic. Parents reported they enjoyed a slower-paced lifestyle and expressed an interest to maintain it. For example, one mother planned to work part-time instead of full-time. Parents also reported that they planned to engage in more family activities, prepare more home-cooked meals, and be more vigilant with health and hygiene precautions.

“[I am going to be] a little bit more cautious, as far as with germs and everything, even though I was cautious before. But because of something like this hitting you, be very cautious. And if you washed your hands 20 times before, now wash your hands 40 times.”

4. Discussion

To the authors' knowledge, this study is among the first qualitative research studies to explore families' general experiences during the early phases of the COVID-19 pandemic crisis with a predominantly low-SES and ethnic minoritized sample. When low-SES individuals have more social resources in their neighborhood, they have more confidence that their communities will recover from a crisis (Cagney et al., 2016). And although low-income Latina/o/x and Black individuals have demonstrated resilience in the face of crisis (e.g., Hurricane Sandy) in previous research, the crisis itself exacerbates pre-existing hardships (Hernández & Chang, 2018). These exacerbated hardships—especially challenges with housing conditions, energy insecurity, and encumbered access to healthcare and transportation—limited how residents could respond and delayed a full recovery post-crisis (Hernández & Chang, 2018).

In our study, thirty-one parents were interviewed in May 2020, between six to nine weeks after the stay-at-home mandate was initiated in Illinois. This study highlights results that capture a mixture of motivations and concerns that families experienced relatively early during the pandemic. Specifically, analyses identified four broad themes: (1) Comfortable Stay-At-Home Mandate; (2) Social Resources Avoidance (3) Poor Child and Parent Well-Being; and (4) Pandemic-Related Benefits.

At first glance, the “*comfortable stay-at-home mandate*” and “*social resource avoidance*” themes may appear as unexpected findings given that families were asked to stay home and mitigate their human interactions with people outside of their household (a prospect that can seem uncomfortable) and the families' relatively limited resources prior to and during the onset of COVID-19 pandemic crisis. However, parents described feeling generally comfortable in their housing environments, which included sufficient space and plenty of activities for their children to do during the stay-at-home mandate. Parents in this study also reported that they avoided social resources (e.g., food banks) during the early phases of the COVID-19 pandemic, in part due to concerns about safety and access barriers. Although an extended crisis, such as the COVID-19 pandemic, presents particularly difficult challenges for families with fewer economic resources, families' initial efforts were to respond with resilience. Families endorsed positive use of available resources and a sizable fraction of families reported an altruistic impulse by not wanting to make use of social resources that could be of greater benefit to others with higher levels of need.

Since the qualitative interviews occurred at the outset of the COVID-19 pandemic and stay-at-home mandate, both participants' perceptions and needs are susceptible to change over time, particularly as the pandemic lengthens. For example, early on in the COVID-19 pandemic, participants reported that they had the necessary resources, such as food and income. That is, their resources were not depleted two months after the stay-at-home mandate was implemented. Knowing that extended crises often have the most substantial and long-term impacts on families with limited resources, we imagine that it is quite possible that the parents who initially did not seek resources may ultimately seek and utilize resources in the near future as they exhaust their current resources. For example, more recent studies have shown that adult food insecurity has increased dramatically in the US during the COVID-19 pandemic (Fitzpatrick et al., 2020; Blackmon et al., 2021; Randall, 2021). One study found that individuals who are low-income, parents, Black, and/or Latino/a/x all had a higher prevalence and higher odds of food insecurity than their counterparts (Fitzpatrick et al., 2020). Furthermore, a few studies have discussed how there is a surging demand for food assistance during the COVID-19 pandemic (Blackmon

et al., 2021; Randall, 2021). One foodbank in Western North Carolina that worked during the pandemic to identify underserved Latino/a/x communities served over 100,00 people per month in 2021, a more than 60 % increase over pre-pandemic numbers (Randall, 2021). So, for the families we interviewed, most of whom identify as the socioeconomic group or an ethnic group that is more likely to have higher odds of food insecurity, it is very likely that some of them may have sought out resources such as foodbanks as the pandemic crisis continued.

In addition, the few parents we interviewed who attempted to utilize social resources endorsed a host of barriers, which primarily included long wait times and low resource availability (e.g., food banks that ran out of milk). Importantly, both barriers implied a high demand for social resources in the Chicago Heights area. Similar to previous studies, early on in the pandemic parents also expressed feeling heightened levels of fear about leaving their homes and potentially being exposed to COVID-19 (Mazza et al., 2020). Therefore, it is possible that parents needed resources but avoided them in an effort to mitigate their exposure to the virus. As fears lessen and pandemic fatigue grows, it is possible that parents will feel more comfortable – or need to – leave their homes and access social resources. All of these findings suggest that families who may need resources the most in order to sustain themselves through an extended crisis may have a collection of motivations and concerns that decrease their access to and use of resources at a time when they are most needed. The themes “*comfortable stay-at-home mandate*” and “*social resource avoidance*” also shed light on how low-SES families marshalled their reserved resources to remain well enough during the early phases of the COVID-19 pandemic. However, the picture of early resilience may not help from a policy perspective when trying to mitigate the long-term impacts of an extended crisis on low-SES families. For example, in the aftermath of Hurricane Katrina crisis, low-SES families experienced a breakdown of social networks and their sense of community was disrupted, leaving them feeling insecure, distrustful, and unstable (Hawkins & Maurer, 2011). Therefore, it is not surprising that the parents in our study demonstrated resilience, since low-SES and Latina/o/x/Black families have shown resilience in the face of crisis in other studies. But these research studies also suggest that the longer that a crisis persists (such as the COVID-19 pandemic), particularly for low-SES and minoritized families, the potential for exacerbated hardships also increases.

At the same time that parents sought to be resilient, they also discussed the kinds of strains and stresses that an extended crisis could place on households. At this early point in the pandemic, parents in the current study reported poor well-being for themselves and their children, consistent with previous studies that reported poor mental health during the early phases of the COVID-19 pandemic with adult samples (Fernández-Aranda et al., 2020; Mazza et al., 2020; Wang et al., 2020). Several parents reported long waitlists for mental health services, consistent with previous work in China which found that 24.5 % of 2,065 individuals could not access mental health treatment during the COVID-19 pandemic (Zhou et al., 2020). Furthermore, in a qualitative study conducted with primary care teams in Canada, participants explained that due to decreased access to community mental health resources during the pandemic, the waitlists for mental health services were increasing rapidly (Ashcroft et al., 2021). Although the mental health systems in China and Canada differ than the US, findings like these in diverse cultural and societal contexts point to the additional strain placed on mental health systems during a population-wide public health crisis that touches on extensive aspects of daily life.

In addition to mental health needs, the “*poor child and parent well-being*” theme also illustrates how pandemic events can create mental and emotional stress through their impact on normative developmental events. For example, the inability to remain physically active in routine ways was reflected in parents' responses about stresses on young children. New fears appearing for elementary aged children without the cognitive scaffolding to understand the likely true impacts of a pandemic were seen, increasing levels of anxiety. Many of the parents' responses

again reflect the efforts of families to respond to these new stressors in adaptive and meaningful ways. However, in addition to navigating the pragmatic impacts on the entire family (e.g., jobs, safety, income), the intensity of these new stressors may well flow through family systems and tax the mental health of parents trying to help their children. Having a deadly novel virus that spreads efficiently among the populous can also reasonably cause heightened levels of stress (Huckins et al., 2020; Mazza et al., 2020; Wang et al., 2020). Readily available mental health interventions, for both children and parents, are needed to help families maintain or rebuild their sense of control over their lives during an extended pandemic.

When coping strategies were considered, a previous study found that emotion-based coping mechanisms (e.g., praying) elevated the risk of mental health problems, whereas problem-focused coping mechanisms (e.g., accessing information about COVID-19) were more helpful (Guo et al., 2020). These findings may or may not hold in diverse cultural contexts. For example, in the current sample, 54 % referenced religion positively with statements such as “we are okay, thanks to God.” In addition to emotion-based coping mechanisms, parents also endorsed a host of grounding coping mechanisms, which are strategies to reconnect with the present moment such as drawing or playing outdoors. Research is needed to better understand culturally sensitive coping strategies for families that can be effectively implemented in-home during mandated quarantines, particularly during the early phases of a public health crisis when families experience jarring disruptions in their everyday lives.

5. Conclusions

Overall, the current findings should be viewed in the context of the study timing in the pandemic. The strength of the present study comes from the qualitative research strategies that permit one to hear the experiences, motivations, and concerns of low-SES families responding to a population-wide public health crisis. The study does occur in a particular geographic and cultural context. Many participating families were first-generation immigrants of Mexican descent and they all resided in Chicago Heights, IL. Qualitative research findings are not intended to generalize in the same way as quantitative findings, but themes and experiences can transfer to other samples (Padgett, 2016). Also, the current study only interviewed one family member per household, other members of the family (e.g., children or second caregivers) may have diverse perspectives of family-level experiences during the onset of a crisis.

When considered together, the themes from this study suggest a mixture of resilient and vulnerable impacts on low-SES families during the early phases of the COVID-19 pandemic. It is also worthwhile examining further the degree to which some of the unique themes in this study may be attributable to cultural value systems. For instance, compared to English-speaking parents, Spanish-speaking parents were more likely to report minimizing outings to protect their families from COVID-19 exposure, as well as doing their part to minimize the global spread. This difference may be related to the fact that the Spanish-speaking parents in the current study were first-generation immigrants from Mexico, a collectivistic culture that emphasizes the needs of the group over those of individuals. However, compared to non-Latino/a/x white adults, Latino/a/x adults were still much less likely to report trust in public health officials in association with COVID-19 and were more likely to “wait and see” before receiving the COVID-19 vaccination (Alobuia et al., 2020; Hamel et al., 2021). The reason for this distrust of public health officials and vaccine hesitancy in the Latino/a/x community likely stems from the fact that Latino/a/x groups have been the target of multiple discriminatory health interventions (Bailey, 1991). Future research is needed to understand how cultures and value systems within groups may shape behaviors during a public health crisis.

Importantly, participants expressed that the early phases of the COVID-19 pandemic has changed them and, in some ways, the changes have been positive (i.e., “pandemic-related benefits” theme). The altruistic

impulse of many participants to save community resources or prioritize family time were only a couple of examples. Future research should build on the current study and examine not only adversities, but also resilience that emerges during collective crises that impact low-SES families. This study also highlights the important need to examine how low-SES families’ pandemic-related experiences change throughout the course of an extended pandemic. Although early observations help to contextualize families’ initial experiences, examining long-term trends can inform meaningful policies that both support how low-SES families buffer against COVID-19-related negative impacts and mitigate ethnic and SES inequities and disparities.

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CRediT authorship contribution statement

Judith L. Perrigo: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. **Anya Samek:** Conceptualization, Data curation, Resources, Validation, Visualization, Writing – review & editing. **Michael Hurlburt:** Funding acquisition, Investigation, Resources, Supervision, Validation, Visualization, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

- Alobuia, W. M., Dalva-Baird, N. P., et al. (2020). Racial disparities in knowledge, attitudes and practices related to COVID-19 in the USA. *J Public Health (Oxf)*, *42*(3), 470–478.
- Ashcroft, R., et al. (2021). Primary care teams’ experiences of delivering mental health care during the COVID-19 pandemic: A qualitative study. *BMC Primary Care*, *22*, 143.
- Bavel JJV et al. Using social and behavioural science to support COVID-19 pandemic response. *Natural Human Behavior*, *4*(5), 460–471.
- Bailey, M. E. (1991). Community-based organizations and CDC as partners in HIV education and prevention. *Public Health Rep*, *106*(6), 702–708.
- Benedek DM, Morganstein JC, Holloway HC and Ursano RJ (2017) *Kaplan and Sadock’s Comprehensive Textbook of Psychiatry* (eds Sadock, B. J. et al.) (Lippincott Williams & Wilkins).
- Blackmon, L., Chan, R., et al. (2021). Rapid Development of a Decision Support System to Alleviate Food Insecurity at the Los Angeles Regional Food Bank amid the COVID-19 Pandemic. *Production and Operations Management*, *30*(10), 3391–3407.
- Brown, S., Doom, J., et al. (2020). Stress and parenting during the global COVID-19 pandemic. *Child Abuse & Neglect*, *110*(2), Article 104699.
- Browning, M. H. E. M., et al. (2021). Psychological impacts from COVID-19 among university students: Risk factors across seven states in the United States. *PLOS ONE*, *16*(1), Article e0245327.
- Cagney, K., Sterrett, D., et al. (2016). Social Resources and Community Resilience in the Wake of Superstorm Sandy. *PLOS ONE*, *11*(8), Article e0160824.
- Calderon-Anyosa, R. J. C., & Kaufman, J. S. (2021). Impact of COVID-19 lockdown policy on homicide, suicide, and motor vehicle deaths in Peru. *Preventive Medicine*, *143*, Article 106331.
- Colley, R. C., Bushnik, T., & Langlois, K. (2020). Exercise and screen time during the COVID-19 pandemic. *Health reports*, *31*(6), 3–11.
- Coroners Court Monthly Suicide Data Report: Report 2–5 October 2020 (Coroners Court of Victoria, 2020). Available at: <https://www.coronerscourt.vic.gov.au/sites/default/files/2020-10/Coroners%20Court%20Suicide%20Data%20Report%20-%20Report%202%20-%2005102020.pdf> (accessed 22 January 2022).
- Dedoos (2017) Dedoos: Great research made easy. Available: www.dedoos.com.
- Fernández-Aranda, F., Casas, M., Claes, L., et al. (2020). COVID-19 and implications for eating disorders. *European Eating Disorders Review*, *28*(3), 239.

- Finlay, J., et al. (2021). Coping during the COVID-19 pandemic: A qualitative study of older adults across the United States. *Frontiers in Public Health*, 9, Article 643807.
- Fitzpatrick, K., et al. (2020). Assessing Food Insecurity among US Adults during the COVID-19 Pandemic. *Journal of Hunger and Environmental Nutrition*, 16(1), 1–18.
- Fryer Jr RG, Levitt SD, and List JA (2015) *Parental incentives and early childhood achievement: A field experiment in Chicago heights* (No. w21477). National Bureau of Economic Research.
- Guo J, Feng XL, Wang XH, and van IJzendoorn MH (2020) Coping with COVID-19: Exposure to COVID-19 and negative impact on livelihood predict elevated mental health problems in Chinese adults. *International Journal of Environmental Research and Public Health*, 17(11), 3857.
- Hamel L, Sparks G, and Brodie M (2021) KFF COVID-19 vaccine monitor: February 2021. Kaiser Family Foundation. Available at: <https://www.kff.org/coronavirus-covid-19/poll-finding/kff-covid-19-vaccine-monitor-february-2021/> (accessed 22 January 2022).
- Hawkins, R. L., Maurer, K., et al. (2011). 'You fix my community, you have fixed my life': The disruption and rebuilding of ontological security in New Orleans. *Disasters*, 35 (1), 143–159.
- Hernández, D., Chang, D., et al. (2018). Public Housing on the Periphery: Vulnerable Residents and Depleted Resilience Reserves post-Hurricane Sandy. *Journal of Urban Health*, 95, 703–715.
- Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative health research*, 15(9), 1277–1288.
- Huckins, J. F., DaSilva, A. W., Wang, W., et al. (2020). Mental health and behavior of college students during the early phases of the COVID-19 pandemic: Longitudinal smartphone and ecological momentary assessment Study. *Journal of medical Internet research*, 22(6), Article e20185.
- Jacobson NC, Lekkas D, Price G, et al. (2020) Flattening the mental health curve: COVID-19 stay-at-home orders result in alterations in mental health search behavior in the United States.
- Jarrett, R. L., & Coba-Rodriguez, S. (2019). "Whatever I can imagine, we did it": Home-based parental involvement among low-income African-American mothers with preschoolers enrolled in Head Start. *Journal of Research in Childhood Education*, 33 (4), 538–557.
- Kölves, K., Kölves, K. E., & De Leo, D. (2013). Natural disasters and suicidal behaviours: A systematic literature review. *Journal of Affective Disorders*, 146(1), 1–14.
- Li, S., Wang, Y., Xue, J., Zhao, N., & Zhu, T. (2020). The impact of COVID-19 epidemic declaration on psychological consequences: A study on active Weibo users. *International journal of environmental research and public health*, 17(6), 2032.
- Lieberman-Cribbin, W., et al. (2020). Disparities in COVID-19 Testing and Positivity in New York City. *American Journal of Preventive Medicine*, 59(3), 326–332.
- Mazza, C., Ricci, E., Biondi, S., et al. (2020). A nationwide survey of psychological distress among Italian people during the COVID-19 pandemic: Immediate psychological responses and associated factors. *International Journal of Environmental Research and Public Health*, 17(9), 3165.
- Nowell, L., et al. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16(1).
- Office for National Statistics (ONS) (2020) Quarterly suicide death registrations in England: 2001 to 2019 registrations and Quarter 1 (Jan to Mar) to Quarter 2 (Apr to June) 2020 provisional data. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/quarterlysuicidedeathregistrationsinengland/2001to2019registrationsandquarter1jantomartoquarter2aprtojune2020provisionaldata> (accessed 22 January 2022).
- Padgett DK (2008) Strategies for rigor. *Qualitative methods in social work research*, 2nd ed. Thousand Oaks, CA: Sage Publications Inc, 179–198.
- Padgett DK (2016) *Qualitative methods in social work research* (Vol. 36). Sage publications.
- Perry, B., Aronson, B., & Pescosolido, B. (2021). Pandemic precarity: COVID-19 is exposing and exacerbating inequalities in the American heartland. *Proceedings of the National Academy of Sciences*, 118(8), Article e2020685118.
- Qin P (2020) National observation of death by suicide in the first 3 months under COVID-19 pandemic. *Acta Psychiatrica Scandinavica*, 143(1), 92–92.
- Randall, H. (2021). Sidebar: Climbing With Hope: How Food Banks and Community Came Together in COVID-19. *North Carolina Medical Journal*, 82(4), 262–263.
- Rose, S., Hartnett, J., & Pillai, S. (2021). Healthcare worker's emotions, perceived stressors and coping mechanisms during the COVID-19 pandemic. *PLoS ONE*, 16(7), Article e0254252.
- Saldaña J (2015) *The coding manual for qualitative researchers*. Sage.
- Sandelowski, M., & Barroso, J. (2002). Reading qualitative studies. *International journal of qualitative methods*, 1(1), 74–108.
- Sprang, G., & Silman, M. (2013). Posttraumatic stress disorder in parents and youth after health-related disasters. *Disaster medicine and public health preparedness*, 7(1), 105–110.
- Tanaka, T., & Okamoto, S. (2021). Increase in suicide following an initial decline during the COVID-19 pandemic in Japan. *Natural Human Behavior*, 5, 229–238.
- Tang, W., Hu, T., Hu, B., et al. (2020). Prevalence and correlates of PTSD and depressive symptoms one month after the outbreak of the COVID-19 epidemic in a sample of home-quarantined Chinese university students. *Journal of affective disorders*.
- Tang, W., Hu, T., Yang, L., & Xu, J. (2020). The role of alexithymia in the mental health problems of home-quarantined university students during the COVID-19 pandemic in China. *Personality and Individual Differences*, 165, Article 110131.
- United States (US) Census Bureau (2018) *American community survey 5-year estimates. Census reporter profile page for Chicago Heights School District 170, IL*. Available at: <https://censusreporter.org/profiles/95000US1709960-chicago-heights-school-district-170-il> (accessed 09 September 2020).
- Wang C, Pan R, Wan X, et al. (2020) A longitudinal study on the mental health of general population during the COVID-19 epidemic in China. *Brain, behavior, and immunity*.
- World Health Organization (WHO) (2020) *WHO coronavirus disease (COVID-19) dashboard*. Available at: <https://covid19.who.int> (accessed 09 September 2020).
- World Health Organization (WHO) (2022) *WHO coronavirus disease (COVID-19) dashboard*. Available at: <https://covid19.who.int> (accessed 02 March 2022).
- World Population Review (2022). *Chicago Heights, Illinois Population 2021*. Available at: <https://worldpopulationreview.com/us-cities/chicago-heights-il-population> (accessed 21 January 2022).
- Wu, P., Fang, Y., Guan, Z., et al. (2009). The psychological impact of the SARS epidemic on hospital employees in China: Exposure, risk perception, and altruistic acceptance of risk. *The Canadian Journal of Psychiatry*, 54(5), 302–311.
- Wu, P., Liu, X., Fang, Y., et al. (2008). Alcohol abuse/dependence symptoms among hospital employees exposed to a SARS outbreak. *Alcohol & Alcoholism*, 43(6), 706–712.
- Zhou, J., Liu, L., Xue, P., Yang, X., & Tang, X. (2020). Mental health response to the COVID-19 outbreak in China. *American Journal of Psychiatry*.