Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Parental decision-making on summer program enrollment: A mixed methods Covid-19 impact study

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ABSTRACT

Background: The closure of childcare organizations (e.g. schools, childcare centers, afterschool programs, summer camps) during the Covid-19 pandemic impacted the health and wellbeing of families. Despite their reopening, parents may be reluctant to enroll their children in summer programming. Knowledge of the beliefs that underlie parental concerns will inform best practices for organizations that serve children.
Methods: Parents (n = 17) participated in qualitative interviews (October 2020) to discuss Covid-19 risk perceptions and summer program enrollment intentions. Based on interview responses to perceived Covid-19 risk, two groups emerged for analysis- "Elevated Risk (ER)" and "Conditional Risk (CR)". Themes were identified utilizing independent coding and constant-comparison analysis. Follow-up interviews (n = 12) in the Spring of 2021 evaluated the impact of vaccine availability on parent risk perceptions. Additionally, parents (n = 17) completed the Covid-19 Impact survey to assess perceived exposure (Range: 0–25) and household impact (Range: 2–60) of the pandemic. Scores were summed and averaged for the sample and by risk classification group.
Results: Parents overwhelmingly supported the operation of summer programming during the pandemic due to perceived child benefits. Parent willingness to enroll their children in summer programming evolved with time and was contingent upon the successful implementation of safety precautions (e.g. outdoor activities, increased handwashing/sanitizing of surfaces). Interestingly, parents indicated low exposure (ER: Avg. 6.3 ± 3.1 Range [2–12], CR: Avg. 7.5 ± 3.6 Range [1–14]) and moderate family impact (ER: Avg. 27.1 ± 6.9 Range [20–36], CR: Avg. 33.7 ± 11.4 Range [9–48]) on the impact survey.
Conclusion: Childcare organizations should mandate and evaluate the implementation of desired Covid-19 safety precautions for their patrons.

1. Introduction

The implementation of Covid-19 safety precautions led to the temporary closure of childcare organizations (e.g. schools, childcare centers, after school programs, and summer camps) across the United States (Park et al., 2020; Van Lancker & Parolin, 2020). The benefits of the programming offered at these organizations extend beyond routine childcare to encompass cognitive, social emotional, and health benefits for children (Durlak & Weissberg, 2007). For example, children from low-income households may experience reduced access to free or reduced-price lunches and safe places to play during the summer months. Summer programming meals and activities provide an invaluable opportunity to mitigate food insecurity and physical activity (PA) declines among children from low-income households(Hesketh, Lakshman, & van Sluijs, 2017; Moore et al., 2010) (McCombs et al., 2019).

The social benefits of summer programming is particularly salient to children and adolescents (Richmond, Sibthorp, & Wilson, 2019). Unfortunately, pandemic-closure of these organizations occurred at a time when their social benefits were most needed (Kuhfeld et al., 2020; Lee, 2020; Van Lancker & Parolin, 2020). The reduction of safe spaces for social interaction placed an undue mental health burden on children as they experienced high rates of anxiety and depression (de Miranda, da Silva Athanasio, de Sena Oliveira, & Silva, 2020). Thus, a unique tension

Abbreviations: CEFIS, Covid 19 Exposure and Family Impact Survey; CR, Conditional Risk; ER, Elevated Risk.

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exists between Covid-19 risk reduction strategies (e.g. childcare organization closures) and the benefits of program attendance. As childcare organizations re-open, parent perspectives about Covid-19 risk and desired mitigation strategies should be considered to facilitate the optimal operation of programming.

Given the widespread impact of Covid-19, it is likely that individual perceptions of risk may influence adherence to pandemic guidelines (e.g. facial masks, social distancing). Risk perception theories have been used in behavior change research to address several public health problems including smoking cessation, HIV prevention, environmental hazards, among others (Corneli et al., 2014; Gibbons, McGovern, & Lando, 1991; Slovic, Fischhoff, & Lichtenstein, 1985). Several key constructs in the theory (e.g. perception of risk, risk-adjustment, risk regulation, immediacy of effect, knowledge and control of risk, and severity of consequences) may provide a valuable framework to describe how individuals conceptualize the risk of Covid-19 infection. Previous research on risk perception and protective health behaviors indicates that individuals with a greater perceived risk were more likely to engage in protective behaviors (e.g. handwashing, travel avoidance, vaccination) than individuals with a lower perceived risk (Brug et al., 2004; de Bruin & Bennett, 2020; Gidengil, Parker, & Zikmund-Fisher, 2012).

Similarly, parents' perceived risk of Covid-19 may influence their perspective on Covid-19 risk mitigation strategies.Due to the politicization of Covid-19 pandemic precautions, parents may have diverse perspectives regarding the value of protective behaviors (Perry, Whitehead, & Grubbs, 2020; Whitehead & Perry, 2020). Further, rapidly evolving scientific knowledge and the emergence of several Covid-19 vaccines has the potential to impact risk perception and precaution adherence. Consequently, the collective influence of Covid-19 risk perceptions and precaution adherence on parents' summer program enrollment decision-making for their children should be evaluated.

The purpose of this study is to describe parent perceptions of Covid-19 risk and to explore how changes in risk perceptions may impact parental decision-making on summer program enrollment for their children. To address this, the following research questions have been developed for the study.

1. What are the thoughts and expectations of parents regarding the operation of summer programming next year (Summer of 2021)?
2. How do parents perceive the risk and severity of the Covid-19 virus?
3. How has the COVID-19 pandemic impacted the well-being (e.g. mental, social, financial) of parents?
4. What strategies do parents use to cope with the challenges COVID has caused in their life?

Given the persistence of the Covid-19 virus, we anticipate that findings from this study will inform future out-of-school time programming research and implementation.

2. Methods

2.1. Study design/procedure

All procedures were approved by the lead author's university institutional review board prior to recruitment of the first participant. This study used a convergent mixed method design to quantitatively and qualitatively assess family lived experiences during the Covid-19 pandemic, perceived Covid-19 risk, and summer program enrollment decision-making (Wu, Deatrick, McQuaid, & Thompson, 2019). Parents who completed the quantitative survey were contacted within two days to request a qualitative interview. Results from the quantitative survey were compared with explanatory information from qualitative interviews. To assess change in perceived Covid-19 risk, follow-up interviews were conducted with parents 6 months after the initial interview.

2.2. Setting, recruitment, participants

This study recruited a subset of parents (n = 60) participating in a larger study investigating the impact of summer programming vouchers on children's obesogenic behaviors in one southeastern U.S. state. In the September of 2020, parents were invited to complete an online survey (i.e. Covid-19 impact survey) evaluating their lived experiences and children's summer activities during the Covid-19 pandemic. The survey link was sent through SMS text-message and at the end of the survey parents indicated their willingness to participate in a qualitative interview. A total of 55 of 60 parents completed the survey, and 17 parents responded to request for interview. A subset of parents (n = 12 of 17 parents completed follow-up interviews in the Spring of 2021. All parents were compensated for completing the survey ($10) and qualitative interviews ($15).

2.3. Quantitative measures

Parents completed a Covid-19 impact survey using a Qualtrics survey link sent via SMS message in September of 2020. Survey questions were drawn from the Covid-19 Exposure and Family Impact Scales (CEFIS), a trauma-based framework examining the socioeconomic and family effects of the Covid-19 pandemic (Abuse, 2017; Kazak et al., 2021b). CEFIS questions were divided and scored into two separate sections evaluating 1) Covid-19 exposure (25 questions), 2) Covid-19 family impact (12 questions). In the Covid-19 exposure section, respondents indicated agreement (i.e. yes or no) with several pandemic-related experiences (e.g. stay at home order, missed important family event, family income decreased, Covid-19 diagnosis). In the family impact section, respondents utilized a 5-point Likert scale to indicate the overall impact Covid-19 had on several family-life areas including parenting, childcare, and physical/emotional well-being. Higher scores for each section indicate greater exposure to and perceived impact of Covid-19.

2.4. Qualitative methods

2.4.1. Preliminary interviews

Preliminary qualitative interviews were conducted to refine the interview guide by the lead author with 3 parents, not included in the study from 2 separate households. Preliminary interviews lasted approximately twenty minutes and were conducted socially distanced in-person. Specifically, interview questions about pandemic experiences and the perceived risk of Covid-19 were narrowed to elicit clear responses from participants. Other questions were eliminated to reduce redundancy (e.g. "How comfortable should parents feel about enrolling their child in summer programming during Covid?" was eliminated from the final semi-structured interview guide due to overlap with, "What advice would you give a parent considering sending their child to a summer camp?"). Edits to the final interview guide from the preliminary interviews strengthened the clarity of the interview questions and increased the likelihood that study research questions would be addressed.

2.4.2. Primary interviews

Phone interviews were conducted in October of 2020 by the lead author with parents (n = 17) who indicated interest in a qualitative interview on the Covid-19 Impact survey. Participants were contacted a total of 3 times to request an interview. Phone interviews were ~20 min in duration and were conducted using a semi-structured interview guide (Appendix B). The interview questions were grounded in constructs from the health belief model, health behavior change theory and risk perception literature (Kahr et al., 2015; Schwarzer, 2016; Slovic et al., 1985). Questions addressed several theoretical constructs including perceived knowledge about risk, perceived risk, perceived severity and dread, control, and relevance.

2.4.3. Follow-up interviews

The emergence of several Covid-19 vaccines during the Winter of 2020 had the potential to impact perceptions of Covid-19 risk. To evaluate changes in risk perceptions, follow-up interviews were conducted via phone with parents (n = 12) in the March of 2021. All previously interviewed parents were contacted via SMS message/phone call a maximum of 3 times to request a second interview. Interviews were ~10 min in duration and were conducted using a semi-structured interview guide (Appendix C). Interview questions were designed to assess the change in perceived risk of Covid-19, the impact of vaccine availability on perceived risk, desired Covid-19 precautions for summer programming, and parent intentions to enroll their child in summer programming. All parents were compensated $10 for completing the survey and $15 for completing each interview (e.g. primary and follow-up).

2.5. Data analysis

2.5.1. Qualitative analysis

Interviews were transcribed and recorded using an online transcription software, Otter.ai and imported into NVIVO 12 software. Online access to transcripts and recordings were password-secured. Data analysis was conducted by authors (RD, LRO) trained in qualitative methodology. To generate themes, inductive analysis was applied using an immersion crystallization approach and constant comparison methodology (Boeije, 2002; Crabtree, Crabtree, & Miller, 1999; Strauss & Corbin, 1998).

2.5.1.1. Analytical approach. A two-step approach was employed to conduct data analysis.

First, in keeping with the overarching purpose of the study, the sample was stratified into two groups based on parent-voiced perceptions of Covid-19 risk. Consistent with the constant comparison analytical approach, sample stratification occurred prior to analysis (Boeije, 2002). Parents were categorized based on their response to interview questions evaluating the risk Covid-19 presents to their family. Responses to these questions were independently coded and discussed until a consensus on group labels was reached. Parents who indicated that Covid-19 presented a significant risk to their household were classified as "Elevated Risk (ER)". Parents who held a more nuanced view of the risk, given the widespread implementation of Covid-19 precautions, were classified as "Conditional Risk (CR)". Second, after parents were classified into groups, separate thematic coding analyses were conducted within unique NVIVO files for each respective group (n = 2). Follow-up interviews were not stratified into risk perception groups to account for potential bias due to attrition.

2.5.1.2. Three steps of thematic coding analysis. Coders utilized a three-step latent coding technique for analysis (Bernard, Wutich, & Ryan, 2016) of all interviews (e.g. primary and follow-up interviews). First, coders independently read and generated codes for a single transcript by grouping recurring words, phrases, and themes. Second, coders and a third reviewer (RGW) met in order to review codes, integrate/add codes to a running list of codes generated from each transcript (i.e. coding guide), and to arbitrate any disagreements between coders to 100% agreement.

Third, transcripts were revisited by the coders to determine if additional codes were needed and if the coding guide had reached saturation (Strauss & Corbin, 1998). Saturation was determined utilizing a code meaning saturation approach. Saturation was determined through collaborative discussion when coders agreed that a full understanding of codes had been reached and no new data, themes, or codes had emerged within the data (ER: ~Interview 5–6, CR: ~Interview 11, Follow-up: ~Interview 8) (Fusch & Ness, 2015; Hennink & Kaiser, 2020). This iterative process was repeated until all transcripts were read and a comprehensive coding guide was created. This comprehensive coding guide was subsequently used to review and code all interview transcripts. Afterwards, in a final meeting coders met to discuss and reconcile all coded interviews.

Themes were identified using inductive analysis through a constructionist epistemology. Consistent with constant comparison approach, themes were identified as patterns of similarities and differences between groups for each interview guide question. The prevalence of a theme was considered in terms of the number of different speakers who articulated a similar idea. Although, no specific threshold was established, coders evaluated the relative importance or 'keyness' of a theme to answer the research questions. The themes presented herein are semantic in nature and adhere to a simple description and interpretation of participant responses.

Additionally, primary interview themes related to parent perceptions of Covid-19 risk were nested within constructs from risk perception theory (Slovic et al., 1985). Risk perception theory attempts to understand how individuals conceptualize risk and describe the association between risk perception and protective behaviors (Borrelli, Hayes, Dunsiger, & Fava, 2010). Relevant theoretical constructs and their definitions can be found in Appendix D. Similarly, the social ecological model was utilized to frame coping strategies parents employed to manage pandemic-related stress. Intrapersonal resources were defined as attitudes and personal practices (e.g. diet or exercise) that parents engaged in to reduce stress. Interpersonal resources were support systems that operate between individuals, typically at the family and friend locus (e.g family activities, childcare support, emotional support). Community resources were defined as external support existing at institutions beyond the home setting (e.g. schools, churches, recreation centers). Policy support included federal, state, and local policies parents referenced as supportive during the pandemic.

2.6. Trustworthiness of findings

Several steps were taken to ensure trustworthiness of the study findings. First, the lead author of the study engaged in a reflective process to examine personal biases and assumptions that may be associated with this research. The lead author explored his personal value system and subsequently identified potential areas for role conflict during interviews. This process culminated in a written positionality statement acknowledging his subjectivities which was shared with the corresponding author (Appendix A). To establish clarity of the research findings, peer scrutiny of the project was conducted with two research colleagues in the health psychology field who were not involved in transcript coding or theme generation. Feedback was incorporated to modify theme development. During the interview, several tactics to help ensure honesty in informants were employed including, encouraging participants to be frank (i.e. there are no right or wrong answers) at the outset of the interview, interviewer attempts to establish rapport with respondents, and participants were reminded that they are not required to disclose information. Iterative questioning was used to uncover contradictions in statements and elicit detailed information and greater transparency. Negative case analysis was utilized to revisit the data and confirm that the established themes account for all instances of Covid-19 risk perception. Frequent debriefing sessions occurred during the analysis process with coders (LRO, RD) and the third reviewer (RGW) to resolve disagreements and clarify interpretation of participant responses. Lastly, quantitative survey data were triangulated with qualitative interview findings to create a holistic understanding of parent perceptions of Covid-19 risk (Patton, 1999).

2.7. Quantitative analysis

Demographics for the sample are reported by risk classification (e.g. ER & CR). Using the scoring rubric for the CEFIS scale, parent responses were scored for sections one (i.e. exposure) and two (i.e. family impact)

using establish scoring criteria (Kazak et al., 2021a). Section one included twenty-five dichotomous (Yes/No responses) question items. Responses were scored using a summary count of yes responses ranging from 0 to 25. Scores greater than 16 were considered as high exposure. Section two consisted of twelve questions. Ten of twelve questions were summed and scored using a four-point Likert scale, and the remaining two questions were summed using at 10 point (i.e. 1–10) distress scale. Combined scores for this section ranged from 2 to 60 with higher scores (>40) denoting greater negative impact and higher distress (Kazak et al., 2021b). Average scores, standard deviations, and range were calculated for each section (i.e. exposure & impact) and are reported by risk classification (e.g. ER & CR). Additionally, frequency counts for all question items and the distribution of the exposure and impact scores are reported in tertiles (1−3) by risk classification.

3. Results

3.1. Qualitative findings

Parents in the CR group perceived Covid-19 risk as contingent upon a variety of factors including personal behavior (e.g. taking precautions) and population characteristics (e.g. age, health complications). Whereas parents in the ER group considered Covid-19 risk to be elevated and considered precautions necessary. Utilizing the constant comparison approach, the findings herein are presented as similarities and/or differences between these groups (see below and Table 3).

3.2. Similarity-Covid-19 impact – "shared difficulty"

Across groups, parents experienced significant difficulty with the Covid-19 pandemic and resulting precautions. Parents described financial hardship due to loss of income, reduced work hours, and increased costs as a negative impact of Covid-19 precautions. Additionally, other negative effects of implemented safety precautions included challenges with virtual school, disruptions in daily routines, boredom, and decreased physical activity. Several parents discussed a personal experience with Covid-19 (e.g. Covid-19 diagnosis, family member death). Parents in both groups noted several positive effects of the pandemic, namely increased discretionary time to engage in preferred activities, new beneficial family routines (e.g. family bike rides), and virtual school kept families safe and together.

Table 1
Demographics of Participants by Risk Classification.

Program	All Participants	Conditional Risk	Elevated Risk
Number of Participants	17	10	7
Mean Parent Age in Years	38 (± 7)	39 (± 7)	37 (± 5.7)
Mean Child Age in Years	8 (± 0.7)	9 (± 0.5)	8 (± 0.9)
Female (n)	16	10	6
Male (n)	1	0	1
Participants by Race (n)			
Non-Hispanic Black	5	1	4
Non-Hispanic White	11	9	2
Race not specified	1	0	1
Children in home (n)	0	24	16
1	2	1	1
2	7	4	3
3	6	3	3
5	1	1	0
Not reported	1	1	0
Income (n)			
< $30,000	2	2	0
$30,000-$50,000	5	4	1
$50,000-$70,000	2	1	1
> $70,000	8	3	5

3.3. Similarity- coping strategies- "support at higher levels"

Parents employed a variety of practices and resources to cope with the stress the Covid-19 pandemic precipitated. These resources aligned with a social ecological framework, and notably across groups parents referenced greater support at higher ecological levels (e.g. interpersonal and community). At the interpersonal level, emotional social support (e.g. phone calls, communication) received from family and friends was a consistent coping strategy utilized by parents. Similarly, to balance virtual school and work outside the home requirements, parents relied upon friends and family to provide childcare support. Families engaged in a variety of activities together to keep busy and some adopted healthy habits including time spent outdoors, family bike rides, and cooking together. At the community level, schools continued to provide meals for students during the pandemic. Parents described this service as beneficial due to household income losses. Table 4.

3.4. Differences- coping strategies- "variable intrapersonal support"

Clear differences in intrapersonal coping strategies emerged between groups. Parents in the CR group displayed an awareness that they engaged in maladaptive health behaviors including overeating and internalizing/ignoring their stress. Conversely, parents in the ER group adopted a more positive mental framework to cope with their stress.

3.5. Similarities- family risk of Covid-19- "variable risk"

Several risk perception theory constructs align with parent descriptions of the risk Covid-19 presents to their family. Similarities in perceived control over risk and reflections of common-dread were observed between groups. Parents perceived their control over Covid-19 risk as dependent upon individual factors including individual behavior (e.g. following Covid-19 precautions), personal health conditions, and age. Adherence to Covid-19 precautions was described as a strategy to control/reduce disease risk. Parents also described an evolving understanding and ultimate acceptance of Covid-19 risk and pandemic precautions. This evolution reveals that parents had minimal dread and learned to live with Covid-19 risk. In addition to physical health risks, parents recognized that the pandemic presented significant risks to their mental health by increasing feelings of social isolation, fear, and anxiety.

3.6. Differences- family risk of Covid-19- "uncertainty-discomfort"

Differences in risk perception constructs (e.g. knowledge about risk, newness of risk) were observed between groups. Parents in the ER group acknowledged that the novelty of the disease and limited knowledge contributed to feelings of uncertainty and discomfort with Covid-19 risk. Specifically, contradicting media information, mistrust of the public's precautionary behavior, and a lack of clarity on Covid-19 risk classification all contributed to perceptions of uncertainty. Notably, perceptions of uncertainty and discomfort with Covid-19 risk were not discussed by parents in the CR group.

3.7. Differences- summer programming risk of Covid-19- "potency of precautions"

Although parents widely agreed upon the risk that Covid-19 presents to their family, key differences in summer programming risk were observed. Parents in the CR group were more likely to suggest that Covid-19 precautions could mitigate the risk of infection at a summer program. This finding aligns with the risk perception construct of control over risk. The implementation of precautions at summer program sites afforded parents a perceived degree of control over Covid-19 risk.

Table 2
Covid-19 Exposure and Family Impact survey.

Part 1. Exposure

Root: Please tell us about your family's experiences during the novel Coronavirus (COVID-19) pandemic. In answering these questions, please think about what has happened from March 2020 to the present, due to COVID-19. By family we mean people who live in your household, extended family, and close friends who you consider "like family." Please answer Yes or No for each of the following statements.

	Elevated Risk (ER) (n = 7)		Conditional Risk (CR) (n = 10)	
Stem	Yes	No	Yes	No
1. We had a "stay at home" order	3	4	7	3
2. Our schools / childcare centers were closed	6	1	9	1
3. Our child/ren's education was disrupted	5	2	8	2
4. We were unable to visit or care for a family member	6	1	4	6
5. Our family lived separately for health, safety or job demands	0	7	1	9
6. Someone moved into (or back into) our home	0	7	0	10
7. We had to move out of our home	0	7	0	10
8. Someone in the family kept working outside the home (essential personnel)	5	2	7	3
9. Someone in the family is a healthcare provider/first responder providing direct care	3	4	3	7
10. We had difficulty getting food	0	7	2	8
11. We had difficulty getting medicine	0	7	2	8
12. We had difficulty getting health care when we needed it	0	7	2	8
13. We had difficulty getting other essentials	0	7	4	6
14. We self-quarantined due to travel or possible exposure	0	7	1	9
15. Our family income decreased	3	4	7	3
16. A member of the family had to cut back hours at work	1	6	3	7
17. A member of the family was required to stop working (expect to be called back)	2	5	2	8
18. A member of the family lost their job permanently	0	7	1	9
19. We lost health insurance/benefits	0	7	0	10
20. We missed an important family event or it was canceled (e.g., wedding, graduation, birth, funeral, travel [including vacation], other)	5	2	5	5
21. Someone in the family was exposed to someone with COVID-19	1	6	4	6
22. Someone in the family had symptoms or was diagnosed with COVID-19	1	6	3	7
23. Someone in the family was hospitalized for COVID-19	2	5	0	10
24. Someone in the family was in the Intensive Care Unit (ICU) for COVID-19	2	5	0	10
25. Someone in the family died from COVID-19	1	6	0	10

Part 2. Family Impact

Root: COVID-19 may have many impacts on you and your family life. In general, how has the COVID-19 pandemic affected each of the following?

Elevated Risk

Stem	Made it a lot better	Made it a little better	Made it a little worse	Made it a lot worse	Not applicable
26. Parenting	2	0	3	0	2
27. How family members get along with each other	3	1	3	0	0
28. Ability to care for your child with [add illness/condition]	1	2	2	0	2
29. Ability to care for other children in your family	2	0	1	0	4
30. Ability to care for older adults or people with disabilities in your family	0	0	0	0	7
31. Your physical wellbeing – exercise	1	2	3	0	1
32. Your physical wellbeing - eating	1	1	3	1	1
33. Your physical wellbeing – sleeping	2	1	1	0	3
34. Your emotional wellbeing – anxiety	0	0	4	1	2
35. Your emotional wellbeing – mood	1	0	5	1	0

Conditional Risk

Stem					
26. Parenting	4	1	3	0	1
27. How family members get along with each other	4	1	3	1	1
28. Ability to care for your child with [add illness/condition]	4	0	5	0	1
29. Ability to care for other children in your family	4	0	0	0	6
30. Ability to care for older adults or people with disabilities in your family	0	0	2	0	8
31. Your physical wellbeing – exercise	3	0	3	4	0
32. Your physical wellbeing - eating	2	1	3	4	0
33. Your physical wellbeing – sleeping	2	0	5	3	0
34. Your emotional wellbeing – anxiety	2	0	1	7	0
35. Your emotional wellbeing – mood	1	0	4	5	0

Stem	Group	1 – No Distress	2	3	4	5	6	7	8	9	10- Extreme Distress
36. Overall, how much distress have you experienced related to COVID-19?	ER	0	0	0	1	2	2	1	1	0	0
36. Overall, how much distress have you experienced related to COVID-19?	CR	0	2	0	1	0	1	2	1	2	1
37. In general, across all your children, how much distress have your children experienced related to COVID-19?	ER	1	0	1	1	0	3	0	0	1	0
37. In general, across all your children, how much distress have your children experienced related to COVID-19?	CR	1	0	1	1	0	2	3	1	1	0

Summary	Group Frequency	First Tercile (<33%)	Second Tercile (34-66%)	Third Tercile (>67%)	Total

(*continued on next page*)

Table 2 (*continued*)

Exposure (ER)	5	1	1	7
Exposure (CR)	3	3	4	10
Impact (ER)	4	3	0	7
Impact (CR)	2	3	5	10
Total Sample Scores	**Mean**	**Std. Dev**	**Minimum**	**Max**
Exposure	7	3.39	1	14
Impact	31	10.11	9	48

Note: Exposure scores range from (0-25) and Impact Score range from (2-60). Higher scores denote more negative impact/higher distress.

3.8. Differences- summer programming risk of Covid-19- "continuum of risk"

Parents in the ER group displayed diverse perspectives about the risk Covid-19 presents to children who attend summer programming. Some parents perceived the risk as comparable to the risk of going to public places. This risk comparison aligns with risk perception theory and suggests that parents in the ER group are able to reasonably evaluate the risk of Covid-19 infection (i.e. Common Risk perception). Others considered the risk to be high due to the lack of a vaccine and limited scientific understanding of the disease. Between the polar ends of the spectrum (i.e. high and low risk), some parents held a more nuanced view and described a tension between child benefits of summer program attendance (e.g social interaction, learning, activities) and the risk of infection or financial risk (e.g. cost of attendance). Parents also expressed difficulty in evaluating the risk due to conflicting information presented in the media. The limited knowledge about risk contributed to parent perceptions of uncertainty.

3.9. Similarities – safe summer camp- "safety precautions are necessary"

Across groups, parents described a need for Covid-19 safety precautions to be implemented to keep children safe. Parents desired a variety of safety precautions, these included increased handwashing, masks, sanitizing of surfaces, small-contained groups, limited enrollment, and outdoor activities. Despite widespread enthusiasm for precautions, some safety precautions were considered unnecessary by parents. Masks for children and masks worn outdoors were perceived as restrictive. Social distancing and temperature checks were also considered unnecessary by some parents.

3.10. Differences-decision to enroll- "depends on multiple factors"

Most parents in the CR group described how a variety of factors influenced their decision to enroll their child in summer programming. These factors include the number of Covid-19 cases in their county, family need for childcare (e.g. programming unnecessary if parent works from home), cost of attendance, and if precautions are implemented. Parents in the CR group were also more likely to enroll their child in summer programming than parents in the ER group.

3.11. Follow-up parent interviews

A total of 12 of 17 (CR=9, ER=3) parents participated in follow-up interviews. Due to loss to follow-up among parents in the ER group, themes were not stratified by risk group. Notably, among participating parents, perceptions of Covid-19 risk seemed to align irrespective of group status. The themes presented herein represent an explanation of the contributing factors for this alignment.

3.12. Theme- precautions mitigate risk (n = 11)

Overall, parents perceived that the implementation of Covid-19 precautions mitigated Covid-19 risk. Consequently, parents desired to be informed of the precautions summer programs would implement. With implemented precautions, parents were largely willing to enroll their children in summer programming. The perceived importance of implementing precautions aligns with the risk perception theory construct of control over risk. Parents considered precaution implementation as a means to reduce their child's Covid-19 risk.

3.13. Theme- personal experience with the pandemic (n = 12)

Parents referenced their pandemic experiences as influential to their perception of Covid-19 risk. Parents attributed a decrease in cases and the successful operation of in-person schooling to the decreased perception of risk. The experience with in-person schooling assuaged risk concerns for some parents, suggesting a shift towards a common, rather than dreaded understanding of risk. Additionally, increased knowledge/experiences with Covid-19 diagnosis provided greater clarity about the risk. Given the widespread implementation of Covid-19 precautions, parents seem to value the implementation of these precautions at summer programs.

3.14. Theme- vaccine variable impact (n = 12)

Parent perceptions of the impact of vaccines on Covid-19 risk was variable. Some credited vaccinations with decreasing concern about risk, while others described a level of mistrust/uncertainty about the vaccine, therefore limiting its impact. One parent considered the vaccination campaign as an increase to Covid-19 risk.

3.15. Theme- risk v. benefits (n = 3)

Parents recognize that other benefits of SDC attendance may outweigh the risk of Covid-19 infection. This influenced their willingness to enroll their children in summer programming.

3.16. Quantitative findings

Demographics for the sample are reported by risk classification in Table 1. Notably, risk classification groups were largely dissimilar by race. Among parents classified as ER, 57.1% were Non-Hispanic Black and 28.6% were Non-Hispanic White, whereas 90.0% of parents classified as CR were Non-Hispanic White and 10.0% were Non-Hispanic Black. Question item responses and summary scores for the family impact survey are reported in tertiles and can be found in Table 2. Parents' (n = 17), average score for the exposure section was relatively low (<33% tertile avg= 4.3 [2.1], 33%–66% tertile avg=7.8 [0.5], >67% tertile avg=10.8 [2.2]). Similarly, parents (n = 17) reported a low average score on the family impact section (<33% tertile avg= 5.7 [2.7], 33%–66% tertile avg=7.2 [4.9], >67% tertile avg=8.4 [1.1]). Notably, no parents classified as ER had family impact scores in the upper end (i.e. third tercile) of the distribution. Conversely, parents (n = 5) classified as CR had family impact scores in the upper end (i.e. third tercile) of the distribution. Parents in the CR group reported a disproportionately negative impact on their physical (i.e. exercise, eating, sleeping) and emotional well-being (e.g. anxiety, mood), while ER parents did not. The perceived decline in well-being may drive observed differences in family impact score between groups.

Table 3
Primary Interview Themes with Representative quotes.

Section	Similarities (S) or Differences (D)	Theme	Risk Perception Construct	Quote 1	Quote 2
Covid-19 Impact	Similarity	Shared Difficulty	–	"When it [Covid-19] first happened last spring, it was terrible. None of us parents knew what we were doing. The teachers didn't know what they were doing. None of the work was really aimed at what the children were learning, it was just stuff thrown [at them]. 'Here. Do this.'" –CR Parent #14	"I have another toddler here, so it's hard for me to bounce back and forth with her school work and taking care of him [toddler], the tantrums etc. It's hard to really focus and give her the attention that she needs when she has questions or needs some assistance." -ER Parent #4 "As everything was opening back up people were trying to go back to work. The job my wife had wasn't going back, it wasn't a call back type of job. [Unfortunately] they were one of the ones [businesses] that weren't making it after Covid." -ER Parent #1
Coping Strategies	Similarity	Support at higher ecological levels- Emotional Social Support	–	"I have a sister that lives in Missouri. And I mean, she's not physically related to me, but she's always there when I need somebody to talk to." -CR Parent #13	"Yeah, mainly my sister, my older sister, I talk to her every day. I mean, I feel like we both kind of support each other during this process." -ER Parent #2
		Interpersonal-Childcare Support	–	"We have friends who will watch the kids for us if we need them to." -ER Parent #3	"My mom came down and visited for a while. It wasn't really like financial support, and it was more of a 'let me help you with the kids for a couple weeks.'" -CR Parent #12
		Interpersonal-Healthy Habits	–	"We got back into yoga because I had more time at home. My daughter's dance studio offered classes that we were able to attend. [We] are just trying to stay active and keep a positive spin on it." -CR Parent #9	"We also exercise and we will go bike riding as a family in the afternoon to release that stress. It really helps us…to come in contact with nature and just feel better." -ER Parent #2
		Community- School meal assistance	–	"The school system did a free program with food. So that [really] did assist and help… with being able to have a little bit more food in the home." -ER Parent #5	"We received these EBT cards [from the school] for each one of the kids because they had been enrolled in the reduce meal program. Each one had a certain amount of money on it, so it was helpful to pay for groceries. because we weren't used to having them home all the time." -CR Parent #11
Coping Strategies	Differences	Variable Intrapersonal Support	–	"Honestly, I have taken to overeating. I am eating my feelings." -CR Parent #8 "I am one of those [people] who internalize everything. I am not the best on mental health." -CR Parent #10	"I'm actually focusing on positive things; I do a lot of reading that deals with being mindful and learning gratification. I try to not look at the worst situation, just keep a positive [outlook] knowing that each day is a gift." -ER Parent #2
Family Risk of Covid-19	Similarity	Variable Risk	Control over Risk	"It is a little bit of an increased risk because I'm a nurse, I'm exposed to it every day. But as long as I'm doing what I'm supposed to do [following precautions], I've made sure that my risk of bringing it home to my loved ones is very low." -CR Parent #9	"Oh my goodness, without the precautionary measures that we take, I will say high because you just don't know who is asymptomatic." -ER Parent #5
			Common Dread	"Well, I went back and forth. When it [Covid-19] started we were scared, we went on lock down. We kept our kids home, we didn't go to church and did grocery store pick-up. But you start going in waves [feeling fatigued with precautions], you can stress out with all that. But today, we still take a lot of precautions." -ER Parent #1	"We were scared at first because we didn't know what was going on. But month after month, you saw the news, you look at the numbers, and your friends telling you that somebody died from Covid. It kind of became less frustrating. It reached the point of this is everyday life now. This is something that we just have to deal with until something happens." -CR Parent #17
		Variable Risk- Mental Health Risk		"It is a little bit of an increased risk because I'm a nurse, I'm exposed to it every day. But as long as I'm doing what I'm supposed to do, I've made sure that my risk of bringing it home to my loved ones is very low." -CR Parent #9	"He didn't want to go out and be around other people because of his asthma. We don't know a lot about Covid, but we do know that it does attack the respiratory [system]." -ER Parent #5
Family Risk of Covid-19	Differences	Uncertainty-Discomfort	Knowledge about Risk	"I really don't know. It's so hard to really navigate all of the stuff you read on the news and in the media. What's true and what's not	"You never know if someone is coming to work sick or if other children are coming to daycare sick. You just don't know. Since he [toddler] can't communicate with me, I just

(*continued on next page*)

Table 3 (*continued*)

Section	Similarities (S) or Differences (D)	Theme	Risk Perception Construct	Quote 1	Quote 2
				true. What's really a risk? I don't know." -ER Parent #3	don't feel comfortable right now." -ER Parent #4
Summer Programming Risk of Covid-19	Differences	Potency of Precautions	Control over Risk	"Well I mean if the precautions are taken and they have all the safety things in place, I think the risk is really low." -CR Parent #13	
	Differences	Continuum of Risk (Low Risk)	Common Risk	"I would still send my child [to a summer camp] because it's the same risk as going to the store, church, or school." -ER Parent #6	
	Differences	Continuum of Risk (High Risk)	Common Risk	"I really do believe it's high until they come out with a vaccine that's an FDA approved and that's safe to administer to the kids." -ER Parent #2	
	Differences	Continuum of Risk (Contingent risk)	Common Risk	"Finances are a challenge to sending my child to camp because we're on a very tight budget…So it would be tough, but we would still try to put our children in [camp], if we possibly can because I feel that it's [important] for children to communicate with other children their age and do different activities." -ER Parent #4	
	Differences	Continuum of Risk (Uncertainty)	Common Risk	"It's [risk of attending summer programming] hard to say because the information we're getting from the media contradicts itself at times. So honestly…I just don't know. I don't know what the risks are." -ER Parent #4	
Safe Summer Camp	Similarities	Safe Precautions are necessary	–	"Probably limit the children maybe. I noticed that when she was in summer camp last year there was a lot of kids. So maybe limit [the number of] kids if they're going to be with counselors." -CR Parent #17 "If you can stop the spread using social distancing, then why would you have to wear the added mask? Would I send him [son] to a camp where he had to wear a mask all the time? No, because he is not comfortable wearing a mask eight hours a day." -CR Parent #15	"I feel like a summer camp [should] properly ensure that workspaces and things that are touched are sanitized. And that the kids are frequently washing and sanitizing their hands." -ER Parent #3
Safe Summer Camp	Differences	Decision to enroll- Depends on multiple factors	–	"It [summer program enrollment] more than likely will be an option, but it all depends on if I'm still working from home." -CR Parent #17	"It [summer program enrollment] would depend on finances because I actually did take a pay cut switching over to a different school district." -CR Parent #10

4. Discussion

The Covid-19 pandemic significantly disrupted the lives of parents interviewed in this study. Irrespective of risk perception classification (i.e. ER or CR), parents perceived both positive and negative disruptions to their daily routine. Interestingly, parents reported relatively low exposure and low perceived family impact on the Covid-19 impact survey. These results can be contrasted with parent perceptions of Covid-19′s family impact discussed in the qualitative interviews. Across groups, parents described having difficulty with finances (i.e. loss of income), virtual learning, following pandemic precautions, and maintaining mental wellness during the pandemic. Parents also noted several positive aspects of pandemic-precipitated changes including increased discretionary time, family activities, and improved health habits. These results suggest that the Covid-19 impact survey did not have appropriate sensitivity to capture the nuances of Covid-19′s impact on households. Moreover, perceptions of Covid-19 family impact (survey and interviews) did not differ between groups. This indicates that parents' lived experiences during the pandemic do not completely explain differences in Covid-19 risk perception.

Parents employed a variety of coping strategies that were categorized at multiple levels of the social ecological model. Although strategies were identified at the intrapersonal level, these strategies were disparate, and commonalities were not found between groups. Similarities in coping strategies were found at the interpersonal and community level. The similarities in interpersonal and community support align with resilience literature about the pivotal role social support and social capital resources play in mitigating the harmful effects of chronic stress (Labrague, 2021; Ozbay et al., 2007; Palacio, Krikorian, Gómez-Romero, & Limonero, 2020). Social support has both A.) structural (i.e. network size, frequency of contact) and B.) functional (emotional- receiving love/empathy & instrumental- practical help) dimensions. Research has also demonstrated that the quality of socially supportive relationships is a stronger predictor of resilience than quantity. Parents in the present study referenced functional social support (emotional [e.g. talk with friends] & instrumental [e.g child-care assistance]) received from relatively few sources. It appears that the quality of these relationships buffered some of the harmful effects of the pandemic.

Parent perceptions of the risk Covid-19 presented to their family aligned with several constructs in risk perception theory. Parents in both

Table 4
Follow-Up Interview Themes with Representative quotes.

Theme	Sub-theme	Quote 1	Quote 2
Precautions mitigate risk	Precautions mitigate risk	Precautions mitigate risk. "I'm more comfortable with it [Covid-19 risk]. Interviewer: 'What contributed to that change?' 'The fact most everybody knows what to do, how to stay safe. Like the whole hand washing, distancing, masks." -Parent #10	"I know the precautions that are going to be taken, the protocols that will be put in place. So I don't feel there's as great of a risk." -Parent #9
	Parents interested in summer programming precautions	"Before we sign them up for the program, we would like to know what their plan is. And then actually see it implemented." -Parent #6	"When they present the summer programs it would be nice to have a flyer that lays out all the precautions that they're taking, and what's required." -Parent #13
	Parents willing to enroll child in summer programming	"But I mean [it's] likely for him [to go to camp] if possible to get out and do some type of camp so he can have a nice summer." -Parent #15	
Personal experience with the pandemic	Decreased cases-severity	"We're not seeing as great a spikes anymore. So that definitely helps." -Parent #9	"What helped motivate you to allow your children to go to school? 'Not having so many phone calls from the school saying that a child has been exposed to Covid-19.'" -Parent #14
	In-person schooling	"It's [Covid-19 risk] still a little nerve racking. In school, they have been safe, and they've been going to school just fine. So I guess that's a little more calming." -Parent #12	"I wouldn't have any concern sending my kids to summer school. It would be the same as them going to regular school. And they have been." -Parent #3
	Safety Precautions	"The kids are going to hopefully follow whatever precaution they're being told. The basics are just wash your hands…" -Parent #10	"What would a safe summer camp look like this year? 'Something that stays outside all day long!'" -Parent #8
	Increased knowledge about risk	"I have kind of believed in kids can be closer together than adults, I have read into that." -Parent #14	
	Covid-19 diagnosis	"I actually tested positive for Coronavirus [since the first interview]. I had no symptoms and didn't feel sick, my kids never had symptoms…. So I am not [worried] We still wear masks when they're mandated. But we just don't really have the fear of getting it." -Parent # 3	
Vaccine Variable Impact	Family risk of Covid-19- No impact	"I am not one to trust a vaccine that was mass produced in such a short time." -Parent #13	"[The vaccine] hasn't [made an impact] because it's a preventative measure, you can still get the disease if you've been vaccinated." -Parent #15
	Family risk of Covid-19-Decreased concern	"Over the last few months, I got my first dose and my husband will get his, so I felt a little bit safer." -Parent #12	"I was leery of the vaccine at first, but after someone associated with the CDC came and talked with us at work it made my thoughts about the vaccine a littler better. I thought 'Okay this will really help.'" -Parent #17
	Summer programming risk of Covid-19-Decreased concern	"It has made it much better knowing that there's a vaccine that can help protect people from getting sick." -Parent #17	"I do feel like we're getting close to that herd immunity so it has lessened the fear of another big outbreak." -Parent #9
	Summer programming risk of Covid-19-Increased with vaccines	"I think the risk for kids is going up because parents are going to get a bit more relaxed." -Parent #8	
	Summer programming risk of Covid-19- No impact	"It [vaccines] doesn't make me feel either way about sending my kid to camp. Even if there wasn't a vaccination, I probably would still send my kid to summer camp." -Parent #3	"I like data…and want to make sure there's plenty of research. I want to hold out as long as possible to see what the possible long term side effects are." -Parent #9
Risk vs. Benefits	Live life	"I really wish they would open everything back up, so a lot of the kids can do things." -Parent #15	"I think we're going to be exposed no matter what we do. People just need to go back to living life. That's just how I feel." -Parent #16
	Kids need social interaction	"They [kids] do need the interaction with other kids…they need normal life." -Parent #14	

groups described the importance of following pandemic precautions to reduce the spread of Covid-19. This aligns with the risk perception principle of control over risk. Parents believed that the risk of Covid-19 could be controlled by personal behavior (i.e. following precautions) (Slovic et al., 1985). Previous research in environmental hazards has found that non-experts rate risks more highly when the hazard is uncontrollable and involuntary (Boholm, 1998; Slovic, 1987; Sullivan-Wiley & Gianotti, 2017). Further, non-experts are more likely to rate risks as controllable, if the risks are voluntary (Slovic, 1987). For parents in the present study, the implementation of Covid-19 safety precautions may have inspired a sense of control over risk and transformed the risk from involuntary to voluntary. The increased feeling of control may have promoted greater comfort with participation in public activities (e.g. school, in-store grocery shopping, summer programming).

Despite their similarities, parents differed in their perception of Covid-19 risk. Eighty percent of Non-Hispanic Black parents perceived the risk of Covid-19 to their family to be severe and were classified as elevated risk. This sober evaluation of risk may be due in part to the disproportionate burden of Covid-19 hospitalizations and deaths experienced by Non-Hispanic Black Americans (Millett et al., 2020; Muñoz-Price et al., 2020). Due to the persistent effects of structural racism, Non-Hispanic Black Americans are more likely to be employed in the service, transportation, and healthcare industry, placing them at greater risk for Covid-19 infection (Statistics, 2016). Perhaps this disproportionate disease burden influenced risk perceptions among ethnically-minoritized participants. Additional explanations for the observed racial differences in Covid-19 risk perception are multi-faceted and intersect with political & religious ideology and socioeconomic hardship (Vargas, Mora, & Gleeson, 2021). Consequently, parents in the ER group maintained that the risk of Covid-19 was high and expressed uncertainty and discomfort with this risk. This aligns with the concept of dread risk which states that the higher the perceived risk, the more likely people will want to see it reduced through strict regulation (Slovic, 1987). Familiarity and level of knowledge about the threat also affect perceptions of risk (Slovic, 1987). The lack of clear information about the virus may have contributed to a higher perceived dread that was unique to parents in the ER group. In hazard risk studies, public education program are founded on the assumption that providing information about hazardous activities may motivate people to adopt protective behaviors (Smith, 2013). However, several studies indicate that increased information does not necessarily translate to precautionary behavior (Ballantyne, 2000; Paton, Smith, Daly, & Johnston, 2008). Thus, increased knowledge about the threat may reduce perceptions of dread, but it may not result in taking safety precautions. Overall, we observed that no single risk perception construct completely explains differences in parents' perception of Covid-19 risk. Rather, risk perception is multi-faceted and what constitutes an acceptable risk varies depending upon the individual.

Taken together, several factors emerged from our qualitative data analysis that may explain parent summer program enrollment decision-making. First, a dual-effect of vaccine availability and successful precaution implementation increased parents' perceived control over the risk of Covid-19. During follow-up interviews, overwhelmingly, parents expressed comfort with enrolling their children in summer programming, provided that precautions were implemented. The availability of the vaccine seemed to reduce concern about the risk of Covid-19 spread for the majority of parents. Second, the passage of time produced an evolved perception of Covid-19 risk for most parents. Over time, parents gained a greater understanding of the novel Covid-19 virus and acclimated to following precautions. This finding is consistent with "normalization bias", in which people believe that their ability to cope with previous experiences with the risk provides them the capability to address future risks (Paton et al., 2008). This was evidenced by parents who referenced the successful operation of in-person school (e.g. low Covid-19 cases) as a rationale for the safety of summer programming for children. Third, parents displayed decisional balance to determine if they would enroll their children in summer programming. Parents weighed the benefits and risks of summer program attendance. As seen in risk perception literature, non-experts' evaluation of risk is sensitive to a variety of factors (e.g catastrophic potential, impact of future generations, voluntariness, knowledge, control etc.). Parents in the present study based their decision-making on factors beyond disease risk, including financial, mental wellness, and child benefit. Parents willingness to enroll their children into summer programming seemed to be largely based on precaution implementation and the perceived benefit of program attendance.

Although the findings of this study contribute to our understanding of how individuals conceptualize Covid-19 risk, several limitations exist. The findings are not generalizable to the broader population due to the absence of risk perceptions of other marginalized populations (e.g. Asian-Americans, Hispanic-Americans). Despite this, the inclusion of perspectives from a historically marginalized group (e.g. Non-Hispanic Black parents) is a strength of the study. Additionally, the study findings could have been strengthened by a pre-pandemic assessment of parents' summer program enrollment intentions and perceived benefits of program attendance. Parent intentions were assessed at two timepoints during the pandemic which allowed the authors to capture changes in risk perception and summer program enrollment intentions. However, a loss to follow-up of parents in the ER group limits the generalizability of findings. The authors of this study also acknowledge that their subjectivities (e.g. professionals in public health research) may have influenced the interpretation of parent responses and subsequent creation of risk classification groups. Several steps were taken to establish trustworthiness (e.g. reflexivity memo, positionality statement, peer debriefing) and mitigate any undue influence.

4.1. Lessons learned

4.1.1. Parents maintained interest in summer program enrollment for children

Despite the risk of Covid-19 infection, overwhelmingly parents supported the operation of summer programming, and most were interested in enrolling their child in a summer program. Most parents perceived that the benefits of program attendance outweighed the risks of Covid-19 infection. Such benefits included social-peer interaction for children, outdoor activities, child learning, and physical health benefits (e.g. exercise). This finding suggests that summer programming is important to parents and the reduction of summer programming offerings presents its own unique risks.

4.1.2. Precaution implementation is important

Parents valued the implementation of Covid-19 safety precautions at summer program sites. While there was a lack of consensus on certain precautions (e.g. masks, social distancing), parents broadly supported greater incorporation of outdoor activities and increased sanitizing/cleaning of surfaces at program sites. This reveals that parents were comfortable enrolling their children in summer programming if precautions are implemented. Consequently, child-care organizations should continue to mandate and evaluate the implementation of desired Covid-19 safety precautions for their patrons.

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CRediT authorship contribution statement

Roddrick Dugger: Conceptualization, Data curation, Formal analysis, Methodology, Writing. **Layton Reesor-Oyer**: Formal analysis, Writing. **Dawn K. Wilson**: Conceptualization, Methodology, Funding

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Declaration of Competing Interest

None to disclose.

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Data statement

This data is unavailable for public access.

Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.evalprogplan.2022.102200.

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Dawn K. Wilson, Ph.D. |Dr. Wilson is a Professor of Psychology at the University of South Carolina (USC). Her nationally funded program of research has focused on developing innovative, theoretically based interventions for health promotion in minority adolescents and their families. Her theoretical approach integrates bio-ecological models, family systems, and motivational approaches for understanding social and environmental influences of long-term health behavior change. Her current trials are evaluating the efficacy and cost-effectiveness of social marketing interventions on increasing safety and access for walking in high crime, under-served communities.

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Roddrick Dugger, MPH | Mr. Dugger's research focuses on childhood obesity prevention among children from low-income, ethnically minoritized backgrounds. His work focuses on understanding and amplifying the resilience strengths of families who live in under-resourced communities. Mr. Dugger utilizes qualitative methodology and a person-centered approach to identify innovative solutions to improve children's health.