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Supporting Families Exposed to Adverse Childhood Experiences Within Child Care Settings: A Feasibility Pilot

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Abstract
Childhood adversity is strongly associated with poor health and well-being in childhood and adulthood. Young children are at greatest risk during their developmental years. Child care providers can participate in preventing the impact of adversity on children by becoming communities of support for families in need. This project aimed to explore the feasibility and acceptability of identifying childhood adversity and strengthening family protective factors by incorporating professional development and both universal and targeted interventions that included screening, motivational interviewing, parent cafés, and parenting workshops within ten family and center-based child care programs. A total of 159 caregivers completed the screen about their experiences of adversity, with 60% disclosing adversity during their childhood and 53% disclosing current risk for adversity for their child. An intergenerational association was found between caregivers' past exposure to adversity and their child's current risk ($p=0.023$). However, this association was no longer significant ($p=0.14$) when accounting for their current protective factors ($p=0.002$). Most families (77%) who disclosed moderate to high adversity or risk on the screen participated in a brief interview with their child care provider. Eleven parent events were also conducted with an attendance of 91. Child care providers reported that these interventions were both feasible and beneficial. Caregivers showed significant improvements in protective factors ($p=0.013$) over the course of the project.

Keywords ACEs · Trauma · Resilience · Early childhood · Child care · Screening

Introduction

Over half of children in the United States have been exposed to at least one adverse childhood experience (ACE) (Merrick et al. 2018). These adversities include abuse, neglect, parental separation or divorce, domestic violence, household member mental illness, substance use, or incarceration (Merrick et al. 2018). The stress of these adversities and living in an unsafe or unstable environment can lead to the release and dysregulation of stress hormones in the body and developing brain of a child (Kalmakis et al. 2015; Voellmin et al. 2015). This stress can change the way the body and brain function, which can alter a child's capacity to learn and reason, to develop healthy attachments, to navigate social relationships, and to fight off disease and infection (Middlebrooks and Audage 2008; Shonkoff and Garner 2012). Children under age 6 are at greatest risk of child maltreatment (U.S. Department of Health & Human Services et al. 2019) and most vulnerable to its effects on development due to the dramatic brain changes during these early years (Enlow et al. 2017; Shonkoff and Garner 2012).

Young children may also express their reactions to these frightening experiences through behaviors, such as developmental regression, irritability, aggression, hyperactivity, avoidance, fearfulness, sleeping or eating disturbances, difficulty soothing, or physical complaints like headaches and stomachaches (Cook et al. 2003). Children may respond differently based on the nature of the trauma and the combination of risk and protective factors in their environment (Bartlett et al. 2017). Research has found that young children who have been exposed to 3 or more ACEs are more likely

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to have below-average academic skills, attention problems, social problems, and aggressive behavior at age 5 (Jimenez et al. 2016) and health problems at age 14 (Flaherty et al. 2013) than children who have not been exposed to ACEs. Greater exposure to ACEs has also been associated with behavioral problems and developmental delay among 4–5 year old children presenting to a federally qualified health center (Marie-Mitchell and O'Connor 2013) and chronic medical conditions, behavior problems, and worse social development among 3–5 year old children in the child welfare system (Kerker et al. 2015).

In addition to a child's direct exposure to adversity, an intergenerational association has also been found between a mother's exposure to ACEs during her childhood and her child's development. Specifically, greater maternal adversity has been correlated with worse developmental function (Folger et al. 2018; Sun et al. 2017), social–emotional function (Folger et al. 2017; Enlow et al. 2017; Madigan et al. 2017; McDonnell and Valentino 2016), and behavioral problems (Schickedanz et al. 2018; Stepleton et al. 2018) among her children.

Child care providers can play an important role in preventing adversity and promoting the well-being of children and families. Child care settings serve as a main point of contact during early childhood, when healthy development is most critical. Child care providers participate in shaping the cognitive, emotional, and social development of children, which lays their foundation for future academic success (Shonkoff and Phillips 2000). They also interact with children and their caregivers on a daily basis and are positioned to build strong, trusting relationships with families. As such, child care providers may be the first to know of family stressors and to see their impact on the children. Although this may create additional stress for providers, it also puts them in a position to support families through difficult times (Donahue et al. 2007). The National Center for Children in Poverty recommends providing professional development and training for early childhood professionals on trauma-informed strategies for responding to children who have experienced trauma and building partnerships and connections with community service providers in order to support children and families (Bartlett et al. 2017). Brief interventions to identify adversity and offer supports in other settings, such as pediatric primary care, have resulted in fewer child protective services reports and minor physical assaults and psychological aggression by mothers (Dubowitz et al. 2009, 2012).

Strengthening Families is an evidence-informed, strengths-based framework and national initiative developed by the Center for the Study of Social Policy to enhance protective factors within families in order to prevent child maltreatment (Harper Browne 2014). This framework is two-generational and grounded in the belief that all families possess strengths that can be used and fostered. It promotes the strengthening of five protective factors: (1) parental resilience, (2) social connections, (3) concrete support in times of need, (4) knowledge of parenting and child development, and (5) child social and emotional development. All families can benefit from the strengthening of these protective factors, so they can be promoted universally for primary prevention of child maltreatment. By promoting these protective factors, child care providers can mitigate the impact of stress and foster family wellness. When protective factors are in place, families are better positioned to respond to expected and unexpected stressors.

This project explores the feasibility and acceptability of incorporating professional development on ACEs and motivational interviewing, screening for adversity, and brief interventions and supports to promote family wellness within family and center-based child care programs participating in the Strengthening Families Southwest Ohio program of the Consortium for Resilient Young Children. Although this program has previously demonstrated success in elevating protective factors, family stress and the complex needs of young children have been increasing across this region, resulting in the emergence of conversations on ways to further support families. Incorporating additional training, screening, and parenting supports that intentionally address the increased stress and adversity of families into this program has the potential to increase communication and rapport between child care providers and caregivers and improve their capacity to support the psychosocial needs of families and consequently the health and development of the children. As a secondary aim, this project assesses the relationship between risk and protective factors in families and changes in protective factors over time.

Methods

Design and Population

This feasibility project was performed between August 2017 and May 2018 with 10 licensed child care programs enrolled in the Strengthening Families Southwest Ohio program, including two preschools, four child care centers, and four family child care programs located within four nearby urban neighborhoods in Cincinnati, Ohio. The preschools serve 2–5 year old children and approximately 60 families each. The child care centers serve birth to 12 year old children and approximately 55–65 families each at three centers and 30 families at one center. The family child care providers serve birth to 12 year old children and about 5–7 families each.

The Strengthening Families Southwest Ohio program is implemented by the Consortium for Resilient Young

Children, which is a collaborative of 10 social services agencies in Greater Cincinnati. The program works to incorporate the Strengthening Families Protective Factors framework into child care programs through specialized training and coaching in order to promote the social and emotional development and well-being of young children and strengthen the capacity of all adults who care for them. Coaches partner with child care programs to implement intentional strategies that promote the five protective factors for all families. Examples of these strategies include: (1) promoting parental resilience to stress by welcoming caregivers, getting to know them, calling them by name, looking for signs of distress, checking in with them, acknowledging what they are doing well, and encouraging them, (2) promoting social connections by creating opportunities for parents to get to know each other through events and activities, such as parent cafés, field trips, potlucks, or spaces for sharing coffee, (3) promoting concrete support in times of need by offering resource information, discounts, finance workshops, food, and diapers, (4) promoting knowledge of child development and parenting strategies by providing guidance to parents related to child development and alternative parenting strategies through parenting workshops, print materials, and conferences, and (5) promoting the social and emotional competence of children by teaching children words and healthy ways to express and regulate their feelings and modeling these approaches to caregivers.

This project was approved by the Cincinnati Children's Hospital Medical Center Institutional Review Board, and informed consent was waived.

Measures

Family Wellness Survey

The Family Wellness Survey has two parts: (1) the Adverse Childhood Experiences (ACE) survey that assesses for caregivers' past experiences of adversity during their childhood and (2) a section that assesses for risk factors for current adversity in the child's environment.

The ACE survey consists of 10 questions that assess a person's experience of abuse (physical, sexual, or emotional), neglect (physical or emotional), and household dysfunction (parent/guardian divorce or separation, domestic violence, household member mental illness, substance abuse, or incarceration) prior to 18 years of age (Felitti et al. 1998). The ACE survey is given to caregivers, and they check "Yes" for each type of adversity that they experienced during their childhood. A total ACE score from 0 to 10 is derived by counting up the number of adversities experienced. This measure has good to excellent test–retest reliability and good internal consistency (Dube et al. 2004; Murphy et al. 2014). Caregivers with an ACE score of 3 or more are invited to meet with the child care provider.

The second section consists of 10 questions that assess for current psychosocial risk factors for child adversity, similar to the Safe Environment for Every Kid (SEEK) Parent Questionnaire (Dubowitz et al. 2009) but modified in language based on child care provider feedback and with responses converted from yes/no to a 4-point Likert scale from "Never" to "Often." The questions can be seen in Table 1. The risk factors assessed include: parenting stress (item 2), life stress (item 3), financial strain (item 4), food insecurity (item 5), caregiver depression (items 6–7), domestic/community violence (item 8), substance use (item 9), and harsh punishment (item 10). Caregivers who indicated "Yes" for items 1 or 10, "Often" for any of items 2–4, or "Sometimes" or "Often" for any of items 5–9 were invited to meet with the child care provider.

Protective Factors Survey

The Protective Factors Survey is also given to caregivers as a standard part of the Strengthening Families Southwest Ohio program and consists of 20 items that assess for protective factors against child maltreatment on a 7-point Likert scale from either 1 "never" to 7 "always" or 1 "strongly disagree" to 7 "strongly agree" (Counts et al. 2010). The five protective factors measured are: (1) family functioning/resiliency (adaptive skills to persevere in times of crisis), (2) social support (perceived informal support that helps provide for emotional needs), (3) concrete support (perceived access to tangible goods and services that help families cope with stress), (4) knowledge of parenting and child development (understanding and utilizing effective child management techniques and having age-appropriate expectations for children's abilities), and (5) nurturing and attachment (emotional tie along with a pattern of positive interaction between the parent and child that develops over time) (Counts et al. 2010). Average scores are calculated for each protective factor subscale (except knowledge of parenting and child development) after reverse scoring some items. An average score of 5.0 or more was considered "high." Subscales are not calculated if 33% or more of the items were missing. These subscales demonstrate good internal consistency (Counts et al. 2010).

Feasibility and Acceptability

After the project, a structured interview was performed between each of the child care program directors and an unaffiliated interviewer. Questions were designed to capture their reactions and impressions related to administering the surveys to caregivers, reaching out and having conversations with caregivers, and having parent events. In addition,

Table 1 Family wellness survey items on current risk factors for child adversity

1. Has anything bad, sad, or scary happened to you or your child recently?				☐ NO	☐ YES
Would you like to tell us more: _____					
During the LAST COUPLE OF MONTHS…	NEVER	RARELY	SOMETIMES	OFTEN	
2. How often did your child display challenging behaviors?	☐	☐	☐	☐	
3. How often did you feel stressed about your home/family life?	☐	☐	☐	☐	
4. How often did you have trouble making ends meet financially?	☐	☐	☐	☐	
5. How often did you worry that your family wouldn't have enough to eat?	☐	☐	☐	☐	
6. How often did you feel down, depressed, or hopeless?	☐	☐	☐	☐	
7. How often did you feel little interest or pleasure in doing things?	☐	☐	☐	☐	
8. How often did you feel unsafe in your home or relationships?	☐	☐	☐	☐	
9. How often did you feel alcohol or drug use negatively impacted your family?	☐	☐	☐	☐	
10. Did you sometimes feel you needed to spank your child?			☐ NO	☐ YES	
Is there anything you are concerned about as a parent and would like help with or more information on?					

program directors were asked to provide feedback on what went well, what was difficult or challenging, and what they would do differently. They were also asked how the project impacted their program, whether it was worth the added time and effort, and how they would rate it on a scale from 0 "very harmful" to 10 "very helpful." The interviews were audio-recorded and transcribed.

Procedures

The 10 child care programs selected to participate in this feasibility project formed a learning community. This learning community served as a vehicle for coaches to offer shared learning and technical assistance in a manner that fostered problem solving among the group. Participating child care providers completed a two hour training on the impact of adversity on the developing brain of children that explained (1) the findings of the ACEs study, (2) how the body and brain respond to stress, (3) the impact of stress on the brain and development, (4) the preventive impact of protective factors, and (5) ways that child care providers can work with and support families to prevent the impact of childhood adversity. Additionally, one to three core child care providers from each program completed a five hour training on motivational interviewing that taught communication techniques for building rapport, conveying safety and empathy, assessing resiliency, and fostering collaboration with caregivers in order to strengthen their motivation for change and protective factors.

Each child care site had a planning meeting to decide how to give the Family Wellness Survey and perform brief interventions. Each site identified their core team, chose their preferred method for administering the survey (e.g., entire program or one classroom at a time, giving it at pick up or drop off, completing on-site or returning the next day). The child care programs gave the Family Wellness Survey and Protective Factors Survey to all families during the fall of 2017. The Protective Factors Survey was collected from caregivers again in the spring of 2018. Completion of the surveys was voluntary. Child care providers contacted caregivers who met criteria for the brief motivational interviewing intervention. These conversations were intended to build on the caregivers' strengths by helping them to better manage their stress, connect with supportive others, learn about resources in their community, better understand what to expect in terms of their child's development, and learn different approaches to parenting that foster nurturing and attachment with their child. Informational handouts and resources were offered when desired, and caregivers were followed up with after 2 to 4 weeks to check in and find out

whether the resources were helpful. A summary of these conversations was documented.

In an effort to respond to caregivers experiencing parenting stress, all caregivers were invited to participate in six parent cafés and five parenting workshops that were offered from fall 2017 to spring 2018. Parent cafés were led by a trained parent facilitator and included topics related to resilience, self-care, parenting approaches, and strengthening the parent–child relationship. Parenting workshops were conducted by a trained educator who taught the Making Parenting a Pleasure® curriculum by Parenting Now!, which is an evidence-based group curriculum for highly stressed parents of children from 0 to 8 years old. These workshops were on topics including understanding stress, managing anger, and approaches to discipline.

Statistical Analyses

Descriptive statistics were used to characterize the caregiver demographics and experiences of past adversity and current risk and protective factors. Fisher exact tests and relative risk ratios determined the likelihood of having a current risk factor based on whether or not the caregiver was exposed to 3 or more ACEs as a child. Mann–Whitney tests determined whether each protective factor (continuous, average score) differed first based on caregivers' past exposure to adversity (dichotomous, ACE score < 3 or ACE score ≥ 3) and second based on having a current risk factor for child adversity (dichotomous, yes or no). Cochran-Armitage trend tests determined whether the caregivers' total number of high protective factors (ordinal, count) was associated with their past exposure to adversity (dichotomous) or having a current risk factor for child adversity (dichotomous). Caregiver ACE score and number of high protective factors were then combined in a multiple logistic regression predicting the presence or absence of current risk factors to determine if protective factors played a mediating role. Wilcoxon-Ranked Sum Tests evaluated the change in each protective factor over the course of the academic year.

Utilizing the Braun and Clarke (2006) approach, a thematic analysis of the interview transcripts was conducted by two evaluators (E.A.E. & J.T.). Each evaluator independently reviewed the transcripts and extracted portions that were notable or potentially significant, then applied codes to define them. Similar codes were sorted into overarching themes, which were refined and condensed based on the frequency they appeared across interviews and relevance to the research questions. The evaluators then compiled their findings and collaboratively defined the final themes and selected representative quotes for each from the excerpts.

Results

Exposure and Risk Factors for Adversity

The Family Wellness Survey and Protective Factors Survey were completed by 159 caregivers who were predominantly female, African American/black, and single (Table 2). The average age was 32 ± 7 years (range: 19–57 years). At least one ACE was reported by 60% (95/158) of caregivers (58% [82/142] within centers, 81% [13/16] within family child care). A caregiver ACE score of 1 was reported by 28% (44/158), a score of 2 by 9% (15/158), and a score of 3 or more by 23% (36/158) of caregivers. At least one current risk factor for child adversity was reported by 53% (84/159) of caregivers (50% [71/143] within centers, 81% [13/16] within family child care). More than one risk factor was reported by 26% (41/159) of caregivers. Caregivers with an ACE score of 3 or more had 1.46 times greater relative risk (95% CI 1.03–1.88) of having a current risk factor for child adversity than caregivers with an ACE score less than 3 (69% [n = 25] vs. 48% [n = 58], $p = 0.023$). Further demographic characteristics and rates of each ACE and risk factor can be found in Table 2.

Association Between Risk and Protective Factors

The Protective Factors Survey results can be found in Table 3. Overall, caregivers rated themselves highly on all four protective factors, with a median score of 6.0 or higher (scale ranges from 1 to 7) and over 80% having a high score of 5.0 or more. Caregivers who reported an ACE score of 3 or more had significantly less social support (Table 3, $p = 0.001$) and fewer high protective factors ($X^2 = 10.02$, $p = 0.002$) than caregivers who reported an ACE score less than 3. Caregivers who reported current risk factors for child adversity rated themselves lower in the protective factors of family resiliency, social support, and nurturing and attachment (Table 3, $p < 0.05$) and had fewer high protective factors ($X^2 = 12.56$, $p < 0.001$) than caregivers who did not report risk factors. When combined in a logistic regression, number of high protective factors remained a significant predictor of current risk factors ($\beta = 0.45$, 95% CI 0.27–0.74, $p = 0.002$), while caregiver ACE score was no longer significant ($\beta = 1.89$, 95% CI 0.82–4.36, $p = 0.14$).

Brief Intervention

Of the 97 caregivers who met criteria on the Family Wellness Survey for an interview, 77% (75) underwent a brief motivational interviewing session with their child care provider (75% [60/80] within centers, 88% [15/17] within

Table 2 Characteristics of the caregiver sample surveyed ($n = 159$)

Characteristic	*n* (%)	Characteristic	*n* (%)
Gender		Annual household income	
Female	136 (86%)	$0–10,000	41 (26%)
Male	11 (7%)	$10,001–20,000	19 (12%)
Unknown	12 (8%)	$20,001–$30,000	34 (21%)
Race		$30,001–$40,000	12 (8%)
African American or Black	81 (51%)	$40,001–$50,000	15 (9%)
White or Caucasian	51 (32%)	> $50,001	31 (19%)
Multiracial	11 (7%)	Unknown	7 (4%)
Other	10 (6%)	Receiving government assistance	
Unknown	6 (4%)	Yes	110 (69%)
Relation to child		No	46 (29%)
Biological parent	139 (87%)	Unknown	3 (2%)
Relative	9 (6%)	Caregiver adverse childhood experiences	
Foster parent	4 (3%)	Guardian divorce or separation	74 (47%)
Unknown	7 (4%)	Household member mental illness	34 (22%)
Education level		Household member substance abuse	33 (21%)
Some high school or less	6 (4%)	Domestic violence	27 (17%)
High school diploma/GED	31 (19%)	Household member incarceration	24 (15%)
Trade school	9 (6%)	Emotional neglect	22 (14%)
Some college	53 (33%)	Emotional abuse	20 (13%)
2–4 year college degree	48 (30%)	Physical abuse	15 (9%)
Master's degree or higher	10 (6%)	Sexual abuse	14 (9%)
Unknown	2 (1%)	Physical neglect	7 (4%)
Marital status		Risk factors for child adversity	
Single	89 (56%)	Harsh punishment	53 (33%)
Married	42 (26%)	Caregiver depression	46 (29%)
Partnered	12 (8%)	Food insecurity	14 (9%)
Separated	6 (4%)	Life stress	14 (9%)
Divorced	8 (5%)	Parenting stress	10 (6%)
Unknown	2 (1%)	Financial strain	9 (6%)
Housing situation		Domestic/community violence	6 (4%)
Rent	103 (65%)	Substance use	5 (3%)
Own	44 (28%)		
Shared	7 (4%)		
Unknown	5 (3%)		

Table 3 Caregiver protective factors survey results by caregiver adverse childhood experiences (ACE) and risk factors for child adversity ($n = 159$)

Variable	All caregivers		Caregiver ACE score			Risk factors for child adversity		
			< 3	≥ 3	Difference	No	Yes	Difference
	Median (IQR)	*N* (%) High	Median (IQR)	Median (IQR)	*z* (*p* value)	Median (IQR)	Median (IQR)	*z* (*p* value)
Family resiliency	6.0 (5.2–6.8)	131 (82%)	6.0 (5.2–6.8)	6.0 (5.0–7.0)	−0.44 (0.66)	6.2 (5.6–7.0)	5.8 (4.9–6.4)	−2.60 (0.009)*
Social support	6.0 (5.3–7.0)	138 (87%)	6.3 (5.9–7.0)	5.7 (4.7–6.3)	3.29 (0.001)*	6.7 (6.0–7.0)	6.0 (5.0–7.0)	−2.19 (0.029)*
Concrete support	6.5 (5.0–7.0)	128 (81%)	6.7 (5.2–7.0)	6.2 (4.0–7.0)	1.41 (0.16)	6.9 (5.3–7.0)	6.0 (5.0–7.0)	−1.49 (0.14)
Nurturing and attachment	7.0 (6.3–7.0)	154 (97%)	7.0 (6.3–7.0)	6.8 (6.0–7.0)	0.67 (0.50)	7.0 (6.5–7.0)	6.8 (6.0–7.0)	−2.05 (0.040)*

IQR interquartile range

*$p < 0.05$ indicates statistical significance

family child care). Nine caregivers who did not meet criteria completed a session as well, for a total of 84 caregivers receiving the targeted intervention. Of those, 69% (58) were already receiving supports, and 74% (62) were given informational handouts and/or referrals to food and housing services, mental health services, and parent events (71% [49/69] within centers, 87% [13/15] within family child care). The six parent cafés and five parenting workshops were universally available to all caregivers, and attendance across these events was 91 (caregivers may have attended more than one event).

Change in Protective Factors

Ninety-four (59%) caregivers completed the Protective Factors Survey again at the end of project. Caregivers showed significant improvement in family resiliency (Table 4, $p=0.001$) and their total number of high protective factors ($z=-2.50$, $p=0.013$) over the academic year.

Acceptability

Interviews were performed with 9 of the 10 participating sites and analyzed for themes. The program was given an average rating of 8.5 on a scale from 0 "very harmful" to 10 "very helpful", and all of the providers said that it was worth the time and effort. They considered the following to be the greatest benefits to them as providers (in this order): (1) it helped build and strengthen relationships with parents, (2) they learned something new about their parents, (3) it fostered empathy and understanding toward their parents, (4) it furthered their professional development, and (5) it enabled them to help parents. They considered the following to be the greatest benefits to the parents (in this order): (1) the parent events, (2) feeling more supported by their child care providers and other parents, and (3) gaining an awareness of their impact on their child. They also mentioned a few challenges, which included: (1) parents being so busy that they had difficulty finding time to talk and to attend parent events, (2) parents having some discomfort with the personal questions, and (3) a few providers having initial discomfort asking the questions and talking with new families. Table 5 contains the complete list of themes and representative quotes, including strategies that providers felt contributed to their success in engaging parents and suggestions that providers gave for how to improve the program.

Discussion

Incorporating professional development on ACEs and motivational interviewing, screening for adversity, and brief interventions and supports to promote family wellness into family and center-based child care programs experienced in applying the Strengthening Families framework was found to be both feasible and acceptable to child care providers.

A little less than half (approximately 45%) of the available families completed the voluntary Family Wellness Survey, which is lower than the ACE survey completion rates reported in other settings such as family medicine practice (97%) (Glowa et al. 2016), prenatal care (78%) (Flanagan et al. 2018), and home visitation programs (96–100%) (Johnson et al. 2017). Of those caregivers who completed the survey though, 60% were willing to disclose past exposure to ACEs, and 53% were willing to disclose current risk factors for child adversity to their child care provider. The overall prevalence of ACEs in this cohort was similar to that of the original Adverse Childhood Experiences study cohort (37% vs. 42% had 1 or 2 ACEs, 23% vs. 22% had 3 or more ACEs, respectively); however, a greater proportion of caregivers in this cohort disclosed exposure to emotional abuse, parental separation or divorce, mental illness, domestic violence, and incarcerated household member (Dong et al. 2004). Proportions for 4 of the 5 types of abuse and neglect were lower, which could indicate that these experiences happened less often or that caregivers felt less comfortable disclosing these types of adversity. Furthermore, a greater proportion of caregivers in the family child care programs compared to the center-based programs disclosed at least one ACE (81% vs. 58%, respectively) and current risk factors for child adversity (81% vs. 50%, respectively), which may suggest that the experiences happened to these caregivers more often or that the caregivers felt more comfortable disclosing to a family child care provider with whom they had a one-to-one

Table 4 Pre- to post-intervention change in caregiver protective factors survey results ($n=94$)

Variable	Pre-intervention Median (IQR)	Post-intervention Median (IQR)	Difference z (p value)
Family resiliency	6.0 (5.2–6.6)	6.2 (5.6–6.8)	−3.27 (0.001)*
Social support	6.2 (5.6–7.0)	6.5 (6.0–7.0)	−1.84 (0.066)
Concrete support	6.5 (5.0–7.0)	6.9 (5.7–7.0)	−1.62 (0.11)
Nurturing and attachment	6.8 (6.0–7.0)	6.8 (6.5–7.0)	−0.67 (0.51)

IQR interquartile range

*$p<0.05$ indicates statistical significance

Table 5 Thematic analysis of child care provider feedback

Themes	Representative quotations
Provider benefits	
Built and strengthened relationships	"I think it helped give us all a little bit more background on the parents that were hard to get along with, hard to get to know. So I think it was helpful in that regard because we would change our approach a little bit. And I think that the families that we are already close to, it helped cement that a little more. So I think it just helped further our relationships with our families"
Learned something new about parents	"There were a few surprises…just things like, I didn't know that was going on, and wow, that makes sense as to why that is happening"
Fostered empathy and understanding	"It gives you a different perspective with the parents. Sometimes, you look at people when you don't really know them…it's like a top surface that we interact with each other. So by doing this, I was able to get to know them on a different level. They were able to get to know me on a different level. And so then, that way you can go about it with them differently than I would have before. It gave me a different understanding of where they come from and sometimes how they do stuff and what they say"
Furthered professional development	"If anything, it made me want to research more, look more stuff up about it more in depth, so it could make me better at it, which has helped me in my own situation really. So it was just great. It was just another level that I am able to be on in this business that I wasn't before"
Able to help parents	"I think if you are helping one parent get through a hard time, helping them find some solutions to a behavioral issue, even just simple basic needs, then I think it was worth it"
Parent benefits	
Greatly enjoyed parent events	"I think the people that came really engaged, and I think really appreciated the learning and then the connecting of the café"
Felt supported by providers and peers	"There was a big push this year to let families know that we are here to be there for the whole family and not just the student. So I think having those conversations helped to further cement that""When we had the parent cafes, they would really open up and try to support each other"
Gained awareness of impact on child	"I think it also took a couple of them to step back and say, 'Oh, this does affect my kids. I went through this, but it's affecting my kids'"
Provider challenges	
Busy parents	"The problem is with people being in single parent houses and every kid is playing different sports, they are so incredibly busy. They don't have time for anything, and I don't know how you make that different with them"
Parent and provider discomfort with survey questions	"Some parents were iffy about it because some of the questions were a little personal" "At first, I was nervous, because you know we are a child care, and […] I didn't feel like I was qualified to do that, and I didn't know how parents would take it and how it would affect our relationship"
Discomfort talking with new families	"The parents I knew well, I wasn't very concerned, but the parents that I don't know well, I don't see them. They don't drop off. They don't pick up. Their babysitter does or their grandparents. So I don't have that connection with them. So that felt a little heavy handed. Like let me help you when I don't even know them"
Provider strategies	
Proactively building relationships	"I try to tell my staff, 'Get to know the parents. Try to learn their names. Make sure you are greeting them when they come in the door. When they are leaving, tell them to have a nice day.' Because I think the more that you…and my teachers do a good job about that…but the more that you personalize the relationships, if they are having hardships or challenges, then they will come to you"
Being vulnerable and relatable	"I would tell them something about my own history, growing up, past, and everything, what I struggled with, so that way they could see that we are alike, so that I could get some good responses and honest answers" "With the ones that were new to me, it was a little bit more formal at first, but I tried to help them relax and tell them, 'I have a title and a position, but I am a person just like you are. And I'm a mother and have not always had everything that I needed and wasn't able to do everything that I needed to for my children"

Table 5 (continued)

Themes	Representative quotations
Giving parents choice	"I just make sure that they are aware that it does ask personal questions, and if they don't feel comfortable answering one or all of them, that is their choice. We don't judge them one way or another" "I didn't push them. If they said they didn't want to discuss it, I said, 'okay'"
Offering free food and child care at parent events	"It's a personal touch. I mean the site directors approach the parents and so do the teachers to talk about it. 'We are having this, and it is really a good topic. We are going to be here to take care of the kids. Everyone is going to get dinner. It is about an hour and a half. We still got the kids, and you can sit down and talk with other adults"
Provider suggestions	
More staff training	"I thought the motivational interviewing was great, but if you're not using it all the time, you kind of fall out of practice, and you kind of forget things. So moving forward, if they offer that maybe in the fall and then again in January, if people need a refresher or you have new staff" "I think if more teachers could have the training it would benefit them because we are trying to overall utilize the multigenerational approach, and the teachers are the ones on the front line with families every day"
Remove spanking question	"The spanking question. I just feel like parents felt like that was the one question where I felt like parents thought we were judging them"
Survey parents on event topics	"I think what I am going to do is survey the families, give us an idea. I'm going to talk to them about what the parent café is, this is how it works, this is what we are going to do to help you participate, but what are some topics that you would like to talk about with other parents? And I think if we go to what is on their minds, they will come"
Offer webinars	"I would even like it if we could do webinars. Then that way that would be something that you don't have to get out to go and see, or maybe if they sent you a link on YouTube"
Employ a family outreach coordinator	"Have someone designated… like to have someone in a role designated for family outreach over there, and it was her job to be in touch with the families every day and be in touch with that they need, what are they struggling with, and just finding resources and being someone to listen"

relationship (similar to a home visitor). Family child care providers are often more likely than center-based providers to form close relationships with caregivers because they may serve a smaller number of families, live in the same neighborhood or community, be related, or provide transportation for the child (Karageorge and Kendall 2008).

An intergenerational association was found between the caregivers' past exposure to adversity and their child's current risk for adversity. Lower protective factors, however, were a stronger predictor of current risk factors for adversity than past exposure to adversity. Other studies have also found caregiver and child resilience and protective factors to have a strong association with child outcomes regardless of the degree of childhood adversity (Bellis et al. 2018; Bethell et al. 2019; Robles et al. 2019; Yamaoka and Bard 2019). These findings reinforce our approach to promote family protective factors and resilience in an effort to counterbalance and reduce risk for adversity.

This project applied both universal and targeted interventions, with all families being asked about their risk and protective factors and invited to participate in parent events and with a targeted subset of high risk families receiving the brief motivational interviewing intervention to strengthen their protective factors. The majority of high risk families (77%) were willing to meet with their child care provider for the brief intervention, and the majority (74%) were offered information and resources. Given their existing, routine, and familiar relationships with families, child care programs are a sensible place to target these prevention and intervention efforts (Karageorge and Kendall 2008). Structuring child care programs as communities of support for families, with both formal and informal resources, is a novel approach that has the capacity to promote the well-being of all families (Mortensen and Barnett 2016).

The main themes from interviews with the participating child care providers is that they found this project to be helpful and worthwhile for building and strengthening relationships with caregivers and for learning valuable information about the families that fostered their empathy and enabled them to better support them. This relationship building has the potential to promote a sense of partnership between child care providers and caregivers that fosters more open communication about the child and their approaches to parenting, greater appreciation for each other's role in caring for the child, and greater consistency in the child's care at home and in child care (Karageorge and Kendall 2008). Through

their training in child development and behavior management, child care providers can act as a sounding board for parents and offer suggestions to promote positive parenting (Karageorge and Kendall 2008). This partnership may be further strengthened by seeing how children benefit from their teamwork (Karageorge and Kendall 2008). When a similar screening and brief intervention approach was implemented in primary care settings, physicians also found it worthwhile for being better able to meet family needs but also because it provided a framework for asking questions about psychosocial concerns and providing whole-person care (Eismann et al. 2019). This type of screening and brief intervention is conducive to both of these types of settings where caregivers interact with professionals regularly during their child's early years.

The main challenges noted by the child care program directors was an initial discomfort asking the questions and talking with *new* families about their experiences of adversity. They felt more comfortable talking with families they knew well. These participating child care programs were selected intentionally because they were already enrolled in the Strengthening Families Southwest Ohio program and had made considerable efforts to build relationships with families prior to this project. We think that it is important to make efforts to foster relationships with families to establish rapport and a sense of trust and understanding prior to screening for adversity. Many of the program directors mentioned finding the trainings on ACEs and motivational interviewing to be beneficial for having the conversations with families but also wanted the trainings to be available more often and for more staff. These trainings were considered an important precursor to screening for adversity as they provided context for why to screen and techniques for how to respond with empathy. According to the U.S. Department of Health and Human Services, "early childhood care providers should *not* be expected to function as social workers or as therapists to the families they serve. However, they are in a good position to establish strong working alliances with the children's parents. These alliances can be used to refer parents to community- and faith-based programs, clinics, or self-help groups for appropriate support, guidance, or therapy" (Karageorge and Kendall 2008). Even though child care providers are not therapists, they can have empathic conversations with families that promote healing and wellness. Child care providers can also act as advocates for both parents and children by seeking out supports, helping them to navigate systems and resources, and empowering them to action. Over the course of the year, the caregivers within these child care programs showed significant improvement in their family's resiliency and number of high protective factors.

This project has limitations. First, it is unknown why some caregivers did not complete the survey and if there were any demographic differences compared to those who did complete it. The moderate completion rate prevents us from knowing the true prevalence of adversity in this cohort. The primary intention of the surveys, however, was to open the door to conversation and relationship building rather than to determine a precise rate of adversity and risk. Second, it is unknown why some caregivers who met criteria for the targeted intervention (23%) did not receive it and whether provider bias influenced that. Third, the extent to which motivational interviewing skills were applied during the brief intervention was not evaluated for fidelity. Having a third party observe these skills may have altered the dynamic between the provider and caregiver. Fourth, the lack of a control group prevents causal inferences from being made related to program impact. Fifth, the program was implemented within child care programs enrolled in the Strengthening Families Southwest Ohio program and may not be generalizable to other programs. Sixth, the success of referrals and impact on child ACE rates and outcomes were not assessed as this was a feasibility project. Future work should consider exploring these outcomes.

In summary, child care programs are uniquely positioned to support family wellness due to their knowledge of child development and daily access to families. Incorporating professional development and brief interventions for identifying adversity and supporting family wellness into family and center-based child care programs was found to be feasible to implement and well-received by child care providers. These supports were associated with an increase in caregiver protective factors, especially family resiliency. This strengthening of protective factors is intended to promote a safe, stable, and nurturing environment that encourages optimal child development and health that could potentially result in healthier, better functioning children and greater long-term economic savings (García et al. 2017). Randomized controlled trials are needed to better understand the impact of these prevention efforts within child care settings on child development and health outcomes.

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Compliance with Ethical Standards

Conflicts of interest The authors declare that they have no conflict of interest.

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