Internalizing Symptoms in Children Exposed to Adversity: Examining Associations with Resilience, Social Support, and Community Cohesion

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ABSTRACT
Exposure to adverse childhood experiences (ACEs) contributes to increased rates of psychopathology in youth. Specific environmental factors have been linked to improved functioning following adversity, but few studies have taken a social-ecological approach to examine how resilience, social support, and community cohesion may be associated with internalizing problems (*i.e.*, anxiety, depression) in young children. The current study included 49 children between the ages of 8 and 13 (M_{age} = 10.43, SD = 1.57; 55.1% male; 95.8% Black or African American) who were recruited from four community programs in the Midsouth, United States that serve families experiencing adversity. Regarding income, 77.3% of youth's caregivers reported an annual household income under $15,000. Almost all children reported experiencing at least one ACE (92.6%). Two linear regression models were run to assess how resilience, social support, and community cohesion were related to youth's depression and anxiety symptoms while controlling for ACEs and family income. The model examining depression was significant, (F (*5, 48*) = 4.16, $p < .01$, $R^2 = .33$) with fewer reported ACEs ($\beta = 1.55$, $p < .02$) and higher resilience ($\beta = -.73$, $p = .01$) associated with lower depressive symptoms. The model assessing anxiety was not significant. Results indicate that personal resilience may be a key target for intervention in children exposed to ACEs as efforts to strengthen individual resources (*e.g.*, self-efficacy, emotion regulation skills) could be linked to reduced psychopathology.

KEYWORDS
Adverse Childhood Experiences; Social Ecology; Resilience; Social Support; Community Cohesion; Internalizing Symptoms; Anxiety; Depression

INTRODUCTION

Adverse childhood experiences (ACEs) are regrettably common and impact a large percentage of children in the United States annually.[1] The Center for Disease Control (CDC) reports that more than 60% of adults endorse at least one ACE in their childhood, with 16% experiencing four or more ACEs.[1] Childhood adversities can encompass a myriad of events including child abuse or neglect, exposure to intimate partner violence (IPV), substance use in the home, familial mental illness, parental incarceration, and community violence.[2] Felitti and colleagues were among the first to examine the relation between ACEs and adult functioning, with their work indicating that ACEs are associated with an increased risk of health problems in adulthood.[3] More recent research has shown that ACEs are related to higher levels of posttraumatic stress disorder (PTSD),[4] depression,[4,5] and anxiety in adults.[6] The available literature has primarily studied the effects of ACEs on adult outcomes, with less work examining the impact of ACEs on childhood functioning.[7] Further, ACEs research in child samples has traditionally focused on mental health associated with exposure to specific types of adversity rather than the effects of cumulative adverse exposure.[8] Moreover, most empirical work on ACEs and childhood mental health has examined factors that increase risk for psychopathology rather than exploring social ecological strengths that could be linked with improved child outcomes.[7] Thus, the present study aimed to assess how factors across the social ecology were associated with the internalizing domains of depression and anxiety following childhood exposure to adversity.

ACEs & Children's Internalizing Symptoms

Previous research has focused on the impact of ACEs on children's mental health, connecting ACEs to children's emotion regulation abilities and subsequent internalizing symptoms (*e.g.*, anxiety and depression). Emotion regulation refers to the psychological processes that influence which emotions are felt, when they are felt, and how frequently they are experienced.[10] Negative environmental factors (*e.g.*, living below the poverty line, IPV exposure in the home) can hinder the typical development of emotion regulation skills in children,[10,11] which is associated with heightened emotional internalization.[12] Thus, children exposed

to ACEs are at a higher risk for the development of internalizing symptoms.[13] Internalizing symptoms are often separated into two categories: anxiety and depression. Research shows that experiencing more ACEs is associated with increased reports of both anxiety and depression.[14,15] In children, anxiety symptoms are evidenced by excessive worry about one's school performance, personal and familial safety, or events in the future; children may also have difficulty (*e.g.*, excessive worry or nervousness) when separated from their caregivers.[16] Research shows that exposure to four or more ACEs is associated with heightened levels of anxiety.[14, 17] Depressive symptoms in children can be more challenging to identify. Young children experiencing depression often lose interest in activities that they previously enjoyed, display high levels of irritability, or increases in temper tantrums, and they may socially withdraw from others.[18,19] In addition to these symptoms, youth with depression may exhibit fatigue, feelings of worthlessness, and difficulties concentrating.[20] Recent research suggests a strong, positive correlation between levels of ACEs and the severity of depressive symptoms in middle childhood.[15] Despite differences in symptomology between anxiety and depression, studies indicate that exposure to violence in one's home or community, family dysfunction, and child maltreatment were linked to increased levels of depression and anxiety in children between the ages of six and eleven.[6] Although a robust literature has indicated that ACEs are associated with depression and anxiety across development and into adulthood, few studies have focused on how the presence of social-ecological strengths in a child's environment may be associated with fewer internalizing symptoms.

Social-Ecological Theory

Bronfenbrenner's social-ecological model provides a useful framework for conceptualizing how various environmental factors may be related to internalizing symptoms in children exposed to ACEs.[21] The social ecology is comprised of five expanding systems that surround the child: the microsystem, the mesosystem, the exosystem, the macrosystem, and the chronosystem.[21] Changes in relationships or resources within each system may affect a child's development. The microsystem, mesosystem, and exosystem are most proximal to a child's immediate environment, and therefore these systems have the strongest associations with children's internalizing symptoms.[22] The microsystem directly surrounds the child and consists of parents or caregivers, siblings, or any childcare providers or teachers.[21,23] The mesosystem represents the settings that a child is directly involved in, such as one's school, neighborhood, and religious communities.[21,23] Finally, the exosystem is categorized by events that happen in the child's life, but don't directly happen to the child, such as a parent losing their job, a new park placed in the neighborhood, or new changes in local government policies (*e.g.*, access to community services, affordable housing, or food assistance).[21,23]

Adverse experiences occurring within various levels of the social ecology have previously been associated with an increased risk for children's internalizing symptoms. Specifically, stressful experiences in the home, or in the microsystem (*e.g.*, witnessing IPV, child abuse and neglect, divorce) have been linked with heightened levels of anxiety and depression in adolescents.[17,23] Adversities experienced in the mesosystem, such as bullying, peer victimization, or violence also have a significant impact on internalizing symptoms in youth.[25,26] Within the exosystem, children exposed to community level adversity, such as reduced access to safe spaces, community violence, and/or neighborhood disorder report higher levels of depression and PTSD compared to children who experience less communal adversity.[27,28] Most research has focused on risk factors associated with child psychopathology rather than examining strengths across the social ecology.

Social-Ecological Strengths

Social-ecological strengths can be conceptualized as factors within an individual, a family, or a community that may be related to improved functioning.[28] The CDC highlights the utility of implementing a social-ecological framework that explores manifest strengths as these factors may be integral in preventing violence against children and youth.[29] Within this model, there are three primary systems outlined (individual, relational and communal) that map onto Bronfenbrenner's micro-, meso- and exosystems. Individual-level factors include variables that bolster self-efficacy (*e.g.*, emotion regulation, positive reinforcement, resilience) which have been linked with improved functioning following exposure to adversity.[29] Social support is a key factor of the relational system, which includes the presence of stable, supportive individuals who promote safety and sustained support.[29] Strengths within the communal system include variables such as strong neighborhood connections and consistent access to community resources and specialized care.[29] The current study aimed to examine relations between internalizing symptoms and socioecological strengths including resilience (individual system), social support (relational system), and community cohesion (community system).

Resilience

Resilience has become an increasingly studied construct in child development research and is defined as "the amount of adaptability that occurs in the face of stress, trauma, tragedy, or threats."[30] Definitions of resilience vary, with some researchers defining it as one's personal ability to overcome adversity and others defining it as normative levels of functioning despite exposure to adversity.[31,32] One prominent definition considers resilience to be one's access to resources that allow individuals to flourish despite exposure to adversity;[33] this is the conceptualization of resilience used in the current study. Across the empirical literature, resilience, regardless of definition or measurement, is associated with improved outcomes for individuals who have experienced adversity. Studies examining resilience in adults exposed to ACEs demonstrate that individuals who report higher

resilience have fewer mental health diagnoses (*e.g.*, depression and PTSD).[34,35] In relation to children, research indicates that resilience is associated with lower levels of anxiety and depression in clinical samples.[36,37] Further, self-reported resilience in the aftermath of ACEs has been linked with a delayed onset of anxiety and depressive disorders in youth.[38,39] Taken together, studies demonstrate that higher levels of resilience may be linked with fewer internalizing symptoms in children exposed to ACEs. However, few studies have examined resilience in younger and more diverse, community-based samples of children. Moreover, most research has relied on parental reports of children's resilience rather than using children's self-reported data, which the present study sought to address.

Social Support

Social support, including support from family and friends, is one relational factor associated with improved mental health.[39] Strong family relationships are characterized by secure caregiver-child attachments and the presence of at least one caring, supportive adult in the child's life.[40] Friend support refers to positive, emotional connections to peers in one's school or neighborhood.[41] One study found that youth with strong parental social support reported more frequent engagement in adaptive coping strategies (*e.g.*, expressing one's feelings, tackling a problem head on).[42] Children with parents who were emotionally available and implemented positive, trauma informed parenting strategies in the home were better able to manage stress and reported higher engagement in adaptive coping skills following adversity.[43,44] In addition to parent support, research has demonstrated that strong support from friends is linked to an increased sense of self-acceptance and a decrease in depression and anxiety symptoms in youth.[41,45] Yet, little research has examined the direct relation between social support and internalizing symptoms for children exposed to multiple ACEs. Thus, the current study contributed to the limited literature by examining how multiple social-ecological factors, including social support, differentially related to anxiety and depressive symptoms while accounting for ACEs.

Community Cohesion

Community cohesion is a valuable community-level construct that may be associated with children's well-being. Community cohesion refers to the integration of a family into their community and the mutual levels of support shared between neighbors.[46] One study examined the relation between neighborhood support and internalizing symptoms in children exposed to parent-child violence. Results showed that children residing in close-knit neighborhoods reported lower internalizing symptoms than those from more disconnected neighborhoods.[47] Other studies indicate that higher levels of community cohesion have been associated with lower rates of anxiety and depression in youth following exposure to community violence.[45,48] Although there is some evidence to suggest that community cohesion is associated with children's internalizing symptoms, to the authors knowledge, the present study was the first to examine the association between community cohesion and internalizing symptoms in a sample of youth exposed to multiple ACEs.

THE CURRENT STUDY

Previous literature provides strong evidence for the relation between ACEs and adulthood psychopathology, as well as the importance of identifying social-ecological strengths associated with children's mental health. Further, past research demonstrates that exposure to more ACEs is linked with heightened internalizing symptoms (*i.e.*, anxiety, depression) in children. However, there is a dearth of literature regarding the relation between social-ecological strengths and internalizing symptoms in children exposed to ACEs. The current study aimed to address this research gap by simultaneously examining several strengths within different levels of the social ecology and assessing how they related to children's anxiety and depressive symptoms. Guided by Bronfenbrenner's social-ecological theory,[28] the current study examined three factors: resilience (the individual level), social support (the relational level), and community cohesion (the community level) and their relation to children's internalizing symptoms while accounting for ACEs. Additionally, the present study controlled for annual family income, as living below the poverty line is reportedly linked with higher internalizing symptoms in children and reduced levels of social support.[49,50] While accounting for income, it was hypothesized that 1) exposure to more ACEs would be associated with heightened anxiety and depressive symptoms and 2) higher levels of resilience, social support, and community cohesion would be associated with lower levels of children's self-reported anxiety and depressive symptoms.

METHODS AND PROCEDURES

Participants

Participants included 49 children between the ages of 8 and 13 years old (M_{age} = 10.43, *SD* = 1.57; 55.1% male) with 92.6% of participants reporting at least one ACE. The sample was predominantly Black or African American (95.8%) with 2.1% identifying as White or European American and 2.1% identifying as American Indian or Alaskan Native. Most of the sample reported having a lower income, with 77.3% of youth's caregivers reporting an annual household income under $15,000.

Procedure

Following institutional review board (IRB; PRO-FY2018-688) approval, participants were recruited from four community programs in the Midsouth, United States. Caregivers and children separately completed a 60-90 minute interview with trained study staff. Prior to beginning the interview, parents completed an informed consent and parent permission form while youth completed a child assent form. Participants were informed that their data would be kept confidential and that their responses would not be linked to their identifying information. This was a grant funded project, with funds available for participant compensation. The caregiver and child each received a $30 gift card for their participation. A list of local and national mental health, counseling, and support resources was provided to all families at the end of the survey. The contact information for the principal investigator was also given to participants.

MEASURES

Demographics

Child participants were asked basic demographic information including their relationship to the caregiver participating in the study, their age, gender, and current grade in school. Caregivers reported on the family's annual income with response options ranging from less than $5,000 to more than $50,000.

Coddington life events scales (CLES)

The CLES is a 35-item measure that was completed by child participants. It is designed to identify how specific life events affect a child's wellbeing including stressful, traumatic, or celebratory events.[51] The current study utilized responses to the 17 CLES items that represent adverse life events (*e.g.*, the death of a family member, being hospitalized for illness or injury, a parent going to prison). Questions were answered dichotomously (1 = Yes, this has happened to me; 0 = No, that has not happened to me). Items were summed to create a total childhood adversity score, which had a possible range of 0-17. Higher scores indicated more adverse experiences during childhood. The CLES is a reliable and valid measure for examining children's life events.[51] Internal reliability was not calculated in the current study because children could experience one of the adversities listed in the CLES without necessarily experiencing another.

Behavior assessment system for children- third edition (BASC-3)

The BASC-3 is a standardized measure used to assess children's thoughts, feelings, attitudes, and internal reactions.[52] In this study, two validated versions of the BASC-3 were administered: one for children ages 8 to 11 years old (child version) and one for youth 12 years and older (adolescent version). The child version contained 137 items and the first 42 items were "True" or "False" questions. The remaining items were answered on a four-point Likert scale from 1 (Never) to 4 (Always). The adolescent version contained 189 items with the first 59 items answered as "True" or "False," and the Likert scale for the remaining items was from 1 (Never) to 4 (Always). Both versions contained items related to anxiety (*e.g.*, "I worry about making mistakes"), and depression (*e.g.*, "Your mood changes easily"). Overall composite scale scores for the BASC-3 demonstrate strong psychometric reliability, with alpha coefficients for anxiety at .85 for 8 to 11-year-olds and .87 for 12 to 14 years-old and for depression .83 and .86 respectively.[52] Q-global, an online scoring software program, was used to generate a norm-referenced, standardized t-score for both anxiety and depression across all respondents with higher scores reflecting greater symptomology.

Child and youth resilience measure-revised (CYRM-R)

The Child and Youth Resilience Measure-Revised is a 17-item self-report questionnaire used to identify resources that may foster resilience.[53, 54] The CYRM-R is comprised of two primary subscales: personal resilience and caregiver resilience. Personal resilience refers to children's perceptions of their own intrapersonal skills and behaviors that foster a sense of belonging and self-efficacy. Caregiver resilience encompasses the caring supervision and perceived support that characterize the child-caregiver relationship. Only the personal resilience subscale was used in this study, and it included seven items (*e.g.*, "I cooperate with people around me"; "I know how to behave in different social situations"). The CYRM-R utilizes a 5-point Likert scale from 1 (Not at all) to 5 (A lot) with total personal resilience scores ranging from 7 to 35. Higher scores on this subscale indicate higher levels of resilience. The personal resilience subscale has demonstrated strong internal reliability in previous studies (α = .82).[53] Internal reliability for the current sample was .79.

Social support scale

The Social Support Scale is a 10-item self-report inventory adapted from the Multidimensional Scale of Perceived Social Support,[56] which measures perceived social support from friends and family.[55] Items included "My friends really try to help me" and "My family lets me know that they care about me". The Social Support Scale uses a 4-point Likert scale from 1 (Not true about me) to 4 (Mostly true about me). All 10 items were summed to obtain a total score, which ranged from 19 to 40 in the current sample, with higher scores representing higher levels of perceived social support. The Social Support Scale has demonstrated good internal reliability in past studies (α = .88 to .90).[56,55] The alpha coefficient for this sample was .77.

Community cohesion scale (CCS)

The Community Cohesion Scale is a six-item self-report questionnaire adapted from the Social Cohesion and Trust Scale.[57] The CCS measures community characteristics, such as shared values and levels of trust and reliance among neighbors. Sample items include: "In your community, people are willing to help their neighbors" and "You live in a close-knit neighborhood." Participants were asked how much they agreed or disagreed with these statements on a 4-point Likert scale ranging from 1 (Strongly disagree) to 4 (Strongly agree). After reverse coding, items were summed to create a total community cohesion score. Higher scores indicated that participants felt a greater sense of connectedness and trust in their community. The CCS has demonstrated strong internal reliability with alpha values ranging from .80 to .91 in previous samples.[57] However, in the current study the alpha value was rather low ($\alpha = .56$). To improve the measure's reliability, one item was removed from the scale ("People in your neighborhood do not share the same values."). The alpha value improved to an acceptable level of .61 and the adjusted total score ranged from 8 to 20 in this sample.

DATA ANALYTIC PLAN

Linear regression modeling was conducted in SPSS version 27 to assess relations between the independent variables (*i.e.*, resilience, social support, community cohesion, reported ACEs, annual income) and the outcomes of children's anxiety and depressive symptoms. Separate regression analyses were conducted for each outcome. Prior to running the regressions, data were screened for missingness, skewness, kurtosis, and multicollinearity. A missing data analysis revealed that 2.7% of the data were missing. This was addressed using mean substitution, which is acceptable for studies with small amounts of missingness.[58] Skewness and kurtosis values were in the normal range and there was no evidence of multicollinearity (VIF < 2).

RESULTS

Children reported an average of three adverse events in their lifetime ($M = 3.35$, $SD = 1.90$), with the death of a family member (83.3%) being the most frequently endorsed ACE. Additionally, 52.1% had been hospitalized for an illness or injury, 43.8% experienced parental divorce or separation, 37.5% had a parent who was incarcerated, 31.3% had been in a bad accident or fall, 18.8% had seen someone beaten up or shot at, 12.5% had been personally beaten up or shot at, 10.4% reported parental drug use in the home, 9.8% endorsed childhood abuse, 6.3% reported witnessing IPV in the home, and 4.1% endorsed another adverse or traumatic experience (*e.g.*, seeing a parent's gunshot wound, being in a vehicle when the brakes failed). Income was not correlated with any of the study variables. See **Table 1** for means, standard deviations, and correlations among study variables.

		1	2	3	4	5	6	7
1.	**Household Income**	-						
2.	**ACEs**	.02	-					
3.	**Resilience**	-.17	-.08	-				
4.	**Social Support**	-.05	.02	.59**	-			
5.	**Community Cohesion**	-.05	.03	.34*	.44**	-		
6.	**Depressive Symptoms**	.05	.35*	-.47**	-.26	-.09	-	
7.	**Anxiety Symptoms**	.01	.26*	-.04	.04	.15	.61**	-
	M	3.10	3.35	43.67	34.67	15.10	51.85	54.20
	SD	1.95	1.90	5.97	5.29	3.20	9.53	10.53

Table 1. Means, Standard Deviations, and Correlations Among Study Variables. $N = 49$; *$p < .05$, **$p < .01$.

Findings from both regression models are reported in **Table 2**. The linear regression model that examined factors associated with depressive symptoms was significant ($F\ (5, 48) = 4.16$, $p < .01$, $R^2 = .33$). In this model, experiencing fewer ACEs ($\beta = 1.55$, $p = .02$) and exhibiting higher personal resilience ($\beta = -.73$, $p = .01$) were associated with fewer depressive symptoms. Household income, social support, and community cohesion were not significantly related to youth's self-reported depression levels. The model for anxiety was not significant.

Regarding depressive symptoms, results partially supported the first hypothesis as children who experienced a higher number of ACEs reported more depressive symptoms. Regarding hypothesis two, personal resilience was the only social-ecological strength associated with lower levels of depressive symptoms. No social-ecological factors were significantly associated with anxiety

symptoms. These findings partially support the second hypothesis, indicating that higher levels of personal resilience may be linked with fewer internalizing symptoms, specifically in the context of depression.

	Depression			
	β	*t*	R^2	*F*
Model Summary			.33	4.16**
Household Income	-.14	-.23		
ACEs	1.55	2.45*		
Resilience	-.73	-2.89**		
Social Support	-.06	-.21		
Community Cohesion	.22	.52		
	Anxiety			
	β	*t*	R^2	*F*
Model Summary			.10	.90
Household Income	.03	.03		
ACEs	1.40	1.72		
Resilience	-.13	-.40		
Social Support	-.002	-.004		
Community Cohesion	.56	1.04		

Table 2. Linear Regression Models Examining Factors Associated with Depression and Anxiety. *Note.* $N = 49$; $*p < .05$, $**p < .01$.

DISCUSSION

Seminal research has explored the impact of ACEs on child development and mental health in adulthood; however, few studies have investigated the relations between social-ecological strengths and youth's internalizing symptoms following exposure to adversity. Specifically, the present study investigated how the social-ecological strengths of resilience, social support, and community cohesion were associated with depression and anxiety symptoms in a sample of youth who had experienced ACEs. It was hypothesized that higher exposure to ACEs would be associated with heightened anxiety and depressive symptoms, and that higher levels of resilience, social support, and community cohesion would be associated with lower levels of children's self-reported anxiety and depressive symptoms, all while accounting for family income.

In line with the first hypothesis, children who experienced more ACEs reported higher levels of depressive symptoms. Notably, youth in this study endorsed high exposure to ACEs (*i.e.*, more than three adversities on average). Given the young age of the study population, this places youth at an increased likelihood for experiencing more than four ACEs before the age of 18, which has been linked to poorer mental health functioning. Specifically, the current sample is at a heightened risk for negative health outcomes as past literature suggests that adults who experience four or more ACES may be particularly vulnerable.[1] Accordingly, given the high rates of ACEs in this sample, higher rates of self-reported depression symptoms are not surprising. This finding aligns with previous studies indicating exposure to stress and adversity are linked to psychopathology in childhood.[7,59,60] Results from the current study trend with Bronfenbrenner's social-ecological theory,[21] which states that adverse experiences or events in a child's most proximal relationships negatively affect their mental health. In this study, the most frequently endorsed ACEs occurred in the microsystem (*e.g.*, parental divorce, IPV or violence exposure in the home, a parent being hospitalized) constituting significant interpersonal events. Past research indicates that children who experience interpersonal adversity report elevated symptoms of both anxiety and depression.[14,24,26]

Unexpectedly, anxiety was not associated with ACEs in this study. On average, children's reports of depression and anxiety were in the normal range for youth in this age group (See Table 1). Perhaps depression represents a mood disorder that may be uniquely impacted by trauma exposure. It may be that young children who have experienced multiple ACEs are more likely to shut down in response to adversity rather than engage in continuous worry or rumination about the stressor. Additionally, it could be that types of anxiety (*e.g.*, hypervigilance, persistent worrying, fear of social interactions) are differentially affected by ACEs, which was not captured when using a cumulative anxiety symptom score. Further, differences in anxiety symptoms were not examined in relation to specific types of ACEs, which could represent a key next step for future work. Nonetheless, the present

study underscores previous literature indicating that heightened exposure to adversity has negative mental health outcomes for youth, particularly depression, and highlights the value of early intervention with children exposed to ACEs.[17,24]

Regarding social-ecological factors, hypothesis two was partially supported. Specifically, youth who endorsed higher personal resilience reported fewer depressive symptoms, suggesting that children's positive self-concept and increased access to resources (*e.g.*, equitable education, behavioral control, opportunities to learn new skills) are central to understanding psychopathology. This finding lends support to a small body of literature indicating that youth's resilience may be linked with lower reports of depression over time.[38, 39] One study found that children who have more "positive childhood experiences" (*e.g.*, stronger parental bonds, stable home environment) report higher levels of resilience and lower depressive symptoms in comparison to their peers with equal adversity exposure.[38] These results indicate resilience may represent a novel social-ecological strength that could be targeted for intervention and may be uniquely related to the etiology of depression in children ages 8-13. It may be that this developmental stage lends itself to more accurately reporting egocentric information rather than external information about one's friends or community, suggesting that personal resilience could be critical for youth in this age bracket. Resilience, as measured in this study, captures variables that are central to mental health (*e.g.*, recognizing personal strengths, cooperating with others, finishing what one starts) and reflects constructs such as tenacity and determination. These personal facets of resilience may be essential in helping children thrive amidst adversity and maintain adaptive functioning.

Neither social support nor community cohesion were associated with either of the internalizing outcomes in the current sample. It may be that children's ability to accurately report on their social support or community cohesion was limited due to child age, developmental stage, or the instruments used to capture these constructs. Regarding social support specifically, research indicates that children often report more inflated perceptions of their relationships with others, particularly peers, that may not adequately reflect the quality or quantity of their available support.[62] Notably, while the total scores yielded from the social support measure showed appropriate variability, there was a slight negative skew suggesting that youth endorsed somewhat higher levels of perceived social support than would be expected. Further, it may be that conducting interviews in a face-to-face format amplified social desirability bias. While an interview format is valuable as it often increases response rates, improves item comprehension, and reduces the amount of missing data, perhaps children responded to questions in a way that made them seem more socially liked or desirable, rather than providing answers that were the "truest" for themselves.[63] Future studies should attempt to reduce social desirability bias when collecting data regarding perceived social support by keeping questions neutral when asking about supportive relationships (*i.e.*, "I have people I can count on")[64] and use a mixture of both closed- and open-ended questions to assess the quality of support.[65]

To the authors knowledge, this was the first study to examine community cohesion in youth exposed to adversity. Although community cohesion was not associated with internalizing problems, the null findings warrant discussion to guide future research. First, items assessed on the community cohesion measure may have been too broad for children in this age range. For example, children may not know how to answer a question asking, "I live in a close-knit neighborhood." Children may have only lived in one neighborhood for their whole life and might not be able to identify what constitutes a "close-knit" community. Second, it may be hard for children to identify community and cultural values in their neighborhood, and they may overestimate their community connectedness. Indeed, while the range of total scores was appropriate, participants endorsed relatively high levels of community cohesion, leading to a slight negative skew for this scale. Moreover, if community values are challenging to identify, it may be even more difficult to accurately report if other neighbors can be trusted or if they share similar values. Some research suggests that the type of abstract thought needed to comprehend concepts like a "close-knit" or "trustworthy" group is not developed until middle childhood (12 years or older).[66] It could be that assessing both internal and external resources available in one's community, such as perceptions of safety and the number of people they know in their neighborhood, are better proxies of community cohesion for young children.[67,68] Future work should implement multiple methods of measurement to operationalize the concept of community cohesion for young children. For example, including items that are intentionally child-focused, such as asking how safe the child feels in their neighborhood or assessing how many community opportunities (*e.g.*, sports, arts, employment) are available for them, may be one strategy to enhance the accurate reporting of community cohesion among youth.

Strengths

The present study boasts several strengths. Participants were recruited from the broader community and were predominantly Black or African American; representing a population that is typically underrepresented and understudied in the literature. Further, this study took a strengths-based approach to examining internalizing symptoms by exploring which social-ecological factors (*i.e.*, resilience, social support, community cohesion) were most salient for children exposed to ACEs. Rather than focusing on the cumulative risks associated with negative outcomes following trauma, this study explored what positive resources were available to children and how these resources that may be associated with internalizing problems. Finally, the majority of the interviews were conducted in-person and the surveys were read aloud to participants, which is a research strategy that is reported to improve data quality by reducing the amount of random responding and missing data.[69]

Limitations

Though this study has notable strengths, several limitations should also be acknowledged. Data were cross-sectional, which limits the interpretation of directionality and temporality. Additionally, power was likely limited due to the relatively small sample size. Further, the families participating in this study were actively seeking services, so the generalizability of the findings may not extend to all families, as the intentional act of reaching out for help may engender adaptive functioning in the family system. Lastly, the nuances in assessing social-ecological factors such as social support and community cohesion may have been reduced in this study due to the developmental age range of the sample and limitations of the measures.

Clinical implications

Research highlights the need for intervention efforts to address psychopathology in children exposed to ACEs. Children should be given opportunities to process trauma exposure in safe and supportive environments through trauma informed interventions such as Trauma-Focused Cognitive Behavioral Therapy (TF-CBT).[70] Given study findings, interventions should also implement strategies to bolster resilience such as increasing self-efficacy and positive self-talk, teaching emotion identification and regulation skills, and practicing mindfulness, which could mitigate the onset of depressive symptoms. Importantly, these techniques aimed at increasing resilience could be implemented at different levels across the social ecology. Psychoeducation could be provided to parents who, in turn, could practice these strategies at home. Children could attend individual sessions with a school counselor or mental health provider. Further, these techniques could be shared in a group-based format as a part of broader community-focused programming.[71,72] Implementing these strategies in the child's home or microsystem following adversity could be a critical preventative measure against the development of internalizing symptoms.

CONCLUSIONS

The current study took a social-ecological approach to examine the associations between resilience, social support, community cohesion and internalizing symptoms *(i.e.*, anxiety, depression) in young children who had been exposed to ACEs. Linear regression modeling revealed that fewer ACEs and higher levels of resilience were linked to fewer depressive symptoms. These findings extend the ACEs literature and provide insight to guide future intervention methods for youth exposed to adversity.

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PRESS SUMMARY

Adverse childhood experiences (ACEs) are reported by a majority of children in the United States. Research indicates that ACEs are associated with increased reports of anxiety and depression in children. Limited work has examined how social-ecological strengths may be associated with anxiety and depression symptoms in youth following ACEs. The current study explored how factors across the social ecology, including resilience, social support, and community cohesion were associated with mental health symptoms in a sample of racially diverse youth exposed to adversity. Results showed that experiencing more ACEs was associated with endorsing more depressive symptoms, and higher levels of personal resilience were linked with lower levels of depression. Thus, mental health professionals and community stakeholders working with ACE-exposed youth should implement strategies that foster resilience (*i.e.*, learning self-efficacy and positive self-talk, teaching emotion identification and regulation skills), as building personal resilience could lessen symptoms of depression among youth experiencing adversity.