ACE RESEARCH BRIEF: 12

Adverse Childhood Experiences in South Carolina

Expanding the Understanding of Childhood Adversity

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Children's Trust of South Carolina has produced a series of research briefs on adverse childhood experiences (ACEs). Research brief topics include the data collection process, an overview of ACEs, the prevalence of ACEs in various populations, and the relationship between ACEs and health and social outcomes.

In 2014, Children's Trust of South Carolina (herein Children's Trust) partnered with South Carolina's Department of Health and Environmental Control (SC DHEC) to collect data from South Carolina adults on exposure to adverse childhood experiences (ACEs). This partnership developed because, as the state leader in prevention of child abuse and neglect, Children's Trust values data-driven decision-making the quality of life of vulnerable children and families. Currently, ACE data is being collected annually in South Carolina via the Behavioral Risk Factor Surveillance System Survey (CDC, 2016). Recognizing the importance of capturing a wide-range of experiences and to broaden the understanding and definition of childhood adversity, Children's Trust added eight supplemental questions in 2016. These questions include additional adverse childhood experiences related to poverty, protective factors, and socio-economic factors and will be included on the annual South Carolina BRFSS Survey through 2018.

Children's Trust has developed a series of research briefs to outline the ACE data collection process (Morse, Strompolis, & Srivastav, 2017) and to highlight important findings. Eleventh in the series, this brief provides a summary of the 2016 supplemental ACE survey questions. An overview of the 2016 supplemental ACE survey items is provided followed by prevalence rates for the additional types of ACEs (e.g. food insecurity, homelessness), protective factors, (feeling safe and protected in childhood, and basic needs being met in childhood) and socio-economic factors (i.e. parental education, single parent home, access to oral health services in childhood).

Supplemental ACE Survey Items

Since the original ACE study took place, a wealth of ACE-related research has been conducted. Such research includes expanded conceptualizations of ACEs and associated factors. The CDC in partnership with the state of Wisconsin developed eight supplemental ACE survey questions that include experiences related to poverty and other social contexts that can contribute or may be related to ACEs. Table 1 outlines the supplemental ACEs survey items. Notably, South Carolina is only the second state to utilize the BRFSS to expand data collection to include the supplemental ACEs and protective factors. The expanded conceptualization of ACEs continues to evolve as Wisconsin and South Carolina lead efforts in data collection and analyses of population-level data. For the purposes of this brief, the supplemental survey questions are categorized into 1) additional ACE types, 2) protective factors, and 3) socio-economic factors in childhood.

Table 1

Supplemental ACE Survey Questions	
ADDITIONAL ACE TYPES	
Food insecurity	How often were you hungry because your family could not afford food?
Homelessness	How often were you homeless when you were growing up?
PROTECTIVE FACTORS	
Safe and protected	For how much of your childhood was there an adult in your household who made you feel safe and protected?
Basic needs met	For how much of your childhood was there an adult in your household who tried hard to make sure your basic needs were met?
SOCIO-ECONOMIC FACTORS	
Parental education	Did your mother graduate from high school? Did your father graduate from high school?
Single parent household	For how much of your childhood did you live in a single-parent household?
Access to oral health services	How often did you visit a dentist?

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BRFSS data are collected via landline and cellular phone surveys and are weighted by the CDC so that the data is representative of the adult population of South Carolinians. RFSS data is weighted to ensure unbiased population estimates by accounting for complex sampling, nonresponse, and noncoverage (e.g., landline versus cell phone data collection) (CDC, 2016). Thus, a "weight" is assigned to every survey respondent. Under-represented respondents have a higher weight, whereas over-sampled or represented respondents have a lower weight (Kish, 1992). See Weighting of BRFSS Data for more information (CDC, 2017a).

Items for these supplemental ACE types were collapsed for analytic purposes similarly to the original ACE study questions (e.g.,Anda et al., 1999; Felitti et al., 1998). Item responses only indicated whether a participant had experienced a particular ACE, protective factor or indicator of socio-economic status. Thus, the survey does not capture intensity or frequency of the experience (i.e. ACE or protective factor) or status (socio-economic).

Additional ACE Types

Food insecurity and homelessness—which are often a result of poverty, are linked to poor health outcomes, including chronic disease, mental illness, substance use, and early mortality (Narayan et al., 2017; Story, Kaphingst, Robinson-O'Brien, & Glanz, 2008). Similar to ACEs, poverty can lead to increased toxic stress, which is associated with disrupted neurodevelopmental and socio-emotional competencies (Shonkoff et al., 2012) . Thus, examining indicators of poverty, such as food insecurity and homelessness through the lens of childhood trauma may help illuminate new and innovative ways to prevent childhood trauma and promote childhood health and well-being. Table 2 describes the frequency of these experiences.

Protective Factors

Protective factors are conditions, resources and assets in families and communities that, when present, increase the health and well-being of children and families (CSSP, n.d.). They serve as buffers from the long term impact of ACEs by building resilience in children, helping them overcome and cope with toxic stress experienced with childhood trauma (Afifi et al., 2008; Afifi & Macmillan, 2011; Child Information Gateway, 2014). There are many frameworks that detail the different types of protective factors, including the Center for the Study of Social Policy's Strengthening Families Framework, the CDC's Essentials for Childhood Framework, and the Administration on Children, Youth and Families Protective Factors Framework (Administration for Children and Families, 2017; CDC, 2017b; CSSP, n.d.).

While each framework varies in its scope and context, they all generally touch on the importance of safe, stable, and nurturing relationships, social and emotional competence of children, social connections for parental resilience, and positive environments (Child Information Gateway, 2014).

These supplemental ACE questions focus on the relational aspect of protective factors, specifically between adult and child. The prevalence of these protective factors is detailed in Table 3.

Table 2

Prevalence of Additional ACE Types		
ACE	**PREVALENCE**	
	YES	**NO**
Food insecurity	9%	91%
Homelessness	2%	98%

Table 3

Prevalence of Additional ACE Types		
PROTECTIVE FACTOR	**PREVALENCE**	
	YES	**NO**
Safe and protected	98%	3%
Basic needs met	98%	2%

Socio-Economic Factors

While socio-economic factors such as gender, race, age, income, education, and employment are examined in the BRFSS, they are focused on the socio-economic status in adulthood. These items do not provide insight on the role of socio-economic factors in childhood, especially as it relates to ACEs.

Three items were added to the supplemental ACE survey that researchers and ACE experts feel are important to understanding the socio-economic contexts and environments in childhood that can contribute to or prevent ACEs. These factors can be considered additional indicators of poverty, or social disadvantage which have been linked to the higher prevalence of ACEs (Brooks-Gunn & Duncan, 1997; Nurius, Logan-Greene, & Green, 2012; Seccombe, 2002). They can also provide more insight risk factors and outcomes associated with the original and additional ACEs (Morris, Criss, Silk, & Houltberg, 2017; Sege et al., 2017; Treat, Morris, Williamson, Hays-Grudo, & Laurin, 2017). Finally, these items can further target prevention efforts focused on a dual-generation approach that empowers parents to break the intergenerational cycle of ACEs that may occur (Jaffee et al., 2013; Metzler, Merrick, Klevens, Ports, & Ford, 2017). Prevalence of these socio-economic factors are detailed in Table 4.

Conclusion

This brief details the supplemental ACE questions that were added to the South Carolina BRFSS in 2016 to capture additional experiences of ACEs, protective factors, and socio-economic status in childhood. The supplemental questions can provide a better snapshot of ACEs in South Carolina and possible prevention approaches.

ACEs are typically recognized by indicators of household dysfunction and abuse in childhood (Morse, Strompolis, Priester, & Wooten, 2016). To better understand how childhood adversity impacts our population, it is important to recognize that other ACEs exist that may not be captured by the original ACE items. There is growing evidence to suggest that poverty may operate as an ACE; in this case, defined by homelessness and food insecurity, which are both of great concern in South Carolina, with 8% of adults reporting food insecurity in childhood and 2% reporting homelessness in childhood. These data points emphasize the importance of a community-based approach to preventing childhood trauma and highlight the role of social contexts that affect health, given the several factors associated with homelessness and food insecurity.

Table 4

Prevalence of Additional ACE Types		
SOCIO-ECONOMIC FACTOR	**PREVALENCE**	
	YES	**NO**
Mother graduated high school	29%	71%
Father graduated high school	34%	66%
Single parent household	31%	69%
Access to oral health services	20%	80%

Measuring protective factors on a population level through the BRFSS provides an opportunity to understand ways in which the long-term impact of ACEs can be prevented in South Carolina. The overall prevalence of protective factors, (as defined by a safe stable home and having basic needs met in childhood) is high in South Carolina, however, further examination of protective factors within different populations in South Carolina could provide data that highlights the need for community-based resiliency efforts.

Socio-economic status in childhood helps provide more context to the ways in which ACEs may occur, allowing for more targeted prevention opportunities. For example, approximately 80% of the population reported a lack of access to dental care, which is an important consideration for programs and policies that prevent the poor health outcomes associated with ACEs. These data points can serve as a foundation for further analysis on the way poverty can impact children of South Carolina.

In conclusion, these supplemental questions that address additional ACEs, protective factors, and socio-economic status in childhood, provide more nuanced insight on the types of experiences that impact South Carolina's population, and how they may also play a role in poor health and social outcomes.

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