

A Short Adverse Experiences Measure Among Mothers of Young Children

Félice Lê-Scherban, PhD, MPH,^{a,b} Anqi Wang, PhD, MS,^a Kelly A. Courts, MPH,^{a,c} Stephanie Ettinger de Cuba, PhD, MPH,^d Roy Wade Jr, MD, PhD,^{e,f} Mariana Chilton, PhD, MPH^g

abstract

OBJECTIVES: Screening for parental adverse childhood experiences (ACEs) in pediatric settings can be burdensome because of the questionnaire's length and sensitive nature. Rapid screening tools may help address these challenges. We evaluated a 2-item short ACE measure developed for adults in a cross-sectional sample of mothers of young children in an urban pediatric emergency department.

METHODS: From January 2011 to March 2020, we administered the ACE questionnaire in English or Spanish to 3999 biological mothers of children aged <4 years in a pediatric emergency department in Philadelphia, Pennsylvania. We assessed sensitivity and specificity of a shortened 2-item ACE measure defined as report of childhood emotional abuse and/or household substance use, using 4+ ACEs on the full questionnaire as the standard. We assessed convergent validity by comparing associations of the 2-item and standard measures with maternal, household, and child outcomes using adjusted log-binomial regression.

RESULTS: Mothers were racially and ethnically diverse (54% Latina, 35% Black non-Latina); 94% of children were publicly insured. Thirteen percent of mothers reported childhood emotional abuse and 16% childhood household substance use; 23% reported at least 1 of these and 6% both. Compared with 4+ ACEs on the full questionnaire, the 2-item measure had sensitivity 88% and specificity 90%. In adjusted models, high adversity was associated with poor maternal, household, and child outcomes.

CONCLUSIONS: A 2-item ACE measure assessing childhood emotional abuse and household substance use may be useful in pediatric settings to identify mothers who may have experienced significant child adversity and inform development, testing, or provision of comprehensive family supports.



^aDepartment of Epidemiology and Biostatistics, and ^bDrexel Urban Health Collaborative, Dornsife School of Public Health, Drexel University, Philadelphia, Pennsylvania, and ^cSt Christopher's Hospital for Children, Philadelphia, Pennsylvania, and ^dBoston University School of Public Health and Chobanian and Avedisian School of Medicine, Boston, Massachusetts, and ^eDepartment of Pediatrics, Children's Hospital of Philadelphia, Philadelphia, Pennsylvania, and ^fPediatrics at the Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania; and ^gDepartment of Health Management and Policy, Dornsife School of Public Health, Drexel University, Philadelphia, Pennsylvania

Dr Lê-Scherban supervised data collection, conceptualized the study, and drafted the initial manuscript; Dr Wang conducted analyses and contributed to drafting the initial manuscript; Ms Courts coordinated data collection and contributed to interpretation of results; Drs Ettinger de Cuba and Chilton designed the data collection instruments and supervised data collection; Dr Wade, Jr contributed to interpretation of results; and all authors critically reviewed and revised the manuscript.

DOI: <https://doi.org/10.1542/peds.2023-063882>

Accepted for publication Jan 22, 2024

WHAT'S KNOWN ON THIS SUBJECT: Assessment of parent adverse childhood experiences (ACEs) in pediatric settings can inform development and provision of comprehensive family supports. However, the assessment can be challenging because of the questionnaire's length and sensitive nature.

WHAT THIS STUDY ADDS: We evaluated a 2-item short ACE measure in a cross-sectional sample of mothers of young children in an urban pediatric emergency department. The measure may be a useful tool to address challenges in assessment of parent ACEs in pediatric settings.

To cite: Lê-Scherban F, Wang A, Courts KA, et al. A Short Adverse Experiences Measure Among Mothers of Young Children. *Pediatrics*. 2024;153(4):e2023063882

Adverse childhood experiences (ACEs) are associated with many poor physical, psychological, and behavioral health outcomes.^{1,2} Growing evidence also suggests intergenerational effects of parents' ACEs on their children's health via epigenetic, socioeconomic, and behavioral mechanisms.³⁻⁷ These findings have led to considerable debate in recent years about whether and how to screen for ACEs in health-care settings and how to use the resulting information. This includes discussion specifically about screening for parent and caregiver ACEs in pediatric settings.^{8,9} Calls for patient and parent ACE screening in pediatric health care settings refer to potential benefits as part of trauma-informed, family-centered pediatric practice.^{8,10-12} On a population level, knowledge about prevalence of parent ACEs in pediatric patient populations may aid in developing and securing funding for trauma-informed parent support services. On an individual level, the utility of parent ACE screening for clinical care remains an open question and requires more research. Knowledge of parent ACEs, in the context of a detailed social and medical history, may be used to inform appropriate referrals or to frame provider-parent discussions, such as about how the parent believes their ACEs may be affecting their parenting and their child.^{8,13,14} However, researchers and others have cautioned that the ACE questionnaire was not developed and has not yet been adequately tested for use as a diagnostic tool or as the basis for individual treatment decisions.^{15,16}

Whether to provide population-level information, conduct research, or test individual- or family-level intervention strategies,¹⁷ many pediatric providers remain hesitant to implement routine ACE assessment, in part, because of the length and sensitive nature of the ACE questionnaire.^{11,12} A more brief measure can help address these concerns. Devoting less time to ascertain ACEs may also allow for more opportunity during a limited-time survey or healthcare visit for strengths-based discussion of parental and household resilience factors that may mitigate ill effects of parent ACEs on child health.¹⁷ Recent studies have demonstrated the roles of parent resilience and positive parenting behaviors in mitigating intergenerational effects of ACEs,¹⁸ as well as the promise of these factors as potential intervention targets.¹³

In a prior study, Wade et al developed and evaluated a 2-item ACE measure using data from the Behavioral Risk Factor Surveillance System (BRFSS).^{19,20} However, the measure was developed in a largely older (55% aged ≥ 45 years), white-race (85%) sample.²⁰ ACE prevalence varies across sociodemographic backgrounds.²¹ Therefore, the psychometric properties of the 2-item ACE measure may differ when administered to more diverse racial and ethnic populations. To inform the use of this 2-item ACE measure in more targeted populations, we psychometrically evaluated the previously developed short ACE measure among a racially diverse sample of mothers of young children surveyed in a pediatric clinical setting.

Our analysis included assessment of the short measure's convergent validity with respect to child health, as well as measures representing important maternal- and household-level mechanisms that may serve as potential points of intervention.

METHODS

Study Population

Data came from cross-sectional surveys of biological mothers of children aged < 4 years conducted in a pediatric emergency department in Philadelphia, PA in January 2011 through March 2020 as part of the Children's HealthWatch study.²² This analysis was limited to biological mothers to reduce variation by caregiver role and potential biological or epigenetic mechanisms.^{3,23} Surveys were conducted verbally in English or Spanish while participants were waiting to be seen by a healthcare provider. Specifically for the ACE questionnaire, participants were given the choice of reading and filling out the questionnaire on paper if they preferred. During a pilot phase, participants were additionally given the choice of completing the ACE questionnaire using audio computer-assisted self-interview software (ACASI). Participants were reminded during the interview that they were free to choose at any time whether to answer each question or to continue the survey. Interviewers were trained to reduce the likelihood of distress (eg, maintaining neutrality, being cognizant of body language, reiterating the right to refuse to answer questions and that the same questions are asked of all participants) and in appropriate response if a participant should become distressed, including seeking the aid of provider staff. At the close of the survey, participants were given the option of receiving information on local resources for a variety of specific services, including physical, mental, and dental health; social work; domestic violence; legal; public benefits assistance; assistance with basic needs such as food, diapers, and utilities; and educational services. Mothers of children with severe injury or illness were excluded, including any child who had been triaged as level 1 on the Emergency Severity Index,²⁴ and surveys were paused or halted as needed to avoid interfering with the child's medical care. Participants were compensated with gift cards. The study received Institutional Review Board approval. Caregivers gave verbal consent to participate. Caregiver names were not collected as part of the survey, and written documentation of consent was waived to protect participant privacy. All child data were deidentified for storage and analysis. Out of 4150 biological mothers administered the ACE questionnaire, we excluded responses for 103 (2.5%) with incomplete ACE information and 48 (1.2%) with missing covariate information, resulting in an analysis sample of 3999 mothers.

Measures

The shortened ACE measure developed by Wade et al²⁰ comprises 2 of the questions from the BRFSS 11-item ACE questionnaire. The BRFSS questionnaire assesses 2 dimensions of adversity—abuse and household stressors—experienced when the participant was age <18 years.¹⁹ The 2 questions chosen for the short measure were the most frequently reported items in each of the 2 dimensions, assessing emotional abuse (abuse) and problematic household alcohol abuse (household stressor). Compared with reporting 4+ ACEs on the full 11-item scale, sensitivity of the short measure in Wade et al's sample was 99% and specificity was 66% when high adversity was defined as experiencing at least 1 of these 2 adversities.

For this analysis, we modified the measure for the 10-item Children's HealthWatch ACE questionnaire,²² which phrases all questions as "yes or no," combines some items asked separately in the BRFSS, and—like the

original ACE questionnaire¹—includes questions about emotional and physical neglect in addition to abuse and household stressors¹ (Table 1). For the short measure, we defined high adversity as an affirmative response to at least 1 of the following questions: "Did a parent or other adult in the household often or very often swear at you, insult you, put you down, or humiliate you or act in a way that made you afraid that you might be physically hurt?" (abuse) and "Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?" (household stressor).

To assess convergent validity—how related a measure is to theoretically connected constructs—we examined associations of the 2-item and standard measures with binary measures of maternal, household, and child health outcomes. Maternal outcomes were maternal health status (fair or poor versus good or excellent)²⁵ and depressive symptoms, defined as affirmative response to 2+ questions on the 3-question

TABLE 1 Comparison of Prevalence of ACEs Among Mothers in Philadelphia Compared With in Behavioral Risk Factor Surveillance System (BRFSS) Data Used by Wade et al to Develop 2-item Short ACE Measure

		Philadelphia Study Sample		BRFSS ^a
	Item from Philadelphia survey	N	%	Weighted %
1	Did a parent or other adult in the household often or very often swear at you, insult you, put you down, or humiliate you or act in a way that made you afraid that you might be physically hurt? (Included in short measure)	528	13	34 ^b
2	Did you live with anyone who was a problem drinker or alcoholic or who used street drugs? (Included in short measure)	656	16	24 (alcohol); 10 (drugs) ^c
3	Did a parent or other adult in the household often or very often push, grab, slap, or throw something at you or ever hit you so hard that you had marks or were injured?	403	10	12
4	Did an adult or person at least 5 y older than you ever touch or fondle you or have you touch their body in a sexual way or attempt or actually have oral, anal, or vaginal intercourse with you?	384	10	7 (touched sexually); 9 (forced to touch sexually); 4 (forced to have sex) ^d
5	Did you often or very often feel that no one in your family loved you or thought you were important or special or your family didn't look out for each other, feel close to each other, or support each other?	808	20	Not asked
6	Did you often or very often feel that you didn't have enough to eat, had to wear dirty clothes, and had no one to protect you or your parents were too drunk or high to take care of you or take you to the doctor if you needed it?	267	7	Not asked
7	Was a biological parent ever lost to you through divorce, abandonment, or other reason?	1089	27	27
8	Was your mother or stepmother often or very often pushed, grabbed, slapped, or had something thrown at her or sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard or ever repeatedly hit over at least a few minutes or threatened with a gun or knife?	363	9	12
9	Was a household member depressed or mentally ill or did a household member attempt suicide?	514	13	16
10	Did a household member go to prison?	716	18	8

^a Wade Jr R, Becker BD, Bevans KB, Ford DC, Forrest CB. Development and evaluation of a short adverse childhood experiences measure. *Am J Prev Med* 2017;52(2):163–72. Data were from BRFSS 2011–2012 and included participants from 8 states that reported ACE survey results (MN, MT, VT, WA, WI, IA, NC, TN).

^b BRFSS uses cutoff of "more than once" rather than "often or very often," and question does not contain the phrase "or act in a way that made you afraid that you might be physically hurt?"

^c Household alcohol use and drug use were asked as separate questions in BRFSS, and only the question on alcohol use was incorporated into the original 2-item short measure. The BRFSS question about household drug use includes prescription medication abuse in addition to street drug use.

^d Asked as separate questions in BRFSS.

Kemper scale.²⁶ Household food insecurity was defined using standard coding of the validated 18-item Household Food Security Survey Module.^{27,28} Child outcomes were mother-reported fair or poor health status,²⁵ risk of obesity, and developmental concerns. Risk of obesity, taken from the child's electronic health record from the visit where the survey was conducted, was defined as weight-for-height >90th percentile.^{29,30} If length data were not available, weight-for-age >95% was used. Developmental concerns were defined as 1 or more parental concerns on the Parents' Evaluation of Developmental Status.³¹

Analyses

We assessed sensitivity, specificity, and convergent validity of the shortened ACE measure compared with the standard of 4+ ACEs on the full 10-question questionnaire.¹ Sensitivity, the degree to which mothers who reported high adversity on the standard scale were correctly identified by the short measure, was calculated as the proportion of mothers who reported 4+ ACEs on the full scale who were classified by the short measure as having experienced high adversity (ie, [number of mothers reporting high adversity on the short measure]/[number of mothers reporting 4+ ACEs on the full scale]). Specificity, the degree to which mothers who did not report high adversity on the standard scale were correctly identified by the short measure, was calculated as the proportion of mothers who reported <4 ACEs on the full scale who were classified by the short measure as not having experienced high adversity (ie, [number of mothers not reporting high adversity on the short measure]/[number of mothers reporting <4 ACEs on the full scale]). We also assessed sensitivity and specificity stratified

by maternal combined race and ethnicity (Latina, Black non-Latina, white non-Latina). Small sample size precluded evaluation among mothers of other racial and ethnic groups. Ninety-five percent confidence intervals were calculated for measures of sensitivity and specificity using the conservative "exact" method.^{32,33}

Convergent validity was assessed by separately estimating associations of the 2-item and standard measures with maternal, household, and child health outcomes using adjusted logbinomial regression. Models were adjusted for child age (months) and sex assigned at birth (male or female); and maternal self-reported race and ethnicity (Latina, Black non-Latina, white non-Latina, other [includes Asian, American Indian or Native American, "Other"] or multiple non-Latina race and ethnicity) and education (\leq high school or $>$ high school). Associations of high maternal adversity—measured using the short measure—with poor outcomes would indicate good convergent validity, particularly if these associations were similar to associations estimated using the standard measure.

RESULTS

The participation rate among eligible approached caregivers was 86%. Characteristics of survey participants excluded from this analysis because of missing information ($n = 151$) were similar to those of included participants (Supplemental Table 5). Mothers were racially and ethnically diverse (54% Latina, 35% Black non-Latina, 8% white non-Latina), 88% were United States-born, and 36% had education beyond high school (Table 2). Ninety-four percent of children were publicly insured.

TABLE 2 Sample Characteristics of Biological Mothers Completing ACE Questionnaire and Their Children in Pediatric Emergency Department Waiting Area ($n = 3999$), Philadelphia, PA, April 2011 to March 2020

	Total	Latina	Black, non-Latina	White, non-Latina	Other, non-Latina Race and Ethnicity ^a
Characteristic	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
<i>N</i>	3999	2178 (54)	1394 (35)	335 (8)	92 (2)
Education					
<High school	888 (22)	639 (29)	173 (12)	63 (19)	13 (14)
High school or GED	1675 (42)	867 (40)	659 (47)	112 (33)	37 (40)
>High school	1436 (36)	672 (31)	562 (40)	160 (48)	42 (46)
United States-born (versus immigrant)	3507 (88)	1785 (82)	1339 (96)	316 (94)	67 (73)
Number of ACEs					
0	1950 (49)	1128 (52)	631 (45)	148 (44)	43 (47)
1–3	1458 (36)	774 (36)	534 (38)	115 (34)	35 (38)
4+	591 (15)	276 (13)	229 (16)	72 (21)	14 (15)
Child insurance					
Public	3750 (94)	2061 (95)	1326 (95)	280 (84)	83 (90)
Private	150 (4)	53 (2)	48 (3)	45 (13)	4 (4)
No insurance	91 (2)	58 (3)	19 (1)	9 (3)	5 (5)
Child male sex (versus female)	2180 (55)	1208 (55)	733 (53)	188 (56)	51 (55)

^a Includes mothers reporting multiple racial and ethnic identities.

TABLE 3 Prevalence, Sensitivity, and Specificity of 2-item Short ACE Measure in Philadelphia Children’s HealthWatch Dataset by Maternal Race and Ethnicity

a	Total ^b	Latina	Black non-Latina	White non-Latina
<i>N</i>	3999	2178	1394	335
Prevalence (%)	23	20	26	35
Sensitivity % (95% CI)	88 (87–89)	90 (89–92)	87 (85–89)	81 (76–86)
Specificity % (95% CI)	90 (87–92)	87 (81–91)	91 (87–95)	93 (85–98)

CI, confidence interval.
^a Short measure defined as reporting at least 1 of: emotional abuse and household substance use. 10-item ACE measure dichotomized at 4 or more ACEs used as standard.
^b “Total” column includes mothers reporting other non-Latina race and ethnicity identities.

Fifty-one percent of mothers reported at least 1 ACE and 15% reported 4 or more. Thirteen percent of mothers reported emotional abuse and 16% household substance use (Table 1). Twenty-three percent reported high adversity using the short measure (ie, emotional abuse and/or household substance use), including 6% who reported both of these experiences. Thirty-two percent of mothers completed the ACE questionnaire verbally, 33% using ACASI, and 13% using paper self-administration; 22% either used multiple modes or had missing information for mode of administration. The percent reporting 4+ ACES on the full questionnaire or reporting high adversity using the short measure did not vary statistically significantly by mode of administration (Supplemental Table 6).

Compared with 4+ ACEs on the full questionnaire as the standard, the 2-item measure had sensitivity 88% ([95% confidence interval] 87%–89%) and specificity 90% (87%–92%). In stratified analyses, sensitivity was highest among Latina mothers (90% [89%–92%]), followed by Black Non-Latina (87% [85%–89%]) and white non-Latina (81% [76%–86%]), whereas specificity was highest among white non-Latina mothers (93% [85%–98%]), followed by Black non-Latina (91% [87%–95%]) and Latina (87% [81%–91%]) (Table 3).

The 2-item measure demonstrated good convergent validity in this sample for the outcomes examined (Table 4). In adjusted models, high adversity was associated with all poor maternal, household, and child outcomes examined except for child risk of obesity. Compared with

estimates using the standard measure, estimates using the short measure were identical in terms of statistical significance, but point estimates were slightly lower for most outcomes.

DISCUSSION

A modified version of a previously developed 2-item short ACE measure demonstrated good sensitivity, specificity, and convergent validity in a racially and ethnically diverse sample of mothers, primarily with low incomes, seeking care for their young children in an urban pediatric emergency department. Wade et al suggest that the shortened measure may be incorporated into a 2-step screening process where the remainder of the ACE questionnaire is administered to individuals who screen positive on the short measure.²⁰ Our results suggest that, depending on the context-specific goals of collecting parent ACE information, this approach may be appropriate in populations and settings similar to our sample.

Some researchers and practitioners have argued that given the strong impact of ACEs on health and well-being, screening for ACEs is an important component of effective health care.^{14,34} They have argued that ACE information provides crucial context for understanding patient populations’ physical and mental health and aids in designing trauma-informed interventions and making appropriate referrals. A handful of qualitative studies support this, with caregivers reporting that they are willing to provide ACE information and that doing so may help elucidate family needs and

TABLE 4 Prevalence Ratios of Maternal, Household, and Child Outcomes From Adjusted Log-binomial Regression Models Using Short and Standard ACE Measures in Philadelphia Children’s HealthWatch Dataset

Outcome ^{a,b}	<i>N</i> ^c	Short Measure	Standard Measure
		PR (95% CI)	PR (95% CI)
Maternal fair or poor health	3993	1.63 (1.45–1.83)	1.72 (1.52–1.95)
Maternal depressive symptoms	3999	2.47 (2.20–2.77)	2.78 (2.48–3.11)
Household food insecurity	3998	2.24 (1.98–2.54)	2.54 (2.24–2.88)
Child fair or poor health	3992	1.38 (1.15–1.66)	1.42 (1.15–1.75)
Child at risk for obesity	3860	0.95 (0.81–1.11)	0.93 (0.77–1.12)
Child developmental concerns	3463	1.49 (1.31–1.69)	1.33 (1.15–1.54)

^a Short measure defined as reporting at least 1 of: emotional abuse and household substance use. 10-item ACE measure dichotomized at 4 or more ACEs used as standard.
^b Models adjusted for child age and sex and maternal nativity, race and ethnicity, and educational attainment.
^c *N* varies because of missingness in the outcome variable.

identify appropriate care.^{35,36} However, although care provision may include decisions about how to allocate limited resources, individual patients should not be denied beneficial services based on the outcome of ACE screening. In the case of assessment of parent ACEs in pediatric settings, there is the risk of perceived or actual blaming of parents for their child's behavior or health, undermining effective treatment and perpetuating discrimination.^{9,37,38} Parents may also be concerned that they may divulge information that will trigger reporting to a child welfare agency. These concerns may contribute to underreporting of ACEs, which could in turn lead to under-provision of services if receipt of the services is tied to screening results. Administering the questionnaire may also retraumatize individuals who have experienced adversities, and care must be taken to provide adequate training for providers administering the questionnaire as well as a plan for appropriate follow-up should administration cause distress.

Another challenge is the lack of evidence-based interventions specifically to address ACEs, including parent ACEs. In a recent review, Gupta et al⁸ provide a framework for addressing parent ACEs in pediatric settings that incorporates both universal and targeted interventions. Universal interventions may include parent education programs in which ACE screening is incorporated into broader conversations with parents about the impacts of ACEs, common parenting strategies for coping, proactive identification of resilience factors, and connection with supportive resources. Of note, some universal interventions may be implemented without incorporating screening for parent ACEs. Targeted strategies for families identified as having higher risk may include provision of or referral to more intensive mental health or parenting support services.

Implementing patient or caregiver ACE screening also poses challenges for provider workflow and compensation. Some studies have shown that administering the questionnaire takes little time for the majority of patients and that individuals find providing this information acceptable.¹² However, surveys have found pediatric providers are hesitant because of discomfort with the sensitive nature of the questionnaire and the time required to administer it.¹¹ New compensation models, including California's recently implemented ACEs Equity ACT (SB 428), which mandates insurance compensation for ACE screening, help address time-constraint challenges.³⁹ Our results suggest that when thoughtfully used, the short ACE measure may be an appropriate tool to help address these concerns.

Given these varied considerations, we believe the greatest utility for the short measure is in clinical or research settings where ACE information provides important context but where in-depth, individual-level information from all individuals is not required. In this sense, the short measure may serve as a low-barrier screener to provide population-level

information to inform program or policy planning. The good convergent validity of the short measure in our sample is encouraging in this respect, as it suggests the short measure serves as an adequate proxy for high ACE exposure in associations with outcomes. This includes maternal and household outcomes representing mechanistic pathways that may serve as important intervention targets. We recommend following up with the full ACE questionnaire in situations where a greater degree of accuracy or depth of information is needed. It is also important to clearly explain the purpose of the questionnaire before administration.

Compared with the BRFSS sample in which the short measure was developed, in this study, sensitivity was somewhat lower (88% vs 99%), whereas specificity was substantially higher (90% vs 66%). These differences likely resulted from underlying ACE exposure variations²¹ as well as differences in the BRFSS and Children's HealthWatch ACE questionnaires, such as the frequency cutoff for reported emotional abuse ("often or very often" in Children's HealthWatch versus "more than once" in BRFSS). Although our sample was limited to a single urban site, limiting generalizability, our results support applicability of the short measure for assessing maternal ACEs among racially and ethnically diverse populations in pediatric health care settings. Of note, our sample also included both United States-born and immigrant mothers, although we did not assess differences by maternal nativity because of sample-size constraints. We relied on mothers' retrospective self-report of ACEs that may be subject to recall bias or other reporting errors. Future analyses incorporating additional important sources of childhood adversity, such as community violence, racial discrimination, and bullying, are needed.^{40,41} In our assessment of convergent validity, we were not able to incorporate information on ACEs experienced by other adults in the household or by the children themselves. We were also not able to assess how the short ACE measure relates to important mediating or moderating maternal mechanisms beyond depressive symptoms, such as anxiety, substance use, parenting behaviors, or resilience factors.⁴² These may be important potential intervention targets.

CONCLUSIONS

A short screener may support parent ACE screening in pediatric settings, facilitating care that is family-centered, trauma-informed, and strengths-based. However, the decision whether and how to screen for parent ACEs is context-specific and evidence on its clinical utility is still emerging. Decisions must incorporate consideration of the specific purpose of conducting the screening, ability to follow up with appropriate services or referrals, provider compensation and workflow challenges, and the potential for subjecting parents to retraumatization or blame.^{34,37-39}

ACKNOWLEDGMENTS

We thank Kathryn Duncan and Saishi Cui for their valuable contributions to the development of this manuscript. A list of Children's HealthWatch funders can be found here: <https://childrenshealthwatch.org/giving/supporters/>.

ABBREVIATIONS

ACE: adverse childhood experience
BRFSS: Behavioral Risk Factor Surveillance System

Address correspondence to Félice Lê-Scherban, PhD, MPH, Department of Epidemiology and Biostatistics, Dornsife School of Public Health, 3215 Market St, 5th Floor, Philadelphia, PA 19104. E-mail: f.lescherban@drexel.edu

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

Copyright © 2024 by the American Academy of Pediatrics

FUNDING: No external funding.

CONFLICT OF INTEREST DISCLOSURES: The authors have no conflicts of interest relevant to this article to disclose.

REFERENCES

1. Felitti VJ, Anda RF, Nordenberg D, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *Am J Prev Med.* 1998;14(4):245–258
2. Struck S, Stewart-Tufescu A, Asmundson AJN, Asmundson GGJ, Afifi TO. Adverse childhood experiences (ACEs) research: a bibliometric analysis of publication trends over the first 20 years. *Child Abuse Negl.* 2021;112:104895
3. Zhang L, Mersky JP, Gruber AMH, Kim JY. Intergenerational transmission of parental adverse childhood experiences and children's outcomes: a scoping review. *Trauma Violence Abuse.* 2023;24(5):3251–3264
4. Madigan S, Wade M, Plamondon A, Maguire JL, Jenkins JM. Maternal adverse childhood experience and infant health: biomedical and psychosocial risks as intermediary mechanisms. *J Pediatr.* 2017;187:282–289.e1
5. Sun J, Knowles M, Patel F, Frank DA, Heeren TC, Chilton M. Childhood adversity and adult reports of food insecurity among households with children. *Am J Prev Med.* 2016;50(5):561–572
6. Lê-Scherban F, Wang X, Boyle-Steed KH, Pachter LM. Intergenerational associations of parent adverse childhood experiences and child health outcomes. *Pediatrics.* 2018;141(6):e20174274
7. Metzler M, Merrick MT, Klevens J, Ports KA, Ford DC. Adverse childhood experiences and life opportunities: shifting the narrative. *Child Youth Serv Rev.* 2017;72:141–149
8. Gupta RC, Randell KA, Dowd MD. Addressing parental adverse childhood experiences in the pediatric setting. *Adv Pediatr.* 2021;68:71–88
9. Bair-Merritt MH, Zuckerman B. Exploring parents' adversities in pediatric primary care. *JAMA Pediatr.* 2016;170(4):313–314
10. Shonkoff JP, Garner AS; Committee on Psychosocial Aspects of Child and Family Health; Committee on Early Childhood, Adoption, and Dependent Care; Section on Developmental and Behavioral Pediatrics. The lifelong effects of early childhood adversity and toxic stress. *Pediatrics.* 2012;129(1):e232–e246
11. Szilagyi M, Kerker BD, Storfer-Isser A, et al. Factors associated with whether pediatricians inquire about parents' adverse childhood experiences. *Acad Pediatr.* 2016;16(7):668–675
12. Rariden C, SmithBattle L, Yoo JH, Cibulka N, Loman D. Screening for adverse childhood experiences: literature review and practice implications. *J Nurse Pract.* 2021;17(1):98–104
13. Riggs JL, Rosenblum KL, Muzik M, et al; Michigan Collaborative for Infant Mental Health Research. Infant mental health home visiting mitigates impact of maternal adverse childhood experiences on toddler language competence: a randomized controlled trial. *J Dev Behav Pediatr.* 2022;43(4):e227–e236
14. Lewicki KS, Rosenfeld AJ. Letter to the editor regarding "inside the adverse childhood experience score: strengths, limitations, and misapplications". *Am J Prev Med.* 2021;60(1):e45–e46
15. Dube SR. Continuing conversations about adverse childhood experiences (ACEs) screening: a public health perspective. *Child Abuse Negl.* 2018;85:180–184
16. Anda RF, Porter LE, Brown DW. Inside the adverse childhood experience score: strengths, limitations, and misapplications. *Am J Prev Med.* 2020;59(2):293–295
17. Leitch L. Action steps using ACEs and trauma-informed care: a resilience model. *Health Justice.* 2017;5(1):5
18. Buchanan GJR, Tate AD, Barnes A, Trofholz AC, Berge JM. Potential points of intervention to minimize the impact of parents' adverse childhood experiences on child mental health. *J Dev Behav Pediatr.* 2023;44(1):e24–e31
19. Centers for Disease Control and Prevention (CDC). Behavioral risk factor surveillance system ACE data. Available at: <https://www.cdc.gov/violenceprevention/aces/ace-brfss.html>. Accessed November 22, 2022
20. Wade R Jr, Becker BD, Bevans KB, Ford DC, Forrest CB. Development and evaluation of a short adverse childhood experiences measure. *Am J Prev Med.* 2017;52(2):163–172
21. Merrick MT, Ford DC, Ports KA, et al. Vital signs: estimated proportion of adult health problems attributable to adverse childhood experiences and implications for prevention - 25 States, 2015-2017. *MMWR Morb Mortal Wkly Rep.* 2019;68(44):999–1005

22. Children's Health Watch. Core survey. Available at: <https://childrenshealthwatch.org/our-survey/>. Accessed November 22, 2022
23. Galler J, Rabinowitz DG. The intergenerational effects of early adversity. *Prog Mol Biol Transl Sci*. 2014;128:177–198
24. Wuerz RC, Milne LW, Eitel DR, Travers D, Gilboy N. Reliability and validity of a new five-level triage instrument. *Acad Emerg Med*. 2000;7(3):236–242
25. Centers for Disease Control and Prevention (CDC). NHANES III (1988-1994). Available at: <https://wwwn.cdc.gov/nchs/nhanes/nhanes3/default.aspx>. Accessed November 30, 2022
26. Kemper KJ, Babonis TR. Screening for maternal depression in pediatric clinics. *Am J Dis Child*. 1992;146(7):876–878
27. Bickel G, Nord M, Price C, Hamilton W, Cook J. *Guide to Measuring Household Food Security, Revised 2000*. U.S. Department of Agriculture, Food and Nutrition Service; 2000
28. Marques ES, Reichenheim ME, de Moraes CL, Antunes MM, Salles-Costa R. Household food insecurity: a systematic review of the measuring instruments used in epidemiological studies. *Public Health Nutr*. 2015;18(5):877–892
29. Centers for Disease Control and Prevention. Defining childhood weight status. Available at: <https://www.cdc.gov/obesity/basics/childhood-defining.html>. Accessed November 30, 2022
30. Gamliel A, Ziv-Baran T, Siegel RM, Fogelman Y, Dubnov-Raz G. Using weight-for-age percentiles to screen for overweight and obese children and adolescents. *Prev Med*. 2015;81:174–179
31. Glascoe FP. Evidence-based approach to developmental and behavioural surveillance using parents' concerns. *Child Care Health Dev*. 2000;26(2):137–149
32. Agresti A, Coull BA. Approximate is better than "exact" for interval estimation of binomial proportions. *Am Stat*. 1998;52(2):119–126
33. Stevenson M, Sergeant E, Heuer C, et al. epiR: Tools for the Analysis of Epidemiological Data [computer program] Version R package version 2.0.67202. Available at: <https://cran.r-project.org/web/packages/epiR/index.html>. Accessed January 11, 2024
34. Dubowitz H, Finkelhor D, Zolotor A, Kleven J, Davis N. Addressing adverse childhood experiences in primary care: challenges and considerations. *Pediatrics*. 2022;149(4):e2021052641
35. Conn AM, Szilagyi MA, Jee SH, Manly JT, Briggs R, Szilagyi PG. Parental perspectives of screening for adverse childhood experiences in pediatric primary care. *Fam Syst Health*. 2018;36(1):62–72
36. Estrada-Darley I, Chen P, McBain R, et al. Patient and caregiver perspectives on implementation of ACE screening in pediatric care settings: a qualitative evaluation. *J Pediatr Health Care*. 2023;37(6):616–625
37. Finkelhor D. Screening for adverse childhood experiences (ACEs): cautions and suggestions. *Child Abuse Negl*. 2018;85:174–179
38. Purtle J, Nelson KL, Gollust SE. Public opinion about adverse childhood experiences: social stigma, attribution of blame, and government intervention. *Child Maltreat*. 2022;27(3):344–355
39. Shimkhada R, Miller J, Magnan E, Miller M, Coffman J, Corbett G. Policy considerations for routine screening for adverse childhood events (ACEs). *J Am Board Fam Med*. 2022;35(4):862–866
40. SmithBattle L, Loman DG, Yoo JH, Cibulka N, Rariden C. Evidence for revising the adverse childhood experiences screening tool: a scoping review. *J Child Adolesc Trauma*. 2021;15(1):89–103
41. Wade R Jr, Shea JA, Rubin D, Wood J. Adverse childhood experiences of low-income urban youth. *Pediatrics*. 2014;134(1):e13–e20
42. Hetherington E, Racine N, Madigan S, McDonald S, Tough S. Relative contribution of maternal adverse childhood experiences to understanding children's externalizing and internalizing behaviours at age 5: findings from the All Our Families cohort. *CMAJ Open*. 2020;8(2):E352–E359