Stressful Life Events and Healthcare Utilization Among U.S. Children Aged 2–17 Years

by Lindsey I. Black, M.P.H., Amanda E. Ng, M.P.H., and Benjamin Zablotsky, Ph.D.

Abstract

Objective—Associations between stressful life events (SLEs) during childhood and suboptimal healthcare access and use has been documented. Recent changes to the National Health Interview Survey's questionnaire enabled the inclusion of SLEs in the child sample, resulting in an additional national data source where SLEs can be tracked. In this report, the latest SLE estimates are examined for children aged 2–17 years in the United States and their associations with healthcare utilization.

Methods—Data from the 2021 National Health Interview Survey were used to examine the percentage of children who experienced one or more SLEs—emotional abuse, unmet basic needs, experiences of racism, household mental illness, household substance abuse, parental incarceration, and exposure to neighborhood violence—and describe the association between SLEs and selected healthcare utilization indicators over the past 12 months (as in no well-child visit, emergency room visits, urgent care visits, unmet medical care needs due to cost, use of prescription medications for mental health, and use of any mental health therapy). Multivariate logistic regression models were fit to produce prevalence ratios for selected healthcare utilization indicators by SLEs, after adjusting for child and family sociodemographic characteristics.

Results—In 2021, one in five children aged 2–17 years had ever experienced an SLE. In general, all SLEs were related to higher healthcare utilization (as in emergency department visits or mental health therapy) and unmet medical care needs. In general, no significant associations were found between experiencing SLEs and not receiving preventive health care. After adjusting for demographic characteristics, higher rates of healthcare utilization, unmet medical care needs, and mental healthcare utilization generally persisted for children with SLEs.

Conclusion—This report expands knowledge on the relationship between childhood SLEs and the use of preventive care, healthcare utilization, and mental health care. National Health Interview Survey data can be used to monitor trends in these associations over time.

Keywords: preventive care • social determinants of health • child health • health insurance • National Health Interview Survey

Introduction

Stressful life events (SLEs) are a subset of the adverse childhood experiences (ACEs) that are frequently measured and include a broad range of childhood challenges that occur both inside the home, such as living with someone with mental illness or substance abuse, and outside the home, as in being treated or judged unfairly because of race or ethnicity (1). Among adults, SLEs are associated with poor health outcomes including cardiovascular disease, cancer, poor mental health, risky health behaviors, and early mortality (1,2). Studies have linked ACEs in childhood with poor mental and dental healthcare utilization during childhood, as well as increased chronic medical conditions across a person's lifetime as each life stage influences the next (life course) (3–6).

Studies of children in community samples have shown that children with one to three ACEs had a 1.22 times higher incidence rate of emergency and urgent care use compared with children who had no ACEs (7). The associations for emergency and urgent care use are even stronger for children with four or more ACEs compared with children who had none of the experiences; however,

no differences were noted for preventive health care (7). Similarly, a longitudinal study of children showed that children who experienced four or more ACEs were also more likely to have sick visits or emergency room visits and were less likely to have routine dental care compared with children who had none of these experiences (8).

Family and child factors, such as insurance type and poverty, are thought to contribute to these patterns of healthcare utilization among children who have experienced early childhood adversities (9). More recent analyses using data from the National Survey of Children's Health shows that most SLEs are associated with delays in children's receipt of medical care, specialty care (as in hearing or vision), and mental health services (10). Examining both cumulative and individual types of adversities is important for understanding the relationships between childhood adversity and healthcare utilization.

A growing amount of literature has suggested that SLEs impact children's health over the life course (11–14). Children with childhood adversities have higher rates of chronic diseases and are less likely to show resilience or have comprehensive primary care (high-quality medical home) (15). Further, exposure to adversity can negatively affect children's mental and physical health by altering their stress response systems (measured by allostatic load), particularly during early and mid-childhood (16). Addressing SLEs and providing appropriate support to families can help improve children's health and may buffer the long-term effects of childhood trauma that often negatively affect adult health (17).

The National Health Interview Survey (NHIS) has included questions on a set of SLEs periodically, beginning in 2019 with a redesigned questionnaire. Initially, four questions were fielded and referred to as SLEs rather than ACEs within the context of NHIS, because NHIS did not include a full set of questions. Over time, more questions on SLEs have been added, resulting in eight SLEs that more closely resemble the full series of ACEs. This has created an additional data source for monitoring experiences of childhood adversity while considering both family and child demographics. Building on previous literature, this report examines associations between parent-reported SLEs, both individually and as a composite, and a series of healthcare utilization outcomes using the 2021 NHIS.

Methods

Data source

Data from the 2021 NHIS were used for this analysis. NHIS is a nationally representative survey of the U.S. civilian noninstitutionalized population that is conducted annually by the National Center for Health Statistics and administered by trained U.S. Census Bureau interviewers, either in person or by phone. Households are sampled and selected to be interviewed. From each household, demographic characteristics are collected from all household members, and then one adult (Sample Adult) and one child (Sample Child) are randomly selected to receive a detailed health questionnaire. A parent or guardian answers on behalf of their child. Sample children aged 2–17 years were included in this analysis (n = 7,151). The final response rate for the 2021 Sample Child questionnaire was 49.9% (18). Because of the COVID-19 pandemic, interviewing procedures were disrupted, and during 2021, 61.4% of the Sample Child interviews were conducted at least partially by telephone (18).

SLE measures

The parent-reported lifetime SLEs assessed by the 2021 NHIS and included in this analysis are outlined in the Table. Respondents were asked whether their child had ever experienced any of the following: victim of or witnessed neighborhood violence, parental incarceration, household mental illness, household substance abuse, emotional abuse, unmet basic needs, or racism. SLEs were examined individually and as a composite. The composite measure of "any SLE" was constructed based on an affirmative response to any of the seven individual SLEs.

Healthcare utilization

Parent-reported healthcare utilization outcomes examined in this report include:

No well-child visit in the past 12 months—Based on a response of "Never," "Within the past year (anytime less than 12 months ago)," "Within the last 2 years (1 year but less than 2 years ago)," "Within the last 3 years (2 years but less than 3 years ago)," "Within the last 5 years (3 years but less than 5 years ago)," "Within the last 10 years (5 years but less than 10 years ago)," or "10 years ago or more" to the survey question, "About how long has it been since (Sample Child) last saw a doctor or other health professional for a well child visit, physical, or general purpose check-up?" and an affirmative response to the

Table. List of survey questions related to stressful life events: National Health Interview Survey, 2021

Stressful life event	Survey question
Experienced emotional abuse	Has (Sample Child) ever lived with a parent or adult who frequently swore at them, insulted them, or put them down?
Experienced unmet basic needs	Has there ever been a time when (Sample Child) basic needs were not met, such as having enough to eat, being able to go to a doctor when they were sick, or having a safe place to stay?
Experienced racism	Has anyone ever treated or judged (Sample Child) unfairly because of their race or ethnic group?
Household mental illness	Did (Sample Child) ever live with anyone who was mentally ill or severely depressed?
Household substance abuse	Did (Sample Child) ever live with anyone who had a problem with alcohol or drugs?
Parental incarceration	Has (Sample Child) ever been separated from a parent or guardian because the parent or guardian went to jail, prison, or a detention center?
Victim of or witnessed neighborhood violence	Has (Sample Child) ever been the victim of violence or witnessed violence in their neighborhood?

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2021.

follow-up question, "Was this a wellness visit, physical, or general purpose check-up?"

Emergency department visits in the past 12 months—Based on a response of at least once to the survey question, "During the past 12 months, how many times has (Sample Child) gone to a hospital emergency room about his or her health?"

Urgent care visits in the past 12 months—Based on a response of at least once to the survey question, "During the past 12 months, how many times has (Sample Child) gone to an urgent care center or clinic in a drug store or grocery store about his or her health?"

Unmet medical care need due to cost in the past 12 months—Based on an affirmative response to at least one of the following two survey questions, "During the past 12 months, has medical care been delayed for (Sample Child) because of the cost?" and "During the past 12 months, was there any time when (Sample Child) needed medical care, but did not get it because of the cost?"

Any prescription medication for mental health in the past 12 months—Based on an affirmative response to the survey question, "During the past 12 months, did (Sample Child) take any prescription medication to help with his or her emotions, concentration, behavior or mental health?"

Any mental health therapy in the past 12 months—Based on an affirmative response to the survey question, "During the past 12 months, did (Sample Child) receive counseling or therapy from a mental health professional such as a psychiatrist, psychologist, psychiatric nurse, or clinical social worker?"

Selected sociodemographic and geographic characteristics

Covariates of interest were selected in advance, based on previous research. These included characteristics that could influence the relationship between SLEs and healthcare utilization (confounders), specifically: child's age (2–5, 6–11, and 12–17 years); child's sex; child's race and Hispanic origin, as in Hispanic, Asian non-Hispanic (subsequently, Asian), Black non-Hispanic (subsequently, Black), White non-Hispanic (subsequently, White), and non-Hispanic all other and multiple races (subsequently, other and multiple races); current health insurance type (a hierarchy categorized as private, public, other coverage, or uninsured); urbanicity of residence, as in large central metropolitan, large fringe metropolitan, medium or small metropolitan, or nonmetropolitan (19); family composition (one adult or multiple adults in household); and family income as a percentage of federal poverty level (FPL), as in less than 200% FPL and 200% or more FPL. Family income was imputed when missing, for 18.2% of children (20).

Statistical analysis

First, the prevalence of any SLE was calculated overall and by selected demographics. Chi-square tests were conducted to determine significant differences between children who had experienced any or no SLEs. Second, the prevalence of each of the seven individual SLEs was calculated, as well as percentages for each healthcare utilization measure by any SLE status. Differences between percentages were assessed with two-sided significance tests at the 0.05 alpha level. Third, logistic regression models were used to generate unadjusted prevalence ratios of healthcare utilization outcomes for each SLE as well as a composite for any SLE. Finally, separate multivariate logistic regression models were fit to generate adjusted prevalence ratios for each healthcare utilization outcome by each SLE as well as a composite for any SLE. For individual SLEs examined, the comparison group was children who did not have the specified SLE.

All estimates are weighted using SAS-callable SUDAAN version 11.0 software and use procedures that account for the complex sample design of NHIS. Additionally, all estimates presented meet National Center for Health Statistics standards of reliability (21).
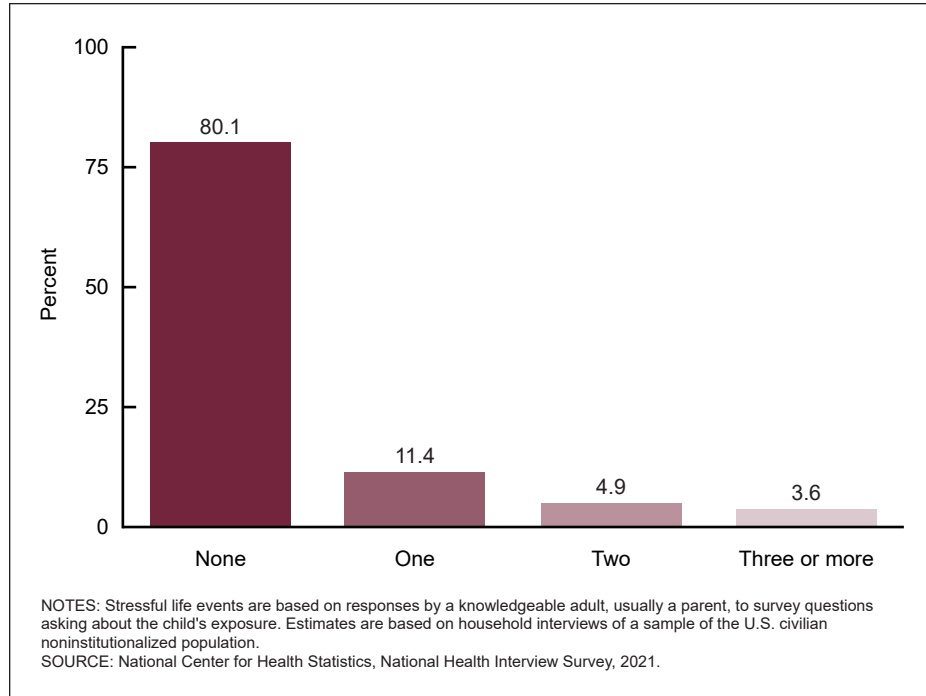
Results

Prevalence of any SLE

In 2021, 19.9% of children aged 2–17 years had any SLE (Table 1). The prevalence of any SLE increased with age, ranging from 9.8% among children aged 2–5 to 27.4% among children aged 12–17. The prevalence of any SLE was 8.4% among Asian children, 18.8% among White children, 19.1% among Hispanic children, 23.7% among Black children, and 33.4% among children of other and multiple races. Children with Medicaid or other public health coverage were generally more likely to have experienced SLEs (26.9%) than children with private insurance (15.6%) and other insurance types. Children living in less urban areas generally were more likely to experience SLEs than those living in more urban areas. Children living in families with one adult were more likely to have experienced SLEs (35.5%) compared with children living in families with multiple adults (17.2%). Children living in families with incomes less than 200% FPL were generally more likely to experience SLEs (25.8%) than those living in families with incomes of 200% or more FPL (16.1%).

While most children did not experience any SLEs (80.1%), 11.4% of children experienced one SLE, 4.9% of children experienced two, and 3.6% experienced three or more (Figure 1).

Prevalence of individual SLEs

Figure 2 presents the prevalence of the seven individual SLEs in this analysis: 8.0% of children had ever lived with a household member who had a mental illness, 7.7% of children had ever lived with a household member who experienced substance abuse, 5.7% had a parent who had ever been incarcerated, 5.2% were victims or witnesses of neighborhood violence, 4.7% experienced racism, 3.5% experienced emotional abuse, and 2.5% experienced unmet basic needs. SLEs were not mutually exclusive.

Figure 1. Percent distribution of number of stressful life events among children aged 2–17 years: United States, 2021

NOTES: Stressful life events are based on responses by a knowledgeable adult, usually a parent, to survey questions asking about the child's exposure. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.
SOURCE: National Center for Health Statistics, National Health Interview Survey, 2021.

Healthcare utilization patterns by SLE

The associations between any SLE and selected healthcare utilization outcomes in the past 12 months are shown in Figure 3. No significant association was found for not having a well-child visit in the past 12 months between children who experienced SLEs (13.1%) and children who did not (11.5%). However, the prevalence of emergency department and urgent care visits was higher among children who experienced SLEs (17.7% and 26.6%, respectively) compared with children who did not experience SLEs (10.0% and 21.1%). Similarly, children who had experienced SLEs were more likely to have had an unmet medical care need due to cost (3.3%) compared with those who had not experienced SLEs (1.0%).

Mental healthcare utilization also varied by whether children had

Figure 2. Prevalence of selected stressful life events among children aged 2–17 years: United States, 2021

NOTES: Stressful life events are based on responses by a knowledgeable adult, usually a parent, to survey questions asking about the child's exposure. Stressful life events shown are not mutually exclusive. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.
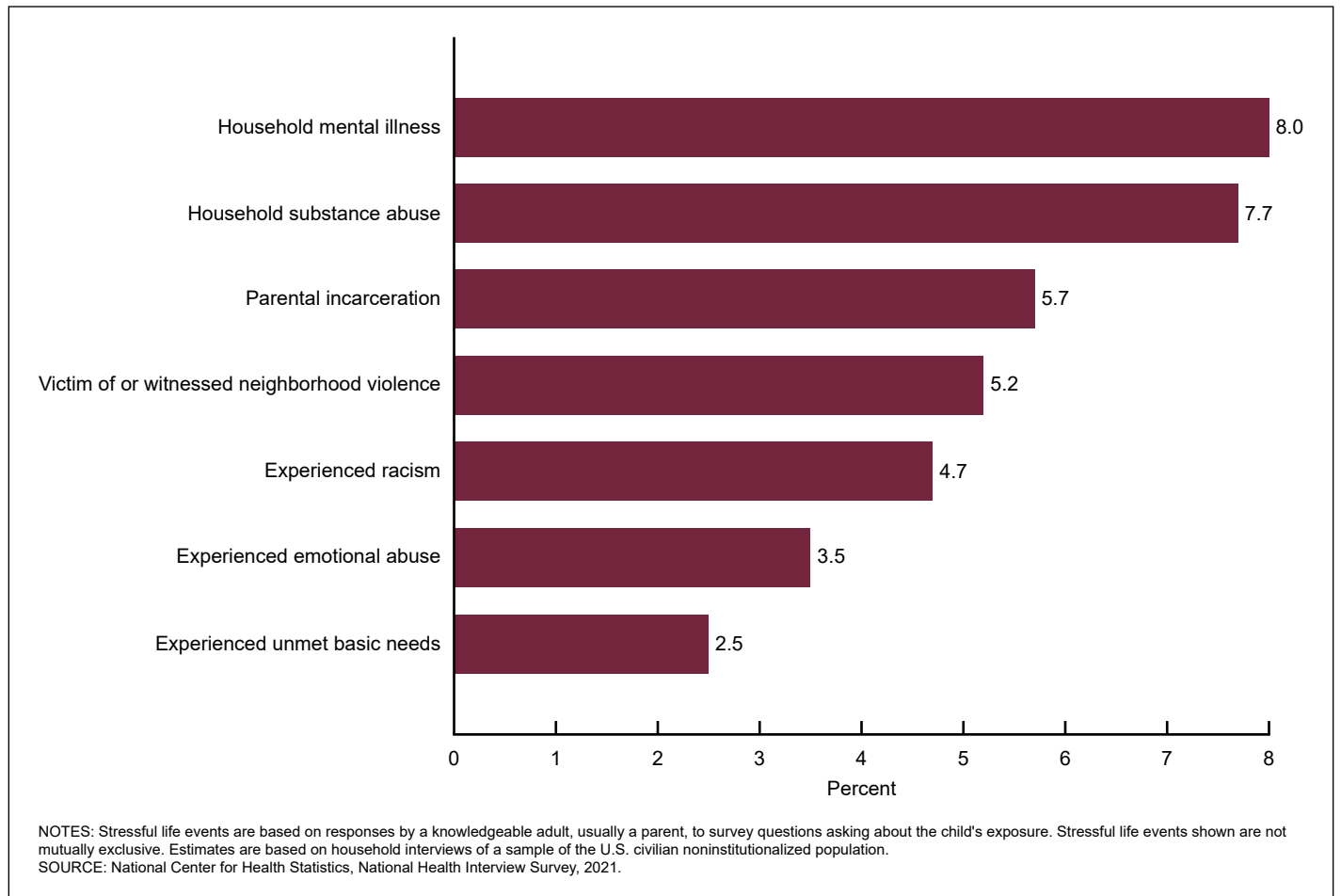SOURCE: National Center for Health Statistics, National Health Interview Survey, 2021.

Figure 3. Healthcare utilization in the past 12 months among children aged 2–17 years, by any stressful life event: United States, 2021

[1]Significantly different from children without stressful life events.
NOTES: Stressful life events are based on responses by a knowledgeable adult, usually a parent, to survey questions asking about the child's exposure. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.
SOURCE: National Center for Health Statistics, National Health Interview Survey, 2021.

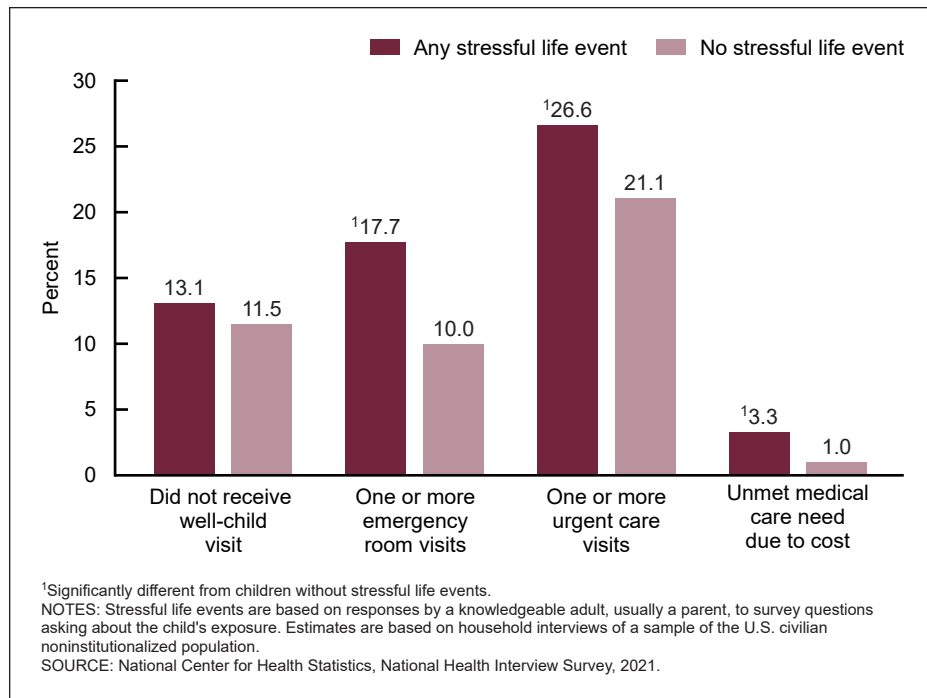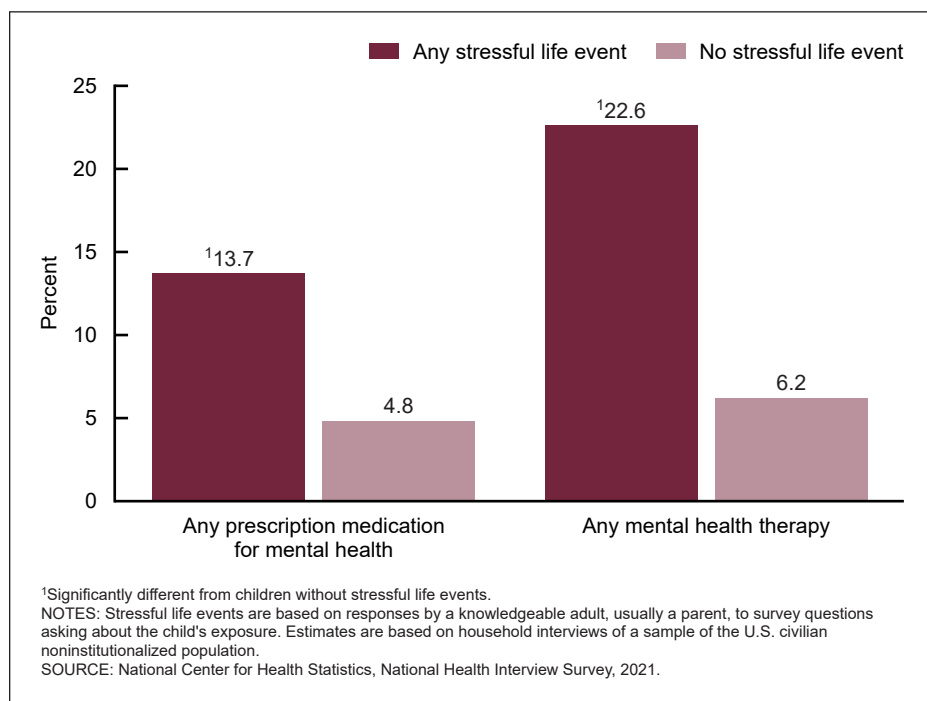Figure 4. Mental healthcare utilization in the past 12 months among children aged 2–17 years, by any stressful life event: United States, 2021

[1]Significantly different from children without stressful life events.
NOTES: Stressful life events are based on responses by a knowledgeable adult, usually a parent, to survey questions asking about the child's exposure. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.
SOURCE: National Center for Health Statistics, National Health Interview Survey, 2021.

association was reduced, and many of these associations remained significant.

After adjustment, children who had experienced any SLEs had a higher prevalence of an emergency department visit (adjusted prevalence ratio [APR]: 1.25; 95% confidence interval [CI]: 1.08–1.45), and an unmet medical need due to cost (APR: 1.59; 95% CI: 1.24–2.04) compared with children who did not have this experience.

Children who had experienced emotional abuse had a higher prevalence of an emergency department visit (APR: 1.66; 95% CI: 1.23–2.24), an urgent care visit (APR: 1.32; 95% CI:1.06–1.64), and an unmet medical need due to cost (APR: 4.36; 95% CI: 2.16–8.77) compared with children who did not have this experience.

Children who had experienced unmet basic needs had a higher prevalence of an emergency department visit (APR: 1.59; 95% CI: 1.12–2.24) and an unmet medical need due to cost (APR: 2.75; 95% CI: 1.21–6.26) compared with children who did not have this experience.

Children who had experienced racism had a higher prevalence of an emergency department visit (APR: 1.65; 95% CI:1.22– 2.23) and an unmet medical need due to cost (APR: 4.76; 95% CI: 2.58–8.79) compared with children who did not have this experience. Urgent care visit was higher but not significant among children who had experienced racism (APR: 1.25; 95% CI: 1.00–1.55).

Children who had experienced household mental illness had a higher prevalence of an emergency department visit (APR: 1.88; 95% CI:1.51–2.33), an urgent care visit (APR:1.26; 95% CI: 1.07–1.49), and an unmet medical need due to cost (APR: 3.01; 95% CI: 1.77–5.12) compared with children who did not have this experience.

Children who had experienced household substance abuse had a higher prevalence of no well-child visit (APR: 1.29; 95% CI: 1.01–1.65), an urgent care visit (APR: 1.19; 95% CI:1.01–1.40), and an unmet medical need due to cost (APR: 2.07; 95% CI: 1.21–3.54) compared with children who did not have this experience. Prevalence of an emergency department visit was similar to the

experienced SLEs. Children who experienced SLEs were more likely to take any prescription medication for their mental health (13.7%) compared with children who did not experience SLEs (4.8%) (Figure 4). Similarly, children who experienced SLEs were more likely to have received mental health therapy

or counseling (22.6%) compared with children who had no SLE experience (6.2%).

Results for unadjusted and adjusted prevalence ratios for selected healthcare utilization measures by SLE type and any SLE are shown in Table 2. In general, after adjustment, the strength of the

prevalence of no well-child visit but was not significant after adjustment (APR: 1.18; 95% CI:1.00–1.63).

No difference was found in healthcare utilization among children who experienced parental incarceration compared with children who did not have experiences of parental incarceration. Before adjustment, children who had experienced parental incarceration had a higher prevalence of an emergency department visit, but this association was no longer significant after adjustment for covariates (APR: 1.30; 95% CI: 0.98–1.72). A higher prevalence of unmet medical need due to cost was found, but it was not statistically significant before or after adjustment (APR:1.54; 95% CI: 0.70–3.41).

Children who have experienced being a victim of or witnessing neighborhood violence had a higher prevalence of an emergency department visit (APR: 1.88; 95% CI:1.45–2.44), an urgent care visit (APR: 1.36; 95% CI: 1.12–1.65), and an unmet medical need due to cost (APR: 3.21; 95% CI: 1.68–6.12).

Table 3 presents the results for unadjusted and adjusted prevalence ratios for mental health treatment. In general, after adjustment, the strength of the association was reduced but always remained significant. For each of the seven individual types of SLEs examined, the prevalence of use of mental health medications and of any mental health therapy was significantly higher among children who experienced the SLE than among children who did not have that experience. Children who had experienced any SLE had an increased prevalence of prescription medication for mental health (APR: 1.39; 95% CI: 1.20–1.61) and of any mental health therapy (APR: 1.71; 95% CI:1.47–1.99). For each mental healthcare utilization measure, all individual SLEs were related to a higher prevalence compared with children who did not have that SLE.

Discussion

This study is the first to examine associations between various types of SLEs and healthcare utilization using NHIS. These results highlight patterns of healthcare use among children who experienced SLEs and are consistent with previous studies in that receiving preventive care was not associated with exposure to SLE, both before and after adjustment (9). However, consistent with previous studies, in this report, children with SLE experience are more likely to have utilized healthcare systems (as in emergency room or urgent care) and mental health treatment, and to have unmet medical needs after controlling for other sociodemographic characteristics (5–10). These findings suggest that receipt of an annual well-child visit may not be enough engagement with the healthcare system to prevent increased use of emergency or urgent care, because the population of children with SLEs has increased healthcare needs (22). Research shows that children with childhood adversities are also less likely to have received health care in a family-centered medical home—one that ensures the child is with a provider who knows the child and their health history and can provide appropriate referrals (15,23,24)—and this may contribute to increased reliance on emergency department or urgent care visits. Future work to disentangle the healthcare quality of children's primary care (as in access to the medical home, personal doctor, or nurse) may allow for a better understanding of associations between SLEs and emergency healthcare use.

Previous research has demonstrated that children with SLEs have a higher prevalence of emotional, developmental, or behavioral problems and mental health conditions (25,26). The results shown in this report that indicate increased utilization of mental health medications and services are also consistent with previous research (27). Although the findings are consistent, the implications of this relationship are difficult to interpret because children who have SLEs have increased mental healthcare needs and, as a result, they are potentially more likely to need and receive treatment. The findings, however, inform the larger body of research that regardless of SLE type, utilization was elevated and the strength of association varied by SLE.

Finally, these findings also show that unmet medical care needs due to cost were more likely among children with SLEs compared with children who did not have SLEs. These results align with previous research showing that children with adversities are more likely to have forgone medical care, hearing care, vision care, and mental health services (10).

These analyses are not without limitations. NHIS data are based on parent report and the interviews are conducted either in person or on the phone with an interviewer. Because the SLEs collected are of a sensitive nature, parents might not be comfortable disclosing them when talking to the interviewer (social desirability bias). SLE responses are also subject to recall bias because parents must reflect on lifetime events of the child, which could also result in an underreport. Parents may also be unaware of experiences that may occur outside the home, for example, racism, or those that occurred before living with the child, as in the case of foster parents. Data are cross-sectional and cannot assess causality. Note that only seven individual SLEs were included in this analysis and, as a result, the findings of the current study should be interpreted with caution when compared with other national estimates of child SLEs due to differences in survey methods, respondent type, and measures included in the definition of SLE.

NHIS estimates of SLEs are lower than those reported in other surveys, such as the National Survey of Children's Health, which has prevalence estimates of 33.3% (28). Survey estimates may vary due to survey methodology differences (for example, survey mode and absence of an interviewer) as well as differences in the questions used to create an index definition for "any SLE." NHIS does not include questions on parental divorce or separation, which is the most prevalent SLE used in the National Survey of Children's Health. It is not surprising that experiencing an SLE increased as children aged, and about 27% of those aged 12–17 years ever had an SLE. Other national data using self-report of recent adversities found higher estimates than this study, with almost 75% of teenagers reporting any SLE (29). Again, differences in respondent type (for example, parent report compared with self-report) and SLE types included in the index vary and may contribute to the differences in estimates, and comparison

should be considered with caution.

Despite these limitations, this study provides nationally representative estimates of childhood SLEs using data from NHIS that can be monitored over time. Children with SLEs have increased utilization of emergency and urgent health care as well as mental health care, and have unmet medical needs. NHIS data can be used to monitor both the types of SLEs that children experience and the accumulation of multiple SLEs. Focusing on specific SLEs and relationships to healthcare access and utilization can contribute to the broader understanding of the social determinants of health for children.

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Table 1. Percentage of children aged 2–17 years who experienced any stressful life events, by selected sociodemographic and geographic characteristics: United States, 2021

Characteristic	Any stressful life event	
	Percent (95% CI), n = 1,440	p value
Overall prevalence	19.9 (18.8, 21.0)	
Sex		0.2301
Male	19.7 (18.2, 21.4)	
Female	20.0 (18.5, 21.6)	
Age group (years)		Less than 0.0001
2–5	9.8 (8.2, 11.6)	
6–11	18.7 (16.9, 20.6)	
12–17	27.4 (25.4, 29.5)	
Race and Hispanic origin		Less than 0.0001
Asian, non-Hispanic	8.4 (6.0, 11.3)	
Black, non-Hispanic	23.7 (20.2, 27.5)	
White, non-Hispanic	18.8 (17.3, 20.3)	
Hispanic[1]	19.1 (17.0, 21.4)	
Other and multiple races	33.4 (28.2, 38.9)	
Health insurance coverage		Less than 0.0001
Private.	15.6 (14.4, 16.9)	
Medicaid or other public coverage	26.9 (24.8, 29.1)	
Other coverage.	14.0 (8.6, 21.1)	
Uninsured	18.4 (13.2, 24.8)	
Urbanicity		Less than 0.0001
Large central metropolitan	16.8 (14.9, 18.9)	
Large fringe metropolitan	17.5 (15.6, 19.4)	
Medium or small metropolitan	22.4 (20.5, 24.4)	
Nonmetropolitan	25.9 (22.1, 29.9)	
Family type		Less than 0.0001
One adult in household.	35.5 (31.9, 39.2)	
Multiple adults in household	17.2 (16.1, 18.4)	
Family Income as percentage of FPL[2]		Less than 0.0001
Less than 200% FPL	25.8 (23.8, 27.9)	
200% or more FPL	16.1 (14.9, 17.3)	

[1]Children of Hispanic origin may be of any race.
[2]FPL is federal poverty level, which was caculated using U.S. Census Bureau poverty thresholds for the previous calendar year, which consider family size and number of children.

NOTES: CI is confidence interval. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population. All p values are for chi square tests.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2021.

Table 2. Prevalence and adjusted prevalence ratios for selected healthcare utilization indicators among children aged 2–17 years, by stressful life event: United States, 2021

Stressful life event	Did not receive well-child visit in past 12 months		Had one or more emergency department visits in past 12 months		Had one or more urgent care visits in past 12 months		Had unmet medical care need in past 12 months	
	PR (95% CI)	APR (95% CI)	PR (95% CI)	APR (95% CI)	PR (95% CI)	APR (95% CI)	PR (95% CI)	APR (95% CI)
Experienced emotional abuse	1.23 (0.84, 1.79)	1.04 (0.71, 1.53)	†1.82 (1.34, 2.48)	†1.66 (1.23, 2.24)	†1.38 (1.11, 1.71)	†1.32 (1.06, 1.64)	†4.18 (2.16, 8.10)	†4.36 (2.16, 8.77)
Experienced unmet basic needs	1.18 (0.74, 1.90)	1.04 (0.66, 1.65)	†1.86 (1.32, 2.63)	†1.59 (1.12, 2.24)	0.90 (0.64, 1.26)	0.89 (0.63, 1.25)	†2.88 (1.06, 7.88)	†2.75 (1.21, 6.26)
Experienced racism	1.16 (0.85, 1.58)	1.00 (0.73, 1.37)	†1.64 (1.22, 2.21)	†1.65 (1.22, 2.23)	1.20 (0.96, 1.48)	1.25 (1.00, 1.55)	†4.96 (2.78, 8.84)	†4.76 (2.58, 8.79)
Household mental illness	1.13 (0.87, 1.46)	1.06 (0.82, 1.38)	†2.00 (1.63, 2.45)	†1.88 (1.51, 2.33)	†1.33 (1.14, 1.56)	†1.26 (1.07, 1.49)	†2.88 (1.70, 4.89)	†3.01 (1.77, 5.12)
Household substance abuse	†1.42 (1.11, 1.80)	†1.29 (1.01, 1.65)	†1.40 (1.11, 1.77)	1.18 (1.00, 1.63)	†1.24 (1.06, 1.45)	†1.19 (1.01, 1.40)	†2.00 (1.17, 3.39)	†2.07 (1.21, 3.54)
Parental incarceration.	1.07 (0.76, 1.49)	0.99 (0.69, 1.41)	†1.57 (1.21, 2.05)	1.30 (0.98, 1.72)	1.03 (0.82, 1.29)	1.05 (0.83, 1.33)	1.58 (0.75, 3.36)	1.54 (0.70, 3.41)
Victim of or witnessed neighborhood violence	0.94 (0.68, 1.29)	0.83 (0.60, 1.15)	†2.12 (1.66, 2.70)	†1.88 (1.45, 2.44)	†1.33 (1.09, 1.61)	†1.36 (1.12, 1.65)	†3.45 (1.89, 6.28)	†3.21 (1.68, 6.12)
Any stressful life event	0.91 (0.78, 1.06)	0.96 (0.81, 1.14)	†1.29 (1.13, 1.48)	†1.25 (1.08, 1.45)	1.12 (1.00, 1.25)	1.12 (0.99, 1.26)	†1.50 (1.23, 1.84)	†1.59 (1.24, 2.04)

† Significant difference from children without the stressful life event, $p < 0.05$.

NOTES: PR is prevalence ratio, APR is adjusted prevalence ratio, and CI is confidence interval. The reference for each stressful life event is not experiencing the stressful life event being examined. Data are adjusted for age, sex, race and ethnicity, health insurance status, urbanicity, family composition, and family income.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2021.

Table 3. Prevalence and adjusted prevalence ratios for mental healthcare utilization among children aged 2–17 years, by stressful life event: United States, 2021

Stressful life event	Any prescription medication for mental health in past 12 months		Any mental health therapy in past 12 months	
	PR	APR (95% CI)	PR	APR (95% CI)
Experienced emotional abuse	4.24 (3.26, 5.52)	2.73 (2.03, 3.66)	5.51 (4.54, 6.69)	3.96 (3.16, 4.97)
Experienced unmet basic needs	2.93 (2.04, 4.20)	2.11 (1.46, 3.07)	3.85 (2.98, 4.97)	2.98 (2.27, 3.93)
Experienced racism	2.21 (1.60, 3.06)	1.76 (1.26, 2.45)	2.47 (1.93, 3.17)	1.99 (1.52, 2.59)
Household mental illness	2.94 (2.35, 3.67)	2.14 (1.68, 2.73)	3.91 (3.28, 4.66)	2.96 (2.47, 3.56)
Household substance abuse	2.82 (2.22, 3.57)	1.97 (1.52, 2.55)	3.58 (2.97, 4.32)	2.64 (2.15, 3.23)
Parental incarceration.	2.20 (1.55, 3.11)	1.63 (1.13, 2.35)	2.22 (1.76, 2.80)	1.71 (1.33, 2.22)
Victim of or witnessed neighborhood violence	2.88 (2.16, 3.84)	2.23 (1.67, 2.98)	3.97 (3.25, 4.86)	3.28 (2.68, 4.03)
Any stressful life event	1.52 (1.34, 1.74)	1.39 (1.20, 1.61)	1.82 (1.57, 2.10)	1.71 (1.47, 1.99)

NOTES: PR is prevalence ratio, APR is adjusted prevalence ratio, and CI is confidence interval. All results reflect a significant difference from children without the stressful life event at the $p < 0.05$ level. The reference for each stressful life event is not experiencing the stressful life event being examined. Data are adjusted for age, sex, race and ethnicity, health insurance status, urbanicity, family composition, and family income.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2021.

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