Disparities in Screening for Adverse Childhood Experiences

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Introduction: **Screening for adverse childhood experiences (ACEs) in the clinical setting is set to become more commonplace with continued efforts to reimburse clinicians for screening. However, an examination of disparities in ACEs screening and related attitudes and beliefs is needed.**

Methods: **Using the 2021 California Health Interview Survey (CHIS), this study examined if several measures of socioeconomic status, access to care and identities were associated with 3 outcomes: 1) getting screened for ACEs by a clinician; 2) beliefs about the importance of screening and 3) satisfaction with efforts to address the impacts of ACEs. Logistic regressions were used to estimate odds of the outcomes.**

Results: **Black, Latinx, and Asian individuals had lower odds of being screened for ACEs than non-Hispanic Whites. A recent doctor's visit, higher burden of ACEs, and serious psychological distress were associated with higher odds of being screened. Latinx individuals, women, bisexual individuals, those with a recent doctor's visit and those with serious psychological distress had higher odds of believing clinicians asking about ACEs was very important, relative to their counterparts. Latinx individuals, American Indian or Alaska native individuals, Asian individuals, those with higher educational attainment and those with serious psychological distress had lower odds of being very satisfied with providers' efforts to address the impact of ACEs, relative to their counterparts.**

Conclusions: **Efforts to expand ACEs screening should consider the disparities in screening that currently exist. Given the wide-ranging impacts that ACEs have on health, an equitable approach to screening is necessary. (J Am Board Fam Med 2024;37:73–83.)**

Keywords: **Adverse Childhood Experiences, Health Care Disparities, Preventive Medicine, Primary Health Care, Public Health, Screening, Social Determinants of Health**

Introduction

Adverse childhood experiences (ACEs) have been associated with increased risk of various negative health outcomes and health behaviors associated with poor health.[1,2] To address this, some health practitioners and researchers are advocating for asking some patients about their ACE experiences, including screening for ACEs.[3–5] However this is not routine practice,[6,7] and insufficient evidence exists to recommend widespread screening in the clinical context, at this time.[8–11] Nonetheless, support does exist for conducting population-level surveillance of ACEs.[12]

The state of evidence and policies around ACEs screening are evolving. This evolution is continuing as several states in the United States have passed legislation that reimburses clinicians for ACEs screening administered to Medicaid patients.[13] These efforts have been expanded in California, which will require private health insurance to also cover ACE screening.[13] In addition, in California, clinicians are required to complete a 2 hour training

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that covers ACEs screening and how to incorporate the results of ACE screening into patient care, to be eligible to be reimbursed for screening under Medicaid.[14] Although there are hypothesized benefits to ACEs screening, these remain largely untested and many argue that more research is needed to fully understand the health benefits of ACEs screening.[3] However, available research has suggested that ACEs screening increases referrals to community and social services in some contexts,[10] which can be an indirect pathway to improve health by addressing the social and behavioral determinants of health. Given the increased interest and funding to screen patients for ACEs, it is important to understand factors that contribute to screening.

A recent review of studies examined the acceptability of screening for ACEs and found that screening for ACEs was seen as acceptable by the majority of people.[15] Acceptability of screening is impacted by many characteristics including approachability of clinicians, the trust between patient and clinician, attentiveness of a clinician, respect of privacy by clinicians, and a clear statement of the purpose of ACEs screening.[15] However, much of the existing work examining attitudes toward the acceptability of ACEs screening has been limited to clinical samples,[16–19] rather than representative, population-based surveys. Thus, these findings are only generalizable to patients already seeking care, which may exclude adults who have a higher burden of ACEs because they are less likely to use preventative health care,[20,21] more likely to be “no shows” for scheduled appointments.[22] Further, some extant work focuses on screening for domestic and family violence, which has overlap with ACEs, but is not about a dedicated screening for ACEs,[17] further limiting generalizability.

An examination into ACEs screening becomes more complicated when considering that the impact of ACEs is not equal, suggesting the benefits and barriers to screening for ACEs are also not equal. Population-based studies of adults and children have documented consistent racial and ethnic disparities in ACE burden, such that Hispanic, Black and multiracial individuals tend to report more ACEs than their non-Hispanic white counterparts.[23–26] Lesbian, gay, bisexual, and transgender individuals report more ACEs than their straight and cisgendered counterparts.[26] Women, younger individuals, and those of lower socioeconomic status report more ACEs than their male, older, and higher socioeconomic status counterparts.[24,26,27] Overall, general patterns of ACE disparities show that more marginalized groups tend to have higher burden of ACEs. Further, most of these groups have a higher burden of disease and disability, driven by structural inequities and systems of oppression,[28–30] making addressing the disparate impact of ACEs key to achieving health equity.

Given the continued efforts to increase ACE screening, it is important to understand what disparities exist in regard to screening, and related beliefs. The goal of this study is to examine disparities in ACEs screening, as well as beliefs related to ACEs screening. Specifically, this study examined disparities across different sociodemographic characteristics and 1) getting screened for ACEs by a clinician; 2) beliefs about the importance of screening; and 3) satisfaction with efforts to address the impacts of ACEs. This is important information as disparities in screening may present a roadblock to maximizing potential benefits of screening efforts.

Methods

Data Source

Data for analyses came from the 2021 California Health Interview Survey (CHIS). The CHIS is a representative survey of community dwelling adults and children in California that uses address and cellphone-based samples, along with targeted oversamples to recruit participants.[31] CHIS questionnaires can be completed online or over the phone and are conducted in English, Spanish, Mandarin, Cantonese, Vietnamese, Korean and Tagalog.[31] Online questionnaires took respondents an average of 47 minutes to complete, and over the phone interviews took respondents an average of 83 minutes to complete.[31] Respondents received a 2 dollar preincentive to encourage completion of the CHIS.[31] This study included all adult CHIS respondents that: (1) completed the CHIS directly, rather than through a proxy, and (2) had valid data on all variables of interest. A total of 25,347 adult respondents completed the CHIS in 2021. Missing data were imputed by the CHIS in most cases, with the exception of proxy interviews where someone answered questions on behalf of the respondent, resulting in a study sample of 24,441 respondents.

Variables

There were 3 dichotomous dependent variables: (1) lifetime ACE screening, (2) belief about the importance of clinicians asking about ACEs, and (3) satisfaction with clinician efforts to address the impact of ACEs. First, lifetime ACE screening in the health care setting was assessed by asking respondents if they had ever completed an ACE assessment with a health professional (yes or no). Second, belief about the importance of clinicians asking about ACEs was dichotomized so that respondents who believed it was "very important" were compared with those who believed it was "somewhat important" or "not at all important." Third, satisfaction with clinician's or clinic's efforts to address the impact of ACEs was dichotomized so that respondents who believed they were "very satisfied" were compared with those who were "somewhat satisfied" or "not at all satisfied." Of note, questions to CHIS respondents used the term "health care provider" and not "clinician," we use the latter term as it more accurately reflects the roles of the individuals delivering health services to patients.[32]

Characteristics that captured various identities or statuses, access and utilization of health care, socioeconomic status, measures of health, and number/burden of ACEs were included as independent variables. Number of ACEs experienced was based on responses to an 11-item ACE questionnaire that included measures of child abuse and household disfunction, which the CHIS categorized as 0, 1, 2, 3, or 4 or more ACEs in their data file. These responses were recoded to 0, 1 to 3 or 4 or more ACEs for analyses. Race and ethnicity (Non-Hispanic White; Hispanic or Latinx; Black or African American; American Indian or Alaskan Native; Asian or Asian American; and Other race or 2 or more races), gender (male or female), age (18 to 39, 40 to 64, or 65 and older), sexual orientation (heterosexual; gay, lesbian, or homosexual; bisexual; and do not know or other), gender identity (cisgender; or transgender or gender nonconforming), marital status (married; living as married; widowed; separated or divorced; and never married), citizenship status (US-born citizen; naturalized citizen; and noncitizens) were included as statuses and identities. Household income as percent of the federal poverty level (FPL; under 100% of FPL; or 100% and above the FPL) and educational attainment (less than high school; high school; some college; and college degree or above) were included as measures of socioeconomic status. The gender identity variable captures facets of both gender expression and whether or not gender identity matches the gender a person was assigned at birth. Current insurance (employer-sponsored coverage; uninsured; Medicare alone or in combination; Medicaid or other public coverage; and privately purchased insurance), doctor's visit in the past 12 months (yes or no) were included as measures of access and utilization of health care. Health status (fair or poor; or good, very good, or excellent) and serious psychological distress (SPD) in the past year (yes or no) were included as measures of health. Health status was based on responses to a single question that asked about general health, commonly referred to as "self-reported health status."[33] SPD was determined from a 6-item scale known as the "Kessler 6."[34,35] Responses to this scale are summed and represent the frequency and number symptoms of mental illness experienced in the past 30 days days, with values ranging from 0 to 24. The CHIS then asks the respondent the K6 items again, this time in reference to their worse month of symptoms in the past year, if it was different from the past 30 days. From these responses, values greater than 12 suggest that the respondent has serious, diagnosable mental health condition in the past year.[36]

Analyses

All analyses were conducted using Stata 16 using jackknife replicate weights to produce robust standard errors and account for complex survey design. Frequencies were calculated for all study variables. Logistic regression analyses were used to calculate adjusted odds ratios (AORs) and 95% confidence intervals (95% CIs) for all 3 study outcomes. All independent variables were included in the same model. For models examining beliefs in the importance of clinicians asking about ACEs and satisfaction with efforts to address ACEs, lifetime ACEs screening was also included as an independent variable.

Results

Study sample characteristics are presented in Table 1, representing survey-weighted precents. The majority of the population had never been screened for ACEs, were not at all satisfied or somewhat satisfied with the clinicians or clinic's efforts to address the impact of ACEs and had experienced at least 1 ACE. Most of the population was Non-Hispanic White, between the ages of 18 and 64, heterosexual, cisgender, married, and were US born citizens. The majority of the population were above FPL, had

Table 1. Sample Characteristics (n = 24,441)

	%	SE
Dependent Variables/Outcome Measures		
Ever screened for adverse childhood experiences by health professional		
No	92.8	0.20
Yes	7.20	0.20
How important is it for health care provider to ask patients about adverse childhood experiences		
Somewhat important/Not at all important	49.54	0.41
Very important	50.46	0.41
How satisfied with providers or clinic's efforts to address impacts of ACEs		
Not at all satisfied/Somewhat satisfied	71.08	0.37
Very satisfied	28.92	0.37
Independent Variables		
Number of ACEs		
0	32.64	0.34
1 to 3	46.11	0.39
4 or more	21.25	0.38
Race and Ethnicity		
Non-Hispanic White	40.51	0.02
Hispanic/Latinx	37.01	0.02
Black or African American	5.56	0.03
American Indian or Alaska Native	4.70	0.03
Asian	13.81	0.03
Other race or two or more races	2.64	0.03
Gender		
Man	49.03	0.03
Woman	50.97	0.03
Age		
18 to 40	38.58	0.02
41 to 64	40.39	0.03
65 and over	21.03	0.03
Sexual orientation		
Heterosexual	89.35	0.29
Gay, lesbian or homosexual	40.90	0.18
Bisexual	5.16	0.21
Don't know or other	1.40	0.12
Gender identity		
Cisgender	98.78	0.12
Transgender or gender non-conforming	1.22	0.12
Marital status		
Married	50.08	0.39
Living as married	9.33	0.26
Widowed, separated or divorced	14.37	0.24
Never married	26.22	0.3
Citizenship status		
US-born citizen	68.11	3.1
Naturalized citizen	18.79	3.4
Non-citizen	13.10	3.1
Household income		
Under 100% of federal poverty level	13.36	0.38
100% and above the federal poverty level	86.64	0.38
Educational attainment		
Less than high school	14.68	0.08
High school	21.91	0.08
Some college	21.01	0.28
College degree or above	42.40	0.29
Current insurance		
Medicaid or other public coverage	18.96	0.42
Employer sponsored coverage	46.84	0.41
Uninsured	7.65	3.1
Medicare alone or in combination	21.13	0.15
Privately purchased insurance	5.42	0.2
Visited doctor in past 12 months		
No	76.57	0.38
Yes	23.43	0.38
Health status		
Good, very good or excellent	83.62	0.34
Fair or poor	16.38	0.34
Psychological distress in past year		
No	83.02	0.35
Yes	16.98	0.35

Continued

Table 1. Continued

Abbreviations: ACEs, adverse childhood experiences; SE, standard error.

completed at least some college, and had employer sponsored coverage. The majority of the population had visited a doctor in the past 12 months, were in good, very good, or excellent health, and did not report psychological distress in the past year.

Table 2 shows odds of ever being screened by a health care professional. Higher numbers of ACEs were associated with increased odds of being screened for ACEs, relative to those who had not experienced any ACEs. Latinx and Asian individuals had lower odds of being screened for ACEs, when compared with Non-Hispanic White respondents. Individuals who were 65 years of age and over had lower odds of screening for ACEs when compared

Table 2. Odds of Ever Being Screened for Adverse Childhood Experiences by a Health Professional (n = 24,441)

	AOR	95%CI
Variable		
Number of ACEs		
0	Reference	Reference
1 to 3	**1.95**	**(1.57, 2.42)**
4 or more	**4.22**	**(3.17, 5.61)**
Race and Ethnicity		
Non-Hispanic White	Reference	Reference
Hispanic/Latinx	**0.72**	**(0.60, 0.87)**
Black or African American	0.80	(0.58, 1.09)
American Indian or Alaska Native	2.08	(0.71, 6.05)
Asian	**0.49**	**(0.28, 0.56)**
Other race or multiracial	**1.53**	**(1.14, 2.06)**
Gender		
Man	Reference	Reference
Woman	1.05	(0.91, 1.21)
Age		
18 to 39	Reference	Reference
40 to 64	0.84	(0.70, 1.01)
65 and over	**0.32**	**(0.19, 0.53)**
Sexual orientation		
Heterosexual	Reference	Reference
Gay, lesbian or homosexual	1.05	(0.78, 1.42)
Bisexual	1.26	(0.99, 1.60)
Don't know or other	0.75	(0.25, 2.30)
Gender identity		
Cisgender	Reference	Reference
Transgender or gender non-conforming	0.86	(0.50, 1.45)
Marital status		
Married	Reference	Reference
Living as married	1.17	(0.90, 1.51)
Widowed, separated or divorced	1.25	(1.00, 1.56)
Never married	1.08	(0.87, 1.35)
Citizenship status		
US-born citizen	Reference	Reference
Naturalized citizen	0.89	(0.69, 1.13)
Non-citizen	0.78	(0.54, 1.13)
Household income		
Under 100% of federal poverty level	Reference	Reference
100% and above the federal poverty level	**0.68**	**(0.52, 0.89)**
Educational attainment		
Less than high school	Reference	Reference
High school	1.22	(0.79, 1.89)
Some college	1.29	(0.86, 1.92)
College degree or above	1.29	(0.86, 1.93)
Current insurance		
Medicaid or other public coverage	Reference	Reference
Employer sponsored coverage	**0.72**	**(0.58. 0.90)**
Uninsured	**0.38**	**(0.25, 0.57)**
Medicare alone or in combination	1.20	(0.75, 1.94)
Privately purchased insurance	**0.64**	**(0.41, 1.00)**
Visited doctor in past 12 months		
No	Reference	Reference
Yes	**1.35**	**(1.08, 1.68)**
Health status		
Good, very good or excellent	Reference	Reference
Fair or poor	1.19	(1.08, 1.68)
Psychological distress in past year		
No	Reference	Reference
Yes	**1.24**	**(1.00, 1.53)**

Abbreviations: ACEs, adverse childhood experiences; AOR, adjusted odds ratio; CI, confidence interval.
Significant associations in bold.

with those 18 to 39 years of age. Individuals who lived in households at or above the FPL had lower odds of getting screened for ACEs, when compared with those in households below the FPL. In terms of insurance, those with employer sponsored coverage, the uninsured, and those with privately purchased insurance, had lower odds of being screened for ACEs, when compared with those with Medicaid and other public programs. Individuals who had visited the doctor in the past 12 months had higher odds of being screened for ACEs, when compared with those who had not. Those who had SPD in the past 12 months had higher odds of being screened for ACEs, when compared with those who had not had SPD. No difference was observed by gender, sexual orientation, gender identity, marital status, citizenship status, educational attainment, or health status.

Table 3 shows odds of believing it is very important for a clinician to ask about ACEs. Individuals who had been screened for ACEs had more than 3 times the odds of believing it is very important for a clinician to ask about ACEs, relative to the unscreened. Individuals with 4 or more ACEs had higher odds of believing it is very important for a clinician to ask about ACEs, relative to those who had not experienced any ACEs. Latinx individuals had higher odds, and Asian individuals had lower

Table 3. Odds of Believing It is Very Important for Providers to Ask about Adverse Childhood Experiences (n = 24,441)

	AOR	95%CI
Variable		
Ever screened for ACEs by a health professional		
No		
Yes	**3.25**	**(2.78, 3.81)**
Number of ACEs		
0	Reference	Reference
1 to 3	1.02	(0.94, 1.10)
4 or more	**1.27**	**(1.16, 1.41)**
Race and Ethnicity		
Non-Hispanic White	Reference	Reference
Hispanic/Latinx	**1.23**	**(1.11, 1.36)**
Black or African American	1.21	(1.00, 1.48)
American Indian or Alaska Native	1.35	(0.70, 2.62)
Asian	**0.82**	**(0.74, 0.92)**
Other race or two or more races	1.02	(0.85, 1.24)
Gender		
Man	Reference	Reference
Woman	**1.35**	**(1.23, 1.48)**
Age		
18 to 39	Reference	Reference
40 to 64	**0.73**	**(0.67, 0.81)**
65 and over	**0.70**	**(0.53, 0.92)**
Sexual orientation		
Heterosexual	Reference	Reference
Gay, lesbian or homosexual	1.19	(0.97, 1.47)
Bisexual	**1.30**	**(1.10, 1.53)**
Don’t know or other	**1.98**	**(1.42, 2.77)**
Gender identity		
Cisgender	Reference	Reference
Transgender or gender non-conforming	1.04	(0.67, 1.61)
Marital status		
Married	Reference	Reference
Living as married	**1.17**	**(1.02, 1.34)**
Widowed, separated or divorced	**1.12**	**(1.01, 1.23)**
Never married	1.00	(0.90, 1.12)
Citizenship status		
US-born citizen	Reference	Reference
Naturalized citizen	**1.19**	**(1.06, 1.35)**
Non-citizen	**1.35**	**(1.17, 1.57)**
Household income		
Under 100% of federal poverty level	Reference	Reference
100% and above the federal poverty level	0.89	(0.79, 1.00)
Educational attainment		
Less than high school	Reference	Reference
High school	**0.78**	**(0.66, 0.92)**
Some college	**0.76**	**(0.65, 0.89)**
College degree or above	0.90	(0.76, 1.07)
Current insurance		
Medicaid or other public coverage	Reference	Reference
Employer sponsored coverage	1.10	(0.96. 1.25)
Uninsured	1.01	(0.82, 1.24)
Medicare alone or in combination	1.02	(0.79, 1.30)
Privately purchased insurance	0.90	(0.75, 1.08)
Visited doctor in past 12 months		
No	Reference	Reference
Yes	**1.17**	**(1.06, 1.28)**
Health status		
Good, very good or excellent	Reference	Reference
Fair or poor	0.96	(0.84, 1.08)
Psychological distress in past year		
No	Reference	Reference
Yes	**1.26**	**(1.11, 1.42)**

Abbreviations: ACEs, adverse childhood experiences; AOR, adjusted odds ratio; CI, confidence interval.
Significant associations in bold.

odds of believing it is very important for a clinician to ask about, relative to non-Hispanic Whites. Individuals who were 65 years of age and over, or 40 to 64 years of age, had lower odds of believing it is very important for a clinician to ask about ACEs when compared with those 18 to 39 years of age. Women had higher odds of believing it is very important for a clinician to ask about ACEs, relative to men. Bisexual individuals and individuals that identified “Do not know or other” as their sexual orientation had higher odds of believing it is very important for a clinician to ask about ACEs, relative to heterosexual individuals. People living as married and those who were widowed, separated, or divorced had higher odds of believing it is very important for a clinician to ask about ACEs, relative to married individuals. Naturalized citizens and noncitizens had higher odds of believing it is very important for a clinician to ask about ACEs, relative to US-born citizens. Individuals with a high school education and those who had completed some college had lower odds of believing it is very important for a clinician to ask about ACEs, relative to those with less than a high school education. Individuals

Table 4. Odds of Being Very Satisfied with Provider or Clinic's Efforts to Address Impact Adverse Childhood Experiences (n = 24,441)

	AOR	95%CI
Variable		
Ever screened for ACEs by a health professional		
No		
Yes	**2.50**	**(2.15, 2.90)**
Number of ACEs		
0	Reference	Reference
1 to 3	**0.70**	**(0.64, 0.78)**
4 or more	**0.51**	**(0.45, 0.59)**
Race and Ethnicity		
Non-Hispanic White	Reference	Reference
Hispanic/Latinx	**0.79**	**(0.71, 0.88)**
Black or African American	0.96	(0.79, 1.17)
American Indian or Alaska Native	**0.50**	**(0.28, 0.91)**
Asian or Asian American	**0.49**	**(0.44, 0.57)**
Other race or two or more races	**0.77**	**(0.61, 0.98)**
Gender		
Man	Reference	Reference
Woman	1.02	(0.95, 1.10)
Age		
18 to 39	Reference	Reference
40 to 64	**1.14**	**(1.02, 1.28)**
65 and over	1.07	(0.81, 1.43)
Sexual orientation		
Heterosexual	Reference	Reference
Gay, lesbian or homosexual	1.06	(0.82, 1.37)
Bisexual	0.86	(0.69, 1.06)
Don't know or other	0.69	(0.41, 1.15)
Gender identity		
Cisgender	Reference	Reference
Transgender or gender non-conforming	0.67	(0.39, 1.14)
Marital status		
Married	Reference	Reference
Living as married	**0.77**	**(0.65, 0.91)**
Widowed, separated or divorced	0.98	(0.88, 1.09)
Never married	**0.83**	**(0.74, 0.93)**
Citizenship status		
US-born citizen	Reference	Reference
Naturalized citizen	0.98	(0.85, 1.14)
Non-citizen	1.08	(0.93, 1.26)
Household income		
Under 100% of federal poverty level	Reference	Reference
100% and above the federal poverty level	**0.83**	**(0.72, 0.96)**
Educational attainment		
Less than high school	Reference	Reference
High school	**0.81**	**(0.68, 0.97)**
Some college	**0.78**	**(0.66, 0.92)**
College degree or above	**0.78**	**(0.66, 0.91)**
Current insurance		
Medicaid or other public coverage	Reference	Reference
Employer sponsored coverage	0.88	(0.77. 1.01)
Uninsured	0.88	(0.72, 1.08)
Medicare alone or in combination	1.19	(0.92, 1.55)
Privately purchased insurance	0.78	(0.62, 1.00)
Visited doctor in past 12 months		
No	Reference	Reference
Yes	1.06	(0.95, 1.19)
Health status		
Good, very good or excellent	Reference	Reference
Fair or poor	0.94	(0.82, 1.08)
Psychological distress in past year		
No	Reference	Reference
Yes	**0.62**	**(0.54, 0.71)**

Abbreviations: ACEs, adverse childhood experiences; AOR, adjusted odds ratio; CI, confidence interval.
Significant associations in bold.

who had visited the doctor in the past 12 months had higher odds of believing it is very important for a clinician to ask about ACEs, when compared with those who had not. Those who had SPD in the past 12 months had higher odds of believing it is very important for a clinician to ask about ACEs, when compared with those who had not had SPD. No difference was observed by gender identity, current insurance status, household poverty level, or health status.

Table 4 shows odds of being very satisfied with a clinician or clinic's efforts to address the impact of ACEs. Individuals who had been screened for ACEs had more than 2 times the odds of being very satisfied with efforts to address ACEs. Higher numbers of ACEs were associated with lower odds of being very satisfied with efforts to deal with ACEs, relative to those who had not experienced any ACEs. Individuals who were Latinx; American Indian or Alaska Native; Asian; or some other race or 2 or more races; had lower odds of being very satisfied with efforts to address ACEs, relative to non-Hispanic Whites. Individuals who were 40 to 64 years of age of being very satisfied with efforts to address ACEs, when compared with those 18 to 39 years of age. People living as married and those that were never married had lower odds of being very satisfied with efforts to address ACEs, relative to married individuals. Individuals in households above the FPL had lower odds of being very satisfied with efforts to address ACEs, relative to individuals in households below the FPL. Individuals with a high school education, those who had completed some college and those with a college degree or above had lower odds of being very satisfied with efforts to address ACEs, relative to those with less than a high school education. Those who had SPD in the past 12 months had lower odds of being very satisfied with efforts to address ACEs, when compared with those who had not had SPD. No difference was observed by gender, sexual orientation, gender identity, citizenship status, current insurance status, having a doctor's appointment in the past 12 months, and health status.

Discussion

This study showed that the majority of California adults had not been screened for ACEs in the clinical setting, indicating wide room for policy and programmatic efforts to increase screening. These findings also provide a critical baseline for rates of screening, before new reimbursement policies for ACEs screening that will likely increase the uptake.[13] However, as efforts to screen for ACEs expand, clinician reported barriers to screening, such as lack of mental health resources to refer patients to, insufficient time to screen, lacking confidence, fear of retraumatization, lack of appropriate screening tools, and beliefs that screening for ACEs does not have a positive impact[7,37,38] should be considered and addressed. One potential avenue to address these barriers would be to provide more clinicians training on screening, including working to increase self-efficacy and reducing fears around screening.

About half of Californians thought it was very important for clinicians to ask about ACEs, suggesting that a majority of the population sees some benefit to being asked about ACEs. This may be helpful as screening efforts increase in the future. However, just under half of California adults view clinicians asking about ACEs as important, meaning educational and social marketing efforts focusing on the reasons clinicians might want to know about their ACE experiences is important. In particular, the public might benefit from further education around the difference between a clinician asking a patient about ACEs to help diagnose a patient, as might occur in behavioral health settings, versus formally screening for ACEs that may occur in settings where no behavioral health condition has been diagnosed or suspected. Finally, satisfaction with efforts by clinicians to address the impacts of ACEs was low. Thus, clinicians and health care administrators may need to proactively increase their efforts to address ACEs, beyond merely asking about them, and they need to communicate with their patients what they have done about ACEs and why.

The present study showed important disparities in ACEs screening and related beliefs. In terms of screening, several socially marginalized groups, including racial and ethnic minorities and the uninsured, were less likely to be screened for ACEs. Given that many racial and ethnic minority groups are more likely to report ACEs,[25,39,40] and also have higher burden of disease, the decreased rates of ACEs screening present a challenge for efforts to expand screening. Namely, can screening efforts be expanded in such a way to target systematically marginalized communities who are less likely to be screened, but might also experience the biggest impact, positive or negative, from screening? However, some have cautioned against using ACEs screening to predict mental illness among some population subgroups, particularly among different gender and racialized groups.[41] Thus, disparities in screening must be addressed in a way that does not overextend their use to try to predict disease. Importantly, individuals with private insurance and those that were uninsured, were less likely to be screened, relative to those on Medicaid, suggesting that Medicaid's reimbursement of ACEs screening[42] is promoting more screening. However, because the CHIS asks about lifetime ACE screening, we cannot know if participants were screened for ACEs on their current insurance. In addition, the findings showed that some medically vulnerable groups were more likely to be screened. In particular, higher burden of ACEs was associated with increased rates of being screened by a clinicians, suggesting that some higher risk groups are being screened.

Findings also highlight important disparities in beliefs about the importance of clinicians asking patients about ACEs. Here several communities that have a higher burden of ACEs, and/or who have marginalized identities, expressed higher rates of believing it was very important for clinicians to ask patients about ACEs. Latinx individuals, women, bisexual individuals, and non-US citizens all had beliefs that viewed asking about ACEs as more important than their respective counterparts. Given the higher burden of ACEs in several of these communities, these findings suggest that these communities understand the importance of having conversations about ACEs during a clinician encounter. Based on how CHIS asked this question, however, it is unclear if respondents view "asking about" ACEs as something that is distinct from screening for ACEs, thus further research is needed. Further, the belief that asking about ACEs is very important, does not directly address any other issues that may prevent utilization of health care, among individuals with a history of ACEs. In particular, a growing body of research has shown that people with a history of ACEs are less likely to get preventative care,[20,21] and also less likely to receive patient centered care.[43] Thus, positive attitudes around being asked by a clinician about ACEs will be less relevant if people with ACEs are less likely to get care, particularly high quality care.

When examining the disparities in satisfaction with efforts by clinicians to address ACEs, more marginalized and underserved groups tended to be less satisfied. In particular, racial and ethnic minorities and those with a higher burden of ACEs, were less satisfied with efforts to address ACEs, than their counterparts. Clinicians and health care administrators should investigate why these disparities exist, and take proactive efforts to address reasons for dissatisfaction, particularly among marginalized and underserved groups. Otherwise, patients may be alienated from health care based on the shortcomings that they observe and perceive. Importantly, those who had been screened for ACEs by a clinician, were far more likely to be satisfied with their clinician's efforts to address ACEs, highlighting the need for research that investigates what benefits patients perceive from ACE screening. In addition, results showed that individuals who had higher educational attainment were less likely to be very satisfied with clinician efforts to address ACEs. Further research should examine if this is a function of education increasing knowledge of the impacts of ACEs.

Findings should be interpreted in light of several limitations. First, the CHIS is a California-specific survey, which has a policy environment that is more supportive of ACEs screening than other states in the US, potentially limiting generalizability. Second, because the CHIS is cross-sectional in nature, it is not possible to determine temporality of associations. Third, because data are self-reported, it is subject to recall bias. This can, for example, lead to inaccurate recall of whether or not a respondent has been screened for ACEs. Fourth, because the majority of the sample was not screened for ACEs, it is unclear what the level of satisfaction with clinician efforts to address the impacts of ACEs means for those who have not been formally screened. Future work should examine what people want clinicians to do to address ACEs.

The current study offers an important look at rates of screening, related beliefs and disparities that exist. Across study outcomes, several groups with higher ACEs burden were less likely to be screened and be satisfied with efforts to address ACEs. Policy makers, clinicians, health equity advocates and health care administrators should keep this in mind as efforts to promote ACEs screening in health care continue. In particular, efforts to promote screening should be done equitably, and examine if the benefits of screening are disproportionately experienced by groups in the population that occupy positions of relative advantage. Continued efforts to expand ACEs screening could provide an opportunity to promote health equity, if done carefully. In addition, as efforts to expand screening continue, there is a critical need to determine the health and health care utilization benefits of ACEs screening.

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