

Adverse Childhood Experiences (ACEs) Among New Mexico Adults: Results from the NM BRFSS, 2019

Adverse childhood experiences (ACEs) are traumatic and stressful events that children experience before the age of 18. These experiences can have a profound impact into adulthood as there is an association between traumatic childhood events such as childhood abuse and subsequent adult health risk behaviors and disease.¹ The impact of ACEs on the subsequent development of risk behaviors is of great interest since risk behaviors are one of the basic causes of morbidity and mortality in adult life. Studies on ACEs and adult health outcomes have shown that as the number of ACEs children experience increases, so does the risk of negative health outcomes and poor quality of life when they become adults.²

Methods

The Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing, nationwide surveillance system that routinely collects data on the prevalence of a variety of health conditions and behaviors that affect health.³ The surveillance system uses a telephone survey to collect data in all 50 states, the District of Columbia, Guam, Puerto Rico and the U.S. Virgin Islands. The CDC established the BRFSS in 1984 with 15 states participating. Eligible individuals include non-institutionalized adults (aged 18 years or older). New Mexico began participating in the BRFSS in 1986. Participation in the survey is voluntary, and all data collected are confidential.

The NM BRFSS survey instrument includes a core set of questions that is included in the questionnaire of every state. Optional modules of questions on a variety of topics have been developed by the CDC and made available to the states. Additionally, states are free to include other questions that have been borrowed from other surveys or developed by the state; such questions are referred to as 'state-added' questions.

The 2019 NM BRFSS included the [CDC ACEs optional module](#) that consists of 11 questions about experiences that adults had during childhood. The questions

Chris Whiteside, MPH

*Epidemiology and Response Division
New Mexico Department of Health*

fit into the following three categories: abuse, neglect, and household dysfunction. The ACEs module includes questions regarding emotional abuse, physical abuse, sexual abuse, parental separation/divorce, household substance use, household domestic violence, whether a household member was incarcerated, and mental illness in the household.

This report presents prevalence and corresponding confidence intervals (CI) for health status, chronic disease and health conditions, and risk behavior indicators among adults with zero to four or more ACEs. STATA 16.1 software was used for data analysis and data management. Respondents who answered, "Don't Know," "Not Sure," or "Refused" to any of the 11 ACE questions were excluded from analyses.

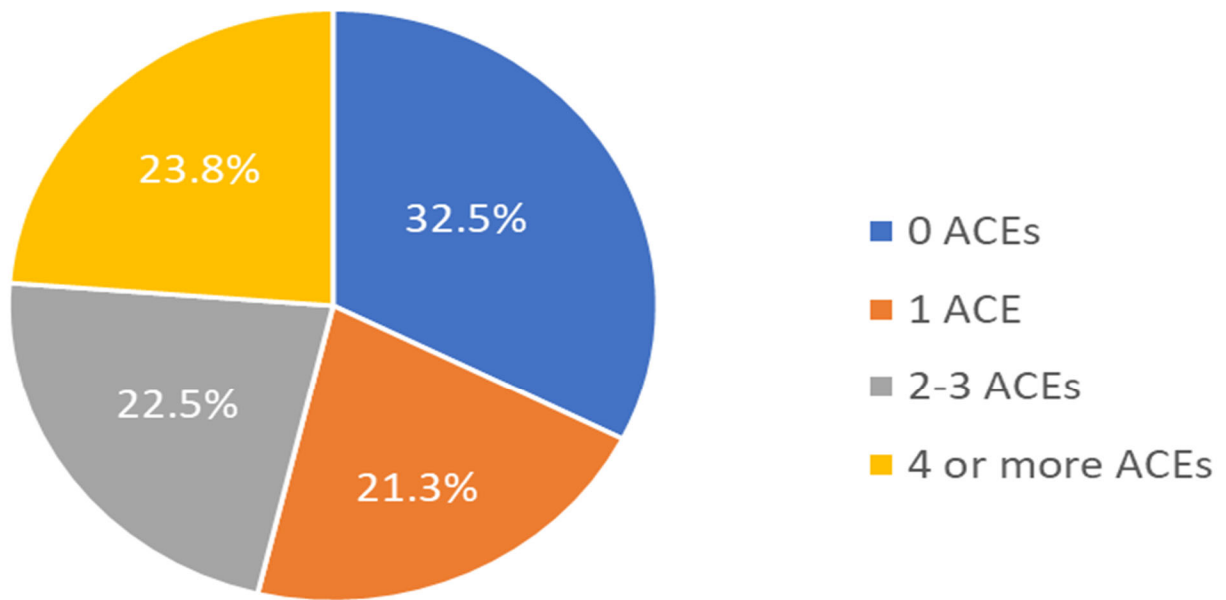
Results

The 2019 BRFSS data show that an estimated 67.6% of NM adults have experienced at least one Adverse Childhood Experience (ACE), and nearly one in four adults (23.8%) have experienced four or more ACEs. (Figure 1).

The ACE that most New Mexico adults experienced was emotional abuse or verbal abuse with 36.4% of adults saying that an adult, such as a parent, ever swore at or insulted them, or put them down. The second most common ACE was having divorced or separated parents (30.4%). Physical abuse (having a parent ever hit, beat, kick, or physically hurt them in any way) and having a household member who was a problem drinker or alcoholic, were the third and fourth most common ACEs (29.0% and 28.9%, respectively). (Figure 2).

Demographic Characteristics by History of ACEs
New Mexico adults with four or more ACEs (18.1%) were less likely to have a college degree than adults

Figure 1. Prevalence of ACEs among NM Adults, 2019



with no ACEs (36.7%). Females and males had similar percentages of four or more ACEs vs. no ACEs. American Indian-Alaskan Natives (33.3%) had a higher percentage of having four or more ACEs compared to White (22.0%) and Hispanic (23.7%) adults in New Mexico.

Health Outcomes and Risk Behaviors by History of ACEs

General Health Status

More than one-quarter (25.7%) of New Mexico adults with four or more ACEs reported fair or poor health while 18.6% of adults with no ACEs reported fair or poor health. Poor physical health and frequent mental distress were more prevalent among adults with four or more ACEs (21.2% and 28.2%, respectively) than among adults with no ACEs (11.0% and 6.9%, respectively). Adults with four or more ACEs were more likely to have at least one disability (38.3%) compared to adults with no ACEs (23.0%) (Table 1).

Chronic Disease and Health Conditions

Asthma and chronic obstructive pulmonary disease (COPD) were more prevalent among New Mexico adults with four or more ACEs (13.0% and 7.5%, respectively), than among adults with no ACEs (5.1% and 3.6%, respectively). Diagnosed depression was much more prevalent among adults with four or more ACEs (31.3%) than among adults with no ACEs (7.7%).

Risk and Behaviors Indicators

New Mexico adults with four or more ACEs were significantly more likely to engage in heavy drinking and binge drinking (8.2% and 18.6%, respectively), than were adults with no ACEs (3.2% and 10.9%, respectively). Adults with four or more ACEs were significantly more likely to be current smokers (24.6%) compared to adults with no ACEs (9.5%). Adults were more likely to have had thoughts about suicide in the past year if they had four or more ACEs (15.5%) than were adults with no ACEs (2.3%).

Discussion

There was a strong correlation between the number of ACEs among NM adults and the prevalence of harmful health behaviors and negative health outcomes. While adults with between one and three ACEs were more likely to have chronic conditions and to engage in risky health behaviors, adults with four or more ACEs were much more likely to have these conditions or engage in these behaviors.

These findings from the NM BRFSS are consistent with other studies demonstrating that adults who have experienced ACEs are at greater risk for adverse mental health outcomes and negative physical health outcomes.⁴ As with the other studies, NM results show that adults with a higher number of ACEs are more likely to have been diagnosed with depression, to have frequent mental distress, and to engage in risk behav-

iors such as binge drinking and smoking. Unlike previous studies, however, there was no association between more ACEs and lack of access to healthcare or between the number of ACEs and cancer or obesity.^{5,6}

New Mexico recently (2020) created the Early Childhood Education and Care Department (ECECD) which has programs that can potentially reduce ACEs and their impacts. ECECD aims to create a more cohesive, equitable, and effective early childhood system in New Mexico by providing easier transitions for women receiving services in pregnancy to birth and home visiting to pre-kindergarten and kindergarten, for example. The benefits of these services are expected to be intergenerational. By including the CDC ACEs optional module in the NM BRFSS in future years, this hypothesis can begin to be tested.

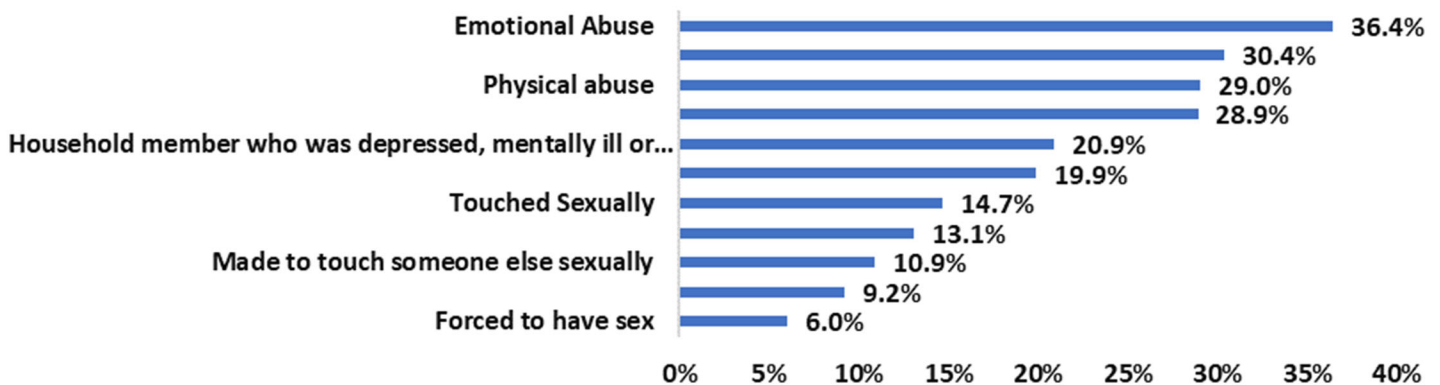
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Figure 2. ACEs Ranked by Prevalence among NM Adults, 2019



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Heidi Krapfl, M.S.

Deputy Division Director of Programs,
Deputy State Epidemiologist & Editor

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1190 St. Francis Dr.

P.O. Box 26110, Santa Fe, NM 87502

24-Hour Emergency Number:
(505) 827-0006
www.health.state.nm.us

Table 1. Health Outcomes by Number of ACEs among NM Adults

Characteristic	0 ACEs % (95% CI)	1 ACE % (95% CI)	2-3 ACEs % (95% CI)	4+ ACEs % (95% CI)
Health Status				
Fair/Poor Health ^a	18.6 (16.2, 21.3)	20.0 (16.8, 21.3)	19.3 (16.2, 22.7)	25.7 (22.1, 29.6)
Poor Physical Health ^b	11.0 (9.1, 13.1)	11.3 (9.0, 14.0)	15.1 (12.5, 18.3)	21.2 (17.8, 25.0)
Frequent Mental Distress ^c	6.9 (5.3, 9.0)	11.3 (8.8, 14.4)	14.1 (11.4, 17.5)	28.2 (24.5, 32.3)
Disability ^d	23.0 (20.4, 25.7)	25.3 (21.9, 29.1)	31.0 (27.3, 35.0)	38.3 (34.2, 42.6)
Chronic Disease and Health Conditions				
Asthma ^e	5.1 (3.9, 6.7)	7.6 (5.7, 9.9)	8.9 (6.9, 11.4)	13.0 (10.4, 16.3)
COPD ^f	3.6 (2.7, 4.9)	5.2 (3.8, 6.9)	7.1 (5.4, 9.3)	7.5 (5.8, 9.6)
Depression ^g	7.7 (6.2, 9.6)	10.0 (7.8, 12.8)	20.6 (17.4, 24.2)	31.3 (27.5, 35.3)
Risk and Behavior Indicators				
Heavy Drinking ^h	3.2 (2.2, 4.6)	4.7 (3.2, 6.8)	7.7 (5.7, 10.3)	8.2 (6.1, 11.1)
Binge Drinking ⁱ	10.9 (8.8, 13.3)	11.7 (9.1, 14.9)	16.4 (13.2, 20.2)	18.6 (15.4, 22.4)
Current Smoking ^j	9.5 (7.6, 11.7)	13.3 (10.6, 16.6)	16.3 (13.3, 19.9)	24.6 (21.1, 28.5)
Suicidal Ideation ^k	2.3 (1.4, 3.8)	3.6 (2.2, 5.8)	6.9 (5.1, 9.2)	15.5 (12.8, 18.6)

Note CI= confidence interval

^aProportion with either fair or poor general health

^gProportion ever diagnosed with depression

^bProportion reporting 14 + days of poor physical health

^hProportion drinking 7+ drinks in the past week

^cProportion reporting 14 + days of poor mental health

ⁱProportion who binge drank in the past 30 days

^dProportion with at least one disability

^jProportion who currently smoke

^eProportion ever diagnosed with asthma

^kProportion who had thoughts about suicide in <year

^fProportion ever diagnosed with COPD