

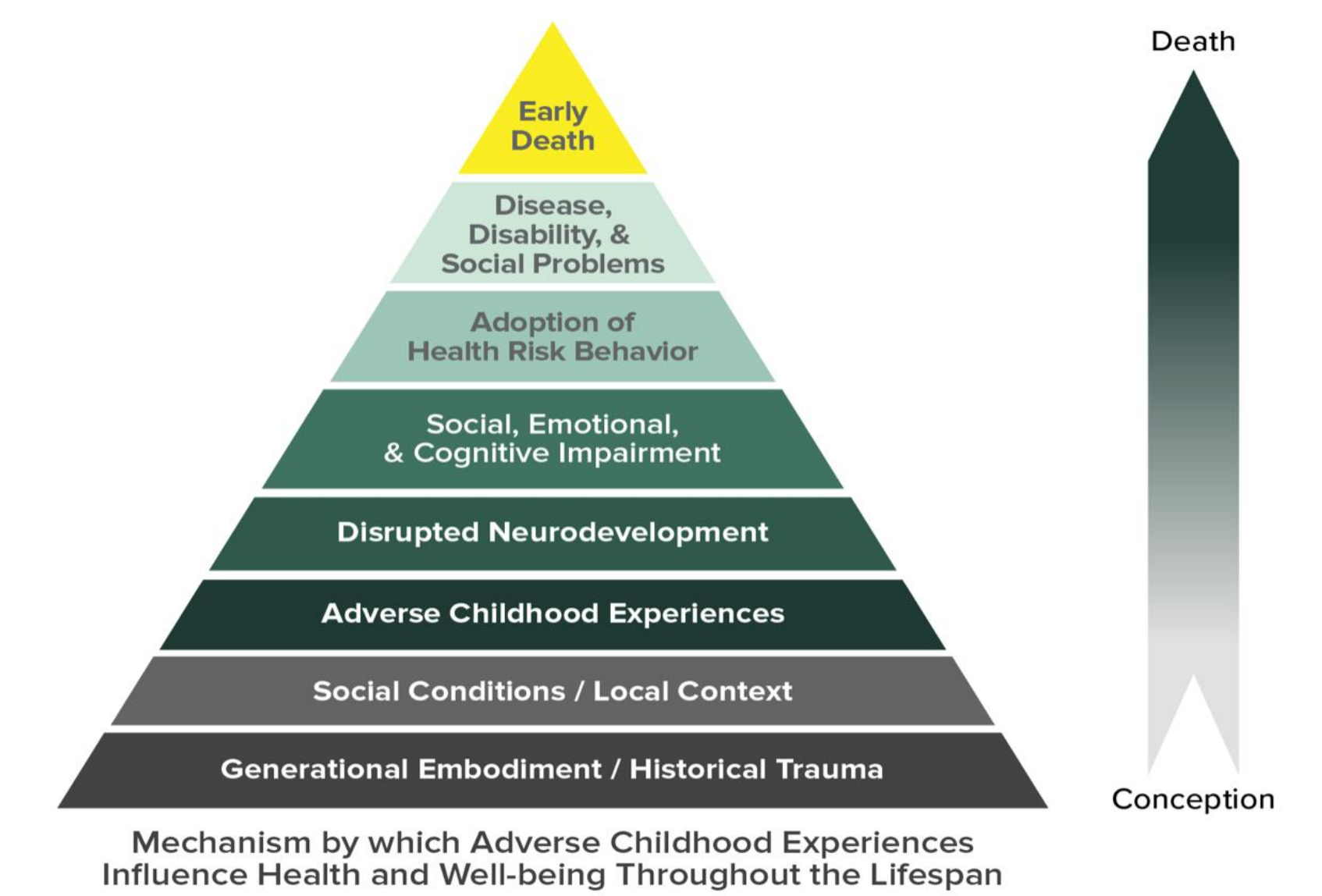


# Adverse Childhood Experiences (ACEs) among Kentucky College Students

Skyler Worley and Beth Vanover

Dr. Laurie Larkin, Dr. Michelyn Bhandari, and Dr. Phyllis Bryden

Department of Public Health, College of Health Sciences, Eastern Kentucky University



## Introduction

- Adverse Childhood Experiences (ACEs) is a term used to describe abuse, neglect, and other potentially traumatic experiences that occur to children under the age of 18 (CDC, 2019).
- During 2011-2014, more than 60 % of U.S. adults reported having had at least one ACE, and almost 25 % reported three or more (Merrick, Ford, Ports, Guinn, 2018).
- Kentucky ranks in the top 10 states for ACEs (State Health Improvement Plan Committee, 2017).
- In Kentucky, 59% of adults reported having at least one ACE, while 64% reported having two or more, of which 11% experienced four ACEs, and 18% experienced five or more (KDPH Division of Child and Maternal Health, 2016).
- ACEs have been linked to risky health behaviors, chronic health conditions, low life potential, and early death (CDC, 2019).
- ACEs have been found to negatively impact adult mental health, which may make academic success more difficult (Karatekin and Ahluwalia, 2016).
- Nationwide, the average first year to second year retention rate is 68.0% whereas colleges and universities in Kentucky was lower at just 67.0% (College Factual, 2020)
- No known research study has assessed the relationship between ACEs and academic success for Kentucky college students.

## Purpose and Hypotheses

- The purpose of this study was to determine the prevalence of ACEs among undergraduate students attending a regional Kentucky university.
- It was hypothesized that (1) at least 60% of Kentucky college students will report one or more ACEs, (2) there will be a significant difference in the number of Kentucky college males and females reporting at least one ACE, and (3) having experienced two or more ACEs will result in a lower perceived retention rate.

## Method

- 11 questions from the Behavioral Risk Factor Surveillance Survey (BRFSS; CDC, 2020) ACE Module were used and are public domain.
- Researchers adapted the survey by adding 5 demographic and 3 academic questions regarding GPA and 2 retention questions for a total of 19 items.
- After receiving Institutional Review Board approval, the researchers contacted roughly eight professors from a variety of departments at a regional Kentucky university campus asking them if they would share the SurveyMonkey link with their students. Because of the sensitive nature of the questions, students were able to complete the survey outside of the classroom and in the comfort and privacy of their own home.
- An informed consent statement was included before participants could initiate the survey. The form also directed students where to seek professional help if necessary upon completing the survey.
- 201 college undergraduates completed the ACE survey.
- Chi-square analyses were used to make comparisons between ACE scores, GPA, demographics, and perceived retention rate.

## Results

### Demographics

- 201 college students completed the ACE survey.
- 69.7% female ( $n = 140$ ) and 18.4% male ( $n = 37$ ), with 23 values missing for gender question.

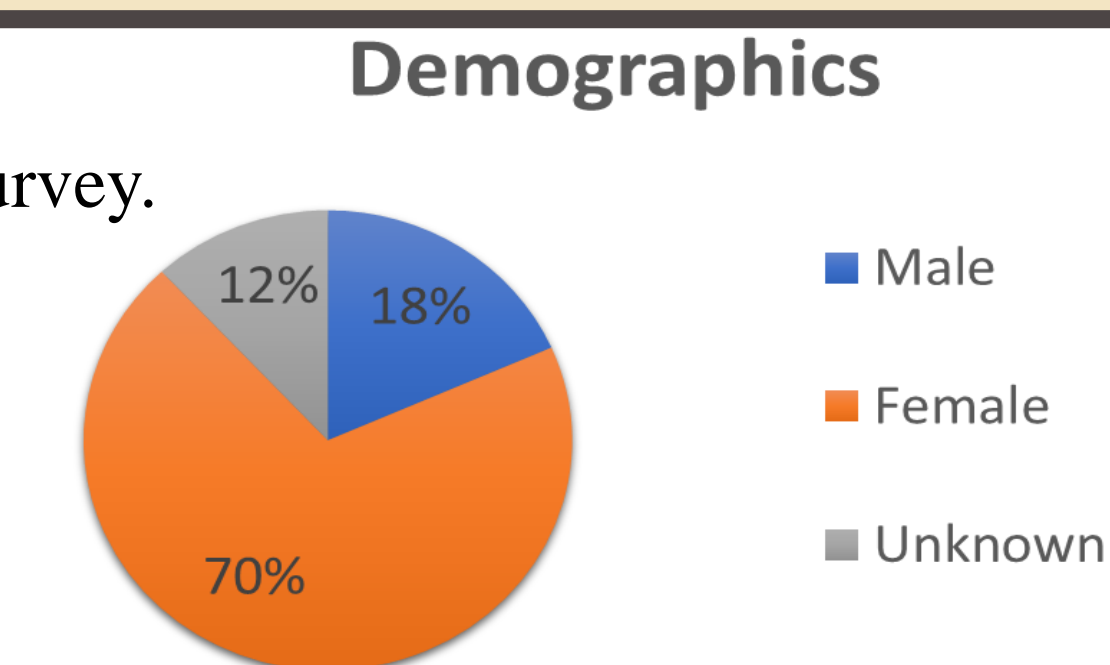


Figure 1. Gender Breakdown

Table 1. Percentage of participants reporting ACEs, by gender

Number of ACEs	Male (%)	Female (%)	Total (%)
0	5.4	12.9	11.2
1	16.2	25.7	23.6
2	27.0	12.9	16.3
3	5.4	14.3	12.4
4 or more	45.9	34.3	36.5
Total	20.8	78.7	100

Figure 2. ACEs Distribution by Gender

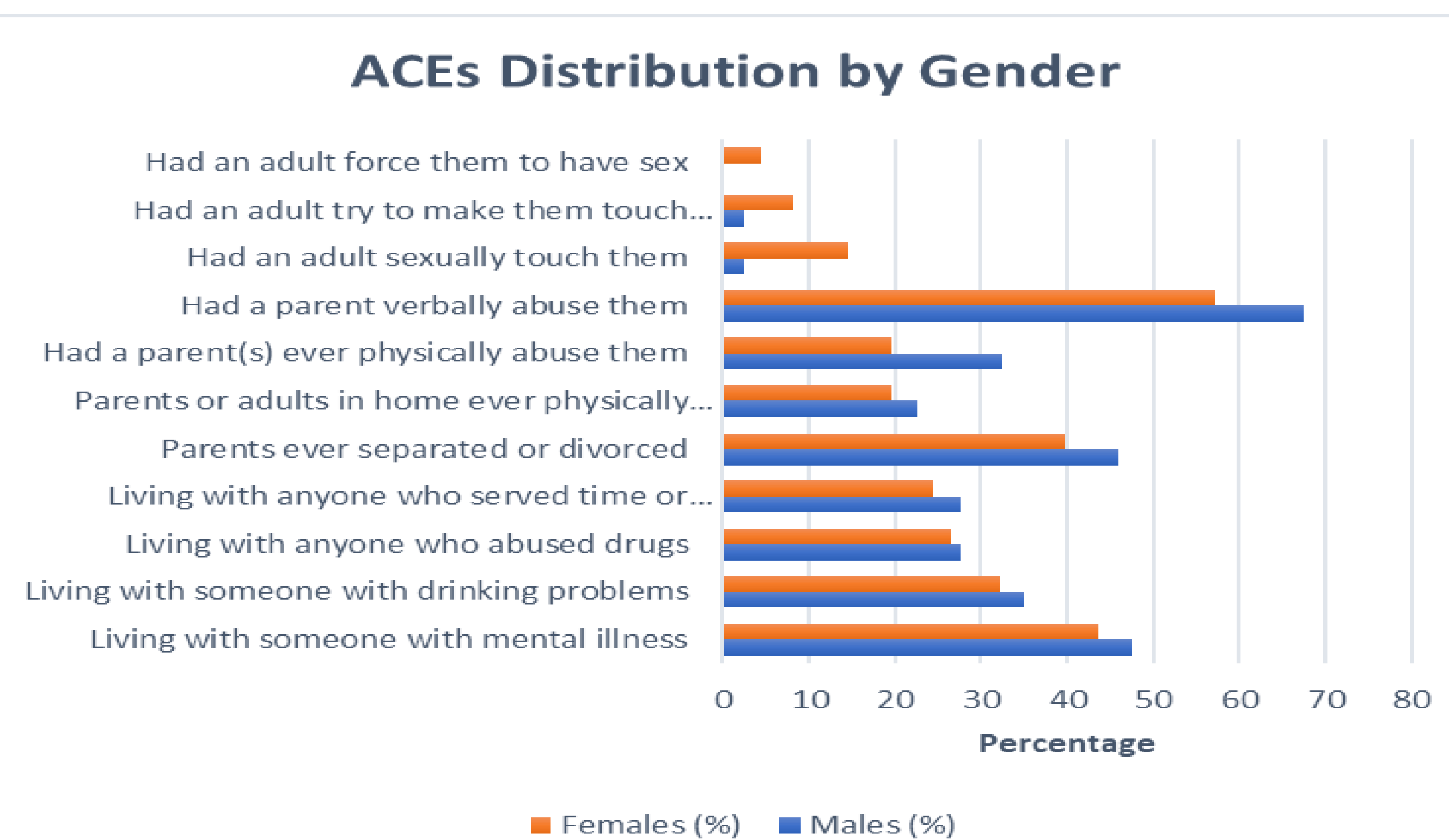


Table 2. Chi-square Results for Hypotheses

- Only question nine (asking about sexual touching from an adult) had a statistical difference between genders ( $p = .038$ ), with 2.5% of males ( $n = 1$ ) and 14.5% of females ( $n = 23$ ) reporting once or more.

Hypothesis	Result
1. At least 60% of Kentucky college students will report one or more ACEs	Correct: 79% of participants reported having at least one ACE.
2. There will be a significant difference in the number of Kentucky college males and females reporting at least one ACE	Incorrect: 94.6% of males and 87.1% of females reported at least one ACE ( $p = .424$ ).
3. Having experienced two or more ACEs will result in a lower retention rate.	Incorrect: Having two or more ACEs did not significantly affect GPA ( $p = .323$ ) nor how many semesters it would take students behind in their program to graduate ( $p = .582$ ).

## Discussion

- 87.1% ( $n = 122$ ) of females and 94.6% ( $n = 35$ ) of males reported at least one or more ACEs. These rates were much higher than average for Kentucky adults.
- The first hypothesis was correct, as 79% of participants reported having at least one ACE. This is significantly higher compared to Kentucky adults overall, as the reported average for the state is that 59% of adults experienced at least one ACE (KDPH Division of Child and Maternal Health, 2016).
- Hypothesis two was incorrect, as there was not a significant difference in the number of Kentucky college males and females reporting at least one ACE.
- The third hypothesis, having experienced two or more ACEs will result in a lower retention rate, was also incorrect. Even experiencing four or more ACEs did not have a statistically significant impact on GPA or being on track to graduate.

## Conclusions & Implications

- It is suggested that there may be a particularly high prevalence of ACEs among eastern Kentucky college students and students may have higher ACE scores than the average Kentucky adult.
- There is an alarmingly high rate of ACEs among these college students (79.1% compared to the state's average of 59%).
- Studies from the literature review agreed that females typically experience ACEs more frequently, but this study found that 87.1% of females and 94.6% of males had at least one ACE. This could be due to a low sample size of men. More studies are needed assessing the prevalence of ACEs for Kentucky male college students.
- Future research could assess what types of ACEs were most common, what areas of childhood home life need to be further addressed in Kentucky, what other factors (e.g., resiliency) may be moderating the role of ACEs on college performance, or what other areas of adult life their ACEs may have impacted if it was not college retention.

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