University of Nevada, Reno

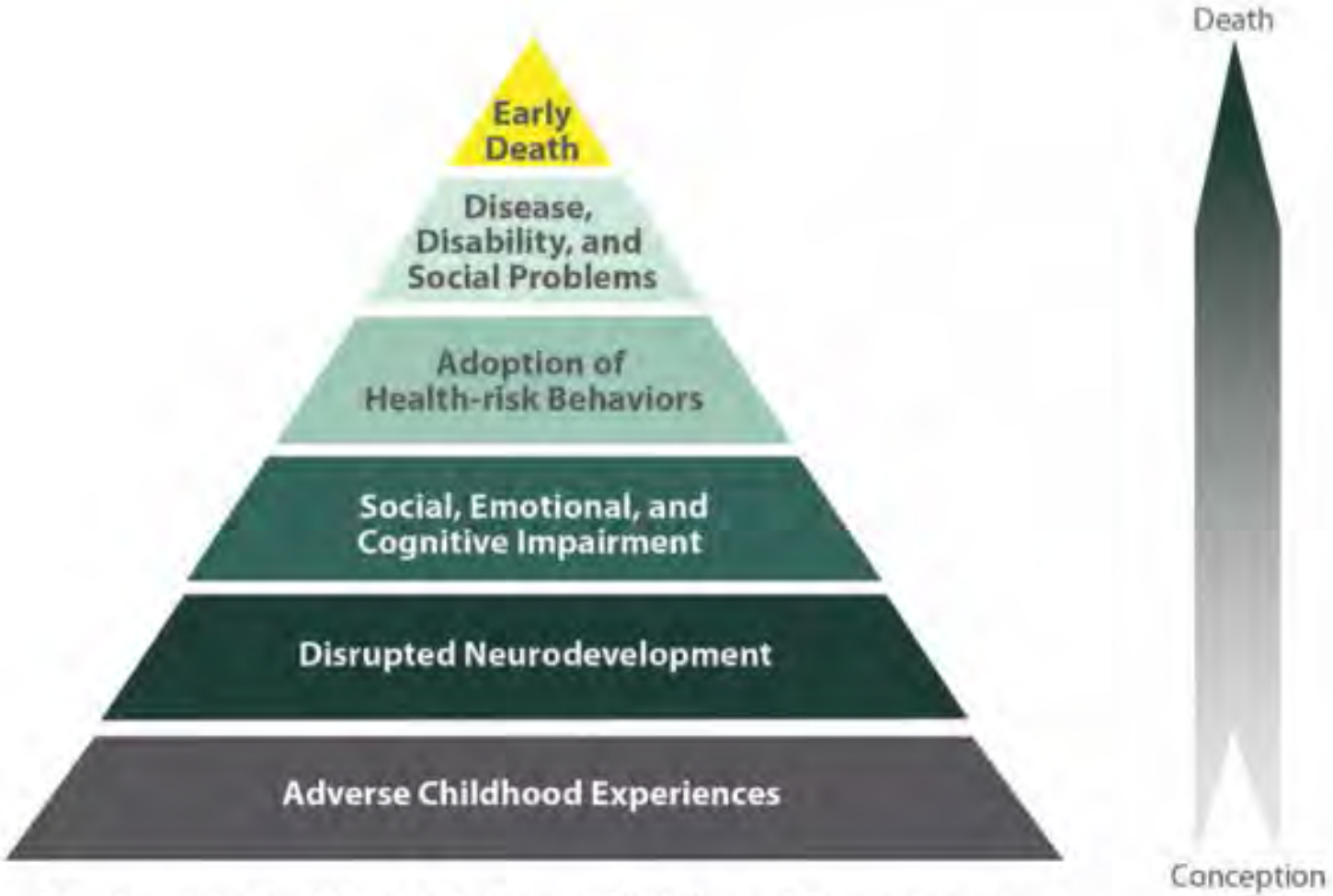
Adverse Childhood Experiences and Suicide Risk among LGB High School Students in Nevada

Kristen Clements-Nolle, PhD, MPH

Agenda Item VII (HEALTH)
Meeting Date: 09-24-18

What are ACEs?

Adverse childhood experiences (ACEs) are stressful or traumatic experiences, including abuse, neglect and a range of household dysfunction such as parental substance abuse, mental health problems, divorce, parental battery and incarceration.



Mechanism by Which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan

PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

The Lifelong Effects of Early Childhood Adversity and Toxic Stress

Jack P. Shonkoff, Andrew S. Garner, THE COMMITTEE ON PSYCHOSOCIAL ASPECTS OF CHILD AND FAMILY HEALTH, COMMITTEE ON EARLY CHILDHOOD, ADOPTION, AND DEPENDENT CARE, AND SECTION ON DEVELOPMENTAL AND BEHAVIORAL PEDIATRICS, Benjamin S. Siegel, Mary I. Dobbins, Marian F. Earls, Andrew S. Garner, Laura McGuinn, John Pascoe and David L. Wood

Pediatrics 2012;129;e232; originally published online December 26, 2011;
DOI: 10.1542/peds.2011-2663

Toxic Stress

Center on the Developing Child
HARVARD UNIVERSITY

http://developingchild.harvard.edu/science/key-concepts/toxic-stress/

Toxic Stress

CENTER for YOUTH WELLNESS

Toxic Stress Research

Exposure to intense, frequent, or sustained stress without the buffering care of a supportive adult, can change children's brains and bodies, including disrupting learning, behavior, immunity, growth, hormonal systems, immune systems, and even the way DNA is read and transcribed.

NERVOUS SYSTEM

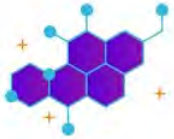
Disruption to the developing brain, including changes to the hippocampus, prefrontal cortex and amygdala, may lead to an increase in risk of cognitive impairment, attention deficits, learning disabilities, hyperactivity, self-regulation, memory and attention, and anxiety.

CARDIOVASCULAR SYSTEM

Toxic stress can increase a person's risk of developing high blood pressure, elevating levels of inflammation that can damage the arteries. These conditions can lead to heart disease, stroke and other serious health issues later in life.

IMMUNE SYSTEM

Higher risk of infection and autoimmune disease may occur due to chronic inflammation and other factors, which cause changes in the body's natural immune defense responses.



ENDOCRINE SYSTEM

Toxic stress can impact growth and development. It can also lead to obesity and changes in the timing of puberty, as well as other issues.

Published in final edited form as:
Child Adolesc Psychiatr Clin N Am. 2014 April ; 23(2): 185–222. doi:10.1016/j.chc.2014.01.002.

"The Biological Effects of Childhood Trauma"

Michael D. De Bellis, MD, MPH and **Abigail Zisk A.B.**

I. Synopsis

Trauma in childhood is a grave psychosocial, medical, and public policy problem that has serious consequences for its victims and for society. Chronic interpersonal violence in children is common worldwide. Developmental traumatology, the systemic investigation of the psychiatric and psychobiological effects of chronic overwhelming stress on the developing child, provides a framework and principles when empirically examining the neurobiological effects of pediatric trauma.

Despite the widespread prevalence of childhood trauma, less is known about trauma's biological effects in children as compared to adults with child trauma histories; and even less is known about how these pediatric mechanisms underlie trauma's short-term and long-term medical and mental health consequences. This article focuses primarily on the peer-reviewed literature on the neurobiological sequelae of childhood trauma in children and adults with histories of childhood trauma. We also review relevant studies of animal models of stress to help us better understand the

Adverse Childhood Experiences: Nevada Data

ACE Surveillance Data in Nevada

- Adult Data:
  - The Behavioral Risk Factor Surveillance System (BRFSS) included the CDC ACE module in 2010, 2011, 2014, 2015, 2016, and 2018

- Youth Data:
  - The High School Youth Risk Behavior Survey (YRBS) included a modified ACE module in 2015 and 2017
  - The Middle School YRBS included a modified ACE module in 2017

Nevada Youth Risk Behavior Survey (YRBS)

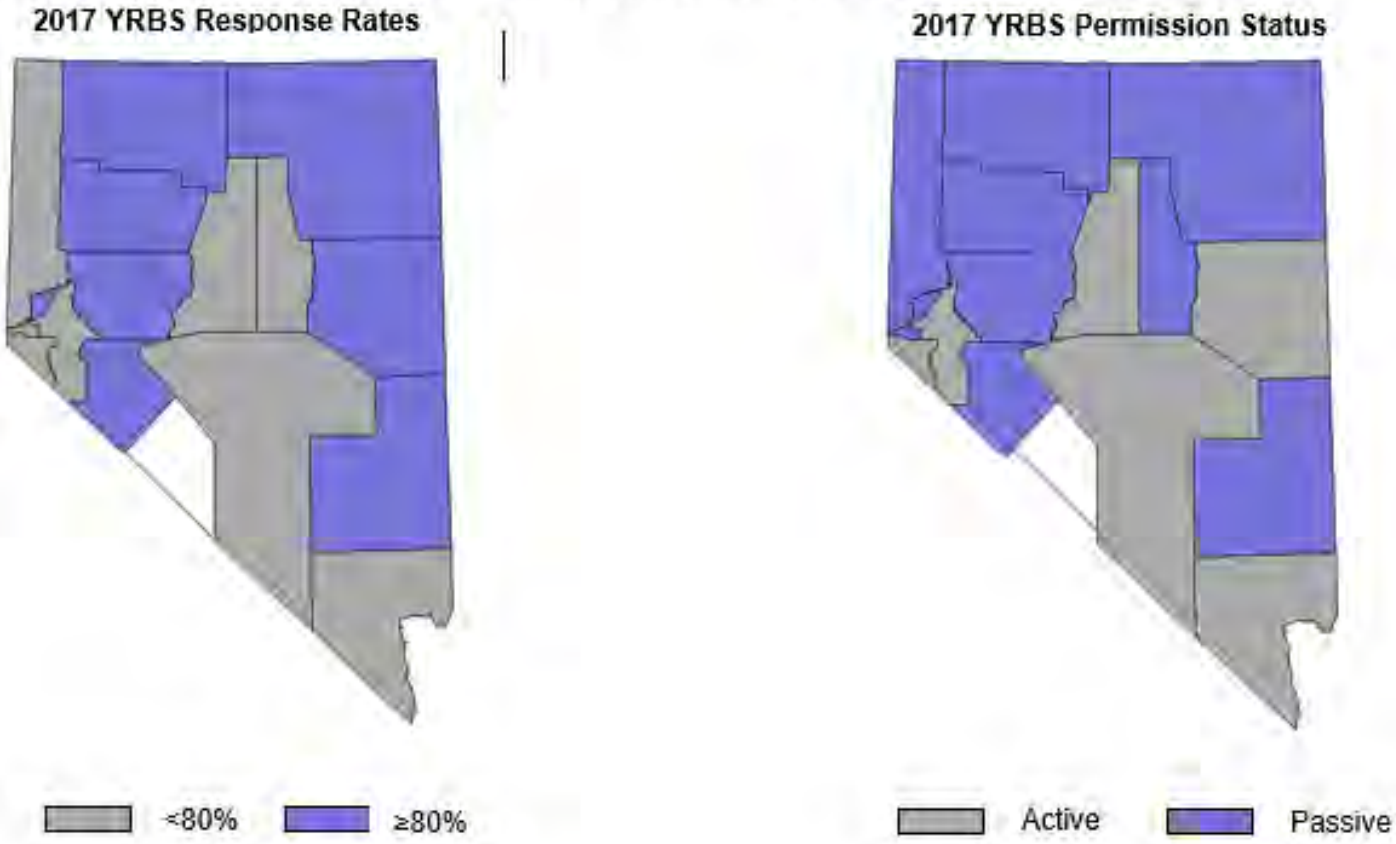
- CDC funds UNR to conduct the YRBS with a random sample of high school students
- NV Division of Public and Behavioral Health contracts with UNR to sample *all* high schools, middle schools, tribal schools (regular, charter and alternative)
- 2 stage random sampling strategy is used to ensure every child has possibility of being selected
- Data are weighted at the state level and regional level based on the sex, race/ethnicity, and grade

YRBS Sampling, 2017

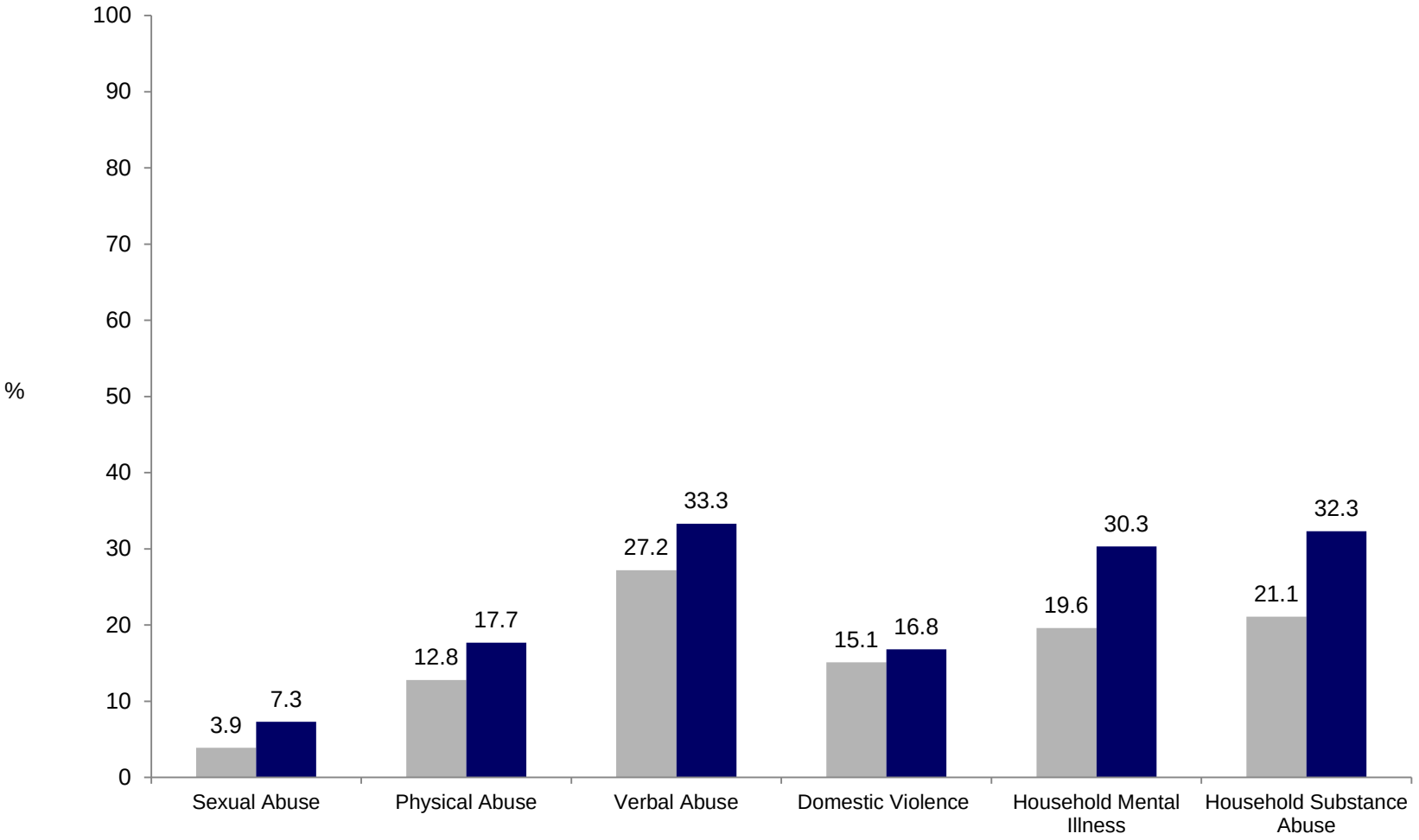
Region	School District	# Middle Schools	# High Schools	Coalitions
1	Carson City	2	2	Partnership Carson City
2	Douglas County	2	2	Partnership of Community Resources
3	Elko County White Pine County Eureka County	9	9	Pace Coalition
4	Churchill County Humboldt County Pershing County Lander County	5	5	Churchill Community Coalition Frontier Community Coalition
5	Lyon County Mineral County Storey County	7	7	Healthy Communities Coalition
6	Nye County Lincoln County	10	7	Nye Communities Coalition
7	Washoe County	16	17	Join Together Northern Nevada
8	Clark County	62	49	Care Coalition PACT Coalition Nevada Community Prevention Coalition
	TOTAL	113 Schools **5,467** students	98 Schools **5,336** students	

2017 High School YRBS Permission Status and Response Rates

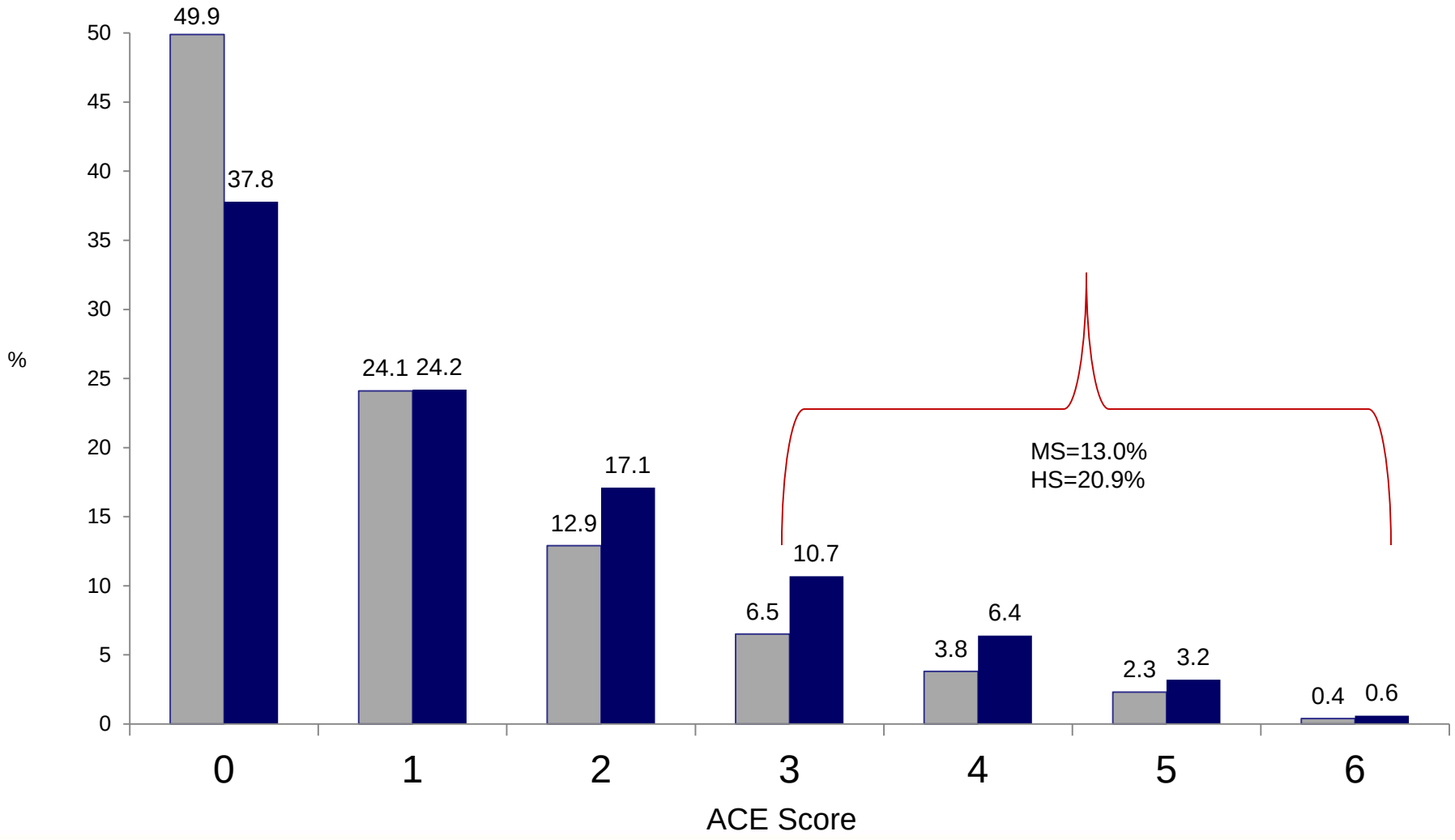
Figure 1: YRBS response rates and permission status by school district, 2017



Adverse Childhood Experiences (ACEs), 2017 YRBS



Total Number of ACEs, 2017 YRBS

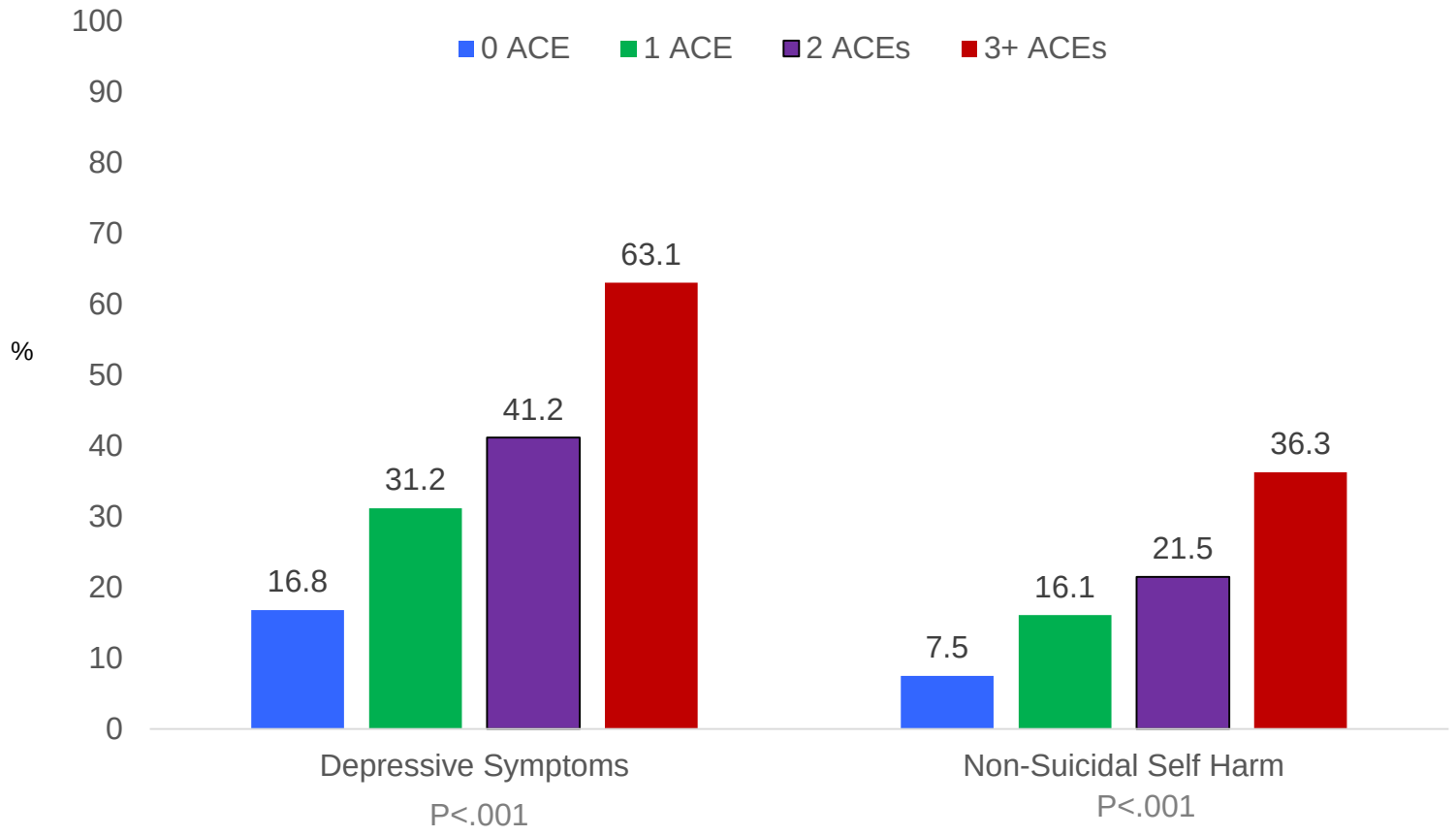


Demographic Differences in ACE Scores, 2017 YRBS

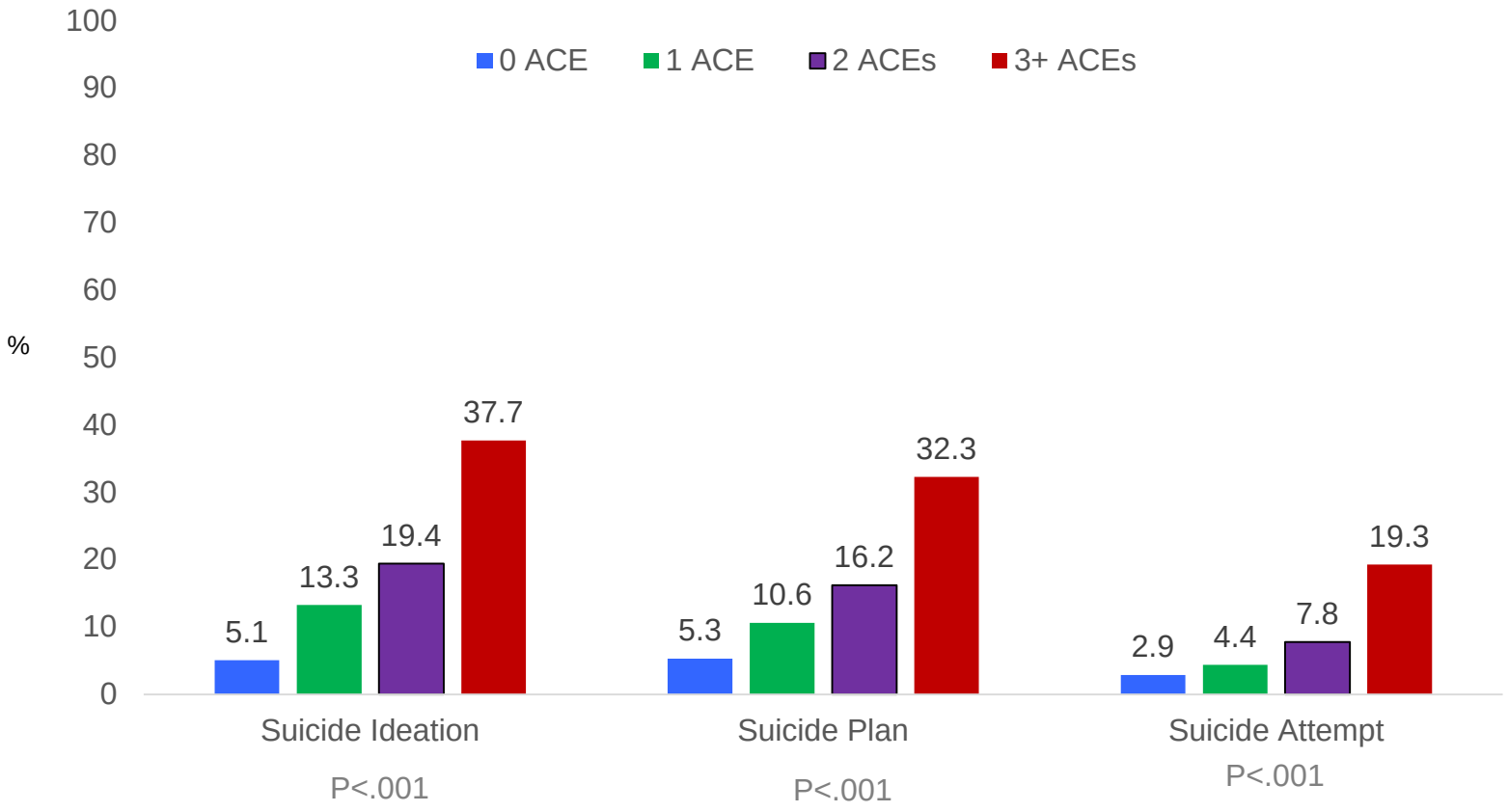
- **ACE scores were significantly higher among:**
  - **Female students**
  - **Older students**
  - **LGB students (HS)**
  - **Students living in military households**
  - **Students who qualified for free/reduced lunch**

ACEs and Emotional Health among High School Students in Nevada

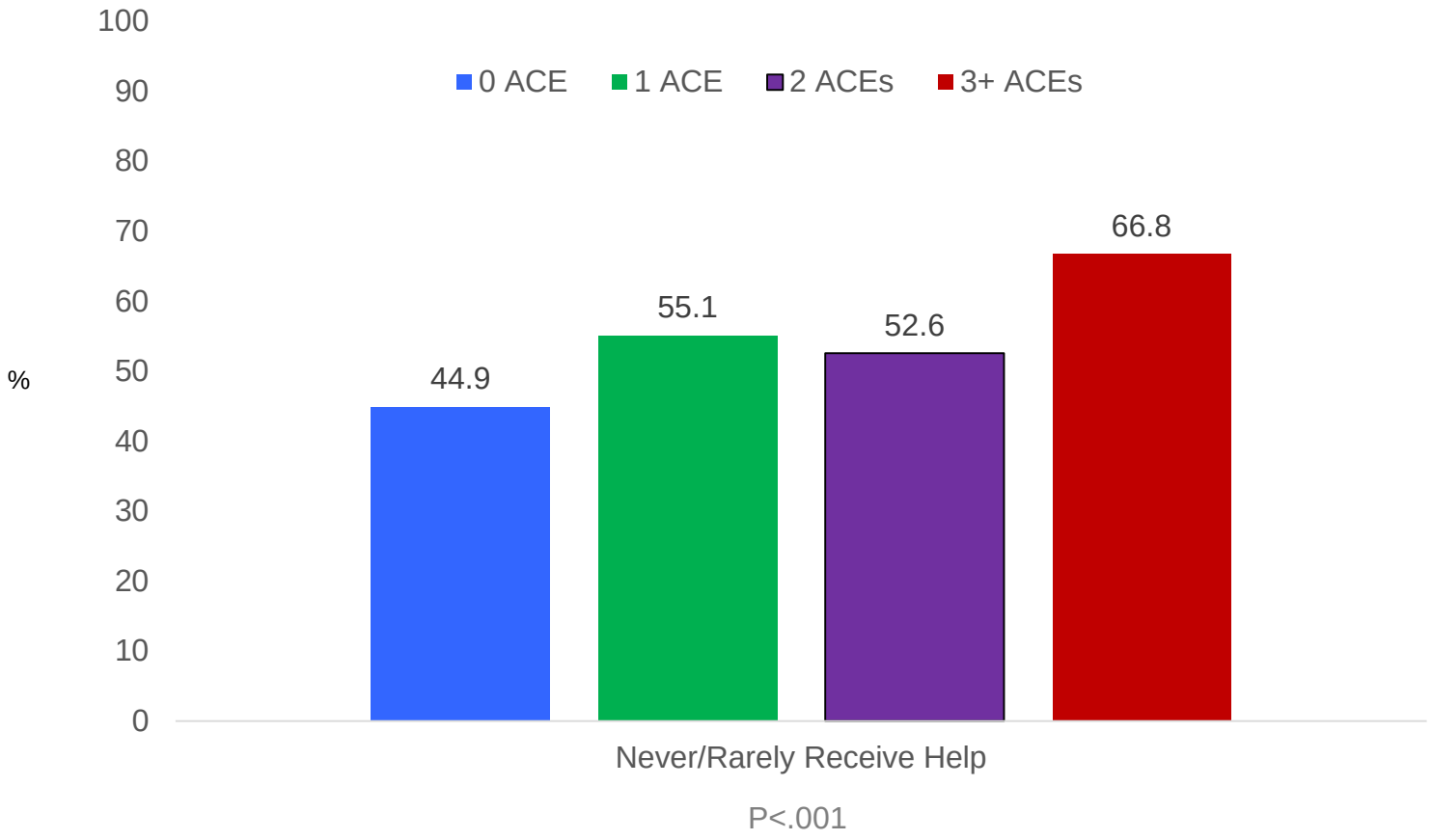
Past Year Depressive Symptoms and Non-Suicidal Self Harm, 2017 High School YRBS



Past Year Suicide Behaviors, 2017 High School YRBS

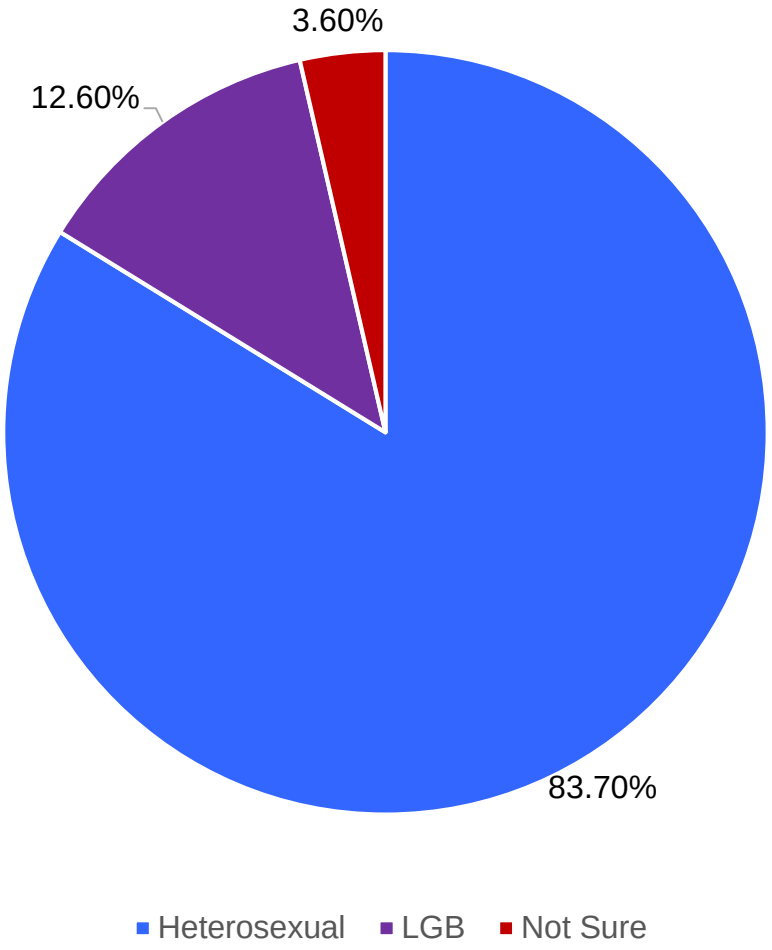


Never/Rarely Received Help Needed When Experiencing Internalizing Symptoms, 2017 High School YRBS



ACEs and Behavioral Health among LGB High School Students in Nevada

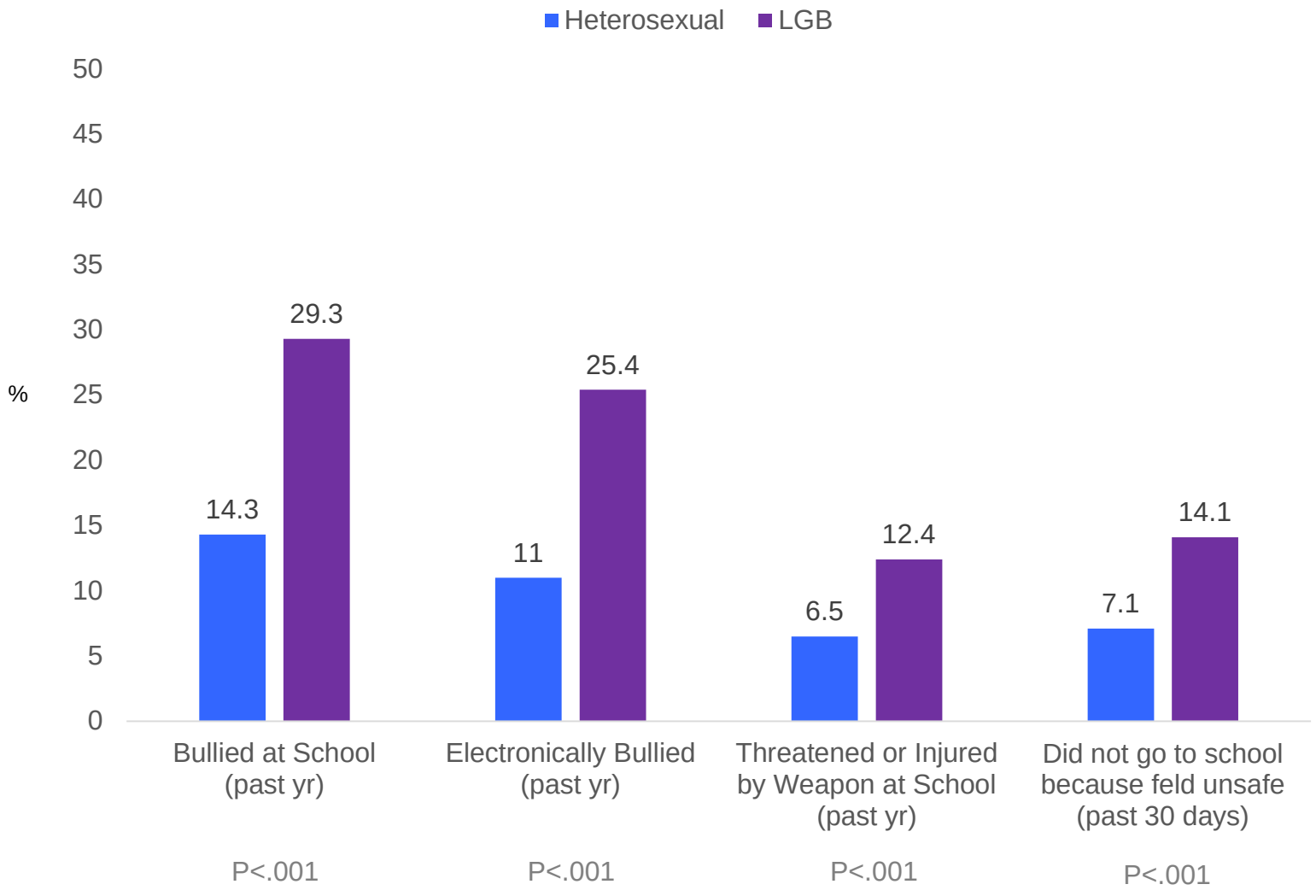
Sexual Identity of Students – 2017 High School YRBS



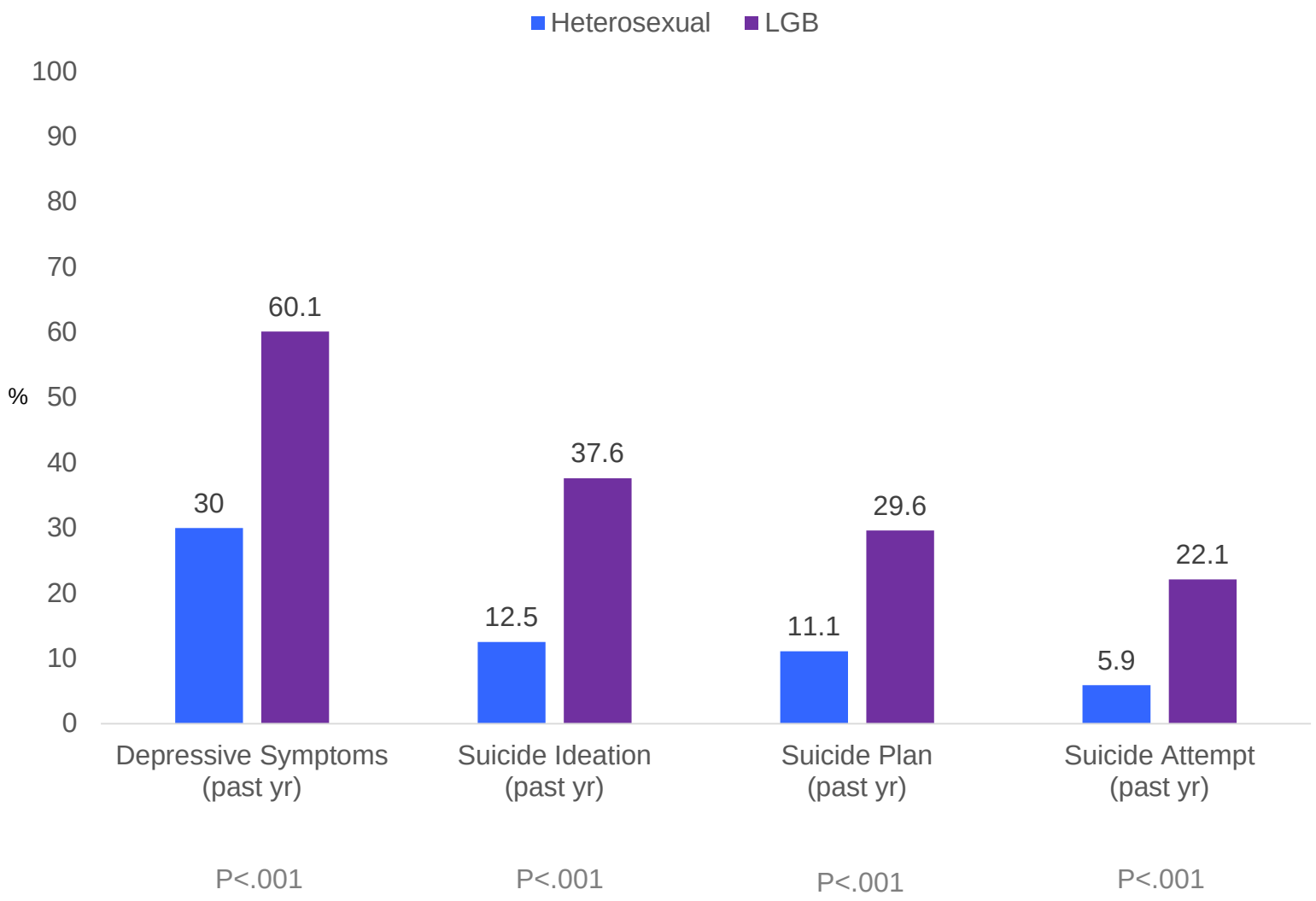
Health Disparities among LGB Students – 2017 High School YRBS

Risk Behavior Category	Behaviors With Significant Differences / Total Number of Behaviors	
	Fraction	Percent
All Categories	72 / 107	67%
Safety	1 / 2	50%
Violence	1 / 3	33%
Victimization	11 / 11	100%
Emotional Health	8 / 8	100%
Substance Use	30 / 39	77%
Sexual Behaviors	7 / 13	54%
Diet, Physical Activity, Weight	14 / 31	45%

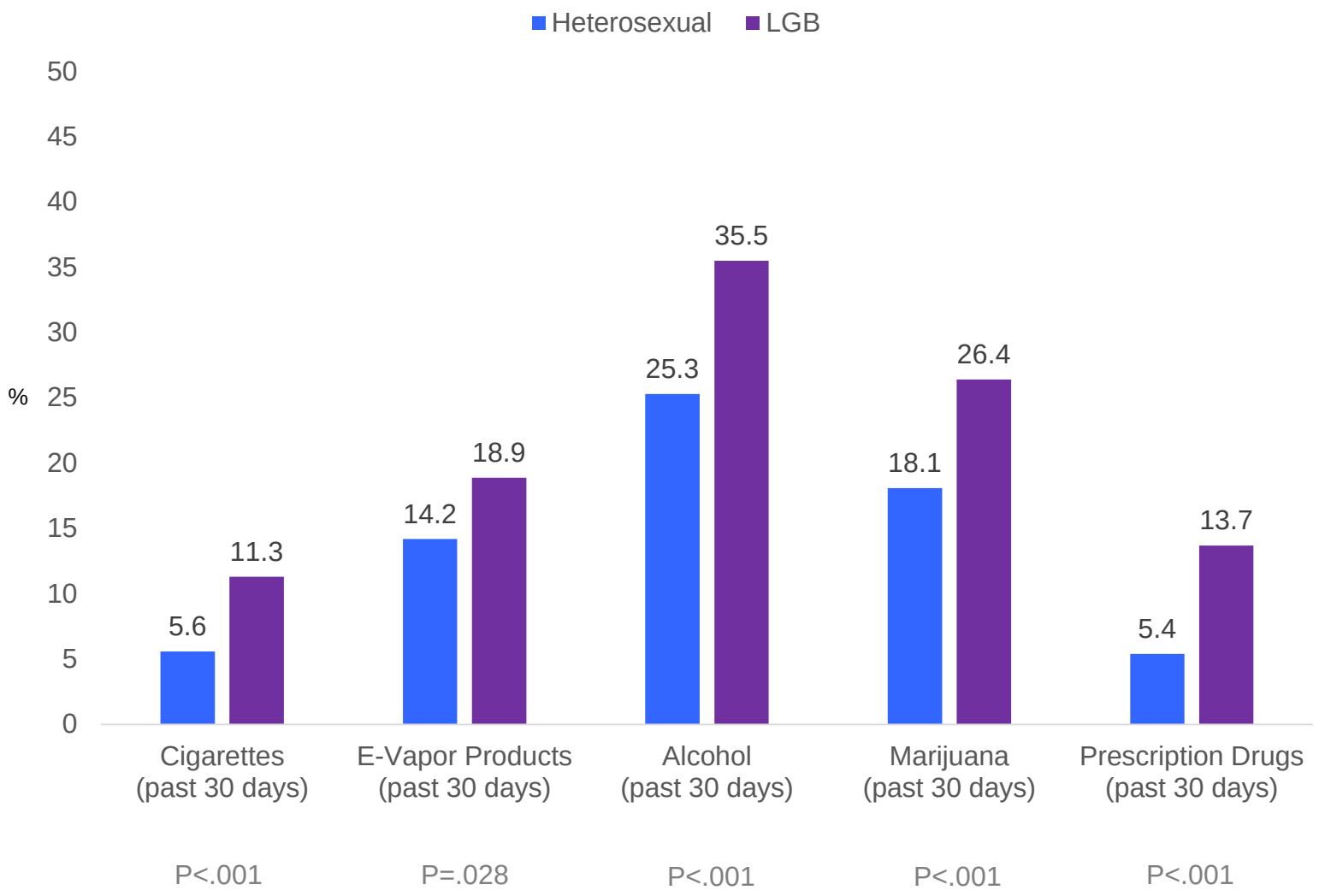
Recent Victimization by Sexual Identity 2017 High School YRBS



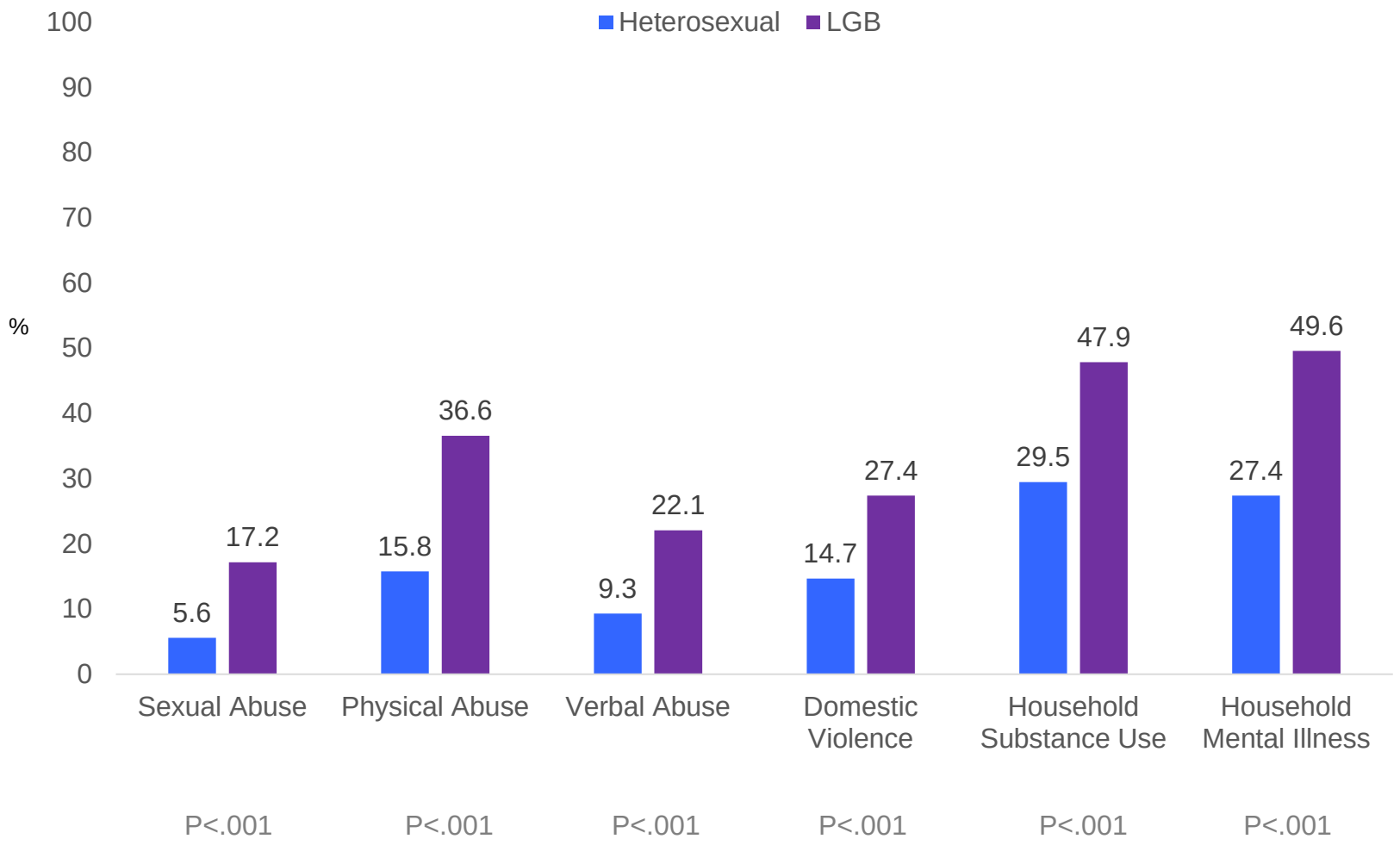
Past Year Emotional Health by Sexual Identity 2017 High School YRBS



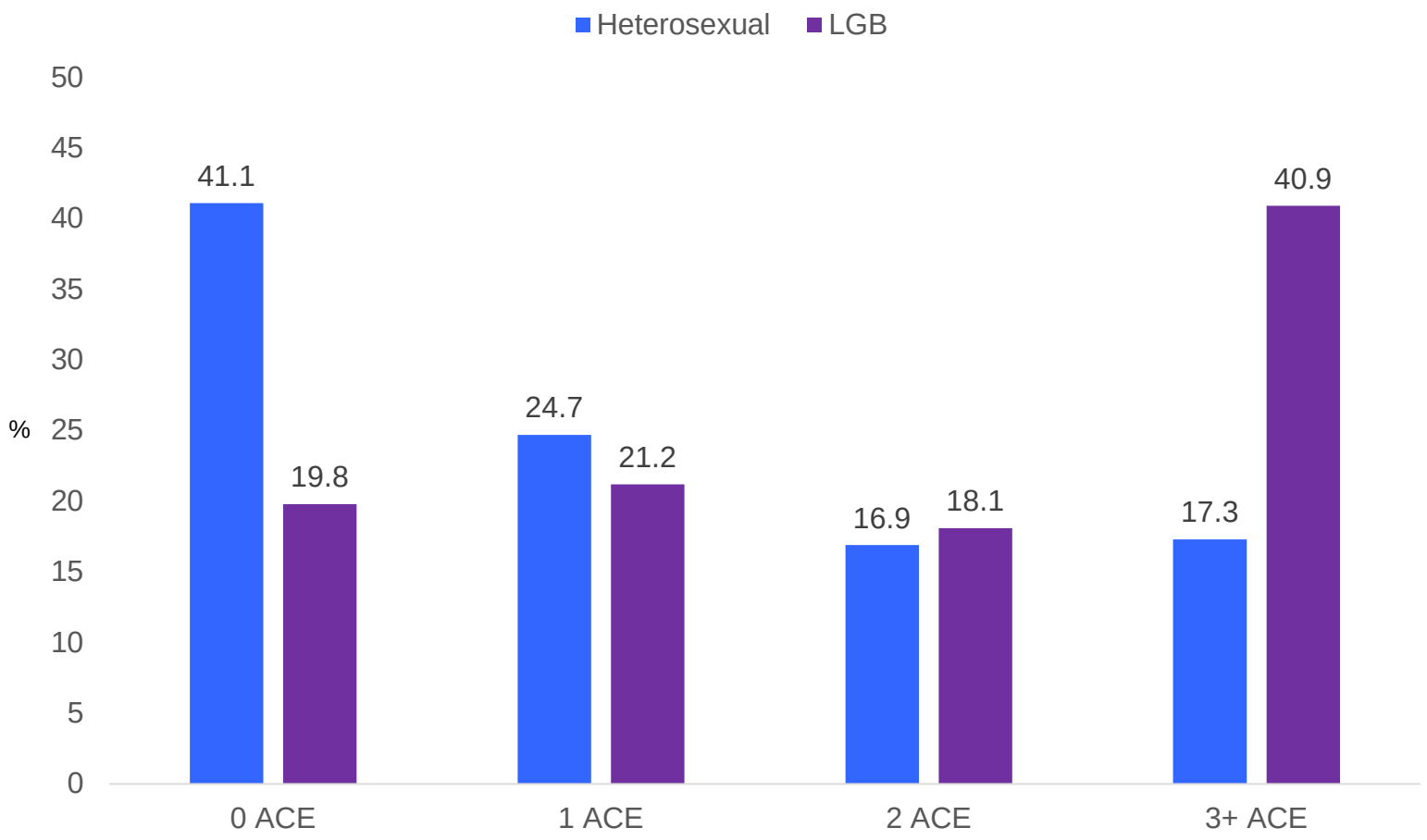
Past 30 Day Substance Use by Sexual Identity 2017 High School YRBS



ACEs by Sexual Identity
2017 High School YRBS



ACEs by Sexual Identity 2017 High School YRBS



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Original article

Sexual Identity, Adverse Childhood Experiences, and Suicidal Behaviors

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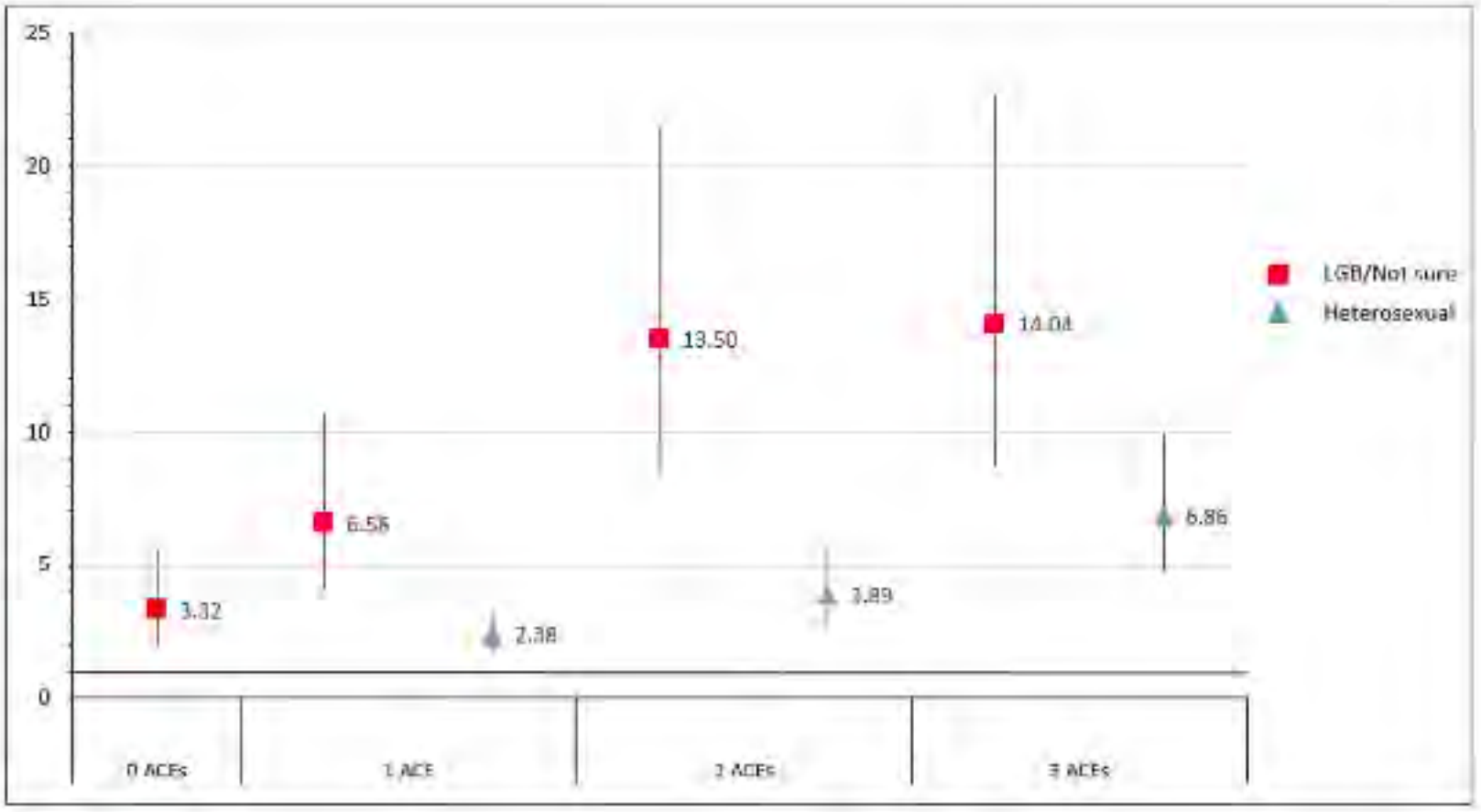
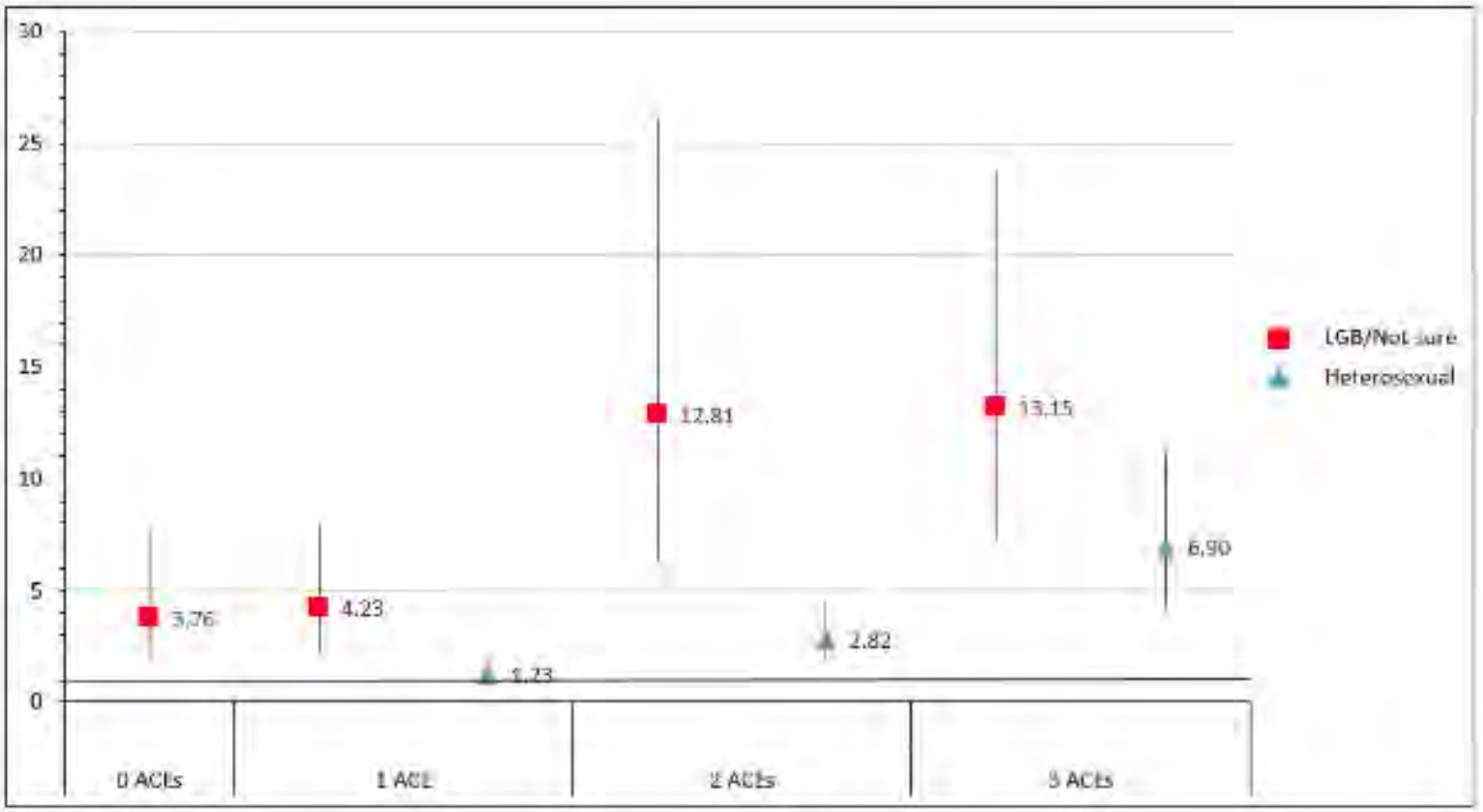
[b] *Office of Public Health Informatics and Epidemiology, Nevada Division of Public and Behavioral Health, Las Vegas, Nevada*

Interacting Influence of ACEs and Sexual Identity: Suicide Ideation, 2015 High School YRBS



Interacting Influence of ACEs and Sexual Identity: Suicide Attempts, 2015 High School YRBS



https://www.unr.edu/public-health/research/yrbs

High School

- 2017 Nevada High School YRBS
- 2015-2017 Nevada High School YRBS Comparison Report

Middle School

- 2017 Nevada Middle School YRBS
- 2015-2017 Nevada Middle School YRBS Comparison Report

2017 Nevada YRBS Special Reports

High School

- 2017 Nevada High School YRBS: Clark County Special Report
- 2017 Nevada High School YRBS: Washoe County Special Report

Middle School

- 2017 Nevada Middle School YRBS: Clark County Special Report
- 2017 Nevada Middle School YRBS: Washoe County Special Report

2017 CDC YRBS Reports

High School

- 2017 Nevada High School CDC YRBS Academic Achievement
- 2017 Nevada High School CDC YRBS Summary Tables

Childhood trauma is a strong risk factor for multiple behavioral health outcomes

Early screening and intervention, including building resiliency and youth assets may improve lifelong outcomes

Screening and referral

Treatment		
Trauma Focused Cognitive Behavioural Therapy (TF-CBT)	Provides psycho-education; addresses parenting skills; teaches affect modulation and expression as well as relaxation techniques and coping skills; assists with narrative processing of the trauma; uses desensitisation techniques to reduce traumatic reactions to trauma reminders; and aims to improve the safety of the child.	Cohen (2005), Lieberman (2011)
Child-Parent Psychotherapy (CPP)	Combines psychoanalytic attachment and trauma theory with social learning and CBT techniques to start to restore emotional regulation and a positive attachment relationship to the caregiver and to enable the re-telling of the trauma in an integrated life narrative.	Lieberman and van Horn (2005, 2008) both cited in Lieberman (2011)
Trauma Systems Therapy (TST)	Targets the development of self-regulatory capacities in children and reduction of stress and risk in the child's environment.	Saxe *et al.* (2005)
Attachment, Self-Regulation and Competency (SRC) model	Focuses on the development of skills to overcome trauma related barriers to healthy development.	Kinniburgh *et al.* (2005)
Skills Training in Affect and Interpersonal Regulation (STAIR)	A group treatment model for adolescents which directly targets affect regulation and interpersonal difficulties before progressing to emotional processing of the trauma through the use of prolonged exposure techniques.	Cloitre *et al.* (2002), Cook *et al.* (2005)
Structured Psychotherapy for Adolescents Responding to Chronic Stress (SPARCS)	A group treatment model which aims to foster and augment current coping skills through validation and connection. It aims to address difficulties with emotional regulation, physical health, attention and information processing, self-perception and sense of meaning.	Cook *et al.* (2005), De Rosa *et al.* (2006)
Trauma Adaptive Recovery Group Education and Training (TARGET)	Teaches adolescents skills for affect and physical self-regulation, information processing, relational problem solving and coping with stress through the use of experiential exercises.	Cook *et al.* (2005), Ford and Russo (2006)

Cognitive-Behavioral Intervention for Trauma in Schools (CBITS)

A Mental Health Intervention for Schoolchildren Exposed to Violence

A Randomized Controlled Trial

Bradley D. Stein, MD, PhD
Lisa H. Jaycox, PhD
Sheryl H. Kataoka, MD, MSHS
Marleen Wong, MSW
Wenli Tu, MS
Marc N. Elliott, PhD
Arlene Fink, PhD

Context No randomized controlled studies have been conducted to date on the effectiveness of psychological interventions for children with symptoms of posttraumatic stress disorder (PTSD) that has resulted from personally witnessing or being personally exposed to violence.

Objective To evaluate the effectiveness of a collaboratively designed school-based intervention for reducing children's symptoms of PTSD and depression that has resulted from exposure to violence.

Design A randomized controlled trial conducted during the 2001-2002 academic year.

Setting and Participants Sixth-grade students at 2 large middle schools in Los Angeles who reported exposure to violence and had clinical levels of symptoms of PTSD.

Intervention Students were randomly assigned to a 10-session standardized cognitive-behavioral therapy (the Cognitive-Behavioral Intervention for Trauma in Schools) early intervention group (n=61) or to a wait-list delayed intervention comparison group (n=65) conducted by trained school mental health clinicians.

Main Outcome Measures Students were assessed before the intervention and 3 months after the intervention on measures assessing child-reported symptoms of PTSD (Child PTSD Symptom Scale; range, 0-51 points) and depression (Child Depression Inventory; range, 0-52 points), parent-reported psychosocial dysfunction (Pediatric Symptom Checklist; range, 0-70 points), and teacher-reported classroom problems using the Teacher-Child Rating Scale (acting out, shyness/anxiousness, and learning problems; range of subscales, 6-30 points).

Results Compared with the wait-list delayed intervention group (no intervention), after 3 months of intervention students who were randomly assigned to the early intervention group had significantly lower scores on symptoms of PTSD (8.9 vs 15.5, adjusted mean difference, −7.0; 95% confidence interval [CI], −10.8 to −3.2), depression (9.4 vs 12.7, adjusted mean difference, −3.4; 95% CI, −6.5 to −0.4), and psychosocial dysfunction (12.5 vs 16.5, adjusted mean difference, −6.4; 95% CI, −10.4 to −2.3). Adjusted mean differences between the 2 groups at 3 months did not show significant differences for teacher-reported classroom problems in acting out (−1.0; 95% CI, −2.5 to 0.5), shyness/anxiousness (0.1; 95% CI, −1.5 to 1.7), and learning (−1.1, 95% CI, −2.9 to 0.8). At 6 months, after both groups had received the intervention, the differences between the 2 groups were not significantly different for symptoms of PTSD and depression; showed similar ratings for psychosocial function; and teachers did not report significant differences in classroom behaviors.

Conclusion A standardized 10-session cognitive-behavioral group intervention can significantly decrease symptoms of PTSD and depression in students who are exposed to violence and can be effectively delivered on school campuses by trained school-based mental health clinicians.

JAMA. 2003;290:603-611 www.jama.com

IN THE LAST DECADE, THERE HAS BEEN heightened awareness of the extent to which children personally witness or experience violence.[1-3] Public health officials have responded by identifying violence as one of the most significant US public health issues.[4-6] Large numbers of US children experience such violence, and an even greater number may experience symptoms of distress after personally witnessing violence directed at others.[2,7-9] For many children, personally experiencing or directly witnessing multiple incidents of violence is the norm.[2,10,11] Violence affects all racial, ethnic, and socioeconomic groups, but its burden falls disproportionately on urban,[9,12] poor, and minority populations.[13,14]

Several studies have found that the majority of children exposed to violence, defined as personally witnessing or directly experiencing a violent event, display symptoms of posttraumatic stress disorder (PTSD),[15,16] and a substantial minority develop clinically significant PTSD.[17-19] However, the harmful effects of violence extend beyond symptoms of PTSD. Exposure to violence is associated with depression[20] and behav-

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THE COMMUNITY RESILIENCE INITIATIVE- PART 2

2. Schools. New Haven Public Schools provide a unique, nearly ideal venue through which ACEs can be addressed. CRI proposes:

a. ACEs screening for every public school student. Every child, every year, will be screened for ACEs and behavioral health problems, much like they are screened for immunization, vision, or reading, through a mix of school staff, SBHCs and private providers. The screening results will be properly reviewed, and appropriate referrals will be made to school social workers/psychologists and/or school based health clinics and/or outside agencies. If a child reports actual abuse or neglect, the principal and staff will meet with the child; if abuse is confirmed, appropriate reports and referrals will be made including to DCF, Yale Center for Children Exposed to Violence, the Post Traumatic Stress Center, and Clifford Beers Clinic.

b. ALIVE/PBIS or other robust school wide early intervention. School administrators will continue to grow the partnership with the Foundation for the Arts and Trauma through the Boost! Initiative. This partnership has spawned a program called ALIVE (Animating Learning by Integrating and Validating Experience) which focuses on early intervention and prevention by reducing chronic stress in children K-12. Currently in nine schools, Boost will ultimately be in all New Haven schools. ALIVE has proven particularly impactful in reducing behavioral disruptions in school. Barnard Environmental Magnet School has fully implemented the ALIVE program through Boost. Referrals to the office have decreased from over 700 prior to the ALIVE program coming in 2011 to under 70 in 2012, a remarkable change due to ALIVE, PBIS and other efforts at the school. In addition PBIS and de-escalation trainings will be expanded to more schools, and all school personnel will be trained in trauma and its effects in the classroom, through a mix of school staff, SBHCs and private providers. All staff and personnel will be trained in trauma-informed practices, and all discipline policies will be designed with trauma-informed care.

c. CBITS and vigorous referral system. In addition to the ALIVE program, Cognitive Behavioral Intervention for Trauma in School (CBITS) will be available for students in grades 5-12. CBITS is a school-based, group and individual intervention. It is designed to reduce symptoms of post-traumatic stress disorder (PTSD), depression, and behavioral problems, and to improve functioning, grades and attendance, peer and parent support, and coping

http://www.cityofnewhaven.com/NewsYouCanUse/readmore.asp?ID=%7bF881F228-240B-4FA5-897A-81FA34442FF1%7d

PAPER TIGERS

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AMERICAN EDUCATION WEEK EVENT FAQ

Paper Tigers captures the pain, the danger, the beauty, and the hopes of struggling teens—and the teachers armed with new science and fresh approaches that are changing their lives for the better.

RESILIENCE

THE BIOLOGY OF STRESS & THE SCIENCE OF HOPE

Official Selection 2016 sundance film festival

THE MARTHA'S VINEYARD FILM FESTIVAL 2016 Official Selection

Sonoma International Film Festival OFFICIAL SELECTION 2016

OFFICIAL SELECTION Santa Barbara INTERNATIONAL Film FESTIVAL

FESTIVAL of FILM

OFFICIAL SELECTION CARMEL INTERNATIONAL FILM FESTIVAL 2016

Official Selection Seattle International Film Festival 2016

CLEVELAND INTERNATIONAL FILM FESTIVAL OFFICIAL SELECTION

OFFICIAL SELECTION mspIFF 2016

"...AN ENGROSSING STUDY OF HOW ADVERSE CHILDHOOD EXPERIENCES (OR ACES) CAN BE LINKED TO DESTRUCTIVE BEHAVIOR AND MEDICAL DISEASES"

–Matt Fagerholm ROGEREBERT.COM

QUESTIONS?

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