

ADVERSE CHILDHOOD EXPERIENCES AMONG WYANDOTTE COUNTY, KANSAS ADULTS

2014 Kansas Behavioral Risk
Factor Surveillance System

Adverse Childhood Experiences Among Wyandotte County, Kansas Adults

2014 Kansas Behavioral Risk Factor Surveillance System

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**THE JUNIOR LEAGUE OF
WICHITA**



Kansas Children's Service League

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Executive Summary

Researchers have demonstrated a link between adverse childhood experiences (ACE) of abuse, neglect and family dysfunction and health status later in life. This may be explained in part by a toxic physiological stress response, such as elevated stress hormone levels, to multiple stressors, which may have damaging effects on a child's developing brain. The Behavioral Risk Factor Surveillance System (BRFSS) introduced an optional module in 2008 to assess the relationship between ACE and health status at the population-level. The ACE optional module was included for the first time in the Kansas BRFSS in 2014.

The ACE module is comprised of 11 questions that assess the following eight categories of ACE:

Childhood Abuse

1. physical abuse
2. sexual abuse
3. emotional abuse

Household Dysfunction

4. presence of a mentally ill household member
5. alcohol or drug abuse in the household
6. incarcerated household member
7. violence between adults in the household
8. parental divorce or separation

Self-reported exposure to any single adverse childhood experience category is counted as one point toward the final ACE score (range: 0 to 8). SAS complex survey procedures were used to calculate overall and subpopulation prevalence estimates of each adverse childhood experience category and ACE score. Prevalence estimates of various health risk factors, perceived poor health indicators and chronic conditions were also examined by ACE score. In addition, logistic regression was used to examine the association between ACE score category and various health risk factors and conditions, while controlling for selected demographic characteristics.

This report summarizes findings from analysis of Kansas BRFSS data for Wyandotte County, Kansas adults 18 years and older.

Key Findings:

- ACE are prevalent: more than half of Wyandotte County adults have experienced at least one adverse childhood experience.
- In Wyandotte County, high ACE scores (3+) are more common among younger adults and those with lower levels of education.
- The prevalence of depression was higher among Wyandotte County adults with high (3+) ACE scores compared with those with no ACE.

- After controlling for selected demographic variables, significant positive associations were observed between ACE score category and arthritis and depression among Wyandotte County adults.

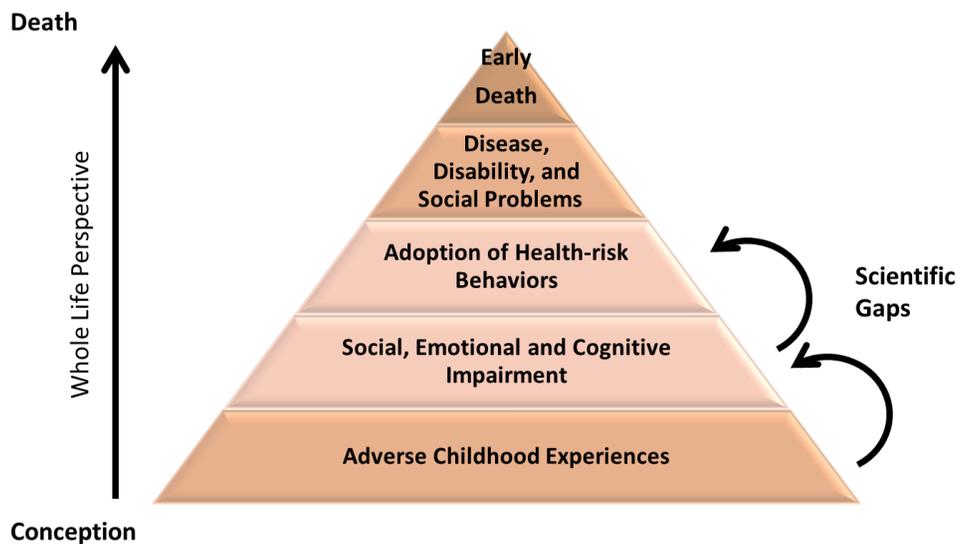
Wyandotte County data highlight the need to increase awareness of ACE as a public health issue. Preventing ACE may have beneficial effects on the long-term health of Wyandotte County residents.

Introduction

The ACE Study

Researchers have demonstrated a link between adverse childhood experiences (ACEs) of abuse, neglect and family dysfunction, and health status later in life.ⁱ This may be explained in part by a toxic physiological stress response, such as elevated stress hormone levels, to multiple stressors, which may have damaging effects on a child's developing brain.^{ii,iii} The ACE study, a collaboration between the Centers for Disease Control and Prevention (CDC) and Kaiser Permanente's Health Appraisal Clinic in San Diego, CA, is one of the largest investigations ever conducted to assess associations between childhood maltreatment and health and well-being later in life.^{iv} The initial phase of the ACE study was conducted from 1995 to 1997. At the time the study was conceptualized, the relationship between single types of abuse, primarily sexual abuse, and poor outcomes across the lifespan were well known, but the impacts of a broad range of childhood abuse and household dysfunction had not yet been assessed (Figure 1).^v Based on this knowledge, the study sought to examine multiple types of abuse and trauma and their cumulative effects on health outcomes in adulthood. ACE study findings suggest that certain experiences are major risk factors for the leading causes of illness and death as well as poor quality of life in the U.S.

Figure 1. Conceptual Framework for the ACE Study



Associations between ACE and health outcomes have since been examined using population-based surveys, including the Behavioral Risk Factor Surveillance System (BRFSS).

The Kansas Behavioral Risk Factor Surveillance System

The BRFSS is an ongoing, population-based, random-digit-dialed telephone survey of non-institutionalized civilian adults 18 years and older. The survey is coordinated by the Centers for Disease Control and Prevention (CDC) and is conducted annually by all 50 states, the District of Columbia and several U.S. territories. The Behavioral Risk Factor Surveillance System (BRFSS) introduced an optional module in 2008 to assess the relationship between ACE and health status at the population-level. The ACE optional module was included for the first time in the Kansas BRFSS in 2014.

For the current report, separate analyses were conducted to compare Wyandotte County estimates with statewide estimates. County of residence was defined via participant self-report. The complex survey methodology and analytical procedures for BRFSS are designed to produce prevalence estimates that can be generalized to Kansas adults statewide. Prevalence estimates are estimates of a true value (population parameter) and are thus subject to random variation. Ninety-five percent confidence intervals are used to characterize this variability and can be thought of as a range of values that will contain the true value 95 percent of the time.

Several considerations should be taken into account when interpreting BRFSS estimates:

- BRFSS estimates do not apply to individuals without telephone service (approximately 2.9% of the population),^{vi} those who reside on military bases or within institutions or those who are unable to complete a telephone survey.
- BRFSS prevalence estimates are self-reported and are subject to bias due to respondents' inability or unwillingness to provide accurate information about their own behaviors or characteristics.
- Prevalence estimates are only reported when they are based on at least 50 denominator respondents and 5 numerator respondents and the relative standard error (RSE) is greater than 30 percent.

A more detailed explanation of the survey methodology used for the Kansas BRFSS is available at <http://www.kdheks.gov/brfss/technotes.html>.

ACE Categories and ACE Scores

The BRFSS ACE module is comprised of 11 questions that assess the following eight categories of ACE:

Childhood Abuse

1. physical abuse
2. sexual abuse
3. emotional abuse

Household Dysfunction

4. presence of a mentally ill household member
5. alcohol or drug abuse in the household
6. incarcerated household member
7. violence between adults in the household
8. parental divorce or separation

All questions refer to the time period before respondents were 18 years old.

Self-reported exposure to any single ACE category is counted as one point toward the final ACE score (range: 0 to 8) (Table 1). ACE scores were only calculated for respondents who answered all 11 questions in the BRFSS ACE module (n=11,353 for Kansas and n=570 for Wyandotte). Responses of “don’t know” or “refused” were coded as missing for all questions.

Table 1. ACE categories and scoring: KS BRFSS ACE module survey questions and response options

ACE Category	Survey Question*	Response Options	Scoring
Childhood abuse			
Physical abuse	"How often did your parent or an adult in your home ever hit, beat, kick, or physically hurt you in any way? Do not include spanking."	Never/Once/More than once	1= Once or More than once 0=Never
Sexual abuse	"How often did anyone at least 5 years older than you or an adult..." "...ever touch you sexually?" "...try to make you touch them sexually?" "...force you to have sex?"	Never/Once/More than once	1= Once or More than once to one or more of the three questions included in this category 0=Never to all three questions in this category
Emotional abuse	"How often did a parent or adult in your home ever swear at you, insult you, or put you down?"	Never/Once/More than once	1= More than once 0= Once or never
Household dysfunction			
Mentally ill household member	"Did you live with anyone who was depressed, mentally ill or suicidal?"	Yes/No	1=Yes 0=No
Substance abuse in household	"Did you live with anyone who..." "...was a problem drinker or alcoholic?" "...used illegal street drugs or who abused prescription medications?"	Yes/No	1= Yes to one or more of the two questions included in this category 0=No to both questions in this category
Incarcerated household member	"Did you live with anyone who served time or was sentenced to serve time in a prison, jail or other correctional facility?"	Yes/No	1=Yes 0=No
Violence between adults in household	"How often did your parents or adults in your home ever slap, hit, kick, punch or beat each other up?"	Never/Once/More than once	1= Once or More than once 0=Never
Parental separation/divorce	"Were your parents separated or divorced?"	Yes/No	1=Yes 0=No

*All questions refer to the time period before respondents were 18 years old.

Note: Results disseminated prior to the current publication may differ slightly due to differences in categorizing emotional abuse. Some researchers have defined exposure to emotional abuse as a response of "Once" or "More than once" to the emotional abuse question indicated in the above table.^{vii} Here, we define exposure to emotional abuse as a response of "More than once" to the indicated question.^{viii}

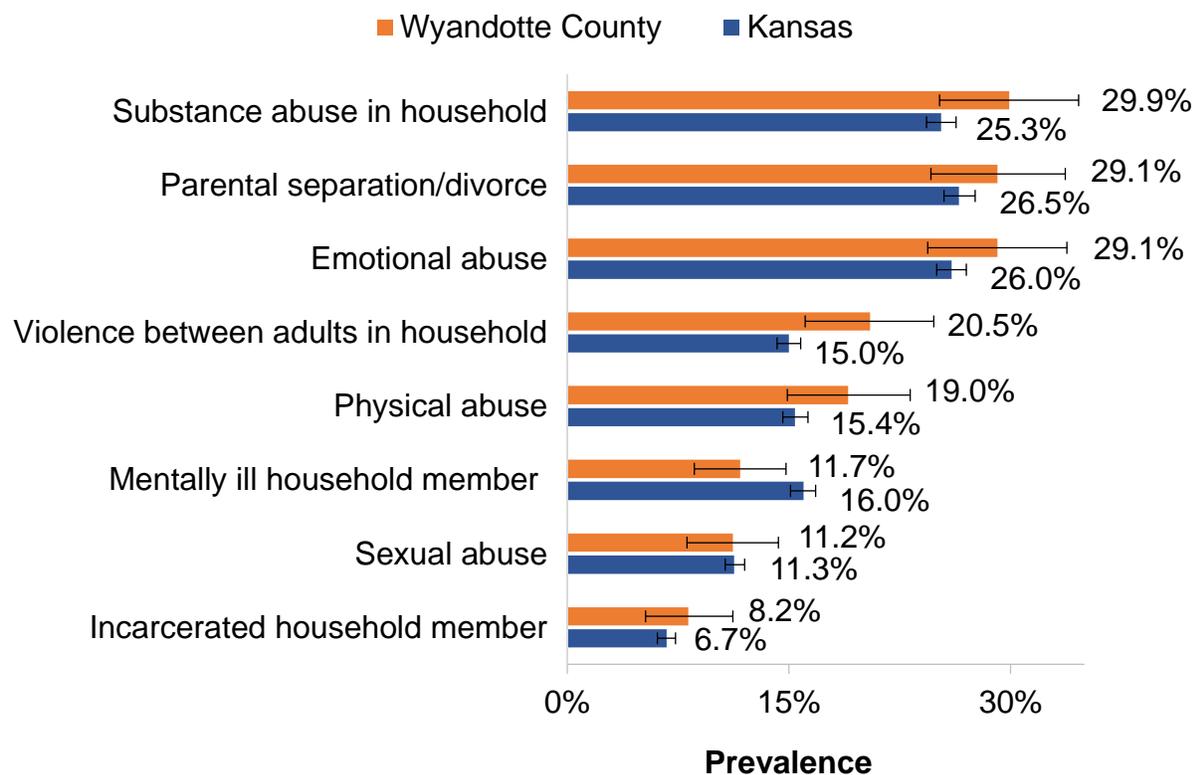
Findings

Prevalence of Adverse Childhood Experience

In 2014, substance abuse by a household member, parental separation/divorce and emotional abuse were the most common adverse childhood experiences (ACE) reported by Wyandotte County adults and Kansas adults (Figure 2). Nearly 1 in 3 Wyandotte County adults (29.9%) reported substance abuse by a household member. Similar percentages of Wyandotte County adults reported experiencing emotional abuse (29.1%) and that their parents were separated or divorced (29.1%).

The percentage who experienced violence between adults in the household during childhood was significantly *higher* among Wyandotte County adults (20.5%) compared with Kansas adults overall (15.0%). The percentage who experienced a mentally ill household member during childhood was significantly *lower* among Wyandotte County adults (11.7%) compared with Kansas adults overall (16.0%). There were no significant differences in prevalence estimates for the remaining ACE categories between Wyandotte County and Kansas adults.

Figure 2. Prevalence of Adverse Childhood Experiences (ACE) among Kansas and Wyandotte County adults aged 18 years and older by ACE category, KS BRFSS 2014

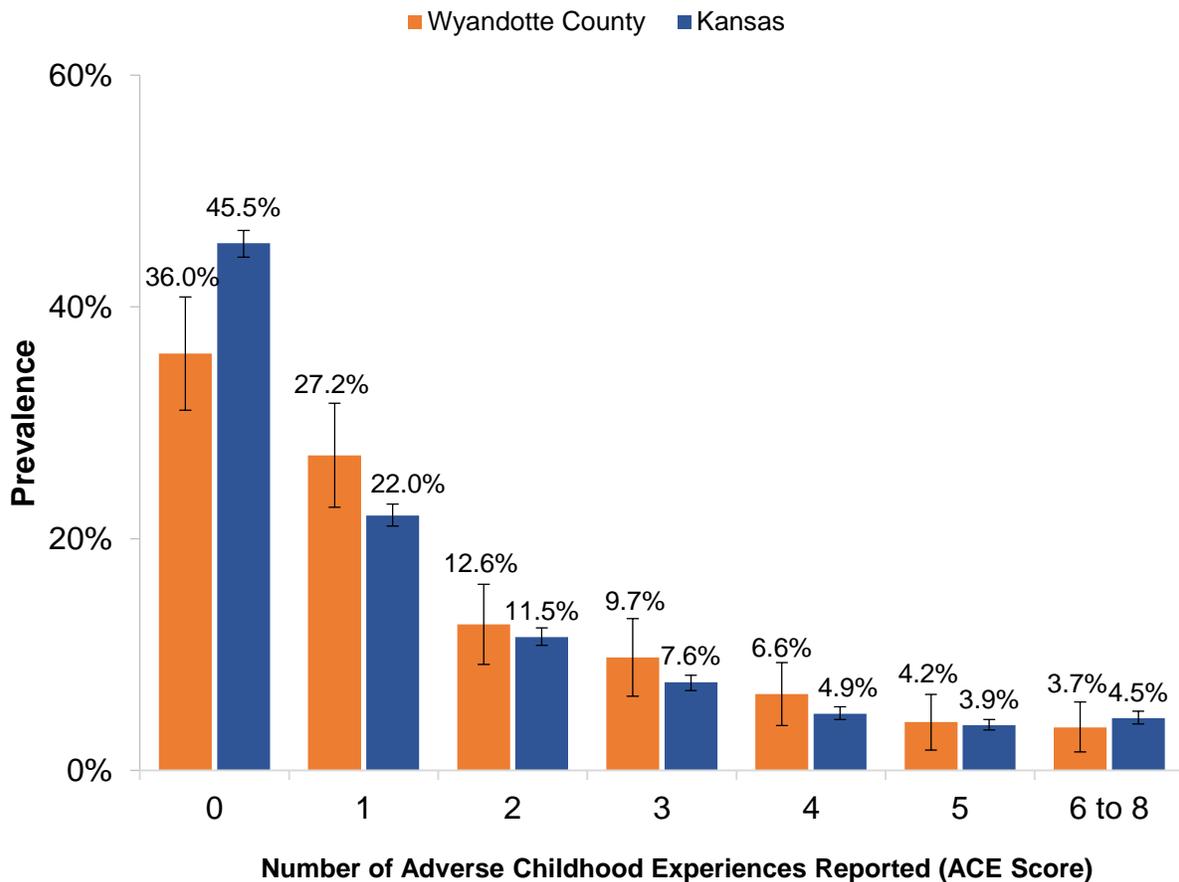


Source: 2014 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE.

For additional information on the prevalence of Wyandotte County adults who experienced specific ACE categories by demographic characteristics, see Appendix A.

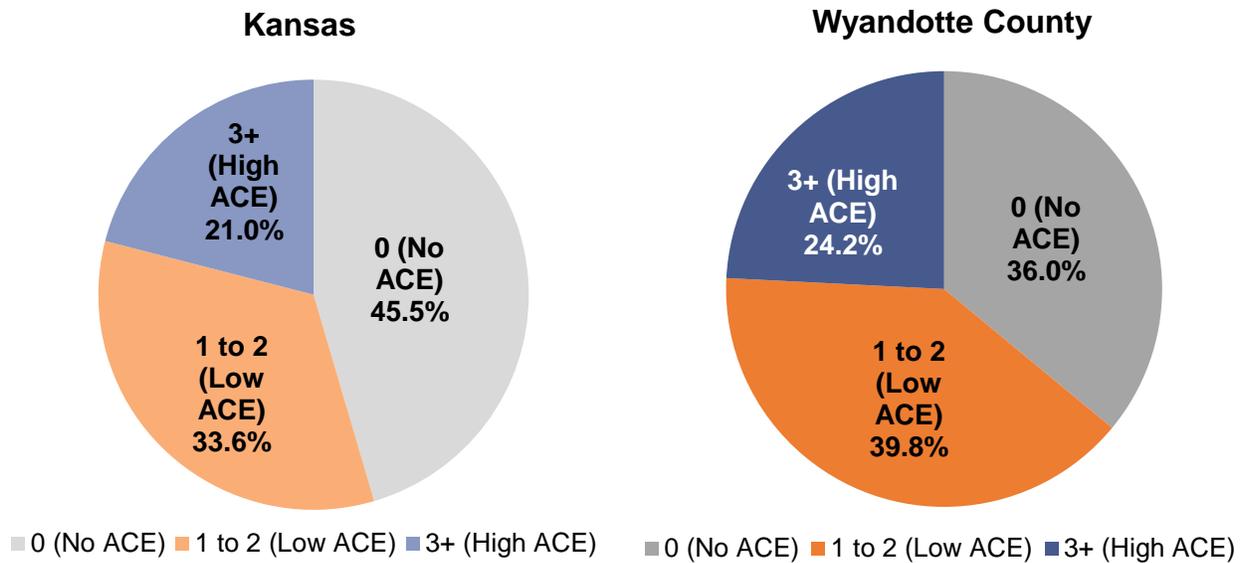
Most Wyandotte County adults (64.0%) reported having experienced at least one ACE, which is significantly higher than the 54.5 percent statewide prevalence (Figure 3). However, there were no significant differences in the prevalence of individual ACE scores between Wyandotte County and Kansas adults. Approximately 2 in 5 (39.8%) Wyandotte County adults had one or two ACE, and nearly 1 in 4 (24.2%) had three or more ACE (Figure 4). The distribution of ACE scores among Wyandotte County adults is similar to the statewide prevalence, which mirrors findings from other states.^{vi,vii}

Figure 3. Prevalence of Adverse Childhood Experiences (ACE) among Kansas and Wyandotte County adults aged 18 years and older by ACE score, KS BRFSS 2014



Source: 2014 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE.

Figure 4. Prevalence of no, low and high ACE among Kansas and Wyandotte County adults aged 18 years and older, KS BRFSS 2014

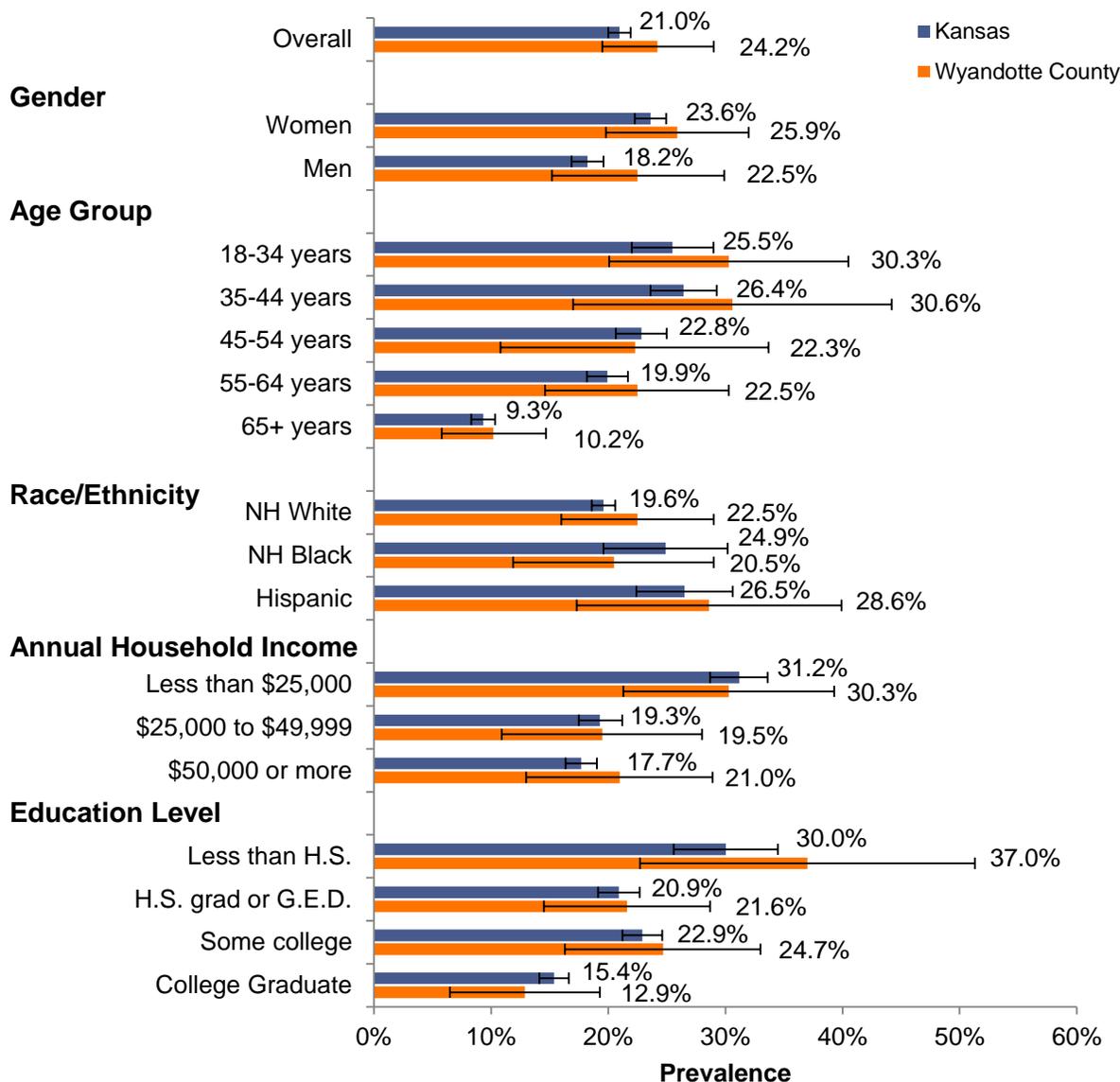


Source: 2014 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE.

In 2014, the percentage of Wyandotte County adults who experienced three or more ACE was significantly **higher** among adults aged 18 to 44 years compared with adults aged 65 years or older; and adults with less than a high school degree compared with their college graduate counterparts (Figure 5). Overall, subpopulation prevalence estimates of high ACE among Wyandotte County adults did not differ significantly from subpopulation prevalence estimates of high ACE among Kansas adults.

For additional information on the prevalence of Wyandotte County adults who experienced no, one to two, and three or more ACE by demographic characteristics, see Appendix B.

Figure 5. Prevalence of high (3+) ACE among Kansas and Wyandotte County adults aged 18 years and older by selected demographic characteristics, KS BRFSS 2014



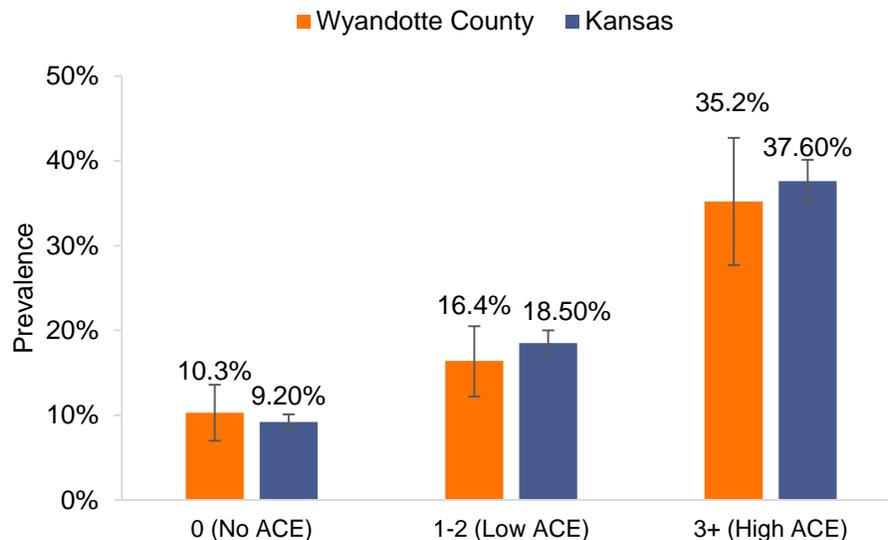
Note: NH: Non-Hispanic. 'Non-Hispanic multiracial' and 'other' race/ethnicity estimates were not reported due to a high relative standard error (RSE).

Source: 2014 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE.

Prevalence of Health Risk Factors and Health Conditions by ACE Score

Wyandotte County adults with high ACE scores had significantly higher prevalence of depression compared with Wyandotte County adults with low or no ACE (Figure 6). This finding mirrored statewide data. However, there was no significant difference in prevalence of depression between Kansas and Wyandotte County adults within ACE score groups.

Figure 6. Prevalence of depression among Kansas and Wyandotte County adults aged 18 years and older by ACE score group, KS BRFSS 2014



Source: 2014 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE.

Kansas adults with high ACE scores had significantly higher prevalence of the following health risk factors, perceived poor health indicators and chronic conditions: current smoking, binge drinking, obesity, poor/fair general health, 14 or more days of poor physical health, 14 or more days of poor mental health, arthritis, asthma, and COPD. These findings were not observed among Wyandotte County adults. However, findings for Wyandotte County adults should be interpreted with caution due to small sample size.

For both Wyandotte County and Kansas adults no significant differences in prevalence were observed among ACE score subgroups for the following health conditions: cancer, coronary heart disease, diabetes, heart attack, kidney disease and stroke.

For additional information on the prevalence of selected health risk factors, perceived poor health and chronic conditions among Wyandotte County adults by ACE score category, see Appendix C.

Statistical Associations Between Health Risk Factors and Health Conditions, and ACE Score

Logistic regression modeling is one analytic method that can be used to examine the association between two or more variables while statistically controlling for additional potentially confounding variables. In this report, prevalence odds ratios were calculated using logistic regression models to compare the prevalence odds of selected health risk factors, perceived poor health indicators and chronic conditions between Wyandotte County adults who reported having three or more ACE compared with Wyandotte County adults who reported not having any ACE. Adjusted prevalence odds ratios (POR) and 95 percent confidence intervals were also calculated to examine these associations while controlling for age, gender, race/ethnicity, education and income. A prevalence odds ratio with a 95 percent confidence interval that contains 1 can be interpreted as no significant association between the selected health risk factor or health condition and ACE score.

Compared with those who did not experience any ACE, Wyandotte County adults with three or more ACE had significantly higher prevalence odds for arthritis and depression, after controlling for selected demographic characteristics (Table 2). Specifically, the adjusted prevalence odds of arthritis among Wyandotte County adults with three or more ACE were 2.4 times as high as those with no ACE. The adjusted prevalence odds of depression among Wyandotte County adults with three or more ACE were 3.9 times as high as those with no ACE. In other words, there was a statistically significant positive association between each of these two chronic conditions and ACE score.

Table 2. Crude and adjusted prevalence odds ratios (POR) of selected health risk factors and conditions among Wyandotte County adults aged 18 years and older with high ACE scores (3+) compared with those with no ACE, KS BRFSS 2014

	Crude POR	95% CI	Adjusted POR*	95% CI
Health risk factors				
Current smoking	2.0	1.0 to 4.0	1.2	0.5 to 2.5
Binge drinking	1.1	0.5 to 2.7	0.5	0.2 to 1.4
Obesity	0.9	0.5 to 1.7	0.7	0.4 to 1.4
Perceived poor health				
Poor/fair general health	1.6	0.8 to 3.2	1.7	0.7 to 3.8
14+ days poor physical health	1.0	0.4 to 2.3	2.1	0.9 to 5.1
14+ days of poor mental health	2.5	1.1 to 5.7	2.0	0.7 to 5.3
Chronic conditions				
Arthritis	1.3	0.7 to 2.4	2.4	1.2 to 4.8
Depression	3.1	1.6 to 6.0	3.9	1.8 to 8.2
Diabetes	0.7	0.3 to 1.5	1.3	0.5 to 3.1

Note: Heavy drinking, asthma, cancer, coronary heart disease, chronic obstructive pulmonary disease, heart attack and kidney disease estimates were not reported due to a high relative standard error (RSE).

POR: Prevalence odds ratio, 95% CI: 95% Confidence interval

*Model adjusts for age, gender, race/ethnicity, education and income.

Source: 2014 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE.

Conclusion

ACE are prevalent: most Wyandotte County adults have experienced at least one ACE. In Wyandotte County, high ACE scores (3+) are more common among younger adults and those with lower levels of education. Wyandotte County data highlight the need to increase awareness of ACE as a public health issue. Preventing ACE may have beneficial effects on the long-term health of Wyandotte County residents.

Appendix A. Prevalence of each ACE category among Wyandotte County adults aged 18 years and older by selected demographic characteristics, KS BRFSS 2014

Characteristic	Emotional abuse % (95% CI)	Physical abuse % (95% CI)	Sexual abuse % (95% CI)	Mentally ill household member % (95% CI)	Incarcerated household member % (95% CI)	Substance abuse in household % (95% CI)	Parental separation/divorce % (95% CI)	Violence between adults in household % (95% CI)
Overall	29.1 (24.4-33.8)	19.0 (14.9-23.2)	11.2 (8.1-14.3)	11.7 (8.6-14.8)	8.2 (5.3-11.2)	29.9 (25.2-34.6)	29.1 (24.6-33.7)	20.5 (16.1-24.8)
Gender								
Women	28.1 (22.2-34.1)	15.7 (10.8-20.6)	16.7 (11.8-21.6)	11.8 (7.9-15.7)	7.9 (4.2-11.6)	28.9 (23.1-34.7)	34.2 (28.1-40.3)	14.6 (14.6-25.3)
Men	30.1 (22.9-37.4)	22.5 (15.8-29.3)	--	11.5 (6.7-16.4)	8.6 (3.9-13.2)	30.9 (23.5-38.4)	23.9 (17.2-30.6)	21.0 (14.2-27.9)
Age Group								
18-34 years	36.3 (26.2-46.4)	26.3 (16.7-35.8)	11.4 (4.9-17.9)	16.4 (9.0-23.8)	13.1 (5.7-20.6)	34.2 (24.2-44.2)	36.1 (26.1-46.1)	21.0 (12.2-29.9)
35-44 years	28.3 (16.0-40.6)	23.1 (11.4-34.9)	--	--	--	29.4 (16.6-42.1)	25.2 (13.7-36.6)	32.8 (19.8-45.8)
45-54 years	38.2 (26.4-50.0)	13.8 (6.4-21.2)	13.7 (6.0-21.4)	--	--	33.0 (21.7-44.2)	31.4 (20.6-42.2)	19.5 (8.7-30.2)
55-64 years	24.2 (16.5-32.0)	15.6 (9.2-22.1)	13.0 (6.9-19.2)	9.3 (4.1-14.4)	--	30.1 (21.4-38.7)	30.6 (22.2-39.0)	18.7 (11.5-26.0)
65+ years	12.6 (7.8-17.4)	10.0 (4.9-15.2)	6.4 (3.1-9.6)	7.9 (4.0-11.8)	--	19.8 (13.2-26.4)	17.5 (11.5-23.5)	9.9 (5.7-14.2)
Race/Ethnicity								
NH White	28.3 (21.9-34.7)	15.0 (9.7-20.4)	9.8 (6.0-13.7)	15.7 (10.7-20.8)	7.2 (3.2-11.1)	31.2 (24.7-37.6)	25.6 (19.5-31.7)	18.2 (12.3-24.1)
NH Black	20.0 (11.8-28.2)	--	--	--	15.6 (7.3-24.0)	25.0 (15.6-34.5)	48.2 (37.9-58.6)	18.4 (10.7-26.1)
Hispanic	37.0 (25.5-48.5)	35.4 (23.9-46.9)	9.4 (3.4-15.4)	5.1 (0.4-9.8)	--	32.6 (21.6-43.7)	19.4 (10.5-28.3)	27.3 (16.4-38.2)
Annual Household Income								
Less than \$25,000	33.6 (24.9-42.3)	27.9 (19.5-36.2)	12.9 (7.3-18.6)	11.5 (6.3-16.7)	12.8 (6.5-19.2)	35.9 (27.1-44.6)	36.0 (27.5-44.5)	26.5 (18.3-34.8)
\$25,000 to \$49,999	25.9 (17.3-34.5)	15.6 (8.0-23.2)	--	10.1 (4.9-15.4)	--	23.5 (15.2-31.8)	20.6 (13.0-28.3)	16.4 (8.6-24.1)
\$50,000 or more	26.5 (18.3-34.6)	12.6 (5.8-19.3)	7.4 (3.3-11.4)	16.6 (9.1-24.1)	--	28.6 (20.4-36.7)	27.9 (19.5-36.3)	14.1 (8.1-20.0)
Education Level								
Less than H.S.	38.5 (25.2-51.7)	37.7 (24.5-50.8)	--	--	--	38.1 (24.7-51.5)	26.0 (14.3-37.7)	30.9 (18.1-43.6)
H.S. grad or G.E.D.	27.3 (20.0-34.6)	17.8 (11.6-24.0)	10.7 (5.6-15.7)	11.4 (6.1-16.8)	10.8 (5.3-16.3)	24.6 (17.4-31.7)	28.8 (21.4-36.1)	18.0 (11.5-24.5)
Some college	28.0 (19.9-36.2)	13.4 (7.5-19.4)	15.5 (8.9-22.1)	14.3 (8.4-20.2)	--	33.4 (25.0-41.8)	33.3 (24.6-42.0)	20.3 (12.7-27.9)
College Graduate	22.1 (14.4-29.9)	--	--	14.3 (7.9-20.7)	--	23.4 (15.7-31.2)	26.9 (18.5-35.3)	11.9 (5.4-18.4)

Note: NH: Non-Hispanic. 95% CI: 95% Confidence interval. Two dashes (i.e., --) indicates a suppressed estimate due to relative standard error (RSE) of 30% or greater. 'Non-Hispanic Multiracial' and 'other' race/ethnicity estimates was not reported due to a high RSE.

Source: 2014 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE.

Appendix B. Prevalence of No (0), Low (1-2), and High (3+) ACE among Wyandotte County adults aged 18 years and older by selected demographic characteristics, KS BRFSS 2014

	0 (No ACE)			1-2 (Low ACE)			3+ (High ACE)		
	N	Percent	95% CI	N	Percent	95% CI	N	Percent	95% CI
Overall	233	36.0%	31.1% to 40.9%	222	39.8%	34.8% to 44.8%	115	24.2%	19.5% to 29.0%
Gender									
Women	144	37.5%	31.2% to 43.9%	122	36.6%	30.3% to 42.9%	74	25.9%	19.8% to 32.0%
Men	89	34.4%	26.9% to 41.9%	100	43.1%	35.2% to 51.0%	41	22.5%	15.2% to 30.0%
Age Group									
18-34 years	28	27.8%	18.2% to 37.3%	47	42.0%	31.5% to 52.4%	27	30.3%	20.1% to 40.5%
35-44 years	22	38.4%	24.2% to 52.5%	19	31.0%	18.2% to 43.9%	15	30.6%	17.0% to 44.2%
45-54 years	27	31.0%	19.2% to 42.8%	41	46.7%	34.1% to 59.4%	20	22.3%	10.8% to 33.7%
55-64 years	53	36.7%	27.7% to 45.7%	54	40.8%	31.4% to 50.2%	30	22.5%	14.6% to 30.3%
65+ years	102	52.1%	43.6% to 60.7%	61	37.6%	29.1% to 46.1%	22	10.2%	5.8% to 14.7%
Race/Ethnicity									
NH White	159	40.4%	34.0% to 46.7%	120	37.2%	30.8% to 43.5%	59	22.5%	16.0% to 29.0%
NH Black	39	25.4%	16.8% to 34.0%	62	54.2%	43.5% to 64.8%	25	20.5%	11.9% to 29.0%
Hispanic	27	38.7%	26.0% to 51.4%	29	32.6%	21.2% to 44.1%	23	28.6%	17.3% to 40.0%
Annual Household Income									
Less than \$25,000	64	29.2%	21.0% to 37.3%	68	40.5%	31.3% to 49.7%	45	30.3%	21.3% to 39.3%
\$25,000 to \$49,999	64	42.5%	32.1% to 52.8%	57	38.1%	28.2% to 47.9%	25	19.5%	10.9% to 28.0%
\$50,000 or more	67	37.2%	28.7% to 45.8%	69	41.8%	33.1% to 50.5%	31	21.0%	13.0% to 28.9%
Education Level									
Less than H.S.	24	34.0%	20.5% to 47.5%	18	29.1%	16.1% to 42.0%	21	37.0%	22.7% to 51.3%
H.S. grad or G.E.D.	81	35.7%	27.9% to 43.5%	81	42.7%	34.4% to 51.0%	42	21.6%	14.5% to 28.7%
Some college	52	33.4%	24.3% to 42.5%	60	41.9%	32.6% to 51.3%	34	24.7%	16.3% to 33.0%
College Graduate	76	43.3%	34.2% to 52.4%	63	43.8%	34.6% to 53.1%	18	12.9%	6.5% to 19.3%

Note: NH: Non-Hispanic. 95% CI: 95% Confidence interval. Two dashes (i.e., --) indicates a suppressed estimate due to relative standard error (RSE) of 30% or greater. 'Non-Hispanic Multiracial' and 'other' race/ethnicity estimates was not reported due to a high RSE.

Source: 2014 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE.

Appendix C. Prevalence of selected health risk factors, perceived poor health and chronic conditions among Wyandotte County adults aged 18 years and older by ACE score category, KS BRFSS 2014

	0 (No ACE)				1-2 (Low ACE)				3+ (High ACE)			
	N	Percent	95% CI		N	Percent	95% CI		N	Percent	95% CI	
Health risk factors												
Current smoking	43	18.5%	12.0%	to 25.0%	48	23.7%	16.6%	to 30.7%	25	31.2%	19.6%	to 42.8%
Binge drinking	24	17.2%	9.7%	to 24.7%	30	15.6%	9.3%	to 21.9%	13	18.9%	8.0%	to 29.8%
Obesity	82	37.8%	29.5%	to 46.2%	71	32.4%	24.6%	to 40.3%	40	36.0%	24.5%	to 47.4%
Perceived poor health												
Poor/fair general health	40	22.3%	14.6%	to 30.0%	44	16.6%	11.1%	to 22.1%	37	31.9%	21.1%	to 42.7%
14+ days poor physical health	29	11.7%	6.4%	to 17.1%	30	11.3%	6.9%	to 15.7%	18	11.6%	4.9%	to 18.3%
14+ days of poor mental health	19	9.1%	4.2%	to 14.0%	21	10.2%	4.8%	to 15.6%	24	20.2%	11.1%	to 29.2%
Chronic conditions												
Arthritis	80	25.9%	19.5%	to 32.4%	85	28.3%	21.8%	to 34.9%	47	32.0%	21.5%	to 42.6%
Depression	29	13.1%	7.7%	to 18.4%	44	17.4%	11.8%	to 23.0%	40	31.4%	21.2%	to 41.7%
Diabetes	36	13.7%	8.6%	to 18.9%	38	14.7%	9.6%	to 19.7%	14	9.9%	4.0%	to 15.8%

Note: 95% CI: 95% Confidence interval. Two dashes (i.e., --) indicates a suppressed estimate due to relative standard error (RSE) of 30% or greater. Heavy drinking, asthma, cancer, coronary heart disease, chronic obstructive pulmonary disease (COPD), heart attack and kidney disease prevalence estimates were not reported due to a high RSE.

Source: 2014 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE.

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