



Economic Instability A Social Determinant of Health

2013 Kansas Behavioral Risk
Factor Surveillance System

March 2015

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Project Funding

Partial funding for the 2013 Behavioral Risk Factor Survey was provided by cooperative agreement 5U58SO000008-03 from the Centers for Disease Control and Prevention, Atlanta GA.

Kansas Department of Health and Environment
Bureau of Health Promotion
March 2015

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Introduction

Social Determinants of Health

An extensive body of knowledge has established that protection, maintenance and improvement of health require more than just controlling disease. In addition to genetic factors, health results from the choices people are able to make from the options available to them. The options are determined by the conditions in their social and physical environments.¹ The circumstances for living a prosperous and healthy life are unequally distributed between and within society. These societal inequities are seen in early childhood conditions, availability of educational and employment opportunities, quality of working conditions as well as in the structure and quality of the physical environment. Differences are seen in the material conditions, psychosocial support and behavioral options for different subgroups of the population, making them more or less vulnerable to poor health. These social inequities also affect access to timely and quality health care and its utilization, which lead to inequities in the health behaviors, disease prevention, treatment and recovery from illness, and survival.²

These complex, integrated and overlapping social structures and economic systems that effect the health of the population are referred to as social determinants of health.¹ The World Health Organization (WHO) defines social determinants of health as “the circumstances in which people are born, grow up, live, work and age, as well as the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies and politics.”^{3,4} In addition to health care, advances are needed in education, childcare, housing, business, law, media, community planning, transportation and agriculture.⁵

The social determinants of health, including social, economic and physical environments mold a person’s opportunity to achieve optimal health.⁶ Economic instability is an important contextual aspect of the social determinants of health frame work.⁵ Unemployment, housing insecurity, food insecurity and poverty are the indicators of economic instability. This report assesses the prevalence of unemployment, housing insecurity, food insecurity and poverty in Kansas and examines the impact of these indicators on health risk behaviors and chronic health conditions.

Health Risk Behaviors

Health risk behavior can be defined as any activity that increases risk of disease or injury. Health risk behaviors examined in this report include:

- **binge drinking** defined as males having five or more drinks or females having four or more drinks on one occasion
- **obesity** defined as body mass index of 30 or higher
- **current smoking** defined as adults who smoke cigarettes every day or some days
- **no physical activity** defined as adults who did not meet any aerobic or strengthening guidelines
- **no fruit intake** defined as adults who did not consume fruit at least once per day
- **no vegetable intake** defined as adults who did not consume vegetables at least once per day

Chronic Health Conditions

According to the Centers for Disease Control and Prevention, chronic health conditions are among the most common, costly and preventable of all health problems. In this report the following chronic health conditions are examined:

- arthritis
- current asthma
- cancers (excluding skin)
- coronary heart disease
- depression
- diabetes
- disability
- heart attack
- stroke

Multiple chronic conditions are a significant and increasing burden on health. According to the U.S. Department of Health and Human Services, adults with multiple chronic conditions are at increased risk for mortality and poorer everyday functioning. In this report multiple chronic conditions is defined as having two or more of the following chronic health conditions: arthritis, current asthma, chronic obstructive pulmonary disease, coronary heart disease, diabetes, heart attack, hypertension, kidney disease, other cancers (excluding skin), skin cancer or stroke.

UNEMPLOYMENT

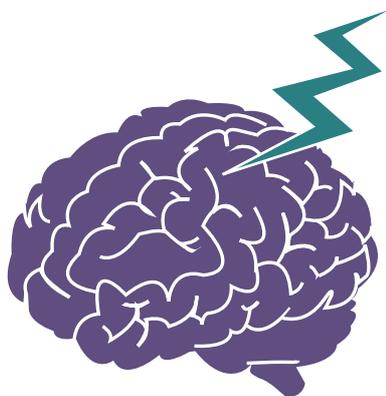


Unemployment

Employment status is an indicator of economic instability, which is an important context of social determinants of health.⁷ Employment is directly correlated with a person's health, when the rate of unemployment increases, illness and premature death increases as well.⁸ In addition to illness and premature death, unemployed adults are more likely to delay or not receive needed medical care and prescriptions compared with employed adults.^{9,10}

For this analysis, unemployed adults are defined as adults 18 years old and older who were out of work or unable to work. Those who responded as students, retired or homemaker to the employment question on BRFSS survey were excluded.

Table 1 demonstrates the percentages of adults 18 years old and older who were unemployed in Kansas in 2013. In 2013, approximately 16 percent of Kansas adults were unemployed. Unemployment is significantly higher in some population groups compared with others, as Table 2 illustrates.



Unemployed Kansas adults have more than **5 times** the prevalence of stroke than employed adults.

Table 1. Percentage of Adults 18 Years and Older Who Were Unemployed, KS BRFSS 2013

Demographics	Weighted %	95% CI
Overall	16.0	15.3-16.7
Gender		
Female	17.8	16.8-18.9
Male	14.4	13.4-15.4
Age Groups		
18-24 years	17.1	14.4-19.7
25-34 years	12.2	10.5-13.9
35-44 years	12.5	11.0-13.9
45-54 years	17.2	15.7-18.7
55-64 years	20.4	18.9-21.9
65+ years	20.8	18.4-23.1
Race/Ethnicity*		
White,NH	14.3	13.6-15.1
African American,NH	30.6	26.0-35.2
Other/Multi-Race,NH	24.5	20.2-28.8
Hispanic	20.3	16.0-24.6
Education		
Less than high school	33.9	30.4-37.3
High school graduate or GED	19.7	18.2-21.2
Some college	15.9	14.7-17.1
College graduate	5.9	5.2-6.6
Annual Household Income		
Less than \$15,000	54.2	50.5-57.9
\$15,000 to \$24,999	28.9	26.4-31.4
\$25,000 to \$34,999	14.0	11.8-16.2
\$35,000 to \$49,999	9.1	7.6-10.6
\$50,000 or more	3.8	3.3-4.4
Health Insurance		
Uninsured	26.6	24.4-28.8
Insured	13.4	12.7-14.1

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population. Source: 2013 KS BRFSS, Bureau of Health Promotion, KDHE

Percentage of Adults 18 Years and Older Who Were Unemployed, KS BRFSS 2013

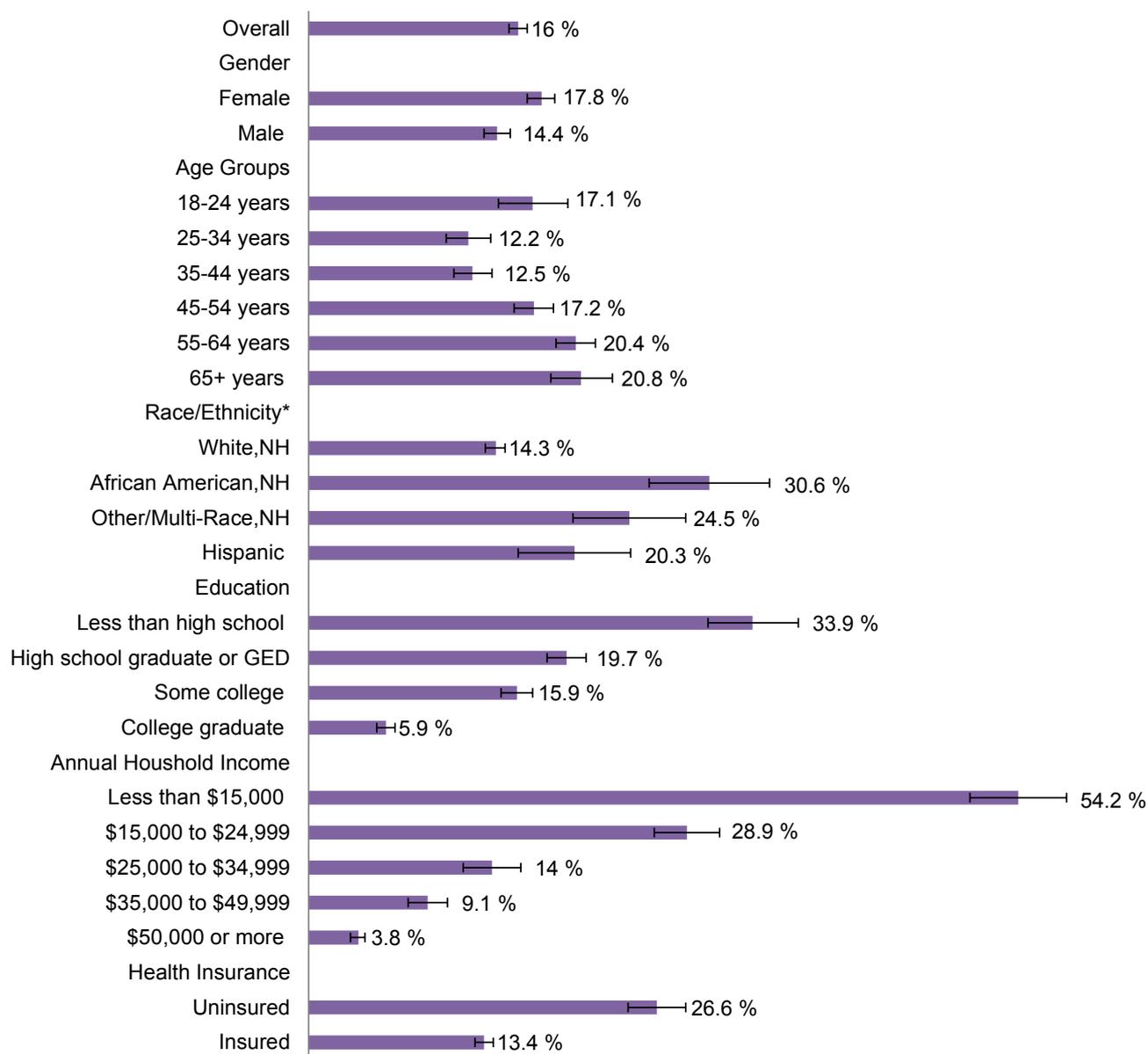


Table 2. Unemployment Among Population Sub-Groups, KS BRFSS 2013

Significantly Higher Unemployment Among

Females	compared with Males
Adults 18 to 24 years old and 45 years and older	compared with Adults 25 to 44 years old
Non-Hispanic African-Americans, non-Hispanic other/multi-race adults and Hispanics	compared with Non-Hispanic whites (age-adjusted prevalence)
Adults with lower education	compared with adults with higher education
Adults with a lower annual household income	compared with adults with a higher annual household income
Adults without health insurance (prevalence twice as high)	compared with adults with health insurance

Impact of Unemployment on Health Risk Behaviors & Chronic Health Conditions

The association between poor health and unemployment is well recognized.¹¹⁻¹⁵ Several studies have shown that mental health conditions, chronic disease and premature mortality are higher among the unemployed.^{11,14-21} Unemployment has also been shown to be associated with unhealthy behaviors such as increased alcohol and tobacco use, and decreased physical activity.^{18,22,23} This analysis examines the impact of unemployment on the prevalence of health risk behaviors (table 3) and chronic health conditions (table 4) in Kansas. See page 1 for the definitions of the health risk behaviors used in this report.

Table 3. Prevalence of Health Risk Behaviors by Employment Status, KS BRFSS 2013

Employment Status	Binge drinking	Obesity	Current smoking	Not meeting physical activity guidelines	No fruit intake at least once per day	No vegetable intake at least once per day
Unemployed	12.5% (10.7-14.3)	39.0% (36.5-41.5)	40.8% (38.3-43.3)	51.4% (48.7-54.0)	48.7% (46.1-51.3)	29.0% (26.6-31.5)
Employed	19.5% (18.6-20.1)	30.6% (29.6-31.6)	19.8% (18.9-20.7)	41.8% (40.7-42.9)	43.5% (42.4-44.6)	22.5% (21.6-23.6)

Note: Binge drinking defined as males having five or more drinks or females having four or more drinks on one occasion. Obesity defined as body mass index of 30 or higher. Current smoking defined as adults who smoke every day or some days. Not meeting physical activity guidelines defined as adults who did not meet any aerobic or strengthening guidelines. No fruit intake defined as adults who did not consume fruit at least once per day. No vegetable intake defined as adults who did not consume vegetable at least once per day. **Source:** 2013 KS BRFSS, Bureau of Health Promotion, Kansas Department of Health and Environment

Table 4. Prevalence of Chronic Health Conditions by Employment Status, KS BRFSS 2013

Employment Status	Cancer (excluding skin)	Coronary heart disease	Diabetes	Heart attack	Stroke
Unemployed	8.5% (7.2-9.8)	8.2% (7.0-9.4)	16.1% (14.5-17.8)	7.6% (6.5-8.7)	6.5% (5.5-7.6)
Employed	3.8% (3.5-4.2)	2.0% (1.7-2.3)	6.3% (5.9-6.8)	2.1% (1.8-2.3)	1.2% (1.0-1.5)
Employment Status	Arthritis	Asthma (current)	Depression	Disability	Multiple chronic conditions
Unemployed	38.8% (36.4-41.1)	16.5% (14.7-18.3)	39.7% (37.3-42.2)	54.8% (52.3-57.4)	52.8% (50.2-55.5)
Employed	16.1% (15.4-16.8)	7.8% (7.2-8.4)	15.1% (14.4-15.9)	12.0% (11.4-12.7)	21.9% (21.1-22.8)

Note: Multiple Chronic Conditions include arthritis, asthma, chronic obstructive pulmonary disease, coronary heart disease, diabetes, heart attack, hypertension, kidney disease, other cancers (excluding skin), skin cancer or stroke **Source:** 2013 KS BRFSS, Bureau of Health Promotion, Kansas Department of Health and Environment

The prevalence of **obesity, current smoking, no physical activity meeting guidelines, no fruit intake per day and no vegetable intake per day** was significantly higher among adults 18 years and older who were unemployed compared with adults who were employed. However, the prevalence of binge drinking was significantly lower among adults 18 years and older who were unemployed compared with adults who were employed (12.5% vs. 19.5%).

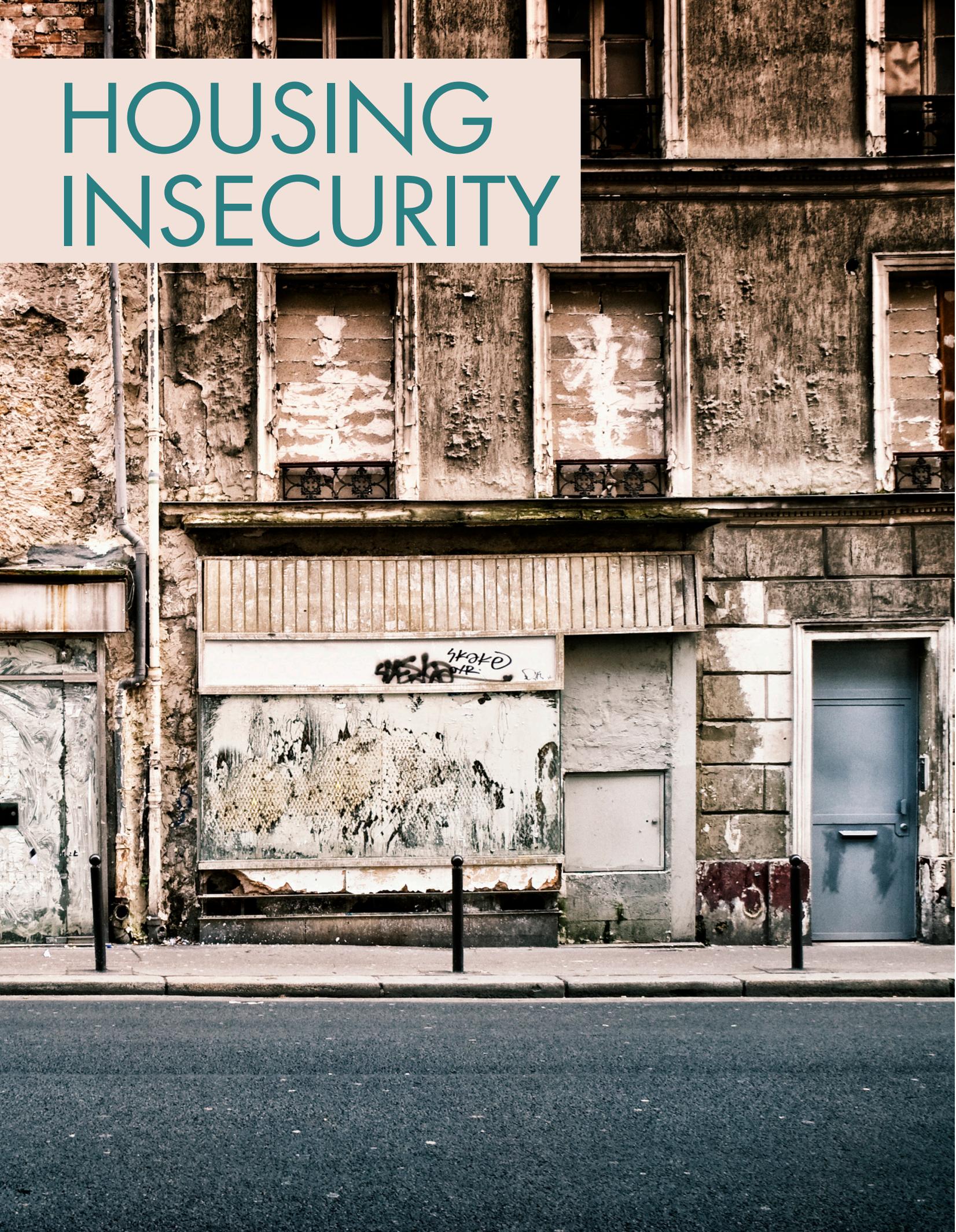
Table 5. Higher Prevalence of Chronic Conditions Among Unemployed Adults Compared with Employed Adults, KS BRFSS 2013

Chronic Condition

Stroke	more than 5 times the prevalence for unemployed adults
Disability	almost 5 times the prevalence for unemployed adults
Coronary heart disease	nearly 3 times the prevalence for unemployed adults
Heart attack	nearly 3 times the prevalence for unemployed adults
Arthritis	more than 2 times the prevalence for unemployed adults
Asthma (current)	more than 2 times the prevalence for unemployed adults
Depression	more than 2 times the prevalence for unemployed adults
Cancer (excluding skin)	2 times the prevalence for unemployed adults
Diabetes	2 times the prevalence for unemployed adults
Multiple chronic conditions	2 times the prevalence for unemployed adults

Note: Multiple Chronic Conditions include arthritis, asthma, chronic obstructive pulmonary disease, coronary heart disease, diabetes, heart attack, hypertension, kidney disease, other cancers (excluding skin), skin cancer or stroke

HOUSING INSECURITY



Housing Insecurity

Health is shaped by where a person lives, learns, works and plays.²⁴ As a social determinant of health, housing insecurity (an indicator of economic instability) has been associated with worsening health outcomes.⁸

In this report, housing insecurity was defined as those who were worried or stressed “sometimes,” “usually” or “always” during the previous year about having enough money to pay rent or mortgage.

In 2013, approximately 3 in 10 Kansas adults 18 years and older who rent or own their home had housing insecurity in the past year.

Kansas adults with housing insecurity have more than **twice** the prevalence of cigarette smoking than adults with housing security.



KS BRFSS 2013

Table 6. Percentage of Adults 18 Years and Older Who Had Housing Insecurity in the Past Year (Among those who rent or own their own home), KS BRFSS 2013

Demographics	Weighted %	95% CI
Overall	27.3	26.1-28.4
Gender		
Female	30.2	28.6-31.8
Male	24.2	22.5-25.9
Age Groups		
18-24 years	34.3	29.3-39.3
25-34 years	36.1	32.6-39.5
35-44 years	33.9	30.7-37.1
45-54 years	29.2	26.6-31.9
55-64 years	22.5	20.5-24.6
65+ years	13.4	12.0-14.8
Race/Ethnicity*		
White, NH	26.5	25.2-27.9
African American, NH	37.7	31.0-44.4
Other/Multi-Race, NH	38.0	31.9-44.2
Hispanic	37.3	32.1-42.8
Education		
Less than high school	44.7	39.7-49.8
High school graduate or GED	31.1	28.9-33.4
Some college	27.9	25.9-30.0
College graduate	16.5	15.0-18.0
Annual Household Income		
Less than \$15,000	56.7	51.7-61.7
\$15,000 to \$24,999	46.8	43.4-50.2
\$25,000 to \$34,999	35.3	31.6-39.1
\$35,000 to \$49,999	26.1	23.0-29.2
\$50,000 or more	13.4	12.1-14.8
Health Insurance		
Uninsured	49.4	45.6-53.3
Insured	23.2	22.0-24.3

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population. Source: 2013 KS BRFSS, Bureau of Health Promotion, KDHE

Percentage of Adults 18 Years and Older Who Rent or Own Their Home Who Had Housing Insecurity in the Past Year, KS BRFSS 2013

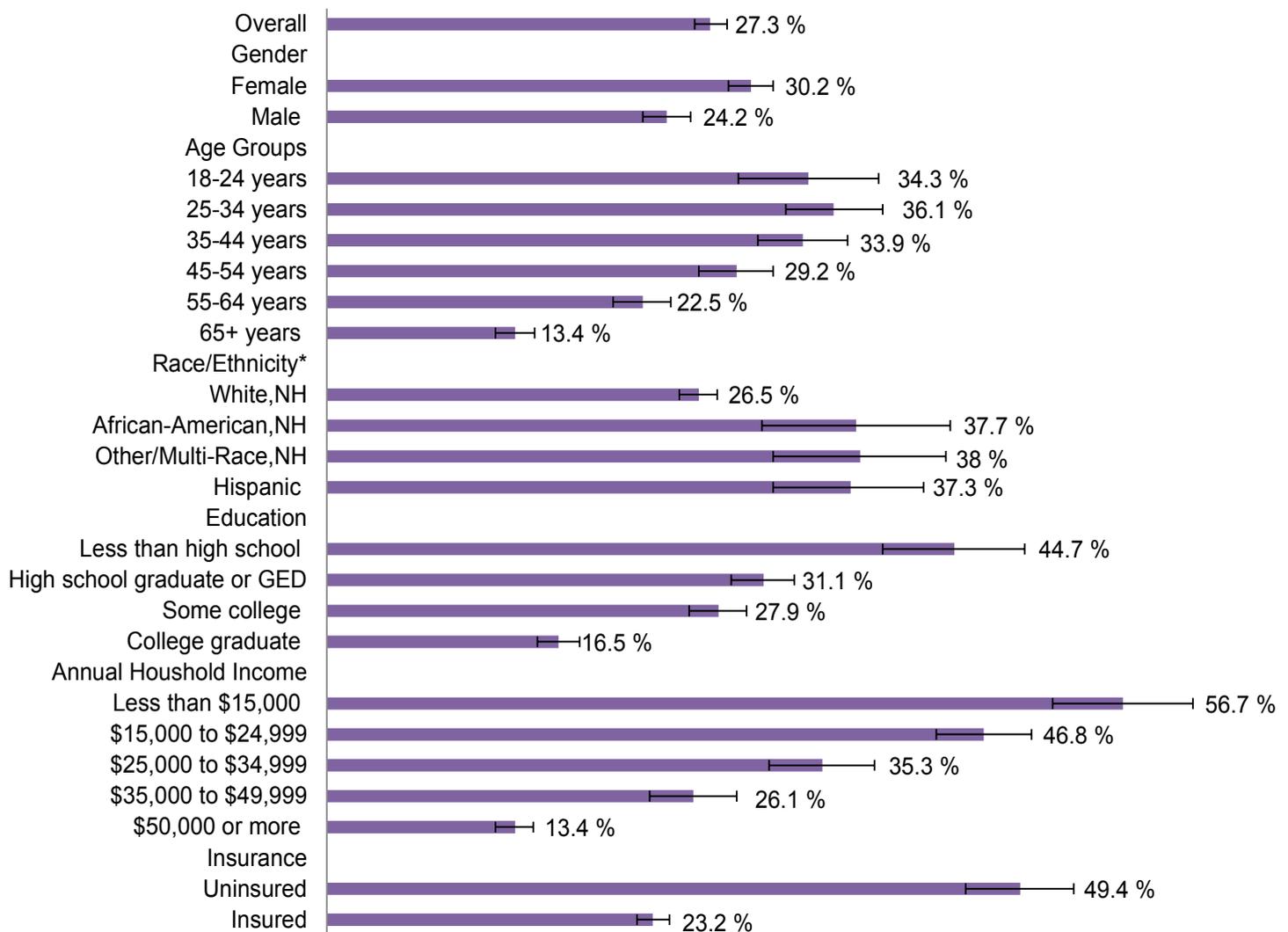


Table 7. Housing Insecurity Among Population Sub-Groups, KS BRFSS 2013

Significantly Higher Housing Insecurity Among

Females	compared with Males
Adults 54 years and younger	compared with Adults 55 years and older
Non-Hispanic African-Americans, non-Hispanic other/multi-race adults and Hispanics	compared with Non-Hispanic whites (age-adjusted prevalence)
Adults with lower education	compared with adults with higher education
Adults with a lower annual household income	compared with adults with a higher annual household income
Adults without health insurance (prevalence more than twice as high)	compared with adults with health insurance

Impact of Housing Insecurity on Health Risk Behaviors & Chronic Health Conditions

In 2010, approximately 20.2 million U.S. households (more than a quarter of the U.S. households) paid more than half of their income for housing.²⁴ This large financial burden can have serious health consequences and impact a person's chances of becoming sick and dying at an early age.²⁵ Housing insecurity has been linked with poor mental health status, insufficient sleep and increased risk for high blood pressure, respiratory conditions and exposure to infectious disease.^{26,27} This analysis examines the impact of housing insecurity on the prevalence of health risk behaviors (table 8) and chronic health conditions (table 9) in Kansas. See page 1 for the definitions of the health risk behaviors used in this report.

Table 8. Prevalence of Health Risk Behaviors by Housing Insecurity, KS BRFSS 2013

Housing Security Status	Binge drinking	Obesity	Current smoking	Not meeting physical activity guidelines	No fruit intake at least once per day	No vegetable intake at least once per day
Insecurity	17.2% (15.1-19.3)	39.6% (37.0-42.2)	31.2% (28.7-33.7)	47.4% (44.7-50.0)	47.2% (44.6-49.8)	25.4% (23.1-27.7)
Security	13.5% (12.4-14.6)	28.0% (26.7-29.3)	15.0% (13.9-16.0)	40.0% (38.6-41.4)	38.9% (37.5-40.3)	21.6% (20.3-22.8)

Note: Binge drinking defined as males having five or more drinks or females having four or more drinks on one occasion. Obesity defined as body mass index of 30 or higher. Current smoking defined as adults who smoke every day or some days. Not meeting physical activity guidelines defined as adults who did not meet any aerobic or strengthening guidelines. No fruit intake defined as adults who did not consume fruit at least once per day. No vegetable intake defined as adults who did not consume vegetable at least once per day. **Source:** 2013 KS BRFSS, Bureau of Health Promotion, Kansas Department of Health and Environment

Table 9. Prevalence of Chronic Health Conditions by Housing Insecurity, KS BRFSS 2013

Housing Security Status	Cancer (excluding skin)	Coronary heart disease	Diabetes	Heart attack	Stroke
Insecurity	6.0% (5.0-7.0)	4.7% (3.8-5.7)	11.6% (10.1-13.0)	5.4% (4.4-6.3)	4.1% (3.1-5.0)
Security	7.2% (6.6-7.8)	4.1% (3.6-4.6)	9.1% (8.4-9.8)	3.9% (3.4-4.3)	2.8% (2.4-3.1)

Housing Security Status	Arthritis	Asthma (current)	Depression	Disability	Multiple chronic conditions
Insecurity	73.2% (71.1-75.4)	12.0% (10.2-13.7)	31.6% (29.3-33.9)	30.5% (28.3-32.8)	37.7% (35.2-40.1)
Security	24.0% (22.9-25.1)	7.1% (6.4-7.8)	13.1% (12.2-14.0)	17.9% (17.0-18.9)	31.5% (30.2-32.7)

Note: Multiple Chronic Conditions include arthritis, asthma, chronic obstructive pulmonary disease, coronary heart disease, diabetes, heart attack, hypertension, kidney disease, other cancers (excluding skin), skin cancer or stroke **Source:** 2013 KS BRFSS, Bureau of Health Promotion, Kansas Department of Health and Environment

The prevalence of binge drinking, obesity, current smoking, no physical activity meeting aerobic or strengthening guidelines, no fruit intake at least once per day and no vegetable intake at least once per day was significantly higher among adults 18 years old and older who had housing insecurity compared with adults who did not experience housing insecurity (Table 8).

Table 10. Higher Prevalence of Chronic Conditions Among Adults with Housing Insecurity Compared with Adults with Housing Security, KS BRFSS 2013

Chronic Condition

Arthritis	nearly 3 times the prevalence for housing insecure adults
Depression	more than 2 times the prevalence for housing insecure adults
Asthma (current)	significantly higher prevalence for housing insecure adults
Diabetes	significantly higher prevalence for housing insecure adults
Disability	significantly higher prevalence for housing insecure adults
Heart attack	significantly higher prevalence for housing insecure adults
Multiple chronic conditions	significantly higher prevalence for housing insecure adults

Note: Multiple Chronic Conditions include arthritis, asthma, chronic obstructive pulmonary disease, coronary heart disease, diabetes, heart attack, hypertension, kidney disease, other cancers (excluding skin), skin cancer or stroke

There was no statistically significant difference in the prevalence of ever being diagnosed with coronary heart disease, cancer (excluding skin cancer) or stroke among adults who experienced housing insecurity compared with adults who did not experience housing insecurity (Table 9).

FOOD INSECURITY

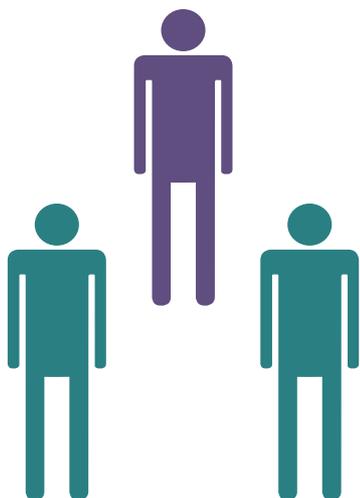


Food Insecurity

Food insecurity is an important indicator of economic instability and is therefore a social determinant of health. Adults who experience food insecurity report being hungry because they did not have enough money for food and not eating at all for an entire day.²⁸

In this report, food insecurity was defined as those who were worried or stressed “sometimes,” “usually” or “always” during the previous year about having enough money to buy nutritious meals.

In 2013, approximately 1 in 5 Kansas adults 18 years and older had food insecurity in the past year.



More than
1 in 3
Kansas adults with
food insecurity have
multiple chronic
conditions.

KS BRFSS 2013

Table 11. Percentage of Adults 18 Years and Older Who Had Food Insecurity in the Past Year, KS BRFSS 2013

Demographics	Weighted %	95% CI
Overall	19.7	18.7-20.8
Gender		
Female	22.6	21.2-24.1
Male	16.7	15.2-18.2
Age Groups		
18-24 years	27.5	23.5-31.6
25-34 years	26.8	23.7-29.9
35-44 years	25.1	22.2-27.9
45-54 years	20.6	18.3-23.0
55-64 years	14.8	13.1-16.5
65+ years	7.8	6.7-8.9
Race/Ethnicity*		
White, NH	19.1	17.9-20.2
African American, NH	30.1	23.9-36.2
Other/Multi-Race, NH	27.5	22.0-33.1
Hispanic	27.1	22.6-31.5
Education		
Less than high school	34.1	29.5-38.7
High school graduate or GED	23.5	21.5-25.5
Some college	20.5	18.6-22.3
College graduate	9.6	8.5-10.8
Annual Household Income		
Less than \$15,000	44.8	40.2-49.4
\$15,000 to \$24,999	35.5	32.3-38.6
\$25,000 to \$34,999	28.1	24.6-31.6
\$35,000 to \$49,999	17.5	14.8-20.2
\$50,000 or more	6.6	5.5-7.7
Health Insurance		
Uninsured	39.0	35.5-42.6
Insured	15.9	14.9-16.9

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population. Source: 2013 KS BRFSS, Bureau of Health Promotion, KDHE

Percentage of Adults 18 Years and Older Who Had Food Insecurity in the Past Year, KS BRFSS 2013

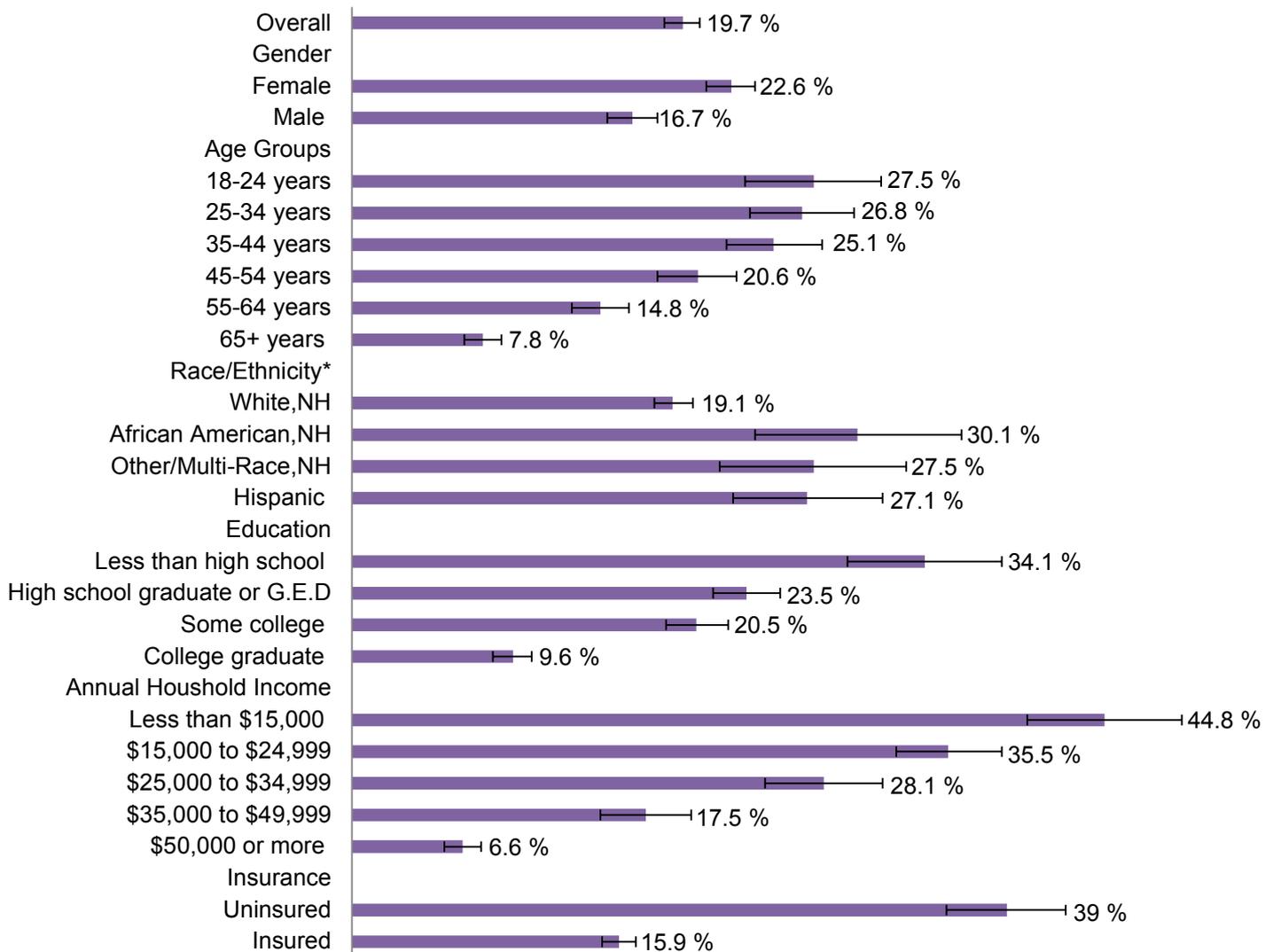


Table 12. Food Insecurity Among Population Sub-Groups, KS BRFSS 2013

Significantly Higher Food Insecurity Among

Females	compared with Males
Adults 54 years and younger	compared with Adults 55 years and older
Non-Hispanic African-Americans, non-Hispanic other/ multi-race adults and Hispanics	compared with Non-Hispanic whites (age- adjusted prevalence)
Adults with lower education	compared with adults with higher education
Adults with a lower annual household income	compared with adults with a higher annual household income
Adults without health insurance (prevalence more than twice as high)	compared with adults with health insurance

Impact of Food Insecurity on Health Risk Behaviors & Chronic Health Conditions

A healthy diet is key to having positive health outcomes. Not being able to access nutritious meals can create health problems and food insecurity has been shown to increase consumption of high-energy-dense foods that can lead to weight gain, poor physical health, chronic disease and health risk behaviors.²⁹⁻³² In addition those who experience food insecurity also experience low dietary variety. This analysis examines the impact of food insecurity on the prevalence of health risk behaviors (table 13) and chronic health conditions (table 14) in Kansas. See page 1 for the definitions of the health risk behaviors used in this report.

Table 13. Prevalence of Health Risk Behaviors by Food Insecurity, KS BRFSS 2013

Food Security Status	Binge drinking	Obesity	Current smoking	Not meeting physical activity guidelines	No fruit intake at least once per day	No vegetable intake at least once per day
Insecurity	16.1% (13.6-18.6)	39.7% (36.7-42.7)	32.9% (30.0-35.7)	49.5% (46.4-52.5)	48.8% (45.7-51.8)	27.5% (24.8-30.2)
Security	14.3% (13.3-15.4)	28.3% (27.1-29.6)	16.3% (15.3-17.3)	39.8% (38.4-41.1)	39.4% (38.1-40.7)	21.5% (20.4-22.7)

Note: Binge drinking defined as males having five or more drinks or females having four or more drinks on one occasion. Obesity defined as body mass index of 30 or higher. Current smoking defined as adults who smoke every day or some days. Not meeting physical activity guidelines defined as adults who did not meet any aerobic or strengthening guidelines. No fruit intake defined as adults who did not consume fruit at least once per day. No vegetable intake defined as adults who did not consume vegetable at least once per day. **Source:** 2013 KS BRFSS, Bureau of Health Promotion, Kansas Department of Health and Environment

Table 14. Prevalence of Chronic Health Conditions by Food Insecurity, KS BRFSS 2013

Food Security Status	Cancer (excluding skin)	Coronary heart disease	Diabetes	Heart attack	Stroke
Insecurity	6.0% (4.8-7.2)	5.3% (4.1-6.4)	12.2% (10.5-13.9)	5.6% (4.5-6.8)	4.6% (3.5-5.7)
Security	7.0% (6.5-7.6)	3.9% (3.5-4.3)	9.0% (8.4-9.7)	3.9% (3.5-4.3)	2.7% (2.3-3.1)

Food Security Status	Arthritis	Asthma (current)	Depression	Disability	Multiple chronic conditions
Insecurity	28.4% (25.9-30.9)	14.0% (11.9-16.1)	36.1% (33.3-39.0)	33.4% (30.7-36.0)	39.3% (36.3-42.2)
Security	23.1% (22.1-24.1)	7.3% (6.6-8.0)	14.0% (13.1-14.9)	18.7% (17.8-19.6)	30.9% (29.8-32.1)

Note: Multiple Chronic Conditions include arthritis, asthma, chronic obstructive pulmonary disease, coronary heart disease, diabetes, heart attack, hypertension, kidney disease, other cancers (excluding skin), skin cancer or stroke **Source:** 2013 KS BRFSS, Bureau of Health Promotion, Kansas Department of Health and Environment

The prevalence of obesity, current smoking, no physical activity meeting guidelines, no fruit intake per day and no vegetable intake per day was significantly higher among adults 18 years old and older who had food insecurity compared with adults who did not experience food insecurity (Table 13). There was no statistically significant difference in the prevalence of binge drinking among adults who experienced food insecurity compared with adults who did not experience food insecurity (Table 13).

Table 15. Higher Prevalence of Chronic Conditions Among Adults with Food Insecurity Compared with Adults with Food Security, KS BRFSS 2013

Chronic Condition

Depression	more than 2 times the prevalence for food insecure adults
Asthma (current)	nearly 2 times the prevalence for food insecure adults
Arthritis	significantly higher prevalence for housing insecure adults
Diabetes	significantly higher prevalence for housing insecure adults
Disability	significantly higher prevalence for housing insecure adults
Heart attack	significantly higher prevalence for housing insecure adults
Multiple chronic conditions	significantly higher prevalence for housing insecure adults
Stroke	significantly higher prevalence for housing insecure adults

Note: Multiple Chronic Conditions include arthritis, asthma, chronic obstructive pulmonary disease, coronary heart disease, diabetes, heart attack, hypertension, kidney disease, other cancers (excluding skin), skin cancer or stroke

There was no statistically significant difference in the prevalence of ever being diagnosed with coronary heart disease or cancer (excluding skin cancer) among adults who experienced food insecurity compared with adults who did not experience food insecurity (Table 14).

POVERTY

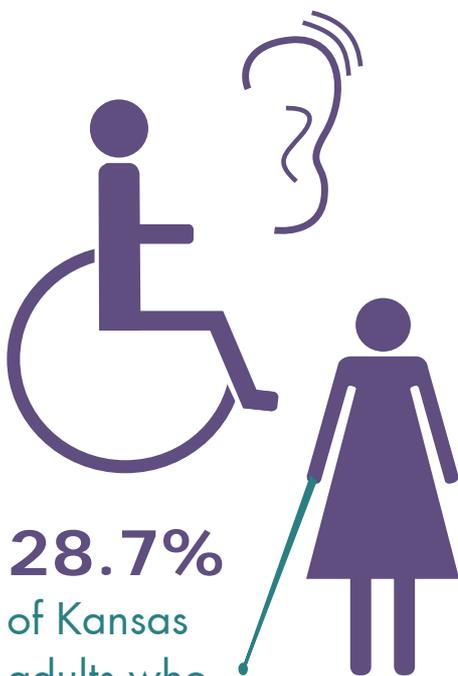


Poverty

Poverty rate/household income is a key component of economic instability. Low income and poverty level is a social determinant of health that is strongly correlated with poor health. Poor people are less healthy than those who have more money; when there are greater differences between the richest and the poorest then there is a greater difference in health.^{9,10}

The income-to-poverty ratio (IPR) is a measure of annual household income as it relates to the poverty threshold by the Department of Health and Human Services. An IPR of 1.0 indicates that the annual household income is identical to the corresponding poverty threshold. Poverty in this report is defined as those less than or equal to an IPR of 1.0 or less than or equal to 100 percent if expressed as a percentage.

In 2013, approximately 3 in 20 Kansas adults 18 years and older were below the federal poverty level.



28.7%
of Kansas
adults who
are at or below
the federal
poverty level are
living with a
disability.

KS BRFSS 2013

Table 16. Percentage of Adults 18 Years and Older Who Were Below the Federal Poverty Level, KS BRFSS 2013

Demographics	Weighted %	95% CI
Overall	14.8	14.1-15.5
Gender		
Female	17.3	16.2-18.3
Male	12.3	11.3-13.3
Age Groups		
18-24 years	32.7	29.4-36.0
25-34 years	20.3	18.3-22.3
35-44 years	16.5	14.8-18.3
45-54 years	10.9	9.6-12.2
55-64 years	8.4	7.2-9.5
65+ years	5.9	5.1-6.8
Race/Ethnicity*		
White, NH	12.1	11.4-12.8
African American, NH	24.9	20.8-28.9
Other/Multi-Race, NH	21.5	17.9-25.1
Hispanic	32.9	29.4-36.5
Education		
Less than high school	38	34.6-41.4
High school graduate or GED	17.6	16.3-19.0
Some college	14.5	13.3-15.8
College graduate	3.9	3.3-4.5
Health Insurance		
Uninsured	40.1	37.6-42.6
Insured	9.8	9.2-10.5

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population. Source: 2013 KS BRFSS, Bureau of Health Promotion, KDHE

Percentage of Adults 18 Years and Older Who Were Below the Federal Poverty Level, KS BRFSS 2013

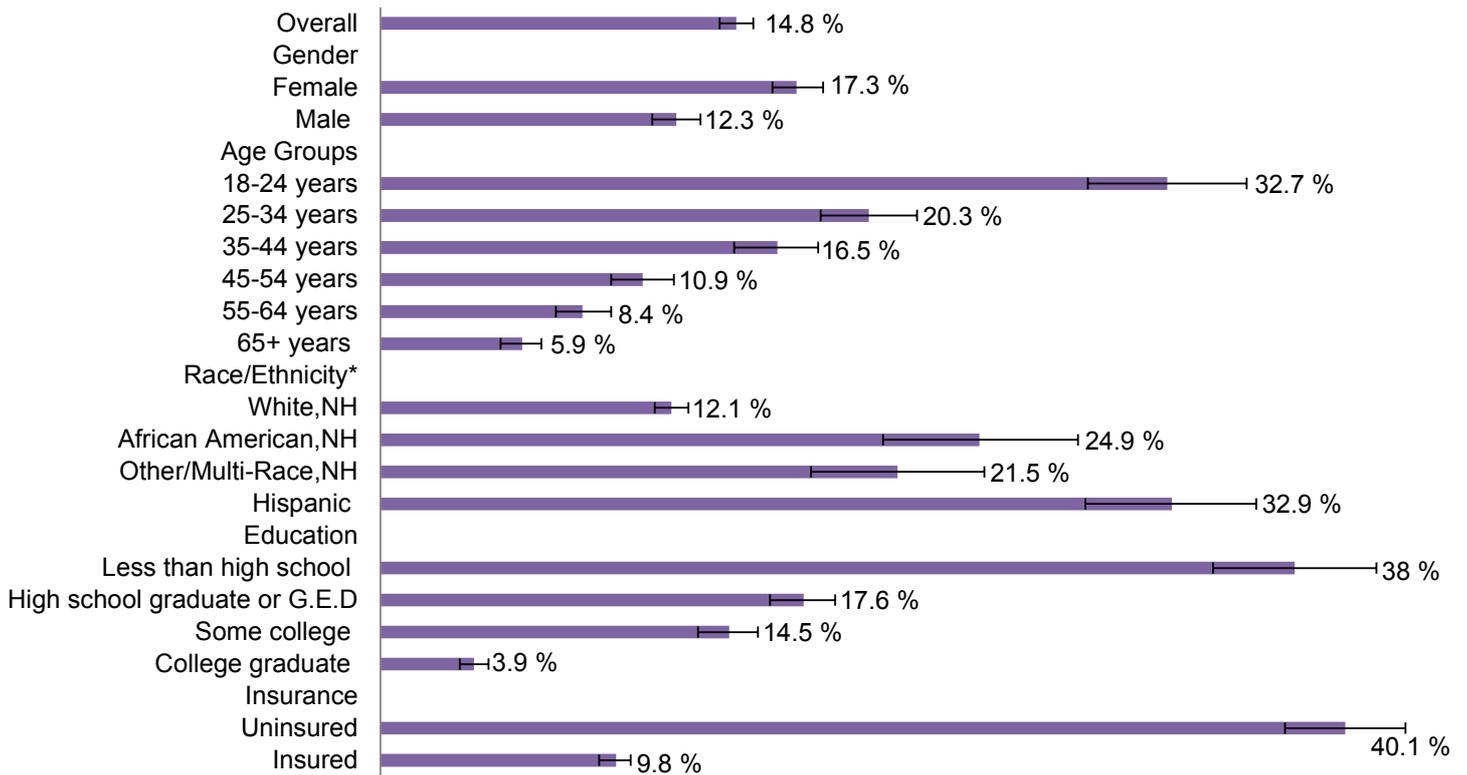


Table 17. Poverty Among Population Sub-Groups, KS BRFSS 2013

Significantly Higher Poverty Among

Females	compared with males
Younger adults	compared with older adults
Hispanic adults	compared with all other race/ethnicity groups
Non-Hispanic African-Americans, non-Hispanic other/ multi-race adults and Hispanics	compared with Non-Hispanic whites (age- adjusted prevalence)
Adults with lower education	compared with adults with higher education
Adults without health insurance (prevalence more than 3 times as high)	compared with adults with health insurance

Impact of Poverty on Health Risk Behaviors & Chronic Health Conditions

People with social, economic and environment disadvantages often report poor health status and disease risk factors.³³ Individuals in poverty have worse health even when compared with their counterparts in the middle income levels.³⁴ It is well documented that people who are poor are more likely to engage in risky health behaviors such as drinking, smoking, eating unhealthy foods and being inactive.³⁴ In addition, those in poverty and who are unemployed are at risk for heavy drinking, thus potentially leading to abuse or dependence of alcohol and other negative consequence for mental, physical and social health.³⁵⁻³⁷ Also poor adults are more likely than high-income adults to have chronic illness such as diabetes, coronary heart disease, kidney disease, or a chronic illness that limits activity.³⁴

Table 18. Prevalence of Health Risk Behaviors by Poverty Status, KS BRFSS 2013

Poverty Status	Binge drinking	Obesity	Current smoking	Not meeting physical activity guidelines	No fruit intake at least once per day	No vegetable intake at least once per day
At or less than federal poverty level	15.3% (13.2-17.4)	37.0% (34.3-39.7)	34.7% (32.2-37.3)	50.6% (47.7-53.4)	43.9% (41.1-46.6)	27.5% (25.0-30.1)
Above federal poverty level	15.8% (15.0-16.5)	29.8% (28.9-30.6)	17.7% (17.0-18.5)	40.1% (39.2-41.1)	41.4% (40.1-42.3)	21.3% (20.5-22.1)

Note: Binge drinking defined as males having five or more drinks or females having four or more drinks on one occasion. Obesity defined as body mass index of 30 or higher. Current smoking defined as adults who smoke every day or some days. Not meeting physical activity guidelines defined as adults who did not meet any aerobic or strengthening guidelines. No fruit intake defined as adults who did not consume fruit at least once per day. No vegetable intake defined as adults who did not consume vegetable at least once per day. **Source:** 2013 KS BRFSS, Bureau of Health Promotion, Kansas Department of Health and Environment

Table 19. Prevalence of Chronic Health Conditions by Poverty Status, KS BRFSS 2013

Poverty Status	Cancer (excluding skin)	Coronary heart disease	Diabetes	Heart attack	Stroke
At or less than federal poverty level	6.0% (4.7-7.2)	3.9% (3.1-4.7)	10.7% (9.2-12.1)	4.3% (3.4-5.2)	4.2% (3.2-5.1)
Above federal poverty level	6.9% (6.5-7.3)	4.3% (3.9-4.6)	9.3% (8.9-9.8)	4.3% (4.0-4.6)	2.8% (2.5-3.0)

Poverty Status	Arthritis	Asthma (current)	Depression	Disability	Multiple chronic conditions
At or less than federal poverty level	22.8% (20.8-24.9)	13.7% (11.9-15.5)	28.2% (25.9-30.4)	28.7% (26.5-31.0)	33.2% (30.7-35.7)
Above federal poverty level	24.1% (23.4-24.8)	8.0% (7.5-8.5)	16.4% (15.7-17.0)	19.5% (18.8-20.2)	32.2% (31.4-33.0)

Note: Multiple Chronic Conditions include arthritis, asthma, chronic obstructive pulmonary disease, coronary heart disease, diabetes, heart attack, hypertension, kidney disease, other cancers (excluding skin), skin cancer or stroke **Source:** 2013 KS BRFSS, Bureau of Health Promotion, Kansas Department of Health and Environment

The prevalence of obesity, current smoking, no physical activity meeting guidelines, or no vegetable intake per day was significantly higher among adults 18 years old and older who were at or less than the federal poverty level compared with adults who were above the federal poverty level (Table 18). See page 1 for the definitions of the health risk behaviors used in this report.

There was no statistically significant difference in the prevalence of binge drinking and no fruit intake per day among adults who were at or less than the federal poverty level compared with adults who were above the federal poverty level (Table 18).

Table 20. Higher Prevalence of Chronic Conditions Among Adults At or Less Than Federal Poverty Level Compared with Adults Above Federal Poverty Level, KS BRFSS 2013

Chronic Condition

Asthma (current)	significantly higher prevalence for adults at or less than federal poverty level
Arthritis	significantly higher prevalence for adults at or less than federal poverty level
Depression	significantly higher prevalence for adults at or less than federal poverty level
Disability	significantly higher prevalence for adults at or less than federal poverty level
Stroke	significantly higher prevalence for adults at or less than federal poverty level

Note: Multiple Chronic Conditions include arthritis, asthma, chronic obstructive pulmonary disease, coronary heart disease, diabetes, heart attack, hypertension, kidney disease, other cancers (excluding skin), skin cancer or stroke

There was no statistically significant difference in the prevalence of ever being diagnosed with arthritis, cancer (excluding skin cancer), coronary heart disease, diabetes, heart attack and multiple chronic conditions among adults who were at or less than the federal poverty level compared with adults who were above the federal poverty level (Table 19).

Technical Notes

Behavioral Risk Factor Surveillance System (BRFSS)

BRFSS is the world's largest annual population-based survey system tracking health conditions and risk behaviors in the United States since 1984. It is coordinated by the Centers for Disease Control and Prevention (CDC) and is conducted in every state and several territories in the United States. The Kansas Department of Health and Environment (KDHE), Bureau of Health Promotion (BHP) conducted the first BRFSS survey in Kansas in 1990 as a point-in-time survey. Since 1992, BHP has conducted the Kansas BRFSS survey annually, providing the ability to examine the burden and monitor the trends of various diseases and risk factors/behaviors. BRFSS is the only source of population-based data for several public health indicators in Kansas. The 2013 Kansas BRFSS was conducted among non-institutionalized adults 18 years and older living in private residences and college housing with landline and/or cell phone service.

For the 2013 Kansas BRFSS survey, the target total (combined landline and cell phone sample) sample size was 20,000 complete interviews with a target of 14,000 complete interviews for the landline telephone survey component (70% of total sample) and 6,000 complete interviews for the cellular telephone survey component (30% of total sample).

Considerations when interpreting BRFSS estimates

The prevalence estimates from 2013 Kansas BRFSS are representative of non-institutionalized adults 18 years old and older living in private residences and college housing with landline and/or cell phone service. BRFSS estimates do not apply to individuals residing in residences without telephone service and those who reside on military bases, prisons or nursing homes.

Due to changes in survey design and weighting methodology in 2011, comparisons cannot be made between the prevalence estimates generated for previous years and those generated for 2011, 2012 and 2013.

For more information on BRFSS methodology, visit www.kdheks.gov/brfss/technotes.html.

Age-adjustment

Age-adjustment is a statistical method for standardizing prevalence estimates for groups that have different underlying age distributions making them more comparable. Age-adjusted prevalence estimates should be used to compare groups if the underlying population distribution is different or changes over time (for example, comparing estimates for veterans and civilians). Age-adjusted prevalence estimates should be understood as relative indices, not as actual measures of burden, and should not be compared with unadjusted prevalence estimates.

All age-adjusted prevalence estimates in this report are computed using the direct method. Briefly, prevalence estimates are first computed within each age group stratum. The products of each age-specific rate multiplied by the proportion of the 2000 U.S. Standard Population in that age category are summed across the age group strata.

Impact of Social Determinants of Health on Health Risk Behaviors and Chronic Health Conditions in Kansas

For this report, the weighted data analysis was conducted to examine the impact of economic social determinants of health (unemployment, housing insecurity, food insecurity, and poverty) on health risk behaviors and chronic health conditions in Kansas.

BRFSS Questions Used for This Analysis:

Unemployment

For this analysis, unemployed adults are defined as adults 18 years and older who were out of work or unable to work. Those who responded as students, retired or homemaker to the employment question on BRFSS survey were excluded.

Are you currently...?

Please read:

- 1 *Employed for wages*
- 2 *Self-employed*
- 3 ***Out of work for 1 year or more***
- 4 ***Out of work for less than 1 year***
- 5 *A Homemaker*
- 6 *A Student*
- 7 *Retired*
- 8 ***Unable to work***

Do not read:

- 9 *Refused*

Housing Insecurity

For this analysis, housing insecurity was defined as adults who rent or own their home and who were worried or stressed “sometimes,” “usually” or “always” during the previous year about having enough money to pay rent or mortgage.

How often in the past 12 months would you say you were worried or stressed about having enough money to pay your rent/mortgage? Would you say you were worried or stressed

Please read:

- 1 ***Always***
- 2 ***Usually***
- 3 ***Sometimes***
- 4 ***Rarely***

5 *Never*

Do not read:

8 *Not applicable*

7 *Don't know / Not sure*

9 *Refused*

Food Insecurity

For this analysis, food insecurity was defined as those who were worried or stressed “sometimes,” “usually” or “always” during the previous year about having enough money to buy nutritious meals.

How often in the past 12 months would you say you were worried or stressed about having enough money to buy nutritious meals? Would you say you were worried or stressed

Please read:

1 *Always*

2 *Usually*

3 *Sometimes*

4 *Rarely*

5 *Never*

Do not read:

8 *Not applicable*

7 *Don't know / Not sure*

9 *Refused*

Poverty

For this analysis, the income-to-poverty ratio (IPR) is a measure of annual household income as it relates to the poverty threshold set by the Department of Health and Human Services. An IPR of 1.0 indicates that the annual household income is identical to the corresponding poverty threshold. Adults in poverty in this report is defined as those with less than or equal to an IPR of 1.0 or less than or equal to 100 percent if expressed as a percentage. Since BRFSS reports annual household income as a range rather than actual amounts, the midpoint of the range was used as the annual household income when estimating IPR. Family size was calculated combining total number of reported adults and children. Then the midpoint annual household income was divided by the 2013 poverty guidelines³⁸ for that respective family size that resulted in the IPR calculation for each BRFSS survey respondent. The following BRFSS questions and 2013 federal poverty guidelines were used for the calculation of the IPR value:

Is your annual household income from all sources

Read only if necessary:

- 0 4 *Less than \$25,000 If “no,” ask 05; if “yes,” ask 03
(\$20,000 to less than \$25,000)*
- 0 3 *Less than \$20,000 If “no,” code 04; if “yes,” ask 02
(\$15,000 to less than \$20,000)*
- 0 2 *Less than \$15,000 If “no,” code 03; if “yes,” ask 01
(\$10,000 to less than \$15,000)*
- 0 1 *Less than \$10,000 If “no,” code 02*
- 0 5 *Less than \$35,000 If “no,” ask 06
(\$25,000 to less than \$35,000)*
- 0 6 *Less than \$50,000 If “no,” ask 07
(\$35,000 to less than \$50,000)*
- 0 7 *Less than \$75,000 If “no,” code 08
(\$50,000 to less than \$75,000)*
- 0 8 *\$75,000 or more*

Do not read:

- 7 7 *Don’t know / Not sure*
- 9 9 *Refused*

I need to randomly select one adult who lives in your household to be interviewed. How many members of your household, including yourself, are 18 years of age or older?

— *Number of adults*

How many children less than 18 years of age live in your household?

- — *Number of children*
- 8 8 *None*
- 9 9 *Refused*

2013 POVERTY GUIDELINES FOR THE 48 CONTIGUOUS STATES AND THE DISTRICT OF COLUMBIA³³

Persons in family/household	Poverty guideline
1	\$11,490
2	\$15,510
3	\$19,530
4	\$23,550
5	\$27,570
6	\$31,590
7	\$35,610
8	\$39,630

For families/households with more than 8 persons, add \$4,020 for each additional person.

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