FIELD EXPERIENCE AT SALINE COUNTY HEALTH DEPARTMENT

Hayleigh Passauer

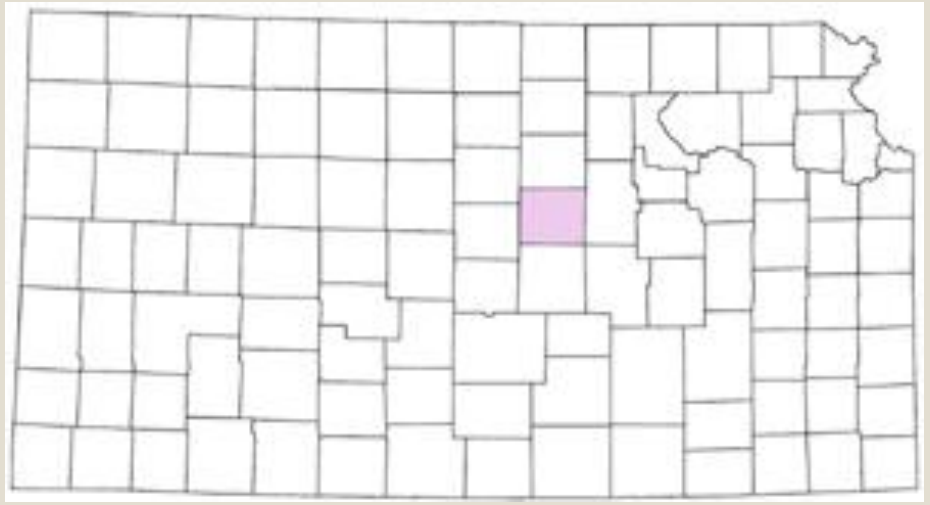
Field Experience

- Took place at Saline County Health Department
- From June 13 – July 25, 2016
- From 8 am to 5 pm Monday thru Friday
- Preceptor was Jason Tiller

Andres, C. (2016). *Lead concerns in Salina children*. *KSN-TV*. Retrieved 5 April 2017, from http://ksn.com/2016/06/08/lead-concerns-in-salina-children/

Saline County Demographics

- 55,740 Residents in the County
- 79.4% Non-Hispanic White
- 11.4% Hispanic
- Median Income $7,000 lower than the state average.



Kansas Historical Society. (2015, October). Saline County, Kansas. Retrieved March 27, 2017, from https://www.kshs.org/kansapedia/saline-county-kansas/15339

Saline County Health Department

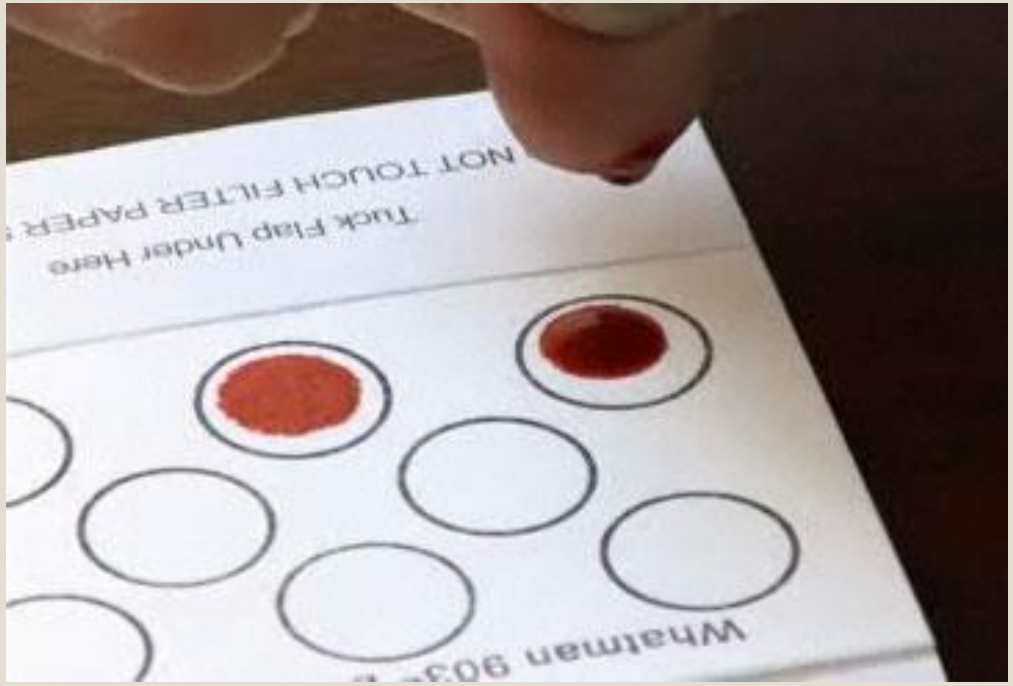
Services Offered

- WIC
- Vaccinations
- Maternal and Child Health
- Home Health Care
- Reproductive Services
- Tuberculosis Services

Facebook. (n.d.). Retrieved April 02, 2017, from https://www.facebook.com/saline.county.health/

Lead Cases

- Time period of January 1st 2015 to March 31st 2016
- 32 cases of elevated blood lead levels in children
- More screening was done to determine if it was more wide spread via a finger stick test
- 300 people screened
- One person had elevated blood lead levels



Copson, M. A. (2010). The Vitamin D Era/Error - More Blunders. Retrieved April 02, 2017, from http://functionalhealthtests.com/vitaminDinfo.html

Live Well Saline County

- The mission of the coalition is to provide all Saline County residents opportunities, education, and encouragement for a lifetime of healthy eating and physical activity
- Focused on healthy eating and food safety
- Working with farmers market to establish use of EBT and vouchers

Live Well Saline County. (n.d.). Retrieved April 02, 2017, from http://volunteer.unitedwaysalina.org/agency/detail/?agency_id=51450

Live Well Saline County (cont.)

- Healthy eating at concession stands at ball parks and pools
- Food vendors must offer 25% healthy food choices
- Starting at 10% and increasing amount each year to keep vendors
- Hoping to help combat childhood obesity

Harris County. (n.d.). Creating Healthier School Concession Stands in San Antonio. Retrieved April 02, 2017, from http://www.healthylivingmatters.net/about_hlm/news/top_news/creating_healthier_school_concession_stands_in_san/

Human Trafficking Coalition

- Salina is at the junction of I-35 and I-70
- Hospitals, health departments, women's shelters and others need to know the signs
- Many trafficked individuals will not go to the doctor alone or have access to their own money
- They may sell small products around town

January is Human Trafficking Awareness Month. (2014, January 09). Retrieved April 02, 2017, from https://www.unicefusa.org/stories/mission/protect/trafficking/end/january-human-trafficking-awareness-month/7509

EpiTrax

- Epidemiological tracking system for Kansas
- Doctor's offices and hospitals report communicable diseases through EpiTrax
- KDHE then assigns cases to county health departments
- County nurses investigate cases

KDHE. (n.d.). Public Health |. Retrieved April 02, 2017, from http://www.kdheks.gov/

EpiTrax (cont.)

- Each disease will have its own specified investigation in the EpiTrax system
- Each person's demographics are collected
- EpiTrax investigations try to determine cause and determine risk of spread
- If outbreak is large KDHE is contacted to investigate

KDHE. (n.d.). Public Health |. Retrieved April 02, 2017, from http://www.kdheks.gov/

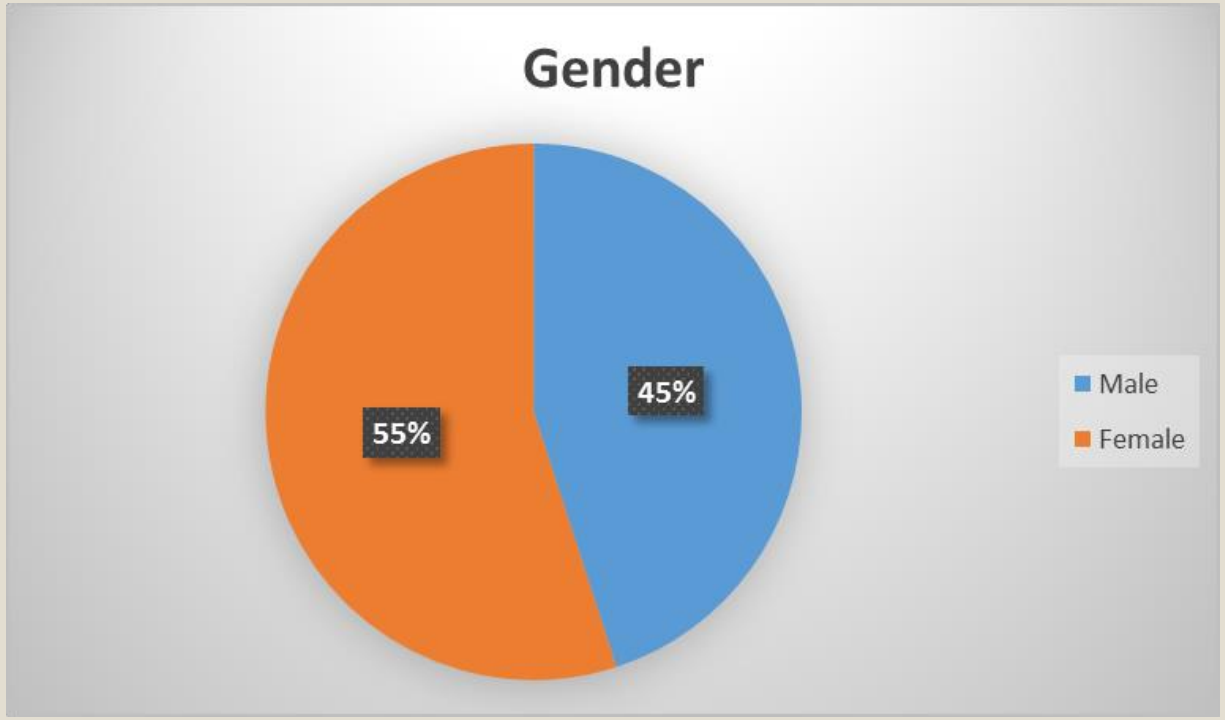
EpiTrax Foodborne Illness Data

- Historical data about foodborne illness from the past three years was looked at to determine if the health department was missing a group of individuals
- Saline County had 20 reported foodborne illness cases since 2013

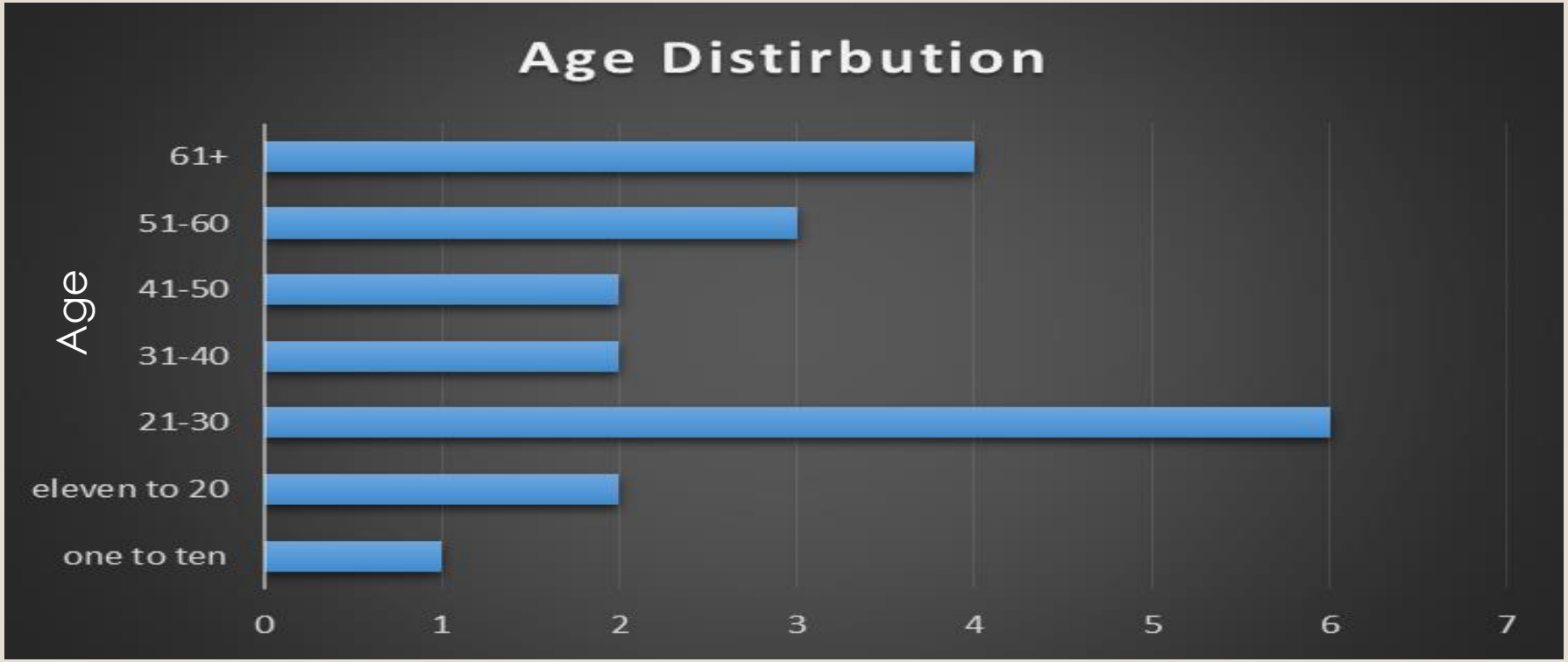
Robinson, S. (2013, August 18). The Big Five: Most Common Salmonella Strains in Foodborne Illness Outbreaks. Retrieved April 02, 2017, from http://www.foodsafetynews.com/2013/08/the-five-most-common-salmonella-strains/#.WOF53fkrJEY

Gender Distribution of Reported Foodborne Illness Cases in Saline County from 2013-2016 from EpiTrax

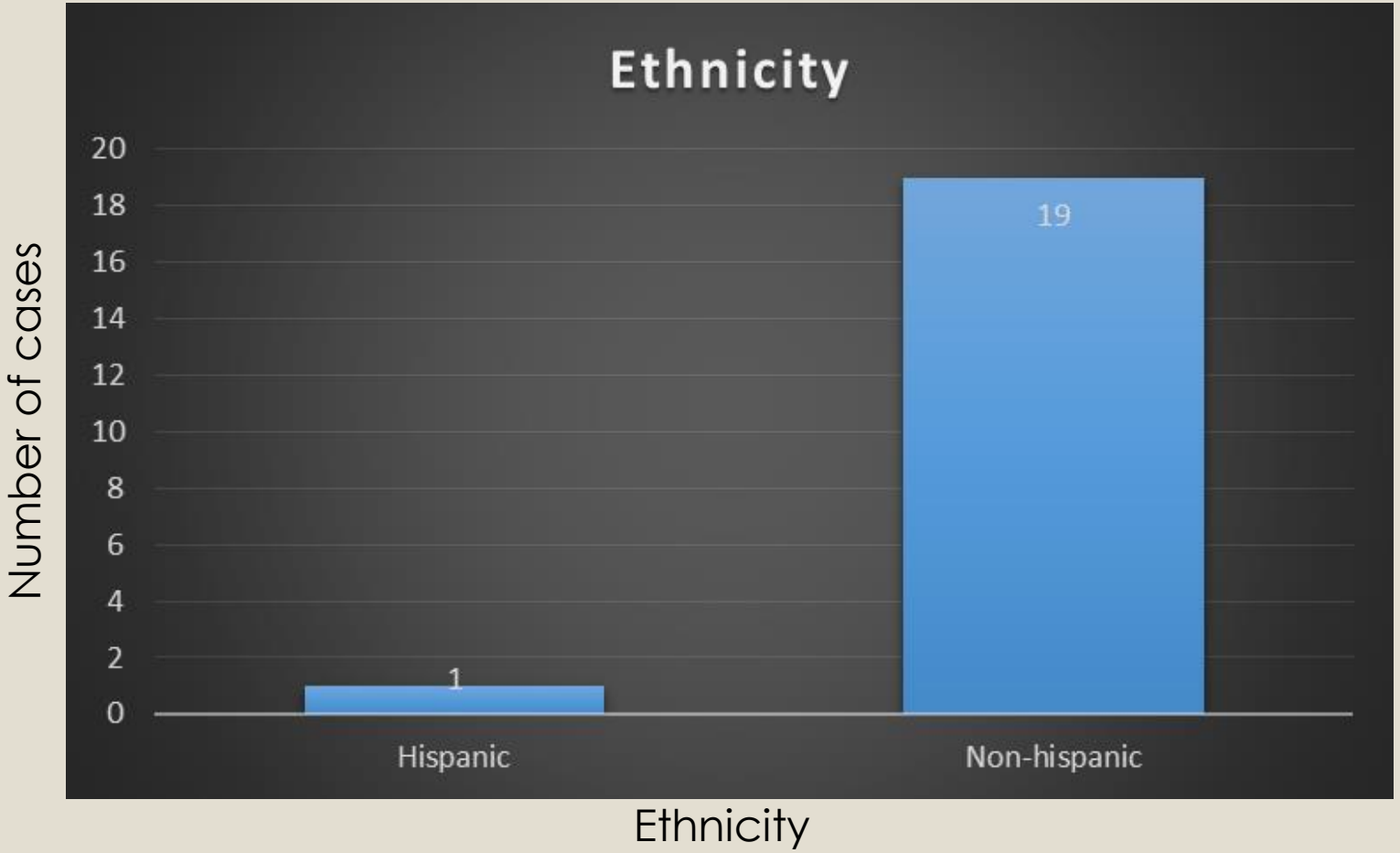
- 11 Female Cases
- 9 Male Cases



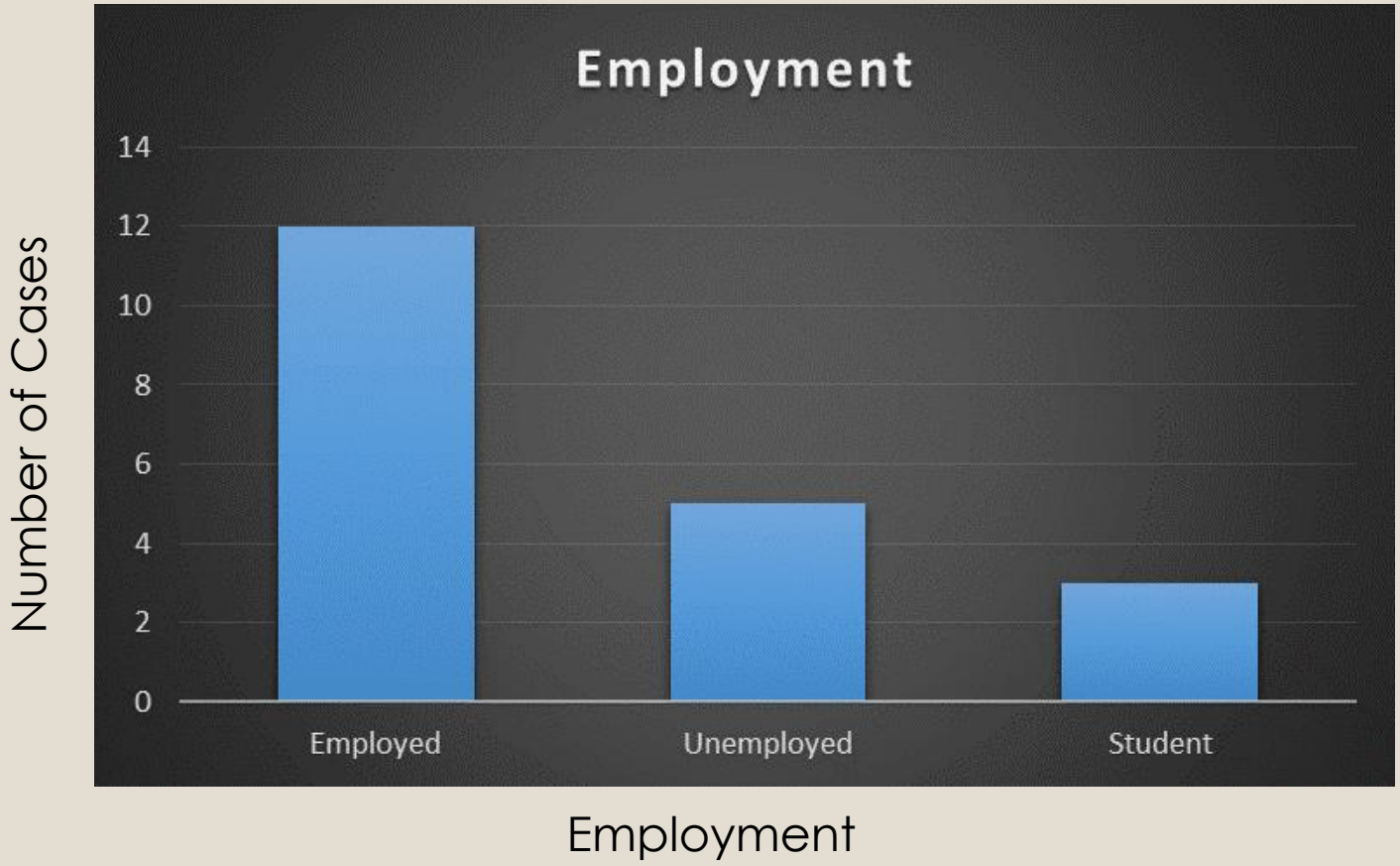
Age Distribution of Reported Foodborne Illness Cases in Saline County from 2013-2016 from EpiTrax



Ethnicity Distribution of Reported Foodborne Illness Cases in Saline County from 2013-2016 from EpiTrax



Employment Distribution of Reported Foodborne Illness Cases in Saline County from 2013-2016 from EpiTrax



Community Outreach Events

- "Becoming a Mom" class is for expectant mothers in the community
- Open to anyone but aimed at low-income families
- If all sessions are completed a prize is given such as a stroller, car seat, or playpen
- Taught women about pregnancy, birth and caring for a child

O'Brien, C. (n.d.). Groups for Parents and Moms | PPD, anxiety, and other parenthood issues. Retrieved April 02, 2017, from http://happywithbaby.com/groups/

CAPSTONE PROJECT – FOOD SAFETY KNOWLEDGE SURVEY

Research Question

- The focus of this research was to understand if food safety knowledge had any correlation to poverty levels.
- The historical data from EpiTrax did not give any insight to poverty level of the person who became ill so a survey was done to gather data to understand food safety knowledge.

Methods

- Food safety survey created to collect data
- Survey is based on other surveys previously used in literature (Kwon et al 2008; North Carolina Department of Agriculture and Consumer Services)
- Survey was tested by health educators at SCHD
- Demographics such including education level, ethnicity, age, income level, number of members in the household, and if the participants had received any food safety training

Methods (cont.)

- The demographic information was used to determine poverty level based on the United States poverty guidelines (United States Department of Health and Human Services, 2016)
- Income level can also give insight to what kind of stores respondents may have access to
- The survey was distributed via social media on the Saline County Health Department's Facebook page on July 1st and closed on July 8th
- The data was collected through Google forms and the data was compiled in Excel for analysis
- The number of questions answered incorrectly by the respondents and their poverty level was analyzed using SAS and put into an ANOVA table to determine the mean and standard deviation of the data

Food Safety Survey

Food Safety Questionnaire

Instructions

Please fill out the questionnaire to the best of your knowledge. The information that is shared will be anonymous and your name will not be shared.

Part I: Demographics

1) _____ **Education Level**
   a. Some high school or less
   b. High school diploma
   c. Beyond high school

2) _____ **Ethnicity**
   a. Non-Hispanic white
   b. Non-Hispanic black
   c. Hispanic
   d. Other _____

3) _____ **Age**
   a. 18-25
   b. 25-50
   c. 50 and above

4) _____ **Income level**
   a. Under $10,000
   b. $10,001-$20,000
   c. $20,001-$30,000
   d. $30,001-$40,000
   e. $40,001 and above

5) _____ **Number of members in your household (including you)**
   a. 1
   b. 2
   c. 3
   d. 4
   e. 5 and above

6) _____ **Have you had any food safety training?**
   a. Yes
   b. No

Part II: Food Safety

1) _____ **A common place for food to get germs is**
   a. Cooking vesicle
   b. Refrigerator
   c. Freezer
   d. Cutting board

2) _____ **To sanitize a surface you should**
   a. Wipe it with a dry dish towel
   b. Wipe it down with soap and water
   c. Use a product containing bleach
   d. Use a window cleaning product

3) _____ **Cutting boards can be used to cut vegetables after it has been used to cut raw meat.**
   a. True
   b. False

4) _____ **How should frozen food be thawed?**
   a. On the counter
   b. In the fridge
   c. In the oven
   d. In the microwave

5) _____ **How should left over hot food be cooled and stored?**
   a. Cooled on the counter then put in the refrigerator
   b. Cover and refrigerate immediately, no cooling
   c. Leave on counter for later use
   d. Cool, cover and refrigerate quickly

6) _____ **What tells you that a ground beef hamburger patty is cooked?**
   a. Color of the meat
   b. Temperature of meat
   c. Firmness of the meat
   d. Juices that are coming out of the meat

7) _____ **If there is mold on cottage cheese, what do you do?**
   a. Throw away the entire package
   b. Scoop out just the moldy part
   c. Eat it anyway
   d. Scoop out the moldy part and then a bit more to make sure you got it all

8) _____ **If the food looks and smells fine then it is safe to eat**
   a. True
   b. False

9) _____ **Which is safer to eat?**
   a. Scrambled eggs
   b. Sunny side up egg

10) _____ **How long should you microwave leftover food?**
   a. Till they are warm enough to eat
   b. Till they are steaming
   c. If they are cold they are still safe to eat
   d. I don't reheat food in the microwave

11) _____ **When was the last time you had any foodborne illness (food poisoning, diarrhea, vomiting, etc.)**
   a. Under 6 months
   b. 6 months to 1 year
   c. 1 year to 2 years
   d. I have never had a foodborne illness

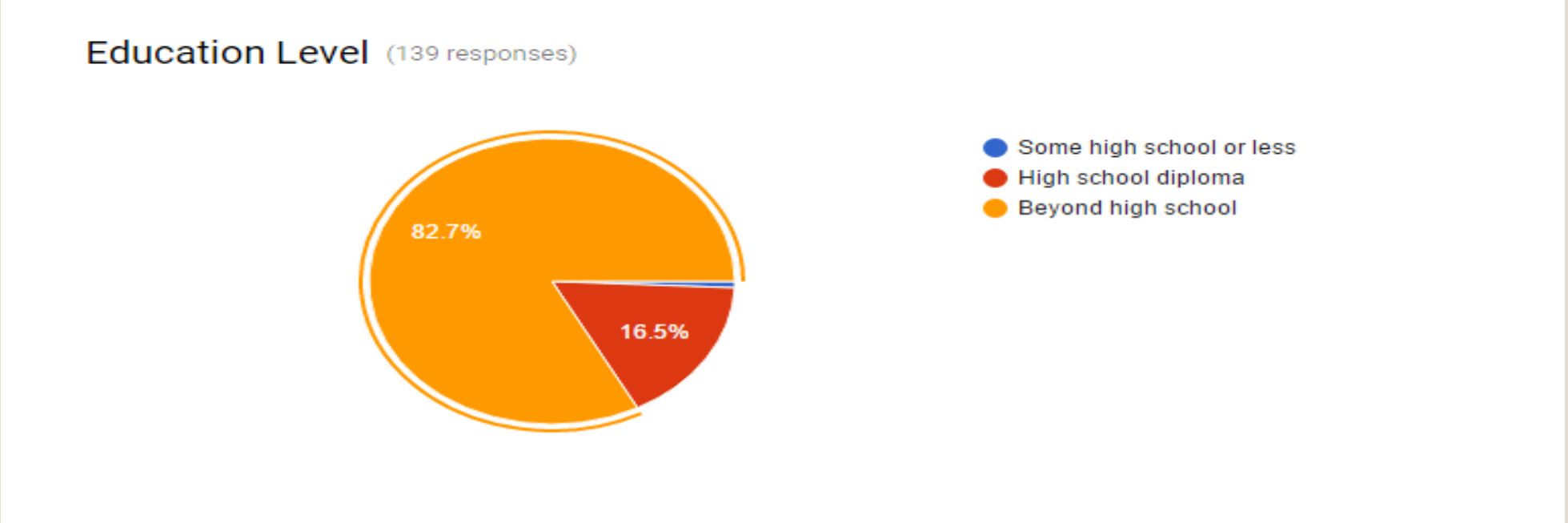
Poverty Guidelines for the United States

2016 POVERTY GUIDELINES FOR THE 48 CONTIGUOUS STATES AND THE DISTRICT OF COLUMBIA	
PERSONS IN FAMILY/HOUSEHOLD	POVERTY GUIDELINE
For families/households with more than 8 persons, add $4,160 for each additional person.	
1	$11,880
2	16,020
3	20,160
4	24,300
5	28,440
6	32,580
7	36,730
8	40,890

Number of the 140 participants above and below the poverty level

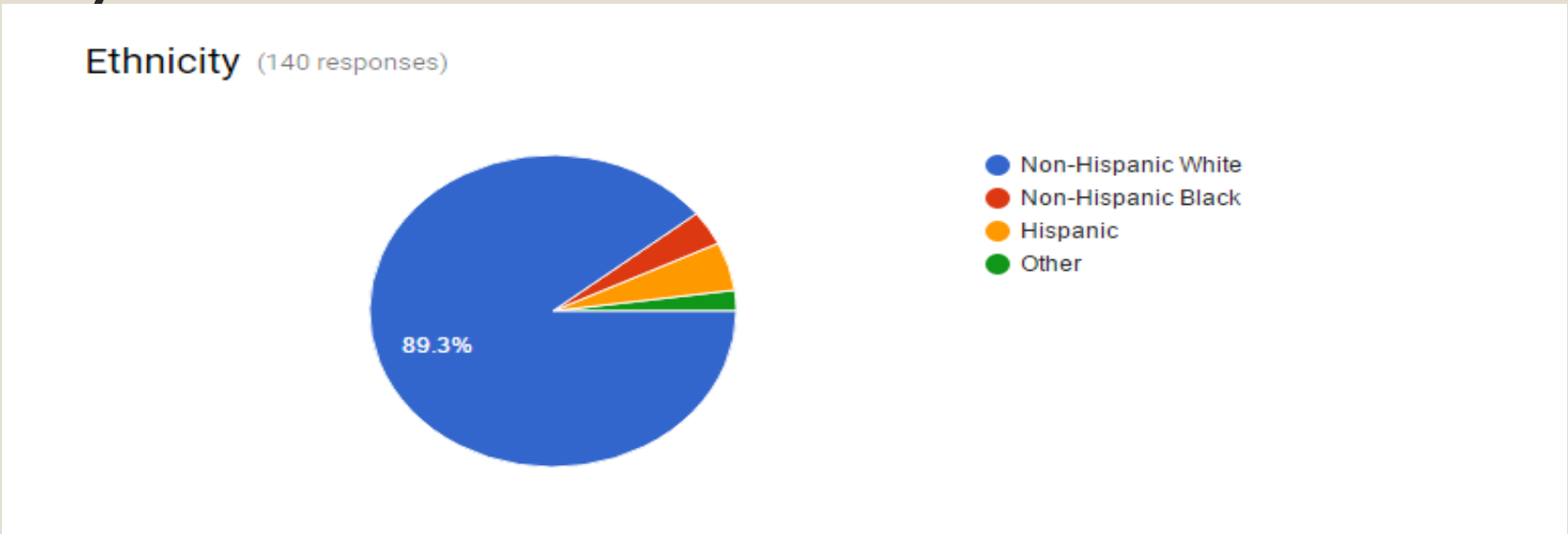
Poverty	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Above	121	86.43	121	86.43
Below	19	13.57	140	100.00

Educational Level of Participants Who Responded to the Food Safety Survey



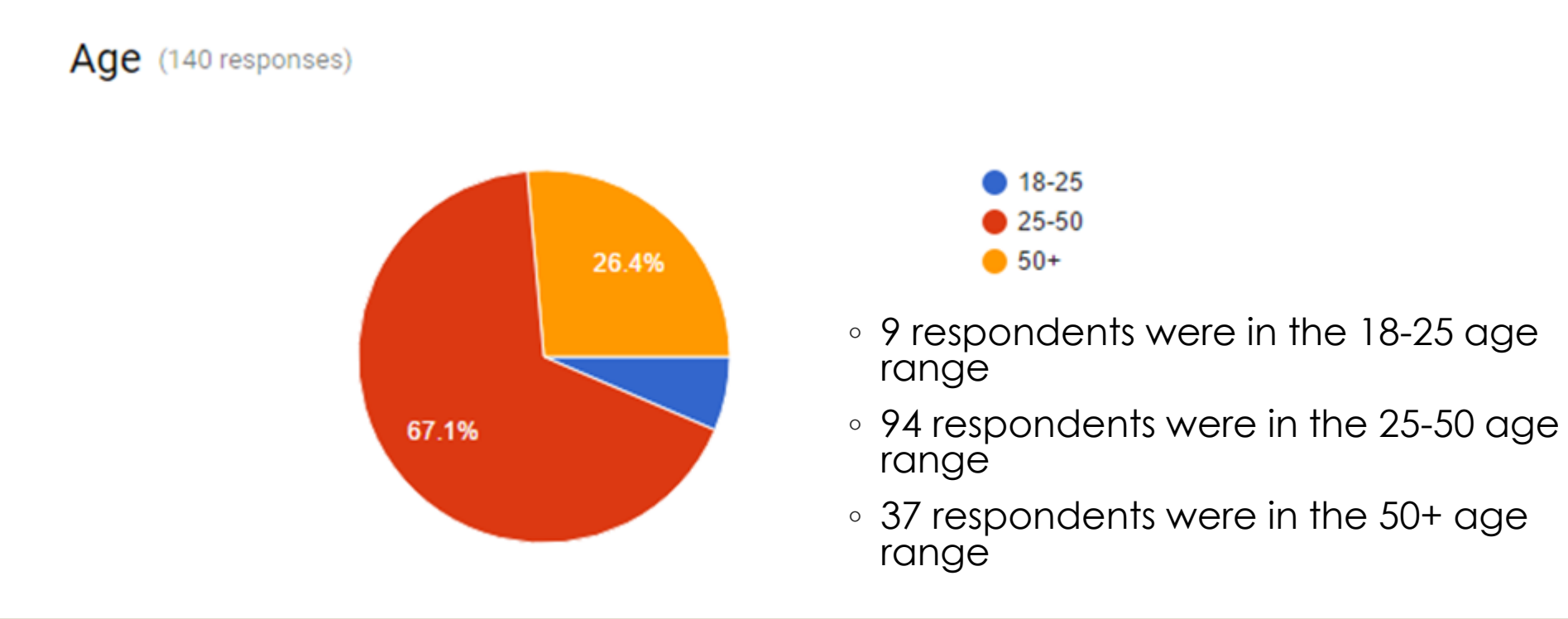
- 115 respondents had education beyond high school
- 23 respondents had only a high school diploma
- 1 respondent had some high school
- 1 respondent did not answer

Ethnicity of Participants Who Responded to the Food Safety Survey



- 125 respondents were Non-Hispanic White
- 7 respondents were Hispanic
- 5 respondents were Non-Hispanic Black
- 3 respondents classified themselves as other ethnicities

Age Range of Participants Who Responded to the Food Safety Survey



- 9 respondents were in the 18-25 age range
- 94 respondents were in the 25-50 age range
- 37 respondents were in the 50+ age range

Survey Summary

- Within the survey there were 11 questions related to food safety knowledge.
- The questions that were answered incorrectly most often were the "How long should food be microwaved?" question, which 72 participants (51%) answered incorrectly
- The "What tells you if a ground beef patty is cooked?" question, which 54 participants (39%) answered incorrectly.
- Overall the mean number of questions answered incorrectly was 1.8 and the standard deviation was 1.24.

Number of Food Safety Questions Answered Incorrectly by Age Range

18-25			25-50			50+		
Questions Incorrect	Number of Participants	Percentage	Questions Incorrect	Number of Participants	Percentage	Questions Incorrect	Number of Participants	Percentage
0	1	11%	0	12	13%	0	6	16%
1	1	11%	1	27	29%	1	8	22%
2	2	22%	2	31	33%	2	12	32%
3	3	33%	3	13	14%	3	9	24%
4	2	22%	4	7	7%	4	1	3%
5	0	0%	5	3	3%	5	1	3%
6	0	0%	6	1	1%	6	0	0%
Mean	2.44		Mean	1.92		Mean	1.81	
Standard Deviation	1.26		Standard Deviation	1.29		Standard Deviation	1.24	

Number of Food Safety Questions Answered Incorrectly by Participants Based on Education Level

Below High School Diploma			High School Diploma			Beyond High School			No Answer		
Questions Incorrect	Number of Participants	Percentage	Questions Incorrect	Number of Participants	Percentage	Questions Incorrect	Number of Participants	Percentage	Questions Incorrect	Number of Participants	Percentage
0	0	0%	0	3	13%	0	16	14%	0	0	0%
1	0	0%	1	3	13%	1	32	28%	1	1	100%
2	0	0%	2	9	39%	2	36	31%	2	0	0%
3	1	100%	3	5	22%	3	19	17%	3	0	0%
4	0	0%	4	3	13%	4	7	6%	4	0	0%
5	0	0%	5	0	0%	5	4	4%	5	0	0%
6	0	0%	6	0	0%	6	1	1%	6	0	0%
Mean	3		Mean	2.08		Mean	2.13		Mean	1	
Standard Deviation	0		Standard Deviation	1.2		Standard Deviation	1.2		Standard Deviation	0	

Number of Food Safety Questions Answered Incorrectly Based on Participants Ethnicity

Non-Hispanic White			Non-Hispanic Black			Hispanic			Other		
Questions Incorrect	Number of Participants	Percentage	Questions Incorrect	Number of Participants	Percentage	Questions Incorrect	Number of Participants	Percentage	Questions Incorrect	Number of Participants	Percentage
0	18	14%	0	1	20%	0	0	0%	0	0	0%
1	30	24%	1	3	60%	1	1	14%	1	2	67%
2	40	32%	2	1	20%	2	4	57%	2	0	0%
3	23	18%	3	0	0%	3	1	14%	3	1	33%
4	9	7%	4	0	0%	4	1	14%	4	0	0%
5	4	3%	5	0	0%	5	0	0%	5	0	0%
6	1	1%	6	0	0%	6	0	0%	6	0	0%
Mean	1.94		Mean	1		Mean	2.29		Mean	1.67	
Standard Deviation	1.3		Standard Deviation	0.71		Standard Deviation	0.95		Standard Deviation	1.15	

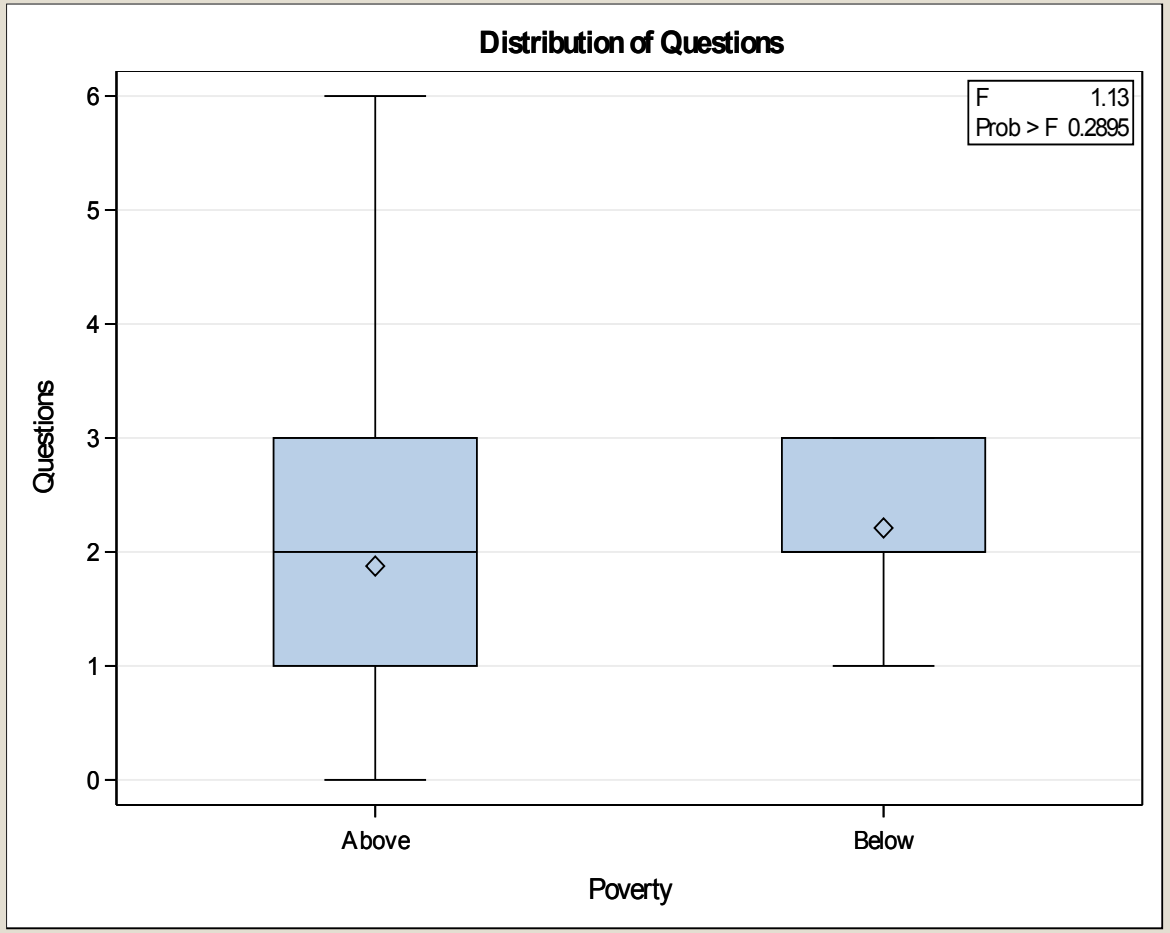
Mean Number of Food Safety Questions Answered Incorrectly Based on Whether Participants Self-Identified as Having, or Not Having, Food Safety Training

Had Food Safety Training	N	Questions Wrong	
		Mean	Std Dev
No	97	1.90	1.28
Yes	43	1.95	1.29

- These values were not significantly different (p=0.83).

Number of Food Safety Questions Answered Incorrectly by Survey Respondents Based on Poverty Level Status

- 121 respondents were above the poverty line with a mean number of questions incorrect of 1.8
- 19 respondents were below the poverty line with a mean number of questions incorrect of 2.2.
- P-value of 0.09



Conclusions

- Participants who were below the poverty line answered an average of 2.2 questions incorrectly
- Participants who were above the poverty line answered an average of 1.8 questions incorrectly
- The difference in the means is not significant at a p-value of 0.09.
- There isn't enough data to say that there is or is not a correlation between poverty level and food safety knowledge.
- Participants who were in the 18-25 range had a higher mean number of questions answered incorrectly than any of the other age groups at 2.44
- This is consistent with the research that states that young adults have very poor food safety knowledge
- Participants with a high school diploma had 2.08 questions answered incorrectly and participants with beyond a high school diploma had 2.13
- Hispanics had the highest mean out of the ethnicities at 2.29 questions answered incorrectly

Reflections

- If more time was available to study data at the Saline County Health Department the survey could have been administered to the WIC clients and to the mothers in the Becoming a Mom class.
- These two populations have a very important role in food safety because they are often the ones preparing the food and they are taking care of small children who are going to learn habits and cooking methods from their parents.

Borboa, M. M. (2012, January 13). Cooking tips for kids. Retrieved April 02, 2017, from http://www.sheknows.com/food-and-recipes/articles/807128/momtested-tips-to-teach-your-kids-to-cook

QUESTIONS?

Image Sources

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