

Using Survey Research to Teach Quantitative Reasoning

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A Presentation Prepared for the
 National Numeracy Network (NNN) Annual Conference
 East Lansing, MI




CUNY Student Characteristics (2016-17)

	Minority	Female	Low Income	First gen	Care provider	Work for pay
Lehman	81.9%	68.0%	64%	49%	77%	54%
Senior Colleges	48.5%	58.3%	54%	43%	66%	49%
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Source: City University of New York Office of Institutional Research



Why survey research?



- Compelling context and cultural relevance
- Working through setbacks to reduce math phobia
- Active and collaborative research
- Identity development and growth mindset



QR Skills Developed in Survey Research Experience (SRE)

- Working with spreadsheets, including Google Sheets/Excel
- Describing data (measures of central tendency, spread, etc.)
- Calculating and interpreting percentages
- Preparing and interpreting tables and graphs
 - Including contingency tables to explore relationships
- Writing about data



Research Process

- Choose research topic/research question(s)
 - Must include a relationship question
- Submit at least two survey questions
- Develop hypotheses
- Analyze data (prepare univariate frequencies and pivot tables)
 - Prepare tables and/or graphs
- Describe research findings/make conclusions
- Present research findings to class
- Submit research paper



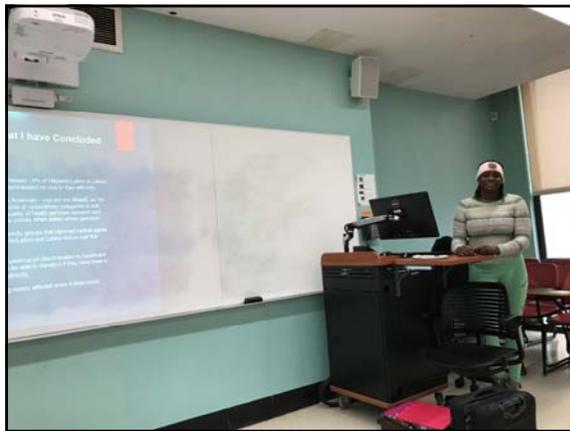
Examples of Research Questions

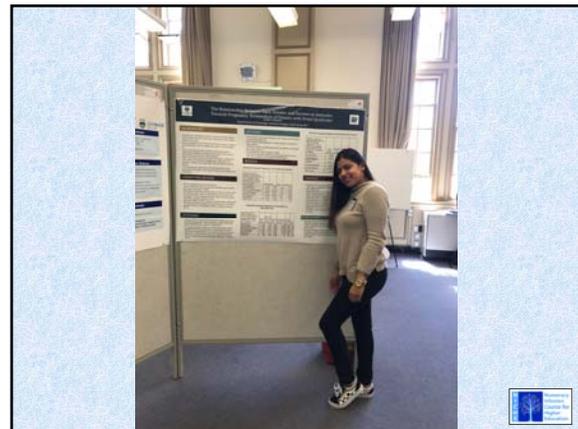
- What is the relationship between stress and sleep among men vs. women?
- How do attitudes towards euthanasia vary by religion or gender?
- What is the relationship between stress and caregiving for family members?
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Creating a Class Survey

- Students' questions are merged together to create a class survey
- **Fall 2018 survey:**
<https://goo.gl/forms/dEtcLYgzGuAEZshx1>
- Each student is required to administer the survey to and/or obtain at least 6 respondents
 - Students email friends, post on social media, etc.
- Representative sample of well-defined population not practical
 - But social media surveys widespread now
 - Teach students to think about representativeness issue





Student Feedback on Survey Research Experience (SRE)

Fall 2016 Anonymous Survey (n=22)

- 100% agreed strongly or somewhat that they had “learned valuable skills undertaking survey research” and that “engaging in survey research [had made them] more interested in doing research.”
- 91% agreed strongly or somewhat that they had become more comfortable working with data and engaging in data analysis.



Students’ Voices (Focus Group): Positive Aspects of the Survey Research Experience (SRE)

- “I like the fact that we were able to pick our own topic.”
- “When I get older and get my degree I want to help teach children with autism. . . . So I wanted to know for myself, my question was does having a child with a disability cause relationship stress?”
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Students’ Voices (Focus Group): Attitudinal Change and Skills Acquired as a Result of the Survey Research Experience (SRE)

- “Excel.”
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- “I feel I am a little more confident concerning discussing data and being able to analyze it when I was in the beginning. I look at it a little deeper and feel more confident.”
- “I think converting the numbers to percent made me feel high class [other students laugh]. It made it so legit like wow I am a doctor. I don’t know that was fun for me.”



Challenges of Survey Research Experience

- Developing and designing appropriate research questions.
- Challenge of sufficient time (to administer survey and analyze data).
- Creating the tables and interpreting the data
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Concluding Thoughts

The Survey Research Experience (SRE)

- Survey research is an excellent tool for engaging students in QR!
 - Students especially liked that they were analyzing data that was personally meaningful and relevant to their lives.
- implementing a SRE requires careful planning and advance preparation on the part of the instructor
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 - The goal is not to train students as survey researchers but to use survey research as a tool for teaching fundamental QR skills (e.g., percentages, tables, etc.).



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How not to teach survey research



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How does stress affects health?

- There is two types of stress:
 - Acute Stress: This is short-term stress.
 - Chronic Stress: Stress that last long period of time.
 - When you have Chronic stress your body reacts to stress by releasing hormones. These hormones make your brain more alert, cause your muscles to tense, and increase your pulse.
 - Over time your are at risk of developing the following diseases:
 - High blood pressure
 - Heart disease
 - Diabetes
 - Depression or Anxiety
 - Skin Problems (acne, eczema)
 - Menstrual Problems

Source : <https://medlineplus.gov/ency/article/003211.htm>

What I have Concluded

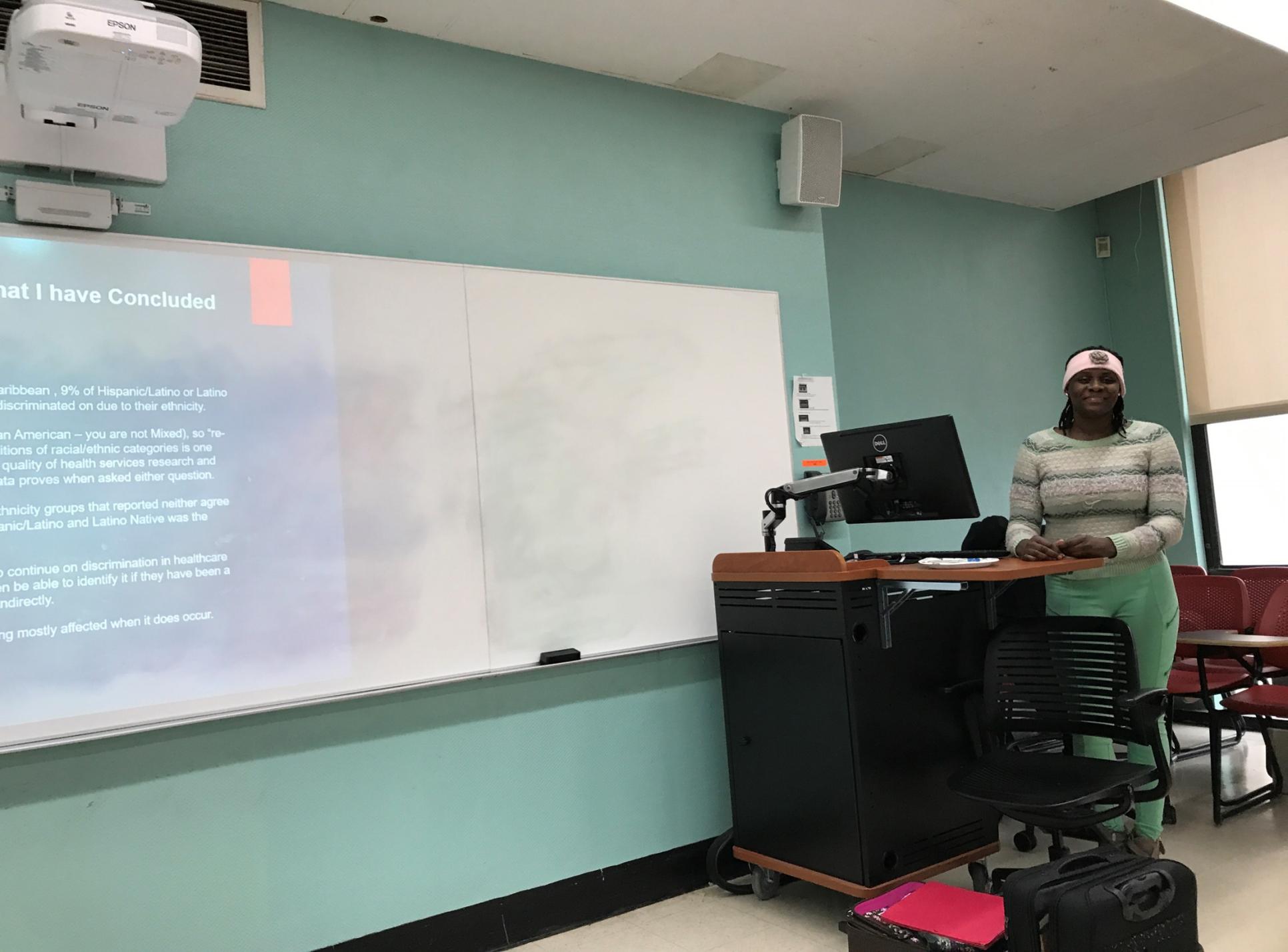
Caribbean, 9% of Hispanic/Latino or Latino
discriminated on due to their ethnicity.

an American – you are not Mixed), so "re-
definitions of racial/ethnic categories is one
quality of health services research and
data proves when asked either question.

ethnicity groups that reported neither agree
Hispanic/Latino and Latino Native was the

to continue on discrimination in healthcare
can be able to identify it if they have been a
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ing mostly affected when it does occur.



search

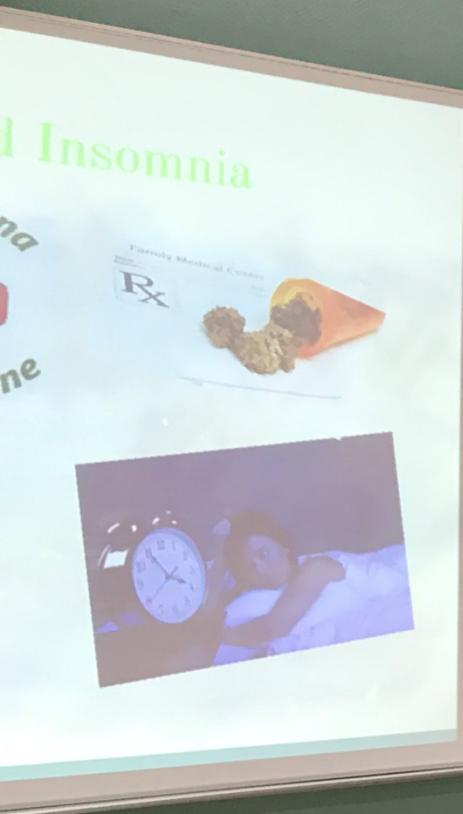
posing or precipitating factor in
emerge, other factors such as
attitudes about sleep, and
"spending too much time in bed"
(and associates 2007).

of Insomnia onset, such that
by 19%, for every additional
higher risks of developing
and that age was not a predictor
increased by 2% for every one year

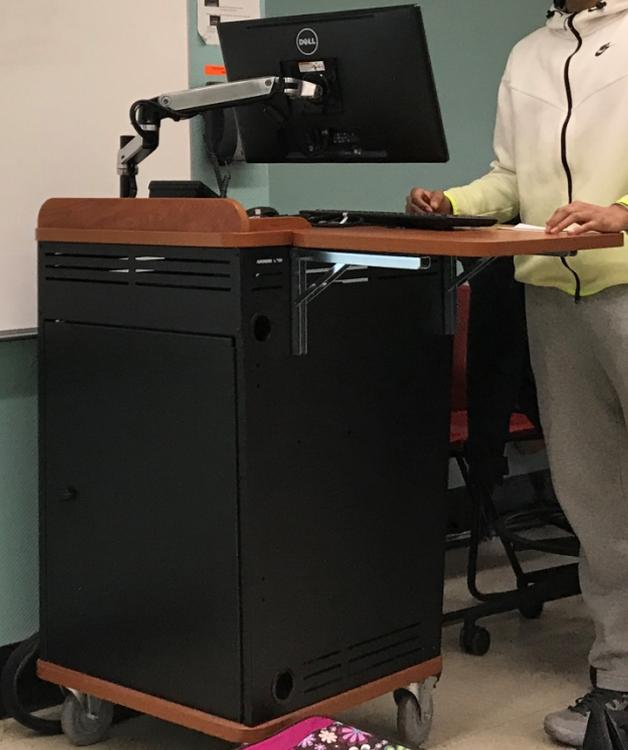


Insomnia

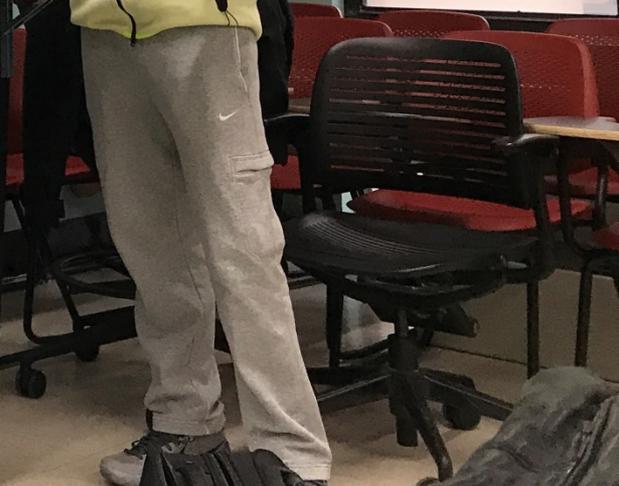
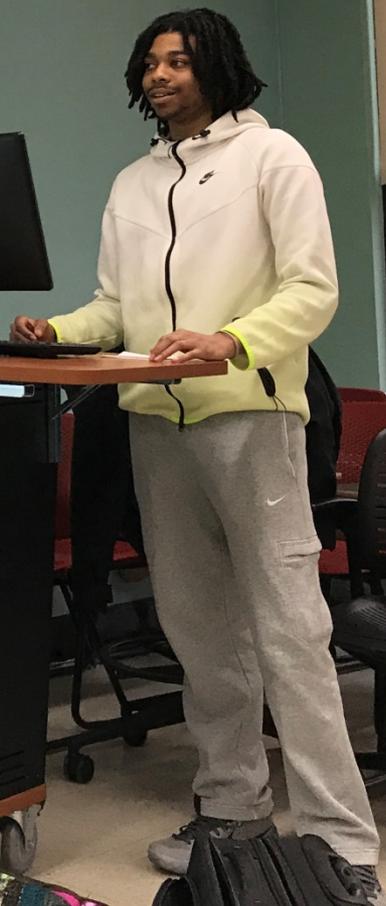
Family Medical Center
Rx

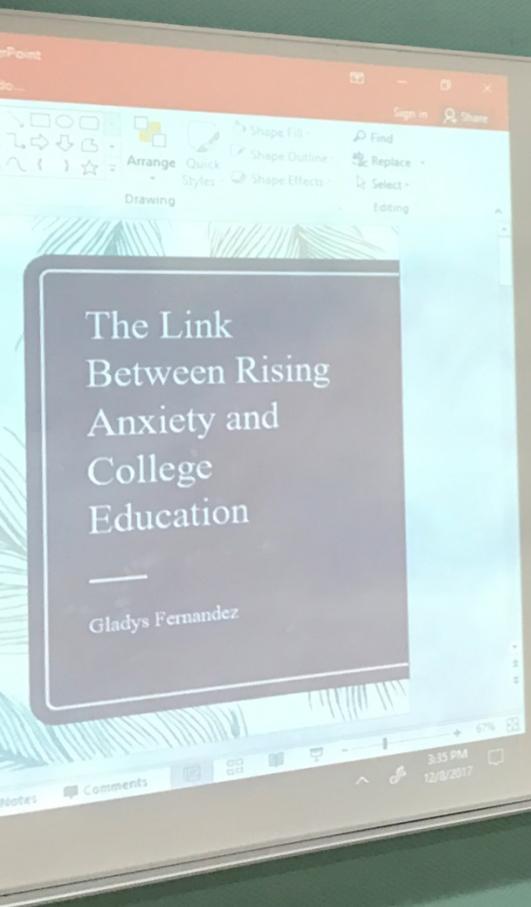


The slide contains three main visual elements: a prescription symbol (Rx) next to the text 'Family Medical Center', a photograph of a bag of orange and white chips, and a photograph of a person lying in bed with an alarm clock on a bedside table.



A black mobile workstation cart with a wooden top. It holds a Dell monitor, a keyboard, and a mouse. A person is standing behind the cart, interacting with the computer.





The Link
Between Rising
Anxiety and
College
Education

—
Gladys Fernandez

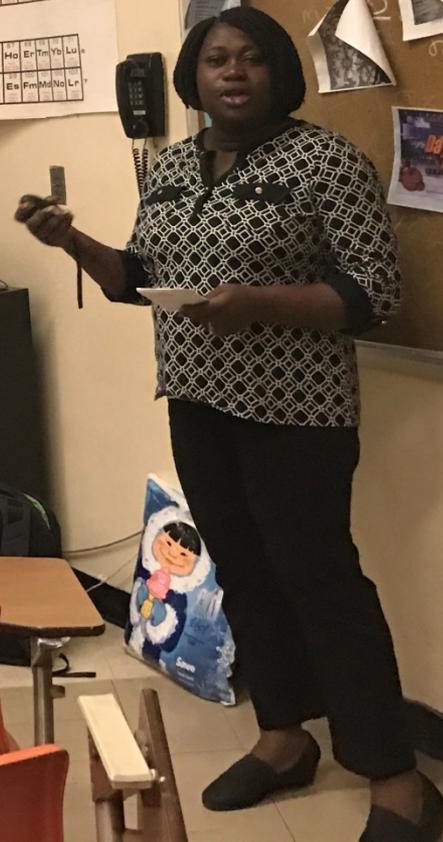
Microsoft PowerPoint interface showing the Drawing and Editing tabs. The status bar at the bottom indicates the time is 3:35 PM on 12/8/2017.



Pressure and Diabetes: Stress and Food Choices

Kate Ofori
(kate.ofori@lc.cuny.edu)

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Students

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Joseph & David Joseph

The Relationship Between Race, Gender, and Income on Attitudes Towards Pregnancy Termination of Fetuses with Down Syndrome

Department of Sociology, Lehman College CUNY, Bronx, NY

BACKGROUND

- According to the National Down Syndrome Society about 6,000 babies are born with Down Syndrome in the United States every year.
- Down syndrome is a condition that happens when a baby is conceived with a full or partial extra copy of chromosome 21.
- Down syndrome causes a distinct facial appearance, intellectual disability, developmental delays, and may be associated with thyroid or heart disease.
- Down syndrome occurs all around the world, in people of every race and economic background. Although it is a genetic condition, you most likely will not have any family history.
- The average life expectancy of individuals with Down syndrome is 60 years, with many living into their sixties and seventies.

LITERATURE REVIEW

- 90% of parents who are told that their unborn child has Down Syndrome reportedly opt to abort their baby (Andriakola, 2006).
- Although the abortion rate decreased 26% for women with income less than 100% of the federal poverty level, this population had the highest abortion rate of all the groups examined (Jones & Jerman, 2017).
- Between 2008 and 2014, abortion rates overall declined for all racial and ethnic groups but were higher for non-white women than for non-Hispanic women (Jones & Jerman, 2017).

ATTITUDES

Lawson (2010) argues that termination following a Down Syndrome diagnosis reflect indirectly negative attitudes toward children with cognitive impairment.

In a study among convenience of 200 participants, those reporting personal familiarity to individuals with Down Syndrome indicated both more positive attitudes toward parenting a child with DS and more certainty that they would not abort following a prenatal diagnosis (Lawson, 2010).

METHODS

- The Fall 2017 Sociology/Disability 222 classes administered a questionnaire/survey
- Each student administered our class survey to at least five respondents.
- The total number of participants that successfully completed the survey were 311.
- All participants were 18 years or older.
- The survey was administered using google forms and the data was analyzed using google spreadsheets.

RESULTS

Attitudes Towards Pregnancy Termination by Gender

Attitude	Female	Male	Other	Grand Total
Strongly Agree	1,251	4,051	4	5,306
Somewhat Agree	8,259	8,211	4	16,474
Neutral	11,259	11,259	4	22,522
Somewhat Disagree	10,811	11,259	4	22,074
Strongly Disagree	44,121	44,121	4	88,246
No response	4,242	4,242	4	8,488
Grand Total	89,753	89,753	16	179,522

Attitudes Towards Pregnancy Termination by Race/Ethnicity

Attitude	White	Black	Hispanic	Other	Grand Total
Strongly Agree	1,251	4,051	4	4	5,306
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Attitudes Towards Pregnancy Termination by Income

Attitude	Less than 100%	100-149%	150-199%	200% or greater	Grand Total
Strongly Agree	8,259	8,211	4	4	16,474
Somewhat Agree	11,259	11,259	4	4	22,522
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FINDINGS

- Females (7%) are more likely to would favor an abortion of a fetus than males (4%).
- White/Caucasians are more likely either "strongly agree" or "somewhat agree" to terminate a pregnancy of a fetus with Down Syndrome (20% compared to 14.62% for non-Hispanic whites (14.62%).
- Those with higher incomes are more likely to indicate that they would favor an abortion of a fetus with Down Syndrome (18.48% vs. those with lower income (14.13%).

CONCLUSIONS

- Results provide us with an insight into the attitudes towards pregnancy termination of fetuses with Down Syndrome.
- However, findings directly suggest that regardless of race, gender and income, individuals should provide views about individual's attitudes.

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