HIV/AIDS MORBIDITY IN YOUTH AND TEENS AGES 13-24 IN ALL TEXAS COUNTIES

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Image Source-http://www.topnews.in/health/files/aids1.jpg
Introduction

- HIV is from the retrovirus family that causes acquired immunodeficiency syndrome, or AIDS, in which the immune system gradually fails and infections become life threatening.

- The virus targets the T Cells of the Immune System, Reproduces (into “virus factory”), and explodes-spreading the HIV through the entire body.
  - This cycle repeats, until no T cells left and the infected person is highly susceptible to infections of all sorts.

- Since discovered, AIDS has killed more than 25 million people worldwide, and in Texas it kills roughly 1,300 every year.
The Research

- Why Should We Bother?
  - HIV/AIDS is a serious pandemic, and a huge threat in Texas for Black populations and urban areas
  - Much of the literature review stated that Youths and Teens were unaware of the serious threat of HIV/AIDS due to a lack of education as well as those living in low income households, which also reflect a lack of necessary finance to get tested and treated

- The Research was intended to understand the spatial distribution of HIV/AIDS in all (254) Texas counties Among Youths and Teens, Ages 13-24
  Human Ecology Disease Model Used:
  - Environment, Genetics, and Human Behavior
  - **Variables include:**
    - Urban Populations
    - Unsafe Sex
      - Chlamydia Rates
      - Teen Birth Rates
    - Level of Education
      - Percent With Less Than a High School Graduate Degree
      - Percent With a Bachelor’s Degree or Higher
    - Race/Ethnicity
      - Black, White, and Hispanic
    - Socioeconomic Factors
      - Median Income
      - Percent of Single-Parent Households
      - Percent of Children Living in Poverty

Image Source:
http://www.gdmaf.org/GDMAF/MetroBall_files/309181_8194-1.jpg
Research Hypotheses

1. Race is a predictor of HIV/AIDS prevalence. The rate of HIV/AIDS is higher in counties with high populations of Black people rather than White or Hispanic people.

2. The rate of HIV/AIDS is higher in counties with higher urban populations.

3. Unsafe Sex is a predictor. Where there are high rates of Chlamydia and Teen Birth Rates, there will be high rates of HIV/AIDS.

4. The rate of HIV/AIDS is higher where there is a higher population of people who received less than a high school graduate degree. And lower where there is a high percentage of those with a Bachelor’s Degree or Higher for every county.

5. Socioeconomic Status is an indicator of HIV/AIDS rates. Where there are high rates, there will also be:
   1. High Percentages of Children Living in Poverty
   2. Low Median Family Incomes
   3. High Percentages of Single-Parent Households

Image Source: http://www.topnews.in/files/aids12.gif
-HIV cases occurred predominantly in metropolitan areas.
- The highest rate of HIV cases occupied the Harris, Dallas, Bexar, Travis and Tarrant Counties.

-Higher rates of HIV/AIDS exist in East Texas where there is a high population of Blacks.

-Higher rates are occurring also in the Northeast, where there are higher urban populations.
Blacks comprise 11% of the total population yet account for 47.3% of the cases among ages 13-24. There was a positive correlation between the rate of HIV/AIDS and Blacks.

R Value: .458
Significant at less than 1%
Null was rejected

As the Black population increases, so does the rate of HIV/AIDS.
- Hispanics comprise 32% of the total population in Texas

- Account for 24.4% of the HIV/AIDS cases among ages 13-24

- There was a negative correlation
  - R Value: -0.136
  - Significant at 3%
  - Null was rejected
  - Weak correlation

- As the Hispanic population increases, the rate of HIV/AIDS decreases
Whites comprise 52.4% of the total population

Account for 27.3% of the HIV/AIDS cases among ages 13-24

There was a negative correlation
- Null was rejected
- Weak correlation

- $R$ Value: $-.135$
- Significant at 3%

As the White population increases, the rate of HIV/AIDS decreases
- There was a positive correlation
  - Moderately Correlated
  - The null was rejected

- **R Value**: .535
  - Significant at Less than 1%
  - Statistically Significant

- Where there are high rates of urban populations, there are high rates of HIV/AIDS
There was a negative correlation

- No significance

- \( R \) Value: -0.27
- Null accepted

- As the percentage of children living in poverty increases, the rate of HIV/AIDS decreases
- Positive Correlation
- Moderate Correlation
- Null Rejected

- **R Value: .442**
- Significant at Less than 1%

- As the percentage of Single-Parent Households increases, so does the rate of HIV/AIDS
As the Median Family Income increases, the rate of HIV/AIDS increases.

- Positive Correlation
- Significant

- $R$ Value: .233
- Significant at Less than 1%

Data from the Texas State Department of Health.
- Positive Correlation
- No Correlation
- R Value: .039

- Not Statistically Significant
As the Chlamydia rate increases, the HIV/AIDS rate increases.
- Negative Correlation
- Weak Correlation
- Null Rejected

*R Value: -.265*
- Significant at Less than 1%

- As the percentage of those with less than a High School graduate degree increases, the HIV/AIDS rate decreases
- Positive Correlation
  - Highly Correlated
  - Significant
  - Null Rejected

- R Value: .987
  - Significant at Less than 1%

- As the percentage of those with a Bachelor’s Degree or higher increases, the rate of HIV/AIDS increases
- State Rate as of 2006 - 313 per 100,000
- Whites: 227, Blacks: 1,047, Hispanics: 228
- Areas in Yellow - decreased
- Areas in Red-Orange - increased significantly
- Over time, the rate of HIV/AIDS has increased the most in the Eastern portion of Texas
- This is where there is a high population
- Also increases in the Urban and Metropolitan areas
Conclusions:

Higher rates where there are higher rates of Chlamydia
- Urban populations tend to have higher STD rates
  - Both Chlamydia and HIV are indicators of unsafe sex
The higher the Median Income, the higher the rate
  - Urbanization is a factor
  - Also, lower Median Incomes are found in the Hispanic populations, where there is a low rate of HIV/AIDS

The higher the percentage of those with a Bachelor’s Degree or higher, the higher the rate
  - Urbanization
  - Colleges
The higher the percentage of those with Less than a High School Graduate Degree, the lower the rate
  - The Hispanic population
The higher the percent of Children Living in Poverty, the lower the rate
  - Not significant
  - Hispanic population is a confounding variable - affects outcome
The higher the percentage of Single-Parent Households, the higher the rate
  Teens home alone, no supervision, etc.
The higher the percent of Blacks, the higher the rate
  Blacks make up 47.3% of cases
Teen Births not significant
Further Research

- Looking at the access to healthcare facilities in East Texas
- Education in urban areas and at Universities
- Disregard the Hispanic population?
- STD Awareness Programs
- Mode of Transmission

Reduce Your Risks!

- Abstinence is the only sure way to not contract HIV in terms of sex
- If engaging in sexual activities, always use protection
- Know your partner’s HIV/AIDS status
- Get tested (Even if you aren’t pregnant)
- Talk to your doctor if you feel you are having any symptoms
- Don’t share any needles, ever, for any reason
- **Treat all blood and bodily fluids as if they are infected**