

Understanding Adolescent Pregnancy Trends In Arizona

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Introduction and Objectives

Adolescent Pregnancy:

Adolescents, or teen, pregnancy is defined as pregnancy that occurs for a woman between the ages of 10-19. Teenage pregnancy is heavily associated with serious health, social, and economic consequences such as maternal and child mortality, pregnancy complications, and high school dropout rates.

Studying adolescent pregnancy will help find efficient methods of prevention, lowering the number of child mortality due to pregnancy complications, and decreasing high school dropout rates.

Commonly Known

Risk Factors:

- Being from a single-parent home
- Early sexual activity
- Early use of alcohol and drugs
- Lack of Education
- Income

Other Potential

Risk Factors:

- Location
- Race

Methods

Data

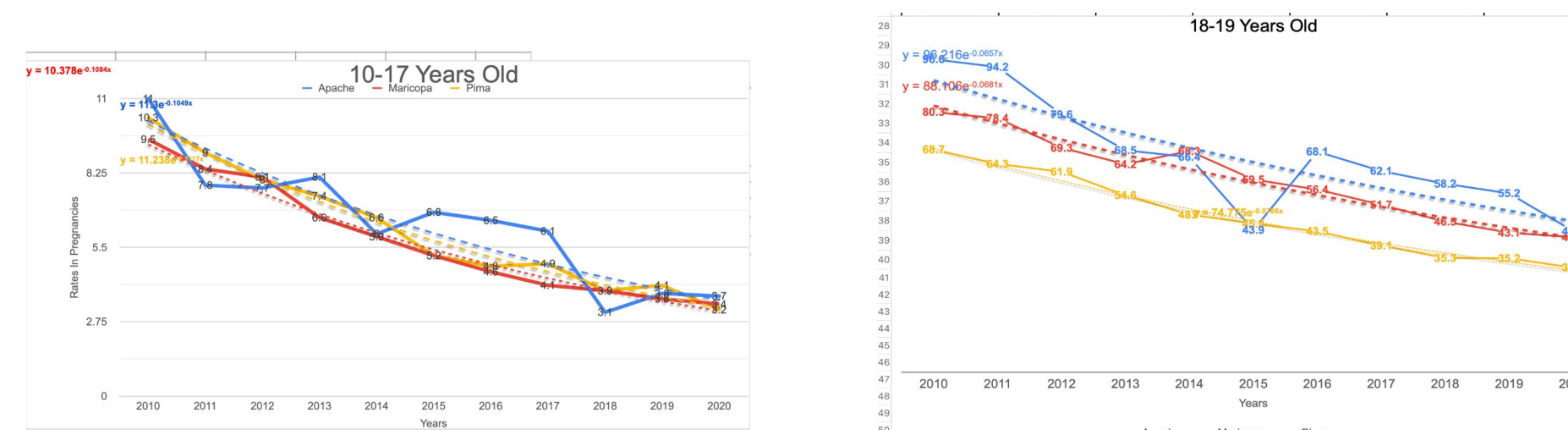
I collected data from AZ Department of Health Services. Their teen pregnancy section details all risk factors regarding teen pregnancy. I collected data on teen pregnancy trends in different Arizona counties, different races in Arizona, and Arizona teen pregnancy rates compared to US teen pregnancy rates.

Analysis

First, I compared Arizona's rates of teen pregnancy with those of the United States. Then I compared AZ counties Pima, Maricopa, and Apache. Lastly, I gathered data of the races in Arizona and their individual teen pregnancy rates. I plotted this data in Excel, created line graphs, and determine trendlines to compare and analyze the data.

Results:

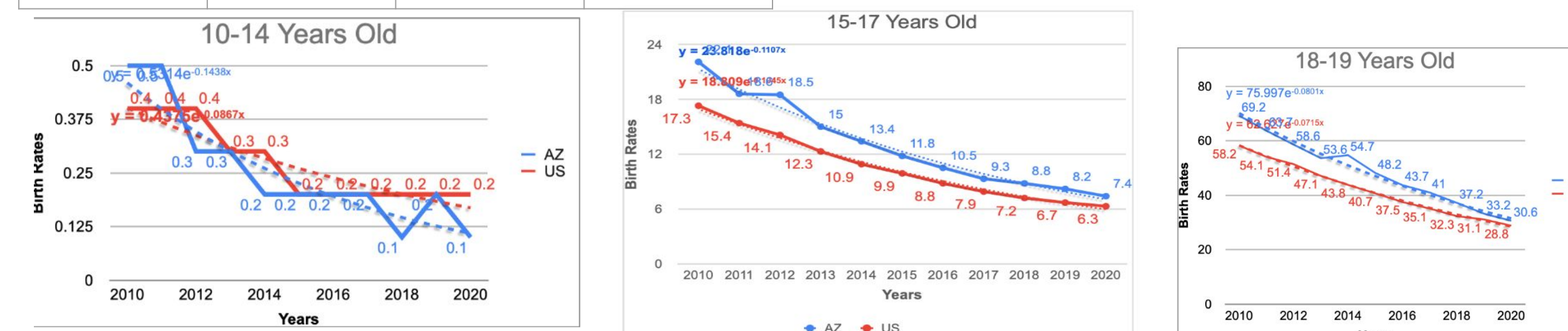
AZ Counties:



Age/ Location	Apache	Maricopa	Pima
10-17	$11.3e^{-0.1049x}$	$10.376e^{-0.1084x}$	$11.238e^{-0.1117x}$
18-19	$96.216e^{-0.0657x}$	$88.106e^{-0.0681x}$	$74.775e^{-0.0786x}$

For age groups 10-17, Apache County is consistently the highest in pregnancy rates. Followed by Pima, then Maricopa. For ages 18-19, Apache is the highest. Followed by Maricopa, then Pima.

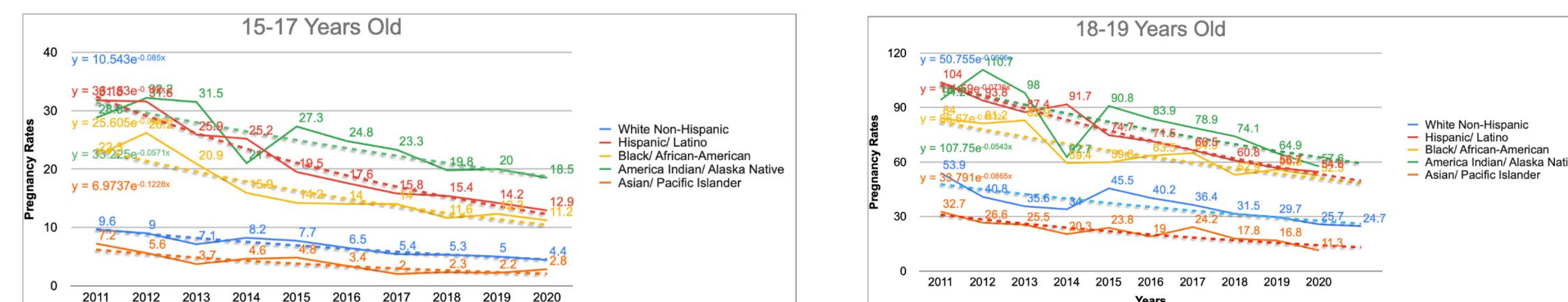
AZ vs US:



Age/ Location	AZ	US
10-14	$0.5314e^{-0.1438x}$	$0.4375e^{-0.0867x}$
15-17	$23.818e^{-0.1107x}$	$18.809e^{-0.1645x}$
18-19	$75.997e^{-0.801x}$	$62.627e^{-0.0715x}$

For ages 10-14, AZ and the US both switch off for higher pregnancy rates. Toward 2020, US rates remain stable as AZ continues to drop. For ages 15-17, AZ rates are continuously higher than US rates. For ages 18-19, AZ rates are continuously higher than US rates.

Race Impacts:



Age/ Race	White Non-Hispanic	Hispanic/ Latino	Black/ African-American	American Indian/ Alaska Native	Asian/ Pacific Islander
15-17	$10.542e^{-0.085x}$	$36.153e^{-0.0102x}$	$25.605e^{-0.0562x}$	$33.225e^{-0.0571x}$	$6.9739e^{-0.1228x}$
18-19	$50.755e^{-0.0606x}$	$111.59e^{-0.0736x}$	$86.67e^{-0.0532x}$	$107.75e^{-0.0543x}$	$33.791e^{-0.0865x}$

For ages 15-17, American Indian/ Alaska Native has the highest pregnancy rates. This is followed by Hispanic/ Latino, then Black/ African-American, then White Non-Hispanic, then Asian/ Pacific Islander. These rankings remain the same for ages 18-19.

Discussion

Around 70% of Apache County is Native American, explaining the higher rate of teen pregnancy as "Race Impacts" depicts that Native Americans have a higher teen pregnancy rate. This explains why Apache county has higher teen pregnancy rates than Maricopa and Pima. Maricopa County consists majority of White Non-Hispanic, while Pima county consists mainly of White Non-Hispanic and Hispanic/ Latino. This explains Pima's higher rate of teen pregnancy than Maricopa County.

Overall, Arizona has a higher population of Native Americans and Hispanic/ Latina than the average in the US. This correlates directly to the charts in "Race Impacts" and explains the number is "AZ Counties" as Native Americans consistently have the highest number of teen pregnancies in Arizona.

Conclusion

Overall, there are numerous factors explaining rates and causes of teen pregnancies. Understanding the root of the issue allows better chances to prevent it. Education regarding teen pregnancies will lower child mortality rates due to teen pregnancy and decrease the rates of high school dropouts. It will also lower STI rates and pregnancy complications due to young mother ages. It is crucial to understand how race and location impact the rates of teen pregnancy, alongside education, income level, and other risk factors. This knowledge will help cultivate effective preventative measures curated to each demographic.

Literature Cited & Acknowledgements

- Bureau of Public Health Statistics. (n.d.). *Arizona Department of Health Services*. ADHS | Teenage Pregnancy, 2010-2020. <https://pub.azdhs.gov/health-stats/report/tp/2020/index.php>
- U.S. Census Bureau quickfacts: Pima County, Arizona. (2023). <https://www.census.gov/quickfacts/fact/table/pima-county-arizona/LND110210>