Breast Cancer Occurrences and Mortality Rates Among Women of Different Races and Ethnicities Elena Jurczak¹, Dr. Jia Pu² Henry M. Gunn High School¹, Mathematica Health Policy Research²

INTRODUCTION

The most recent statistics dating from 2011 state that there were approximately 230,480 new cases of breast cancer and 39.520 breast cancer deaths in the United States. Over the years, irregularities have been noticed in the statistics regarding breast cancer occurrences in women of different races and ethnicities. They are not always consistent, but scientists and researchers have been able to find patterns in the data concerning breast cancer occurrence. Many other factors come into play, including age, amount of exercise done, weight, smoking history, and many more, but race and ethnicity seem to represent an important factor in the probability that a woman will develop breast cancer, get an early diagnosis, and post treatment survivorship. For example, although there has been an important decrease in mortality rates over the years, it has not been equal among the various racial groups either, and has been found to vary. This raises an important question: are women from certain ethnicities more prone to developing breast cancer? Do the statistics change accordingly to a woman's race? And if so, in what ways do they differ? In my research, I tried to find answers to these questions by studying existing statistics about this topic and by drawing my own. This study focuses only on non-Hispanic white, non-Hispanic black, Hispanic and Asian women. If more women were aware that their ethnicity or race could be a determining factor in the probability that they will develop breast cancer, they would probably get checked for this cancer more frequently. This way, they could decrease their risk of developing breast cancer, or it could be discovered at an earlier stage and would be easier to treat.

DATA GATHERED

The results gathered in this project seem to follow similar trends as the ones found in other studies. However, they differ in certain aspects because of circumstances. For one, the data I gathered mainly concerns non-Hispanic white respondents, as they represent the majority of people who took this survey (69 out of the 89 women represented in this project). Not enough non-Hispanic black or Hispanic/Latino women took the survey in order for correct data to be analyzed.

Similarly to what has been found by the Centers for Disease Control and Prevention, non-Hispanic white women are the most likely to get breast cancer. Asian/Pacific Islander and Hispanic/Latino women have an equal and considerably slimmer chance of being diagnosed with breast cancer.

These results aren't as precise as the ones drawn by the CDC because there was a much greater amount of data gathered about non-Hispanic white respondents than there was for other races/ethnicities, but they do show that race and ethnicity are a factor for breast cancer, considering that non-Hispanic white women seem to get fairly regular screenings and still somehow have a much higher rate of breast cancer incidences than other races and ethnicities. Furthermore, because they are more likely to receive regular screenings, there are also a lot more recorded incidences of breast cancer among white women.

Other Statistics Gathered in this Research

- 30.4% of non-Hispanic white respondents have been diagnosed with breast cancer at least once in their lives.
- 10% of Asian/Pacific Islander respondents are diagnosed with breast cancer at least once in their lives.
- 14.3% of Hispanic or Latino respondents are diagnosed with breast cancer at least once in their lives.
- Only 47.8% of non-Hispanic white respondents (the most likely to get breast cancer) perform breast self-examinations, versus 70% of Asian/Pacific Islander respondents and 57.1% of Hispanic/Latino respondents.

RESULTS







Graph #3: When Did You Have Your Most Recent Screening? **Asian/Pacific Islander Respondents**



Graph #4: When Did You Have Your Most Recent Screening? Hispanic or Latino Respondents



PREVIOUS STUDIES

According to a study conducted by the Centers for Disease Control and Prevention in 2012, white women are the most likely to get breast cancer, followed by black, Hispanic or Latino, Asian/Pacific Islander, and American Indian/Alaska Native women. However, the CDC also found out that **non-Hispanic black women with breast cancer have** the highest death rate, followed by white, Hispanic or Latino, Asian/Pacific Islander, and American Indian/Alaska Native women. This trend remains consistent over the years.



ANALYSIS AND CONCLUSION

In conclusion, what I learned from this research isn't at all what I thought it would be at the beginning. As proven by the results gathered in this project, race and ethnicity are a factor to be considered when talking about breast cancer. However, this study also proves that they are just one of many and most importantly, that they most often are both biological and social. Some of the questions asked in the survey that was sent out weren't related to race or ethnicity, but rather to people's awareness and knowledge of cancer, which can then be related back to race and ethnicity. For example, white women are proven to be the most likely to be diagnosed with breast cancer. According to the data gathered, only about 47.8% of white women perform breast selfexaminations. And while 57.4% had a screening in the last year, 10.3% have also never had one before. Thus, a higher rate of screenings than self examinations may explain why mortality rates are lower than incidence rates, but the fact that 1 in 10 non-Hispanic white women have never been tested for breast cancer before also shows why they are the most likely to develop breast cancer, as it indicates low awareness of breast cancer prevention. Other factors, such as age, diet, physical activity, and others, are linked to race and ethnicity, and may be the reason why Asian/Pacific Islander and Hispanic/Latino women have a much lower risk of developing breast cancer and of dying from it than non-Hispanic white women do.

REFERENCES

Centers for Disease Control and Prevention "Breast Cancer Rates by Race and Ethnicity." Centers for Disease Control and Prevention. Centers for Disease Control and Prevention, 20 Aug. 2015. Web. 29 Apr. 2016. <http://www.cdc.gov/cancer/breast/statistics/race.htm>.

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