Spring 2016

The Effects Race and Socioeconomic Status Have on Infant Mortality Rates

Gabrielle Schramm
gns9@zips.uakron.edu

The Effects Race and Socioeconomic Status Have On Infant Mortality Rates

Written by: Gabrielle Schramm

Senior Honors Project 2016

Advisor: Dr. Adrianne Frech

Readers: Dr. Rebecca Erickson and Dr. Juan Xi

Abstract

This paper is going to look at the role that race and socioeconomic status play in infant mortality. While we have made progress, there is still a huge difference between the infant mortality rate for black women than white women and people who have a lower socioeconomic status are much more likely to suffer from infant mortality than people who have a higher socioeconomic status. I used data from outside sources to help create charts that will clearly illustrate the difference in infant mortality rate in regards to race and socioeconomic status. The data will show that African American women are twice as likely as white women to suffer from infant mortality. The data will also show that those who are in a low socioeconomic class are more likely to suffer from infant mortality than those in a high socioeconomic class. I will use this data to discuss why race and socioeconomic status have such a large impact on infant mortality.

Introduction

Infant Mortality is defined as the death of a child that is less than one year of age. In the United States we have a way of measuring infant mortality. We call this the Infant Mortality Rate (IMR) which is defined as the number of deaths of children under one year of age per 1,000 live births. The United States has the highest infant mortality rate among the wealthy countries. In 2014, there were 582.1 infant deaths per 100,000 live births in the United States (MacDorman and Matthews 2013). In 2013, there were 23,000 infant deaths in the United States (MacDorman and Matthews 2013). This lead to an infant mortality rate of 6.0. This means that for every 1,000 live births, 6 infants died. This number may not seem that high but compared to other countries this is an extremely high infant mortality rate. For example, a baby born in the United States is three times more likely to die than a baby born in Japan (Fact File on Health Inequalities 2016).

So the question remains: why does the United States have such a high infant mortality rate? In this paper, I examine how race and socioeconomic status affect infant mortality.

It probably seems unlikely that race would have an effect on infant mortality but it has a large impact. There is a very large gap between the numbers of infant deaths among white women compared to the number of infant deaths among African American women (Kids Count Data Center 2013). The data that I will present later in the paper will show that African American women are twice as likely as white women to suffer from infant mortality. I will also show you that over time, the infant mortality has declined by that African American women are consistently twice as likely to suffer from infant mortality. We have decreased the infant mortality rate but cannot seem to close the gap between races. Many people wonder how such a gap can occur. There are many reasons why the gap exists with the most obvious reason being disparities that occurs in health care.

Making sure that you are seeing a doctor and receiving good health care is important when you are pregnant. The discrimination of black women in healthcare is a big factor in many pregnancy and health related issues for black women (Forbes 2012). Discrimination is defined as the unjust or prejudicial treatment of different categories of people or things, especially on the grounds of race. Now African American women suffer from many different kinds of discrimination on a daily basis but I am going to discuss how African American women are being discriminated against by healthcare professionals (Rowland Hogue and Hargraves 1993). For example, some health professionals continue to insist that the excess infant mortality of Black infants is a result of their mothers' unhealthy behavior, despite clear evidence that some risk behaviors are less common among black women (Rowland Hogue and Hargraves 1993). In order to decrease the infant mortality rate it is important to make sure that women are getting the

same health care treatment regardless of the color of their skin. It is hard for women to get good health care while they are pregnant because the quality of the care that you receive is often dependent on type of healthcare insurance that you have. African American women tend to have worse healthcare insurance than white women (Artiga and Duckett 2013). Which leads to African American women receiving health care that is not as good as the health care that white women are receiving.

A person's socioeconomic status also has an effect on the infant mortality rate. In the United States, 46.7 million people live in poverty, largely due to the fact that America has one of the highest levels of income inequality in the industrialized world (Income, Poverty and Health Insurance 2014). If we have 46.7 million people living in poverty, then chances are that those 46.7 million people do not have very good health insurance, if they have health insurance at all. When you live in poverty, your chances of having a child increase, due to the fact that you do not have the money to pay for contraceptives, to avoid becoming pregnant (Guttmacher Institute 2016). With the passage of the Affordable Care Act, contraceptives are now free, but we do not have data on it yet. Also, getting contraceptives still requires paying for a visit to the doctor and potential follow up depending on what kind of contraceptive a person is looking to get. If you are poor and pregnant, then your health care is not going to be very good. Women who are poor are more likely to give birth to an infant who will die than women who are wealthy (Guttmacher Institute 2016). We need better healthcare available to people who are of lower income status if we are ever going to be able to decrease the infant mortality rate in the United States.

Literature Review

Infant Mortality and Race

There has been a large gap in infant mortality rate between different races in the United States for quite some time. Over the years the numbers have shown that infants born to black women are more likely to die than those who are born to white women. For example, in "1950 there were 43.9 deaths per 1000 live births of babies born to black women" (Singh and Stella 1995: 958). This number is 64% higher than the infant mortality for white women (Singh and Stella 1995). In "1991 there were 16.5 deaths per 1000 live births of babies born to black women" (Singh and Stella 1995: 958). This number is 2.2 times higher than the infant mortality for white women. In "2013 there were 11.11 deaths per 1000 live births of babies born to black women" (Matthews, MacDorman, and Thoma 2015: 3). The infant mortality rate for white women was 5.6. Black women had the highest infant mortality rate across all of the races in the United States.

One reason that we see this racial disparity in infant mortality is access to health care. "The disparities have persisted and even increased over time, suggesting that not all racial and ethnic groups have benefited equally from social and medical advances" (Murphey et al 2015). The truth is that we do not all have the same access to health care. Without proper health care, carrying and delivering a healthy baby can be quite the challenge.

One problem that women without access to the proper health care face is that they often go into premature labor. Premature labor is when a woman goes into labor before she has reached 37 weeks. In 2007 "nearly one in five infants born to black women were born preterm" (MacDorman and Matthews 2011: 3). This was the highest level among the racial groups. It was 60% higher than the percentage for white women (MacDorman and Matthews 2011). Data shows that "for black women, 78 percent of their elevated infant mortality rate compared with white

women was due to their higher percentage of premature births" (MacDorman and Matthews 2011: 6).

One of the causes of premature birth is not having access to good prenatal care. Women who are not able to see a doctor and get the prenatal care they need are already increasing their chances of having a premature baby. Universal health care would be a huge step in fixing this issue of having access to good health care. If everyone had the same health care regardless of social standings, then we would not have the issue of some women receiving better medical care while they are pregnant than other women. If we wish to reduce the infant mortality rate in the United States then universal health care is an important step. It is important to make sure that women are receiving the same medical treatment while they are pregnant (Rowland Houge and Hargraves 1993).

In the United States, we have programs in place to assist women who are pregnant or have a child and do not make enough money to support the child. One example of a program that we have in place is WIC. WIC is a program in place to help low income mothers and their children have access to food and health care referrals (WIC 2016). While this program has excellent aim, it is simply not enough. The foods that they are allowed to get on WIC are very specific and not always enough, if they are trying to feed themselves and possibly multiple children. Also, the requirements that you have to reach in order to qualify for WIC are very strict (WIC 2016).

Stress can play a large role in infant mortality and has a significant impact on the disparities we see between races (Jackson 2007). Stress is "a complex phenomenon that encompasses exposure to psychosocial, environmental, and physical changes and the body's response to those experiences" (Jackson 2007). Stress is something that we all experience

throughout our lifetime. However, when you are bombarded with stress, it can be overwhelming and severely impact your health.

Bringing another life into this world can be a very stressful thing. You begin to worry about how you are going to support the child, how you are going to pay for the medical bills that come with having a child, you worry about who is going to watch your child when you need to go to work. Some women worry about how they are going to continue to go to school, work a job, and raise a child. All of these are questions that many expecting mothers have while they are pregnant and when you do not have answer to these questions, it can be very overwhelming. Being stressed can lead to illnesses. When a women is pregnant it is very important that she remain healthy so that she can deliver a healthy baby. However, avoiding stress and remaining healthy can be a very difficult thing for some women to do especially black women (Jackson 2007).

Many women today refrain from having babies until they are older and have answers to the many stressors that come with having a baby. However, waiting until you are older to have a baby is not necessarily always an option for women. Sometimes, women having babies at a younger age is due to unintended or unplanned pregnancies. In the United States, 45% of pregnancies are unplanned or unintended (Guttmacher Institute 2016). It is not possible for all women to plan their pregnancies. Unintended pregnancies are the most likely among low income women and minority women (Guttmacher Institute2016). Black women had the highest unintended pregnancy rate at 79 per 1,000 women (Guttmacher Institute 2016). However, by having those kids at a younger age, they are increasing their chances of not having access to good prenatal care (Guttmacher Institute 2016).

Black women are likely to have babies at a younger age because of deteriorating health conditions through what we now consider to be the childbearing years (Cohen 2016). Black women having babies at a younger age because of deteriorating health conditions is referred to as the weathering hypothesis. The weathering hypothesis is a theory created by Arline Geronimus in 1992 that stated that racial inequality takes a cumulative toll on black women increasing their chances that they will have health problems at an earlier age. So, early childbearing makes more sense for black women because they will want to have children before their health declines (Cohen 2016).

Infant Mortality and Socioeconomic Status

Over time, the United States has made great advancements in the medical field that has allowed us to make progress in regards to our infant mortality rate. However, findings show that this progress is not being shared equally with all segments of the population (Stockwell and Swanson and Wicks 1988). In fact, findings show that lower income groups in society have been and continue to be at a disadvantage when it comes to the probability that a newborn infant will survive to adulthood (Stockwell and Swanson and Wicks 1988). A study was done that looked at the infant mortality rate for income areas in Ohio. This study found that the High income class had an infant mortality rate of 11.3 and that the low income class had an infant mortality rate of 22.4 (Stockewell and Swanson and Wicks 1988). This shows that the infant mortality rate in the lower income class is twice as high as the infant mortality rate in the high income class. There is an obvious inverse associate between infant mortality and economic status (Stockwell and Swanson and Wicks 1988). Ohio is a very important state to study because as far as infant mortality rate goes, we are doing worse than the national average (Kids Count Data Center 2013).

` Lower income groups in American continue to have infant mortality rates that are above those of high-income groups. Why is this disparity in infant mortality rate occurring based on income? Well the disparity occurs because there is a difference in access to health care services and facilities between income groups. “The first to benefit from the advances in medical technology and other health care improvements are those in the highest income classes; and only gradually do the fruits of such progress filter down to the economically deprived groups in the society” (Stockwell 1988). Health care delivery in the United States is stratified by social class.

Those who are of lower income status in the United States, have a more difficult time receiving health care. If they do receive health care it is not going to be the same type of health care that those of higher socioeconomic status are receiving. For example, those of lower income are often on government provided health insurance. This insurance is going to be very different from the kind of health insurance that those who have a private insurance have access too. Those with private insurance are going to have more benefits. In order to change this problem we need to start viewing adequate health care as a basic right for all citizens and not just an expensive privilege for those who can afford it (Stockwell and Swanson and Wicks 1988).

A lack of social capital plays a large role in income inequality, which leads to a disparity in infant mortality. Social Capital has been defined as the features of social organizations, such as civic participation, norms of reciprocity, and trust in others, that facilities cooperation for mutual benefit (Kawachi et al 1997). In other words, social capital, is a person’s social connections and what those social connections can do to help them go further in life. If you do not have social capital, then you are lacking connections to society, and those connections are often what help you to succeed and move up the ladder. For example, knowing people in the

profession that you want to go into, is going to help you get a good job in the field that you want to be in.

So how does a lack of social capital relate to infant mortality? Well when you are lacking social capital you are likely to have a large amount of social mistrust. Lower levels of social trust are associated with higher rates of most major causes of death, including infant mortality (Kawachi et al 1997). When a society lacks social capital, it lacks social trust, which then can lead to higher rates of death. Disinvestment in social capital appears to be one of the pathways through which growing income inequality exerts its effects on mortality (Kawachi et al 1997), It is important for expecting mothers to have a lot of social capital. The more social capital they have, the more resources they are going to have access too. If they have access to a lot of resources, then this will increase their chances of being able to give birth to healthy baby.

Societies that have large income disparities also tend to be the ones who underinvest in human capital (education), health care, and other factors that promote health (Kawachi et al 1997). This statement is very important and has never been more relevant. Due to our large income disparities we often underinvest in human capital and human capital can play a large role in our infant mortality rate. There was a study done that found that maternal education can be a variable related to income differences (Kawachi et al 1997).

A person's education also plays a large role in what kind of money will be made in the future, thus influencing socioeconomic status. A study found that mothers with a college degree have $63,737 more household income that mothers who have not completed high school (Haider 2014). This is a very large income gap which shows that having a college degree in today's society is highly valued. If you have a college degree, you are most likely going to have a higher income, which will result in a decreased chance of infant mortality. However, without a college

degree, your income is going to decrease, which is going to result in an increase in infant mortality.

The problem that we face today is that most children are going to grow up and live in the same economic situation that they were born into (Child Poverty and Family Economic Hardship 2014). So if you were born into a poor family, chances are that you are going to be poor as an adult. This occurs because those who are born into a poor family, do not have the means to go to college and get a higher education to get out of poverty.

There are two other variables that can be related to income differences. These variables are a person's marital status and age. One study found that married mothers have $30,932 more household income that non-married mothers (Haider 2014). The study also found that mothers aged 35 and above have $26,588 more household income than mothers aged 20 to 24 (Haider 2014). There are characteristics that can relate to income differences. However, this study suggests that even more of the infant mortality rate can be explained by poverty as a whole than is accounted for by the three currently available indicators of maternal education, age, and marital status (Haider 2014). This means that there is a poverty gap that is not explained by maternal education, age, and marital status that does in fact have an effect on the infant mortality rate.

Within the United States, a number of advances in medicine and healthcare have occurred since many of the studies about the role of socioeconomic status in infant mortality has been conducted. Does socioeconomic status still play a large role in infant mortality? I hypothesize that even though we have made advances in medicine and health care that a mother's socioeconomic status still plays a large role in infant mortality.

I will add to my hypothesis that race will also play a role in the infant mortality rate that the United States face today by looking at the infant mortality rate of black women compared to white women both in the United States and in Ohio and how it has changed over the course of 10 years. I will also look at and compare the infant mortality rate for black and white women from 1970, 1980, and 2013 to see if the infant mortality rate has changed in regards to race. I will also look at the infant mortality rate for the wealthiest state in the United States in 2012 compared to the infant mortality rate for the poorest state in the United States in 2012. I will also look at how Ohio's infant mortality rate and wealth compare.

Methodology

Infant Mortality and Race

The Kids Count Data Center is a project of the Annie E. Casey Foundation and is the premier source for data on child and family well-being in the United States (Kids Count Data Center). The kids count data center accesses hundreds of indicators and creates reports and graphs of the data. The data focus on children but covers many different data topics. Topics include demographics, economic well-being, education, family and community, health, and safety and risk behaviors. You can also sort your data by characteristics. Characteristics include race and ethnicity, age, family nativity. Along with looking at statistics for the United States, kids count data center also provides you with data for individual states that you can then compare to the United States. For this research project, I worked with Dr. Adrianne Frech to conduct an analysis of the hypotheses noted above. I selected race and ethnicity as our data characteristic. We then looked at the infant mortality rate by race and ethnicity in the United States. I looked at the infant mortality rate for black children in the United States for the years 2004 to 2013. I then looked at the infant mortality rate for white children in the United States for the years 2004 to

2013. After that I looked at the infant mortality rate by race and ethnicity in Ohio. I then looked at the data for the infant mortality rate for black children in Ohio from 2004 to 2013. Then I looked at the data for the infant mortality rate for white children in Ohio from 2004 to 2013.

Then I took the data for the infant mortality rate for black children and compared it to the infant mortality rate for white children in the United States and I put these numbers in a bar graph. Then I took the data for the infant mortality rate for black children and compared it to the infant mortality rate for white children in Ohio and I put these numbers in a bar graph. I then compared black infant mortality compared to white infant mortality from 1970, 1980, and 2013. Finally, I compared Ohio's overall infant mortality rate to the overall infant mortality rate of the United States over the past ten years.

Infant Mortality and Socioeconomic Status

24/7 Wall Street is a newspaper company that provides analysis and commentary on issues related to the United States. There was a report that was written that listed the states in order from wealthiest to poorest in 2012 (Sauter and Hess and Frohlich 2013). Along with listing these states in order, this report gives you, the median household income in that state, the unemployment rate, and a brief paragraph of why the state ranked where it did.

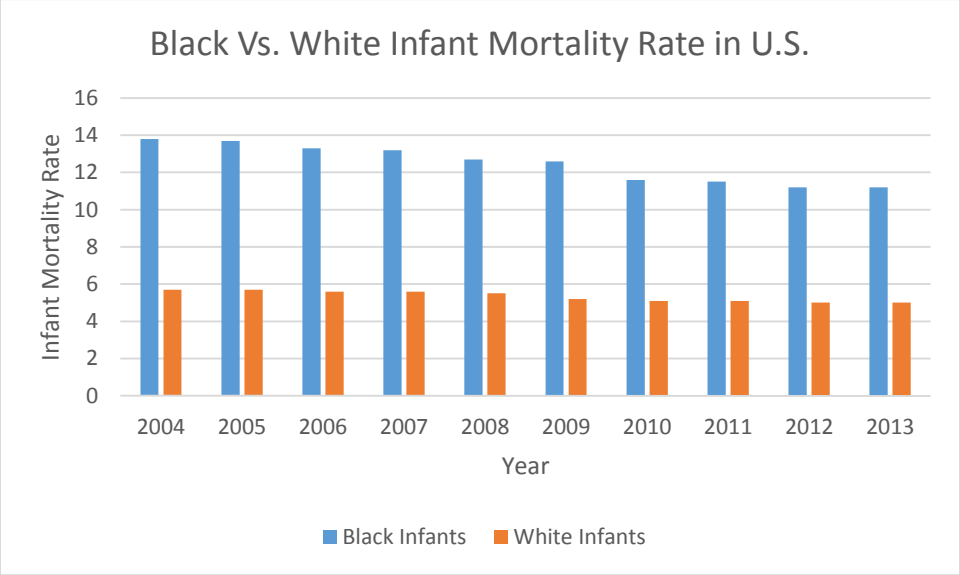
Using this report, I found the wealthiest state in 2012 and the poorest state in 2012. I then found the state that falls in the middle and then found where Ohio falls in these rankings. I then took those states and used their ranking, unemployment rate, and median household income. I used Kids Count Data Center again in order to get my information for the infant mortality rate for each state.

Once I had all of the numbers I then used the numbers to create tables and graphs. I first created a table to show where each state was ranked. Then I created a graph to show the median household income of each state. I then created another graph to show the infant mortality rate for each state. Then I created another table to show each states unemployment rate. I created all of these tables and graphs in an excel spreadsheet.

Data Analysis

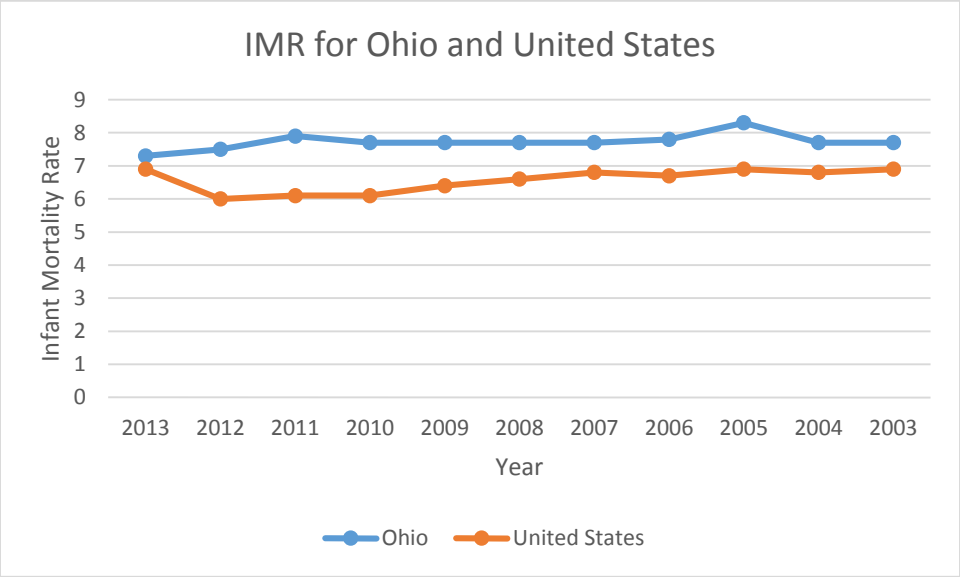
We are first going to look at whether or not race plays a large role in the infant mortality rate in the United States. Figure 1 shows that over the past ten years, the infant mortality rate for black women has remained twice as high as the infant mortality rate for white women. Figure 2 shows you that the United States has made little progress in decreasing our Infant Mortality Rate overall.

Figure 1



Source: Kids Count Data Center

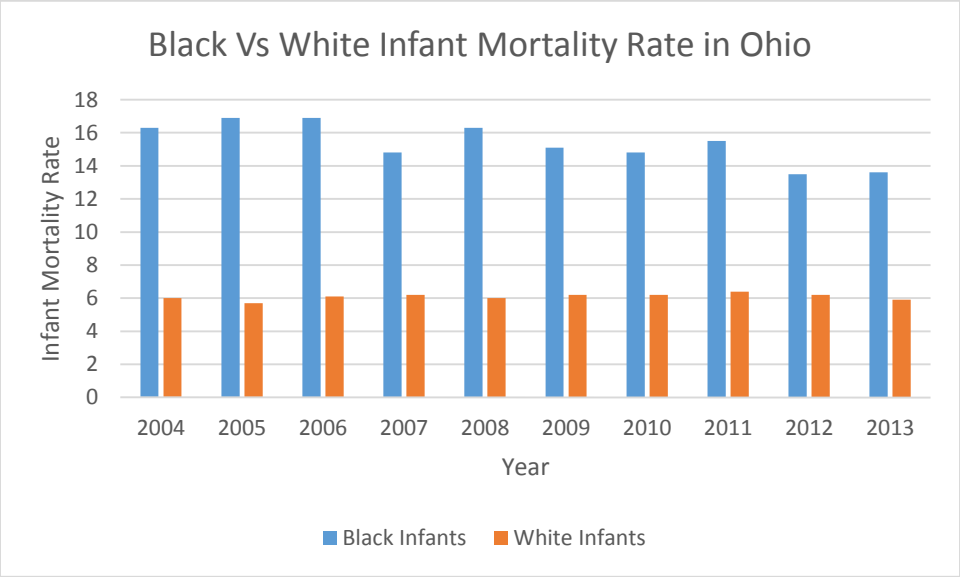
Figure 2



Source: Kids Count Data Center

Figure 3 shows you the infant mortality rate for black and white women in Ohio. As you can see we are facing the same problem in Ohio that we are in the United States. Black infants are twice more likely to suffer infant mortality than white infants. Figure 4 shows us that Ohio has a higher infant mortality rate than the United States. It also shows us that Ohio also has had little success in decreasing its infant mortality rate.

Figure 3

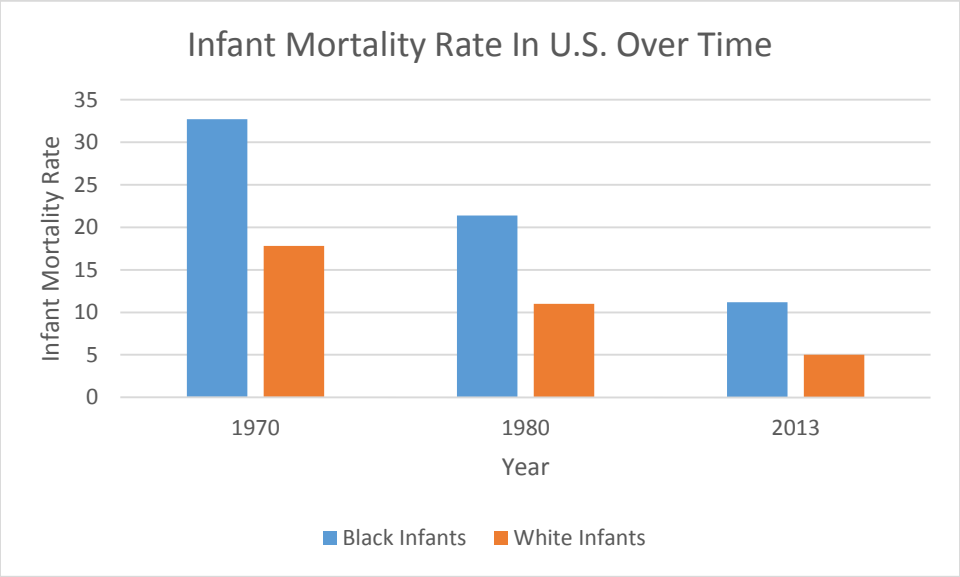


Source: Kids Count Data Center

The infant mortality rate in the United States is determined by looking at each individual states infant mortality rate and finding the average. In order to decrease the national infant mortality rate, we need to start decreasing the infant mortality rate in individual states. If Ohio can decrease its infant mortality rate, it will help to decrease the infant mortality rate of the United States.

Figure 4 shows us the infant mortality rate of the United States in 1970 and 1980 compared to 2013. You can see that the infant mortality rate has declined in the United States. The important thing to look at and keep in mind though is that the infant mortality rate for blacks has remained twice as high as compared to whites. While we have been able to decrease our infant mortality rate since 1970, we have yet to close the gap between white women and black women. Infants are still twice as likely to die if they are born to a black mother.

Figure 4



Source: Kids Count Data Center

Now we are going to look at how socioeconomic status has an effect on the infant mortality rate. Table 1 shows you the rankings of the states being used in this research project. As you can tell by the data presented in the table, Maryland was the wealthiest state in the United States in 2012, Mississippi was the poorest state, Nebraska fell in the middle, and Ohio ranked thirty-fourth.

Table one

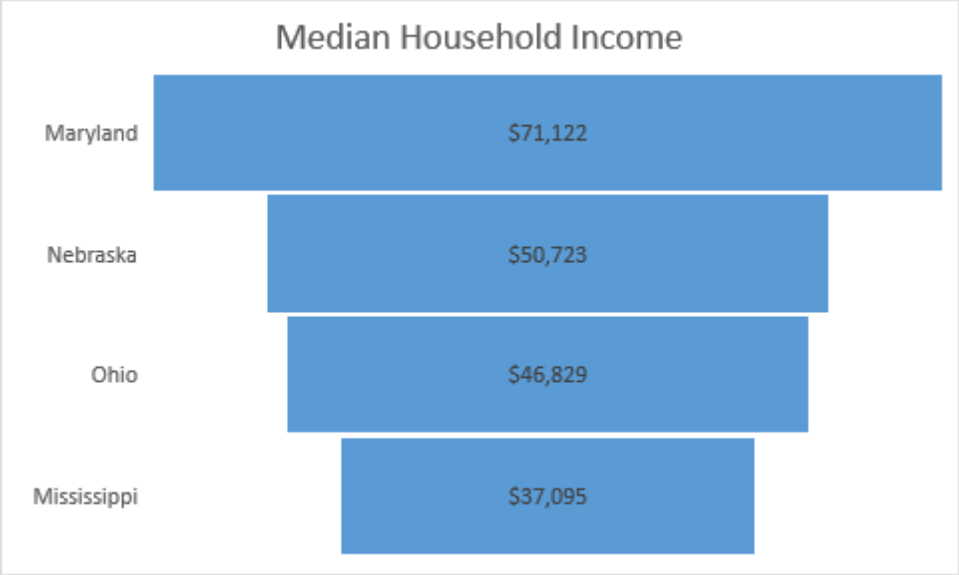
Ranking	State
1	Maryland
25	Nebraska
34	Ohio
50	Mississippi

Source: 24/7 Wall Street

Figure 5 shows the median household income for each state in 2012. As you can see the wealthiest state has the highest median household income while the poorest state has the lowest median household income. Graph six shows the infant mortality rate for each state. As you can see, when comparing Maryland's infant mortality rate with Mississippi's infant mortality rate,

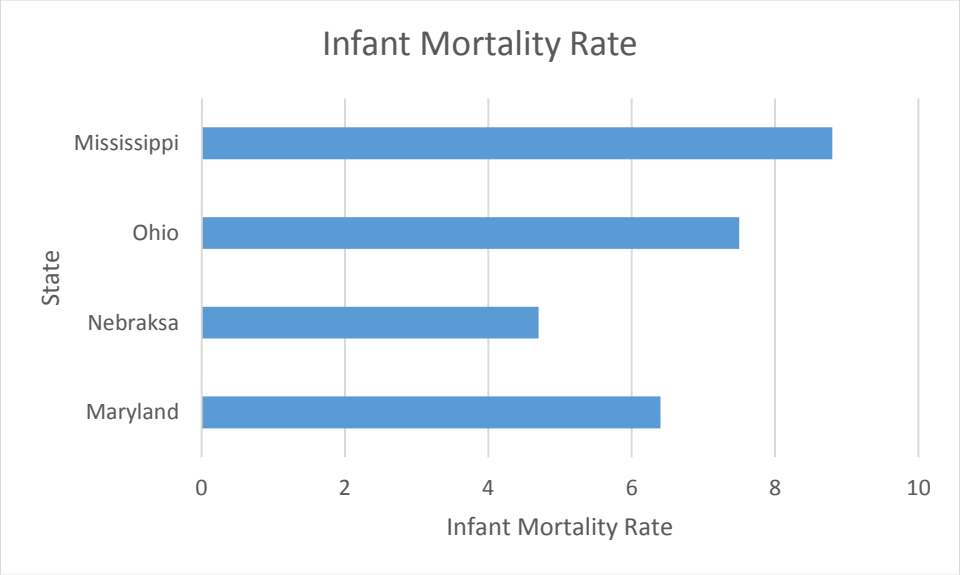
you see that Maryland's is lower. Nebraska is an interesting case that is different from the normal data we are used to seeing. Nebraska is ranked 25th and how a lower median household income than Maryland but has a lower infant mortality rate. This can be attributed to the fact that while Nebraska has a low median household income compared to Maryland they also have a lower unemployment rate. You can compare the states unemployment rates in table 2.

Figure 5



Source: 24/7 Wall Street

Figure 6



Source: Kids Count Data

Table 2

State	Unemployment Rate
Maryland	6.80%
Nebraska	3.90%
Ohio	7.20%
Mississippi	9.20%

Source: 24/7 Wall Street

Nebraska having a lower infant mortality rate than Maryland even though Maryland has a higher median household income can be explained by Nebraska's unemployment rate. Nebraska has the second lowest unemployment rate in the United States. Due to the fact that Nebraska has such a low unemployment rate, that also causes them to have a lower infant mortality rate. Yes, the people in Nebraska make less than the people in Maryland but more people in Nebraska are working than the people in Maryland. With more people working, that means that when a person gets pregnant they are more likely to be able to afford the proper care to make sure that they have a healthy baby because they are more likely to have a job.

A person's socioeconomic status has a large impact on infant mortality. If a person has a low socioeconomic status, then they are going to be more likely to suffer from infant mortality. As shown in the graphs above, the states that have a higher median household income also have lower infant mortality rate.

Limitations and Conclusions

There are some limitations that exist with my research. First, due to the time that it would take to collect this data on my own, I had to use data that other people had already collected in order to make my analyses. However, because the Kids Count Data Center's most recent data is from 2013, that is the most recent data we are able to examine in regards to infant mortality. That data is now three years old and may not be as accurate as data from 2015 would be, especially because the passage of the Affordable Care Act may signify differences in access to health care and contraceptives. Also, I had to use data from 2012 when looking at where states ranked as far as wealthiest and poorest. This data is also not as accurate as it would be if we were using data from 2015. Once again, due to the time that it would take to collect this data, I had to use data that had already been collected.

As shown by the data above, race and socioeconomic status have a large impact on the infant mortality rate. The current research has shown that black women are still twice as likely to suffer from infant mortality than white women. Also, people with low socioeconomic status are more likely to suffer from infant mortality than those who have a higher socioeconomic status. Now that I have shown that these two results exist the question becomes what can be done to fix these issues?

First, let us talk about the race disparity that we see occurring in infant mortality rates between black and whites. We do not know empirically why this racial disparity exist. However,

a good start to help solve this problem, would be too put an end to racial discrimination. Most people think that racial discrimination ended when slavery ended. However, this is not the case. "One hundred years ago in this country, Black babies were twice as likely to die as White babies, today, Black babies are twice as likely to die as White babies" (Rowland Hogue and Hargraves 1993). If we are making so many technological advances, then why is the racial disparity still so large?

Structural racism is part of why the racial disparity continues to be so large. Structural racism is creating barriers to adequate health care and having to deal with this racism is causing stress related health problems for black women which can lead to them suffering infant mortality. Perhaps we need to focus our attention on eliminating racial discrimination and this might help us to reduce the racial disparity.

However, racial disparity is not the only problem that we see in infant mortality. We also see that people with a low socioeconomic status are more likely to suffer from infant mortality than those with a high socioeconomic status. The amount of money that a person makes is going to greatly impact the kind of health care that they are able to afford.

People with lower socioeconomic status, may skip out on a few doctor's appointments before the baby is born, in order to save money. These appointments are really important because these appointments could tell the doctor important information, that could help them be proactive and help the baby live.

We need to make it a priority that every person has access to the same health care regardless of what their socioeconomic status might be. An unborn child should not have to suffer or die because of the amount of money that their parents make. If every person has access to the same health care, then we can be guaranteed that all women are getting the same prenatal

care. If all women are getting the same treatment, then we are going to greatly reduce the number of infants that die every year.

How do we make sure that all citizens are receiving the same health care when a person's health care is based on how much money a person makes? The answer is simple actually. We need a universal healthcare system. This would guarantee the same health care and treatment for all citizens regardless of your economic standing. Also, we need to make sure that we are providing people with the opportunity to obtain jobs that pay them enough to support a child. If a woman is not making enough money, to take herself to the doctor while she is pregnant, it is unrealistic to expect her to be able to provide for the child once the child is born.

We also see the issue of race and socioeconomic status collide, as blacks are more likely to be poor and uninsured than whites. As of 2011 there are over 7 million uninsured blacks, that make up about 15% of the uninsured population (Duckett 2013). It is no wonder that the infant mortality rate for black women is so much higher than the infant mortality rate for white women when there are 7 million black people who are uninsured. Black women are going to be more likely to suffer from infant mortality if they do have insurance to make sure that they can see a doctor.

In order to reduce infant mortality rates in the United States, we need to start looking at ways to fix the social issues that this country faces. We have made a lot of advances in medicine and technology. However, those advances are not enough to reduce infant mortality rates on their own. We need to look at the issues that we face as a society and start addressing them.

References

Anon. 2012. “Black Women Face Health Discrimination In America.” Forbes. Retrieved April 7, 2016 (http://www.forbes.com/sites/womensenews/2012/09/07/black-women-face-health-discrimination-in-america/#7a01c1313daa).

Anon. n.d. “Fact File on Health Inequities.” WHO. Retrieved April 25, 2016 (http://www.who.int/sdhconference/background/news/facts/en/).

Anon. 2015. “Income, Poverty And Health Insurance Coverage in the U.S.: 2014.” Income, Poverty and Health Insurance Coverage in the U.S.: 2014. Retrieved April 25, 2016 (https://www.census.gov/newsroom/press-releases/2015/cb15-157.html).

Anon. 2016. “Infant Mortality.” Centers for Disease Control and Prevention. Retrieved March 2, 2016 (http://www.cdc.gov/reproductivehealth/maternalinfanthealth/infantmortality.htm).

Anon. n.d. “Indicator Selection | KIDS COUNT Data Center.” Indicator Selection | KIDS COUNT Data Center. Retrieved April 7, 2016. (http://datacenter.kidscount.org/data#oh/2/35/36,37,38,41,40/char/0).

Anon. n.d. “Infant Mortality Rate (Deaths Per 1,000 Live Births) by Race/Ethnicity.” Infant Mortality Rate (Deaths per 1,000 Live Births) by Race/Ethnicity. Retrieved March 2, 2016 (http://kff.org/other/state-indicator/infant-mortality-rate-by-race-ethnicity/).

Anon. 2014. “Ten Important Questions About Child Poverty And Family Economic Hardship.” NCCP. Retrieved April 25, 2016 (http://www.nccp.org/faq.html).

Anon. 2016. “Unintended Pregnancy in the United States.” Guttmacher Institute. Retrieved April 7, 2016 (https://www.guttmacher.org/fact-sheet/unintended-pregnancy-united-states).

Anon. 2016. “Women, Infants, And Children (WIC).” Women, Infants, and Children (WIC). Retrieved April 25, 2016 (http://www.fns.usda.gov/wic/women-infants-and-children-wic).

Duckett, Phillethea and Samantha Artiga. 2013. “Health Coverage for the Black Population Today and Under the Affordable Care Act.” Health Coverage for the Black Population Today and Under the Affordable Care Act. Retrieved April 7, 2016 (http://kff.org/disparities-policy/fact-sheet/health-coverage-for-the-black-population-today-and-under-the-affordable-care-act/).

Haider, Steven J. 2014. “Racial and Ethnic Infant Mortality Gaps and Socioeconomic Status.” Focus 31(1):18–20.

Jackson, Fleda Mask. 2007. “Race, Stress, And Social Support: Addressing The Crisis in Black Infant Mortality.” Joint Center for Political and Economic Studies. Retrieved (http://jointcenter.org/sites/default/files/race and stress final - 17 pages.pdf).

Kawachi, Ichiro, Bruce P. Kennedy, Kimberly Lochner, and Deborah Prothrow-Smith. 1997. “Social Capital, Income Inequality, And Mortality.” American Journal of Public Health 87(9):1491–98. Retrieved (http://www.ncbi.nlm.nih.gov/pmc/articles/pmc1380975/).

MacDorman, Marian F. and T. J. Matthews. 2009. “The Challenge of Infant Mortality: Have We Reached a Plateau?” Public Health Reports 124:670–81. Retrieved (http://www.ncbi.nlm.nih.gov/pmc/articles/pmc2728659/pdf/phr124000670.pdf).

MacDorman, Marian F. and T. J. Matthews. 2011. “Understanding Racial and Ethnic Disparities in U.S. Infant Mortality Rates.” NCHS Data Brief (74):1–7.

Matthews, T. J., Marian MacDorman, and Marie Thoma. 2015. “Infant Mortality Statistics From The 2013 Period Linked Birth/Infant Death Data Set.” National Vital Statistics Reports. Retrieved April 25, 2016 (http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_09.pdf)

Murphy, Sherry L., Kenneth D. Kochanek, Jiaquan Xu, and Elizabeth Arias. 2015. “Mortality in the United States, 2014.” NCHS Data Brief (229):1–7.

Rowland Hogue, Carol J. and Martha A. Hargraves. 1993. “Class, Race, and Infant Mortality in the United States.” American Journal of Public Health 83(1):9–12. Retrieved (http://www.ncbi.nlm.nih.gov/pmc/articles/pmc1694522/).

Sauter, Michael B., Alexander E. M. Hess, and Thomas C. Frohlich. 2013. “America’s Richest (And Poorest) States.” 247wallst.com. Retrieved April 7, 2016 (http://247wallst.com/special-report/2013/09/19/americas-richest-and-poorest-states/4/).

Singh, Gopal K. and Stella M. Yu. 1995. “Infant Mortality in the United States: Trends, Differentials, and Projections, 1950 through 2010.” American Journal of Public Health 85(7):957–64. Retrieved (http://www.ncbi.nlm.nih.gov/pmc/articles/pmc1615523/).

Stockwell, Edward G., David A. Swanson, and Jerry W. Wicks. 1988. “Economic Status Differences in Infant Mortality by Cause of Death.” Public Health Reports 103(2):135–42. Retrieved March 2, 2016 (http://www.ncbi.nlm.nih.gov/pmc/articles/pmc1477962/).