2016

Medical Community Distrust and the Influenza Vaccination Rates of Black Americans

Kenyatte Irby Winston
Walden University

Walden University

College of Health Sciences

This is to certify that the doctoral dissertation by

Kenyatte Winston

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Chinaro Kennedy, Committee Chairperson, Public Health Faculty
Dr. Cheryl Anderson, Committee Member, Public Health Faculty
Dr. Tolulope Osoba, University Reviewer, Public Health Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2016

Abstract

Medical Community Distrust and the Influenza Vaccination Rates of Black Americans

by

Kenyatte Irby Winston

MA, Trinity College, 2001

BA, Howard University, 1993

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Health

Walden University

February 2016

Abstract

Black Americans experience influenza vaccination rates that are lower than the rates of other ethnic groups. Low influenza vaccination rates among the Black community are associated with higher influenza infection rates, influenza-related hospitalizations, and higher influenza mortality rates. There is a belief within the Black American community that the medical establishment does not have the Black American patient in its best interest, leading to feelings of distrust. The purpose of this study was to determine if the distrust of the medical community is a relevant factor in the low influenza vaccination rates of Black Americans aged 18 and older in Baltimore, Maryland. The study also examined the belief that the influenza vaccine causes the flu and the effect this belief may have on influenza vaccination rates. The public health critical race theory served as the framework for the study. Previously validated survey instruments, the Health Care System Distrust Scale and the Adult Influenza Immunization Survey, were obtained with permission and used to collect data from the members of a Baltimore city church. The study used chi-square analysis, multivariable logistic regression, and narrative discussion to address the research questions and analyze the data of 105 completed surveys. Results of the study determined that distrust of the medical community was not a relevant factor in the influenza vaccination rates of study participants, and that participants' vaccination status was influenced by factors other than distrust. Implications for social change included improving the influenza vaccination rate among Black Americans and decreasing their influenza mortality rates.

Medical Community Distrust and the Influenza Vaccination Rates of Black Americans

by

Kenyatte Irby Winston

MA, Trinity College, 2001

BA, Howard University, 1993

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Health

Walden University

February 2016

Dedication

This dissertation is dedicated to my daughter Kennedy S. Winston. I strive to always be a positive example in your life, and someone that you can always depend on and look up to. I hope that you will always be as proud of me as I am of you.

I would also like to dedicate this dissertation to the family members and friends who supported me on this journey. Your many prayers and encouraging words were truly appreciated, and helped me more than you will ever know.

Acknowledgements

This dissertation would not have been possible without the help of many individuals. I would first like to express my sincerest gratitude to Rev. Dr. Gregory B. Perkins, First Lady Roslyn M. Perkins and the members of Historic St. Paul Community Baptist Church in Baltimore, Maryland. Thank you for your assistance, encouragement, and many prayers.

I would like to give a special thank you to my biggest cheerleader, my dissertation advisor Dr. Chinaro M. Kennedy. Thank you so much for believing in me, continuing to push me, and not allowing me to give up. This has been a long journey, and I appreciate you pushing me over the finish line. To the other members of my dissertation committee, Dr. Cheryl L. Anderson and Dr. Tolu A. Osoba, thank you for your guidance and expertise throughout this process. Without this team, I would not have achieved my goal.

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

In an effort to maintain the health and well-being of the public, the United States healthcare system has made encouraging individuals to obtain the influenza vaccination a top priority each flu season. Despite these vaccination efforts, U.S. adult vaccination rates have been low. While U.S. vaccination rates have been low, those in the Black community are historically lower (Harris, Juergen, & Uscher-Pines, 2010).

The Adult Immunization Consensus Panel conducted a study to examine the problem of consistently low levels of immunization rates among Black Americans (Adult Immunization Consensus Panel, 2003). Researchers found that distrust of healthcare providers was one of the potential patient-related barriers to adult immunization. A history of medical abuses and experiments has helped foster the belief that the medical community does not have the Black patient in its best interest (Washington H. A., 2006). As a result, many Black Americans will not go to the doctor, with a large number experiencing medical treatment primarily in an emergency room setting (Halbert, Armstrong, Gandy, & Shaker, 2006). There is also an unwillingness to use preventative measures such as immunizations, for fear that there may be something malicious in the shot. A survey of 1,500 registered voters in California showed that 17% of survey respondents felt that there was a strong chance that the influenza vaccine was not safe. According to the poll, 34% of Black Americans and 25% of Latinos believed that the influenza vaccine is unsafe, compared with 14% of whites and 16% of Asians (Hennessy-Fiske, 2009).

Influenced by this history of distrust of the medical system, many within the Black community have developed negative beliefs about the influenza vaccine, which has contributed to many Black Americans not participating in vaccination efforts (The College of Physicians of Philadelphia, 2013). Previous studies have determined that distrust of the medical community is a factor that contributes to the low influenza vaccination rates of elderly Black Americans (Harris, Chin, Fiscella, & Humiston, 2006; Fiscella, Dressler, Meldrum, & Holt, 2007; Wray, Jupka, Ross, & Dotson, 2007). Unfortunately, there is not much research data exploring the reasons why the younger Black population chooses not to get the influenza vaccination. In this study, I examined whether or not distrust of the medical community is a relevant factor in the seasonal influenza vaccination efforts of Black Americans aged 18 and older that are living in Baltimore, Maryland.

Background of the Problem

In 1918, the world experienced the deadliest pandemic in modern history. The influenza or flu pandemic infected nearly 50 million people worldwide, and more than 25% of the United States population (National Archives and Records Administration, 2013). Influenza, more commonly known as the flu, is a respiratory disease caused by influenza viruses A and B. According to the American Lung Association (2010), influenza is one of the most severe illnesses of the winter season. Influenza viruses infect the respiratory tract, causing fever, body aches, headache, dry cough, and a sore or dry throat (U.S. Department of Health & Human Services, 2013).

The Centers for Disease Control (CDC) estimates that 25 to 50 million Americans contract the flu each year (Pediatric Alliance Health Partners, 2012). While most people infected with influenza get better without any additional problems, for some, influenza can lead to a bacterial infection such as an ear infection, sinus infection, bronchitis, or in a more serious case, pneumonia (Thompson, 2009). In the United States, the flu is responsible for more than 200,000 hospitalizations and an average of 36,000 deaths annually (CDC, 2009).

The influenza virus can easily be spread from person to person through coughing, sneezing, or talking. When an infected person coughs, sneezes, or talks, respiratory droplets are generated and transmitted into the air and are eventually inhaled by nearby individuals (Stilianakis & Drossinos, 2010). Although highly contagious, influenza can be prevented through covering coughs and sneezes, frequent hand washing, staying home when sick, correct usage of antiviral drugs, and the administering of the seasonal influenza vaccine. Immunization is a primary intervention strategy, as it inhibits the development of disease before it occurs. The influenza vaccine is available in the form of a flu shot and a nasal spray. What many do not realize is that the flu is the biggest killer of all vaccine-preventable diseases (Moyer, 2010; Wiley, 2001).

For the past 3 decades, the Department of Health and Human Services has set 10 year national objectives for improving the health of all Americans called Healthy People (U.S. Department of Health and Human Services, 2012). As a part of the Healthy People 2020 program, public goals have been set for influenza vaccinations. Healthy People 2020 program goals are to reach 80% vaccination levels for noninstitutionalized adults

aged 18 to 64, 60% vaccination levels for persons considered high-risk (i.e., young children, pregnant women and people with medical conditions such as asthma, diabetes or heart disease), and 90% vaccination levels for individuals over the age of 65 (Shefer, 2010). Unfortunately, at present, no racial/ethnic group, at any age group, met these standards (see Table 1). If the Healthy People 2010 goals had been achieved, 3,750 minority deaths could have been prevented annually (American Lung Association, 2010).

Table 1
Estimated Influenza Vaccination Coverage by Age Groups and Race/Ethnicity - Behavioral Risk Factor Surveillance System (BRFSS) and National Immunization Survey (NIS, United States, † end of May 2011)

	Non-Hispanic White		**Non-Hispanic Black**		**Hispanic**	
Age groups	Unweighted sample size	%	Unweighted sample size	%	Unweighted sample size	%
18-64 yrs	188,853	36.6	21,059	30.9	18,016	29.7
≥65 yrs	113,158	67.7	7,957	56.1	4,505	66.8

Note. Adapted from *Influenza (Flu): 2010-2011Flu Season,* by U.S. Department of Health and Human Services, 2011, Atlanta, GA.

Statistics have shown that Black Americans have a much higher rate of death from influenza and pneumonia than do White Americans and are less likely to receive the vaccination for influenza (American Lung Association, 2010). The results of focus groups conducted by the National Immunization Program of the CDC revealed that Black patients who did not want to be vaccinated believed that the flu vaccine would give them the flu, and they expressed a strong distrust of the government, physicians, and drug companies (Centers for Disease Control and Prevention, 2004). Hispanic-American

participants in the same focus groups did not allude to this (Centers for Disease Control and Prevention, 2004).

According to the CDC (2013), from 1976 to 2006, between 3,000 and 49,000 deaths were caused by flu related illnesses. Vaccination for seasonal flu can decrease the number of flu related illnesses. Even though this may be the case, a large portion of the population chooses not to get the influenza vaccine. Across the United States, minorities have lower vaccination rates than Whites, with higher rates of mortality related to influenza. According to the Illinois Department of Public Health, the mortality rate was seven per 100,000 for Black Americans, versus three per 100,000 for Whites (Levi, Segal, St. Laurent, & Lieberman, 2010). The causes of low vaccination rates of Black Americans aged 65 and older have been explored by a number of researchers; however, there has not been much research on the rates of Black Americans aged 18 to 64.

Statement of the Problem

The low rate of influenza vaccination among individuals within the Black community was the overall problem of focus in this study. Studies have shown that lower influenza vaccination coverage is associated with higher influenza infection rates (Hayward, et al., 2006; Salgado, Giannetta, Hayden, & Farr, Preventing influenza by improving the vaccine acceptance rate of clinicians., 2004). From 2009 – 2010, the hospitalization rates due to influenza were twice as high among Black Americans compared to Whites (Levi et al., 2010). Black Americans of all ages tend to have higher rates of chronic health conditions such as diabetes, heart disease, and asthma, which can put them at greater risk for the flu (Centers for Disease Control and Prevention, 2015).

Having one or more of these health conditions and then becoming infected with the influenza virus can turn deadly. According to the American Lung Association, Black Americans have a much higher rate of death from influenza than Whites and other ethnic groups (American Lung Association, 2010; see Table 2).

Table 2

Age-Adjusted Death Rates Due to Influenza and Pneumonia by Race and Ethnicity

Race / Ethnicity	Age-adjusted death rate per 100,000 population
African Americans / Black Americans	19.9
Caucasians	17.8
American Indians and Alaskan Natives	16.2
Hispanics	15
Asians and Pacific Islanders	12.8

Note. Adapted from *State of Lung Disease in Diverse Communities* by American Lung Association, Washington, 2010.

In a study conducted by the California Department of Public Health, Black Americans in the state were 50% more likely to die of H1N1 than Whites (Hennessy-Fiske, 2010). If the influenza vaccination rate of Black Americans can increase to the influenza vaccination rate for Whites, the Black annual influenza-related death rate could be reduced by approximately 1,330 (Fiscella, 2007). Receiving the influenza vaccination

can be 50 to 60% effective in preventing hospitalization and 80% effective in preventing death (Browne, 2012).

While there are many causes for individuals not obtaining the influenza vaccine, in this research, I focused on the distrust of doctors and the medical community as one of the primary causes of nonvaccination. In reviewing the studies that examine distrust as it relates to Black Americans and the influenza vaccine, the study subjects were ages 65 and older. Thus, I examined whether distrust of doctors and the medical community contributes to the influenza vaccination rates among Black Americans aged 18 and older.

Researchers have established that individuals aged 65 and older are more likely to suffer from serious flu-related complications due to the likely presence of chronic health conditions (Finnegan, 2012). However, the age group of 18 and older has been selected because the percentage of adults aged 64 and younger living with chronic health conditions such as diabetes, heart disease, and cancers has increased (Freid, Bernstein, & Bush, 2012). According to the CDC, becoming infected with the influenza virus can make chronic health conditions worse (CDC, 2012).

Purpose of the Study

The purpose of this study was to determine if the distrust of doctors and the medical community are relevant factors in the low influenza vaccination rates of Black Americans aged 18 and older. Previous researchers found that the distrust of doctors and the medical community are factors in the low influenza vaccination rates of Black Americans aged 65 and older (Musa, Schulz, Harris, Silverman, & Thomas, 2009). In this study, I investigated the impact that distrust of the healthcare system has on the

influenza vaccination rates of Black Americans aged 18 and older, as there is an increase in chronic diseases among individuals aged 64 and younger (Freid et al., 2012). According to the CDC, individuals suffering from chronic conditions are more likely to get flu-related complications if they get sick from influenza (National Center for Immunization and Respiratory Diseases, 2012). I also investigated the belief that the influenza vaccine causes the flu.

Significance of the Study

This study is significant because I attempted to determine whether factors that contribute to low vaccination rates among elderly Black Americans are relevant among Black Americans, aged 18 and older. Exploring factors impeding influenza vaccination among Black Americans as opposed to those of differing racial groups may shed more light on the causes of nonvaccination that are distinct to this population. This study contributes to the body of knowledge regarding influenza immunization rates among Black Americans aged 18 and older through the implementation of a validated survey instrument in Baltimore, Maryland. Survey data obtained from this study and determining the causes of nonvaccination can help with the development of culturally appropriate health education messages that would encourage an increase in vaccination rates amongst this particular population.

In spite of major American medical and public health advancements afforded by new technologies, research, and critical changes in civil rights legislation, major health disparities continue to plague the Black community due to a lack of culturally-sensitive care delivery (Harvard Health Policy Review, 2002). To improve the disparity in

influenza vaccination coverage, more efforts are needed to develop and disseminate strategies and messages that are tailored to specific target populations (America's Health Insurance Plans, 2011). Ethnic-specific strategies to address the issues of medical mistrust by Black Americans are desperately needed (Chen, 2007).

Study Population

The targeted population for the study included Black Americans aged 18 and older living in Baltimore, Maryland, who are members of one of the city's predominantly Black churches. For the purposes of this research, Black Americans were operationally defined as individuals who are the descendants of any of the black racial groups of Africa or the Caribbean that are currently living in the diaspora. This distinction was made because I did not want to exclude black American immigrants or the descendants of black immigrants. A more in-depth discussion on the racial definition is provided in the Definition of Terms section.

Baltimore City, MD is an 80.94 square mile area with a total population of 621,342 (U.S. Census Bureau, 2013). Baltimore is the largest city in the state of Maryland. The racial makeup of Baltimore City is as follows: 63.6% Black or African American, 31.4% White, 4.4% Hispanic or Latino, 2.5% Asian, and 0.4% American Indian and Alaska Native (U.S. Census Bureau, 2013). See Figure 1 on the racial demographics of Baltimore City.

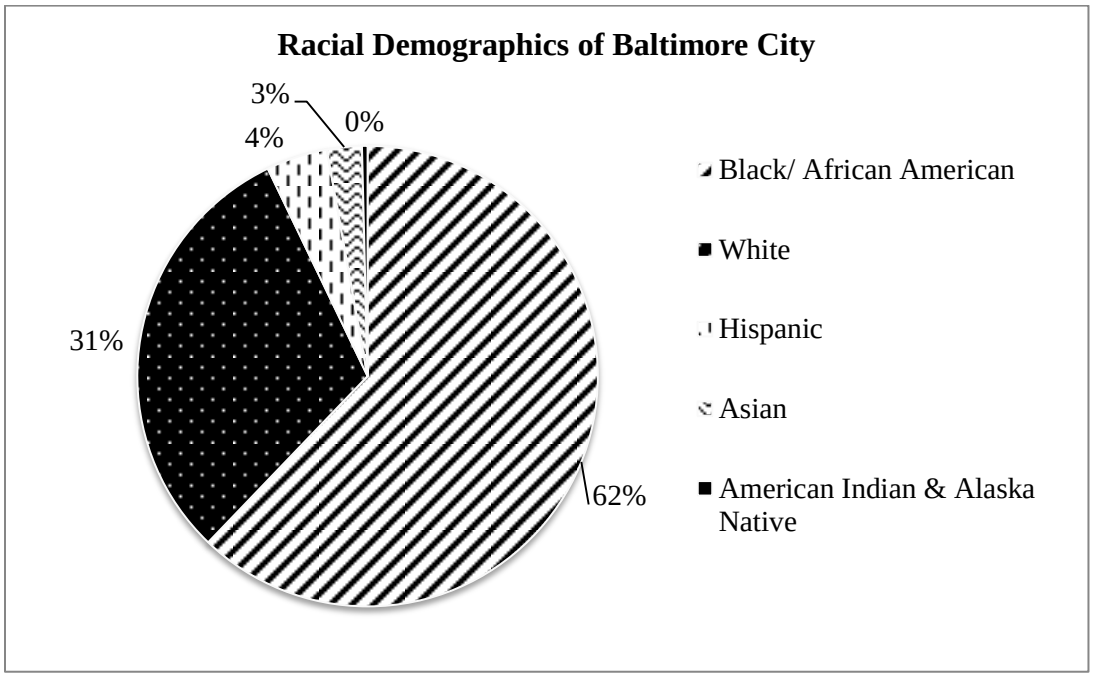

Figure 1. Pie chart showing racial demographics of Baltimore city. Data obtained from (U.S. Census Bureau, 2013).

With 20% of the city's population living below the poverty line, Baltimore city's minority and impoverished populations shoulder the cost of poor health. At every age, Baltimore city Black Americans are at a disadvantage in relation to health-related issues and outcomes (Johns Hopkins Urban Health Institute, 2013). According to Baltimore City's 2010 Health Disparities Report, many disparities have gone without improvement. Baltimore city fared worse than the rest of the state of Maryland on every major health indicator, receiving an overall score of D for health disparities (Office of Epidemiology and Planning, 2010).

Baltimore's City Health Code tasks the Health Commissioner with the prevention of diseases that affect the public's health and the prevention of physical illnesses

(Baltimore City Health Department, 2008). In November 2007, the city's health department launched a Seasonal Influenza Plan for the 2007-2008 influenza season with goals of describing planned surveillance for influenza, educating the medical community and the public, and actions to reduce the transmission of influenza (Baltimore City Health Department, 2008). During the peak of Baltimore's 2007-2008 influenza season, 11 to 13% of visits to healthcare providers were for flu-like symptoms.

Primary Research Questions

The questions developed for this research had a primary focus on the potential factors that influence low influenza vaccination rates amongst Black Americans aged 18 and older.

The following research questions guided this dissertation:

Research Question 1: Are current influenza vaccination status among Black Americans aged 18 and older influenced by distrust of the healthcare system?

Research Question 1A: Is there an association between distrust of the healthcare system and Black Americans aged 18 and older not receiving the influenza vaccination?

Null Hypothesis: There is no association between distrust of the healthcare system and Black Americans aged 18 and older not receiving the influenza vaccination.

Alternative Hypothesis: There is an association between distrust of the healthcare system and Black Americans aged 18 and older not receiving the influenza vaccination.

Research Question 2: Are current influenza vaccination status among Black Americans aged 18 and older influenced by individuals being suspicious of healthcare providers?

Research Question 3: Is there an association between the belief that the influenza vaccine causes the flu and receiving a flu vaccine among male and female Black Americans aged 18 and older?

Null Hypothesis: There is no association between the belief that the influenza vaccine causes the flu and receiving a flu vaccine among male and female Black Americans aged 18 and older.

Alternative Hypothesis: There is an association between the belief that the influenza vaccine causes the flu and receiving a flu vaccine among male and female Black Americans aged 18 and older.

Theoretical Framework

The theory used for this study was the public health critical race praxis (PHCR). The PHCR praxis was developed from the critical race theory (CRT) for public health research and practice. CRT has offered the field of public health a new paradigm for investigating the root causes of health disparities (Ford & Airhihenbuwa, 2010).

CRT was developed out of legal scholarship in the mid-1970s, and recognizes that racism is engrained within the framework of American society (UCLA School of Public Affairs, 2009). CRT has 3 main goals: (1) present stories about discrimination from the perspective of people of color, (2) argue for the eradication of racial subjugation while simultaneously recognizing that race is a social construct, and (3) address areas of difference such as gender, class, and any inequities experienced by individuals (Parker & Lynn, 2002). In research, when using the CRT methodology, race and racism is the primary focus throughout the research process. CRT challenges the traditional research

paradigms, texts, and theories that are used to explain the experiences of people of color, while offering transformative solutions to racial, gender, and class subordination in our societal and institutional structures (Creswell, 2007). Since many stories advance White privilege through "majoritarian" master narratives, counter-stories by people of color can help to shatter the complacency that may accompany such privilege and challenge the dominant discourses that serve to suppress people on the margins of society (Solorzano & Yosso, 2002).

The PHCR praxis was developed to improve the ease and fidelity with which public health researchers can use CRT to conduct health equity research (Ford & Airhihenbuwa, The public health critical race methodology: Praxis for antiracism research, 2010). CRT and PHCR both attempt to move beyond just documenting health inequities to understanding and challenging the power hierarchies behind them. There are four principles of PHCR: contemporary patterns of racial relations, knowledge production, conceptualization and measurement, and action steps. A limitation of using the PHCR praxis is researcher bias (Thomas, Quinn, Butler, Fryer, & Garza, 2011) stated that the PHCR praxis calls for beginning the research process from the perspective of the racial and ethnic minorities, as opposed to that of the majority white researchers, thus forcing researchers to examine their own lived experiences and the interaction of race, power and class.

Contemporary patterns of racial relations describes the ways in which racism changes over time (Ford & Airhihenbuwa, The public health critical race methodology: Praxis for antiracism research, 2010). In studying racism's effect on health, one must

focus on the time period of interest to the study. For example, to understand inequities in the 1950s, research would reflect how racism operated during that period, while inequities in the 2000s would be based on more current characteristics of racism.

Knowledge production focuses on understanding how racialization may shape a project or reinforce existing beliefs about racial groups or phenomena (Ford & Airhihenbuwa, The public health critical race methodology: Praxis for antiracism research, 2010). This principle also examines how conventional tools may influence an immediate study (e.g., standard research approaches may stigmatize a community, but journals may be unwilling to publish findings based on other approaches such as those emphasizing positive outcomes; Ford & Airhihenbuwa, 2010).

Conceptualization and measurement defines a study's race- or racism-related constructs, hypothesized relations between constructs, and the social contexts in which the constructs and relationships exist. With this principle, constructs and measures should be context-specific because racism functions differently depending on the place, population, time, and context (Ford & Airhihenbuwa, The public health critical race methodology: Praxis for antiracism research, 2010).

Action steps include (a) expanding the vocabulary with which to discuss poorly understood racial and power relations, (b) employing storytelling that is centered in the margins to describe a problem, and (c) directly challenging identified injustices. Action steps recognize that while a problem may be due to racism, the necessary responses may not be racial in nature as cultural or other tools may be more effective in addressing the

problems (Ford & Airhihenbuwa, The public health critical race methodology: Praxis for antiracism research, 2010).

Assumptions

In conducting the research, I assumed that all of the research participants would fully complete the validated survey when administered. More detail about the previously validated paper survey is given in Chapter 3. I also assumed that the research participants would understand the content of the survey without any difficulty. Based upon my research on the influenza vaccine, I had the assumption that the influenza vaccine did not pose a safety issue to the public, and the vaccine was effective in protecting against the influenza illness. Based upon previous studies on influenza vaccination (Nichol & Mendelman, 2004), I assumed that there was an overall health and economic benefit for the public to be vaccinated against the influenza virus. By determining if there was a culture of distrust of the medical community among the target group, I assumed that this research can lead to improvements in influenza vaccination rates of this group.

Limitations

In conducting research, there were factors that may have limited the findings of the study. In administering the survey instrument, research participants may not have fully completed the survey and/or may not have answered all of the survey questions honestly. In addition, individuals who were identified as potential research participants may not have wanted to cooperate and take part in the research. Furthermore, results of this study may not be generalizable to all Baltimore Black church congregants but only

those who agreed to participate. The research focuses on the experiences of members of the Black community and influenza vaccination; therefore, the PHCR praxis would provide an enhanced view of the research in that the theory moves beyond just documenting health inequities to providing an understanding of the root causes. The limitation to using the PHCR praxis is the bias of the researcher. PHCR praxis operates from the perspective of the minority and challenges the consensus that the United States is now a post racial society (Thomas, Quinn, Butler, Fryer, & Garza, 2011).

Delimitations

For the purposes of this study, only Black Americans who reside in the city of Baltimore, Maryland was recruited to complete the study. Recruiting members of other racial/ethnic groups to participate in the study did not fit the confines of the study. The geographic location of the study was confined to Baltimore city, as Baltimore city has a higher population of Black Americans than Baltimore County (U.S. Census Bureau, 2013).

Definition of Terms

African American / Black: An American of African and especially of black African descent (Merriam-Webster, 2013). According to the Office of Management and Budget, African American or Black refers to a person having origins in any of the Black racial groups of Africa (Office of Management and Budget, 1997). The Black or African American population includes people who classify their race(s) as Black, African American and Negro, as well as those who report Sub-Saharan African, such as Kenyan

and Nigerian, or Afro-Caribbean such as Haitian and Jamaican (Rastogi, Johnson, Hoeffel, & Drewery, 2011). For the purposes of this research, the term African American is used to refer to individuals who also identify as Black.

Chronic disease: A physical or mental condition that requires long term monitoring and/or management to control symptoms and to shape the course of the disease. Chronic conditions generally meet the following criteria: (a) relative permanence, (b) lasts at least 6 months, (c) requires special training of the client or those who provide the client's care, (d) is caused by a nonreversible pathological alteration, (e) is usually not curable by short-term treatment, and (f) is often characterized by remission and exacerbations (Missouri Department of Health & Senior Services, 2013).

Elderly: A male or female, 65 years of age and older.

H1N1: An influenza virus first detected in the United States in April 2009. Originally called the "swine flu" because many of the genes in the virus were similar to influenza viruses that occur in North American pigs, and it has two genes from flu viruses the occur in European and Asian pigs and bird genes and human genes (CDC, 2010a).

Healthy People : Healthy People is a science-based program designed and released by the Department of Health and Human Services in September 1990 to guide national health promotion and disease prevention efforts to improve the health of all people in the United States in 10-year targeted increments. The initial launch was titled Healthy People 2000, with Healthy People 2010, and Healthy People 2020 following suit. The overall goals of the current Healthy People 2020 are to attain high-quality, longer lives free of preventable disease, disability, injury, and premature death; to achieve health

equity, eliminate disparities, and improve the health of all groups; to create social and physical environments that promote good health for all; and to promote quality of life, healthy development, and healthy behaviors across all life stages (CDC, 2011a).

Influenza: A viral infection that attacks the respiratory system (nose, throat and lungs) and is commonly called the flu (Mayo Clinic, 2012).

Influenza vaccine: A vaccine that is administered in the form of a shot or nasal spray that causes antibodies to develop in the body approximately two weeks after vaccination. These antibodies provide protection against infection with the viruses that are in the vaccine (CDC, 2013a).

Social Change Implications

The purpose of this study and its connection to social change was to improve the low influenza vaccination rate of Black Americans. By identifying the causes of nonvaccination, healthcare professionals can better identify strategies that address issues that prevent individuals from being vaccinated. By identifying the causes of nonvaccination, these elements can be used to develop a culturally relevant program to help Black Americans aged 18 and older overcome the barriers that promote high influenza infection and low influenza vaccination rates. In addition to overcoming vaccination barriers, the findings of this study can be used in helping to decrease the mortality rates of Black Americans, who are suffering from higher rates of influenza–related mortality (Levi, et al., 2010).

Summary

The issue of seasonal influenza vaccination in the United States is a very significant one. Even with mass efforts to notify the public of the importance of being vaccinated against the influenza virus, this task is still a difficult one within the African American community. Although many studies have determined that the medical community needs to implement more intervention strategies to increase the immunization rates of Black Americans, not much has been done to develop these strategies. Culturally appropriate interventions are needed in order to address the fears, concerns, and unanswered questions that members of the African American community have about the influenza vaccines. Until these issues are addressed, the medical community will continue to experience disparities in influenza vaccination rates and other preventative health measures within the African American community.

Chapter 2: Literature Review

In this chapter, I will examine relevant literature regarding African American influenza vaccination rates and the historical events within the African American community that may have helped cultivate the attitude of distrust. The information presented in the literature review was found through the use of the Walden University's EBSCO Research database, Google Scholar, Science Direct database, and PubMed.gov. The literature review includes information from books, peer-reviewed journal articles, as well as guideline information from the federal government on the influenza virus and influenza vaccine. The search terms used to gather information were *African American views of health care, African American influenza vaccine, distrust of medical system, African Americans and medical experiments, African American distrust, African American medical experimentation, cultural distrust, Black Americans and medical conspiracy theories, Black church and healthcare, African American influenza, influenza vaccination, African American vaccination, influenza rates, eugenics,* and *African Americans chronic disease.*

Influenza Information and Vaccine Recommendations

Influenza, also known as the flu, is a contagious respiratory illness caused by the influenza virus that occurs, in the United States, primarily from October through May. Influenza can cause mild to severe illness, and can even lead to death (New York State Department of Health, 2012). Symptoms of the flu may include fever, cough, sore throat, runny or stuffy nose, muscle or body aches, headaches, fatigue, vomiting, and diarrhea (CDC, 2013).

To prevent the spread of influenza, the CDC recommends that individuals aged 6 months and older receive the influenza vaccination at the start of each flu season. The influenza vaccine is primarily administered in the form of an intramuscular injection. The influenza vaccines that are administered in the form of a shot are made with either an inactive flu vaccine virus (inactivated influenza vaccine--IIV), and therefore are not infectious, or with no flu vaccine viruses at all. The influenza vaccine can also be administered in the form of a nasal spray. The nasal spray influenza vaccine contains live viruses (live attenuated influenza vaccine--LAIV); however, those viruses are weakened and cannot cause the flu (National Center for Immunization and Respiratory Diseases, 2013).

Influenza Vaccine Information

Over the past years, hundreds of millions of Americans have safely received both the inactived influenza vaccine and the live attenuated influenza vaccine. The CDC and the U.S. Food and Drug Administration closely monitors the safety of the seasonal influenza vaccine to ensure clinically significant adverse events following vaccination are quickly identified (National Center for Immunization and Respiratory Diseases, 2013). Through the Vaccine Safety Datalink project, a collaborative effort between the CDC's Immunization Safety Office and managed care organizations, near real-time surveillance for selected adverse events is now possible (Greene et al., 2010). Although the vaccine is monitored for safeness, individuals receiving the influenza vaccine may experience mild side effects. Side effects may include soreness, redness or swelling at the injection site, low grade fever, and aches. Individuals who receive the flu vaccine nasal spray may

experience nasal congestion. Rare but serious side effects may occur, which would include allergic reactions, difficulty breathing, swelling around the eyes or lips, hives, racing heart, dizziness, and high fever (Rettner, 2013).

Each year, the CDC conducts studies to determine how well the flu vaccine protects against the flu (National Center for Immunization and Respiratory Diseases, 2013). The effectiveness of the influenza vaccine depends on how well the flu strains contained in the vaccine match the flu strains that are in circulation (Rettner, 2013). An individual's age and health also play a role in influenza vaccine effectiveness. The influenza vaccine works best among healthy adults and children 2 years of age and older. Older people with weaker immune systems often have a lower protective immune response after vaccination, which could result in lower vaccine effectiveness (National Center for Immunization and Respiratory Diseases, 2013). In a study on the effectiveness of influenza vaccination in healthy, working adults, 849 individuals were recruited to receive either an influenza vaccine or placebo injection. At follow-up it was determined that the influenza vaccine decreased the frequency of upper respiratory illness by 25%. The influenza vaccine also decreased work absenteeism due to upper respiratory illness by 43%, and visits to the doctor for upper respiratory illness by 44% (Nichol et al., 1995).

While it is recommended that the public be vaccinated annually, there are times when the influenza vaccine supply is limited. During those times, the CDC has determined that vaccination efforts should focus on delivering the vaccine to a specific group of individuals. This CDC-specified group are individuals who are 6 months to 4

years of age, 50 years of age and older, individuals who are pregnant or will be pregnant during influenza season, and individuals suffering from chronic health conditions (CDC, 2012a).

There are some individuals who should not be administered the influenza vaccine. Individuals with a history of prior allergic reaction to the influenza vaccine, individuals with egg allergies, and those who have a history of Guillain-Barre' Syndrome (GBS) should not receive the influenza vaccine. The CDC also recommends not administering the influenza vaccine to those individuals who are not feeling well, but suggests waiting until the individual is feeling better (National Center for Immunization and Respiratory Diseases, 2013).

The majority of intramuscular influenza vaccines are cultured on the fluid from chicken embryos. As a result, the influenza vaccines contain egg protein. This causes the risk of inducing an allergic reaction to an individual with an egg allergy (Kelso & Wang, 2013).

GBS is a rare disorder in which a person's own immune system damages their nerve cells, causing muscle weakness and paralysis (National Center for Immunization and Respiratory Diseases, 2012). In 1976, there was a small increased risk of GBS following the administering of an influenza vaccine made to protect against swine flu. While recent studies have shown a lack of association between GBS and influenza vaccines, patients and providers with concerns are still encouraged to keep the disease in perspective (Walberg, 2013).

Influenza Vaccination and Gender

Researchers found that influenza vaccination coverage among adults 18 to 64 years of age was 6.9 percentage points higher for females compared with males. The figures were 36.5% and 29.6%, respectively (National Center for Immunization and Respiratory Disease, 2012). The higher influenza immunization rates for females is likely due to women being more likely than men to be caregivers and to work in health-care occupations, which may increase their exposure rate to the influenza virus (World Health Organization, 2010).

Hospitalization rates from seasonal influenza viruses are higher in males than females. In the United States, an analyses of 2005 to 2007 seasonal influenza vaccination data showed that men aged 18 to 24 and men 70 years and older were more likely to receive the seasonal influenza vaccine. Women in the age group of 25 to 69 were more likely to receive the influenza vaccine than men in that same age group (WHO, 2012).

Influenza and Chronic Health Conditions

A chronic health condition is as any physical or mental condition requiring long term monitoring and/or management to control symptoms and to shape the course of the disease (Missouri Department of Health & Senior Services, 2013). Chronic diseases can be controlled but not cured. Examples of chronic diseases are diabetes, heart disease, breast cancer, and HIV/AIDS (Center for Managing Chronic Disease, 2015). Researchers have found that individuals who are at high risk for problems associated with the flu are individuals suffering with chronic health conditions (National Center for Immunization and Respiratory Diseases, 2013) .

Influenza and Diabetes

Individuals suffering with the chronic condition of diabetes are three times more likely to die when infected with the influenza virus than the general population (Promotion, 2013). The influenza vaccine is important for individuals with diabetes as the vaccine lowers the risk of more serious respiratory tract involvement and lessens the risk of secondary complications, hospitalization, and death (Mayo Clinic, 2012). Diabetes can weaken the body's immune system, making it harder for the body to fight the influenza virus. Being sick with the flu can lead to a rise in blood glucose levels and prevent an individual diagnosed with diabetes from eating properly (FLU.gov, 2013).

Influenza and Heart Disease

Flu season poses special problems for heart patients, as influenza epidemics are associated with a rise in coronary deaths (Texas Heart Institute, 2012). According to the CDC, death from the flu is more common among people with heart disease than among people with any other chronic illness (as cited in Mayo Clinic, 2013). The risk of having a heart attack or stroke doubles in the week following a respiratory infection such as the flu. The influenza virus can also cause complications, including bacterial pneumonia, or the worsening of chronic heart problems (American Heart Association, 2012). Liberati (2013) stated that "when the influenza virus enters the heart, disease-fighting cells produce chemicals to fight off the infection. These chemicals can also damage the heart muscle and leave it thick, swollen and weak".

Influenza and Cancer

During an influenza epidemic, between 21% and 33% of cancer survivors who are hospitalized due to respiratory symptoms test positive for influenza (Nowak, 2012). Like many individuals suffering from other chronic conditions, cancer patients and cancer survivors are at greater risk for complications from the flu, such as hospitalization and death (Centers for Disease Control and Prevention, 2012). The CDC recommends that cancer patients and cancer survivors receive an annual influenza vaccination with an inactivated viral vaccine. The inactive influenza vaccine is administered in the form of a shot with a needle (as cited in Menchetti, 2012). The nasal spray flu vaccine contains a weakened live flu virus and should not be administered to cancer patients and cancer survivors (Stephan, 2009).

Individuals with cancer often have weak immune systems during cancer treatment, as chemotherapy can cause a drop in the patient's red and white blood cells (Stephan, 2009). As a result, an influenza infection in a cancer patient may delay or interrupt chemotherapy treatments and require hospitalization (Boehmer, Waqar, & Govindan, 2010). A delay in cancer treatment can ultimately affect the eventual outcome of the treatment itself (Nowak, 2010).

Influenza and HIV/AIDS

Another category of chronic diseases that are adversely affected by the influenza virus are the Human Immunodeficiency Virus (HIV) and the Acquired Immune Deficiency Syndrome (AIDS). The HIV virus causes damage to cells in the body's immune system. This makes it difficult for the body to fight off infections like the

influenza virus (FLU.gov, 2013). Due to cell damage, individuals with HIV/AIDS diagnosis are more likely to develop complications such as pneumonia from the flu (Mayo Clinic, 2013). Because there is a higher risk of flu-related deaths among individuals with HIV during the flu season, the CDC recommends that those infected with HIV/AIDS to receive the influenza vaccine in the form of a shot. During the flu season, HIV/AIDS-infected individuals have an increased risk of heart- and lung-related hospitalizations as opposed to other times of the year (as cited in National Center for Immunization and Respiratory Disease, 2011).

Black Americans and Chronic Diseases

In the United States, no progress has been made in decreasing the prevalence of chronic health conditions (Mendes, 2011). In the African American community, chronic disease is a growing problem. Studies have shown that Black Americans are hospitalized at a much higher rate for a range of chronic diseases than Whites (Metropolitan Area Planning Council, 2008).

When compared to the general United States population, Black Americans are disproportionately affected by diabetes (American Diabetes Association, 2013). Of all Black Americans aged 20 years and older, 3.7 million (14.7%) have been diagnosed with diabetes (National Association for the Advancement of Colored People, 2013). Studies have shown that Black Americans are twice as likely to contract diabetes as Whites and are more likely to suffer complications such as end-stage renal disease and lower extremity amputations than Whites (Department of Health and Human Services, 2012).

While there are a number of chronic diseases affecting those within the African American community, heart disease is the leading cause of death of Black Americans (NAACP, 2013). Black Americans have the highest mortality rate from coronary heart disease than any ethnic group in the United States, particularly at younger ages (Clark, et al., 2001). Approximately 1 in 100 Black Americans develop heart failure in their 30s and 40s, a rate 20 times higher than that of similar aged Whites (Sutton, 2012).

HIV and AIDS has ravaged the African American community. Black Americans are the racial/ethnic group that is most affected by HIV in the Unites States (National Center for HIV/AIDS, 2013). Black Americans account for 13% of the United States population and about half (49%) of all individuals infected with HIV and AIDS (NAACP, 2013). Black Americans have a higher proportion of HIV infections at all stages, from new infections to death (National Center for HIV/AIDS, 2013).

Members of the African American community are at a high risk for morbidity and mortality from chronic diseases; however, this group is less likely to engage in behaviors that are associated with a reduction in the risk of chronic diseases and behaviors that would detect these diseases at an early stage (US News & World Report, 2011). With chronic diseases impacting the community at high rates, it is important for Black Americans to receive the influenza vaccination. Unfortunately, many who are living with chronic diseases do not receive the influenza vaccine, and health officials are concerned that nationwide surveys are showing low influenza vaccination levels among adult members of the African American community (Oklahoma State Department of Health, 2012).

Black Americans and Low Influenza Vaccination Rates

According to research conducted by the AARP Public Policy Institute, flu and pneumonia immunization rates among all older adults are well below the Healthy People 2010 goals of 90% for each vaccine (Flowers, Sinclair, & Umans, 2008). While the Healthy People 2010 immunization rates for all older adults were lower than the national goal, the immunization rates among Black Americans were considerably below the immunization rates of Whites. In their study of racial difference in influenza vaccination, Ostbye, Taylor, Lee, Greenberg, and Scoyoc (2003) also found that while the number of Americans receiving immunization against the influenza virus has steadily increased since the mid 1990s, the rates of Black Americans receiving the vaccine has been consistently lower than that of Whites. Schneider, Cleary, Zaslavsky, and Epstein (2001) determined that managed care does not necessarily reduce the racial disparity in influenza vaccination receipt. In their study, it was found that Whites were still more likely than Black Americans to receive the vaccination.

A review of immunization literature from 1980 to 1999, which addressed immunization issues from an African American and/or minority perspective, found that some patient-related attitudinal barriers to adult immunization included doubts about vaccine efficacy as well as misperceptions about vaccine side effects, such as believing the influenza vaccination would actually cause influenza (Adult Immunization Consensus Panel, 2003). Many individuals in minority communities do not believe that vaccines are safe, or that they even work. United States Secretary of Health and Human Services,

Kathleen Sebelius indicated that the H1N1 swine flu pandemic revealed a mistrust of vaccines (as cited in Rees, 2010).

During the United States H1N1 swine flu pandemic, the lingering issue of distrust that many minorities have of vaccines became painfully clear to many health agencies. While 162 million influenza vaccines were shipped across the country, only 90 million doses of the vaccine was administered, with minorities often left out of the receiving number (Fox & Osterman, 2010). In a survey of 1500 registered California voters, 17% of survey respondents felt that there was a strong chance that the 2009 H1N1 vaccine was not safe. This concern was twice as high among African American survey respondents (CDC, 2010). The Adult Immunization Consensus Panel conducted a study to examine the problem of consistently low levels of immunization rates among Black Americans. The study found that distrust of healthcare providers was one of the potential patient-related barriers to adult immunization (Adult Immunization Consensus Panel, 2003).

In a study that used a telephone survey of 1681 Black and White adults aged 65 years and older, it was determined that Black Americans were less likely than Whites to have received an influenza shot (Musa, Schulz, Harris, Silverman, & Thomas, 2009). The study found that there was a tendency for Black Americans to favor conspiracy theories and health misinformation as an explanation of real or perceived medical abuse. As a consequence, the utilization of preventative services the require injection (such as the flu shot) is subject to rejection amoung Black Americans.

Black Americans and Distrust of the Medical Community

A history of medical abuses, inhumane testing and experimentation of Black Americans by the medical community has created an environment of fear and distrust of the medical community (Washington H. A., 2006). Fear and distrust of the health care system is a natural and logical response to the history of experimentation and abuse (Randall, 1996). Unfortunately, distrust of the health care system can have a detrimental effect on the overall health and well-being of the African American community. Evidence of this can be found not only in low influenza vaccination rates, but also in low African American medical research participation rates, and low rates of preventative medical care. Black Americans who reported being highly mistrustful of the medical system were more than twice as likely to delay routine preventative medical check-ups and screenings (Lane, 2011).

In a study examining the concept of medical mistrust among low income Black Americans and Whites, Dr. Teri Strenski found that feelings of medical mistrust tend to vary across groups of people (Strenski, 2013). Dr. Strenski found that when it comes to medical mistrust, what may be an important issue for one group may be of little importance to another. African American participants reported unequal access to care due to perceived bias and discrimination. White participants reported equal access to care, but tended to perceive it to be of inferior quality. Strenski concluded that health care providers, researchers, and health program planners should be more sensitive to medical mistrust to understand how mistrust can impede access to care, health interventions, and participation in research studies.

Medical Research

Distrust of the medical system by members of the African American community can also have a detrimental effect on the scientific community and the development of drugs to treat Black Americans. In a random survey designed to examine patients' views on clinical trial participation, 58% of African American participants thought physicians used medications to experiment on people without patients consent, as opposed to 25% of Whites (JHMI, 2008). Many Black Americans fear that clinical trials are an avenue for them to be used as guinea pigs. A study found that Black Americans were more likely than Whites not to trust that their doctors would fully explain participation in clinical research (Adams, 2003).

In a University of Iowa study, researchers examined the racial differences in the sociocultural barriers as a possible explanation of the underrepresentation of Black Americans in medical research studies (Shavers, Lynch, & Burmeister, 2002). Study results indicated that more white respondents indicated a willingness to participate in a medical research study than African American respondents. African American subjects more frequently attributed race/ethnicity as a factor in the distribution of the burden of medical research than did whites. This study also examined participants' knowledge of the Tuskegee Study. Researchers found that a reduction in trust as a result of respondent knowledge of the Tuskegee Study had a negative impact on the future willingness of African American respondents to participate in medical research studies.

Preventive Care

Not only can distrust of the medical system affect the scientific community's ability to develop treatment drugs and clinical trial participation, it can also affect rates of preventative medical care. In a University of North Carolina study, 62% of the Black Americans sampled believed that physicians often prescribed medication as a way of experimenting, as opposed to 8% of the Whites sampled (Powe, 2004).

In a Rush University Medical Center study (Peek, Sayad, & Markwardt, 2008), researchers found that distrust of the health care system was a barrier to African American women cancer screenings. In four focus groups with a total of 29 participants, researchers found that the women feared being subjected to unnecessary surgery or mastectomy due to inaccurate health beliefs and misinformation. Some of the participants also concerns about unethical experimentation as a result of a mistrust of the medical system. The fear discussed in this study that led to mistrust of the health care system arose from a lack of accurate information and poor communication between doctor and patient. This study found that to promote mammogram utilization, comprehensive communication about breast cancer screening is important among the African American female population.

Distrust of the health care system was also found to be a barrier to preventative cancer screenings in a Philadelphia study. In a telephone survey of 5268 women, researchers determined that high levels of health care system distrust among the women correlated with a low utilization of breast and cervical cancer screening services. The study concluded that women with a regular source of care may have more interaction

with the health care system. More interactions may promote trust in the health care system (Yang, Matthews, & Hillemeier, 2011).

Researchers conducted a study to find racial differences in the effects of trust in the health care system on the use of preventative health care. A telephone survey of 1681 Black and White adults revealed that Black Americans had higher levels of distrust of their physicians. This high level of distrust of their physicians likely contributed to health disparities by causing reduced utilization of preventative services. Researcher also determined that health information disseminated to Black Americans through informal means would likely increase Black Americans' utilization of preventative health services (Musa, Schulz, Harris, Silverman, & Thomas, 2009).

Trust and Mistrust

According to their study on the racial differences in trust in health care providers, Halbert et al, stated that trust is increasingly being recognized as a critical aspect of medical care (Halbert, Armstrong, Gandy, & Shaker, 2006). In their study of 954 African American and white men and women, Black Americans participants (44.7%) were more likely than white participants (33.5%) to report low levels of trust in health care providers. Halbert et al found that even after controlling for sociodemographics, prior health care experience, and structural characteristics of care, African American participants still reported lower levels of trust. Researchers in this study found that their results were consistent with previous research (Doescher, Saver, Franks, & Fiscella, 2000), (Boulware, Cooper, Ratner, LaVeist, & Powe, 2003).

In their study, Doescher et al. used two scales, "The Satisfaction With Physician Style Scale" and "The Trust in Physician Scale" to assess whether an individual's race or ethnicity is associated with low trust in the physician (Doescher, Saver, Franks, & Fiscella, 2000). Utilizing a telephone survey of 60,446 members of the non-institutionalized United States population, the researchers found that racial or ethnic minority group members reported less positive perceptions of physicians than whites. The two scales used in the study indicated that while trust scores were low for Latinos and Black Americans, they were particularly low for the African American subjects.

In a University of Illinois at Chicago study identifying key determinants of trust and mistrust of physicians by African American family caregivers, it was determined that the physician behavior was a key determinant that engendered trust or mistrust (Bonner, Ferrans, Moore-Burke, & Gorelick, 2005). The study also determined that mistrust forms a barrier to health care and interferes with the ability to make informed and appropriate health care decisions. In determining the causes of physician trust and mistrust, the study concluded that trust and mistrust were not determined by a physician's ethnicity. Participants determined that a physician's behavior, medical knowledge base, having the patient's best interest in mind, communication, and accessibility to caregivers were more important than ethnicity

Boulware et al. (2003) also assessed the relationship of race and trust in physicians, hospitals, and health insurance plans in their study. Before and after adjusting for confounding variables, research subjects responded differently in their trust in physicians. Black respondents were less likely to trust their physicians than white

respondents. The results of this study also showed that Black participants were more likely than white participants to express concern about the occurrence of harmful experiments in hospitals.

In a Michigan State University study on medical mistrust among minority women, nearly 70% of minority women agreed that health-care organizations sometimes deceived or mislead patients (Michigan State University, 2009) In the study, African American women were found to have higher levels of mistrust than participants of other ethnicities. Thirty-nine percent of African American women participants believed that health-care organizations did not keep their information private, compared to 15% of Latina women, and 9% of Arab-American women.

According to pediatric doctor, Corey Hebert, M.D., Black Americans tend not to get flu shots due to a historical distrust. Dr. Hebert stated that many Black Americans tend to feel that doctors are injecting them with something that is bad, or will cause harm (Campbell, 2009).

In his work The Doctor's Dilemma, Irish playwright George Bernard Shaw stated, "I do not know a single thoughtful and well-informed person who does not feel that the tragedy of illness at present is that it delivers you helplessly into the hands of a profession which you deeply mistrust" (Shaw, 1909).

Historical Medical Events and the African American Community

While the United States claims to be the world leader in medicine, there is a dark side to western medicine that few want to acknowledge: the horrifying medical experiments performed on impoverished people and their children in the name of

scientific progress. Many of these experiments were conducted on people without their knowledge or without their consent (Veracity, 2006). Historically, Black Americans were denied health care because of racism, classism and poverty, and a distrust borne from past unethical medical practices (such as the Tuskegee syphilis study) lingers among many black Americans" (Strange, 2006). Black Americans have a greater awareness of the documented history of racial discrimination in the health care system than other racial/ethnic groups (Boulware, Cooper, Ratner, LaVeist, & Powe, 2003). This long history of medical discrimination and experimentation has left a long lasting imprint on the psyche of Black Americans, affecting medical decisions and the frequency of medical care (Washington, 2006).

Antebellum Period

The roots of distrust can be traced back to the 19th century when African American slaves were used for medical experimentation. In an era when physicians enjoyed fewer financial rewards and lower professional status than they do today, physicians derived most of their income from the care of slaves (Fisher, 1968). Medical records show that antebellum physicians used Black Americans as living specimens for teaching and testing medical, surgical and pathological examination procedures (Bonner et al, 2005).

In the 1803's a Dr. T. Stillman ran advertisements in the Charleston Mercury for his infirmary. On October 12, 1838, he ran the ad: "Wanted: FIFTY NEGROES. Any person having sick negroes, considered incurable by their respective physicians and wishing to dispose of them Dr. Stillman will pay cash for negroes affected with scrofula

or king's evil, confirmed hypochondriacism, apoplexy, or diseases of the brain, kidneys, spleen, stomach and intestines, bladder and its appendages, diarrhea, dysentery, &c. The highest cash price will be paid as above" (Weld, 1839). In this case slave owners could turn a loss into a gain by receiving cash for slaves who were dying and considered "worthless property". These slaves would then be used as involuntary subjects for Dr. Stillman's medical experiments (Deyle, 2005).

A historical case of medical experimentation that dates back to slavery is that of Dr. Marion Sims. Dr. Sims, who is considered by many the father of gynecological surgery, developed the first successful technique for the repair of gynecological fistulae - abnormal passageways that sometimes develop between the bladder and the vagina because of prolonged labor. Dr. Sims perfected his technique by performing the experimental surgery on African slave women without the use of anesthesia. Initially several male doctors assisted Sims in holding down the enslaved women during the surgeries sans anesthesia, but within a year they could no longer bear the bone-chilling screams of the women. While medical journals detailed the inhalation of ether as an anesthesia since the early 1840s, Sims refused to administer anesthesia claiming that the procedures were not painful enough to justify the trouble (Harris, 1950).

20th Century

A more renowned post-slavery case of medical experimentation is the Tuskegee Syphilis Study, also known as the Tuskegee Experiment or the Tuskegee Study. The Tuskegee Experiment has stirred up fear and suspicion within the African American community over many health initiatives. That suspicion has had a continuous negative

effect on the health of the African American community (Donovan, 2009). In a Washington Post article, the Executive Director of Chicago's Community Mental Health Council, Dr. Carl C. Bell state, "Many Black Americans' distrust in today's medical establishment can be attributed to Tuskegee" (Shelton, 1997).

The Tuskegee Syphilis Study was a case in which 399 black men were enrolled in a United States government study conducted by the U.S. Public Health Service (PHS), spanning from 1932 to 1972, to explore the effects of syphilis on the body. The men were not told that they had syphilis, and were purposely not given penicillin, which was discovered in 1940 as a cure for the disease. The men were monitored so well that most of them received no treatment for forty years. In 1934, Public Health Service doctors met with local African American doctors and asked them not the treat them men who were receiving care in the research study, to which the doctors complied. In 1941, the Public Health Service circulated a list of the names of the men to the draft board, instructing the military not to treat any men that were inducted. When the United States entered into World War II, the Tuskegee research subjects were exempted from the draft because the Public Health Service feared that they would be treated for syphilis in the military and ruin the study (Washington, 2006). The experiment ended only because a journalist exposed it, creating a firestorm of public outrage (Grady, 2007).

Although it ended over a quarter of a century ago, the effects of the Tuskegee Syphilis Study are still felt. In his news article on the need to help Black Americans dispel their suspicions of the influenza vaccine, Wickham (2003), recalls how the subject of the flu shot came up among a group of 15 black journalists. Only two out of the

fifteen journalists had received the vaccine. When asked why the other journalists had not received the vaccine, the topic of the Tuskegee Experiment was brought up.

In their study on the underrepresentation of Black Americans in medical research studies, Shavers et al found that 51% of African American subjects reported that their knowledge of the Tuskegee Study resulted in them having less trust in medical researchers (Shavers, Lynch, & Burmeister, 2002). Seventeen percent of white subjects who had knowledge of the Tuskegee Study reported less trust in medical researchers. Forty-nine percent of African American participants indicated that their knowledge of the Tuskegee Study would affect their future participation in medical research studies, and 17% of white participants indicated that they would not being willing to participate in future medical research studies.

In 2010, news was released that the United States government infected Guatemalans with gonorrhea and syphilis without their permission, giving new credence to the often dismissed claims by Black Americans of government backed conspiracies to harm them (Penrice, 2010). From 1946 to 1948, the United States government ran a venereal disease experiment on Guatemalan prisoners, soldiers and mental patients to determine if penicillin could prevent disease infection after exposure. Guatemalan prostitutes infected with syphilis were paid to have sex with prisoners. If it was determined that the men were not infected, bacteria was poured into scrapes made on their penises or face, or was injected by spinal puncture (McNeil, 2011).

Birth control methods are another issue that has been shrouded in conspiracy within the African American community. In the 1960's and 70's, birth control and

family planning programs were believed to be a part of a genocidal conspiracy against Black Americans (Bird, 2005). In the American South, federally funded state welfare programs underwrote the coercive sterilization of thousands of poor black women. Under threat of termination of welfare benefits or denial of medical care, many black women "consented" to sterilization procedures (Roberts, 2000).

In 1961, Civil Rights leader Fannie Lou Hamer was diagnosed with a small uterine tumor and checked into the Sunflower City Hospital to have it removed. Without her knowledge or consent, without any indication of medical necessity, the operating physician took the liberty of performing a complete hysterectomy. Three years later, as a leader of the Mississippi Freedom Democratic Party, Ms. Hamer spoke about her experience to an audience in Washington D.C. – telling them that she was one of many black women in her area that had been a victim of an unwanted, unrequested and unwarranted hysterectomy. According to Hamer's research, 60% of the black women in Sunflower County, Mississippi were subjected to postpartum sterilizations at Sunflower City Hospital without their permission (Sebring, Fannie Lou Hamer, 2007).

In these southern black communities, the non-consensual and medically unnecessary sterilizations on black women became known as a Mississippi Appendectomy (Sebring, Sterilization - black women, 2007). Historical incidents such as this contribute to a lasting fear of the medical establishment among the African American community (Wickham, 2003).

In the late 20th century, the Human Immunodeficiency Virus (HIV) and the Acquired Immune Deficiency Syndrome (AIDS) emerged. In the African American

community there was widespread belief that the AIDS epidemic was a man-made virus, and a deliberate conspiracy by government officials (Goertzel, 1994). Several studies have noted that many Black Americans believe that the government created AIDS to kill minorities, and that the government is withholding information about AIDS from the public (Bird et al., 2005, (Whetten, et al., 2006).

In their study examining the association between trust of health care providers and the use of health services, Whetten et al. found that 23% of all minority participants, and 11% of non-minority participants believed that the government created AIDS to kill minorities (Whetten, et al., 2006). Over half of the study's minority participants believed that a significant amount of information about AIDS is withheld from the public, as opposed to one third of non-minority participants. Whetten et al's study determined that distrust is a major issue that may be a barrier to utilizing needed health services and to optimal health.

In the early 1990's there was a case of the testing of antiretroviral and other pharmaceuticals on HIV-infected orphans at New York's Incarnation Children's Center (Zook, 2007). The children were reported to have suffered painful side effects "such as rashes, vomiting and sharp drops in infection-fighting blood cells" (Sharav, 2005). When foster and adoptive parents opted to withdraw their children from the study, the city's Administration for Children's Services removed the children from the homes and sent them back to the orphanage ensuring their participation in the study (Zook, 2007).

21st Century

After receiving $2.1 million dollars from the American Chemical Council, the Environmental Protection Agency launched the Children's Health Environmental Exposure Research Study (CHEERS) in the summer of 2004. The purpose of the study was to examine how children from infancy to 3 years of age ingest, inhale and absorb chemicals (Veracity, 2006). Children from low-income families in the predominantly black area of Duval County, Florida were recruited for the study. As a part of the study, the children would be monitored for health impacts as they undergo exposure to known toxic chemicals over the course to two years. Although the EPA recruiting literature claimed that participation presented no risk to the study subjects, the chemicals used were known to have negative long-term health effects (OCA, 2005). After receiving pressure from activist groups and negative media coverage, the EPA dropped the study on April 5, 2005.

Incidents such as the afore-mentioned foster the belief that the medical community does not have the African American patient in its best interest. This belief ultimately becomes a barrier to patient care, medical research, and preventative measures such as immunizations. As a subculture of the American society, Black Americans have experienced something that members of other ethnic groups have not: the unique combination of racism, slavery and segregation. This experience has caused Black Americans to develop not only different behavioral patterns, values, and beliefs but also different definitions, standards, and a difference in value systems and perspectives (Kennedy et al., 2007).

Avenues of Trust

Studies have suggested that campaigns that provide preventive health care information to Black Americans though informal conduits like beauty salons, barbershops, churches and other community-based organizations are trusted and effective ways to reduce disparities in health care (Musa, Schulz, Harris, Silverman, & Thomas, 2009). Health care system partnerships with community-based organizations are central to improving the health of those within the African American community (Aaron, Levine, & Burstin, 2003). When seeking African American participation in research and health prevention efforts, local African American community leaders are the gatekeepers and guardians of the members of the community (Buseh, Millon-Underwood, & Kelber, 2013). In addition to community leaders, barbershops and churches have been successfully used to educate African American community members about preventative health (Mulder, 2012).

The Black-owned barbershop represents a cultural institution that regularly attracts large numbers and provides an environment of trust and an avenue to disseminate health education information. In 2007, the Diabetic Amputation Prevention Foundation launched The Black Barbershop Outreach Program (BBOP). The program was created to empower the African-American community to better understand various diseases, the complications of these diseases, and standard of care deserved as it relates to prevention and management. BBOP increases public awareness about health care disparities in under-served communities through culturally specific education, research and community based programs (Black Barbershop Health Outreach Program, 2011).

For many Americans, the church plays an important role in their efforts to handle personal problems. It was found that 39% of Americans who have a serious personal problem seek help from a clergy member (Taylor, Ellison, Chatters, Levin, & Lincoln, 2000). This percentage exceeds the rates for help from psychiatrists, psychologists, doctors, marriage counselors or social workers. Public health practitioners, researchers, and policy makers are beginning to recognize this role the church plays, and are increasingly using the church to access Black Americans for health improvement efforts (Aaron, Levine, & Burstin, 2003). In a University of North Carolina study examining the characteristics of churches and their members' beliefs and interests in faith-based health promotion, members viewed the church's health ministry as the more desirable source for health information (Odulana, et al., 2013).

The Black Church and the Health of the Black Community

To understand the role that the church has played in acceptance of prescriptive health services, the literature was reviewed to determine whether said engagement has been critical within the Black community. The Black church traditionally has been the center of the Black community. Historically, it has served as the primary social institution, as well as the conservator of norms, values, folkways, and mores of the Black experience (Levin, Roles for the Black Pastore in Preventive Medicine, 1986). Black Christian churches are becoming more proactive in trying to improve the health of their members through various health programs (Strange, 2006). Several types of community medical programs that have been offered in the Black community through the Black church: primary care delivery, community mental health, health promotion and disease

prevention, and health policy (Levin, The Role of the Black Church in Community Medicine, 1984).

According to Chatters (2000), religious institutions occupy important roles and positions of power and influence (i.e. economic, educational, civic, and political) in their respective communities. As a result, the religious institutions possess legitimacy in the eyes of their communities, as well as the organizational roles, structures, and mechanisms that facilitate the development and implementation of health programs. As health care laws and programs are introduced, it is important for the Black church to be engaged in the effort to educate and inform the Black community.

According to Acacia Bamberg Salatti, acting director of the Department of Health and Human Services' Center for Faith-Based and Neighborhood Partnerships, the Black church will play a major role in educating the public about the Affordable Care Act (Burkins, 2013). Salatti stated, "The African American church – African American congregations – are trusted messengers. Many times, way before they will listen to someone like me or even President Obama, they are going to listen to their pastor; they're going to listen to their Sunday school teacher; they're going to listen to that health minister. So it's really critical that we work with churches in the minority community to give them the information to be able to educate their communities and their congregations about what's going to be happening with the health insurance marketplace, what are some of the provisions, what are some of the benefits, and also to combat some of the misperceptions out there about the law" (Burkins, 2013).

According to Acton (2012), the Black church is a promising site to engage in health disparities research. Medical researchers that are looking to engage members of the Black community through the church can utilize a community-based participatory research (CBPR) approach (Ammerman, et al., 2003). Through CBPR, researchers can overcome distrust by fostering open and honest communication about the research process and engagement of participants in study planning and implementation. The CBPR approach views community participants as partners in the research process rather than as subjects on whom research is conducted.

In their study, Ammerman, et al. (2003) found that the engagement of pastors and other church leaders is critical to program acceptance and success. It was determined that pastors in the African American church can play a pivotal role in the adoption of health promotion and research activities. The pastor's introduction and endorsement of a research program to his or her congregation is essential to the success of the effort.

Methodology Related Literature

The researcher has obtained permission to utilize two previously validated survey instruments to assess distrust of the medical community. The instruments to be used to collect data are the Health Care System Distrust Scale (Rose, Peters, Shea, & Armstrong, 2004), and the Adult Influenza Immunization Survey (Story, 2012). These surveys have been used in previous studies to measure distrust of the health care system and the factors that influence influenza immunization status.

In their investigation of the association between distrust of the health care system and health status, Armstrong, et al. (2006) utilized the 10-item Health Care System

Distrust Scale. Developed to assess distrust of the health care system, the scale also identifies dimensions of distrust: honesty, confidentiality, competence and fidelity. From the use of the scale, the researchers concluded that distrust of the health care system was highest among participants who were between 31 and 60 years of age, as well as participants who did not have health insurance. The scale also allowed researchers to determine which of the predetermined dimensions were more closely associated with distrust of the health care system.

In her assessment of the factors that influence the influenza immunization decisions among Black Americans in a small Tennessee town, Dr. Chandra Story (2012) developed the Adult Influenza Immunization Survey. The survey was developed using portions of the National Adult Immunization Survey questionnaire (National Center for Health Statistics, 2013), the Behaviors and Beliefs about Influenza Vaccine survey questionnaire (Santibanez, Mootrey, Euler, & Janssen, 2010), and the Barriers to Adult Immunization Study questionnaire (Johnson, Nichol, & Lipczynski, 2008). Please refer to Chapter 3 under Instrumentation, page 47 paragraph 1, for information on the validation of these tools.

Summary

Influenza is a contagious respiratory illness that can cause mild to severe illness (NYDH, 2012). It is recommended that the public, particularly those individuals suffering from chronic diseases, receive the flu vaccine at the start of each flu season in an effort to prevent any flu-related illness (CDC, 2012a). Chronic disease sufferers are at a higher risk for flu-related problems than the general public (Missouri Department of

Health & Senior Services, 2013). Studies have shown that members of the African American community have higher rates of chronic disease, and the lowest rates of influenza vaccinations (OSHD, 2012).

The low African American influenza vaccination rates can be attributed to a distrust of the medical system, which stems from a long history of documented incidents of racial discrimination and medical experimentation (Campbell, 2009). Many historical incidents have helped to develop and maintain the belief that the medical community does not work in the best interest of the African American community. As a result of this belief, members of the Black community experience higher rates of health disparities.

In an effort to reduce health disparities in the African American community, healthcare organizations have turned to informal avenues to deliver preventive health care information such as beauty shops, barber shops and churches. As the historical center of the Black community, the Black church provides an environment of trust where the medical community can engage members of the Black community in preventive health programs. Engagement of pastors and other community leaders is key to the acceptance and success of a program.

Chapter 3: Research Method

In Chapters 1 and 2, I discussed how influenza immunization rates have been historically lower among Black Americans in comparison to other populations despite the efforts of the U.S. healthcare system to encourage the public to obtain the vaccine (Harris, Juergen, & Uscher-Pines, 2010). Previous studies have shown that many elderly Black Americans do not participate in influenza vaccination efforts due to distrust of doctors and the medical community. In this chapter, I discuss the mixed research method used to determine if (a) distrust of the medical system was a relevant factor in the low influenza vaccination rates in Black Americans aged 18 and older, (b) vaccination status was influenced by a suspicion of healthcare providers, and (c) if there was a difference in the belief that the influenza vaccine causes the flu by vaccination status. The dependent variable was influenza immunization status. The independent variables were distrust of the healthcare system, suspicion of healthcare providers, and belief that the influenza vaccine causes the flu.

Research Questions & Hypotheses

The questions developed for this research had a primary focus on the potential factors that influence low influenza vaccination rates amongst Black Americans aged 18 and older.

The following research questions guided this dissertation:

Research Question 1: Are current influenza vaccination status among Black Americans aged 18 and older influenced by distrust of the healthcare system?

Research Question 1A: Is there an association between distrust of the healthcare system and Black Americans aged 18 and older not receiving the influenza vaccination?

Null Hypothesis: There is no association between distrust of the healthcare system and Black Americans aged 18 and older not receiving the influenza vaccination.

Alternative Hypothesis: There is an association between distrust of the healthcare system and Black Americans aged 18 and older not receiving the influenza vaccination.

Research Question 2: Are current influenza vaccination status among Black Americans aged 18 and older influenced by individuals being suspicious of healthcare providers?

Research Question 3: Is there an association between the belief that the influenza vaccine causes the flu and receiving a flu vaccine among male and female Black Americans aged 18 and older?

Null Hypothesis: There is no association between the belief that the influenza vaccine causes the flu and receiving a flu vaccine among male and female Black Americans aged 18 and older.

Alternative Hypothesis: There is an association between the belief that the influenza vaccine causes the flu and receiving a flu vaccine among male and female Black Americans aged 18 and older.

Role of Researcher

For the purposes of this study, the role of the researcher was primarily that of data collector. The interaction that I had with the study subjects was limited to providing information on the content of the survey and the purpose of collecting the survey data,

distributing and reviewing the participant consent form, and distributing and collecting the survey instrument. My role was limited to these few actions so as not to interject personal bias and/or influence participant response.

Mixed Method Research Methodology

A mixed methods research was selected for the study. This mixed method research involved the collecting and analyzing of both quantitative and qualitative data within a single study. Creswell and Plano Clark (2007) defined this as follows:

> Mixed methods research is a research design with philosophical assumptions as well as methods of inquiry. As a methodology, it involves philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative approaches in many phases in the research process. As a method, it focuses on collecting, analyzing, and mixing both quantitative and qualitative data in a single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone.

Justification for Mixed Method Research Design

Mixed methods research enabled me to provide a more in depth examination of the research problem than using either quantitative or qualitative methods alone. According to Jick (1979), mixed methods research provides strengths that offset the weaknesses of both quantitative and qualitative research. Jick's theory stated that quantitative research is weak in understanding the context in which people talk, while qualitative research makes up for this weakness. On the other hand, qualitative research

is viewed as deficient because of the subjective interpretations made by the researcher and the difficulty in generalizing findings to a large group, which quantitative research makes up for (Jick, 1979). By using both methods, the research outcomes could be relied upon as each method served to triangulate the other.

This study's mixed method design was appropriate to address the research questions of (a) whether distrust of the healthcare system influences influenza vaccination status, (b) the correlation between distrust of the healthcare system and influenza vaccination status, (c) whether suspicion of healthcare providers influences influenza vaccination status, and (d) the differences in the belief that the influenza vaccine causes the flu by vaccination status. Two of the study's research questions 1 and 2) were qualitative in nature, and two of the questions 1A and 3) were quantitative. Having a mixed method design enabled me to present the statistical results, as well as present an in-depth analysis of the results.

Qualitative Research Design

A qualitative research design was selected to address a portion of the study. Qualitative research is a way of recording people's attitudes, feelings, and behaviors in greater depth, as opposed to just recording precise numerical data. With a qualitative design, I was able to develop theories and analyze for patterns and emerging themes from the gathered data (Learn Higher, 2008). Creswell (2007) claimed:

> Qualitative research begins with assumptions, a worldview, the possible use of a theoretical lens, and the study of research problems inquiring into the meaning individuals or groups ascribe to a social or human problem. Qualitative

> researchers use an emerging qualitative approach to inquiry, the collection of data in a natural setting sensitive to the people and places under study, and data analysis that is inductive and establishes patterns or themes. The final written report or presentation includes the voices of participants, the reflexivity of the researcher, and a complex description and interpretation of the problem, and it extends the literature or signals a call for action.

There are five major types of qualitative research design: narrative, phenomenology, ethnography, grounded theory, and case study. Narrative research focuses on an individual's expressed experiences of events or happenings. Phenomenology focuses on people's subjective experiences and interpretations of the world. Ethnography has a background in anthropology and provides a descriptive study of the culture of a group of people. Grounded theory research develops theory about the phenomena of interest. Case study research provides a detailed account and analysis of phenomenon in its natural state (Creswell, 2007). I used narrative research theory for the study.

Justification for the Qualitative Research Design

Whereas quantitative research seeks to validate a theory by conducting an experiment and analyzing the results numerically, qualitative research seeks to arrive at a theory that explains the behavior observed (Lowhorn, 2007). The narrative research design was appropriate for this study as it allowed me to collect and analyze data that addressed if current influenza vaccination status among Black Americans aged 18 and older was influenced by distrust of the healthcare system, and if current influenza vaccination status among Black Americans aged 18 and older was influenced by a

suspicion of healthcare providers. Narrative research theory provides a more flexible theoretical framework in comparison to other research theories. A narrative theory approach accepts that each individual subscribes to a criss-crossing network of sometimes conflicting narratives, allowing the possibility of exploring inconsistencies within translated texts (Mansfield, 2015).

Quantitative Research Design

A cross-sectional quantitative study design was selected to examine the association between distrust of the healthcare system and the influenza vaccination status of Black Americans aged 18 and older. I also examined the association between the belief that the influenza vaccine causes the flu and receiving the influenza vaccine among Black Americans aged 18 and older by gender, as influenza vaccination tends to be higher in females compared to males (National Center for Immunization and Respiratory Disease, 2012). Quantitative research establishes statistically significant conclusions about a population by studying a representative sample of the population (Lowhorn, 2007). Quantitative research approaches investigations in a systematic way during which numerical data are collected and/or the researcher transforms what is collected or observed into numerical data (Learn Higher, 2008).

There are three types of quantitative research: experimental, analytical, and descriptive. Experimental quantitative research tests the accuracy of a theory by determining if the independent variable causes an effect on the dependent variable. Analytical studies examine associations between a purported risk factor and an outcome, to determine the relative risk of exposure of disease/outcome development. Descriptive

quantitative research measures the sample at a moment in time and describes the sample's demography (Lowhorn, 2007). I employed experimental quantitative research for the study. Some common approaches to quantitative research are surveys, self-administered questionnaires, trend analysis, experimental research, and mail/email/internet surveys (Sukamolson, nd).

Justification for the Quantitative Research Design

Quantitative research design allowed for greater objectivity and accuracy of results. I was able to provide summaries of data that support generalizations about the phenomenon being studied (Learn Higher, 2008). Using quantitative research enabled me to avoid personal bias by keeping a distance from participating subjects and not imparting my personal beliefs or opinions on the subjects.

Recruitment & Sample Strategy

The sampling frame for the research were the congregation members of the predominantly Black churches in Baltimore, Maryland. I contacted the leaders of local religious organizations via mail and phone requesting their partnership and permission to speak with their congregation about participating in the research. Information was provided to the organization on the nature of the study and how their involvement can benefit the community. Upon receiving permission, I visited the church during times designated by church leadership to speak with congregation members. I gave the congregation members an overview of the content of the survey and explained the purpose of collecting survey data. Only the congregation members who were present were asked to participate in the research by completing the survey. Each congregation

member was asked for individual consent to complete the survey. Congregation members who agreed to participate received a packet containing a consent form and the survey.

Sample Size Calculation

A sample size of 555 was determined based upon the African American population of the city of Baltimore, Maryland (U.S. Census Bureau, 2013). The number 555 was reached using a formula for sample size calculation (see Figure 2). After calculating my sample size of 555, I used an online Power & Sample Size Calculator located at http://www.statistical solutions.net/pss_calc.php. Using a power of 80%, an alpha of 5%, and standard deviation of 2, it was determined that out of a sample size of 555, 80 participants were needed to complete the survey to achieve 80% power.

$$ss = \frac{Z^2 * (p) * (1-p)}{c^2}$$

Z = *Z* value (1.96 for 95% confidence level)
p = population percentage expressed as decimal (63.6% = .636)
c = confidence interval, expressed as decimal (±4 = .04)

Figure 2. Sample size calculation with the source of *p* being Baltimore City's African American population (U.S. Census Bureau, 2013).

Data Collection

Data collection for this mixed method study was in the form of a self-administered questionnaire (Appendix B; Appendix C) distributed to congregants

attending predominantly Black churches in Baltimore, Maryland. According to Sukamolson (2007), self-administered questionnaires are an inexpensive method that does not require much interviewer time. Self-administered questionnaires also allowed the respondent to maintain anonymity and the ability to reconsider their responses.

Paper surveys were distributed to members of the Baltimore church congregations that agreed to participate in this study. Data were collected from Black Americans aged 18 and older, as this was the target group of the study. Informed consent was sought from the participant using a consent form that included the objective of the study as well as any risks or benefits associated with participation. The individuals had the option to refuse participation or to complete the survey. Survey participants were advised to not include their name or any identifying information on the survey form in an effort to protect their anonymity. The participating religious organization provided me a room on-site to distribute the surveys, and for participants to complete the surveys in confidence. I provided a locked survey collection box where participants were instructed to return their completed surveys. The locked collection box not only secured the completed surveys, but will also further protected the anonymity of the participants.

Instrumentation

Two previously validated survey instruments were used to collect data from research participants. The instruments were the Health Care System Distrust Scale (Rose et al., 2004) and the Adult Influenza Immunization Survey (Story, 2012).

Health Care System Distrust Scale (HCSDS)

The HCSDS (Rose et al., 2004) was developed to measure distrust of the health care system. The instrument (Appendix B) was in the public domain and was available for use and reproduction without special permission. The HCSDS is a 10-item, 5-point response format (1= *strongly disagree*, 5= *strongly agree*) instrument that measured an individual's distrust of the health care system in the areas of honesty, confidentiality, competence, and fidelity. Higher HCSDS scores represented higher distrust of the health care system. Rose et al. (2004) reported the possible score range for the instrument is from 10 to 50, and a Chronbach's alpha score of 0.75 for internal consistency.

Adult Influenza Immunization Survey (AIIS)

The Adult Influenza Immunization Survey (Story, 2012) was created to measure the factors that influence immunization status. The survey (Appendix C) was developed using the questions from two national phone survey instruments, and the National Adult Immunization Survey. The phone surveys used to create the new survey instrument were the Behaviors and Beliefs about Influenza Vaccine survey questionnaire (Santibanez, Mootrey, Euler, & Janssen, 2010), and the Barriers to Adult Immunization Study questionnaire (Johnson, Nichol, & Lipczynski, 2008). The AIIS contained 36 statements with a 5-item response format ranging from "Strongly Agree" to "Strongly Disagree". The survey measured Perception of the flu and vaccine, Knowledge of the vaccine, Access to the vaccine, Social influence, Demographical information, Trusting relationship with health care provider, and Sources of health information. The instrument scored a Chronbach's alpha score of 0.72 for internal consistency.

Validation Studies

Health Care System Distrust Scale (HCSDS)

The Health Care System Distrust scale was validated through focus group sessions and pilot testing. The research team developed a conceptual model to guide the development of the scale. Four focus groups with members of the general public were held, in which a total of 15 draft items were generated. The pilot instrument was tested in a survey of 55 individuals waiting to be assigned to jury duty at the Municipal Court of Philadelphia. The participants were comprised of 43% African American, 45% White, and 4% Hispanic. From the results of the pilot test, the survey instrument was revised and developed into the final 10-item scale. Based on testing results, researchers determined that the developed instrument has a Chronbach alpha score of .75, and was deemed had valid and reliable to measure distrust of the health care system (Rose, Peters, Shea, & Armstrong, 2004). A Chronbach alpha score of .70 or above is considered an acceptable score by researchers when using a psychometric instrument (Santos, 1999).

Adult Influenza Immunization Survey (AIIS)

The Adult Influenza Immunization Survey was validated through Nominal Group Technique and pilot testing. The researcher developed a survey which was reviewed and rated by members of the focus group. Members answered the questions: 1) What are the strengths and weaknesses of the survey, 2) How would you change the survey, and 3) What would you add to the survey? Based upon the focus group results, the survey was modified for the development of a pilot test. The pilot testing took place at an African American church in Blount County, Tennessee with 13 Black congregants: 8 males and 5

females. Pilot test results generated only a minor change in font size and allowed for the development of the final survey instrument. Chronbach's alpha was used to test the reliability of the modified survey instrument, resulting in a score of .72 (Story, 2012).

Data Analysis

Utilizing the Statistical Package for the Social Sciences software (SPSS), main effects associations was assessed. Regression diagnostics was used as a method to clean the data by examining data outliers. If there are data points which were extreme, the paper file was cross checked to assure accuracy of data input.

The independent variables in this study were distrust of the healthcare system, suspicion of healthcare providers, and belief that the influenza vaccine causes the flu. The dependent variable was influenza immunization status. The variables are summarized in Table 3.

Table 3
Variables, Scales & Item Location

Variable	Scale	Survey appendix	Item location
Dependent variable: influenza immunization status	Adult Influenza Immunization Survey	Appendix C	Item 21
Independent Variable: Distrust of the healthcare system	Health Care System Distrust Scale	Appendix B	Items a thru j
	Adult Influenza Immunization Survey	Appendix C	Item 36
Independent Variable: Suspicion of healthcare providers	Adult Influenza Immunization Survey	Appendix C	Items 7, 8, 9, 10, 36
Independent Variable: Belief that influenza vaccine causes the flu	Adult Influenza Immunization Survey	Appendix C	Items 3, 6, 13, 14, 15, 27, 36

Research Questions & Analysis

Qualitative Question 1: Are current influenza vaccination status among Black Americans aged 18 and older influenced by distrust of the healthcare system?

Upon reviewing the data collected, the researcher utilized a narrative discussion to address the participants' levels of distrust of the healthcare system. A discussion of emerging themes from the Health Care System Distrust Scale was presented, and a discussion of the responses received from the Adult Influenza Immunization Survey's open-ended question that related to healthcare system distrust.

Quantitative Question 1A: Is there an association between distrust of the healthcare system and Black Americans aged 18 and older not receiving the influenza vaccination?

Null Hypothesis: There is no association between distrust of the healthcare system and Black Americans aged 18 and older not receiving the influenza vaccination.

Alternative Hypothesis: There is an association between distrust of the healthcare system and Black Americans aged 18 and older not receiving the influenza vaccination.

Utilizing the SPSS, a Chi-square analysis was used to determine whether there is an association between the participants' distrust of the healthcare system and the participant not receiving the influenza vaccination. Multi-variable logistic regression analysis was conducted to determine whether this association remained after controlling for potential confounders.

Qualitative Question 2: Are current influenza vaccination status among Black Americans aged 18 and older influenced by individuals being suspicious of healthcare providers?

Upon reviewing the data collected, the researcher utilized a narrative discussion to address the participants' suspicions of healthcare providers. A discussion of emerging themes from the Adult Influenza Immunization Survey's questions that related to suspicion of healthcare providers was presented. The researcher also presented a discussion of the responses received from the Adult Influenza Immunization Survey's open-ended question that relate to suspicion of healthcare providers. The researcher identified and discussed emerging themes from the survey responses and open-ended question that related to the participants' suspicion of healthcare providers.

Quantitative Question 3: Is there an association between the belief that the influenza vaccine causes the flu and receiving a flu vaccine among male and female Black Americans aged 18 and older?

Null Hypothesis: There is no association between the belief that the influenza vaccine causes the flu and receiving a flu vaccine among male and female Black Americans aged 18 and older.

Alternative Hypothesis: There is an association between the belief that the influenza vaccine causes the flu and receiving a flu vaccine among male and female Black Americans aged 18 and older.

The researcher utilized a Chi-square test to analyze the data to determine whether there was an association between the belief that the influenza vaccine causes the flu and

current influenza vaccination status among male and female Black Americans aged 18 and older. Logistic regression analysis was conducted to determine whether this association remained after controlling for potential confounders.

Threats to Internal Validity Relevant to This Study

Internal validity is usually discussed in terms of experimental research, where one or more variables are manipulated and the results are scientifically analyzed (Simon & Goes, 2013). This research was correlational, and while not focusing on a cause and effect relationship of one variable on another, there may have been confounding variables that could pose a threat to internal validity. A potential confounding variable that could effect internal validity was socioeconomic factor. Individuals of varying socioeconomic statuses could have varying beliefs about the influenza immunization (Galarce, Minsky, & Viswanath, 2011). Another threat to internal validity could be volunteer bias. Research has shown that volunteers for research do not have the same characteristics as the general population. Individuals may volunteer to participate in studies for specific reasons, which influences their responses during the process (Lund Research, Ltd., 2012).

Threats to External Validity Relevant to This Study

A threat to the study's external validity was the ability to generalize the results of the study to other populations. Survey participants were selected as a part of a convenience sample from Black churches in Baltimore, Maryland, which this type of sampling method could pose a threat to external validity. When using convenience sampling, the results of the study could not be generally applied to larger populations, it could only be suggested (Simon & Goes, 2013). .

Ethical Considerations

Prior to starting the data collection process, I obtained permission from Walden University's Institutional Review Board (IRB) to ensure that proper measures were taken to address ethical concerns. I was assigned IRB approval number 06-20-14-0041790. Governed by Title 45 Code of Federal Regulations Part 46, IRB approval was required to conduct research involving human participants (HHS, 2010).

Information was provided to the participants on the content of the survey, and the procedures necessary to complete the survey. Informed consent was sought from each participant through the use of a consent form which was distributed along with the survey. The individuals had the option to refuse participation or to complete the survey. Participation in the study did not pose any risk to the safety or wellbeing of the participants. However, there may have been minimal risk of fatigue in completing the survey. Surveys were completed anonymously and participants were advised to not record any type of identifying information on their survey copy. All data received from the surveys were kept secured by the researcher in a password-protected locked database for the duration of the study, plus 5 years. This database is was accessible by the researcher and the dissertation adviser.

Chapter 4: Results

The main purpose of this mixed method study was to determine if distrust of doctors and the medical community are relevant factors in the low vaccination rates of Black Americans aged 18 and older. The distrust of doctors and the medical community were measured through the administering of two survey instruments: the AIIS (Story, 2012) and the HCSDS (Rose, Peters, Shea, & Armstrong, 2004). Both survey instruments were used with permission from their respective authors.

In this chapter, I provide information outlining the demographic characteristics of the sample including age, gender, highest education, and vaccination status. Following the order of the research questions, narrative discussions will address the participants' levels of distrust of the healthcare system, their suspicions of healthcare providers, and emerging themes from the HCSDS and the AIIS. I will also provide the results of the statistical analysis of the association between the participants'distrust of the healthcare system and the participant not receiving the influenza vaccination, and the association between the belief that the influenza vaccine causes the flu and current influenza vaccination status.

Sample Description

The sample for this study was limited to Black Americans aged 18 and older residing in Baltimore, Maryland. The leadership of an all-Black church in Baltimore City, agreed to participate in the study. I was allowed to speak with congregation members and request their participation in completing a survey.

Response Rates

Over a period of 12 weeks, I distributed and collected a total of 111 surveys. Out of the collected surveys, six surveys were excluded or classified as not usable, resulting in 105 surveys available for data analysis. The surveys of participants who did not complete the final page of the survey, which contained the HCSDS, were not included in the data analysis. Two surveys were turned in completely blank, and therefore not usable.

Demographic Description

Based on the survey results, the average age of the survey participants was 52 (*SD* = 14.09), with an overall age range of 18 to 91 years. Eighty-two percent (*n* = 86) of participants were age 18 to 64, and 18% (*n* = 19) of the respondents were age 65 and older. Thirty-four percent (n = 36) of participants were male, and 66% (*n* = 69) were female. Survey results indicated that 28 (27%) of participants were high school graduates, while 39 (37%) were college graduates. Table 4 provides a detailed description of the paticipants' ages, gender and education levels.

Table 4

Descriptive Statistics for Demographic Variables (n=105)

Primary variables / values	Frequencies (%)	Mean Std. Dev
Age (in years)		52 14.09
18 – 44	33 (31.0)	
45 – 64	53 (51.0)	
65 – 74	15 (14.0)	
75 +	4 (4.0)	
Gender		
Male	36 (34.0)	
Female	69 (66.0)	
Education		
No Formal Schooling	0 (0.0)	
Elementary School (grades 1-8)	1 (1.0)	
Some High School	4 (4.0)	
High School Graduate	28 (27.0)	
College Graduate	39 (37.0)	
Graduate / Professional School	33 (31.0)	

Based on self-reporting, 55% (n = 58) of participants received the flu vaccine during the last flu season, and 45% (n = 47) of participants did not receive the flu vaccine during the last flu season. Participants were asked if they had any fears related to receiving the flu vaccine, in which 28% (n = 29) indicated yes. Some participants provided comments explaining their fear of receiving the flu vaccine.

Survey Results

Qualitative Question 1: Are current influenza vaccination status among Black Americans aged 18 and older influenced by distrust of the healthcare system?

Upon reviewing the data collected, the HCSDS was used to assess levels of healthcare system distrust. I also used the open-ended responses of the AIIS to assess healthcare system distrust.

The HCSDS indicated that there was an overall response of uncertainty. Out of the scale's 10 statements, 60% (n = 6) received a majority response of Not Sure. The statements included in Table 5 received a majority response of Not Sure.

Table 5

Healthcare System Distrust Scale Majority Responses of Not Sure

Statement	Response %
d. When they take my blood, they do tests they don't tell me about.	28%
e. If a mistake were made in my health care, the health care system would try to hide it from me.	30%
f. People can get access to my medical records without my approval.	35%
g. The health care system cares more about holding costs down than it does about doing what is needed for my health.	31%
i. The health care system puts my medical needs above all other considerations when treating my medical problems.	38%
j. Some medicines have things in them that they don't tell you about.	28%

While the majority of the statements were classified as Not Sure, the remaining statements were classified with favorable ratings towards the healthcare system, indicating that there was some trust in the healthcare system. The majority of participants (30%) strongly disagreed with the statement "Medical experiments can be done on me without my knowing about it." It was agreed by (34%) of participants that "My medical records are kept private," (35%) agreed that "People die every day because of mistakes by the health care system," and (42%) of participants agreed with the

statement "I receive high-quality medical care from the health care system." Table 6 illustrates the total results in numbers and percentages of the HCSDS.

Table 6
Healthcare System Distrust Scale Total Responses

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
a. Medical experiments can be done on me without my knowing about it.	17 16%	17 16%	19 18%	20 19%	32 30%
b. My medical records are kept private.	24 23%	36 34%	25 24%	15 14%	5 5%
c. People die every day because of mistakes by the health care system.	26 25%	37 35%	19 18%	18 17%	5 5%
d. When they take my blood, they do tests they don't tell me about.	13 12%	15 14%	29 28%	28 27%	20 19%
e. If a mistake were made in my health care, the health care system would try to hide it from me.	16 15%	22 21%	31 30%	27 26%	9 9%
f. People can get access to my medical records without my approval.	8 8%	20 19%	37 35%	22 21%	18 17%
g. The health care system cares more about holding costs down than it does about doing what is needed for my health.	22 21%	18 17%	33 31%	27 26%	5 5%
h. I receive high-quality medical care from the health care system.	11 10%	44 42%	29 28%	15 14%	6 6%
i. The health care system puts my medical needs above all other considerations when treating my medical problems.	11 10%	27 26%	40 38%	20 19%	7 7%
j. Some medicines have things in them that they don't tell you about.	20 19%	26 25%	29 28%	20 19%	10 10%

Analysis of the statements and their responses revealed that a pattern of contradictions began to emerge among statements that were similar. Some of the statements of the HCSDS were similar in their content, but were different in their presentation. In this section, I will discuss the contradictory results of some of the statements.

When analyzing the results of the statement, "Medical experiments can be done on me without my knowing about it," the majority of participants (30%) responded that they strongly disagreed with the statement. When comparing the results of a similar statement, "When they take my blood, they do tests they don't tell me about," the majority of participants (28%) reported that they were not sure.

Similar results occurred when participants responded to questions regarding their medical records. The majority of the participants (34%) responded that they agreed with the statement, "My medical records are kept private. " However (35%) of the pariticipants, indicated that they were not sure when addressing the statement, "People can get access to my medical records without my approval."

When addressing the quality of care, the majority of participants (31%) reported they were not sure with statement, "The health care system cares more about holding costs down than it does about doing what is needed for my health." Participants (38%) indicated that they were also not sure with the statement, "The health care system puts my medical needs above all other considerations when treating my medical problems." While the majority of participants were unsure if the health care system cared more about holding down costs than doing whats needed for their health, or if their medical needs

were a high priority, participants (42%) stated that they agreed with the statement, "I receive high-quality medical care from the health care system."

Through the open-ended questions of the AIIS, participants were able to provide comments on the influenza vaccine, or other related topics not addressed in the survey. Only one participant provided comments that specifically addressed the healthcare system. The participant indicated that they do not trust pharmaceutical corporations, and they do not trust what is used to create the vaccine.

One of the survey's open-ended questions asked the survey participants, "Do you have any fears related to receiving the flu vaccine? If yes, please explain." While the majority of participants indicated that they had received the influenza vaccine, participants also shared their fears of receiving the vaccine. The majority of the respondents to the open-ended question revealed a strong belief that the vaccine would cause the flu. Many of the respondents who had become ill with the flu, attributed their illness to having received the influenza vaccine. The following statements were made about the vaccine causing the flu:

- I am scared about possibly catching the flu again. I have gotten the flu shot in the past to my surprise the flu shot didn't work as well as I hoped it would have.
- Fear of getting the flu nonetheless.
- I could get the flu from receiving the flu vaccine.
- The last time I received the flu vaccine, I got the flu.
- I have gotten sick after receiving a flu shot.

- Feel that the vaccines make me susceptible to the flu and other unknown challenges.
- I've known people to be sick after receiving the flu vaccine.
- Last shot I got sick.
- May get sick or the side effects.
- When I received the flu vaccine about 2 years ago, I became sick as a result of receiving the vaccination.
- Can cause you to have the flu and sickness.
- A flu shot as I know it is a best guess of what the year's strain will look like. Sometimes they get it wrong. Sometimes you get the flu.
- I DON'T WANT TO GET THE FLU .
- Side effects.
- It's a live virus and I would end up getting the flu anyway because of the live virus.
- I don't trust it.

Some of the respondents had a more scientific view of their fear of the influenza vaccine. There was mention of the possibility of the vaccine causing other medical issues in the future. These respondents were not only concerned with the onset of other diseases and illnesses as a result of the vaccine, but also the various flu strains from year to year. The fact that the health community must develop yearly a influenza vaccine that counteracts the latest flu strain was cause for concern for respondents and contributed to

their fear of the vaccine. The following statements were made about the various flu strains and long-term affects:

- Yes, I have some fears, because each year a different type of flu occurs.
- A flu shot as I know it is a best guess of what the year's strain will look like. Sometimes they get it wrong. Sometimes you get the flu.
- I believe that long-term affects are not yet known. I also suspect that the vaccine could potentially trigger other disease/illnesses depending on one's genetic makeup.
- Think it may cause other issues down the road.
- Not sure if there are unknown damages - this is the first year I have received the vaccine.

In some of the answers to the open-ended questions, there was a more health-centered outlook to not getting the influenza vaccine. While some respondents indicated that they did not receive the vaccine due to allergies, others viewed the human body as having a natural ability to fight off the influenza virus; therefore, the vaccine was not necessary or could cause harm. The following responses addressed those views:

- I believe that immunization prior to disease can inhibit the body's natural ability to heal itself, and in some cases do more harm than good.
- I know 2 people that almost died after have the flu vaccine. [I] think if a virus is in your body then sometimes your body may not be able to fight it off. I never have colds, sniffles etc.. and take care of myself when it is [a] cold.

- Germs are germs never had it; and at 63 I just take for a cold or what call the flu, what I've been taking.
- My body is highly resistant to colds and other ailments; so I generally don't have a need for a flu shot
- I am allergic
- I have had an allergic reaction.

Some survey participants indicated in the open-ended responses that they felt the influenza vaccine was a worthwhile endeavor, but they simply had not taken the time to go and get the vaccine. Some participants also indicated that they had not received the influenza vaccine because their doctor had not administered it to them.

Quantitative Question 1A: Is there an association between distrust of the healthcare system and Black Americans aged 18 and older not receiving the influenza vaccination?

Null Hypothesis: There is no association between distrust of the healthcare system and Black Americans aged 18 and older not receiving the influenza vaccination.

Alternative Hypothesis: There is an association between distrust of the healthcare system and Black Americans aged 18 and older not receiving the influenza vaccination.

Using the SPSS, a Fisher's Exact Test was used to determine whether there is an association between the participants' distrust of the healthcare system and the participant not receiving the influenza vaccination. The Chi-square analysis did not produce the minimum required cell count, and therefore could not be utilized (Table 7). The value of Fisher's Exact Test is $x^2 = 1.70$, $p = .437$ (Table 8). At $p > 0.05$ significance level, the

null hypotheses can be accepted, which concludes that there is no association between distrust of the healthcare system and Black Americans aged 18 and older not receiving the influenza vaccination.

Table 7

Chi-Square Analysis for Levels of Distrust

	Levels of **d**istrust				
Immunization status	Less distrust	Neutral distrust	More distrust	x^2	p value
Vaccinated	3 (3%)	32 (30%)	12 (11%)	1.65	.437
Not vaccinated	2 (2%)	35 (33%)	21 (20%)		

Table 8

Fisher's Exact Test for Levels of Distrust

	Value	Exact **s**ignificance (2-sided)
Fisher's **e**xact **t**est	1.704	.431

Question 1A was also addressed through multivariable logistic regression analysis. Reponses from 103 participants were included in the analysis, with two participant responses excluded due to nonresponse. The overall model had a Wald Value of 14.801, $p = .139$. According to the model, 67% of participants were classified correctly. Within the model, the 53% of participants who were predicted to receive the influenza vaccine were vaccinated. Seventy-seven percent of participants who were predicted to not receive the influenza vaccine were not vaccinated. This model made a better prediction of those who would not be vaccinated with the influenza vaccine than those who would. Of the 10 predictor variables, which were taken from the HSDS, none

were statistically significant (Table 9). None of the predictor variables can singularly be associated with influenza vaccination status.

Table 9
Logistical Regression Analysis of Distrust of Healthcare System for Influenza Immunization Status

Predictor variables	β	S.E.	Wald	df	Sig. (p)	Exp (β)
Medical experimentation without knowledge	.091	.224	.167	1	.683	1.096
Medical records are kept private	-.671	.382	3.079	1	.079	.511
People die every day due to mistakes by health care system	-.030	.286	.011	1	.917	.971
Unauthorized tests on blood	-.025	.230	.012	1	.912	.975
Health care system hides mistakes	.548	.299	3.359	1	.067	1.729
My medical records can be accessed	.138	.295	.218	1	.641	1.148
Health care system cares more about costs	-.495	.273	3.291	1	.070	.609
I receive quality care	.390	.359	1.183	1	.277	1.477
Health care system puts my medical needs first	.372	.308	1.457	1	.227	1.450
Unknown ingredients in medicine	-.275	.197	1.946	1	.163	.760
Constant	.298	1.202	.061	1	.804	1.347
Overall statistics			14.801	10	.139	

Note. Cox & Snell $R^2 = .146$. Nagelkerke $R^2 = .195$. $p < 0.05$.

Qualitative Question 2: Are current influenza vaccination status among Black Americans aged 18 and older influenced by individuals being suspicious of healthcare providers?

Specific questions from the Adult Influenza Immunization Survey were utilized to measure participants' suspicions of healthcare providers. The researcher identified emerging themes and also presented a discussion of the responses received from the

Adult Influenza Immunization Survey's open-ended question that relate to suspicion of healthcare providers. A portion of the Adult Influenza Immuniztion Survey assessed the participant's suspicion of heathcare providers and the belief that the influenza vaccine causes the flu. The survey results indicated that the majority of participants were not suspicious of healthcare providers. Shown in Table 10 are the statements from the Adult Influenza Immunization Survey which addressed suspicion of healthcare providers. Also included with the statements are the majority response percentages.

Table 10

Adult Influenza Immunization Survey – Suspicion of Healthcare Providers

Statements	Responses	Response rate
7. I am more likely to get the flu vaccine if my doctor recommends it.	Somewhat Agree	28%
8. I have a trusting relationship with my doctor	Strongly Agree	45%
9. My health care provider expresses care for me.	Strongly Agree	43%
10. Health care providers are known for doing procedures without the patient being aware of what is being done.	Somewhat Disagree	30%

Some participants chose to utilize the Adult Influenza Immunization Survey's open-ended responses to address their suspicions of heathcare providers. Participants that addressed healthcare provider suspicions, indicated that when choosing to receive the influenza vaccine, it was generally under the advise of their doctor. Statements indicating no suspicion of healthcare providers were as follows:

- This is the first year that I have received the flu shot. I am fortunate that I have great healthcare providers, my mother is a physician and I am in an income bracket where the disparities are not as obvious.
- I get the flu shot because it is recommended by my doctor.
- I only receive the vaccine when prompted by my doctor, and because now I teach.
- If I do get a shot, it's under a doctor's advice.
- I am a healthcare worker and I believe that obtaining the flu vaccine enables me to stay healthy and avoid calling out due to illness from having the flu.
- My provider didn't administer the shot to me during my annual physical, so I haven't received the shot yet.

Only a few statements from the open-ended portion of the survey were recorded that indicated a suspicion of heathcare providers. Those statements were as follows:

- I think that mankind always wanted to see what works on humans.
- I believe vaccines are a way for population control.
- I don't trust what is used to create the vaccine nor do I want to expose myself to any unwarranted side effects known or otherwise. I do not trust pharmaceutical corporations.

While 45% (*n*=47) of participants did not receive the flu vaccine during the last flu season, the responses did not reveal a theme of participant suspicion of healthcare providers. Based upon responses to the Adult Influenza Immunization Survey, the

majority of participants expressed that they have a trusting relationship with their doctor, and felt that their health care provider showed care for them.

Quantitative Question 3: Is there an association between the belief that the influenza vaccine causes the flu and receiving a flu vaccine among male and female Black Americans aged 18 and older?

Null Hypothesis: There is no association between the belief that the influenza vaccine causes the flu and receiving a flu vaccine among male and female Black Americans aged 18 and older.

Alternative Hypothesis: There is an association between the belief that the influenza vaccine causes the flu and receiving a flu vaccine among male and female Black Americans aged 18 and older.

Utilizing the Statistical Package for the Social Sciences software (SPSS), a Chi-square analysis was used to determine whether there is an association between the belief that the influenza vaccine causes the flu and current influenza vaccination status among male and female Black Americans aged 18 and older. The value of the chi-square test is $x^2=3.38$, $p=.185$. At $p<0.05$ significance level, there was not a significant difference in beliefs that the influenza vaccine causes the flu according to vaccination status. Table 11 provides a description of the chi-square analysis for the belief that the influenza vaccine causes the flu.

Table 11

Chi-Square Analysis for Belief Influenza Vaccine Causes Flu

	Belief Influenza Vaccine Causes Flu				
Immunization Status	Yes	No	Unsure	x^2	p value
Vaccinated	21 (20%)	16 (15%)	10 (10%)	3.38	.185
Not Vaccinated	29 (28%)	11 (10%)	18 (17%)		

Question 3 was also addressed through logistic regression analysis. Reponses from all 105 participants were included in the analysis. The overall model had a Wald Value of 0.073, p=.787. According to the model, 55% of participants were classified correctly. Within the model, none of the participants who were predicted to receive the influenza vaccine were vaccinated. One hundred percent of participants who were predicted to not receive the influenza vaccine were not vaccinated. This model made a better prediction of those who would not be vaccinated with the influenza vaccine than those who would. As shown in Table 12, the model's predictor "I could get the flu from receiving the flu vaccine" (Question 13) (Wald $\boldsymbol{x^2}$ =.073, p=.787) was not statistically significant at $p<0.05$. The variable can not singularly be associated with influenza vaccination status.

Table 12

Logistical Regression Analysis of Belief that Influenza Vaccine Causes the Flu for Influenza Immunization Status

Predictor variables	β	S.E.	Wald	df	Sig. (p)	Exp (β)
Believes vaccine causes flu	.064	.235	.073	1	.787	1.066
Constant	.097	.464	.043	1	.835	1.101
Overall statistics			.073	1	.787	

Cox & Snell R^2 = .001. Nagelkerke R^2 = .001. $p<0.05$

Summary

The results of this study indicated that influenza vaccination status among Black Americans aged 18 and older are not influenced by distrust of the healthcare system. It was also determined that there was not an association between distrust of the healthcare system and Black aged 18 and older not receiving the influenza vaccination. Influenza vaccination status among Black Americans aged 18 and older were not influenced by individuals being suspicious of healthcare providers, and there was not an association between the belief that the influenza vaccine causes the flu and receiving the influenza vaccine among the same group. Chapter 5 will provide a summary of the research and the results. An interpretation of the findings will be presented, along with the implications for social change. Chapter 5 will also provide conclusions and recommendations for further study.

Chapter 5: Discussion, Conclusions, and Recommendations

In this chapter, I discuss the findings of this study, whose purpose was to determine if distrust of doctors and the medical community are relevant factors in the low influenza vaccination rates of Black Americans aged 18 and older. In this chapter, I present the findings, interpretation of the findings, recommendations, implications for positive social change, and conclusions.

The study's participants were congregation members of, an all-Black church in Baltimore city. Church members who agreed to participate in the study were given a survey to complete and return. Two previously validated survey instruments were used to collect data from the research participants. The survey instruments used were the HCSDS (Rose et al., 2004), which was developed to measure distrust of the healthcare system, and the AIIS (Story, 2012), which was developed to measure the factors that influence immunization status.

Data were analyzed using SPSS. I used Chi-square analysis, Fisher's Exact Test, and logistic regression to examine associations between influenza immunization status and the independent variables. Narrative discussions were also used to address independent variables and to highlight emerging themes from the HCSDS and the AIIS. The independent variables of the study were distrust of the health care system, suspicion of heath care providers, and the belief that the influenza vaccine causes the flu.

Findings

Research Question 1: Are current influenza vaccination status among Black Americans aged 18 and older influenced by distrust of the healthcare system?

An analysis of the results of the HCSDS, showed that 60% of the scale's 10 statements received a majority respose of Not Sure. The scale's results also showed that the participants classified the remaining statements with a more favorable rating of the healthcare system, indicating that there is some trust of the healthcare system.

Research Question 1A: Is there an association between distrust of the healthcare system and Black Americans aged 18 and older not receiving the influenza vaccination?

According to the data analysis, there was not a significant difference in the levels of distrust according to vaccination status. None of the predictor variables could be associated with influenza vaccination status.

Research Question 2: Are current influenza vaccination status among Black Americans aged 18 and older influenced by individuals being suspicious of healthcare providers?

According to results of the AIIS, 64% of participants indicated that they were not suspicious of healthcare providers. Seventy-nine percent of participants indicated that they have a trusting relationship with their doctor, and 73% feel that their healthcare provider shows care for them.

Research Question 3: Is there an association between the belief that the influenza vaccine causes the flu and receiving a flu vaccine among male and female Black Americans aged 18 and older?

According to the data analysis, there was not a significant difference in the belief that the influenza vaccine causes the flu according to vaccination status. The belief that the influenza vaccine causes the flu could not be associated with influenza vaccine status.

Interpretation of Findings

Qualitative Question 1: Are current influenza vaccination status among Black Americans aged 18 and older influenced by distrust of the healthcare system?

Quantitative Question 1A: Is there an association between distrust of the healthcare system and Black Americans aged 18 and older not receiving the influenza vaccination?

Null Hypothesis: There is no association between distrust of the healthcare system and Black Americans aged 18 and older not receiving the influenza vaccination.

Alternative Hypothesis: There is an association between distrust of the healthcare system and Black Americans aged 18 and older not receiving the influenza vaccination.

With the historically low influenza vaccination rates of members of the Black community (Harris, Juergen, & Uscher-Pines, 2010), I expected the vaccination status of the survey participants to be low as well. With the sample used for the survey, this expectation did not hold true. Of the individuals surveyed, 55% of participants indicated that they received the influenza vaccine, while 45% indicated that they did not receive the influenza vaccine. The overall results of the HCSDS, which was designed to assess levels of healthcare system distrust, indicated that participants had a high level of uncertainty in regards to their distrust of the healthcare system. Although the majority of statements were were classified with uncertainty, the remaining statements were classified with more favorable ratings towards the healthcare system, indicating that participants did have some trust in the healthcare system. While previous studies

determined that distrust of the medical community to be a factor contributing to the low influenza vaccination rates of Black Americans (Harris, Chin, Fiscella, & Humiston, 2006; Fiscella, Dressler, Meldrum, & Holt, 2007; Wray, Jupka, Ross, & Dotson, 2007), based solely on the majority responses received, distrust was not a factor in this study.

Quantitative data analysis indicated that there were no significant differences in the levels of distrust (p = .44) between those participants who had received the influenza vaccine and those participants who had not received the influenza vaccine. The data analysis also determined that none of the predictor variables of the HCSDS were statistically significant. None of the scale's predictor variables could singularly be associated with influenza vaccination status. Based on the results of the survey, the research concludes that the participants' influenza vaccination status is not influenced by a distrust of the healthcare system. This would also validate the Null Hypothesis in that there is no association between distrust of the healthcare system and Black Americans aged 18 and older not receiving the influenza vaccination.

Qualitative Question 2: Are current influenza vaccination status among Black Americans aged 18 and older influenced by individuals being suspicious of healthcare providers?

Statements from the AIIS were used to measure participants' suspicions of healthcare providers. Based on previous studies, I anticipated that the survey participants would indicate that they were suspicious of healthcare providers. Researchers believed that a history of experimentation on Black Americans by the medical community has created an environment of fear and distrust of the medical community (Washington,

2006). It was believed that this history has stirred up fear and suspicion within the African American community over many health initiatives and has had a continuous negative effect (Donovan, 2009).

With this survey sample, suspicion of healthcare providers was not a factor. Although 45% of survey participants did not receive the influenza vaccine, based on survey responses to the specific statements measuring suspicions of healthcare providers, 64% of participants indicated that they were not suspicious of healthcare providers. The majority of open-ended responses recorded also indicated that there was no suspicion of healthcare providers. Based on the results of the survey, the research would conclude that the participants' vaccination status is not influenced by suspicions of healthcare providers.

Quantitative Question 3: Is there an association between the belief that the influenza vaccine causes the flu and receiving a flu vaccine among male and female Black Americans aged 18 and older?

Null Hypothesis: There is no association between the belief that the influenza vaccine causes the flu and receiving a flu vaccine among male and female Black Americans aged 18 and older.

Alternative Hypothesis: There is an association between the belief that the influenza vaccine causes the flu and receiving a flu vaccine among male and female Black Americans aged 18 and older.

Based on a previous study where 32% of unvaccinated African Americans believed that influenza vaccination caused the flu compared to 18% for Whites, 13% for

Latinos, 11% for Japanese Americans, and 22% for Filipino Americans (Chen, Fox, Cantrell, Stockdale, & Kagawa-Singer, 2007), I expected there to be an association between the belief that the influenza vaccine causes the flu and receiving the flu vaccine.

Quantitative data analysis indicated that there were no significant differences in the beliefs that the influenza vaccine casues the flu (p = .185) among those participants who had received the influenza vaccine and those participants who had not received the influenza vaccine. The data analysis also determined that the predictor variable "I could get the flu from receiving the flu vaccine" was not statistically significant. The variable could not be singularly associated with influenza vaccination status. Based on the results of the survey, the research would conclude that there is no association between the belief that the influenza vaccine causes the flu and participants receiving the influenza vaccine or participants not receiving the influenza vaccine. These results would also validate the Null Hypothesis in that there is no association between the belief that the influenza vaccine causes the flu and receiving a flu vaccine among male and female Black Americans aged 18 and older.

Limitations of the Study

This research study had some limitations. The sampling frame utilized for the research limited the external validity of the results. Research data was only collected from one all-Black church in Baltimore, Maryland. As a result of data collection from one location, the results may not be generalizable to all Baltimore Black church congregations, only suggested. Other limitations to the research study included

participants not fully completing the survey instrument, and the researcher not knowing if participants answered the survey questions honestly.

Recommendations

The purpose of this study was to determine if distrust of doctors and the medical community are relevant factors in the low influenza vaccination rates of Black Americans aged 18 and older. Based on the results of this research, the following recommendations are offered:

- Conduct a repeat of this study using a larger sample size and recruiting participants from multiple communities as opposed to one specific location. This would lessen the limitation of generalizability.
- Healthcare professionals wanting to conduct influenza immunization outreach in the Black community should consider engaging community leadership and community based organizations. Previous studies found that engaging pastors and other church leaders (Ammerman, et al., 2003), as well as community based organizations (Aaron, Levine, & Burstin, 2003) is critical to program success.
- Research can also be conducted to compare the results of medical community distrust of individuals aged 18 to 64, to those individuals aged 65 and older. With previous studies determining that distrust of the medical community is a factor contributing to the low influenza vaccination rates of elderly Black Americans (Harris, Chin, Fiscella, & Humiston, 2006), researchers may want to explore other factors that may contribute to Black Americans not receiving the influenza vaccine. Other factors that could be explored outside of distrust of the medical community may include socio-economic factors and healthcare accessibility.

Implications for Social Change

The purpose of this study and its connection to social change is to improve the low influenza vaccination rate of Black Americans. With this study I found that many in the Black community do not have a distrust of the medical community in spite of the lower influenza vaccination rates. Some participants responded in the open-ended portion of the survey that they had not received the influenza vaccine simply because their physician had not administered it, or they had not taken the time to go and get the vaccine. Through the engagement of more community resources and leaders, healthcare professionals can better identify strategies and address vaccination issues in an effort to increase the influenza vaccination rates of members of the Black community. Dissemination of influenza vaccination information by community leaders, providing information on influenza vaccination locations, and offering influenza vaccinations during community events, would help increase influenza vaccination rates. The findings of this study can be used in helping to decrease the mortality rates of Black Americans, who are suffering from higher rates of influenza–related mortality (Levi, Segal, St. Laurent, & Lieberman, 2010).

Conclusion

The influenza virus remains one of the most highly contagious and preventable infections. Statistically, Black Americans have a much higher rate of death from the influenza virus than White Americans, and are less likely to receive the influenza vaccine (American Lung Association, 2010). Previous research had shown that a history of medical abuses and experimentation has helped Black Americans to develop a distrust in

the medical community (Washington H. A., 2006). It has been believed that this distrust of the medical community has influenced negative beliefs about the influenza vaccine among members of the Black community, contributing to many Black Americans not participating in vaccination efforts (The College of Physicians of Philadelphia, 2013). Based on this study, distrust of the medical community is not a relevant factor in the influenza vaccination rates of Black Americans aged 18 and older. The majority of participants indicated that they trusted their medical providers, and that their vaccination status was influenced by factors other than distrust. As a result, other variables should be explored so that healthcare providers can determine ways to increase the low influenza vaccination rate of members of the Black community.

References

Aaron, K. F., Levine, D., & Burstin, H. R. (2003). African American Church Participation and Health Care Practices. Journal of General Internal Medicine, 18, 908-913.

Acton, Q. A. (2012). Issues in Discovery, Experimental, and Laboratory Medicine. Atlanta: Scholarly Editions.

Adult Immunization Consensus Panel. (2003). Increasing Immunizaation Rates Among African-American Adults. Journal of the National Medical Association, 37S-45S.

American Diabetes Association. (2013). Living With Diabetes: African Americans & Complications. Retrieved from Diabetes.org: http://www.diabetes.org/living-with-diabetes/complications/african-americans-and-complications.html

American Heart Association. (2012). The flu and heart disease. Dallas, TX. Retrieved from http://www.heart.org/HEARTORG/conditions/more/myheartandStrokeNews/the-flu-and-heart-disease_UCM_445089_Article.jsp

American Lung Association. (2010). State of Lung Disease in Diverse Communities 2010: Influenza and Pneumonia. Washington. Retrieved from http://www.lung.org/assets/documents/publications/lung-disease-data/solddc_2010.pdf

America's Health Insurance Plans. (2011, November 10). HHS Actino Plan and Strategies to Reduce Seasonal Influenza Disparities. Effective Strategies to Promote Influenza Vaccine Uptake Among Culturally Diverse Populations.

America's Health Insurance Plans. Retrieved from http://www.ahip.org/uploadedFiles/AHIPInfluenzaSeminar111011.pdf

Ammerman, A., Corbie-Smith, G., St. George, D. M., Washington, C., Weathers, B., & Jackson-Christian, B. (2003, October). Research Expectations Among African American Church Leaders in the PRAISE! Project: A Randomized Trial Guided by Community-Based Participatory Research. American Journal of Public Health, 93(10), 1720-1727.

Armstrong, K., Rose, A., Peters, N., Long, J. A., McMurphy, S., & Shea, J. A. (2006). Distrust of the Health Care System and Self-Reported health in the United States. Journal of General Internal Medicine, 21, 292-297.

Baltimore City Health Department. (2008). Baltimore City Seasonal Influenza Summary Report. Baltimore: Baltimore City Health Department. Retrieved from www.baltimorehealth.org/info/2008_05_19.SeasonalInfluenza.pdf

Baltimore City Health Department. (2008). Regulation on Reporting of Influenza Vaccination Rates. Baltimore: Baltimore City Health Department.

Black Barbershop Health Outreach Program. (2011). About The Black Barbershop Health Outreach Program. Retrieved from Black Barbershop Health Outreach Program: http://blackbarbershop.org/about-us/

Boehmer, L. M., Waqar, S. N., & Govindan, R. (2010). Influenza vaccination in patients with cancer: an overview. Retrieved from http://www.cancernetwork.com/news/display/article/10165/1717272#

Bonner, G. J., Ferrans, C. E., Moore-Burke, E. F., & Gorelick, P. (2005). Determinants of Trust and Mistrust in Physicians Identified by African American Family Caregivers. African American Research Perspectives, 11(1), 89-102.

Boulware, E. L., Cooper, L. A., Ratner, L. E., LaVeist, T. A., & Powe, N. R. (2003, July-August). Race and Trust in the Health Care System. Public Health Reports, 118, 358-365.

Burkins, G. (2013, September 2). Health Care Unites Black Baptists and Obama Administration. Charlotte, NC. Retrieved from http://www.qcitymetro.com/faith/articles/health_care_unites_black_baptists_and_obama_administration013404684.cfm

Buseh, A. G., Millon-Underwood, S., & Kelber, S. T. (2013). Community Leader' Perspectives on Engaging African Americans in Biobanks and Other Human Genetics Initiatives. Journal of Community Genetics, 4, 483-494.

Center for Managing Chronic Disease. (2015). About chronic disease. Ann Arbor, MI. Retrieved from http://cmcd.sph.umich.edu/about/about-chronic-disease/

Centers for Disease Control and Prevention. (2004). Influenza and pneumococcal immunization: a qualitative assessment of the beliefs of physicians and older hispanic americans and african americans. Retrieved from National Immunization Program.

Centers for Disease Control and Prevention. (2012). Cancer, the flu and you: what cancer patients, survivors, and caregivers should know about the flu. Atlanta, GA. Retrieved from http://www.cdc.gov/cancer/flu/

Centers for Disease Control and Prevention. (2013). Key facts about influenza (flu) & flu vaccine. Retrieved from http://www.cdc.gov/flu/keyfacts.htm

Centers for Disease Control and Prevention. (2015, January). People at high risk of developing flu–related complications. Retrieved from http://www.cdc.gov/flu/about/disease/high_risk.htm

Chatters, L. M. (2000). Religion and Health: Public Health Research and Practice. Annual Review of Public Health, 21, 335-367.

Chen, M. J., Fox, E. S., Cantrell, C. H., Stockdale, P. S., & Kagawa-Singer, P. M. (2007, February). Health Disparities and Prevention: Racial/Ethnic Barriers to Flu Vaccinations. Journal of Community Health, 32(1), 5-20.

Clark, L. T., Ferdinand, K. C., Flack, J. M., Gavin, J. R., Hall, W. D., Kumanyika, S. K., . . . Wright, J. T. (2001). Coronary heart disease in African Americans. Heart Disease, 3(2), 97-108.

Creswell, J. A. (2007). Qualitative inquiry and research design: Choosing among five traditions. Thousand Oaks, CA: Sage.

Department of Health and Human Services. (2012). Cancer and African Americans. Retrieved from Department of Health and Human Services: Minority Health: http://minority health.hhs.gov/templates/content.aspx?ID=2826

Deyle, S. (2005). Carry Me Back: The Domestic Slave Trade in American Life. New York: Oxford University Press, Inc.

Doescher, M. P., Saver, B. G., Franks, P., & Fiscella, K. (2000). Racial and Ethnic Disparities in Perceptions of Physician Style and Trust. Archives of Family Medicine, 9, 1156-1163.

Donovan, P. (2009). Dspite risk, older African Americans more likely than others to avoid flu vaccine. Buffalo, NY: University of Buffalo. Retrieved from http://www.buffalo.edu/news/10565

Finnegan, G. (2012, February 27). Flu vaccine can reduce impact of chronic diseases in the elderly. Retrieved from Vaccines Today: http://www.vaccinestoday.eu/vaccines/flu-vaccine-can-reduce-impact-of-chronic-diseases-in-the-elderly/

Fiscella, K., Dressler, R., Meldrum, S., & Holt, K. (2007, March 20). Impact of Influenza Vaccination Disparities on Elderly Mortality in the United States. Preventive Medicine, 45(1), 83-87.

Flowers, L., Sinclair, S.-A., & Umans, B. (2008). Racial and ethnic disparities in influenza and pneumococcal immunization rates among medicare beneficiaries. Washington: AARP Public Policy Institute.

FLU.gov. (2013). Diabetes & the Flu. Retrieved from FLU.gov: http://www.flu.gov/at-risk/health-conditions/diabetes/#

FLU.gov. (2013). HIV/AIDS & the Flu. Retrieved from FLU.gov: http://www.flu.gov/at-risk/health-conditions/hiv-aids/#

Ford, C. L., & Airhihenbuwa, C. O. (2010, September 1). Critical Race Theory, Race Equity, and PUblic Health: Towards Antiracism Praxis. American Journal of Public Health, 100(S1), S30-S35.

Ford, C. L., & Airhihenbuwa, C. O. (2010). The public health critical race methodology: Praxis for antiracism research. Social Science & Medicine, 71, 1390-1398.

Fox, M., & Osterman, C. (2010, April 20). U.S. doctors, minorities still wary of shots: official. Retrieved from Reuters: http://www.reuters.com/article/us-flu-usa-idUSN1524606120100420

Freid, V. M., Bernstein, A. B., & Bush, M. A. (2012). Multiple chronic conditions among adults aged 45 and older: trends over the past 10 years. NCHS data brief, 100.

Galarce, E. M., Minsky, S., & Viswanath, K. (2011, July 18). Socioeconomic status, demographics, beliefs and A(H1N1) vaccine uptake in the United States. Vaccine, 29(32), 5284-5289.

Grady, D. (2007, January 23). White Doctors, Black Subjects: Abuse Disguised as Research. New York Times.

Greene, S. K., Kulldorff, M., Lewis, E. M., Li, R., Ruihua, Y., Weintraub, E. S., . . . Lee, G. M. (2010). Near Real-Time Surveillance for Influenza Vaccine Safety: Proof-of-Concept in the Vaccine Safety Datalink Project. American Journal of Epidemiology, 171(2), 177-188.

Halbert, C. H., Armstrong, K., Gandy, O. H., & Shaker, L. (2006). Racial Differences in Trust in Health Care Providers. Archives of Internal Medicine, 166, 896-901.

Harris, K. M., Juergen, M., & Uscher-Pines, L. (2010). Seasonal Influenza Vaccine Use by Adults in the U.S.: ASnapshot from the End of the 2009-2010 Vaccination Season. Santa Monica: RAND Corporation. Retrieved from http://www.rand.org/content/dam/rand/pubs/occasional_papers/2010/RAND_OP311.pdf

Harris, L. M., Chin, N. P., Fiscella, K., & Humiston, S. (2006, October). Barrier to Pneumococcal and Influenza Vaccinations in Black Elderly Communities: Mistrust. Journal of the National Medical Association, 98(10), 1678-1684.

Hayward, A. C., Harling, R., Wetten, S., Johnson, A. M., Munro, S., Smedley, J., . . . Watson, J. M. (2006). ResearchEffectiveness of an influenza vaccine programme for care home staff to prevent death, morbidity, and health service use among residents: cluster randomised controlled trial. British Medical Journal, 333, 1241-1246.

Health, T. f. (2010, November). Fighting the Flu.

Jick, T. D. (1979). Mixing qualitative and quantitative methods: triangulation in action. Administrative Science Quarterly, 24, pp. 602-611.

Johns Hopkins Urban Health Institute. (2013). Health Disparities in Baltimore City: Is Geography Destiny? Baltimore: Johns Hopkins University.

Johnson, D. R., Nichol, K. L., & Lipczynski, K. (2008). Barriers to Adult Immunization. The American Journal of Medicine, 121, S28-S35.

Kelso, J. M., & Wang, J. (2013, September 20). Influenza Vaccination in Individuals with Egg Allergy. (S. H. Sicherer, & E. TePas, Eds.) Retrieved from Up To Date:

http://www.uptodate.com/contents/influenza-vaccination-in-individuals-with-egg-allergy

Learn Higher. (2008). Qualitative data analysis. Retrieved from Learn Higher: http://archive.learnhigher.ac.uk/analysethis/main/qualitative.html

Levi, J., Segal, L., St. Laurent, R., & Lieberman, D. (2010, November). Fighting Flu Fatigue. Trust for America's Health. Washington, DC. Retrieved from http://healthyamericans.org/assets/files/TFAH2010FluBriefFINAL.pdf

Levin, J. S. (1984). The Role of the Black Church in Community Medicine. Journal of the National Medical Association, 76(5), 477-483.

Levin, J. S. (1986). Roles for the Black Pastore in Preventive Medicine. Pastoral Psychology, 35(2), 94-103.

Liberati, L. (2013, February 25). How Does Influenza Affect the Heart. Retrieved from http://www.livestrong.com/article/559439-how-does-influenza-affect-the-heart/

Lowhorn, G. L. (2007). Qualitative and quantitative research: How to choose the best design. Regent University. Retrieved from http://www.academia.edu/1841579/Qualitative_and_Quantitative_Research_How_to_Choose_the_Best_Design

Lund Research, Ltd. (2012). External Validity: The problem of volunteer bias. Derby, England, United Kingdom. Retrieved from http://dissertation.laerd.com/external-validity-p3.php

Mansfield, C. (2015). Understanding Translation as Renarration: Advantages of narrative theory. Retrieved from Advancing Research in Translation and Interpreting

Studies: http://artisinitiative.org/online-course/online-course-2/module-2-unit-3-understanding-translation-as-renarration-catherine-mansfield/m2-unit-3-chapter-10-advantages-of-narrative-theory/

Mayo Clinic. (2013, January 19). Flu shots: Especially important if you have heart disease. Retrieved from Mayo Clinic: http://www.mayoclinic.com/health/flu-shots/HB00086

Menchetti, F. (2012, September). Influenza vaccination in cancer patients. Annals of Oncology, 23, 56-56.

Mendes, E. (2011, February 2). In U.S., Chronic Health Conditions as Prevalent in 2010 as 2009. Retrieved from Gallup.com: http://www.gallup.com/poll/145868/chronic-health-conditions-prevalent-2010-2009.aspx

Merriam-Webster. (2013). African American. Retrieved from Merriam-Webster: http://www.merriam-webster.com/dictionary/african-american

Metropolitan Area Planning Council. (2008). Public Health: Preventable Chronic Disease. Retrieved from Metro Boston Indicators Project: The State of Equity in Metro Boston: http://equity.regionalindicators.org/equity/public-health/preventable-chronic-disease/

Michigan State University. (2009, February 17). High Level of Medical Mistrust Among Minority Women Impacts Quality of Health Care. Retrieved from Science Daily: http://www.sciencedaily.com/releases/2008/01/080114121332.htm

Missouri Department of Health & Senior Services. (2013). Healthy Living. Retrieved from Missouri Department of Health & Senior Services: http://health.mo.gov/living/families/schoolhealth/glossary.php

Moyer, C. S. (2010, November 29). Vaccination rates for adults continue to drop below optimal levels. (A. M. Association, Ed.) Retrieved from American Medical News: http://www.amednews.com/article/20101129/profession/311299960/4/

Mulder, J. T. (2012, April 29). Syracuse Professor Uses Black Barbershops, Churches as Classrooms for Erasing Health Disparities. Syracuse.com. Retrieved from http://www.syracuse.com/news/index.ssf/2012/04/activist_uses_black_barbershop.html

Musa, D., Schulz, R., Harris, R., Silverman, M., & Thomas, S. B. (2009). Trust in the Health Care System and the Use of Preventive Health Services by Older Black and White Adults. American Journal of Public Health, 99(7), 1293-1299.

National Archives and Records Administration. (2013). The Deadly Virus: The Influenza Epidemic of 1918. Retrieved from Regional History from the National Archives: http://www.archives.gov/exhibits/influenza-epidemic/

National Association for the Advancement of Colored People. (2013). Health care fact sheet: heatlh disparities. Retrieved from National Association for the Advancement of Colored People: http://www.naacp.org/pages/health-care-fact-sheet

National Center for Health Statistics. (2013, August 29). National Immunization Survey. Retrieved from Centers for Disease Control: http://www.cdc.gov/nchs/nis/nis_faq.htm#faq_adult

National Center for HIV/AIDS. (2013, May 15). HIV Among African Americans. Retrieved from Centers for Disease Control and Prevention: http://www.cdc.gov/hiv/risk/racialethnic/aa/facts/index.html

National Center for Immunization and Respiratory Disease. (2011, September 21). HIV/AIDS and the Flu. Retrieved from Centers for Disease Control and Prevention: http://www.cdc.gov/flu/protect/hiv-flu.htm

National Center for Immunization and Respiratory Disease. (2012, September 26). Flu Vaccination Coverage, United States, 2011-12 Influenza Season. Retrieved from Centers for Disease Control and Prevention: http://www.cdc.gov/flu/fluvaxview/coverage_1112estimates.htm#by-sex-adults

National Center for Immunization and Respiratory Diseases. (2012, November 1). People at High Risk of Developing Flu-Related Complications. Retrieved from Centers for Disease Control and Prevention: http://www.cdc.gov/flu/about/disease/high_risk.htm

National Center for Immunization and Respiratory Diseases. (2012, August 23). Seasonal Influenza (Flu). Retrieved from Centers for Disease Control and Prevention: http://www.cdc.gov/flu/protect/vaccine/guillainbarre.htm

National Center for Immunization and Respiratory Diseases. (2013, September 27). 2013-2014 Seasonal Influenza Vaccine Safety. Retrieved from Centers for

Disease Control and Prevention: http://www.cdc.gov/flu/protect/vaccine/general.htm

National Center for Immunization and Respiratory Diseases. (2013, September 25). Key Facts About Seasonal Flu Vaccine. Retrieved from Centers for Disease Control and Prevention: http://www.cdc.gov/flu/protect/keyfacts.htm

National Center for Immunization and Respiratory Diseases. (2013, July 11). People at High Risk of Developing Flu-Related Complications. Retrieved from Centers for Disease Control and Prevention: http://www.cdc.gov/flu/about/disease/high_risk.htm

National Center for Immunization and Respiratory Diseases. (2013, November 7). Vaccine Effectiveness - How Well Does the Flu Vaccine Work? Retrieved from Centers for Disease Control and Prevention: http://www.cdc.gov/flu/about/qa/vaccineeffect.htm

National Center for Immunization and Respiratory Diseases. (2013). Vaccine Information Statement: Influenza Vaccine. Atlanta: Centers for Disease Control and Prevention. Retrieved from http://www.cdc.gov/vaccines/hcp/vis/vis-statements/flu.pdf

New York State Department of Health. (2012). Influenza (Flu) fact sheet. New York, NY. Retrieved from http://www.health.ny.gov/diseases/communicable/influenza/fact_sheet.htm

Nichol, K. L., & Mendelman, P. (2004). Influence of clinical case definitions with differing levels of sensitivity and specificity on estimates of the relative and

absolute health benefits of influenza vaccination among healthy working adults and implications for economic analyses. Virus Research, 103, 3-8.

Nichol, K. L., Lind, A., Margolis, K. L., Murdoch, M., McFadden, R., Hauge, M., . . . Drake, M. (1995, October 5). The Effectiveness of Vaccination Against Influenza in Healthy, Working Adults. The New England Journal of Medicine, 333(14), 889-893.

Odulana, A. A., Kim, M. M., Isler, M. R., Green, M. A., Taylor, Y. J., Howard, D. L., . . . Corbie-Smith, G. (2013, March 14). Examining Characteristics of Congregation Members Willing to Attend Health Promotion in African American Churches. Health Promotion Practice, 1-9.

Office of Epidemiology and Planning. (2010). 2010 Baltimore City Health Disparities Report Card. Baltimore: Baltimore City Health Department.

Office of Management and Budget. (1997, October 30). Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity. Retrieved from http://www.whitehouse.gov/omb/fedreg_1997standards/

Office of the Assistant Secretary for Health. (2004). Preventing influenza by improving the vaccine acceptance rate of clinicians. Infection Control and Hospital Epidemiology, 25, 923-928. Retrieved from U.S. Department of Health & Human Services.

Oklahoma State Department of Health. (2012, November 27). Persons with chronic disease and African American adults at risk from flu. Retrieved from Oklahoma State Department of Health:

https://www.ok.gov/health/Organization/Office_of_Communications/News_Releases/2012_News_Releases/Persons_with_Chronic_Diseases_and_African_American_Adults_at_Risk_from_Flu.html

Pediatric Alliance Health Partners. (2012). What is Seasonal Flu. Retrieved from Pediatric & Adolescent Health Partners: http://pahpartners.com/wp-content/uploads/2012/11/Full-Swine-Flu-Stuff.pdf

Peek, M. E., Sayad, J. V., & Markwardt, R. (2008). Fear, Fatalism and Breast Cncer Screening in Low-Income African-American Women: The Rold of Clinicians and the Health Care System. Journal of General Internal Medicine, 23(11), 1847-1853.

Promotion, N. C. (2013, February 12). Diabetes Public Health Resource. Retrieved from Centers for Disease Control and Prevention: http://www.cdc.gov/diabetes/news/docs/flu_protect.htm

Randall, V. R. (1996). Slavery, Segregation and Racism: Trusting the Health Care Systemm Ain't Always Easy! An African American Perspective on Bioethics. Saint Louis University Public Law Review, 15(2), 191-235.

Rastogi, S., Johnson, T. D., Hoe, E. M., & Drewery, Jr., M. P. (2010). The Black Population: 2010. Washington: U.S. Census Bureau. Retrieved from http://www.census.gov/prod/cen2010/briefs/c2010br-06.pdf

Rastogi, S., Johnson, T. D., Hoeffel, E. M., & Drewery, Jr., M. P. (2011). The Black Population: 2010. U.S. Department of Commerce , United States Census Bureau.

United States Census Bureau. Retrieved from http://www.census.gov/prod/cen2010/briefs/c2010br-06.pdf

Rees, N. (2010, April 27). HHS says doctors and minorities mistrust vaccines. Retrieved from Vaccine News Daily: http://vaccinenewsdaily.com/stories/510530888-hhs-says-doctors-and-minorities-mistrust-vaccines

Rettner, R. (2013, September 18). Flu Shot 2013-2014: Strains, Release Date & Side Effects. Retrieved from Live Science: http://www.livescience.com/39765-flu-shot-2013-2014-flu-season.html

Roberts, D. (2000, March/April). Black Women and the Pill. Family Planning Perspectives, 32(2). Retrieved from http://www.guttmacher.org/pubs/journals/3209200.html

Rose, A., Peters, N., Shea, J. A., & Armstrong, K. (2004). Development and Testing of the Health Care System Distrust Scale. Journal of General Internal Medicine, 19, 57-63.

Salgado, C. D., Giannetta, E. T., Hayden, F. G., & Farr, B. M. (2004). Preventing influenza by improving the vaccine acceptance rate of clinicians. Infection Control and Hospital Epidemiology, 25, 923-928.

Santibanez, T. A., Mootrey, G. A., Euler, G. L., & Janssen, A. P. (2010, Jan-Feb). Behavior and Beliefs About Influenza Vaccine Among Adules Aged 50-64 Years. American Journal of Health Behaviors, 34(1), 77-89.

Santos, J. A. (1999, April). Chronbach's Alpha: A Tool for Assessing the Reliability of Scales. Journal of Extension, 37(2). Retrieved from http://www.joe.org/joe/1999april/tt3.php?ref

Schneider, E. C., Cleary, P. D., Zaslavsky, A. M., & Epstein, A. M. (2001). Racial Disparity in Influenza Vaccination: Does Managed Care narrow the Gap Between African Americans and Whites? Journal of the American Medical Association, 286(12), 1455-1460.

Sebring, S. (2007, December 6). Fannie Lou Hamer. Retrieved from Mississippi Appendectomy: http://mississippiappendectomy.wordpress.com/2007/12/06/fannie-lou-hamer/

Sebring, S. (2007, November 19). Sterilization - black women. Retrieved from Mississippi Appendectomy: http://mississippiappendectomy.wordpress.com/2007/11/19/black-women-in-the-1960s-and-1970s/

Sharav, V. H. (2005, May 4). A National Scandal: AIDS Drug Experiments on Foster Care Children. LA Times.

Shavers, V. L., Lynch, C. F., & Burmeister, L. F. (2002). Racial Differences in Factors that Influence the Willingness to Participate in Medical Research Studies. Annals of Epidemiology, 12, 248-256.

Simon, M. K., & Goes, J. (2013). Dissertation and Scholarly Research Recipes for Success. Dissertation Success, LLC.

Spencer, M., Petteway, R., Bacetti, L., & Barbot, O. (2011). Healthy Baltimore 2015: A city where all residents realize their full health potential. Baltimore: Baltimore City Health Department.

Stilianakis, N. I., & Drossinos, Y. (2010, February 17). Dynamics of Infectious Disease Transmission by Inhalable Respiratory Droplets. Journal of the Royal Society Interface, 1-12.

Story, C. R. (2012). Influenza Immunization Status Among African Americans: Factors Influencing Vaccine Decisions. University of Tennessee. Retrieved from http://trace.tennessee.edu/utk_graddiss/1352

Strange, J. (2006, November 1). Tammy Williams: The Black Church and Health in the Community. Duke TODAY. Durham, NC: Office of News & Communications. Retrieved from http://today.duke.edu/2006/11/williams.html

Strenski, T. A. (2013). Differences in teh Conceptualization of Medical Mistrust among African Americans and Whites of Low Socioeconomic Standing. Retrieved from UIC Healthy City Collaborative: http://www.uic.edu/cuppa/gci/whatwedo/researchclusters/hcc/materials/Sharing%20What%20We%20Learn/2011/Teri%20A%20Strenski,%20Ph.D%20%20November.pdf

Sukamolson, S. (nd). Fundamentals of quantitative research. Bangkok: Chulalongkorn University. Retrieved from http://www.culi.chula.ac.th/Research/e-Journal/bod/Suphat%20Sukamolson.pdf

Sutton, B. J. (2012, May 3). African-Americans: Your Heart is a Ticking Time Bomb. Washington, DC.

Taylor, R. J., Ellison, C. G., Chatters, L. M., Levin, J. S., & Lincoln, K. D. (2000). Mental Health Services in Faith Communities: The Role of Clergy in Black Churches. Social Work, 45(1), 73-87.

Texas Heart Institute. (2012). Research shows flu can trigger heart attack. Houston, TX. Retrieved from http://www.texasheart.org/HIC/Topics/Cond/Flu_heartattack.cfm

The College of Physicians of Philadelphia. (2013). Cultural Perspectives on Vaccination. Retrieved from The History of Vaccines: http://www.historyofvaccines.org/content/articles/cultural-perspectives-vaccination

Thomas, S. B., Quinn, S. C., Butler, J., Fryer, C. S., & Garza, M. A. (2011). Toward a Fourth Generation of Disparities Research to Achieve Health Equity. Annuals Reviews of Public Health, 32, 399-416.

Thompson, N. (2009, January). About Influenza: What is the Flu? Retrieved from Bay Area Medical Information: http://www.bami.us/Influenza/InfluenzaAbout.html

U.S. Census Bureau. (2013, June 27). State & County QuickFacts: Baltimore City, Maryland. Retrieved from http://quickfacts.census.gov/qfd/states/24/24510.html

U.S. Department of Health & Human Services. (2013, January 15). Vaccines, Blood & Biologics. Retrieved from U.S. Food and Drug Adminstration: http://www.fda.gov/BiologicsBloodVaccines/SafetyAvailability/VaccineSafety/ucm110288.htm

U.S. Department of Health and Human Services. (2011, December 8). Influenza (Flu): 2010-2011 Flu Season. Retrieved from Centers for Disease Control and Prevention: http://www.cdc.gov/flu/fluvaxview/coverage_1011estimates.htm

U.S. Department of Health and Human Services. (2012, December). Healthy People.gov. Retrieved from HealthyPeople.gov: http://www.healthypeople.gov/2020/about/default.aspx

UCLA School of Public Affairs. (2009, June). What is Critical Race Theory? Retrieved from UCLA School of PUblic Affairs / Critical Race Studies: http://spacrs.wordpress.com/what-is-critical-race-theory/

Veracity, D. (2006, March 6). Human medical experimentation in the United States: The shocking true history of modern medicine and psychiatry (1833-1965). Retrieved from http://www.naturalnews.com/019189_human_medical_experimentation_ethics.html

Walberg, M. P. (2013). The Risk of Guillain-Barre Syndrome After Influenza Vaccination. Formulary Journal.

Washington, H. A. (2006). Medical apartheid: the dark history of medical experimentation on black americans from colonial times to the present. New York, NY: Doubleday.

Washington, H. A. (2006). Medical Apartheid: The Dark History of Medical Experimentation on Black Americans from Colonial Times to the Present. New York: Doubleday.

Whetten, K., Leserman, J., Whetten, R., Ostermann, J., Theilman, N., Swartz, M., & Stangl, D. (2006). Exploring Lack of Trust in Care Providers and the Government as a Barrier to Health Service Use. American Journal of Public Health, 96(4), 716-721.

Wiley, M. V. (2001). Influenza is America's #1 Killer: Flu Vaccine Found Least Effective for those Counting on it Most. Retrieved from HealUSA: http://www.healusa.net/art_7_influenza.html

World Health Organization. (2010). Sex, gender and influenza. Geneva: Geneva: World Health Organisation.

Wray, R. J., Jupka, K., Ross, W., & Dotson, D. (2007). How Can You Improve Vaccination Rates Among Older African Americans? The Journal of Family Practice, 56(11), 925-929.

Yang, T.-C., Matthews, S. A., & Hillemeier, M. M. (2011). Effect of Health Care System Distrust on Breast and Cervical Cancer Screening in Philadelphia, Pennsylvania. American Journal of Public Health, 101(7), 1297-1305.

Appendix A: Permission to Use Survey Instruments

kenyatte winston Mon, Apr 1, 2013 at 11:10 AM
<XXX@gmail.com>
To: XXX@gmail.com
Reply | Reply to all | Forward | Print | Delete | Show original

Hello Dr. Story,

My name is Kenyatte Winston and I am a doctoral student at Walden University. I am conducting research on the effect that doctor distrust has on the influenza vaccination rates of African American adults aged 18 to 65.

I would like to request your permission to use your Adult Influenza Immunization Survey instrument for my research study. The survey would only be used for my research study and will not be sold or used with any type of compensated activities, and you will be credited as the author of the survey. Please let me know if this is acceptable, and if you have any questions that I can answer.

Thank you kindly,

Kenyatte Irby Winston
Doctoral Student
Public Health, Walden University

Chandra.story Wed, Apr 10, 2013 at 5:33 PM
<XXX@gmail.com>
To: XXX7@gmail.com
Reply | Reply to all | Forward | Print | Delete | Show original

That sounds fine. You have permission to use my part. Simply ensure that you get permission from the other two sources, the CDC and the research group.

Dr. Story
Chandra R. Story, PhD
Visiting Assistant Professor
Oklahoma State University

kenyatte winston Thu, Apr 11, 2013 at 11:52 AM
<XXXX@gmail.com>
To: XXXX@adelphigroup.com
Cc: "dr.johnson" <XXXX@sanofipasteur.com>
Reply | Reply to all | Forward | Print | Delete | Show original

Greetings Dr. Lipczynski & Dr. Armstrong,

Thank you again for providing me with a copy of the consumer questionnaire from the Barriers to Adult Immunization article. For my research I will be using a survey instrument that was developed using your consumer questionnaire. The author of the new survey instrument, Dr. Chandra Russell Story, was given permission to use your questionnaire to fit the needs of her study.

Dr. Story has given me permission to reuse her survey instrument for my study; however, I would like to ask your permission as well since a portion of the instrument was developed using your consumer questionnaire.

The survey would only be used for my research study and will not be sold or used with any type of compensated activities. Please let me know if this is acceptable, and if you have any questions that I can answer.

Thank you,
Kenyatte Irby Winston

XXXX@adelphigroup.com Thu, Apr 11, 2013 at 11:55 AM
<XXXX@adelphigroup.com>
To: kenyatte winston <XXXX@gmail.com>
Cc: "dr.johnson" <XXXX@sanofipasteur.com>
Reply | Reply to all | Forward | Print | Delete | Show original

Dear Kenyatte,
We would be happy to give our permission for you to use our survey instrument for your study. We wish you all the best with your research.

Best regards,
Kim

kenyatte winston <XXXX@gmail.com> Thu, Apr 11, 2013 at 1:04 PM
To: XXXX@cdc.gov
Reply | Reply to all | Forward | Print | Delete | Show original

Good Afternoon Dr. Santibanez,

My name is Kenyatte Winston and I am a doctoral student at Walden University. I am conducting research on factors that influence the influenza vaccination rates of adults.

For my research I will be using a survey instrument that was developed using the telephone survey referenced in your American Journal of Health Behavior article, Behavior and Beliefs About Influenza Vaccine Among Adults Aged 50-64 Years. The author of the new survey
instrument, Dr. Chandra Russell Story, was given permission to use your survey to fit the needs of her study.

Dr. Story has given me permission to reuse her survey instrument for my study; however, I would like to ask your permission as well since a portion of the instrument was developed using your telephone survey.

The survey would only be used for my research study and will not be sold or used with any type of compensated activities. Please let me know if this is acceptable, and if you have any questions that I can answer.

Thank you kindly,

Kenyatte Irby Winston
Doctoral Student
Public Health, Walden University

Santibanez, Tammy (CDC/OID/NCIRD) <XXXX@cdc.gov> Thu, Apr 11, 2013 at 2:25 PM
To: kenyatte winston <XXXX@gmail.com>
Reply | Reply to all | Forward | Print | Delete | Show original

Hello Kenyatte--

Yes, you may use the survey; it is in the public domain. We just ask that appropriate reference and acknowledgement of the source of the survey be include in any reports and publications.

Best wishes for you study!

Tammy

Tammy A. Santibanez, Ph.D., Epidemiologist
Centers for Disease Control and Prevention

<XXXX@gmail.com> Wed, Apr 3, 2013 at 3:43 PM
To: Katrina Armstrong <XXXX@mail.med.upenn.edu>
Reply | Reply to all | Forward | Print | Delete | Show original

Hello Again Dr. Armstong,

May I please have your permission to reuse the Health Care System Distrust Scale that is referenced and shown in the Journal of General Internal Medicine article, Development and Testing of the Health Care System Distrust Scale?

The survey would only be used for my research study and will not be sold or used with any type of compensated activities. Please let me know if this is acceptable,
and if you have any questions that I can answer.

Thank you,
Kenyatte Winston

Reply | Reply to all | Forward | Print | Delete | Show original

<XXXX@mail.med.upenn.edu> Thu, Apr 4, 2013 at 10:48 AM
To: kenyatte winston <XXXX@gmail.com>, Katrina Armstrong <XXXX@mail.med.upenn.edu>
Cc: Judy Shea <XXXX@mail.med.upenn.edu>
Reply | Reply to all | Forward | Print | Delete | Show original

Kenyatte

I am delighted for you to use the scale.

All my best

Katrina Armstrong
- Show quoted text -

Thu, Apr 4, 2013 at 1:15 PM
<XXXX@gmail.com>
To: Katrina Armstrong <XXXX@mail.med.upenn.edu>
Cc: Judy Shea <XXXX@mail.med.upenn.edu>

Reply | Reply to all | Forward | Print | Delete | Show original

Dr. Armstrong,

Thank you very much for your approval!

Regards,
Kenyatte Winston

Appendix B: Health Care System Distrust Scale

Health Care System Distrust Scale*

The next questions are about your opinion of the health care system in general. When we refer to the health care system, we mean hospitals, health insurance companies, and medical research. For each statement below, please check how strongly you agree or disagree.					
	[5] Strongly Agree, %	**[4] Agree, %**	**[3] Not Sure, %**	**[2] Disagree, %**	**[1] Strongly Disagree, %**
a. Medical experiments can be done on me without my knowing about it.					
b. My medical records are kept private.					
c. People die every day because of mistakes by the health care system.					
d. When they take my blood, they do tests they don't tell me about.					
e. If a mistake were made in my health care, the health care system would try to hide it from me.					
f. People can get access to my medical records without my approval.					
g. The health care system cares more about holding costs down than it does about doing what is needed for my health.					
h. I receive high-quality medical care from the health care system.					
i. The health care system puts my medical needs above all other considerations when treating my medical problems.					

The next questions are about your opinion of the health care system in general. When we refer to the health care system, we mean hospitals, health insurance companies, and medical research. For each statement below, please check how strongly you agree or disagree.					
	[5] Strongly Agree, %	**[4] Agree, %**	**[3] Not Sure, %**	**[2] Disagree, %**	**[1] Strongly Disagree, %**
j. Some medicines have things in them that they don't tell you about.					

*b, h, and i are reverse scored to measure distrust.

Appendix C: Adult Influenza Immunization Survey

Adult Influenza Immunization Survey

INTRODUCTION

I am a doctoral student in Public Health at Walden University. You are invited to participate in a research study pertaining to influenza vaccination status among African Americans in your community. The study is in partial requirement for the PhD in Public Health, Community Health Promotion & Education. The purpose of the study is to help us determine factors that influence influenza vaccination rates.

Instructions: Please rate how strongly you agree or disagree with the following statements by placing an X in the appropriate box. The flu vaccine refers to the flu shot or nasal mist.

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
1. I feel that I am at risk of getting ill if I do not receive the flu vaccine.					
2. It is important to keep up with vaccinations.					
3. I feel that getting the flu vaccine is a wise thing to do.					
4. I am aware of the national recommendations for the flu vaccine.					
5. If a person in the house gets the flu, other members of the household are also likely to get the flu.					

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
6. The flu vaccine is effective.					
7. I am more likely to get the flu vaccine if my doctor recommends it.					
8. I have a trusting relationship with my doctor.					
9. My health care provider expresses care for me.					
10. Health care providers are known for doing procedures without the patient being aware of what is being done.					
11. My relatives and close friends think that I should get the flu vaccine.					
12. The flu vaccine could interact with my current medications.					
13. I could get the flu from receiving the flu vaccine.					
14. Serious side effects from the flu vaccine are common.					

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
15. I think that the flu vaccine is safe.					
16. I am aware of locations that I can receive the flu vaccine.					
17. The flu vaccine costs too much for me.					
18. I don't have transportation to get the flu vaccine.					
19. People in my community receive the flu vaccine.					
20. The flu vaccine does not cover all strains of the flu.					

21. I received a flu vaccine last season.

Yes	
No	

If your response is no, skip to Question 25.

22. If you received the flu vaccine last season, was this your first time receiving the flu vaccine?

Yes	
No	

23. If you received the flu vaccine, please check which method was chosen.

Shot	
Mist	

24. If you answered yes to Question 21, where did you receive the flu shot or mist?

Medical/Doctor's Office	
Pharmacy	
Church	
Health Department	
Employer/Work	
Other (write in)	

25. How did you learn about the flu shot? Please check all that apply.

News Media, TV, Newspaper, Magazine	
Health Care Provider	
Family/Friends	
Employer/Work	
Community Center	
Church	
School	
Other (write in)	

26. Were you diagnosed with the flu by a health care provider last flu season?

Yes	
No	

27. Do you have any fears related to receiving the flu vaccine?

Yes	
No	

28. If yes, please explain.

_____
_____
_____
_____
_____

29. Please provide your age. _____

30. What is the last grade or year of school that you completed?

No Formal Schooling	
Elementary School (grades 1-8)	
Some High School (9-<12)	
High School Graduate	
College Graduate	
Graduate/Professional School	

31. Please check the work status category that applies to you?

Student	
Full Time Employment	
Part Time Employment	
Temporary Worker	
Unemployed	
Retired	

32. Gender

Male	
Female	

33. Do you have health insurance? Please check the response that applies to you.

Yes	
No	

34. How would you like to learn about the flu vaccine? (Check all that apply)

Pastor or Church Leader	
Media Advertisement	
A Friend or Family Member	

None	
Other _____	

35. In your opinion, did you have the flu at some point during the last flu season?

Yes	
No	

36. Please comment on any reasons for choosing to receive or not to receive the flu vaccine that was not mentioned within this survey.

_____
_____
_____
_____
_____
_____
_____

Thank you for completing this survey