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A Phenomenological Inquiry into the Low Rates of Influenza Vaccination Among Older African Americans

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Abstract

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by

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Dissertation Submitted in Partial Fulfillment

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Abstract

Influenza vaccination is recommended for persons with high-risk health conditions such as chronic diseases to prevent flu-related complications and death. African Americans 65 years and older have consistently been reported to have the lowest influenza vaccination rates compared to all other racial groups, despite having higher rates of chronic diseases. A review of the literature indicated that there is a dearth of qualitative studies examining the grounds for these low rates. In this study, 15 African Americans 65 years and older were interviewed to explore the factors that contribute to low rates of flu vaccination among this racial group. Research questions using the constructs of the theory of planned behavior gathered the behavioral beliefs, normative beliefs (social norm), and control beliefs affecting low influenza vaccination uptake among older African Americans. Data analysis yielded 5 major themes: (a) fear of illness, (b) vaccine does not work, (c) self-advocacy, (d) have access to flu vaccine, and (e) education needed. These findings suggest that older African Americans would benefit from system, organization, and policy changes that support improved provider efforts and community interventions specifically targeting their concerns about flu vaccination. Implementation of strategies supported by evidence found in this study may improve understanding of flu vaccination from the perspective of older African Americans, and potentially increase the rates of influenza vaccination among this racial group to bring about positive social change.

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Dedication

This effort is devoted to my father and mother, Mr. and Mrs. L.F. Howson. They have always believed in me and supported me in all my endeavors. I sincerely wish my mom could have been here to experience the pride in this accomplishment. I do miss her. I also dedicate this achievement to my daughter Shaena and precious baby grandson Trip. I owe my strength as a mother to my daughter, Shaena, for whom I have worked to be my best example of what is achievable in life with perseverance and courage. I am currently supporting and watching her work diligently toward reaching her educational and personal goals. She gave me the best gift…my precious grandson Trip, for whom I would give everything. Trip has been the reason for my renewed spirit of love for life and vitality and the inspiration for the new person I have become in the past years resulting in this work. Finally, I could not have made this achievement without my most cherished friends. Thank you for your support and for helping me set my priorities and my goals.

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Chapter 1: Introduction to the Study

Introduction

This phenomenological study examined the low influenza immunization rates among African Americans 65 years and older. This study was needed because a review of the literature indicated that older African Americans have the lowest rates of influenza vaccination uptake among all other racial groups, despite having the highest rates of chronic diseases (American Lung Association [ALA], 2010; Frank & Grubbs, 2008). As a result, African Americans reportedly have greater influenza-related illnesses and complications during annual influenza seasons (ALA, 2010). Based on the theory of planned behavior (TPB), the goal of this study was to target the behavioral, normative, and control beliefs that contribute to the low influenza uptake among this population. The implications for social change of this study were to inform health policies and interventions geared at increasing influenza uptake to address the current disparity in influenza-related illnesses among older African Americans.

In the background, I describe seasonal influenza and its social and economic impact on the U.S. health care system; I also provide an overview of the racial and ethnic disparities in influenza vaccination. Also explained are the study problem, purpose, and the research questions addressing behavioral, normative, and control beliefs that affect the low uptake of influenza vaccination among older African Americans. I then addresses the following: the elements under exploration, the key terms, the study's assumptions,

limitations, scope, and delimitations, and the significance and implications for social change.

Background

Influenza, or "flu," is a contagious respiratory illness due to infection with the influenza virus. Persons at increased risk for flu-related complications can get very ill, and even die (Centers for Disease Control & Prevention [CDC], 2010; CDC, 2013b; Flu.gov, 2014). Seasonal influenza causes annual influenza cases in the United States most often between fall and spring (CDC, 2013a) and result in epidemics and pandemics every year. Past global pandemics that resulted in high morbidity and mortality are the Spanish, Asian, and Hong Kong flu (Simonson, 1999). Disease and illnesses resulting from influenza amount to 200,000 plus hospitalizations and averaging 36,000 deaths annually (HealthyPeople.gov, 2013; Herbert, Frick, Kane, & McBean, 2005; Molinari et al., 2007; Monto, 2008). With 13% of U.S. adults 65 years and older (United States Census Bureau, 2012) living longer with chronic diseases, adults 65 years and older are particularly susceptible to complications as a result of influenza illnesses (CDC, 2013a; Flu.gov, 2014). In several studies researchers have indicated that 90% of annual influenza deaths nationally between the influenza seasons 1976-1977 and 2006-2007 occurred among individuals 65 years and older (CDC, 2010; CDC, 2013b; Flu.gov, 2014). More recent reports showed that of the 31.7 of influenza cases per 100,000 population, the highest rates of hospitalization was seen among adults 65 years and older (CDC, 2014a).

Influenza permeates the healthcare system to cause huge economic impact on healthcare costs within United States. Lost wages averaging over $10 billion may be attributed to influenza related direct medical expenses, with a projected loss of approximately $16 billion per year due to lost wages and mortality (Molinari et al., 2007). Healthy People 2020 target goal for influenza immunization among noninstitutionalized adults 65 years and older is 90 % from a baseline of 66.6% in the year 2008 (Healthy People.gov, 2014).

African Americans have consistently been reported as having the lowest rates of flu immunization compared to other racial and ethnic groups, despite their higher rates of chronic diseases (ALA, 2010; Frank & Grubbs, 2008). Over the past 11 years, 28% fewer African Americans than European Americans on average get the influenza vaccine (ALA, 2010). These low rates have been linked to issues of trust, education, beliefs, and social factors (Daniels, Juarbe, Rangel-Lugo, Moreno-John, & Pérez-Stable, 2004; Harris, Chin, Fiscella, & Humiston, 2006; Sengupta, Corbie-Smith, Thrasher, & Strauss, 2004; Wray et al., 2007). Attitudes, beliefs, and perceptions were also found to be major factors affecting influenza uptake among older African Americans (Hebert, Frick, Kane, & McBean, 2005; Krieger, Rowley, Herman, Avery, & Phillips, 1993). These findings were primarily observed in quantitative studies. This study sought qualitative evidence using the constructs of the TPB to address the *behavioral beliefs*, the *normative beliefs* or social norms, and the *control beliefs* affecting the uptake of influenza vaccination among older

African Americans. Behavioral beliefs, normative beliefs, and control beliefs are the constructs of the TPB which forms the theoretical framework of this study.

This study was needed because based on the current literature there is a need for more qualitative research to explore the contributing factors for the low rates of influenza vaccination among older African Americans. Findings from this study may advance the existing literature and offer opportunities to inform and expand health policies and interventions to increase the uptake of influenza vaccine among not only older African Americans but possibly other age categories of African Americans as well. Implementation of strategies based on the findings of this study may protect against the related morbidity and mortality caused by seasonal influenza. A more detailed discussion of the research literature that supports these findings and identifies the gap and the need for this study is presented in Chapter 2.

Problem Statement

African Americans 65 years and older have considerably lower influenza vaccination rates compared to European Americans and Hispanics of the same age. As a result, they are more susceptible to flu-associated illnesses (Cai, Feng, Fennell, & Mor, 2011; Lindley, Winston, & Bardenheier, 2006; Wortley, 2005; Sambamoorthi & Findley, 2005). Older adults offer opportunities for learning how to best engage them in primary prevention practices (Schensal, Radda, Coman, & Vazquez, 2009). An initial review of the literature indicated that the majority of studies on flu vaccine rates among older Americans lacked data about how they felt about their experiences with influenza

vaccination (Evans, Prout, Prior, Tapper-Jones, & Butler, 2007). The problem was that the studies did not qualitatively explore the contributing factors that adequately incorporated behavioral beliefs (which address a person's attitude toward a behavior; Ajzen, 2012), normative beliefs (the social influences on a behavior; Ajzen, 2012), and control beliefs (a person's confidence in performing a behavior; Ajzen; 2012).

Purpose of the Study

The phenomenon of interest was the low rate of influenza vaccination among older African Americans. Immunization is the recommended preventive approach for all persons older than 6 months and especially for those 65 years and older with high-risk conditions (CDC, 2013a; Lu et al., 2013). Over the last 11 years, an average of 28% fewer older African Americans than European Americans got vaccinated against influenza (ALA, 2010), and in 2009, 30% fewer African Americans than European Americans 65 years and older received the flu vaccine (Office of Minority Health, 2012). An influenza vaccination rate among African Americans that equaled that of European Americans would result in more than 25% fewer influenza deaths and more than 1,800 lives saved (ALA, 2010; Fiscella, Dressler, Meldrum, & Holt, 2007). Older adults are better able to express factors that contribute to their vaccine-seeking behaviors, and data gathered from older adults could be used to develop primary prevention strategies (Schensal, Radda, Coman, & Vazquez, 2009) that may improve influenza vaccination rates among this group. The purpose of this qualitative study was to use phenomenology to explore and understand the behavioral beliefs, normative beliefs, and control beliefs

that affect the low uptake of flu vaccination among African Americans who are 65 years and older . The following research questions were formulated to achieve the goals of this study.

Research Questions

The following research questions guided this study:

1. What are the behavioral beliefs or perceptions affecting influenza vaccine uptake among older African Americans?
2. What are the normative beliefs or social norms affecting influenza vaccine uptake among older African Americans?
3. What are the control beliefs affecting influenza vaccine uptake among older African Americans?

Data gathered from these research questions and follow-up questions (see Appendix A) were coded; the codes were then analyzed from which themes emerged. These themes described the essence of participants' experiences. Data analysis is further described in Chapter 3.

Theoretical Foundation of the Study

The theoretical foundation of this study was TPB, the theory of planned behavior (Ajzen, 2012), which postulates that people's actions are predisposed by their attitude towards the behavior (behavioral beliefs), the social influences driving the behavior (normative beliefs or social norm) whether positive or negative, and the person's confidence in performing the behavior (behavioral control). The theory maintains that the

greater the person's intent on performing the behavior, the greater the chance she or he will carry out the behavior (Ajzen, 2012). Beliefs are formed from an individual's current information and past experiences; it determines a particular behavior with or without much thought (Ajzen, 2012). This assumption explains why volitional control is seen as central to the TPB because it elucidates the connection between beliefs and behaviors (Ajzen, 2012). Finally, the TPB recognizes that variables such as demographics, environment, and personal characteristics, help determine behavior (Ajzen & Manstead, 2008).

Other conceptual frameworks were also examined for application to this study: the theory of reasonable action, the self-efficacy theory, and the health belief model. However, the TPB was selected based on its ability to address the relationship between beliefs and behavior as used in this study. Chapter 2 further examines theoretical frameworks.

The research questions developed for this study addressed the behavioral beliefs, normative beliefs, and control beliefs that affected influenza vaccination. When applied to the issue of low influenza uptake among older African Americans, the TPB was able to make the connection between beliefs and behavior and to frame the problem such that a person's behavioral beliefs, existing normative beliefs or social norms toward or against flu vaccination, and their perceived control over getting vaccinated determined whether or not they followed through on getting vaccinated. The TPB and its application to the phenomenon of influenza vaccination is further discussed in Chapter 2.

Nature of the Study

The phenomena studied were elements of the person's behavioral, normative, and control beliefs involved in consistently declining influenza vaccination for the last three or more influenza seasons. The goal of this phenomenological inquiry was to apply an exploratory approach to study behavioral, normative, and control beliefs about influenza vaccination uptake among African Americans 65 years and older.

In this research study phenomenology provided the basis from which participants perceive, describe, judge, recall, interpret, and talk about their common experiences and beliefs as suggested by Patton (2002, p. 104) toward influenza vaccination. Moustakas's (1994) transcendental phenomenology was used to form descriptions of the meanings of these experiences.

The data for this study were obtained by interviewing 15 African Americans, 65 years and older, who had access to the seasonal influenza vaccine but declined it for the last three or more influenza seasons. Data were analyzed using NVivo10 qualitative data analysis software for coding and theme formation. No comparison data were acquired since the aim of the study was to focus on elements that contributed to the decision not to be vaccinated against influenza and the components that could have altered that decision. Chapter 2 provides a more detailed account of the integration of the TPB and phenomenological approach used in this study.

Operational Definitions of Terms

The following is a list of study terms and phrases along with their definitions:

Antibody: A part of your immune system that fights illness in the body (MedlinePlus, 2014).

Antigen: An unsafe material that causes the body to produce antibodies (MedlinePlus, 2014).

Antigenic drift: Mutations that modify the two most important viral proteins of the same cell (Novick, Morrow & Mayes, 2008).

Antigenic shift: Mutations that result in new influenza virus variations (Novick, Morrow & Mayes, 2008).

Behavioral beliefs: A person's attitude toward a behavior (Ajzen, 2012).

Control beliefs: A person's confidence in performing a behavior (Ajzen, 2012).

Epidemic: An outbreak of a disease that is specific to a geographical location (Cox & Subbarao, 2000)

Epoche: A method by which the researcher explores and validates personal feelings and experiences with the phenomenon of interest through understanding and expression in order to approach the data collection process from a new perspective, void of preconceptions, prejudgment, and biases (Moustakas, 1994).

Immunity: Resistance to a particular illness (MedlinePlus, 2014).

Influenza A virus: According to Novick, Morrow, and Mayes (2008) this is the virus that causes seasonal influenza. Influenza *A* is the most common form of influenza virus that occurs in humans. Influenza *A* occurs naturally in animals particularly birds and can infect both people and several animals (Novick, Morrow & Mayes, 2008).

Influenza B virus: Influenza virus that infect only humans and seals. It evolves and mutates slower than Influenza *A* viruses (Cox & Subbarao, 2000).

Influenza season: The months between fall and spring (CDC, 2013a).

Influenza vaccine or *flu vaccine* or *flu shot:* Inoculation to prevent influenza illness. These terms are used interchangeably in this study.

Normative belief or Social norm: The social influences driving the behavior (Ajzen, 2012). Normative belief and social norms are used interchangeably in this study.

Pandemic: An epidemic that affects a large geographical area across international borders (Doshi, 2011).

Assumptions

This study assumed that collected data and interpretation of findings are specific to participants interviewed and therefore not generalizable. This assumption was necessary because the study was focused specifically on African Americans aged 65 and older who consistently declined the flu vaccine over the last three or more influenza seasons. Although all participants were African Americans 65 years and older, they are assumed to vary in backgrounds such as place of origin and social influences.

Scope and Delimitations

This study was an inquiry of the specific beliefs that are thought to influence the current low rates of influenza vaccination in the population studied. This is a qualitative study that addressed the TPB constructs of behavioral, normative, and control beliefs of older African Americans. Beliefs about flu vaccine were selected for study because the

majority of studies on flu vaccine rates among older Americans were quantitative in nature and had very little data on the contributing factors from a qualitative perspective. The study boundaries were as follows: (a) Participants were obtained from a community senior center in Los Angeles County. (b) Additional participants for the study (up to 15) were obtained through snowballing technique. (c) Participants met screening and selection criteria for participation in the study and were included if they were at least 65 years old, had refused the flu vaccine for the last three flu seasons, and had a primary care provider. Participants who did not meet the selection criteria were not included in the study. Fifteen participants were interviewed. The constructs of the TPB guided the study to obtain descriptions of behavioral beliefs, normative beliefs, and control beliefs with respect to flu vaccination.

The study was delimited by factors outside of the behavioral, normative, and control beliefs affecting flu uptake among African Americans 65 years and older. The TPB was used to guide the research. Consequently, other elements such as past historical events, experiences with the healthcare system, and use of home remedies were not captured and included for data analysis. This study focused on the behavioral, normative, and control beliefs because the intent was to focus on individuals' intent in getting vaccinated against the flu virus. Populations included in this study were African Americans 65 years and older who had a healthcare provider, and who refused to be vaccinated against the flu virus for the past three flu seasons, and could comfortable take part in a 20 to 30 minute interview. Persons were excluded if they fell outside of this

criteria. TPB as this study's theoretical framework acknowledges demographic, environmental, and personal characteristics as variables that shape people's behavior and may be addressed through phenomenology. Phenomenology as a qualitative research approach allowed for in-depth interviews with an interview guide to gather rich description to answer the research questions. External barriers (such as distance and availability of flu vaccine) as another potential factor affecting influenza uptake was discussed but not measured in this study, because the review of literature demonstrated that access to influenza vaccination was not a primary concern affecting influenza uptake among older African Americans.

Limitations

The following is a summary of the limitations of this study related to its design and methodology. This study is not generalizable because the data collected were specific to the participants interviewed. Results may vary with different populations and settings. Participants for this study were limited to persons meeting the screening selection requirements. As such, demographic data about income, residence, education, sex, employment, and income level, were not collected for analysis in this study. This study was specific to the research questions that focused on behavioral, normative, and control beliefs affecting flu uptake among participants. Consequently, the study was limited by these variables, such that other factors that may impact flu vaccination uptake were not captured. Since data collection occurred at a single site, expressed beliefs about flu vaccination may have been influenced by conversations that occurred at this site.

Additionally, events during the past three years such as availability of vaccines, priority groups targeted for vaccination, media events, or quality and type of flu outreach efforts may have had an effect on thoughts about flu vaccination. Limitations were improved by detailed descriptions of the experiences of participants through recordings, note taking, accurate transcriptions of interviews, and member checks. Biases were addressed through consistency in data collection, reflexivity, epoche, and building trust with study participants. This study used phenomenology so data was collected through interviews, removing triangulation as a means of data collection. Finally, the study was conducted in whole by a sole researcher, removing opportunities for peer review or external audits as recommended by Lincoln and Guba (1985). Chapter 3 offers a more detailed discussion on quality checks, limitations, and addressing biases.

Significance

In several quantitative studies researchers provide data that support findings of low flu vaccination numbers among older African Americans (Cai, Feng, Fennell, & Mor, 2011; Lindley, Winston, & Bardenheier, 2006; Wortley, 2005; Sambamoorthi & Findley, 2005). A review of the literature also suggests that insufficient qualitative evidence exists that explore the reasons for the low rates of influenza vaccination among this group. The research questions developed for this study specifically queried the behavioral beliefs, normative beliefs, and control beliefs that affected influenza vaccination among older African Americans. Findings were clustered to form five major themes: (a) fear of illness, (b) vaccine does not work, (c) self-advocacy, (d) have access

to flu vaccine, and (e) education needed. Study findings may increase awareness about how older African Americans think about influenza vaccination and inform policy development that address concerns of older African Americans about flu vaccination. These strategies may include improved and incentivized health care provider approaches geared at addressing concerns of older African Americans about influenza vaccination, improve dialogue between patients and providers about influenza vaccination, and restructure community flu education outreaches to address findings in this study. Implementation of strategies supported by evidence found in this study may increase the rates of influenza vaccination among older African Americans and contribute to positive social change.

Summary

Seasonal influenza is the cause of substantial morbidity and mortality each year, and older adults of African American origin, are especially affected (ALA, 2010; Hebert, Frick, Kane, & McBean, 2005). Influenza illnesses are primarily prevented by vaccination, but vaccination uptake among African Americans 65 years and older remain at rates that are 30% lower than for European Americans (ALA, 2010). The existing literature indicated that more exploration was needed to understand the reasons behind the low vaccination rates among older African Americans. This study sought to explore the behavioral, normative, and control beliefs about flu vaccination from talking with members of this racial group. Several studies have examined the reasons for the low influenza vaccination uptake among older African Americans, but no study has used

phenomenology to learn of the behavioral, normative, and control beliefs affecting vaccine-seeking behaviors of older African Americans. The TPB was used in this study to explore these factors and answer the research questions. The major themes gathered from the research questions indicated that participants feared getting sick from the vaccine, questioned the vaccine efficacy, made their own decisions regarding flu vaccination and did not want to discuss the topic of flu with others. Findings from the data collected also indicated that more education was needed about flu vaccination. The results of this study implies the need for policies supporting improved educational dialogue and community outreach to address educational needs found by this study.

This chapter has presented a brief overview of the background and need for this study by presenting key points on the topic and provided, (a) study problem and purpose, (b) research questions, (c) theoretical foundation approach, (d) study scope and limitations, and (e) significance of this study. Chapter 2 offers historical and current literature on the subject along with a detailed description of the theoretical framework. Chapter 3 defines the methodology and data collection, and explains the data analysis. Chapter 4 describes the study results, and Chapter 5 summarizes the interpretation and application of the findings: the implications for social change, recommendations on how the findings may be used, and areas for future study.

Chapter 2: Literature Review

Introduction

The uptake of influenza vaccination has consistently improved over the years; however, influenza vaccination rates have remained lower among African Americans, age 65 years and older (CDC, 2013a). A review of the literature indicated that there is a dearth in the number of studies examining the grounds for these low rates (Chen, Fox, Cantrell, Stockdale, & Kagawa-Singer, 2007). The purpose of this phenomenological study was to explore and understand the behavioral, normative, and control beliefs influencing the low uptake of influenza vaccination from the perspective of African Americans, age 65 years and older.

The goal of the search was to find current peer reviewed articles that describe influenza vaccination among the general population, vaccination uptake among African Americans, 65 years and older, attitudes and beliefs about influenza vaccination, and historical perspectives and trends. The literature for this study was gathered primarily from published documents dating back to 2007. However, some older materials were used to offer a historical perspective. The following databases were used: Science Direct, ProQuest Central, Academic Search Complete, MEDLINE with Full Text, Google Scholar, CINAHL & MEDLINE Simultaneous Search, and CINAHL Plus with Full Text. A series of governmental websites were used to learn about current trends and recommendations for improving influenza vaccination uptake among the adult population: CDC, WHO, Flu.gov, and California Department of Health and Human

Services. The following search terms were used: *vaccination; rates; older; African Americans; phenomenology; influenza; health*.

This chapter begins with the TPB as the theoretical foundation of the study, its major constructs and past use in research applications, and its applicability in guiding this study. It also offers an overview of influenza epidemiology, the burden of the disease, and the impact of influenza on the general population. This review of the literature also provides current recommendations for preventing and controlling influenza and displays immunization vaccination trend data especially among older adults. In this literature review, the body of literature on influenza vaccination for persons 65 years and older was examined while simultaneously exploring works maintaining that older African Americans are under-immunized in comparison to other racial and ethnic groups (CDC, 2013a; Lin, Musa, Silverman, Degenholtz, 2005; Schneider, Cleary, Zaslavsky & Epstein, 2001). Moreover, in this section, collective quantitative and qualitative findings from the literature that explains reasons why older African Americans are under immunized are presented. The study further related racial and ethnic disparities regarding influenza vaccination in addition to current works on determinants for vaccination uptake with emphasis on persons 65 years and older. Finally, the review of literature identified the gaps in literature that demonstrate the need for a qualitative representation of the account of personal experiences and behavioral, normative, and control beliefs about influenza vaccinations as told by older adults of this racial and ethnic group.

Theoretical Foundation

The theoretical foundation for this research study was Ajzen's TPB (Ajzen, 2012). The TPB focuses on the person's level of belief that they can perform or have the capacity to perform the behavior (Ajzen, 2012). A person's intention to perform the behavior is increased by strong attitudes toward the behavior, strong social influences, and self-assurance in their ability to perform the behavior (Ajzen & Manstead, 2008). If the person has a high intention toward performing the behavior then given the opportunity the person will follow through with the behavior in question (Ajzen & Manstead, 2008). This theoretical framework (see Figure 1) is used extensively in understanding and predicting health behaviors such as the use of safety devices, nutrition, physical exercise, and illegal drug use (Ajzen & Manstead, 2008).

Ajzen (2012) purports that the TPB is largely applicable to any behavior to include those that lack a certain motivation but demonstrates intent to perform the behavior (such as get a health screening or not, or to start an exercise plan or not to do so). These types of behaviors are a result of existing social norms and a person's attitudes toward the behavior but also a factor of the person's behavioral goals (Ajzen, 2012). Therefore, a person's intent to execute a certain behavior is determined by attitudes, subjective norms, behavioral control, and how capable the person feels in performing the behavior (Ajzen, 2012). If the person feels strongly about these functions of behavior then the more likely their intent to perform the behavior and to succeed. The opposite is

also true (Ajzen, 2012). If persons do not believe they can carry out the behavior then their intentions toward the behavior is reduced (Ajzen, 2012).

Other theoretical frameworks were also examined for their use to explore the beliefs affecting the rates of influenza vaccination among older African Americans. Self-efficacy Theory developed by Albert Bandura gives focus to a person's ability to perform an act toward a desired goal and is influenced by the person's behaviors, the environment, and subjective discernment (Bandura, 1997). The health belief model (HBM) gives credence to the importance of how to address behaviors that affect health outcomes. The HBM was developed by social psychologists in the 1950's to help explain why persons engage in risky health behaviors and postulated that these behaviors were determined by the person's perception of their susceptibility to the illness, the severity of its effects, benefits of prevention, and barriers to health protection (Rosenstoch, 1974). Although the HBM addresses beliefs and behavior relative to behavior change much the same as the TPB, the HBM does not sufficiently address the subjective value of the influence of others on performing a desired behavior which is important to this study's purpose. Similarly, Self-efficacy focuses on behavior change; however, the primary construct in self-efficacy theory is cognition which does not provide a structure for understanding the effect of social influences on behavior.

The theory of reasoned action (TRA) was developed from radical behaviorism and the effects of rewards and punishment (Ajzen, 2012) and provided some applicability to this study. The TRA is based on a *behavioral belief* explained as the individual's belief

in the likelihood that a specific action will result in an expected outcome (Ajzen, 2012). The person places a personal worth in the situation where the motivation is equivalent to the person's assessment of the end result (Ajzen, 2012). This understanding of the TRA is similar to both the SET and the HBM. The TRA's *normative belief* is the individual's belief in the likelihood that a specific person approves of a precise behavior (Ajzen, 2012). Their incentive to carry out the behavior and the expectation of another individual toward compliance significantly improves this individual's normative belief (Ajzen, 2012). Neither the SET nor the HBM addresses normative beliefs.

The Theory of Reasoned Action as Basis for the TPB

Ajzen's TPB evolved from the Theory of Reasoned Action (TRA). The TRA posits that human behavior is automatic in situations where rewards will strengthen a behavior while punishment decreases repetition of the same behavior (Ajzen, 2012). Therefore, the influencing positive or negative stimulus is such that the person is not mindfully attentive to their response and does not think about the outcome behavior (Ajzen, 2012).

Social psychologists hold the position that a particular behavior will result in multiple outcomes (Ajzen, 2012). The TRA assumes this principle and extends it toward suppositions that behaviors and outcomes are not linear. Rather, these multiple beliefs in persons will lead behaviors, each with different results (Ajzen, 2012). The person develops a level of confidence or lack thereof that a certain behavior will produce the outcome expected which determines the attitude of this person toward the behavior and

the significance of the outcome (Ajzen, 2012). Thus, the behavioral belief in combination with the outcome evaluation will create either a positive or negative influence on attitude toward the behavior (Ajzen, 2012). This is the TRA's *expectancy-value* model of attitude (Ajzen, 2012). Since beliefs are triggered by memory, only those beliefs that a person can readily recall will determine the person's attitude toward a behavior, therefore, research that investigates the relationship between belief and attitudes should provide opportunities for open subjective recall of information rather than a set of questions that addresses specific beliefs (Ajzen, 2012).

Since the TRA did not account volitional control for behaviors for which people had very little will to perform, the model was expanded into the TPB first defined in 1985 (Ajzen, 1985). The TPB extends the TRA by introducing the extent of a person's volitional control over their actions into understanding the continuum of processes between beliefs and behaviors (Ajzen, 2012).

Constructs of the TPB

The constructs of the TPB are: (1) a person's recollected beliefs about behavior effects and the values placed on the consequences (*behavioral beliefs*). These consequences may yield attitudes that may be either positive or negative; (2) beliefs about expectations from significant social support about performing the behavior and importance of compliance to these parties (*normative beliefs* or *social norm*) resulting from perceived social pressure; and (3) any hindrance or support for the behavior and their impact (*control beliefs*) resulting in perceived behavioral control (Ajzen, 2012).

These are three principles that guide human behavior and in turn determines a person's behavioral intention.

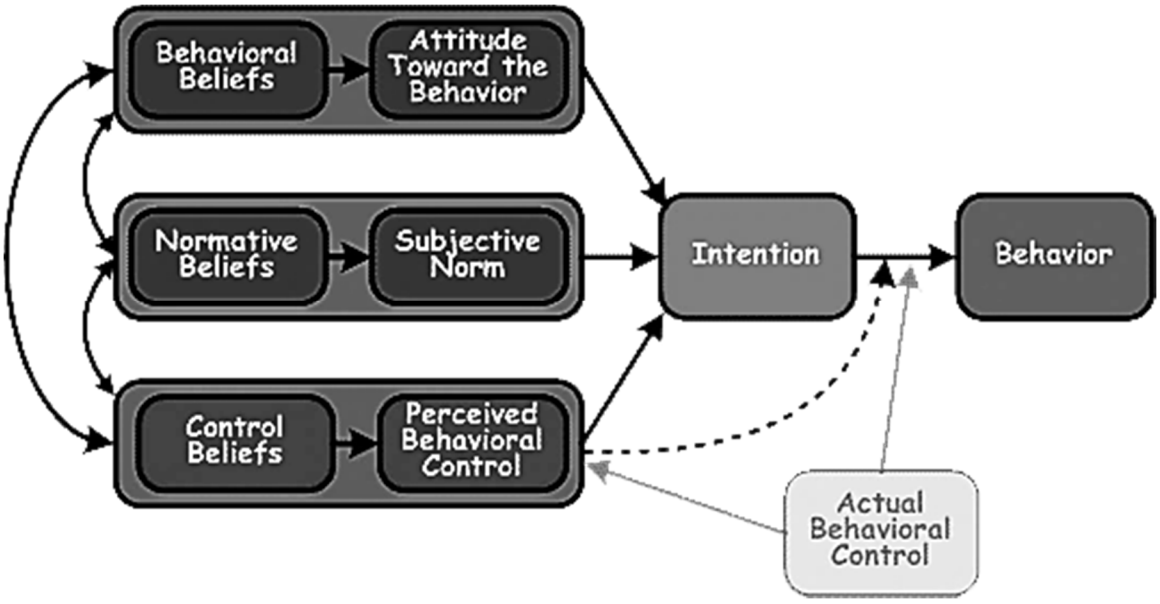

Figure 1. Icek Ajzen's theory of planned behavior model demonstrates that beliefs and intention drives behavior.

From I. Ajzen. (n.d.). *Icek Ajzen: Theory of Planned Behavior (TPB)—TPB Model.* Retrieved May, 15, 2014 from, http://people.umass.edu/aizen/tpb.html. Copyright 2006 by Icek Ajzen.

The TPB posits that if intentions exist toward performing a certain behavior people will be more successful at performing these behaviors primarily if they have the skills, information, mental aptitude, abilities, along with the ability to maneuver any internal or external barriers toward performing that behavior (Ajzen, 2012). Behavioral control affect intentions on the behavior such that high behavioral control suggest high intentions in carrying out of the behavior (Ajzen, 2012). Where the degree of behavioral

control is uneven among individuals both intentions and control must work together to increase the probability that the specified behavior will occur (Ajzen, 2012). More importantly, a person's perceived behavioral control appeared to strengthen motivation to perform a certain behavior or not (Ajzen, 2012). Used as such in the TPB, perceived behavioral control has its roots in Bandura's self-efficacy model (Bandura, 1997) which contends that people's belief about how competent they are to assume control over actions that affect their lives may act as a conduit for determining their motivation and ultimately any action they take.

The TPB has been supported in its application to psychological antecedents of behavior in a variety of domains (Crano & Prislin, 2008). Sheeran (2002) reviewed meta-analyses conducted for diverse behavioral domains and found a mean correlation between intention and behavior of .53. When perceived behavioral control is added prediction of behavior is significantly increased (Madden, Ellen, & Ajzen, 1992).

The TPB acknowledges the importance of demographic, environmental, and personal characteristics as variables that shape people's behavior. Such factors include variables relevant to this study such as control factors, attitudes toward health, and demographics, diagnosis, and media exposure (Ajzen & Manstead, 2008). Recent representations of the TPB model are presented with background factors under general categories of individual, demographic, and societal factors. Comparisons for how the model is used indicated that these categories may be presented specific to the problem being studied. For example, a study of decision to drink alcohol or to eat junk food may

illustrate environmental factors of diagnosis, stress, and media exposure as background factors. In another study examining the factors influencing fertility decisions societal factors of social norm, culture, economy, and political context were important background factors for making this decision.

Use of TPB in Research Applications

The TPB was developed to help understand human social behaviors and assist in developing behavior change interventions (Ajzen, 2014). For this reason, the TPB is very applicable to understanding the beliefs influencing influenza vaccination among the population studied. While the TPB suggests interrelationship between beliefs, attitudes, intention, and behavior, the theory has been criticized for its application using cross-sectional designs (Godin & Kok, 1996) with the associated problems. The argument is that cross-sectional designs require the use of questionnaires which profoundly contributes to the connectivity between beliefs, attitudes, intentions and behavior and introduces consistency biases (Budd, 1987). Also, the strong connection between behavioral measures and intention may be an expected relationship since past behavior has the tendency to predict future behavior (Armitage & Conner, 1999). Godin and Kok (1996) concluded that the TPB clarifies intention and suggests that behavioral control and attitude are equally as important in predicting health-related behavior. Psychometric evaluation of TPB constructs indicate only internal reliability, and with cross-sectional measurement of TPB constructs one is unable to test causal factors to connections between belief, attitude, intention, and behavior. Also, the normative element of the TPB

has been exclusively identified as the weakest predictor of intent in the TPB (Van den Putte, 1991).

The theory primarily supports quantitative studies and the TPB questionnaires which uses likert-like scales to solicit answers from study participants; however, several studies have successfully applied the TPB to qualitative approaches. According to Ajzen, (2014) the constructs of the TPB model that would wholly support qualitative measurements are behavioral, normative, and control belief factors.

TPB in Previous Qualitative Studies

The TPB framework was used in a recent study exploring the influence of a physician's behavioral, normal, and control beliefs on their prescribing decision (Tsiantou et al., 2013). The data collection tool was constructed from TPB and collected data from focus group sessions of general practice physicians in select geographical areas in Greece. The questionnaire specifically collected qualitative data related to general, behavioral, normative, and control beliefs regarding prescribing. Using content analysis insight into physicians' beliefs on prescribing was provided, in addition to new data on the role of patient's families and isolated occurrences affecting prescribing behaviors, as well as policy implications.

In another qualitative study, researchers used the TPB to understand the beliefs of overweight adolescents where behavioral, normative, and control beliefs regarding losing weight, exercising, and healthy eating among overweight adolescents were explored (Rhoades, Al-Obali Kridli, & Penprase, 2011). Purposive sampling was used to obtain the

10 overweight adolescent Participants, and the TPB provided the framework for individual semi structured interviews. Interview questions addressed outcome, behavioral control, social referent, facilitators, and barriers (Rhoades, Al-Obali Kridli, & Penprase, 2011). Content analysis based on TPB constructs were used to build themes. These themes highlighted attitudes, social norms, and perceived behavior control relative to intent to exercise and eat healthy for purposes of weight loss. Additionally, the TPB as used in this study highlighted the importance of family to support behaviors toward weight loss, and provided additional considerations in developing interventions for addressing overweight in children (Rhoades, Al-Obali Kridli, & Penprase, 2011)

The TPB was also used in a qualitative study where researchers examined women's beliefs about being diagnosed with coronary heart disease and their response to the recommended coronary rehabilitation (CR) program as a part of their treatment plan (Sherwood and Povey, 2011). Significant attention was placed on how these beliefs influence CR completion to address barriers and facilitators (Sherwood and Povey, 2011). Ten female cardiac patients were interviewed. Five of the 10 had finished rehabilitation and the other five left the program. Data were collected through semistructured interviews of the women. The major constructs of the TPB were used to guide the interviews. Themes were developed separately for women completing CR and those not completing CR. Findings from this study pooled very detailed findings on each set of women based on the subjective data. New information advanced existing research

on education, lifestyle control, support needs, and views on the value of CR (Sherwood and Povey, 2011).

TPB Constructs Application to Key Concepts Studied

The TPB constructs are the person's behavioral beliefs, normative beliefs, and control beliefs in performing a particular behavior (Ajzen, 2012). Influenza vaccination uptake intentions may be explained by the TPB. When influenza vaccination is interpreted in the context of the TPB an individual's beliefs toward influenza vaccination behavior and their evaluations of the consequences of being vaccinated influences their attitude toward getting the flu shot. This is the individual's behavioral belief. In continuing the TPB application to influenza vaccination, social factors such as the influence of important others (friends, relatives, and healthcare providers) also strongly influences the willpower to seek flu immunization. This is the person's normative beliefs or social norm, which is further facilitated by motivational factors (Ajzen, 2012) such as trust in the healthcare system (Harris, Chin, Fiscella, & Humiston, 2006) and information about the vaccine and its effectiveness (Daniels et al., 2004). If the individual believes that there is support for influenza vaccination, and have the ability to obtain the flu shot then vaccination is more likely (Ajzen, 2012). This defines the person's behavioral control. The stronger the impact of these factors comprehensively, the greater the intent toward the behavior and ultimately leads to obtaining the flu vaccination (Ajzen, 2012).

Application of the TPB will answer this study's research questions exploring the contributing behavioral beliefs, normative beliefs, and control beliefs affecting flu

vaccination among older African Americans. TPB application to this study (see Figure 1) infers that an individual's behavioral beliefs and their perceived behavioral effects influence their attitude toward getting the flu shot. Both normative beliefs (the opinions of important associates) and the individual's enthusiasm toward compliance with recommendations (positive or negative) forms the subjective norm for getting the flu shot. The perceived control and power the individual has over carrying out the process of obtaining the flu shot determines the person's perceived control over getting the flu shot. The person's attitude toward the flu shot along with the subjective norm and perceived control determines intent toward getting the flu shot. The greater the actual control over the process to more likely that the person will get the flu shot. This study using the TPB will increase understanding of the phenomena and advance the current literature on explaining cultural disparities in influenza vaccination rates.

TPB Utility in Influenza Studies

Gallagher and Povey (2006) utilized the TPB in exploring factors that predict older adults' plans to be vaccinated against influenza in a quantitative study. The study participants were European American male and female (n = 77 and n = 116 respectively) Irish adults between 65 and 88 years who completed a questionnaire geared at determining future intentions for influenza vaccination. The TPB was selected as the theoretical framework due to its success in influencing health behavior change. Twelve participants were initially interviewed to understand their beliefs about vaccination and to

develop the questionnaire. Study participants were recruited using the snowballing sampling technique conducted at three community centers (Gallagher & Povey, 2006).

The variables tested were beliefs, norms, perceived behavioral control, and vaccination activities over the last four years (Gallagher & Povey, 2006). The 7-point TPB questionnaire format used for quantitative studies was applied. Data analysis used multiple regression analysis of study variables along with Pearsons product-moment correlations. Overall intentions toward vaccination against the flu in the upcoming year was primarily positive among participants. These intentions were supported by the results of the Pearsons product moment correlations in measuring TPB variables relative to the anticipated regret variable. Utility of the TPB to predict intent along with additional relevant variables such as access and fear of needles, were also analyzed indicating a fit that is satisfactory with a 48% variance in intentions to vaccinate (Gallagher & Povey, 2006).

Researchers in another quantitative study applied the TPB to predict health care workers' intentions to get vaccinated and explored variances influencing this behavior (Godin, Vezina-Im, & Naccache, 2010). The logistic regression analysis of the data collected from the 424 Participants to the self-administered questionnaire indicated that the strongest predictor of behavior was intention, and when moral norm was associated with intention, there was an increase in the predictive behavior measure. Extending the TPB, the variances of attitude, self-efficacy, professional norm, subjective norm, and

moral norm explained 89% of the difference in intentions for influenza vaccination (Godin, Vezina-Im, & Naccache, 2010).

Influenza

Influenza is an infectious viral respiratory illness manifested by the influenza virus and may be quickly spread when individuals come in contact with infected respiratory droplets (CDC, 2013b). Illnesses associated with the flu varies from mild, severe, to even death causing health problems such as dehydration, pneumonia, and deterioration of persistent illnesses such as heart disease, diabetes, and asthma (CDC, 2010; CDC, 2013b; Flu.gov, 2014).

Biology of Influenza

Influenza epidemic in humans are caused by two subtypes of Influenza *A* (*H1N1* and *H3N2*) and *B* viruses existing simultaneously and affecting populations around the globe since 1977 (CDC, 2013a). As influenza *A* virus antigens change during viral replication mutations an *antigenic shift* occur resulting in mutations and new influenza *A* virus variations are formed (Cox & Subbarao, 2000; Flu.gov, 2014). Additional genetic variation in both influenza *A* and *B* viruses also occur with mutations and causes an *antigenic drift* (Cox & Subbarao, 2000) thus allowing influenza viruses to move from animals to humans (Flu.gov, 2014). The only method of reducing infection with the influenza virus is to establish immunity; however, immunity is very specific to the antibody developed for specific viruses (CDC, 2013a). Since immunity cannot be

established, influenza vaccination formulations are adjusted each season as a result of these antigenic variances with a goal of controlling seasonal epidemics (CDC, 2013a).

Burden of Disease

Influenza epidemics cause substantial amounts of illnesses and deaths every year (Molinari et al., 2007) with majority of influenza illnesses occurring yearly from fall to spring (CDC, 2013a). Data directly related to influenza includes pneumonia, respiratory diseases, and circulatory problems and when reported include these conditions (CDC, 2010; CDC, 2013; Cox & Subbarao, 2000; Simonsen et al., 2005; Thompson et al., 2004).

Data from National Hospital Discharge Survey (NHDS) and the World Health Organization (WHO) were used to determine the hospitalizations that occurred from influenza viruses spanning from 1970-1980 through the 2000-2001 influenza seasons (Thompson et al., 2004). The findings indicated measurable increases in the rates of influenza connected hospitalization in people aged 65 years and older (Thompson et al., 2004). Another study using National Respiratory and Enteric Virus Surveillance System (NREVSS) data, the International Classification of Disease codes, and the National Vital Statistics System, indicated that seasonal influenza epidemics that occurred between 1979-1980 and 2000-2001 resulted in a total yearly influenza-related U.S. hospital admission ranging from 55,000 to a high of 431,000 (CDC, 2013a). During the 1976-1977 and 2006-2007 seasons annual flu related mortality rates ranged from approximately 3,000 to a concerning 49,000 each flu season (CDC, 2010; CDC, 2013a).

However, within the same 31 influenza seasons from the 1976-1977 through the 2006-2007 flu seasons, 90% of annual influenza associated respiratory deaths nationally was observed in individuals 65 years and older, with an annual average of 21,098 influenza-associated deaths (CDC, 2010; CDC, 2013b; Flu.gov, 2014). It has been predicted that the numbers of influenza related hospitalizations and deaths would continue to increase due to the aging of the American population with recommendation for further efforts toward influenza illness prevention for high risk populations (Thompson et al., 2004).

Influenza Pandemics

Seasonal influenza results in epidemics and pandemics every year. An *epidemic* is described as an outbreak of a disease that is specific to a geographical location (Cox & Subbarao, 2000) while a *pandemic* is defined as an epidemic that affects a large geographical area across international borders, affecting several areas of the world simultaneously, and impacting a large amount of people (Doshi, 2011). The three worldwide pandemics resulting in high morbidity and mortality were: the 'Spanish flu' (1918), followed by the 'Asian flu' (1956), and finally, the 'Hong Kong flu' which occurred in 1968 (Simonson, 1999). The Spanish influenza *A H1N1* pandemic which occurred between 1918 and 1919 was said to have originated in China (Cox & Subbarao, 2000) with simultaneous epidemics of very high virulence occurring in North America, Europe, and Africa (Crosby, 2003). In 1957 the Asian influenza *A H2N2* pandemic began in China, spreading to Singapore and Hong Kong in a matter of a month (Stuart-Harris, Schild, & Oxford, 1985, as cited by Cox & Subbarao, 2000). By November of 1957 the

virus had reached worldwide pandemic proportions (Glezen, 1996). According to Cox and Subbarao (2000) the Hong Kong influenza *A H3N2* pandemic occurred in 1968 and was accompanied by excess deaths in the United States. The Spanish flu *A H1N1* pandemic remains the most severe, resulting in over 20 million deaths globally (Simonson, 1999).

On April 17, 2009, the *A (H1N1)* virus was identified in two children living in nearby counties in Southern California (CDC, 2009a). The children were found to have a new strain of swine influenza virus with no known source of infection (CDC, 2009a). By April 23, numerous established cases of swine flu virus similar to the strain found in the two children in California were reported to the Pan American Health Organization (CDC, 2009b).

The World Health Organization announced in June of 2009 the existence of a new influenza *A* virus not known to human transmission. This new virus was later confirmed as the 2009 H1N1 influenza pandemic (Chan, 2009). This very contagious influenza virus had quickly spread globally with close to 30,000 cases worldwide (Chan, 2009). As a result of the age range affected by this outbreak, the Advisory Committee on Immunization Practices (ACIP) recommended influenza vaccination during the 2009-10 influenza season for persons 6 months and older (Fiore et al., 2009).

Influenza-related Illnesses and Deaths

Influenza disease and its sequelae result in over 200,000 hospitalizations and more than 36,000 lives lost yearly (HealthyPeople.gov, 2013; Herbert, Frick, Kane, &

McBean, 2005; Molinari et al., 2007; Monto, 2008) primarily affecting persons 65 years and older with persistent or long-term illnesses such as heart disease, diabetes, and asthma (Avelino-Silva et al., 2011; Cai, Feng, Fennell, & Mor, 2011; CDC, 2013a). Seniors and persons with long-term illnesses most often experience complications once infected with the influenza virus (Flu.gov, 2014; Lu, Singleton, Euler, Williams, & Bridges, 2013). A retrospective analysis of data from the 1996-2000 influenza season from managed-care organizations indicated that among adults 65 years and older with long-term illnesses that could result in influenza associated complications, there were 560 flu associated hospitalizations in every 100,000 individuals (CDC, 3013a). Individuals without long-term illnesses in this same age group had 190 hospitalizations per 100,000 individuals during the same influenza season (CDC, 3013a). As we age the immune system deteriorates, placing ill persons 65 years and older at greater threat for influenza-related complications (Flu.gov, 2014). In the 2012 to 2013 flu season alone more than 381,000 of hospitalizations were due to influenza associated causes (CDC, 2013b). Between October 3013 and March 2014, there were 31.7 laboratory confirmed cases of influenza per 100,000 population with the highest rate of hospitalizations seen among adults 65 years and older (CDC, 2014a).

Vaccine Recommendations

Vaccination is the recommended strategy to avoid the flu and related effects on the burden of mortality and morbidity on the population (WHO, 2014; Avelino-Silva, 2011; Cai, 2011; Lu, 2013). Vaccination is especially effective in reducing vaccine

preventable illnesses and deaths among high risk groups such as the elderly (Cornford & Morgan, 1999; Evans, Prout, Prior, Tapper-Jones, & Butler, 2007; Telford & Rogers, 2003). Vaccination against the flu reduces influenza-related illnesses by 55%, hospitalizations by 50% (Evans et al., 2007), and influenza complications by 70% in the elderly population (Cornford & Morgan, 1999). The ACIP recommendations since 2010 has been flu immunization for all persons 6 months and older for preventing the flu (CDC, 2013a; Lu et al., 2013). Notably, the 2012-2013 influenza season influenza vaccination resulted in 17% less hospitalizations, a reduction of flu illnesses by 6.6 million, and 3.2 million less medical evaluations (CDC, 2013a). An increase in vaccination rates would have further reduced the burden of influenza related illnesses and hospitalizations (CDC, 2013a).

Disparities in Influenza Vaccination

Medicare reimburses medical providers for influenza vaccination and have done so since May of 1993 (CDC, 2004; CDC, 1995). In addition, part B beneficiaries are not required to submit a copayment for this vaccine (CDC, 2004, CDC, 1995). These policy changes have been a prime factor in decreasing barriers to influenza vaccinations, making them more accessible and affordable. Improved access to influenza vaccination has resulted in increasing rates over the years; however, the rates of flu vaccination in aging African Americans have remained lower than for European Americans (Schneider, Cleary, Zaslavasky, & Epstein, 2001).

In 2002, more than 30% of adults older than 65 years was not immunized against the flu (CDC, 2002). According to data collected from the National Health Interview Survey (2002) influenza vaccination uptake among European Americans and Africans in the same age group was 69% and 51% respectively during the 2002 flu season. During the influenza vaccination seasons between the years 2007 and 2011 the percentage of Non-Hispanic European Americans 65 years and older vaccinated against influenza saw an average uptake of 73% (CDC, 2012). In those same influenza seasons the rates in non-Hispanic African Americans increased from 60% in the 2007-08 influenza season to 63.8% by the end of the 2008-09 season and then saw a decline to a low of 55-56% in the following two influenza seasons between 2009 and 2011 with an average of 59% vaccination uptake (CDC, 2012). Vaccination coverage for adults 18 years and older also increased by approximately 2.2% each year from 27.4% in the 2005-2006 influenza season to 38% during the 2010-2011 season (Lu, Singleton, Euler, Williams, & Bridges, 2013). Across all age groups there was an average of 10-12 percentage points increase except among adults aged 65 years and older (Lu et al., 2013). For adults in this age group with like economic and social influences, healthcare access and utilization, it was found that attitudes toward immunization impacted existing cultural disparities in flu vaccination (Lindley, Winston, & Bardenheier, 2006; Wortley, 2005; Bratzler et al., 2002).

Influenza Vaccination Disparities among Older African Americans

It is well documented that older adults are at greater risk than other age groups for complications from influenza, but older African Americans are even higher in the risk category for influenza-related complications primarily as a result of higher rates of chronic disease in this racial/ethnic group (ALA, 2010; Frank & Grubbs, 2008). Furthermore, there has been a decline in the number of African Americans getting the flu shot between 2007 and 2008 from 55.3% to 50.4%, and the combined data taken over the last 11 years showed that 28% less African Americans than European Americans on average get vaccinated with the flu vaccine (ALA, 2010). When compared to European Americans, African Americans 65 years and older are 16% more probable to die from heart disease, 55% more probable to die from asthma, and 114% more probable to die from diabetes (ALA, 2010). According to the American Lung Association (2010) in 2006, 7% more African American men were more likely to die from influenza and pneumonia than European American males of a similar age range. These numbers raise strong concern for the disparities in flu immunization amongst aging African Americans since more elderly people are living longer with chronic conditions, and if not addressed will result in steady increase in influenza-associated deaths within approaching years.

Education of African Americans regarding influenza vaccination did not seem to have an effect on the rates, even when barriers to care such as access has been removed (Hebert, Frick, Kane, & McBean, 2005). Similarly, the vaccination rates remained low even with healthcare utilization and socioeconomic status similar between racial groups.

The differentiating factors consistently observed were attitudes and beliefs related to influenza vaccination (Linley, Winston, & Bardenheier, 2006; Wortley, 2005; Bratzler, et al., 2002). Other identified factors were access issues during influenza seasons, and awareness and behaviors of healthcare providers in vaccination encounters (Herbert, Frick, Kane, & McBean, 2005).

In one study of elderly persons who had never been vaccinated against influenza, researchers noted that a majority of the unvaccinated participants were African Americans (Sambamoorthi & Findley, 2005). According to the Office of Minority Health (2012) in 2009, 30% fewer African Americans than non-Hispanic European Americans ages 65 years and older got the flu vaccine. Under-vaccination among African Americans in comparison to European Americans was seen even in managed care settings where the evidence indicates higher vaccination rates overall than in a fee-for-service environment (Schneider, Cleary, Zaslavsky & Epstein, 2001; Lin, Musa, Silverman, Degenholtz, 2005). The rates of flu immunization among ageing African Americans have remained lower than of European Americans (Schneider, Cleary, Zaslavsky, & Epstein, 2001). If African Americans were vaccinated at the same rate of European Americans there would be a decrease in influenza deaths of more than 25% resulting in more than 1,800 lives saved (ALA, 2010; Fiscella, Dressler, Meldrum, & Holt, 2007).

Beliefs, Attitudes, and Perceptions Related to Flu Vaccination

A qualitative study conducted by Evans, Prout, Prior, Tapper-Jones, and Butler (2007) in South Wales, England, aimed to explore beliefs of older lay persons about

vaccination for purpose of improving vaccine uptake among this group. Narrative interviews were conducted on 54 participants, ages 65 years and older. Of the 54 interviewed, 15 were vaccinated, 18 have always refused even though offered, 16 had previously been vaccinated but were not currently vaccinated, and five had never been offered influenza vaccination and had never been vaccinated for influenza (Evans et al., 2007). Interview questions addressed Participants' beliefs, views, and attitudes about influenza vaccination. The questions were developed to solicit feelings about the participant's perceived influenza risk, effectiveness and side effects of the vaccine, self-reported health status, immunization processes, and the involvement of friends, families, and health care providers (Evans et al., 2007) as social influences. Although a theoretical framework was not referenced in the study, these variables are similar components of the TPB and gathered data to suggest utility of the model in addressing behavior change in flu immunization adults ages 65 years and older. Immunized and unimmunized persons in this study equally felt that they would not get influenza illness, and even if they were infected with the influenza virus they would have a mild case of it (Evans et al., 2007). The majority of those who refused the vaccine felt offended by using age as a requirement for influenza vaccination since they felt they were healthy and may be immune to the illness, were concerned about vaccine side effects but would concede to taking the vaccine if advised by their health care provider, or encouraged by friends and family (Evans et al., 2007). The implications of this study were that lay beliefs are important considerations for influenza vaccination, and health care providers should

address beliefs about susceptibility to flu associated illnesses. Also consideration to ageism is suggested especially in persons who view themselves as healthy and do not accept that they may be vulnerable to the flu due to age (Evans et al., 2007).

In another qualitative study also done in Wales, researchers conducted semi-structured interviews of 50 patients over 75 years old to measure how beliefs or perceptions influence attitude toward influenza vaccination (Cornford & Morgan, 1999). Half the participants were vaccinated and the other half had not been vaccinated against influenza infection during the previous influenza season (Cornford & Morgan, 1999). Participants were selected through random selection from computerized records of three physician practices, and participants met the selection criteria if they were 75 years and older and had a high risk condition. Interviews were conducted between April and July which is outside of the influenza season to reduce any bias that would increase intent to vaccinate (Cornford & Morgan, 1999). Basing the study on views about health and health maintenance the interview questions were directed at gathering data regarding individual participants' perceptions of their own health, healthy living, and the benefits of and risks of influenza vaccination (Cornford & Morgan, 1999). Data analysis was completed by the QSR NUD*IST software package for categorizing and building themes.

Most study Participants had positive self-perceptions of their health even with existing high risk conditions, since they were independent and had social connections (Cornford & Morgan, 1999). Their decision to obtain the influenza vaccination was determined primarily by their views on whether the vaccine prevented or caused colds or

influenza and other side effects. Participants did not indicate any barriers to influenza vaccination such as availability, distance, or transportation. The study placed emphasis on the relationship between beliefs and performance of the action of actually obtaining the vaccine, stating that patient's life history and experiences along with the experiences of others are better predictors of vaccination uptake (Cornford & Morgan, 1999). There is recommendation that messages to promote vaccination among this age group send more general statements rather than identifying age and risk categories (Cornford & Morgan, 1999).

Chen, Fox, Cantrell, Stockdale, & Kagawa-Singer, (2007) conducted a quantitative survey to examine the broadening disparity in influenza uptake between European Americans and Latino, African American, Filipino, and Japanese American (Chen et al., 2007). Participants for this study were parishioners aged between 50 and 75 years old of the five racial/ethnic groups listed above (Chen et al., 2007). The research utilized telephone surveys administered to members of 76 faith-based organizations in the cities of Los Angeles and Honolulu. Survey questions measured participants' perceptions toward their own predisposition and expected complications of influenza illness, along with barriers to influenza vaccination (Chen et al., 2007). Analysis of the data used multivariate logistic regression for race/ethnicity relationship to influenza vaccination in participants. The HBM was used in this study to explore perceived susceptibility to the flu and perceived severity of flu related illnesses. Researchers in this study found that persons who believed they were more susceptible and had concerns about the severity of

illness were more likely to be vaccinated. However, African Americans more than any other racial group expressed mistrust, believing that the flu vaccine caused illness. The researchers concluded that beliefs and health maintenance behaviors were predictors of influenza vaccination.

Cultural disparities in flu immunization among aging persons have been studied for potential causes. Hebert, Frick, Kane, and McBean (2005) collected data from a nationwide survey on health conducted by the Medicare Current Beneficiary Survey on health behaviors and medical service utilization of Medicare beneficiaries. The participants for this survey were beneficiaries 65 years and older, of European American, Hispanic, or African American origin, and who were surveyed in 1995 and 1996 for influenza vaccination uptake (Hebert, Frick, Kane, & McBean, 2005).

The three concepts of interest in this study were: resistant attitudes and beliefs, access to care, and provider discrimination. Logistic regression was used for data analysis. According to the researchers of this study African American and European American beneficiaries made regular visits to their health care providers at similar frequencies, but European American beneficiaries had higher rates of influenza vaccination than African Americans even when vising the same provider during the time period measured (Hebert, Frick, Kane, & McBean, 2005). More African American than European Americans stated that they thought influenza vaccine could lead to influenza illness (Hebert, Frick, Kane, & McBean, 2005). Overall more resistance to vaccination was observed in African Americans (30%) than in European American beneficiaries

(18%). More European American beneficiaries saw their medical provider during influenza vaccination weeks (68%) than African American (61%) with similar health care access among unvaccinated beneficiaries (Hebert, Frick, Kane, & McBean, 2005). During the influenza season studied, 278 African American beneficiaries made a medical office visit with their primary care provider compared with 1,127 European Americans. (Hebert, Frick, Kane, & McBean, 2005). Given that African American and European American beneficiaries saw the same provider, influenza vaccination rates were significantly higher in European American beneficiaries (70%) than in African American beneficiaries (35%). Examination of Medicare claims demonstrated that more European American beneficiaries initiated the encounter with their medical provider for the sole purpose of vaccination than African Americans (Hebert, Frick, Kane, & McBean, 2005). The vaccination rate for those beneficiaries regardless of race who initiated an encounter for reasons other than vaccination did not considerably differ by race and ethnicity, indicating that providers were offering the vaccine routinely during service (Hebert, Frick, Kane, & McBean, 2005).

Findings from the study indicated that African Americans demonstrated more resistant attitudes and beliefs than either European American or Hispanic beneficiaries with access and provider discrimination not bearing a significant reason for low vaccination rates (Hebert, Frick, Kane, & McBean, 2005). This finding indicated the need for exploration of the origin of resistant attitudes and beliefs and suggested that strategies such as provider reminder systems, public health messaging are potentially not sufficient

to motivate African Americans to get vaccinated. It was further suggested that future studies investigate the origins of resistant attitudes believed to have roots in the general lack of trust toward the health care community (Hebert, Frick, Kane, & McBean, 2005). Although the data used in this study is dated it continues to bring resonance today considering no significant improvement in flu vaccination rates for older African Americans.

Provider encounters where an influenza vaccine was not provided are labeled "missed opportunities" (ALA, 2010; Hebert, Frick, Kane, & McBean, 2005). These missed opportunities are complex issues that involve patient motivational factors (such as knowledge, attitudes and beliefs), provider office and practice protocols, and established health policies that involve both local and governmental systems requiring inquiry and elucidation (ALA, 2010; Hebert, Frick, Kane, & McBean, 2005).

Other research also established that racial disparities in influenza vaccination are not strongly as a result of access to care but indicate other related factors. Rangel et al. (2005) considered access in relation to racial disparities in influenza vaccination, using Andersen's behavioral model to specifically examine factors that predict health care access (Rangel et al., 2005, p. 426). The 1998 National Health Interview Survey provided data for the study. This health monitoring tool collects data from U.S. households through personal household interviews (NHIS, 2014). Study participants were European Americans, African Americans, and Hispanics 65–74 years of age. Analysis using multiple logistic regression models determined if access to care affected influenza

vaccination (Rangel et al., 2005). Findings of this study suggested that attitudes, beliefs, and perceptions influence vaccination uptake among African American elderly (Rangel et al., 2005). Barriers to vaccination may include past unfavorable experiences and mistrust of the health care community and research ethics beyond access issues (Corbie-Smith, 1999; LaVeist, Nickerson, & Bowie, 2000). Investigators in this study suggested additional research that explores attitudes and cultural respects as contributors to the existing disparities in influenza vaccination among minority populations (Rangel et al., 2005). Study limitations include self-reported surveys and data of national origin with minimal regional and cultural considerations.

In the study by Daniels, Juarbe, Rangel-Lugo, Moreno-John, and Pérez-Stable (2004) racial and ethnic knowledge, attitudes, and perceptions relevant to access were examined to explore their effect on influenza and pneumococcal immunization disparities particularly between European Americans and other racial and ethnic populations. The researchers in this study purported that insufficient information exists to explain the poor uptake of adult vaccination (Daniels et al., 2004). The study setting was in four community based Catholic churches in San Francisco, California. The research questions addressed (a) adult vaccination attitudes and perceptions of African American and Latino adults; (b) current vaccination education; and (c) African American and Latino perceptions of the faith-based setting as a venue for adult immunizations (Daniels et al., 2004).

Daniels et al. (2004) used a qualitative approach to solicit data to inform the research questions and employed focus groups in the language of preference for the participants. Interviews were conducted until data saturation was reached. Participants were selected by recruiting the interest of select faith-based leaders in primarily low socioeconomic neighborhoods with parishioner demographic of more than 50% African Americans or Latino attendance (Daniels et al., 2004). The 22 participants for the focus group were recruited by interested church leaders, then selected based on the selection criteria of age 50 or older, unimmunized within the past year and not routinely immunized, persons with a high risk condition, or 65 years and older and never vaccinated against pneumonia. According to Daniels et al. (2004, p. 1457) a total of 22 participants were selected with a mean age of 62 years. Three participants were European American, nine were Latino, and 10 were of African American origin. From the four themes regarding adult vaccinations that emerged from the data analysis the study found that participants were interested in health improvement, valued the advice of health care providers, and mentioned awareness, knowledge, and barriers (Daniels et al., 2004, p. 1457). Information about benefits and risks to include influenza and pneumococcal vaccine side effects were found to be inadequate among the adult participants in this study (Daniels et al., 2004). Furthermore, participants felt that their healthcare providers did not consistently recommend these vaccines even when existing health conditions indicated that they should be vaccinated (Daniels et al., 2004). Participants expressed the need for more information regarding these vaccines and agreed that churches would be a

convenient venue for vaccination outreach efforts pending adequate promotion, church leadership support, and convenience such as directly after Sunday services; however, negative attitudes about perceived safety of vaccines, and trust of the healthcare system persisted among African American participants (Daniels et al., 2004).

Social Factors and Barriers Related to Flu Vaccination

Social factors such as mistrust in the African American elder community towards the healthcare system seems to be a reality as discussed in the study by Harris, Chin, Fiscella, & Humiston, (2006). This qualitative study was conducted on 20 participants recruited from a largely African American community in Rochester, using purposive and snowball sampling (Harris, Chin, Fiscella, & Humiston, 2006). Of the 20 participants, 11 were vaccinated and nine reported to be unvaccinated against influenza and/or pneumonia. Data were gathered through semi-structured interviews to gather perceptions about the flu shot or pneumococcal shot, shots for children, reasons black persons do not get their flu or pneumococcal shot, trust in their physician, trust in medical institutions, and any information they may have heard about the Tuskegee Syphilis Experiment (Harris, Chin, Fiscella, & Humiston, 2006). The recurring themes generated from analysis of the data were prevention; vaccines resulted in illness; vaccines are unrelated to health; healthcare encounters; self-advocacy; and views of vaccines for children (Harris, Chin, Fiscella, & Humiston, 2006).

Vaccination status of participants did not indicate relevance to factors of mistrust of the medical system but depended instead on the specific institution with which the

participant was affiliated (Harris, Chin, Fiscella, & Humiston, 2006). Questions regarding trust in physicians revealed that 18 out of 20 participants trusted their doctor, but past healthcare experiences played a major role in influencing decisions toward vaccinations (Harris, Chin, Fiscella, & Humiston, 2006, p. 1682). Vaccinated elderly African American participants viewed vaccination as a prevention strategy and were important for health in general for themselves and others especially since it was recommended by their doctor (Harris, Chin, Fiscella, & Humiston, 2006). African American elderly participants who were unvaccinated held opposite views. They viewed vaccination as not preventive, caused illness, and not important to their health even if recommended by their trusted physician (Harris, Chin, Fiscella, & Humiston, 2006). Beliefs and perceptions about the healthcare delivery system that affect social trust among elderly African Americans from the south may be as a result of past experiences of racism and sanctioned segregation (LaVeist, Nickerson, & Bowie, 2000). However, very few participants mentioned the Tuskegee Syphilis Experiment as reasons for mistrust of the medical system and their decisions toward vaccination but cited this event and past negative experiences with the medical system are reasons for self-advocacy (Harris, Chin, Fiscella, & Humiston, 2006). This study is not generalizable because of participant demographics and the then 2004 influenza vaccine shortage as a result of vaccine contamination with Serratia in Britain. Additionally, the interviews were conducted by a physician of African American ethnicity with potential for response bias (Harris, Chin, Fiscella, & Humiston, 2006).

The implications for this study were that mistrust is not a significant influencing factor for influenza vaccination; however an amalgamation of sociocultural and past experiences with the healthcare system, and how those experiences are recalled may be significant in vaccine decisions (Harris, Chin, Fiscella, & Humiston, 2006). Historical injustices were shown to affect elderly African American views of the healthcare delivery system thereby strengthening self-advocacy (Harris, Chin, Fiscella, & Humiston, 2006).

Sengupta, Corbie-Smith, Thrasher and Strauss (2004) conducted another qualitative study to explore social factors that included community perceptions about barriers and facilitators for obtaining influenza vaccine. The researchers highlighted the strong influence of social referents or important others in the determination of whether or not they get vaccinated against the flu. The study was conducted among 28 elderly African Americans in Durham County, North Carolina. The participants were African American adults of age 65 years and older (mean age of 74.9 years) and who had health insurance. Thirteen of the 28 participants consistently obtained annual flu immunization and 15 were offered vaccine by their primary care physician but refused. Since there was insufficient evidence to explain the low rates of vaccination among elderly African American adults 65 years and older this study aim was to explore structural and interpersonal factors resulting in the decision towards vaccination. Study participants were obtained through convenience sampling and interviews were conducted until data saturation was reached. The interview questions were open-ended and generated answers to questions about benefits or risks of flu vaccination, facilitators of influenza vaccination

among older African Americans, and barriers to getting vaccinated among older African Americans. Data from the interviews were coded for emerging themes, ordering, and content analysis. Sengupta, Corbie-Smith, Thrasher, and Strauss maintained that the most common theme among structural facilitating factors was reminder systems (n = 19) and word-of-mouth in the community from other African Americans friends, family members, church, and pastors about the importance of getting the vaccine (n = 14). Only seven participants identified insurance as a positive structural factor influencing influenza vaccination. Knowledge about influenza and its potential severity ranked high on the personal facilitator themes identified and served as a strong motivator for vaccination (n = 17). Only six participants considered their high risk condition as being reason for influenza vaccination, and 11 participants used their age as a factor. Of the 28 participants, 24 believed that the influenza vaccine prevented the flu and 12 believed that the vaccine lessened flu-related symptoms.

According to Sengupta, Corbie-Smith, Thrasher, and Strauss, social norm barriers to getting the flu shot were also word-of-mouth in the community from friends, at frequented areas such as barber shops, and ministers to not get vaccinated (n = 20) Education about influenza was important to 13 participants and was seen as a barrier for flu vaccination among elderly African Americans, and 21 participants felt that the flu vaccine could result in the flu.

The study of this particular sample of African American population resulted in uncovering word-of-mouth as one of the most powerful factors that play the role of both

a barrier and facilitator in influenza vaccination. Attention is directed at the importance of the effects of prior vaccination experiences in predicting future responses to vaccination and conversations around this issue in the community. The researchers of this study additionally suggested that educational campaigns and provider/patient interactions that occur before the flu season should address a major concern among social norms that the vaccine could cause the flu.

Older African American's beliefs regarding influenza vaccination, and the role of healthcare providers as a social influence in the intent to vaccinate can also be explored by researchers who conduct studies that query otherwise unknown issues on this subject. Wray et al. (2007) conducted a qualitative formative research study addressing the barriers to flu vaccination among older African Americans by conducting focus groups and comprehensive interviews among both healthcare providers offering vaccine, and African American participants 50 years of age and older. Participants for the study *(n* = 9) were selected by convenience sampling. They were recruited and took part in structured focus groups and interviews geared to evaluate their knowledge, beliefs, norms, and intentions toward vaccination uptake. Local providers were also interviewed, and one focus group of providers was also conducted.

Findings from the study showed that participants had insufficient information about influenza and who needed the vaccine. Participants saw the importance for children but felt that they were not susceptible to getting the flu and as a result did not need it. They also were unaware of the potential harm of the disease to include death in certain

high risk individuals. There were mixed opinions about vaccine efficacy. Some participants believed that the vaccine prevented the flu but others indicated that people still got the flu even after getting the vaccine or that the vaccine can cause the flu. A common belief was that personal hygiene and staying away from ill persons were more effective than vaccination. A common but unexpected finding was that participants were fearful of vaccine and prescribed medication drug interactions. Providers appeared to be unaware of this finding. Influenza immunization rates were shown to improve when participants were educated by a physician and offered the vaccine and was the strongest motivation for flu immunization among all participants. Wray et al. also found that although African Americans distrust the healthcare system, they trust their primary physician and would like more influenza education from their physician to address their concerns about influenza vaccine.

A comprehensive review to determine barriers to recommended immunizations was conducted by Johnson, Nichol, and Lipczynski (2008) through more than 2,000 adult and 200 provider structured telephone surveys in the U.S. 2006. The researchers in this study sought to gather information on broad understanding and feelings about influenza, tetanus, and pneumococcal vaccines which are the three routinely recommended vaccines for adults. A secondary outcome of the surveys was the role of healthcare providers as a social influence in the intent to vaccinate The results of this study indicated that many adults who do not receive recommended vaccines state that they were not aware that healthy people need immunizations such as the influenza vaccine but would get

vaccinated if it were recommended by their primary care provider. Providers who participated in the survey stated that discussions about vaccinations usually occur during well visits rather than service provision when the patient is ill and are more focused on urgent health concerns during office hours. The data analysis also indicated that 66% of providers felt that patients did not desire vaccines due to fear of needles, concerns about side effects, and fear of vaccine side effects, while adult participants of this study did not mention these factors as major reasons for lack of vaccine uptake. Fifty to 60% of providers also believed that cost was a barrier while only 13% to 15% of participants listed cost since both influenza and pneumococcal vaccines have been a covered service since 1993 and 1981 respectively (CDC, 1997).

The quantitative study conducted by O'Malley and Forrest (2006) engaged a comprehensive review of Medicare beneficiaries to assess patients, doctors, health care community, and locality affect influenza and pneumococcal vaccination rates. The information gathered was intended to explain both belief and social factors related to recommended adult vaccines. Data were collected on more than 18,000 non-institutionalized Medicare beneficiaries surveyed through the 2000–2002 Medicare Current Beneficiary Surveys (MCBS). Data were also gleaned from accompanying Medicare claims, survey data, and local information. Participants selected for the study were non-institutionalized African Americans and European Americans 65 years and older covered by Medicare, and who had a regular physician. The dependent variable was flu immunization within a year. Independent variables included demographic data, health

status, health-seeking attitudes, insurance status, etc. The questions in the MCBS of interest to the study were those that probed healthcare seeking attitudes. Providers were assessed on their accessibility and information giving and area-level factors were measured by the medical culture of that reason, i.e., provider availability, socioeconomic status of local population. Chi-square and *t*-tests were used to evaluate for bivariate and stratified analyses, and hierarchical logistic regression models assessed for significant clustering.

The study results showed Black beneficiaries with the most dissatisfaction toward accessibility of providers and quality of health information provided during interactions. Fewer African Americans (54%) than European Americans (71%) received the flu vaccine in the preceding year. Overall, beneficiaries who had a regular source of care and a consistent provider who was accessible and who was able to effectively communicate health information messages were more likely to be vaccinated than those who experienced the opposite. Researchers in this study suggested that the low socioeconomic status, educational level, and lack of secondary insurance among African Americans in comparison to European Americans may have played a role in this disparity but also propose that other factors not addressed in this study may account for the disparities as well. In fact, the researchers suggested that the variables measured in this study only explained 10% of the existing racial disparity. The study researchers recommended that additional exploration of vaccination knowledge, beliefs, and attitudes. Some of the

suggested topics include issues of trust and communication between patients and providers.

The literature review above has indicated that older African Americans have lower rates of influenza vaccination compared to other race/ethnicities despite having access and influenza education. Findings from several studies also indicate that African Americans have demonstrated more resistant attitudes and beliefs toward influenza vaccination than either European American or Hispanic beneficiaries in the same age group. Finally, mistrust has not been fully substantiated as a sole or strong contributor to low influenza vaccination rates among this group. These findings support the need to explore suggestions for additional research into lay beliefs, origins of resistant attitudes, cultural aspects, past experiences with influenza vaccination, and the influence of others as contributing factors to low influenza vaccination rates among older African Americans.

This study's research questions address the behavioral beliefs, the normative beliefs, and the control beliefs that affect flu vaccination uptake among older African Americans. In this study, phenomenology as an approach to guide in-depth interviews within the framework of the TPB's constructs of behavioral beliefs, normative beliefs, and control beliefs affecting behavior are meaningful in its ability to answer the research questions.

Phenomenology

The methodology for this study used phenomenology to explore the lived experiences of older African American as they relate to influenza vaccination. This methodology is frequently used in studies to gain an understanding of the perspective of persons undergoing an experience common to the group of interest by obtaining the essence of these lived experiences. For this study, Moustakas's (1994) transcendental phenomenology, which he adapted from German philosopher Edmund H. Husserl, was utilized to form a rich description of the experiences of participants using epoche (or bracketing). Husserl's use of transcendental phenomenology emphasizes how people describe and experience situations (Patton, 2002). Transcendental phenomenology as a reduction allows the researcher to explore the basic origin of the experience in the purest form without alterations or being prejudged. Moustakas (1994) uses a structured approach to phenomenological studies that include ensuring that there is a shared experience under study, identifies a specific phenomenon of interest, uses epoche, and collects data from participants who have shared a common experience. Epoche allows the researcher to identify his or her own position or views of the phenomenon of interest through isolation and reflection, encourages an openness to the perspective encountered in the process of the research study (Creswell, 2013). Moustakas (1994) based his approach to phenomenology from the viewpoint that the object that one visualizes is a perception of that object and may not be really what it seems but instead an interpretation of that phenomenon. A person's perception of the object or phenomenon is dependent on

their vantage point and the meaning the experience invokes. The perception of a phenomenon and the meanings derived from it forms the intentionality of the experience and is described by textural and structural measurements of the phenomena (Moustakas, 1994). The questions are broad and general and encompass two general areas: (1) the experience of the phenomenon in terms expressed by the participant, and (2) the contexts influencing how the phenomenon is experienced (Moustakas, 1994). This qualitative approach has been used extensively by researchers wanting to shed light on the experiences of persons in certain situations from a perspective that would otherwise be misunderstood or remain questionable.

Phenomenology was used in a study directed at discovering the lived experience of Black masters students enrolled in a counseling program at a predominantly European American institution, where researchers conducted a qualitative inquiry to understand these experiences to inform current institutional cultural practices in similar settings (Haskins et al., 2013). Eight participants were recruited for the study using purposive sampling. All participants were Black, enrolled in the counseling program, and had completed at least 12 credit hours. The researchers used bracketing to reduce bias and to become cognizant of their own position on Black students in a predominantly European American institution. Focus group interviews were used to gather data for this study because of the interest in gaining group induced thoughts. The focus group sessions involved a pre-focus group meeting and debriefing at the end of the two 60-minute group sessions (Haskins et al., 2013). The data collection followed Van Manen's (1997) six

element process of phenomenology qualitative framework which examines the (a nature of the lived experience, (b) the actual experience as it happened, (c) reflecting on major themes, (d) writing and re-writing of the description of the phenomenon, (5) maintaining connection with the phenomenon, and (6) considering each segment and how these fit with the whole experience. The researchers transcribed audio-recordings, coded the data, and used a peer reviewer to conduct final evaluation of the data to further reduce bias (Haskins, et al., 2013). Trustworthiness was developed through triangulation, bracketing, extensive involvement with the participants, peer debriefing, and member checking (Haskins et al., 2013, p. 167).

The data analysis revealed five themes: isolation, tokenization, and a curriculum exclusive to European American perspectives, Black versus European American faculty support, and differences in Black versus European American peer support (Haskins et al., 2013, p. 167). The findings from this study was found useful in advancing current research on the subject but was also important in identifying areas where Black students may need support in such settings to increase satisfaction with the experience, and also to incorporate cultural perspectives and dialogue in university settings. Researchers in this study further uncovered new data such as "proactive" and "reactive" faculty support in the context of engagement with students of color (Haskins et al., 2013, p. 167).

Researchers also used phenomenology in another study exploring what it means to have a sport injury among college athletes to help bring meaning to this experience (Grindstaff, Wrisberg, & Ross, 2010). The study participants consisted of five athletes

between the ages of 18 and 22 years old who had a prior diagnosis of a sport injury that had prevented participation in the sport for a minimum of 30 days (Grindstaff, Wrisberg, & Ross, 2010). Four major themes (perspective, emotion, relationships, and coping) were formed from the data analysis (p. 129). The result of the study was useful in providing insight into what it means to experience a sport injury. The study explained the athletes' personal views of the experience from both a positive and negative position, the psychological factors that interplays with the experience, and how the athletes managed the challenges brought about by the injury. Finally, the study researcher was able to use phenomenology to describe the roles of the persons closest to the athletes and their effects (Grindstaff, Wrisberg, & Ross, 2010). The phenomenological approach utilized in this study allowed for a keen insight into how sport injury was experienced by athletes studied on a personal level and the impact of their environment on this experience. The researchers suggested that additional understanding may be achieved if a broader array of athletes injured in other settings is utilized in future studies of this nature (Grindstaff, Wrisberg, & Ross, 2010).

Transcendental phenomenology was used in this study to emphasize how study participants describe and experience influenza vaccination as a shared phenomenon through the use of broad interview questions. These questions explored both textural information and the structural context of the phenomenon to obtain rich descriptions. An interview guide (see Appendix A) was used to ensure that the questions addressed both textural and structural data collection within the TPB framework. Participants were

encouraged to give their personal accounts of experiences with flu vaccination and the environment or context in which it was experienced to shape their current beliefs about the phenomenon.

Summary

To summarize, influenza illnesses cause higher morbidity and mortality in older African Americans. African Americans demonstrate lower rates of influenza vaccination even with access to care, health care services utilization similar to European Americans, and influenza vaccine education. This discovery points to the need for older African Americans to increase uptake of flu vaccination to decrease flu-related human and economic losses. The TPB provided the framework from which to study the research questions as this model explains the relationship between beliefs, intent, and behavior as it relates to flu vaccination. Beliefs, attitudes, and perceptions are important factors related to flu vaccination. Qualitative studies have identified considerations for lay beliefs about susceptibility to flu associated illnesses, relationship between personal beliefs and getting the flu vaccine, and the importance of personal stories and experiences as a predictor of vaccination uptake. Other studies identified mistrust of the vaccine as a social barrier toward the vaccine, believing it caused illness. Resistant attitudes and beliefs, the need for more information, and better communication with providers about flu vaccination were also seen as deterrents to flu vaccination. An amalgamation of sociocultural and past experiences with the healthcare system and how those experiences

are recalled may have developed the need for self-advocacy among older African Americans. Finally, access to healthcare was not seen as a barrier to vaccination.

The literature review identified the research gap which indicated the need for additional qualitative exploration to determine behavioral beliefs, normative beliefs, and control beliefs as contributing factors to the current cultural disparities in flu immunization by offering the perspectives of older African Americans themselves. The gap in literature was addressed in this study by applying phenomenology as a qualitative approach to explore the expressed reasons for low vaccination among older African Americans to obtain a description of the phenomenon, and get a deeper understanding of the experience of influenza vaccination. Qualitative studies examining the problem of low influenza vaccination among older adults have used the health belief model and health maintenance. The TPB was the theoretical framework used in this study. This study appears to be among the first to use the TPB and phenomenology in a qualitative study focusing on influenza. The present study utilized the constructs of the TPB and phenomenology geared to gather and analyze relevant data from a sample of African Americans 65 years and older who decline the flu shot for the last three or more years. The outcomes of the study may help explain the reasons behind the low rates of flu vaccine uptake in this population from the viewpoint of older African Americans. Such examination may advance current literature, and provide information to tailor future policy development to meet the specific influenza immunization needs of older African Americans. Finally, the study addresses current racial and ethnic disparities in flu

vaccination with findings on how to interpret these disparities and implement interventions to bring about positive social change

Chapter 3 will provide a description of the methods selected to collect data related to the research questions for analysis to address this gap in literature. This chapter offers an account of the research design, and rational for its selection, an explanation of phenomenology and the advantage of its use over other methodologies, along with the research methodology. My role as the researcher in this study is presented followed by the following: participant selection, data collection instrument, data collection and analysis, quality checks, limitations, and ethical considerations related to this study.

Chapter 3: Research Methods

Introduction

The uptake of influenza vaccination has consistently improved over the years; however, influenza vaccination rates have remained lower among African Americans, age 65 years and older (CDC, 2013a). A review of the literature indicated that there is a dearth in the number of studies examining the grounds for these low rates (Chen, Fox, Cantrell, Stockdale, & Kagawa-Singer, 2007). The purpose of this phenomenological study was to explore and understand the behavioral, normative, and control beliefs influencing the low uptake of influenza vaccination from the perspective of African Americans, age 65 years and older.

Chapter 3 provides a description of the research design and methodology that guided the study. Accordingly, this chapter is a thorough description of the methodology used in the study to include procedures for participant recruitment, selection criteria, and sample size determination. The assessment instrument along with its source, and its use in data collection with study participants are also described. The data analysis plan for clustering coded units to answer the research questions are provided, and issues of trustworthiness and ethics in protecting the rights of study participants are discussed.

Research Design and Rationale

This phenomenological study design used a semi structured interview format, guided by an interview guide with 13 questions (see Appendix A) designed to collect data relative to the research questions. A semi structured interview format allowed

exploration of topics that evolved during the interviews to obtain a clear understanding of participants' experiences with influenza vaccination. Data analysis using Moustakas' (1994) transcendental phenomenology helped the development of both structural and textural descriptions of influenza vaccination uptake. The following research questions were explored:

1. What are the behavioral beliefs or perceptions affecting influenza vaccination uptake among African Americans 65 years and older?
2. What are the normative beliefs or social norms affecting influenza vaccine uptake among African Americans 65 years and older?
3. What are the control beliefs affecting influenza vaccination uptake among African Americans 65 years and older?

The fundamental concepts under study were behavioral beliefs, normative beliefs, and control beliefs affecting influenza vaccination in older African Americans. The TPB constructs are the person's behavioral beliefs, normative beliefs (social norms), and control beliefs in performing a particular behavior (Ajzen, 2012). When influenza vaccination is interpreted in the context of the TPB, an individual's beliefs toward influenza vaccination and their evaluations of the consequences of being vaccinated influences their attitude toward getting the flu shot. This is the individual's behavioral belief (Ajzen, 2010). Social factors such as the influence of friends, relatives, and healthcare providers, also strongly influences behavior to seek flu immunization (Ajzen, 2012). This is the person's normative belief (Ajzen, 2010) or social norm. These central

concepts originated as a result of research that indicate cultural disparities in the rates of influenza vaccination especially among older African Americans ages 65 years and older that is 28% less than European Americans of similar ages (ALA, 2010; Frank & Grubbs, 2008). Several reasons for lower flu vaccination rates in this group have been suggested and include barriers such as trust, education, beliefs, and social factors (Daniels, Juarbe, Rangel-Lugo, Moreno-John, & Pérez-Stable, 2004; Harris, Chin, Fiscella, & Humiston, 2006; Sengupta, Corbie-Smith, Thrasher, & Strauss, 2004; Wray et al., 2007). Attitudes and perceptions were also found to be major factors affecting influenza uptake among older African Americans (Hebert, Frick, Kane, & McBean, 2005; Krieger, Rowley, Herman, Avery, & Phillips, 1993). This study provided a deeper understanding to the causes for the low influenza vaccine uptake among African Americans 65 years and older by using phenomenology to obtain accounts of experiences in influenza vaccination influenced by behavioral, normative, and control beliefs around influenza vaccination from their perspective.

Phenomenology

The research approach for this qualitative study is phenomenology. Phenomenology is a philosophical tradition introduced by the German philosopher Edmund H. Husserl who emphasized how people describe and experience situations (Patton, 2002). Phenomenology elucidates a phenomenon based on the stories of the persons experiencing it (Creswell, 2013). The phenomenological approach used in this study is Moustakas's (1994) transcendental phenomenology that gives focus on

describing how a person experiences a phenomenon rather than the interpretation of such experiences. Transcendental phenomenology was selected for this study because of its ability to direct the research questions to elucidate the experiences of African Americans 65 years and older as they relate to influenza vaccination to attain the real meanings and essences of their experiences rather than an interpretation of the data. Moustakas's (1994) structured approach to phenomenology was used in this study. Moustakas (1994) suggests that the researcher uses a pre-developed set of questions to guide the interview process and allow for follow-up interviews. Questions are open ended (see Appendix A). The data obtained from the interview questions are then analyzed for structural and textural descriptions to obtain meanings and essences (Moustakas, 1994). Moustakas (1994) purports that the research question seeks the quintessence and significances of the experience, gives focus to qualitative foundations of the experience and activities, and necessitates total involvement of the researcher. The research question do not gather predictive information; rather, the data gleaned and presented are clear and truthful to the expressed experiences (Moustakas, 1994). In this study, the research questions gathered information about how African Americans 65 and older perceived and described their experiences in influenza vaccination guided by the TPB constructs.

Advantages over Other Methodologies

Phenomenology was the preferred theoretical tradition from which to approach this phenomenon because it requires that the researcher engage in epoche, suspend personal perspectives, and solicit the participants as valuable partners in the research

process to obtain the essence (Moustakas, 1994) of the experience of influenza vaccination. Quantitative methods are experimental in nature and does not offer the developing themes obtained from exploring the subjective contribution of the participant in a natural setting. Other theoretical traditions such as ethnography, case studies, and narratology studies also describe people's experiences, but would not effectively represent the purpose of this study. Ethnographical studies focus on cultural groups where the researcher is emerged in common societal activities and is an active participant observing, interviewing, and documenting (Patton, 2002). Case studies involve description and understanding a single case or cases (individuals, events or programs) in their context to develop issues and assertions and includes a vignette (Creswell, 2013). Finally, narratives are a presentation of individuals' stories about their lives in a chronological form (Creswell, 2013). Phenomenology met the purpose of this study by identifying a problem and focusing on a particular phenomenon experienced by more than one individual. It involves bracketing of the researcher's experiences, and developing meaningful statements to provide an exhaustive description of the phenomenon (Creswell, 2013). Moustakas's (1994) approach toward phenomenology delivers a structured framework that is aligned with the chosen worldview from which this study was developed and orders the study. This study was rooted in the philosophical assumption of ontology to gather the nature of the reality of the phenomenon from the individual's perspectives, grounded by reductionism and offered a logical postpositivism paradigm (Creswell, 2013).

Role of the Researcher

The principle of the phenomenological approach is to collect exclusively important experiences and reality of participants. Data from the study is bracketed and further categorized into common elements that explain fundamental meanings of the phenomenon (Patton, 2002). Using this approach aided in understanding the views of participants toward flu immunization.

As the sole researcher in this study, my role was to use Moustakas's (1994) structured approach to phenomenological research methods to select a social problem I am passionate about with the desire to see a social change. Engaging in epoche I explored and validated my experiences with influenza vaccination through bracketing, and approached the data collection process from a new perspective, void of preconceptions, prejudgment, and biases as explained by Moustakas (1994). I also engaged in reflexivity or self-searching throughout the data collection process (as indicated by Creswell, 2013) which when combined with epoche was an added measure of control for researcher bias by exploring and addressing personal values and experiences that may affect the study.

The topic of influenza vaccination among older African Americans is important to me as the researcher because of my extensive work in public health and being an active participant in influenza vaccination outreach to the local community in Los Angeles County, California for the last 11 or more years. It has been my observation while at the influenza vaccination sites and also in gathering the demographics about flu vaccination that there is a low turn-out of African Americans in general to these outreach sites. My

personal interest lies in protecting all segments of the population from threats of influenza and its related illnesses. As a result, I seek to understand the views of older African Americans about their beliefs and social influences in influenza vaccination, and potentially obtain clues to strategies that may increase uptake.

Transcendental phenomenological reduction required me to consider the phenomenon as it appears, providing textural documentation of the data in its purest form to generate the meanings associated with the experience, and develop themes (Moustakas, 1994). Meaning to the data were obtained through imaginative variation achieved by viewing the phenomenon from different angles and perspectives and forming structural descriptions, documenting the "how" and "what" of the experience (Moustakas, 1994). Horizontalization was implemented to seek significant elucidations of how participants experience the phenomenon to develop sets of meanings to form themes (Moustakas, 1994). Finally, through synthesis, the meanings of both textural and structural descriptions were combined to form the essences the experience of older African Americans with flu vaccination that contribute to the low rates of vaccination. Participants were viewed as valuable partners in the research process (Moustakas, 1994) and an incentive of a $25 gift card was provided to participants who took part in the study in exchange for time spent participating in the study in the form of interviews. There were no personal or professional relationships associated with this study.

Methodology

Phenomenological studies involve in-depth interviews with between 5 and 25 persons (Creswell, 2013; Maxwell, 2013; Miles & Huberman, 1994; Patton, 2002). For this study, a sample size of 15 African Americans 65 years and above were selected for 20 to 30 minute interviews. A sample size of 15 participants offered manageable amounts of information collected through in-depth interviews. A small sample size also provided opportunities to obtain detailed accounts of participant's personal beliefs, attitudes, experiences, and social influences to reach saturation (Creswell, 2013; Maxwell, 2013; Miles & Huberman, 1994; Patton, 2002). A larger sample size may have present the risk of collecting too much information and thereby reduce the chances of reaching data saturation.

Participant Selection

The sample population of African Americans, age 65 years and older, was obtained from Los Angeles County, California. Participant selection began after Institutional Review Board approval (No. **03-13-15-0264985**). Participants for this study were gathered through criterion sampling of a homogenous nature and snowballing. The above sampling strategy and sample selection facilitated in obtaining the appropriate number of participants and commonalities to benefit collecting information-rich data to form themes (Creswell, 2013). Participants were included if they were: (a) African American 65 years and older, (b) consistently declined the flu vaccine for the last three or more influenza seasons, and (c) had a doctor that s/he visited for healthcare at least once

a year. Participants were asked screening questions (Appendix F) to determine if they fit the selection criteria. Persons who did not fit this criteria and who were not capable of making informed independent decisions were excluded from the study.

To initiate the process of data collection, I provided an introduction/recruitment letter (Appendix C) to the pastor of an African American church requesting access to participants. I then met with the pastor to discuss the study. A similar letter and process was conducted with the director of a community center followed by an in-person meeting to discuss the study, with a request to access senior center members to participate in the study. In-person meetings confirmed interest, provided the opportunity to explain the study, and addressed partnership agreements. I requested permission at both sites to speak with potential participants about the study before, during, or after a regularly scheduled event using a study introduction script (Appendix D) to recruit participants in a group setting. The request also included the use of any available conference room to interview members during regular hours of operation. Although permission was obtained for access to the church, data collection occurred only at the senior center due to lack of availability of the pastor of the church. A participant study introductory letter (Appendix E) was available for participants to review with the opportunity to contact me at a later date at which time I ensured that participants met the selection criteria (see Appendix F). Interested participants who met selection criteria were provided with an appointment for a convenient date, time, and location for the interview. After informed consent I conducted the interview via the interview guide.

Study participants were gathered from a senior center in the city of Compton, California. According to the United States Census Bureau (2041), the city of Compton had a 2013 population estimate of 97,877. A 2010 population estimate of the census recorded that African Americans make up 33% of Compton's population, of which 7.5% of adults are 65 years and older (United States Census Bureau, 2014). Twenty six percent of persons in Compton live below the poverty level (United States Census Bureau, 2014).

After obtaining informed consent interviews were completed. Interviews occurred either onsite or at another location where the participants feel most comfortable, and where their confidentiality could be appropriately protected. Data were collected by myself as the sole researcher. Participants were interviewed for a period of between 20 and 30 minutes and re-interviewed if necessary until saturation was reached. Data were stored electronically and password protected.

Instrumentation

The data collection instrument for this study (Appendix A) was developed from the Ajzen's TPB Questionnaire Construction (Ajzen, n.d.) and based on the data needed to obtain a rich description of the experience of influenza vaccination to fulfill the purpose of the research and address the problem statement. The TPB states that people's actions are predisposed by their attitude towards the behavior, the social influences driving the behavior (positive or negative), and the person's confidence in performing the behavior (Ajzen, 2012). The TPB also recognizes a person's volitional control over their actions into understanding the continuum of processes between beliefs and behaviors

(Ajzen, 2012). An interview guide (shown in Appendix A) was developed to obtain responses to the two open-ended interview questions specifically addressing the behavioral, normative beliefs or social norm, and control beliefs affecting influenza vaccine uptake among older African Americans.

A TPB qualitative data collection instrument was used in a qualitative study by Sherwood and Povey (2011) determine factors influencing women's completion of a cardiac rehabilitation program. The data collected by the instrument was analyzed to form themes that described facilitators and barriers to completion of the cardiac rehab program (Sherwood & Povey, 2011). This instrument was also used in a study by Nolan-Clark, Neale, Probst, Charlton, and Tapsell (2011) to explore consumers' main beliefs regarding dairy food products based on literature indicating insufficient uptake of diary product as a result of lack of knowledge. Participants were individuals who had previously completed a weight loss program consisting of nutrition education and dietary advice. The data gathered using this instrument addressed the TPB tenets of behavioral and control beliefs. Findings of this research indicated that nutrition education influenced both behavioral and control beliefs toward dairy products (Nolan-Clark, Neale, Probst, Charlton, & Tapsell, 2011). In another study the TPB instrument was used to help explain overweight adolescents' beliefs because of the model's extensive use in studying physical activity highlighting the TPB's implication that behavior is a result of a person's salient beliefs (Rhoades, Kridli, & Penprase, 2011). Data were collected through semi structured interviews and the TPB instrument collected data relevant to salient behavioral,

normative, and control beliefs regarding behaviors toward weight, eating, and exercising (Rhoades, Kridli, & Penprase, 2011). Content validity was established for the instrument by consultation with two content experts and conducting pilot interviews with modifications based on results and recommendations.

The data collection instrument for this study was structured based on the theoretical framework of the TPB and placed emphasis on the TPB tenets of behavioral beliefs and outcomes, normative referents, and control beliefs to establish content validity. Under the constructs of the TPB an individual's behavioral beliefs and their evaluation of the behavioral outcomes influence their attitude toward getting the flu shot. Questions regarding influenza vaccination would gather information to explain the TPB's application to the concern of low vaccination among older African Americans. The interview guide target key data points corresponding to the relationship between attitude (influenced by subjective beliefs, and expected behavioral outcomes), social influences, and a person's confidence toward the behavior based on control factors. Content validity was established for the instrument used in this study by construction of the instrument based on the TPB Questionnaire Construction (Fishbein & Ajzen, 2010) specific to flu related questions, its use in previous studies, and consultation with dissertation committee members.

Data Collection Methods

A phenomenological approach explores how a person makes sense of an experience and the meanings they give to that experience (Patton, 2002). Therefore, the

researcher has to methodically collect and describe how people experience, perceive, describe, feel about, judge, remember, make sense, and talk about the phenomenon under study (Patton, 2002, p. 104). In-depth interviews of the lived experience captured this description. The theoretical framework of the TPB model and the research questions in the interview guide (see Appendix A) structured the data collection process (Maxwell, 2013; Miles & Huberman, 1994). The opening question on the interview guide (Appendix A) collected information about participants' experience with flu vaccination and how they perceive it from a phenomenological stand point.

The inductive nature of this study required a less structured design that allowed for flexibility in responding to unexpected information. Therefore, data were collected through semi-structured, in-depth, face-to-face interviews based on an interview guide (see Appendix A). The interviews took place at a location convenient to each participant and was be recorded both by field notes and electronically with audio equipment. The interview process began only after informed consent was obtained. Each interview lasted between 20 and 30 minutes and allowed for one additional follow-up interview as needed. The interview format was sufficiently flexible to allow for probing, clarifying, and confirmation of statements to reach saturation. Questions were open ended to allow participants to feel some personal control of the interview and focus on areas of particular importance related to the phenomenon. The interview guide (Appendix A) helped streamline the interview and prevented collection of too much data. Audio recordings were transcribed onto a secured computer by the researcher. Comparisons were be made

between the transcription and audio version for verification of accuracy. Participant check was also conducted by providing a copy of the transcript to each participant for confirmation or correction of discussion points.

Data Analysis and Interpretation Plan

Moustakas' (1994) transcendental phenomenology provided an organized structure for data analysis ordered by horizontalization, developing meaning units, clustering, and finally textural and structural descriptions of the experience under study. The data analysis and interpretation plan was aided by using the NVivo10 qualitative software. Data analysis included participants' in-depth descriptions of both the phenomenon and their interpretation of personal experiences through epoche (Creswell, 2013). Using the interview guide (Appendix A) Participants were asked each research question. Each research question directly corresponded to the constructs of the TPB studied. These constructs are the behavioral beliefs, normative beliefs, and control beliefs affecting the low rates of influenza vaccination among African Americans 65 years and older. Data related to each research question was organized and grouped together. Statements with significant effects were emphasized and used to formulate meaning units and clustered into themes (Creswell, 2013). Data were pre-coded to provide parameters to assist in defining the amount and quality of data being collected for coding, placing emphasis on the specific data to answer the research questions (Miles & Huberman, 1994). Pre-coding concurrently helped in planning for resource distribution and remained sufficiently flexible to allow modification and new code formation (Miles & Huberman,

1994). Final coding captured important meaning units in preparation for data analysis (Creswell, 2013; Miles & Huberman, 1994). Comprehensive collection of thoughts and interpretations as they occurred during the data collection were obtained through coding as well as memoing (Miles & Huberman, 1994). Both commonalities and inconsistencies were identified (Miles & Huberman, 1994) to form between five organized themes with subtheme formation (Creswell, 2013). Textural and structural descriptions of the phenomenon were formed from major themes to provide the essence of the phenomenon (Creswell, 2013). This "essence" was documented in this study by narrative format with exact quotes of participants, through the use of tables, and a discussion section for interpretation of the findings (Creswell, 2013). Data collected during the interview process were organized and stored in an electronic folder and password protected. Audio recordings were transcribed by myself. Transcribed data were checked against the recordings for accuracy. Data not related to the research questions were noted but not included in the data analysis process.

Participants were informed of study outcome as soon as possible after data collection and analysis via letter (Appendix G) sent by mail or hand delivered to participants at the study/interview site. I also met with the director of the community center for a debriefing and sharing of study outcome considering confidentiality of study participants.

Quality Checks

Trustworthiness was measured by transferability, dependability, conformability, and credibility of the data and data collection process (Lincoln & Guba, 1985). An in-depth description of the experiences of participants through detailed recordings and accurate transcriptions was employed for transferability of findings between the researcher and participants as suggested by Creswell (2013). During the data analysis dependability was established by consistent data collection protocol throughout the data collection process. The value of the data demonstrated confirmability through providing participants with transcribed interviews to review for accuracy and conducting comparisons of transcribed interviews with recordings (Creswell, 2013). Credibility was established through structural corroboration and consensual validation (Eisner, 1991). Structural corroboration was acquired through descriptions of persuasive data collected by means of in-depth interviews recorded in field notes, memoing, and audio recording. Each participant was asked the same interview questions and interviews continued to the point of saturation. Consensual validation was achieved also through member checks which required multiple reviews of the data by both researcher and participant. As suggested by Creswell (2013) validation was increased by establishing trust with participants by demonstrating interest, recognizing cues on how to direct each interview, and knowing when to exit. Reflexivity was incorporated into the study to increase confirmability through controlling researcher bias, and clarifying researcher values and experiences that may affect the study. Researcher bias was addressed as described

previously by epoche to provide clarity to the audience on my position as the researcher. Reliability in this study was enhanced by taking detailed field notes, good quality audio recording, and accurate transcription that include pauses and repetitions (Creswell, 2013). The study met evaluation standards by establishing the research questions as indicators that addressed the behavioral, normative, and control beliefs affecting influenza vaccine uptake among older African Americans. Application of the data collection and data analysis techniques (Creswell, 2013) were based on the constructs of the TPB and transcendental phenomenology related to influenza vaccination among the study population as described in this study. Relativity was addressed by a pre-structured approach utilizing the interview guide for open ended questions, and with sufficient flexibility to allow replication with some degree of control in the data collection process. The methodology using the phenomenological approach was reviewed and refined concurrently with the research design using interviewing technique while allowing the purpose, research questions, and TPB to act as the framework for coherence (Maxwell, 2013).

Limitations

Study limitations were expected since this was a phenomenological study where data were collected primarily through interviews. This research may be replicated in any geographical area and among any racial/ethnic group, but is not generalizable or offer sufficient comparison data needed for increase in quality measures as indicated by Maxwell (2011), Miles and Huberman (1994), and Patton (2002). Assumptions of this

study were that the data collected would be specific to the participants interviewed but may only represent views and experiences of older African Americans within Los Angeles, California. Participants for this study were limited to persons meeting the screening selection requirements. As such, demographic data about income, residence, education, sex, employment, and income level, were not collected for analysis in this study and presented a study limitation. The study focused on persons who declined the flu vaccine during the last three or more influenza seasons and was specific to the research questions that focused on behavioral, normative, and control beliefs affecting flu uptake among participants. Therefore, the study was limited by variables during the previous three or more years that may have affected individual's beliefs about flu vaccine such as availability of vaccines, priority groups targeted for vaccination, media events, or quality and type of flu outreach efforts. Triangulation as a means of multiple sources of data collection as described by Miles and Huberman (1994) was not employed in this study due to the phenomenological approach used requiring data collection primarily through interviews. Finally, the study was conducted in whole by a sole researcher. As a result, peer review or external audits (Lincoln & Guba, 1985) to scrutinize the process and results of the study were not incorporated into the research process.

Informed Consent and Ethical Considerations

A letter was sent to the pastor of the church and the director of the community center (see Appendix C) introducing the study followed by a face-to-face meeting to request access to study participants. Informed consent was obtained by providing detailed

explanation of the research study in plain language. The document identified the study purpose and how the information would be collected and be used. The voluntary nature of participation was explained and I provided my availability for questions during the time of participant recruitment for the duration of the data collection and analysis process. I discussed and addressed participant role in the study and any potential risk that may occur as a result of the interview. Privacy issues, confidentiality, and anonymity of the participant and data collected was addressed and ensured (Miles & Huberman, 1994). Benefit and usefulness of the outcomes of the study and study effects were considered (Miles & Huberman, 1994) for multiple constituents such as the researcher and participants, along with policy implications. I expressed my role in the project, and the process of handling trepidations during the study (Miles & Huberman, 1994). Participants were recruited as volunteers for the study and advised about their right to withdraw from the study any time they choose. The study was explained and risks and benefits of the research was provided in the informed consent. Due to the nature of the data collection no risk outside of the potential inconvenience of the 20 to 30 minute interview and re-interviews were expected. However, participants were informed of their right to stop the interview at any time they feel uncomfortable in any way.

Competence on my part as the researcher in data collection, and resource acquisition to carry out and complete the research project was also established (Miles & Huberman, 1994) through thorough preparation, forecasting, and planning. I adhered to cultural sensitivity by not assuming to know how African Americans approach the topic

of influenza vaccination and approaching the research considering moral advantage of the research to participants (Miles & Huberman, 1994). Ethical issues in this study were also addressed by addressing researcher bias, bracketing, and understanding and settling on my role as the researcher prior to the data collection process.

For confidentiality and to protect the identity of participants, any information that was private or damaging obtained as a result of the interview was removed or disguised. Pseudonyms were used throughout the study for anonymity. Also, participants were not coerced in any way, and all information shared were voluntary. Each interview was assigned a numerical and alphabetical signifier. The pseudonyms associated with the code on transcribed files were stored in an electronic folder and secured by a password known only to myself as the sole researcher. Files were backed up in an electronic drop-box in the event files gets accidentally deleted. Direct quotes of participants obtained during the interview appeared in the study to emphasize themes; however, no identifying information was used. Data will be destroyed five years after completion of the study.

Summary

This chapter presented the research design and methodology, and offered a description of the research participants. The chapter also gave a detailed view of the role of the researcher along with data collection and how the data will be interpreted. Relevance was given to the importance of issues of trustworthiness, and descriptions of addressing factors of credibility, transferability, dependability, and confirmability through reflexivity were provided. Additionally, credibility checks were addressed within

the context of the study along with limitations and ethical standards. The next section is a description of the results of this study.

Chapter 4 begins by reintroducing the research questions and describe the study setting and demographics of the participants. This chapter also provides a detailed description of the data collection process and data analysis which includes coding and theme formation. Finally, the results section presents the findings as they relate to each of the research questions.

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Chapter 4: Results

Introduction

The purpose of this qualitative study was to use phenomenology to explore and understand the behavioral beliefs, normative beliefs, and control beliefs affecting the low uptake of flu vaccination among older African Americans from their perception of the phenomenon. Findings from this study may identify other areas needing further research and inform policies and interventions geared at increasing influenza vaccination uptake among older African Americans.

In this study I used a phenomenological approach to explore the reasons behind the low vaccination rates among older African Americans. The data were collected by conducting in-depth interviews with 15 participants to obtain an understanding of behavioral beliefs, normative beliefs, and control beliefs regarding influenza vaccination. NVivo10 qualitative software was used for data analysis and assisted with interpretation of the data. This chapter covers the following topics: (a) the study setting demographics of the participants, (b) data collection process, (c) data analysis methods and resulting themes, (d) trustworthiness of the study methods addressing credibility, reliability, transferability, dependability, and confirmability, and (e) results of the study.

Research Questions

1. What are the behavioral beliefs or perceptions affecting influenza vaccine uptake among older African Americans?

2. What are the normative beliefs or social norms affecting influenza vaccine uptake among older African Americans?
3. What are the control beliefs affecting influenza vaccine uptake among older African Americans?

Setting

All interview settings provided privacy, convenience, and comfort to help ensure success. Of the 15 participants, 12 were interviewed on-site at the community center in private meeting room; One was conducted privately at the participant's home (at the request of the participant), and the other two were conducted by telephone as agreed upon between the participant and the researcher (after the researcher reviewed and received signed consents).

Demographics

Participants of this study were African Americans between the ages of 65 and 90. The only question about age was asked to ensure that participants met the selection criterion. However, many participants offered their age, mostly prior to the interview. Of the 15 participants, 12 were women. Participants resided in one of four cities in Los Angeles County.

Data Collection

The 15 study participants were recruited either by speaking to them in a group setting at the community center or approaching individuals singly. A brief introduction to the study was provided (see Appendix I) and study introduction letters (Appendix E)

were made available for individuals to review. Participants were informed that they could make appointments to be interviewed, or/and gain answers to any questions about the study in a select private room at the site. Interview sessions for this study ranged among participants from 20 to 30 minutes each. Inclusion in the study was determined by asking participants the questions on the participant screening form prior to data collection (Appendix F). On the first day of recruitment, five participants who met the selection criteria signed consents and were interviewed at the site. On the second recruitment day three participants were interviewed. On the third recruitment day two participants were interviewed, and on day four another two were interviewed. On the last day of the interview period one participant was interviewed. During the 2 weeks that interviews were conducted, three of the 15 participants interviewed were obtained through snowballing where participants with whom the researcher spoke about the study shared study introduction letters (Appendix E) with persons they felt met the study criteria. As a result, each of three participants called the researcher to obtain study information and determine eligibility. Eligibility for the study was determined by asking the screening questions (see Appendix F). Two interviews were conducted via telephone and one at a private residence at the request of the participants. Consents for telephone interviews were reviewed over the phone, then hand-delivered to the participants for review and signature. Appointments were made to conduct the telephone interviews. Consent for the home interview was also reviewed over the phone and signed at the participant's residence at the time of the interview.

At the time of each interview, introductions were exchanged and light conversation occurred to build rapport and to ensure that the participant was comfortable with both the setting and their availability to complete the interview. Privacy issues were discussed, and the study purpose was reviewed with each participant. The consent was read verbatim with the participant, and all questions were answered. Participants were asked where to mail interview transcripts after the interview was transcribed for their review. Interview recording using both an electronic recorder and field notes was discussed and participants were provided the reason for recording each interview, and how recorded information would be stored. After preparing the participant to start the interview the recorder was set and the interview began. The data collection process began on March 16, 2015 and ended on April 1, 2015, which was sooner than originally anticipated.

Interviews were conducted using the Interview Guide (Appendix A), and each interview was digitally recorded on an Olympus VN-722PC Voice Recorder. All participants were asked the same questions and follow-up or clarifying questions were asked as needed based on each interview. Minimal field notes were taken in pen and paper format. All interviews were conducted at the expressed availability of the participant. Each participant was given a $25 gift card at the end of the interview. Recorded data were copied from the electronic recorder to the researcher's personal computer within 12 hours of each interview and securely stored and backed up. Each

interview was transcribed verbatim within 48 hours of the data collection. (An example of an interview transcript may be found in Appendix H.)

Although all interviews were planned to be conducted either at the community center or at the church site, two interviews were conducted by phone and one was conducted at the participant's home. Data collection occurred as planned and was completed within two weeks, which was earlier than was expected. No data collection occurred at the church site due to lack of availability of the pastor for permission to begin data collection.

Data Analysis

Recorded data were transcribed within 48 hours of data collection and stored on a secure computer device. The data were pre-coded to provide parameters that assisted in defining the amount and quality of data being collected for coding thereby placing emphasis on the specific data that answered the research questions The data were then uploaded into the NVivo10 software and coded based on each of the questions on the interview guide so that all responses to each of the questions were grouped by question number.

The data were organized and stored for re-examination, coding, theme formation, analysis, interpretation, and representation utilizing NVivo10 qualitative software (NVivo10). Hand coding was also utilized to help understand and order important themes. There were a total of 15 questions under the three research questions from which data were collected and initially coded. Answers to the first two questions on the data

collection instrument were not used in data analysis because they were constructed as part of the general opening questions to the interview. Five or more of the same responses to each question were grouped to form codes. Responses that either directly or indirectly addressed the need for more flu vaccine education also clustered to form a codes because of the importance of information sharing and its influence on the TPB's construct of normative belief.

Each major thought was separated into coded units and given a node based on the frequency of occurrence of each thought as told by participants. The first research question inquired about the behavioral beliefs or perceptions affecting influenza vaccine uptake among older African Americans. To address this research question, participants were asked about the advantages and disadvantages of getting the annual flu vaccine (Appendix A).

Table 1

*Behavioral Beliefs Affecting Influenza Vaccination (*n=*15)*

Code	Responses (%)
Flu vaccine made me sick	73
Flu vaccine made others sick	93
No advantages of getting the flu shot	80
Flu vaccine does not work	100
Stay healthy	40

Note. Codes developed from participant responses to data collection instrument Questions 1-4.

The data collected from RQ1 were analyzed to generate the coded responses shown in Table 1. The second research question asked about the normative beliefs affecting influenza vaccination. For RQ2, six codes were identified. See Table 2.

Table 2

*Normative Beliefs Affecting Influenza Vaccination (*n=*15)*

Code	Responses (%)
I do not routinely talk about flu shots	100
I am not influenced by others	100
My doctor or nurse recommends the flu shot	87
I do not discuss flu vaccine with my doctor	80
My doctor does not say why I should take it	40
I would like more information	40

Note. Codes developed from participant responses to data collection instrument Questions 5-10.

Finally, the third research question explored the control beliefs affecting influenza vaccine uptake among older African Americans. In response to RQ1 all participants stated that they had access to the flu shot and had no difficulties in getting the flu shot if they chose to get it. See Table 3.

Table 3

Control Beliefs Affecting Influenza Vaccination (n=15)

Code	% of Responses
Have access to flu shot	100
Not difficult to get the flu shot	100

Note. Codes developed in response to the data collection instrument Questions 11-13.

Emerging Themes

Statements with significant effects were emphasized, and commonalities were identified to formulate meaning units and clustered into organized themes (see Table 4).

Table 4

Themes and Corresponding Codes

Themes	Corresponding codes
Fear of Illness	Flu vaccine makes me sick Flu vaccine makes others sick Staying Healthy
Vaccine does not work	No advantages to getting the flu shot Flu vaccine does not work
Self-Advocacy	I do not routinely talk about flu shots I am not influenced by others My doctor or nurse recommends the flu shot I do not discuss flu vaccine with my doctor
Have Access	I can get the flu shot I have no difficulty getting the flu shot
Education Needed	My doctor does not say why I should take it would like to take a class on flu vaccine

Note. Five major themes were developed from the coded units.

As stated earlier, the research instrument was selected to answer each of the research questions. Research questions inquired about the behavioral beliefs or perceptions, normative beliefs (social norms), and control beliefs affecting influenza vaccination among African Americans age 65 years and older. Responses were clustered around five major themes generated from codes. These themes were: fear of illness, vaccine does not work, self-advocacy, have access to flu vaccine, and education needed.

Theme 1: Fear of Illness

Participants recalled that the flu shot made them sick (73%). Twenty seven percent described being sick for weeks in bed and unable to go to work. Participant 6 in particular spoke about her experience after getting the flu shot: “Well being sick. I had a

fever, I was sick for about 3 weeks." Participant 13 expressed her feelings about the flu shot causing illness and why she refuses to take it: "I don't want to get sick. I never took a flu shot and I still never had flu…." She felt that she does not get sick from the flu virus so she does not need the flu shot which she felt would make her sick. While she did not want the flu shot, Participant 13 received it because she worked in a hospital where it was mandatory for her to take the flu shot. She provided insight for why she is convinced that she did not need the flu shot: "I haven't had the flu since that time I got the flu shot." Fear of illness extended to concerns about vaccine side effects. Participants expressed concerns about side effects. Participant 11 shared that she had never received the flu shot and heard about side effects of the vaccine: "Well I don't know what kind of side effects, you know, and some people say it makes them so sick."

Participants (93%) also stated that the flu shot made others sick. Participant 2 shared his experience taking care of ill family members who got sick after getting the flu shot:

> Every year they took the flu shot, both of them together, and they got sick two weeks later…and I ended up going to take care of them. But they believed in it…and I begged them not to take it, but they believe in their doctors.

Most participants (80%) also did not see any advantages of getting the flu shot but mentioned disadvantages. The main disadvantage expressed was that the vaccine caused illness. Participant 4 felt that the vaccine was not meant for everyone: "The

disadvantages of taking it I guess, is depends on your body, it makes you sick…it made me sick."

Theme 2: Vaccine Does Not Work

Participants questioned the effectiveness of the flu shot (80%). They felt that the flu shot does not work. Several responses reflected the inconsistencies experienced between the expectation of what the flu shot is supposed to do (prevent illness) and what participants felt actually occurred. Participant 7 did not believe the vaccine worked to prevent the flu: "People here they get the shot and they are still coming down with the flu." Participant 2 stated that the vaccine gave people the flu: "You still get sick. I mean, I know people who had the flu shot to prevent them from getting the flu, and to me it was worse." Participant 15 recalled several instances where she observed people getting sick from the flu shot: "Everybody I know who gets a shot gets sick. Every year Joyce gets sick. You still get it [the flu]. So I don't see the benefit of getting the flu shot." The media was seen to play an important part in information dissemination and views about flu vaccination. Participant 13 referred to the news media when she spoke of the effectiveness of the 2013-2014 flu vaccine. "Well this last season obviously the shot was not very effective, and so that's another thing…I wonder why it didn't work this time and why it didn't work last time. So I don't even want to deal with it...heard about this on the news." The lack of trust in the vaccine was expressed by Participant 7 as well:

> Why take it when there are no true results? There are guarantees that it is going to really, really work. Some people get very, very sick once they've had the flu

> (shot) and I know this from personal experience; and that's what determines why I don't take the shot.

Some participants (40%) talked about preventing and treating the flu by safe practices and using home remedies. These discussions surfaced when participants were asked what else comes to mind when they think about the flu shot. Participants recalled experiences of flu associated illnesses and shared prevention strategies that included staying healthy, decreasing exposure to ill individuals, and home remedies. Participant 13 explained her strategies for staying healthy:

> I take care of myself, making sure I don't visit sick people. I don't go to rest home visits, especially since I got to this age. I don't go to hospital visits. I try to stay away from all of that, and then I try to take care of myself.

Several participants described in detail some home remedies that they recall their parents and grandparents using with them and still believe are the best remedy for respiratory illnesses. Participant 4 added that she did not believe in vaccination:

> Myself, I take medicines and castor oil for those things. For the diseases, you know the diseases like whooping cough, the vaccines for all those diseases…I took them when I was a little girl. And I just think after you've had them that this is something new that they come up with about getting them again. No…I don't believe in getting them again.

Statements obtained from participants indicated that participants were very concerned about flu vaccine related illnesses and vaccine side effects, and felt that they could prevent the flu by practicing healthy behaviors.

Based on the findings above, it appears that participants' beliefs surrounding flu vaccination weighed heavily on experiences demonstrating beliefs that the vaccine caused illness, had no advantages to getting the shat, and did not work. The common understanding about the flu vaccine as recommended by the Advisory Committee on Immunization Practices (ACIP) is that flu vaccine is supposed to prevent illness from the flu virus (CDC, 2013a). Participants' experiences supported by the news media indicated to them that the flu shot was ineffective.

Theme 3: Self-Advocacy

Majority of participants (87%) stated that their doctor or nurse offered them the flu vaccine. Although recommended by providers participants chose not to take the flu vaccine as a form of self-advocacy and gave reasons that were based on either personal experience or from what they heard from others. Those people who stated that their doctors encouraged them to take the flu vaccine also expressed their refusal of the flu shot as expressed by Participant 7: "I'm with Kaiser and I get calls for doctor visits and the record states I do not want the shot." When asked the question of who encourages the flu shot, Participant 6 talked about her healthcare providers and expressed the extent to which she feels that she does not want to be questioned about taking the flu shot:

Nurses at the hospital, and the doctors at the hospital ask me about the flu

shot…and the first thing they do is throw their hands up like that… we're not trying to make you do it! I say alright…don't keep asking me. No. I don't want it.

A similar response that demonstrated the firmness to which participants stood on this regard against the flu shot and against being persuaded was heard from Participant 14: "When I finish talking to them they don't try to encourage it. They ask me do I want it and I say no." Participant 10 mentioned her fear of needles and also fear of the flu shot making her sick although encouraged by her doctor. She stated, "(My doctor) told me to take it but…because he knows I'm afraid of needles, I tell him I'll take it the next time I come. Actually…I think it will make me sick so that's why I don't take it."

Participant 12 responded that he knows all about the flu shot but still have not been interested in getting it: "I generally get it at Rite Aid and they give me pamphlets plus they send me some pamphlets, and tell me the advantages and the risks and basically telling you keep up your health." According to Participant 10, her doctor offered the shot to her, but she refused: "No sense of him telling me because I wasn't going to take it anyway, because I told him I didn't want it."

When asked about others' influence on their decision to take the flu shot, participants said that others do mention or encourage them to take the flu shot but they have little interest in such conversations. Participants shared that friends and family talked with them about the flu shot to a significantly lesser extent than providers did. Data collected from participants indicated that they were not influenced by others about taking the vaccine and their decisions were based upon personal experiences (100%).

They believe this is a personal decision and no one should encourage or discourage anyone else. They expect conversations about flu shots to happen with their health care providers but not with others. They also express their right to make their own decision. Responses such as that of Participant 1 were received: "I won't let people talk about stuff I'm not interested." Participants felt as though after a certain age then no one should be advising them about their health. Participant 13's response is an example of responses to the question of who participants talk to about flu vaccination:

> I don't do nothing. Because I know what I'm going to do. I'm into myself, I take care of myself. Now that I got to the age of 83 if I don't feel like doing something I don't do it.

Some participants (26%) said they would not discourage people from getting the shot because it may work for them and they did not want to be responsible for deterring people from anything that could potentially help that person. Participant 2 reported the following:

> Most people who don't take it they don't go around telling people not to take it. I myself don't go around telling people not to take it. I did tell my brother and some family members, but as far as people I work with and my neighbors, I never tell anyone in my life not to take it.

Participants expressed the reasons disapprovers have provided to support their own decisions not to take the flu shot. These reasons were similar to those of the participants for their decision to refuse the flu shot. They disapproved of the flu shot because it made

themselves or others sick, and stated that the flu shot does not work. Participant 4 mentioned personal choice to make a decision whether or not to take the flu shot: "But I feel that everyone should have their own opinion of the shot. That's what I feel. And I know what it did for me and that's why I don't take it anymore." Participants stated that others' opinions about the flu shot do not influence them in any way because they themselves make decisions about their actions especially given their life experiences. Others say that some people get sick but others may not get sick. According to Participant 8, "It doesn't make me feel anything because some people don't get sick and some do. So it's an individual thing". Participants were very certain about the reasons for their behavior of choosing not to be immunized against the flu and not talking about the flu shot to anyone in their social circle. The flu shot was not a common topic of conversation. Participants stated that the persons who talked about the flu shot were their healthcare providers. It was less likely to talk to others about the flu shot with others in their social circle.

Theme 4. Have Access

All respondents had access to care. They had health insurance and expressed that it was very simple to get a flu shot. Their doctor asked them every year several times a year during the flu season. However, they chose not to get the flu shot. Participant 8 responded that it was, "Very easy, doesn't cost anything. You just go over and get it." Participant 4 stated he could get the shot anywhere: "Everybody gives it to you for free.

My doctor does. CVS does." Participant 12 summarized what most other Participants stated in the interview:

> Well I won't ever want it so it does not matter how easy it is to get the flu shot. It has been easy all my life. Companies that I've worked at. They've had people come to the company on flu shot day. I'm a veteran, so the VA sends me letters all the time to come get the flu shot. It doesn't even cost me anything. So it has never been easier to get.

Theme 5. Education Needed

Participants brought up questions regarding scientists' determination of the strain of flu each season and hearing about the flu vaccine not being effective for some strains. There was high suspicion about the efforts made on the side of the medical community and pharmaceutical companies on promoting vaccination even when participants express to providers that they never get sick from the flu. When asked about reasons for provider approval of the flu shot Participant 1 expressed that she felt flu vaccination was for profit: "Because he (her doctor) could get more money." About 13% of participants felt that giving the flu shot was a way to benefit healthcare providers and the pharmaceutical industry. Participant 2 explained it this way: "I believe it's about quotas, and protocols, and whatever it is. They are not really hearing me when I tell them I've never been sick from the flu and I've been around sick people with flu all my life." Several participants felt they did not want to be bothered each time they made a doctor visit with questions about their flu vaccination status and why they are refusing. Participants (80%)

responded that they did not want to be asked about taking the flu shot by providers because they have made up their minds why they do not want it. Furthermore, they were not interested in information about the flu vaccine. According to Participant I, "My doctor mention it to me, I tell him I don't want it, all these years I haven't taken one, no need of me starting now." Two participants queried about the possibilities of getting more information about the flu and acknowledged that if there was a class on the flu shot they would be willing to take that class so they could make a more informed decision. According to Participants, some providers have not told them the reasons why they should take the flu shot. An example of this response was provided by Participant 11: "No one ever told me no reason. They just say take your take your flu shot, they never say why. Or if you don't take it what might happen. They never say nothing" Those providers who did talk about the reasons for the flu shot gave reasons primarily related to being older. According to Participant 9,

> Well, they said for my age. Right now every time I go they say (laughs), you know you haven't taken your flu shot, you have to take your flu shot. I say I told you guys I don't take flu shots. They say it's in the computer. I say then take it out of the computer.

Participant 6 admitted to not being interested in the reasons, "He told me but I didn't pay him any attention." Participant 11 recalls her doctor providing a less specific reason: "Well, I offer you the flu shot because it's good for you but if you don't want to take it I can't force you." Participant 4 gave her account of the experience: "They don't talk to

me about the flu shot. No one ever told me a reason. They just say take your take your flu shot…they never say why. Or if you don't take it what might happen." Others do not want to hear about the flu vaccine when they visit their provider. Regardless of what their providers told them they had made up their minds not to take the flu shot. Participants provided a variety of their feelings about others' approval of the flu shot indicating that they should know what was good for them at their current ages. Participant 13 offered her opinion about provider influence on whether or not she should take the flu vaccine: "Well you know, at my age they understand that I should know why I should take it and why I don't, and you can't keep questioning a person who's been here as long as I have." Therefore, approval from providers did not influence these participants to take the flu shot. They had already made up their minds and had solid reasons why they did not want the flu shot. One participant stated: "But I listen to him and then I think about the times that I took shots for colds and I still got sick." When asked by her doctor to take the flu shot, Participant 8 responds, "I say no. Why? Because it made me sick." Participant 10 stated that people from church, some family, and friends have told her not to take the flu shot. She added that she would like to obtain more information on the flu shots so that she could make an informed decision. She also stated that she did not trust the opinions of people because she felt that they may encourage her not to take the vaccine and yet they may go get the vaccine: "That's the reason I want to take the class because you can't go by what people tell you." She said obtaining more information on the flu shot herself may change her decision not to take the flu vaccine. "But I would like to take a class on

that to see, maybe I'll change my mind." These responses indicate a lack of sufficient information and a desire for increased understanding of flu vaccination on self-advocacy in the decision for or against the flu vaccine.

Discrepant Case

During the interview, Participant 15 revealed that she cannot take the flu vaccine due to an autoimmune condition. However, she met the selection criteria and was still included in the data collection process. Participant 15's responses were included in the data collection because she shared views that she did not believe in the safety, effectiveness, nor the rationale behind flu vaccine recommendations. These responses were consistent with the major themes identified in this study.

Evidence of Trustworthiness

Trustworthiness

Consensual validation was accomplished through member checks. Each interview was transcribed verbatim within 48 hours of the interview. Transcriptions were accurate and included pauses and incomplete thoughts. Uninterpretable phrases (such as "ah", and "hmm") were eliminated to improve readability of the transcripts. The participants were provided with transcripts of their interviews. Each transcript had an introductory statement which thanked the participant for the interview and asked the participant to review the transcript and call the researcher if they required any changes or corrections to the transcript. The researcher's contact number was provided in the letter. Only one participant called the researcher to clarify information; however, this information did not

result in modification in the data collected. Since no other call back was received, it was assumed that the participants agreed with the interview transcript and was accepted as correct. Interviews were conducted between March and April which is outside of the peak influenza season and reduced any bias that would increase feelings on intent to vaccinate. Trust was built with each participant by being open and honest in the introduction of the study, giving information about myself as the researcher and my nursing background and sincere interest in the topic of the study, and connecting with each participant as a local resident. Each participant was treated as an individual and the interview was conducted based on the mood, demeanor, and comfort level of that participant.

Credibility

Credibility strategies were fully incorporated into the data collection process which was driven by the research questions. An Interview Guide (Appendix A) was used to guide the interview process and each participant was asked the same interview questions. Some interview questions were skipped based on the participant's answer to a previous question. For example, if a participant answered "no" when asked "Do you see any advantages of getting the flu shot" then the proceeding question of "what do you see as the advantages of getting the annual flu shot" was skipped because it would not be applicable in this situation. (See Appendix A.) Data for this study was collected through in-depth interviews captured through audio recording and minimal field notes. Phenomenology as a qualitative methodology traditionally suggests detailed field notes. In this study interview data were primarily collected by an electronic voice recorder and

minimal interview data collection by way of field notes. Field notes in this study were helpful in collecting demographic information such as participant address and preferences for how to contact and provide and provide feedback to the participant. Field notes also captured data regarding interview settings, pertinent interactions between investigator and participant, and significant data that was generated during individual interviews. Minimal use of field notes for collecting interview data did not appear to affect credibility of the study but enhanced the interview dynamics by allowing more engaged dialogue. Memoing was accomplished primarily while transcribing and reviewing the data. The data were reviewed multiple times and thoughts triggered during this process were documented. Each participant was asked the same interview questions and exploration of each answer continued to the point of saturation which was determined when the participant made statements such as *"*like I said*..."* or otherwise stated they had nothing else to add when prodded. During the interview process participants were very direct with their answers and when queried did not seem to have much else to offer. Open ended questions and confirmations were used to create an environment that facilitated conversation.

Reliability

Reliability in this study was enhanced by good quality audio recording, and accurate transcription that included pauses and repetitions. The study met evaluation standards with use of the interview guide which was developed to answer the research questions which addressed the behavioral beliefs or perceptions, the normative beliefs or

social norms, and the control beliefs affecting influenza vaccine uptake among older African Americans. The pre-structured application of the interview guide using open ended questions improved relativity, providing sufficient flexibility to allow replication with some degree of control in the data collection process. Since this qualitative study methodology used phenomenology, concurrent review and refining of the interview questions with both and nonverbal validation and gentle probing during each interview provided the opportunity for collecting rich data during each interview. Although the research design used the interviewing technique it remained structured, allowing the purpose, research questions, and TPB to act as the framework for coherence.

Transferability

Transferability of the study was increased by obtaining an in-depth description of the experiences of participants during each interview. Fifteen participants were interviewed. Each participant was asked the same interview questions and I encouraged conversation through validation and probing in a comfortable, familiar, and private environment for the interview. Twelve interviews were conducted at a local Community Center in Los Angeles County, in an empty classroom where only the researcher and the participant were present. Two interviews were conducted via telephone, and one interview was conducted in the participant's home at the request of the participant. I was the sole researcher in the data collection process. The length of each interview ranged from 20 to 30 minutes. Data collection was completed within two weeks. I recorded each

interview and documented using field notes followed by accurate transcriptions. All participants interviewed met the selection criteria for the study.

Transferability of the data collected related to vaccine efficacy may have been impacted by the news media which indicated that the flu shot for the 2014-2015 season may not be sufficiently effective. According to the CDC (2015) the current flu vaccine was one-third effective against the circulating strain for the 2014-2015 flu season. This information was shared through media reports on the flu vaccine during the time of data collection and may have influenced responses giving, support to strong concerns among participants for vaccine efficacy.

Dependability

Consistently following the data collection techniques throughout the data collection process increased dependability. For example, I introduced the study to participants either in a group setting or on an individual basis using the same study introduction script. I stated my interest in the study and why I was conducting the study. I shared with each participant the study introduction letter and provided interested individuals with a copy of the informed consent. I provided opportunities for questions and I reviewed the informed consent in full with each participant prior to the interview. Each individual was asked the same interview questions using the interview guide. As discussed above, if a question was not applicable it was appropriately skipped. This factor could decrease dependability and could have been addressed and improved prior to conducting the study by field testing the data collection instrument. Also, there was no

indication for re-interviewing participants after data collection, transcribing, and several reviews of the data.

Confirmability

The value of the data demonstrated confirmability through providing participants with transcribed interviews to review for accuracy and soliciting feedback. Data were collected via an electronic recorder. While minimum field notes were taken for some participants field notes were re-read and compared to recorded data. An adjustment to consistency strategies toward confirmability was noted in the modification of the use of field notes. Field notes were kept at a minimum because several participants expressed a concern for the amount of time required for the interview. I assessed that the recording device was reliable and felt comfortable minimizing paper and pen documentation of the interviews except for demographic information, and important notes for memoing and follow-up for each participant. Transcribed interviews were compared with recordings. Transcribed interviews were sent to each participant for review soliciting feedback. However, no feedback was received from participants. Given this result, the data were considered accurate and correct as recorded. All data from the interview was recorded void of my own interpretation and reflected the expressed experiences for the participants interviewed.

Results

The findings discussed above demonstrates that African Americans 65 years and older either experienced or observed situations that negatively affected their decision to

take the flu vaccination. These decisions were not positively influenced by interactions with providers. Older African Americans provided their reasons for their decision not to take the flu vaccination.

African Americans 65 years and older who met the selection criteria for this study were recruited from a community center in Los Angeles County. An additional recruitment site, an African American church in Los Angeles County was also identified, but no participants were obtained from this site due to lack of availability of the pastor at the time of data collection.

Older African Americans who were interviewed stated that the flu vaccine caused illness and they were afraid of getting sick from taking the flu vaccine. They questioned the efficacy of the vaccine because their impression was that the vaccine was supposed to prevent illness. Their experience with the vaccine was that it caused illness. As a result they felt that the vaccine does not work. Older African Americans interviewed thought that they had sufficient information to advocate for their choice whether or not to take the vaccine and did not want to be influenced for nor against taking the flu vaccine. They spoke about their personal experiences determining that decision. They also expressed that the decision to vaccinate was a personal one and no one should influence anyone for or against taking the flu vaccine. All participants stated they had access to getting the flu vaccine if they wanted it, they just chose not to take it. Educational needs were self-identified by two participants, while others expressed their lack of understanding about

how vaccines worked in the body to develop immunity, and the reasons vaccines are recommended.

Research Question 1

In addressing the first research question which explored the behavioral beliefs of older African Americans affecting influenza uptake participants stated that their personal experiences and the experiences of others indicated that the flu vaccine made people sick. Participants' thoughts were that they should not take any medicines that would make them sick especially at their age. Participant' beliefs about illness associated with the flu vaccine was the most permeating and consistent data throughout the study findings. Primarily, participants used the word "sick" more than any other term to describe the flu vaccine. They felt the flu shot made them or others sick, that the shot does not work and saw more disadvantages than advantages to getting the flu shot. They expressed being healthier without the flu shot and did not see the benefits to getting one if they were already healthy and have never gotten the flu. Findings around fear of illness associated with the flu shot among study participants suggest that policy development should be directed toward information dissemination addressing perception of illnesses associated with influenza vaccination.

Research Question 2

The goal of the second research question was to explore the normative beliefs affecting influenza vaccine uptake among older African Americans from the perspective of the research participants. In answer to this research question older African American

participants shared that while they were encouraged by their healthcare providers to take the flu vaccine and were offered the vaccine during medical encounters with their healthcare providers, they were not positively influenced sufficiently enough to take the flu vaccine. Participants refused healthcare providers' offerings of the flu shot. They also shared that they did not need prodding by healthcare providers and at this time in their lives they would rather not be asked about the flu shot. Participants also stated that they did not talk to others such as family and friends or acquaintances about the flu shot because they believed that flu vaccination was a personal choice. Participants believed that their decision about the flu shot was not influenced by others.

These findings point to social change toward policy development that address provider and patient interactions and communications on the topic of influenza. Provider-patient communication about influenza should correlate with health disparities among older African Americans, and especially in relation to existing chronic diseases. Community based interventions implemented in participants' social network may address education about influenza and influenza vaccination to increase influenza vaccination rates among older African Americans to create social change.

Research Question 3

For the third research question which sought to answer questions addressing the control beliefs that affected older African Americans' decision about influenza vaccination, participants expressed that they did not have any problems getting the flu vaccine if they wanted it. Therefore, barriers such as access to the vaccine did not present

as a factor that negatively influenced flu vaccination among older African Americans. Based on participants' responses that highlighted their knowledge base about influenza vaccination, health education presents as more of a barrier to vaccination than vaccination access concerns.

Summary

This chapter presented the process of data collection, code and theme development, and qualitative analysis of the data evidenced by verbatim transcripts from study participants One discrepant case was explained and evidence of trustworthiness were discussed. Data collected from the 15 participants were developed into five major themes: fear of illness, vaccine does not work, self-advocacy, have access to flu vaccine, and education needed.

Results of each of the three research questions as they relate to the behavioral, normative, and control beliefs affecting influenza vaccination were presented. From the data analysis, answers to each of the three research questions suggested that participants believed that the vaccine caused illness, believed their personal decision toward vaccination was not influenced by others, and believed they had access to the flu vaccine and could get vaccinated if they wanted to. Data analysis further indicated that additional education was needed to address these beliefs.

Chapter 5 offers a discussion on interpretations of the findings of this research and the study limitations. Additionally, this chapter suggest recommendations for future research with a discussion for the implications of this study for positive social change.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this phenomenological study was to explore and understand the behavioral, normative, and control beliefs influencing the low uptake of influenza vaccination from the perspective of African Americans, age 65 years and older. The phenomena studied were elements of the person's behavioral, normative, and control beliefs involved in consistently declining influenza vaccination for the last three or more influenza seasons. The data for this study was obtained by interviewing 15 older African Americans 65 and older who have access to influenza vaccination but who have consistently declined the vaccine for the last three or more influenza seasons. Data were analyzed for coding and theme formation.

Key Findings

The TPB data collection instrument was used as an interview guide to answer the research questions used in this study. Five major themes were developed from the data analysis:

1. Fear of illness: participants believed that the flu vaccine resulted in illness.
2. Flu vaccine is ineffective: participants believed the flu vaccine did not work.
3. Self-advocacy: participants believed that they had enough information to make the decision whether or not to take the flu vaccine and believe that

this is a personal decision. Participants did not believe in outside influences from important others.

4. Have access to flu vaccine: participants stated there are no barriers to receiving the flu vaccine.
5. Education needed: participants expressed either the need for more information or offered statements demonstrating lack of accurate information related to influenza vaccination and recommendations (see Table 4).

Interpretation of Findings

Advancing Knowledge

No other phenomenological study was found to use the TPB to explore the uptake if influenza vaccination. The result of this research may advance the current qualitative literature on flu vaccination by incorporating phenomenology and the TPB in addressing the low rates of flu vaccination among older African Americans providing a qualitative field of evidence. It also adds to the body of knowledge about older African Americans' beliefs about influenza vaccination by pointing to their behavioral, normative, and control beliefs.

This study extends current literature on the influence of others by indicating that participants did not routinely talk to others about influenza vaccination because they felt it was a "personal choice." Participants also insisted that they did not talk with their providers about the flu vaccine nor did they want to discuss the matter during their doctor

visits. The study also extended current literature by findings that indicated participants' did not understand the need for annual flu vaccination compared to other vaccines in addition to concerns related to why the vaccine was "pushed" by the health care community as if to "meet quotas" or for economic interests.

Confirmed Findings

This study confirmed existing findings by Cornford and Morgan (1999) that participants' decision to obtain the influenza vaccination was determined primarily by their views on whether the vaccine prevented or caused colds or influenza and other side effects. As in the study by Cornford and Morgan (1999) participants did not indicate any barriers to influenza vaccination such as availability, distance, or transportation, and suggested that patient's life history and experiences along with the experiences of others influence vaccination uptake (Cornford & Morgan, 1999). Findings of Cornford and Morgan (1999) is supported by this study that indicated participants decided not to be vaccinated based on expressed fear of illness from vaccination based on personal experiences of illness after vaccination and similar reports from others.

Data analysis from this study supported findings by Linley, Winston, and Bardenheier (2006); Wortley (2005); Bratzler et al. (2002), and Rangel et al. (2005) that the discerning factors consistently observed to influence vaccination uptake among African American elderly were attitudes, beliefs, and perceptions. In research conducted by Evans et al. (2007) majority of individuals in their study who were 65 years and older and who refused the flu vaccine felt they were healthy and resistant to the flu illness

despite having high risk conditions, and were concerned about vaccine side effects reflecting findings similar to this study. In this study, only two participants felt that the vaccine could possibly prevent the flu. The others indicated that people still got the flu even after getting the vaccine or that the vaccine can cause the flu. Also, as found by Wray et al. (2007), there was a common belief that personal hygiene and staying away from ill persons were more effective than vaccination. Findings in this study also supported findings by Harris, Chin, Fiscella, and Humiston (2006) where participants viewed vaccination as not preventive, and caused illness even if recommended by their trusted physician.

As in studies conducted by Daniels et al. (2004), Sengupta, Corbie-Smith, Thrasher, and Strauss (2004), and Wray et al.,(2007) this study also confirmed that participants were insufficiently informed about the risks and benefits of the flu vaccine. (Wray et al., 2007. Additionally, this study confirmed findings by Chen et al. (2007) that African Americans refused the flu vaccine because they did not feel they needed the vaccine and decided not to get it. Similar to this study, findings by Cornford and Morgan (1999), Harris, Chin, Fiscella, and Humiston (2006), Sengupta, Corbie-Smith, Thrasher, and Strauss (2004), and Wray et al. (2007) revealed that African American elderly participants who were unvaccinated viewed vaccination as not preventive and caused the flu.

Access to obtaining the flu vaccine was not found by this study to be a barrier to influenza vaccination confirming the existing literature (Chen et al., 2007; Cornford and

Morgan, 1999; Hebert, Frick, Kane, & McBean, 2005; & Rangel et al., (2005) that found no significant barriers to health care access for persons 65 years and older.

Disconfirmed Findings

In their study, Evans et al. (2007) found that participants who refused the flu vaccine stated they would consider taking the vaccine if they were advised by their doctors or encouraged by friends and family. However, this study indicated that even when advised by health care providers and encouraged by family and friends, participants refused the flu vaccine as were the findings of Harris, Chin, Fiscella, and Humiston (2006).

Theoretical Application

The theoretical framework of this study was the TPB. The TPB proved applicable to meeting this study goals in exploring the behavioral, normative, and control beliefs of the study population. The TPB proposes that people's actions are motivated by their attitude towards a behavior (behavioral beliefs), the positive or negative social influences supporting the behavior (normative beliefs or social norm), and the person's assurance that they can perform the behavior (control beliefs). Beliefs are formed from an individual's current information and past experiences and determines a particular behavior with or without much thought (Ajzen, 2012). This assumption points to the connection between beliefs and behaviors (Ajzen, 2012).

Behavioral Beliefs

The first research question sought to gather the behavioral beliefs regarding influenza vaccination. From the data analysis, participants believed that the flu vaccine resulted in illness and feared perceived vaccine-related illnesses and side effects. Participants believed that the vaccine does not work, and believed that staying healthy would reduce their risk of getting the flu. These responses formed participants' attitude toward the behavior of flu vaccination as explained by the TPB (Ajzen, 2012).

Normative Beliefs

The second research question explored participants' normative beliefs about influenza vaccination. From this study, normative beliefs about influenza vaccination were self-advocacy and personal decision. Participants stated that they did not routinely talk to others about flu vaccination and friends and relatives did not influence them for or against the vaccine. Participants believed that they had enough information to make the decision whether or not to take the flu vaccine and believed that this was a personal decision even when vaccination was encouraged by healthcare providers. These responses reflected the social norm around flu vaccination and indicated that based on their experiences, participants' existing social influences to include healthcare providers did not significantly improve their attitudes toward getting the flu vaccine.

Control Beliefs

Control beliefs about flu vaccinations were that all participants had access to care and could receive the vaccine if they wanted it. Control beliefs are the perceived behavioral

controls participants have toward flu vaccination. Therefore, participants felt that they had strong control over getting the flu shot if they wanted it but selected not to get it.

Theoretical Interpretation

Based on previous applications of the TPB to studies predicting behavior, a person's intent to accomplish a specific behavior is preceded by their attitudes toward the behavior, prevailing social norms, and their capacity to perform the behavior (Ajzen, 2012). The stronger these values are, the greater the intent to perform the behavior. Based on the findings of this study, there are no barriers to obtaining the vaccine except the lack of desire to obtain the vaccine. This value negatively affects the construct of control belief and therefore, decreases intent. The behavioral belief values of vaccine causing illness, and vaccine does not work, indicated negative attitudes toward the flu shot and also decreases intent. Findings among the normative belief values of self-advocacy and personal decision, and education needed (see Table 4) decreased the intent to obtain the flu vaccine. The only factor classified under normative belief that increased intent toward the behavior of interest was provider encouragement toward influenza vaccination (see Table 4) during the medical encounter. Also, based on study findings, there was little evidence that patients and their doctors engaged in meaningful dialogue to increase participant education about flu vaccination. An increase in dialogue between participant and provider about influenza vaccination may positively impact normative belief and increase intent toward influenza vaccination.

Methodology

This study used Moustakas's (1994) transcendental phenomenology that gives focus on describing how a person experiences a phenomenon rather than the interpretation of such experiences. Transcendental phenomenology was selected for this study because of its ability to direct the research questions to elucidate the experiences, (Moustakas 1994) of African Americans 65 years and older as they relate to influenza vaccination to attain the real meanings and essences of their experiences rather than an interpretation of the data. The TPB interview guide was used to guide the interview process as recommended by Moustakas' (1994) suggestion of using a developed set of questions (see Appendix A).

Transcendental phenomenology gathered the experience of flu vaccination from (1) textural descriptions as expressed by participants, and (2) contextual descriptions influencing how flu vaccination was experienced as explained by Patton (2002). Textural descriptions of the experience of influenza vaccination allowed the collection of data as told by the participant verbatim in order to fully understand the phenomenon from their perspective rather than an interpretation of the information. Contextual descriptions allowed the understanding of settings where experiences with influenza took place as told by the participants.

Phenomenology was determined to be appropriate for this study because it facilitated n-depth interviews with 15 participants to obtain detailed accounts of participant's personal beliefs, attitudes, experiences, and social influences from their perspectives (Patton, 2002).

Application of the theoretical and methodological approaches used in this study indicated that phenomenology and the TPB provided appropriate parity to describe belief and intent toward a health behavior. Phenomenology focused on the expressed experiences and context of these experiences related to influenza vaccination in the population studied. Using the TPB questionnaire (Appendix A) this study was able to uncover the behavioral, normative, and control beliefs of older African Americans relative to influenza vaccination. Phenomenology and the TPB using interviews provided an in-depth description of lived experiences that identified behavioral beliefs and normative beliefs as major contributing factors to the low rates of influenza vaccination among older African Americans, and removed control beliefs such as access to vaccination from being a perceived barrier.

Limitations of the Study

This study was limited by its inability to be generalized to all populations and settings. The data collected were specific to the study participants and represent the views and experiences of the mostly female (80%) African Americans 65 years and older who resided in Los Angeles County and participated in this study. Additionally, all study participants were acquired from one site where flu shots were offered on an annual basis. Although data collection was not conducted during the flu season, common conversations that occur at this site may have influenced Participants' beliefs about flu vaccination. Also, the data collection instrument (Appendix A) offered questions that were specific to each of the research questions that focused on behavioral beliefs, normative beliefs, and

control beliefs that participants felt affected their decision to take the influenza vaccination each year. Therefore, the data collected was limited to the information sought to answer each research question. The data were also limited by variables such as events during the previous three or more years that may have affected vaccine uptake such as availability of vaccines, priority groups targeted for vaccination, or quality and type of outreach efforts of vaccine providers. Since the study was conducted in whole by a sole researcher there were no opportunities for peer review or external audits to improve trustworthiness. Trustworthiness in this study could be improved by incorporating an additional step requiring the researcher to initiate follow-up discussion by means of a telephone call to participant within 48 hours after interview to meet multiple interview process. In addition, member checks could be conducted by contacting the participant one week after transcripts have been mailed out to initiate contact rather than a passive approach where participants are expected to respond to the transcripts. Transferability of findings also presented some limitations since the research was specific to the target population. The study was limited in dependability since results will change with different study participants and settings.

Recommendations

It is recommended that this study be replicated among the same population of interest using phenomenology with emphasis on normative beliefs and the stories that are being told about influenza vaccination. Additionally, this study may be enhanced with the use of focus groups as described by Krueger (2009) to encourage vibrant discussions and

conversations that will bring up issues that individuals may not want to discuss as individuals. This study along with that of Herbert, Frick, Kane, & McBean (2005) recommend that more research is conducted on awareness and behaviors of healthcare providers in vaccination encounters with older African Americans. Studies on dialogue and behaviors between providers and clients related to influenza vaccination education can provide clues on how to improve approaches toward influenza education among this population. Further, this study supports more exploration of the origin of resistant attitudes and beliefs in this population related to the issue of influenza vaccination since the finding of this study indicates that provider/patient discussions and public health messaging about flu vaccination is essentially ineffective in reaching older African Americans.

Implications

Positive Social Change

Findings from this study have the potential for positive social change applicable to organization, system, and policy levels. This study gathered information that may increase awareness about how older African Americans think about influenza vaccination and inform policy development to address health disparities caused by influenza associated illnesses. Study findings may improve strategies geared at addressing concerns of older African Americans about influenza vaccination, improve dialogue between patients and providers about influenza vaccination, and restructure community interventions geared at educating older African Americans about influenza vaccination.

Implementation of strategies supported by evidence found in this study may increase the rates of influenza vaccination among older African Americans and contribute to positive social change.

Systems Level

The implications of this study may be applicable at a systems level especially in the healthcare delivery system. This study increases provider awareness of how influenza vaccination is viewed by older African Americans in its effectiveness as a recommended prevention measure against influenza related illnesses. This study found that beliefs about flu vaccinations from the perspective of older African Americans affect flu vaccination uptake. It also provides information to the medical community that influenza vaccination and its perceived effects and usefulness remain a matter of concern among older African Americans. These findings indicate that health care providers should seek different approaches to influenza education during medical encounters with older African Americans. Providers should pay special attention to associations between recommendations for flu vaccination, and older African Americans' beliefs about being healthy and their fear of perceived vaccine related illness and chronic diseases, and seek to develop skills on how to address these associations. This research may also encourage providers to offer more written materials to older African Americans about the flu vaccine and encourage dialogue.

Organizational Level

Study implications may be applicable at the local level. Local community organizations to include local public health departments may explore incentivized interventions geared at influenza prevention education (Guide to Community Preventive Services, 2014) that generate discourse among older persons about influenza vaccination. Study outcomes also indicate the need for increased educational campaign specific to the pharmacological effects of the flu vaccine in addition to components of the flu vaccine and how it works to prevent illnesses related to the flu virus. Additional considerations for public health is for dissemination of consistent messaging toward older adults from a variety of sources. This messaging should include data about flu related morbidity and mortality, flu-related hospitalizations, and the role of flu vaccination in improved health outcomes for persons with chronic diseases.

Policy Level

Findings from this study confirmed that there were no access barriers to influenza immunization among older African Americans. Based on responses highlighting participants' limited knowledge base about influenza vaccination, the study findings suggest that limited influenza vaccine education presents more of a barrier to vaccination than vaccination access concerns. This research identified that older African Americans could benefit from more influenza vaccination education for informed decision making. Enhanced policies that offer provider incentives for addressing influenza vaccination on each visit to persons who are eligible but not documented to have received an annual flu

shot could improve influenza education and potentially increase flu vaccinations among at risk groups that include older African Americans with chronic illnesses. These policies if implemented should include standards offered by the Guide to Community Prevention Services (2014b) that facilitate structured requirements for providers to confer and implement with unvaccinated patients. Additionally, findings around fear of illness associated with influenza vaccination among study participants suggest that policy development should be directed toward information dissemination addressing perception of illnesses associated with influenza vaccination.

Theoretical and Methodological Implications

It is suggested that use of phenomenology paired with the TPB in this study are appropriate applications for future studies to describe behavioral, normative, and control beliefs toward decisions about influenza vaccination as a health behavior. Research using phenomenology as a qualitative approach to collect data through interviews may adequately gather rich data about the experience of influenza vaccination. The constructs of the TPB effectively provided the structured framework needed to answer the research questions that gathered the behavioral, normative, and control beliefs of older African Americans about influenza vaccination.

Conclusion

This study sought to explore the behavioral, normative, and control beliefs of older African Americans that would help understand the current low rates of influenza vaccination among this group. The findings of this study indicate that older African

Americans' behavioral beliefs that the influenza vaccine causes illness and their questions related to efficacy, along with primarily negative influences affecting normative beliefs bear heavily on the decision to get vaccinated with the flu vaccine. There was no indication that control beliefs such as access to the vaccine posed any barriers to flu vaccination among this group. Behavioral and normative beliefs may be positively impacted by offering consistent information at every encounter through (1) modifying health policies that impact current systems addressing influenza vaccination, (2) implementing policy driven incentivized community health education about influenza vaccination, and (3) health care provider education on how to talk with older African Americans about influenza vaccination. Consistent with the TPB, these interventions when successfully implemented, may increase both behavioral and normative beliefs which may positively affect intent toward influenza vaccination as a desired behavior, resulting in increased vaccination rates among older African Americans. Based on the research linking influenza vaccination to a reduction in flu related morbidity and mortality and hospitalizations, an increase in influenza vaccination among this group will address current racial and ethnic disparities in flu vaccination to bring about positive social change.

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Appendix A: TPB and Influenza Interview Guide

General opening question

Describe your experience with flu vaccination as you first remember it.

Direct measures of past behavior

(1) When was the last time you received a flu shot?

(2) If you have taken the flu shot previously, tell me about the last time you received a flu shot. Why did you receive it?

1. Behavioral beliefs regarding flu vaccination

(1) Do you see any advantages in getting an annual flu shot?

(2) What do you see as the advantages of getting the annual flu shot?

(3) What do you see as the disadvantages of getting the annual flu shot?

(4) What else comes to mind when you think about getting the annual flu shot?

2. Normative beliefs regarding flu vaccination

When it comes to getting the annual flu shot, there might be individuals or groups who would think you should or should not perform this behavior.

(1) Who are the individuals or groups who would approve or think you should get the annual flu shot every year?

(2) What reasons have they given you for their approval of the annual flu shot?

(3) How does this approval influence your thoughts about the annual flu shot?

(4) Who are the individuals or groups who would not approve or do not think you should get the flu shot?

(5) What reasons have they given you for their disapproval of the annual flu shot?

(6) How does this disapproval affect your decision to take the flu shot?

---

3. Control beliefs regarding flu vaccination

(1) What factors or circumstances make it easy or enable you get the flu vaccine every year?

(2) What factors or circumstances make it difficult or discourage you from getting the flu vaccine every year?

(3) Do you have any additional thoughts you would like to share regarding influenza vaccination?

Note. From "*Icek Ajzen: Theory of Planned Behavior (TPB)—TPB Questionnaire*" by I. Ajzen, (n.d.). http://people.umass.edu/aizen/tpb.html. Copyright 2006 by Icek Ajzen. Adapted with permission of the author.

Appendix B: TPB Copyright Permission

From: **Delia Santana** <delia.santana@waldenu.edu>
Date: Sat, Feb 8, 2014 at 7:33 PM
Subject: Request to utilize TPB Model
To: aizen@psych.umass.edu

Hi Dr. Aizen;

I am writing to request permission to use a copy of the Theory of Planned Behavior picture model in my dissertation. I am a doctoral student writing my dissertation to explore reasons behind the low rates of influenza immunization among older African Americans. I am drawing on the Theory of Planned Behavior because I find it very applicable to my study approach and also applicable for interventions attempted toward addressing this concern. The purpose of the TPB picture model is to give a graphic depiction of the model and assist my readers in understanding the theory and how it is applicable to the research problem and research questions.

Please feel free to send any questions. You may provide your response by replying to this email. I am awaiting your response.

Respectfully submitted,

Delia Santana, RN, MSN, MPH, PhD Candidate
Walden University
(310) 686-5531

From: Icek Ajzen <aizen@psych.umass.edu>
To: Delia Santana <delia.santana@waldenu.edu>
Cc:
Date: Sun, 9 Feb 2014 09:48:45 -0500 (EST)
Subject: Re: Request to utilize TPB Model

Dear Ms. Santana,

The theory of planned behavior is in the public domain. No permission is needed to use the theory in research, to construct a TPB questionnaire, or to include an ORIGINAL drawing of the model in a thesis, dissertation, presentation, poster, article, or book. However, if you would like to reproduce a published drawing of the model, you need to get permission from the publisher who holds the copyright. You may use the drawing on my website for non-commercial purposes so long as you retain the copyright notice.

Best regards,

Icek Aizen, Professor and Head
Division of Social Psychology
University of Massachusetts
Amherst, MA 01003
http://www.people.umass.edu/aizen

Appendix C: Site Study Introduction Letter

Date:

Dear _____,

I am writing to you to let you know about a research study that you have the option to take part in. I am conducting this research as a doctoral student of Walden University. I am requesting your permission to speak with seniors of _____ Senior Center.

Research studies are done to answer a question. This study is being done to learn more about the reasons for the low rates of flu vaccination among older African Americans. I am particularly interested in speaking with African Americans who are 65 years and older.

The reason why I would like to know more about this topic is because older African Americans are less likely to take the flu shot than all other cultural groups.

This study is important because when older African Americans catch the flu they are more likely to have serious health problems causing more hospitalizations and even death. This is because older African Americans are more likely to have other illnesses like diabetes, and heart disease, and catching the flu may make them sicker. Yet, older African Americans have the lowest flu vaccination rates when compared to all other cultural groups.

Taking part in research is always optional. I would like to speak with African Americans who want to take part in this research study and who:

- Have consistently declined the flu shot in the last 3 years or more
- Are 65 years and older
- Are able to take part in a 20 to 30 minute interview

There is no cost to participate in the study. As a thank you for taking part in the study, participants would receive a $25 grocery gift card.

I will be available throughout the duration of the study to answer any questions either by phone or in person. My contact number is _____. My dissertation Chair (name) is also available to answer any questions you may have. She may be reached at _____.

Please do not hesitate to call us if you have any questions as you read over this material. We are happy to review any of this with you and answer any questions you may have.

Appendix D: Study Introduction Script

I would like to let you know about a research study that you have the option to participate in. I am conducting this research as a doctoral student of Walden University student. Research studies are done to answer questions. This study is being done to learn more about the reasons for low rates of flu vaccination among older African Americans. Taking part in research is always optional. I will be available after this meeting to talk with you more about the study and answer any questions either by phone or in person. Letters explaining the study are available today if you would like to know more about the study. You may take these letters with you. My telephone number is listed on the letter as well.

Thank you for your time.

Appendix E: Participant Study Introduction Letter

Date:

Dear Sir/Madam,

This letter is to let you know about a research study that you have the option to take part in. I am conducting this research as a doctoral student of Walden University.

Research studies are done to answer a question. This study is being done to learn more about the reasons for the low numbers of flu vaccination among older African Americans. I am particularly interested in speaking with African Americans who are 65 years and older.

Taking part in research is always optional. I would like to speak with African Americans who want to take part in this research study and who:

- Are 65 years and older
- Have consistently declined the flu shot in the last 3 years or more
- Who see a health care provider at least once a year
- Are able to take part in a 20 to 30 minute interview

There is no cost to participate in the study. As a thank you for taking part in the study, you will receive a $25 grocery gift card.

Please contact me at _____ if you would like to take part in this study.

You may also fill out the attached response card. Please let me know if you are interested by filling out the response card and I will call you to tell you more about the study.

I will be available throughout the duration of the study to answer any questions either by phone or in person.

Appendix F: Participant Screening Form

1. Are you African American or Black?
2. Are you 65 years or older?
3. Have you consistently declined the flu shot for the last three or more years?
4. Do you have a doctor that you see at least once a year?
5. Can you comfortably take part in a 20 to 30 minute interview?

Appendix G: Participant Study Outcome Information Letter

Dear participant in the study of the "Inquiry into the Low Influenza Vaccination Rates among older African Americans,"

I am writing you as a valued participant in this study to share important news before the findings are shared with the general public. The goal of the "Inquiry into the Low Influenza Vaccination Rates among older African Americans" study was to learn more about the reasons why many older African Americans do not take the flu vaccines when available and even when offered to them. Study participants were those persons who:

1) Are African American 65 years and older
2) Consistently declined the flu vaccine for the last three or more influenza seasons
3) Have a doctor that s/he sees at least once a year

The study has been completed and the information gathered has informed us that study participants do not take the annual influenza vaccine for the following main reasons:

1)

2)

3)

Study participants stated that they would consider taking the flu vaccine if:

1)

2)

3)

Findings gathered from this study are important because it will be used to provide more information for policy makers about how you experience flu vaccination and what it means to you. These findings will also be a benefit in learning how to understand the current rate of influenza vaccination uptake among older African Americans and address the resulting racial and ethnic disparities in influenza vaccination.

I remain available to answer any questions you may have about the study. If any changes to the information provided in this letter occurs I will inform you via the contact number you provided.

On behalf of Walden University and my dissertation committee I would like to thank you for your dedication to and participation in this very important study. You have helped us answer important questions about the reasons behind the low rates of influenza vaccination among older African Americans.

Please contact me at _____ with any questions or concerns.

Appendix H: Interview Transcript

Interviewer: When was the last time you received a flu shot?

Participant: Never had the flu shot.

Interviewer: If you have taken the flu shot previously, tell me about the last time you received a flu shot. Why did you receive it?

Interviewer: Do you see any advantages in getting an annual flu shot?

Participant: I don't.

Interviewer: What do you see as the advantages of getting the annual flu shot?

Participant: Because as I said people here they get the shot and they're still coming down with the flu

Interviewer: What do you see as the disadvantages of getting the annual flu shot?

Participant: What I see as a disadvantage is that why take it when there is no true results there's no guarantee that it is going to really, really work, some people get very, very sick once had the flu (shot) and this is personal experience and that what determines why I don't take the shot. I've been with people who have taken it and they get very, very sick when they take the shot.

Interviewer: What else comes to mind when you think about getting the annual flu shot?

Participant: About the shot, I really don't think much about it because I'm not taking it, so I really don't dwell. Well this last season obviously the shot was not very effective and so that's another thing, wonder why it didn't work this time and why didn't work last time so I don't even want to deal with it.

Interviewer: So where did you hear about this?

Participant: On the news.

Interviewer: When it comes to getting the annual flu shot, there might be individuals or groups who would think you should or should not perform this behavior. Who are the individuals or groups who would approve or think you should get the annual flu shot every year?

Participant: No. I'm with Kaiser and I get calls for doctor visits and the record states I do not want the shot.

Interviewer: When you go to the doctor do they ask you each time?

Participant: Oh yeah.

Interviewer: What reasons have they given you for their approval of the annual flu shot?

Participant: But see I've been there for years with the same doctor so why keep asking me the same question. They still ask me because they have to.

Interviewer: How does this approval influence your thoughts about the annual flu shot?

Participant: Well you know, they understand...at my age they understand that I should know why I should take it and why I don't and you can't keep questioning a person who's been here as long as I have

Interviewer: Who are the individuals or groups who would not approve or do not think you should get the flu shot?

Participant: I've never had anyone to tell me that. This is my personal belief. I would not tell anyone not to take it, this is strictly me. I would not tell anyone not to take it. This is how I feel.

Interviewer: What reasons have they given you for their disapproval of the annual flu shot? (NA)

Interviewer: How does this disapproval affect your decision to take the flu shot? (NA)

Interviewer: What factors or circumstances make it easy or enable you get the flu vaccine every year?

Participant: No.

Interviewer: What factors or circumstances make it difficult or discourage you from getting the flu vaccine every year?

Participant: I can't imagine anything because I have access to it. I can have it here at the center or at Kaiser. So that's my choice. If people take it and it works, just like the lady in there, couple of them, every time they take just like other people they take it all the time, that's their choice.

Interviewer: Do you have any additional thoughts you would like to share regarding influenza vaccination?

Participant: No because by me not having experienced the flu, I think I might be immune, I'll tell you why, I had the Hong Kong flu, you heard that, and they say that could be why a lot of people do not get the flu, and that was many years ago, many years, I think it

might have been in the 1950's, and it was called the Hong Kong flu. I heard that on the news, I don't know if it's true or not, but I have never had the flu.