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UNIVERSITY OF SAN DIEGO
Hahn School of Nursing and Health Science
DOCTOR OF PHILOSOPHY IN NURSING

TUBERCULOSIS AWARENESS AND PUBLIC OPINION ON EXPANDING HEALTH
INSURANCE COVERAGE

by

BELAL A. SAADEH, RN, MSN

A dissertation presented to the
FACULTY OF THE HAHN SCHOOL OF NURSING AND HEALTH SCIENCE
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requirements for the degree
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Dissertation Committee

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Abstract

This quantitative descriptive cross-sectional study examined the effect of TB awareness and demographic variables on the level of support for expanding health insurance coverage for all residents, including undocumented immigrants. A modified 13-item tool developed by Morisky et al. (1990) was used to measure TB awareness; a single item created by the researcher assessed personal opinion regarding expansion of health insurance coverage; and a demographic questionnaire was used to collect data from 281 registered voters in San Diego County.

The majority of San Diego County voters participating in the study supported at least some expansion of health insurance coverage. ANOVA tests indicated that personal opinion was not associated with awareness of tuberculosis, but was significantly associated with political party affiliation and education level in the initial analysis ($p = .000$ and $.035$, respectively). TB awareness was significantly associated with ethnicity ($p = .003$) and the education level of the participants ($p = .004$). When the opinion variable was dichotomized and trichotomized, other demographic variables were significantly related.

Study findings suggest that efforts to promote public opinion in favor of expanded health insurance coverage need to be differentially targeted to different audiences. Further studies, addressing the underrepresentation of certain groups that occurred in this study, might result in different findings in different parts of the country, especially nonborder areas.

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Dedication

This work is dedicated to:

Palestine—the history, the land, the people.

My teachers, who have always been wonderful role models for me.

Nurses, who advocate for healthcare for all.

And to all those who lack a basic human right, medical insurance coverage.

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Chapter 1

Introduction

Lack of health insurance has been a significant national concern in the United States in recent decades. The number of uninsured persons is growing dramatically and causing a negative impact on Americans' health status. The uninsured represent multiple segments of the American public, natives, citizens, immigrants, and minorities. The United States, where immigration is an important source for work-force and population growth, is the only wealthy, industrialized nation that does not have a universal health care system to cover its citizens (Miller, Wolman, Snyder, & Palugod, 2004). In addition, Americans continue to debate the value of health insurance as a human right. In a participatory democracy, public participation is vital to informing national policies and decision making processes. American public participation in health policy reform is of extreme importance in initiating action.

Approximately 48 million Americans lacked health care insurance coverage in 2005; 7.1 million of them were Californians. By 2010, an anticipated 53 million Americans will lack coverage, 7.8 million of whom will be Californians (Stoll, 2005). Access to health care for undocumented immigrants residing in the United States is linked to various political, economic, and executive stances. The absence of national health care coverage puts more than 11 million indigent undocumented immigrants at risk for limited access to health care and increased morbidity and mortality. According to Marshall, Urrutia-Rojas, Mas, and Coggin (2005), the 1996 federal welfare reform law (PRWORA) and Proposition 187 in California were designed to restrict immigrants' eligibility for Medicaid and other services. These legislative actions nurtured distrust and

fear and interfered with seeking health care for all immigrants regardless of their residency status, thus affecting the health of all population groups.

Legislative actions such as PRWORA and Proposition 187 arise, in large part, in response to public attitudes and concerns. These attitudes and concerns are frequently based on lack of knowledge and misperceptions. There is little known about current public knowledge of the effects of lack of access to care and their attitudes toward expansion of publicly funded health services to include undocumented immigrants. An understanding of public awareness and attitudes is essential in developing strategies to influence public opinion to support public health initiatives designed to enhance the overall health of the population. Therefore, this study is intended to explore public attitudes toward the expansion of health insurance coverage to include undocumented immigrants. Understanding the factors that influence public attitudes may help policy makers and advocates of human rights to design interventions to bring about expanded coverage. Verifying the public's support for or disagreement with expansion of health insurance coverage will give more focus and direction to all parties involved in recent debates and may influence health policy reform.

Background and Significance of the Problem

Health care access is one of the ten leading health indicators in the Healthy People 2010 national objectives, which emphasize elimination of health disparities among Americans (U. S. Department of Health & Human Services [USDHS], 2000). The United States is a nation of immigrants (Mohanty et al., 2005), with an estimated 300,000 to 400,000 unauthorized immigrants arriving each year. According to the United States

Office of Immigration Statistics (2006), in 2004 alone, 946,142 immigrants were admitted into the United States. California is home for almost a third of all immigrants who arrived in the United States in 1998 (Kaiser Commission on Medicaid and the Uninsured, 2000).

The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 greatly restricted the provision of many federal, state, and local public services to undocumented immigrants and limited states' abilities to provide care to undocumented immigrants. In fact, those admitted to the United States after August 1996 cannot receive coverage, except for emergencies, in their first five years in the country (Kullgren, 2003). In 2005, Kaushal and Kaestner found that PRWORA adversely affected the health insurance status of poorly educated, unmarried, immigrant women and their children, provoked fear among immigrants, and diminished their enrollment in safety net programs.

Prior to this act, in 1994, California voters approved Proposition 187, which eliminated all public services except emergency health care for undocumented immigrants. This legislation also called for publicly funded health care facilities to deny care to illegal immigrants and to report them to government officials. Extensive research after 1996 demonstrated the deleterious effects of these acts on undocumented immigrants' access to health services (Berk & Schur, 2001). Ku and Matani (2001) concluded that the combined effect of welfare reform, public charge (serious immigration consequences such as denial of admission to the United States or denial of permission to adjust status), and other factors negatively affected immigrants' insurance coverage and access to health services, regardless of their previous coverage and access problems. Ku,

in 2009, examined the determinants of insurance coverage and medical expenditures of both immigrant and U.S.-born adults. Results revealed that the majority of all immigrants are Hispanics or Asians, poorer and less educated than U.S.-born residents and more likely to be uninsured and to spend longer periods of time being uninsured. Moreover, the same study indicated that immigration status contributed more than insurance coverage, health status, and race/ethnicity to the gaps in insurance coverage between immigrants and U.S.-born Americans.

Immigrants are not the only group who lack health insurance coverage. For example, Fronstin (2008) examined health insurance coverage among immigrants compared with non-immigrants. Results indicated that native-born Americans comprised most (73.4 %) of the uninsured population in the United States in 2006. Immigrants, however, accounted for about 55% of the increase in the uninsured population between 1994 and 2006.

According to the Kaiser Commission on Medicaid and the Uninsured (2003), four out of ten undocumented immigrants enter the country legally with a student, tourist, business or other type of visa and become "illegal" when they stay after the visa expires. More than half of undocumented immigrants cite work as the main reason for coming to the United States; less than 1% claim receipt of social services as the main reason for immigrating. Of the undocumented immigrants from Mexico, over 90% have at least one employed worker in their families.

The Impact of Current Public Policies on Undocumented Immigrants' Health Care

Being uninsured has a negative impact on almost all aspects of health care quality and access. In fact, according to the National Health Care Disparities Report, the negative effects of being uninsured are typically larger for adults than the effects of race, ethnicity, income, and education (Agency for Healthcare Research and Quality [AHRQ], 2006a, 2006b). In the United States, 40% to 50% of non-U.S. citizens under 65 years of age were uninsured in 2006 (Kaiser Family Foundation, 2007). According to Urrutia-Rojas, Marshall, Trevino, Lurie, & Minguia-Bayona (2006), limited access to and poor utilization of health care services by undocumented Latino residents are related to the prospect of being reported to law enforcement authorities. However, people may use emergency rooms for primary care, when they fear using traditional services because of their legal status, thus leading to increased emergency room visits (Coffman, Shobe, Dmochowski, & Fox, 2007). Conversely, this extensive utilization of emergency services may obscure the effect of legal status and health insurance coverage in the prediction of health care usage by immigrants (Coffman et al., 2007). Extensive emergency department use increases the institutional and societal cost of care and leads to increasing amounts of uncompensated care (Gardner, 2007). In order to reduce hospital expenditures for uncompensated care, the number of uninsured patients should be reduced (Castel et al., 2003).

Documet and Sharma (2004) reported that the primary difficulty for Latinos in Southwestern Pennsylvania in accessing health care was the lack of health care insurance. Moreover, Coffman et al., (2007) reported that undocumented immigrants do not

purchase health care coverage on the individual market because it is prohibitively expensive.

Americans and Health Care Reform

Historically, Americans have supported different proposals for expanding health insurance coverage. A study by Blendon, Benson, and DesRoches (2003) found that three fourths of Americans favored one of three possible ways of expanding health insurance coverage: (a) expanding state government programs such as Medicaid and the State Children's Health Insurance Program (SCHIP), (b) encouraging businesses to offer private health insurance to their employees, and (c) offering uninsured Americans income tax deductions, tax credits, or other financial assistance to help them purchase private health insurance.

Hanson (2003) attempted to identify the ways in which personal political views interact with competing factors, such as self-interest and other personal characteristics, to affect Americans' views of the state of health care in America and what should be done about it. Her results indicated that personal ideology clearly plays a critical role in both the extent to which Americans are content with the current system and their ideas of what should be done to address its perceived problems. Previous surveys and polls focused on examining Americans' reactions to specific recommendations or solutions suggested for better coverage for the uninsured but did not address the extent to which Americans support or oppose the core concept of expanding health insurance coverage for the uninsured. Examining and exploring the levels of Americans' support for expanding health care insurance coverage, in conjunction with public awareness of serious health

issues, may facilitate appropriate public health decisions. No published research has been conducted, however, to determine if such a relationship exists between any communicable disease awareness and public opinion trends.

Tuberculosis and Public Awareness

Exploring the relationships between Americans' opinions on expanding health insurance coverage and their level of awareness about tuberculosis, a disease prevalent in many undocumented immigrants, may reveal associations which can be used to design and initiate future public health awareness programs and ultimately foster public demand for health care policy reforms. This goal is supported by the recommendations of Blendon et al. (2003), who stated that health insurance coverage expansion will not be achieved unless the public comes to support an increase in some sort of tax or premium revenue. Moreover, Hanson (2003) recommended examining the effect of proposed mediating factors that may influence the effect of an individual's political views on personal preferences. Seeking public support mandates an initial assessment of the current public position and factors that interfere with positive attitudes toward expanding health insurance coverage. Understanding of these relationships would greatly influence and assist organizations and decision makers in promoting the expansion of health care insurance coverage.

Public health in general is one of the concerns for Americans who are well informed and educated. As a receiving country for external immigration, the United States institutes certain measures to protect the public from health conditions, such as tuberculosis, that may be transmitted by immigrants. The United States has implemented

many health education programs to increase its citizens' awareness of infectious diseases. This fact leads to the assumption that Americans are expected to possess high interest in and concern for their individual health when connected to community and public health hazards.

Tuberculosis is a global problem and is one of the world's leading infectious causes of death among young people and adults (Dye et al., 2007). In the United States, the National TB Surveillance System reported 13,293 tuberculosis (TB) cases in 2007; this number represents the lowest recorded TB incidence rate since national reporting began in 1953 (Centers for Disease Control and Prevention [CDC], 2008b). The same report also indicated that during 2007, the TB rate in foreign-born persons in the United States was 9.7 times higher than in U.S.-born persons, which can be explained by the high prevalence of the disease among immigrants who arrive in the United States. Furthermore, the report detailed higher TB rates among certain ethnicities and races. For example, incidence was 7.4 times higher among Hispanics, 8.3 times higher for blacks, and 22.9 times higher for Asians than for non-Hispanic whites. These facts put more focus on the risks of tuberculosis through immigration, particularly because most of the immigration flow involves these ethnic groups.

Over twenty years ago, in 1987, the Department of Health and Human Services (DHHS) established the Advisory Committee for the Elimination of Tuberculosis (ACET) to develop a strategic plan for the elimination of tuberculosis as a public health problem (CDC, 1989). ACET established a national goal of TB elimination with an incidence of less than 1 case per million population by the year 2010. Since foreign-born persons residing in or applying to migrate to the United States are more likely to have

TB, immigration authorities started to follow the CDC's (2008a) "Technical Instructions for Panel Physicians" to detect and treat tuberculosis among applicants and to reduce the risk of spread of tuberculosis among the U.S. population after immigration.

In order to improve the control and prevention of TB in the United States and to progress toward its elimination, persons with TB generally should have access to medical and public health services and resources necessary to make a precise diagnosis of the disease, achieve curative medical treatment, and otherwise provide substantial science-based protection of the population against TB (Taylor, Nolan, & Blumberg, 2005).

Concern about transmission of a communicable disease, such as tuberculosis, could be expected to influence public opinion and attitudes towards measures, such as increasing access to care through insurance coverage that may help protect health and well-being. For these reasons, this study was designed to explore the extent to which demographic variables and awareness of TB affect individuals' opinions on expanding health insurance coverage. Individuals with high awareness related to TB were expected to support expanding health insurance coverage.

Conceptual Framework

The theoretical framework for this research was based on two theoretical perspectives, symbolic politics and self-interest, that have been used in previous studies of public opinion. Symbolic politics theory and self-interest theory present important determinants and competing motives in mass politics (Sears, 1993).

Symbolic politics theory suggests that symbolic predispositions, such as party identification, political ideology, and racial prejudice, influence attitudes and opinions.

These symbolic predispositions are stable affective preferences acquired through classical conditioning in pre-adult years (Sears, 1993). These predispositions influence adult policy attitudes on the basis of cognitive consistency, in which symbols evoke longstanding affective responses to policy issues rather than rational self-interested calculations (Sears, Lau, Tyler, & Allen, 1980). Self-interest theory, on the other hand, predicts an individual's policy attitudes to be those that maximize benefits and minimize costs to him or herself and that the intensity of these policy views is a function of the magnitude of perceived benefits and/or costs (Henderson, Monroe, Garand, & Burts, 1995).

Recent work by Greenberg (2004) showed that demographic differences among voters had a significant effect on their support for environmental protection laws in the United States. Being male, highly educated, white, a member of the Democratic Party, and willing to raise taxes rather than cut services designed to foster environmental protection, were found to be predictors of higher support for protective legislation. In the light of these results, highly educated people are usually expected to be more aware and informed about risks and hazards that may affect individual and family health. This assumption supported the inclusion of TB awareness as a moderating factor that might influence personal attitude and policy preferences. Rankin (2004) found that variables of economic self-interest were not a significant factor in how Canadians and Americans viewed the North American Free Trade Agreement (NAFTA). He concluded that a lack of full awareness and information needed to weigh personal costs and benefits in a policy judgment on NAFTA was the basis of such attitudes.

In other work by Maxson, Hennigan, and Sloane (2003), one demographic variable (race/ethnicity) affected perceptions about the police, but did not affect their evaluation of actual police practices. In similar work, age was the only demographic factor, beside symbolic factors, that influenced Americans' public opinion about world affairs (Brewer, Gross, Aday, & Willnat, 2004). On the other hand, socioeconomic gaps between different ethnicities failed to explain differing political views on many issues examined by Claassen (2004).

Applying these two frameworks, public opinion on a health policy issue like expanding health insurance coverage would be expected to be differentiated on the basis of one of the two proposed factors discussed above. Moderating factors, such as awareness of tuberculosis, affect the predicted outcome of the interaction between dependent and independent variables. The conceptual framework for the study is depicted in Figure 1.

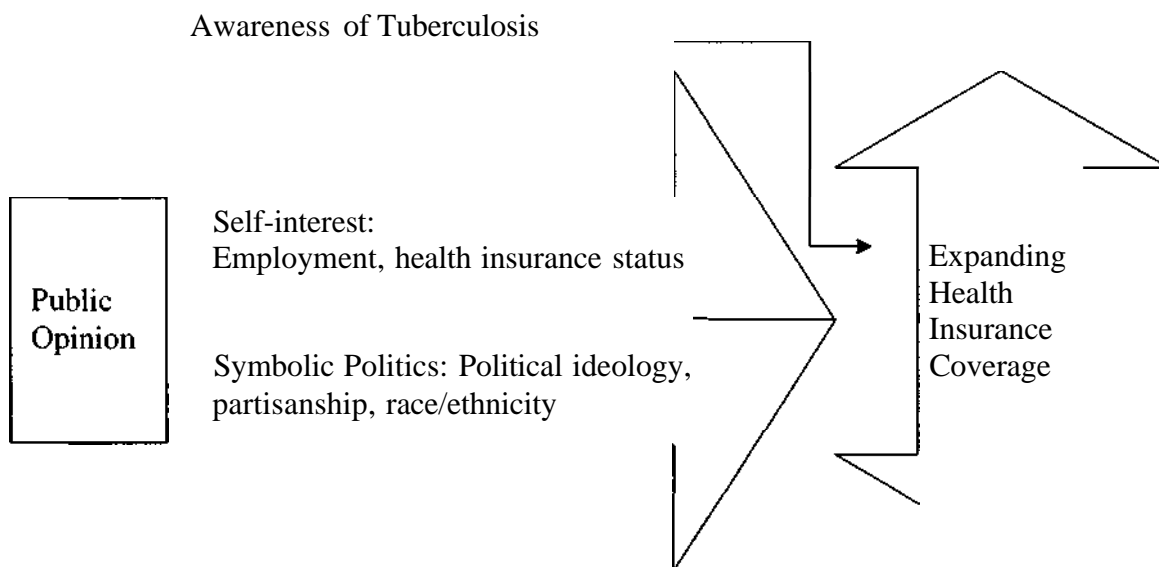


Figure 1. Conceptual Framework

Purpose of the Study

The purpose of this study was to explore the impact of San Diego County voters' awareness of tuberculosis on their attitudes toward expanding publicly funded health insurance coverage to all county residents. In the process of achieving this goal, the following specific aims were addressed:

1. To determine the current level of TB awareness among San Diego County voters.
2. To determine the extent of voter support for expanding health coverage through federally and state financed programs to all county residents, including undocumented immigrants.
3. To examine the relationships among TB awareness, levels of support for expanding health coverage, and personal characteristics (age, gender, marital status, political party affiliation, current employment, education, area of residence, ethnicity, years lived in San Diego, health insurance status, and source of health insurance) among San Diego County voters.
4. To identify the independent variables (TB awareness and personal characteristics) exerting the greatest influence on the dependent variable (level of support for expanding health coverage) among San Diego County voters.

A quantitative cross-sectional survey design was used to answer the research questions. A three-part questionnaire was used to measure public attitudes toward expanding health care insurance in San Diego County, public awareness of tuberculosis, and the personal characteristics of study participants. Descriptive statistics (average, standard deviation, and percentages) were used to describe the study sample. Inferential statistics, including chi square and ANOVA, were also used to describe the relationship

between participants' willingness to expand health insurance coverage and their awareness of tuberculosis. Further details of the research approach are presented in Chapter Three.

Summary

Assessing awareness of a specific consequence of the lack of health insurance and its relationship to attitudes regarding expansion of health insurance coverage will help to direct campaigns to modify public opinion to achieve health care equity. Results of this study will help the public of San Diego County understand and realize the importance of their voice in deciding on a highly debated issue that touches the lives of many Americans. Moreover, these results may contribute to health policy reform by promoting public support for change. Finally, increased public awareness of public health issues can be used to manipulate support for the desired reform.

Chapter 2

Literature Review

This review of the literature will focus on the following issues: (a) perspectives on the American health care system, (b) obstacles and challenges facing the current health care system, (c) public participation in the decision making process and policy reform in democratic civic management, (d) ethical decision making and public interest, (e) public opinion and health care reform, (f) determinants of public opinion, and (g) tuberculosis as a moderating factor in public opinion.

Perspectives on the American Health Care System

The American health care financing system is a combination of public and private health insurance that provides health care coverage for the insured segment of the population. Medicare and Medicaid are the largest public systems, followed by the State Children's Health Insurance Program (S-CHIP), Veterans Administration health care services (VA) and many other government funded programs, such as military (TRICARE) and Indian Health Services (IHS). However, since the VA, HIS, and TRICARE systems serve specific populations, I only note their existence and indicate that they are not relevant to this discussion.

Medicare is a social insurance program for the elderly, some of the disabled under 65, and those with end-stage renal failure. It is administered by the federal government and financed through a combination of payroll taxes, general federal revenues, and premiums. It covers 12% of the population and accounts for 14% of total health care expenditures in the United States (Marshall, Shekelle, & Leatherman, 2000). Medicare

covers hospital services, physician services, Medicare advantage (Health Maintenance Organization's [HMO's] that administer Medicare benefits), and prescription drug benefits. Disadvantages related to Medicare coverage include incomplete coverage of preventive and skilled nursing care and lack of coverage for dental, hearing, or vision care. Incomplete coverage leads to the need for supplemental insurance (Kaiser Family Foundation, 2003).

Medicaid is a program designed for low-income and disabled individuals. It covers 13% of the poor and is administered by the states within broad federal guidelines. By federal law, states' budgets must cover very poor pregnant women, children, the elderly, the disabled, and sometimes children's parents. Childless adults are not covered, and many poor individuals make too much to qualify for Medicaid. Some flexibility is given to the states to expand eligibility, such as increasing income eligibility. The states and the District of Columbia are responsible for the administration of the fifty-one different Medicaid programs in the country. Medicaid is financed jointly by the states and the federal government through taxes. Every dollar that a state spends on Medicaid is matched by the federal government at least 100%. In poorer states, the federal government provides additional funding. Overall, the federal government pays for 57% of Medicaid costs. Benefits offered by Medicaid include prescription drugs. Medicaid has one significant disadvantage. Because of its low reimbursement rates, it is often difficult for insured persons to find providers that accept Medicaid (Kaiser Family Foundation, 2005).

The State Children's Health Insurance Program (S-CHIP) was designed in 1997 to cover children whose families make too much money to qualify for Medicaid but make

too little to purchase private health insurance. This program is financed jointly by the states and the federal government through taxes. On average, the federal government pays 70% of S-CHIP costs, while state governments pay 30% (Lambrew, 2007).

Private health insurance, provided by more than 1,200 for-profit and not-for-profit insurance companies (regulated by state insurance commissioners), is purchased by individuals or employers. This type of insurance is funded by voluntary premium contributions shared by employers and employees on a company-specific basis. Private insurance covers 58% of the population and accounts for 33% of total health expenditures. Individuals may be covered by a combination of public and private insurance policies and cost sharing is common (Marshall et al., 2000).

Obstacles and Challenges in the Current Health Care System

The United States spends more on health care than any other country in the world, yet continues to experience large numbers of uninsured persons, uneven quality of the care provided, and administrative waste (Chua, 2006). Health care costs and the number of people without health insurance increase concurrently even during periods of overall economic growth (Collins, Davis, Doty, Kriss, & Holmgren, 2006).

Contrary to all other industrialized countries and most of the world, private health care insurers are more prevalent than public insurers in the United States. The uninsured in the United States are more likely than people with insurance to be hospitalized for avoidable health problems due to the lack of regular outpatient care. Once hospitalized, they receive fewer services and are more likely to die in the hospital than are insured patients. They also receive less preventive care (United Nations Human Development

Programme [UNHDP], 2005). In addition, more than 40% of the uninsured do not have a regular source of care, and over a third indicate that they or someone in their family has gone without needed care, including recommended treatments or prescription drugs because of cost (UNHDP, 2005).

In 2007, the United States spent 16% of its General Domestic Product (GDP) on health care, compared to an average of 8.9% for other industrialized nations involved in the Organization for Economic Co-operation and Development (OECD). The United States also spends more on health care per capita than any other OECD country. In 2007, total U.S. per capita health spending was \$7,290 (adjusted for purchasing power parity), more than 2.5 times the OECD average of \$2,964 (OECD, 2009). Furthermore, OECD (2009) reported that life expectancy in 2006 in the United States was 78.1 years; nearly a year less than the OECD average of 79.0 years. The consequences of the lack of universal health care coverage in the United States include inequities in access to care, avoidable mortality, poor quality care, financial burdens for people who are uninsured or underinsured, and lost economic productivity (Davis, 2007).

Collins et al. (2006) described the status of health insurance coverage of Americans and the health and financial consequences families faced when they experience breaks in coverage. The lowest income families were found to be the most at risk of not having insurance coverage followed by middle-income families. In addition, one out of five adults under the age of 65 was paying off debt related to past medical bills. Uninsured people with chronic health conditions, such as diabetes and asthma, were much more likely to skip medications and go to an emergency room or hospital than those who were insured.

Lasser, Himmelstein, and Woolhandler (2006) compared health status, access to care, and utilization of medical services in the United States and Canada and examined disparities related to race, income, and immigration status. Multivariate analyses revealed that Americans were less likely to have a regular source of care, more likely to have unmet health needs, and less likely to get needed medicines than Canadians. Disparities in health care services on the basis of race, income, and immigration status were detected in both countries but were more extreme in the United States.

Clearly the literature demonstrates the consequences of lack of health insurance among large segments of the U.S. population. Comparisons with other industrialized countries' as well as researchers' and activists' calls for expanding U. S. health insurance coverage have emphasized the need for major health care reforms. Universal coverage is viewed by many as a realistic and acceptable final solution for deficiencies in the American health care system.

Ethical Decision Making and Public Interest

Society's ultimate goal is to reside under a healthy system of government, free of corruption and political self-interest. With more than 40% of the U.S. population not holding any type of insurance, the issue becomes one of public interests and moral obligation. How should public administrators achieve social justice when it comes to health coverage? And how would an average citizen respond to such a question?

Conflicts sometimes arise between what is in the public's best interest and what interests its governing bodies. Over the last century, public administrators increasingly have become susceptible to the risks of corruption, conflicts of interest, and discordance

with public purpose. Conversely, prioritizing public interest tends to maximize public trust in elected and appointed leaders. McSwite (2000) noted that scholars of the discourse theory in public administration believe that conflicts between elected leaders and the public can be solved through authentic discourse, in which questions related to public policy can be solved at the street level.

The most common constraint in ethical decision-making in an industrial world with global competition is maintaining an effective organization that is capable of serving the public. Which values should be exemplified by public administrators when decisions need to be made? According to Geuras and Garofalo (2005), public agencies must advance the values that the public considers worthy, and it is critical that public agents exhibit a commitment to ethical practices in their stewardship. The conflicting loyalties of public administrators are the real source of ethical dilemmas that potentially prevent meeting the public needs.

Cooper, in his article "Big Questions in Administrative Ethics" (2004), located the ethical foundations in public organizations in five sources (the constitution, social equity theory, public interest, citizenship theory, and virtue ethics) that can serve as primary sources for public administrators in their decision-making processes. According to Wart, (1996), the American Society for Public Administration (ASPA) addressed the public interest in its code of ethics, which serves as a valuable resource in administrative decision making. ASPA's code includes the following guidelines:

1. Exercise discretionary authority to promote the public interest.
2. Oppose all forms of discrimination and harassment, and promote affirmative action.

3. Recognize and support the public's right to know the public's business.
4. Involve citizens in policy making.
5. Exercise compassion, benevolence, fairness and optimism.
6. Respond to the public in ways that are complete, clear, and easy to understand.
7. Assist citizens in their dealings with government.
8. Be prepared to make decisions that may not be popular (Wart, 1996, p. 5).

Health care coverage expansion is a major issue for the American citizen in which public opinion should become an important guiding factor. There is a need for an authentic internal and external discourse between representatives and decision makers and their constituents. Public administrators' actions should reflect the desires of the true owners of the public agency by means of participative decision-making processes and prioritizing public values. A commitment by public administrators to ethical conduct is an invaluable means to bridge the gap between bureaucracy and public interest, which adds to the public organization's legitimacy.

Public Opinion and Health Care Reform

The history of public opinion dates to the eighteenth century and formed the backbone for the political democratic system of United States, embodying the consent of the governed and conferring legitimacy on government (Boyer, 2001). An important question that arises is to what extent public opinion has influenced health care policy reform and health care services delivery.

According to Teixeira (2005), the public is open to a government-supported system of universal coverage, but is not sure about timing and how to achieve this goal.

He showed through a variety of public poll results that Americans view health as high on their list of their concerns, especially in the midst of increased health care costs. Through those polls, people voiced the need for a governmental program that provides a universal system equal for all citizens and indicated a willingness to pay more annual federal taxes to assure that every American citizen received health care coverage. Results also showed, however, that the support for universal coverage dropped significantly when it was perceived as leading to limitations on access to health care (Teixeira, 2005).

In their review of more than 80 opinion surveys dating back to the 1980s, Blendon, Brodie, Benson, Altman, and Buhr (2006) explored the role of public opinion in the reform of U.S. health care policy. They examined the following issues: (a) health care as a national priority for government action; (b) the state of the health care system; (c) personal satisfaction with health care; (d) health care spending and costs; (e) the uninsured and national health insurance; (f) the financial viability and future shape of Medicare, its prescription drug program, and the Medicaid program; and (g) the problem of quality health care in the United States. Blendon and colleagues found that the majority of Americans were dissatisfied with the current health care system but were relatively satisfied with their own health care arrangements. They also found that members of the public were inconsistent in their opinions, particularly when health care policy reform could potentially affect their own health care arrangements and benefits and increase their taxes. The review suggested that the public usually did not support policies that would offer universal coverage or make Medicare and Medicaid financially more secure; however, Americans were anxious about their capacity to afford health care without future changes in the national health care policy. The review showed that there

was a difference in satisfaction between people with higher incomes who had health insurance and those who did not. The authors concluded that delay in a major reform could be expected because Americans believed that the health care system was not yet broken beyond repair and more politically influential people were satisfied with their health arrangements.

According to Kull, Galston, and Ramsay (2009) support of health care coverage expansion declines over time when strong political debate on the subject arises. They added that it is unclear whether the decline in the support of new initiatives is due to citizens' lack of enthusiasm for the issue or a lack of confidence in government in general. Historically, the United States has experienced strong political debates on health care reform resulting in failure of some initiatives, such as California's initiative in 1992, and the success of others, such as the Massachusetts experience in 2006.

Oliver and Dowell (1994) reviewed the 1992 policy choices for expanding health insurance coverage in California that resulted in rejection by the state's legislators and voters. In 1992, the need for health care reform in California was high when a quarter of the state's nonelderly population was uninsured. This led the California Medical Association (CMA) to call for legislation mandating all employers in the state to provide health insurance for their workers and their families. Despite the wide public need and initial support to expand coverage, the CMA's Proposition 166 was rejected and failed to achieve its objectives (Oliver & Dowell, 1994). Oliver and Dowell related the failure of the CMA proposal to the strong influence of various interest groups, gubernatorial politics, the national health care reform debate, and insufficient funds to support the proposal. The experience in California is telling when a total of seven million people in

need of health care coverage, coupled with significant public support, failed to create the desired health care reform. This experience suggests that the U.S. private sector can heavily influence the American democratic system and its public policy unless adequate financial support is available to counter opponents of health care reform initiatives.

A recent successful example of the impact of public support on provision of universal health care coverage was observed in Massachusetts. In their report for the Blue Cross Blue Shield of Massachusetts Foundation, Blendon, Buhr, Fleischfresser, and Benson (2006) noted that the proposal for universal health insurance in Massachusetts was introduced when a majority of Massachusetts residents believed that the health care system in Massachusetts suffered serious problems and needed reform. In their survey, 45% of the population believed that the Massachusetts health care system had "major problems," while 14% believed that it was "in a state of crisis." Only 8% of Massachusetts residents believed that the health care system did not have any problems.

The public believed that the reform plan would help the poor and uninsured citizens of the state. Widespread public support was observed among a variety of demographic groups, including those who would potentially be most affected by the law. Surprisingly, a majority of those who believed their taxes would increase as a result of the law remained supportive of the reform, which indicated a public commitment to the goal of providing health care for all Massachusetts residents and an acknowledgement of the partnership among the public, employers, and government required to meet that goal (Blendon, Buhr, et al., 2006). The authors concluded that increased public support for the Massachusetts law, noted six months after its passage, provides for optimism for the future expansion of universal health insurance nationwide.

According to Dorn (2006), the proposal for universal health coverage in Massachusetts would benefit both citizens of the state and the vast majority of businesses, although a small percentage of companies would experience a 5% to 7% increase in costs. The critical test of the Massachusetts experience will be the continuity of public support for its unique health care reform experience in the years ahead. Increased insurance premiums for individuals, families, and employers; implications of the plan for the state's budget and overall economic growth; and potential decline in the state businesses will be critical components in the success or failure of this important reform.

Determinants of Public Opinion

The limited academic research on public opinion related to health reform in the United States directed this review towards literature that explored public opinion on other issues. This section addresses opinions related to sex offenders and community protection policies, schizophrenia, smoke-free public places, obesity, environmental protection, the military, medical expenditures, immigrants, and other issues.

In an attempt to measure adults' opinion and behaviors before and after implementation of the comprehensive smoke-free public places law in Lexington-Fayette County, Kentucky, Rayens et al. (2007) used two cohorts of non-institutionalized adults (N= 2146) randomly selected by a random-digit dialing method for telephone interviews 8 months before and 6 months after the enactment of the law in April 2004. In addition to public support for Kentucky's smoke-free law, interviews addressed perceptions of health risks from exposure to second-hand smoke (SHS), smoking behaviors, and frequency of visits to restaurants, bars, and entertainment venues. Generally, participants were

supportive of the law (60%) in the combined sample, and support increased significantly from 56% to 63% after enactment of the law. This increase was associated with an insignificant increase (69% to 73%) in participants' perceptions of SHS as a health hazard, but significant increases in disease-specific risk perceptions because of SHS exposure (32% higher risk of heart attack and 24% greater risk of developing cancer) after controlling for personal characteristics in the logistic models. The authors examined each of the main variables (public support, SHS perceptions, smoking behaviors, and frequency of visits to public places) individually, with no attempt to explore their interactions, and only personal difference effects were examined and reported in their results.

Hilbert, Rief, and Braehler (2007) used a telephone survey method to interview a representative sample of 1,000 non-institutionalized people 14 years of age and older regarding the problem of obesity in Germany. The study addressed causal attributions, support for obesity prevention, societal responsibility beliefs, and sociodemographics.

The authors constructed a structured interview, which was tested using trained personnel. Stepwise multiple regression analysis was used to determine predictors of support for obesity prevention. Most of the variance in prevention support was explained by causal attributions to the food environment, and women regarded such influence as more important than men. At the same time, the authors described a low level of awareness about the definition, prevalence, and environmental and genetic risk factors related to obesity. Moreover, their results showed a high level of public readiness for obesity prevention with a focus on individual behavioral change, but not for regulatory interventions. Finally, they recommended raising public awareness about obesity in order

to increase support for obesity prevention and treatment initiatives. These results point out the importance of awareness and knowledge about factors involved in and consequences of any issue in determining public support.

Oliver and Lee (2005) used a survey method to examine public attitudes toward obesity and obesity policy in the United States. Results indicated that most Americans were not seriously concerned with obesity, expressed relatively low support for obesity-targeted policies, and still viewed obesity as resulting from individual failure rather than environmental or genetic factors. In addition, they found that determinants of policy preferences, such as ideology or partisanship, were not good predictors of attitudes on obesity policy. However, the three greatest predictors of support for obesity policy were public awareness about nutrition and obesity, public support for other preventive health policies, and an understanding of environmental factors contributing to obesity, supporting the results of Hilbert, Rief, and Braehler (2007).

Levenson, Brannon, Fortney, and Baker (2007) examined public perceptions about sex offenders and community protection policies, exploring the accuracy of public perceptions about sex offenders and the dangers they pose and determining what residents think about community protection practices and their effectiveness. A sample of 193 residents in Melbourne, Florida, waiting to be served at two Department of Motor Vehicles offices, were surveyed by questionnaire in August 2005. The authors referred to the effect of two incidents (abduction and murder of two girls) that took place in central Florida six months prior to data collection. Unexpectedly, descriptive statistics revealed that community notification activities (including flyers, door-to-door warnings, neighborhood meetings, and press releases) were perceived as uncommon events by the

respondents; at the same time, the majority of the respondents believed that these strategies were effective in reducing rates of sexual abuse. These conflicting results make the findings questionable, particularly because the authors did not report the validity and reliability of their measures. The most interesting finding of the Bonferroni technique to test the statistical significance of multiple comparisons was that females rated their level of fear of sex offenders significantly greater than males and rated their agreement with community notification as an effective preventive measure significantly higher than males. These findings reflect their self-interest in being protected and are in keeping with the theoretical model for the current study.

Esterberg, Compton, Mcgee, Shim, and Hochman (2008) surveyed 111 urban African American community members regarding their level of familiarity with mental illness, knowledge about schizophrenia, and social distance toward individuals with schizophrenia. Validity, reliability, and internal consistency for the instruments used in this study were reported. The measures used were the Knowledge About Schizophrenia Test (KAST-18) and the Social Distance Scale (SDS), while familiarity with mental illness was assessed by a series of questions related to personal, family, friends', and significant others' history of psychiatric treatment for schizophrenia. Finally, the sociodemographics of the participants included age, gender, religious affiliation, marital status, education level, and yearly household income. Bivariate analysis indicated no correlation between the socio-demographics and the desire for social distance. Only family history of psychiatric treatment and family history of schizophrenia positively and significantly predicted the desire for social distance in the regression analysis. These results cannot be generalized to other groups because it was purposely focused on urban

African Americans. Extending this work to other ethnicities and cultures might produce different results or help generalize the findings. General knowledge of schizophrenia was not correlated with the desire for social distance as expected.

Schoen (2008) explored the sources of European public opinion on common foreign and security policies (CFSP) using a survey conducted in 2004. A total of 24,770 Europeans in 25 countries were randomly selected and interviewed, using Computer Aided Personal Interviewing (CAPI). Attitudes toward common foreign and defense policies were measured by six variables. Two items addressed support for one common foreign policy and for one common defense and security policy at a rather general level. The remaining items tapped more specific issues, such as concern for the EU's handling of international crises; whether member states of the European Union should agree on a common position when an international crisis occurs; and a European military rapid response force to be deployed when an international crisis occurs. Control variables included gender, age, education, and left-right ideology. Based on research results, the author proposed three models of support for these policies. Utilitarian models of support build on the assumption that calculations of costs and benefits drive attitudes toward the European Union. The performance model identifies evaluations of how the EU institutions perform and these in turn, have a bearing on support for European integration and common policies. According to the identity model, citizens ask whether European integration in this domain is in line with their notion of national or European identity, including goals, norms, and values.

Descriptive results supported previous research that there is considerable support for policy measures that make the EU a stronger actor in foreign affairs and defense.

Logistic regression showed that the utilitarian model predicted that support for the CFSP depends on perceived threats to existing capabilities to protect national security.

Perceptions of external threats considerably increased support for a common defense policy, coordinated policies in international crises, and a rapid military force response.

This finding suggests that external threats make EU citizens more inclined to consider the common foreign and defense policy not only as a challenge to national sovereignty but also as a means to maintain it. The control variables (gender, education, age, and ideology) played a minor role in shaping attitudes toward foreign and defense policy at the EU level. Evaluations of the EU's performance in foreign affairs and defense were powerful in shaping support for common European policies in these domains.

Greenberg (2004) used telephone survey data from the Eagleton Poll Archive to examine public support for environmental protection among 800 to 1,000 randomly selected residents of the United States and New Jersey. Gender, age, political party, education, race/ethnicity, income, and concern about environmental problems were used as control factors. Descriptive statistics showed that people 40 to 60 years of age, who were Democrats, liberal, more highly educated, and white, with higher income and greater concern about environmental threats to health were more supportive of environmental control policies. Stepwise binary logistic regression results revealed that concern about environmental problems, education, race/ethnicity, Democratic party affiliation, and male gender were significant predictors of support.

Leal (2005) tested racial and ethnic differences in attitudes toward the military. Enlistment of young people in the military, support for military expenditures, and overall evaluations of the military were all measured and aggregated to assess support for the

military. Approximately 4,614 Americans were surveyed by the 1999 National Survey on Latinos in America (NSLA). Income, education, employment, age, religion, citizenship, gender, trust in government, and political party were control variables. Regression analysis indicated that Latinos were the most likely to encourage young people to enlist in the military and the least supportive of military spending. Similarly, women were less supportive of spending than men. Anglos gave the most favorable evaluations of the military compared to Latinos and African Americans. In conclusion, being a citizen, conservative, male, and older were associated with support for military expenditures.

Ilias, Fennelly, and Federico (2008) used data from a 2004 New York Times/CBS News national survey of 744 voters to analyze public opinion toward a guest worker program and to compare predictors of support for guest worker and general immigration policies. Age, gender, income, education, race and ethnicity, residential status, political party affiliation and ideology, views about personal financial conditions and the national economy, and immigrant traits and costs of immigration were examined. The majority of respondents opposed guest worker programs (67.8%), and individuals who supported reducing the level of immigration were much more likely to object to guest worker programs (81.8%) than to support them (18.2%). Moreover, results showed that residents of high-immigration states, Latinos, and college graduates were more likely to support guest worker policies, while opponents were more likely to have negative perceptions of the national economy. The findings also suggested that attitudes toward guest worker policies differed along ethnic lines. Latinos and Whites held similar views toward general immigration policy, but Latinos were more likely to support a temporary worker

initiative. At the same time, results suggested that attitudes toward guest worker and restrictive immigration policies were related.

Surprisingly, attitudes toward immigration in general were found to be significantly affected by political party identification, but not by ideological conservatism. General attitudes toward immigration were not, however, significant predictors of attitudes toward a guest worker program. The results of the bivariate analysis indicated that individuals who favored reducing immigration levels also tended to oppose instituting a guest worker program. Perceptions of the "costs" of immigration emerged as the most important determinant of individuals' attitudes toward immigration policies; such beliefs contributed to opposition to a guest worker policy and support for reducing the immigration level. These conflicting results support the inclusion of self-interest theoretical framework as a predictor of public policy preferences.

Mayda (2006) empirically analyzed economic and non-economic determinants of individual attitudes toward immigrants for 20,000 respondents within and across 22 countries, including the United States, Canada, Japan, several Western European countries, a few Eastern European countries, and the Philippines. Mayda used two individual-level survey data sets and cumulative data on international migration and on destination and origin countries of immigrant flows. The two survey data sets included information on the socioeconomic background of each respondent (age, gender, parents' foreign citizenship, years of education, area of residence [rural versus urban], subjective social class, political affiliation with the right, trade union membership, and income as a basic indicator of individual economic status) and his or her opinions on topics such as immigration and trade policies, patriotism, and national identity.

In this study, Mayda concluded that both economic and non-economic factors were important in explaining immigration attitudes and found that opinions about immigration policy were significantly correlated with individual skill and that there exists substantial cross-country variation in this correlation. Non-economic variables, such as multiculturalism and religious differences, were also found to be significantly correlated with immigration policy preferences. Both concerns regarding the impact of immigration on crime rates and individual perceptions of the cultural effect of foreigners were associated with immigration attitudes. Mayda concluded that non-economic determinants were more important than economic variables in shaping immigration attitudes.

The literature reviewed in this section has supported the significance and importance of self-interest and political identification in shaping individuals' preferences on policy decisions. Consequently, this literature supported the carefully argued decision to use this theoretical framework for this study. As the review indicated, results by Greenberg (2004); Ilias, Fennelly, and Federico (2008); Leal (2005); Mayda (2006); and Schoen (2008) supported the applicability of symbolic politics theory that considers symbolic predispositions, such as party identification, political ideology, and racial prejudice, as stable affective preferences, acquired through classical conditioning in pre-adult years, that influence adult policy attitudes.

Self-interest theory, which predicts that an individual's policy attitudes will be those that maximize benefits and minimize costs to him or herself, is supported by the results of Hilbert, Rief, and Braehler (2007); Levenson, Brannon, Fortney, and Baker (2007); and Rayens et al. (2007). This theoretical framework is used to inform the

predictions and to anticipate the direction of the relationships between the study variables and to evaluate their interactions.

Tuberculosis as a Moderating Factor in Public Opinion

In 2008, a total of 12,898 tuberculosis cases were provisionally reported in the United States. This represents a decline of 2.9% from 2007 and of 54% from 1980. Although the number of TB cases is slowly decreasing in the United States, TB still affects thousands of Americans each year, and hundreds die from the disease annually (CDC, 2008b). Moreover, despite declining overall incidence of tuberculosis in the United States, the proportion of cases occurring among foreign-born persons is increasing, with a the case rate almost 10 times higher than that among persons born in the United States (Infectious Diseases Society of America, 2008). These foreign-born persons are more likely to be uninsured (45%), and they made up 27% of the total uninsured population in the United States in 2008 (Herrick, 2009).

Ailinger, Lasus, and Dear (2003) examined knowledge and perceived risk of tuberculosis among 14,727 U.S. respondents using data from the National Health Interview Survey Supplement, controlling for age, education, gender, income, poverty level, and race/ethnicity. Results indicated low perceived risk of contracting TB and high self-evaluation of general knowledge of TB, yet only 33% correctly identified how TB was spread. Ethnicity, gender, income, and education were associated with TB knowledge.

A focused study by Ailinger, Armstrong, Nguyen, and Lasus (2004) used a descriptive correlational design study to examine tuberculosis knowledge in Latino

immigrants receiving latent TB infection (LTBI) therapy. The 82 Latino immigrant participants were asked to complete a survey instrument designed by two of the authors to measure TB knowledge. Reliability of 0.81 was reported in this study. The mean TB knowledge score was 66%. Knowledge scores were correlated with years of education, but not with age or number of years in the United States. Questions related to the communicability of active TB and how the disease spreads received the most incorrect responses. The authors recommended that public health nursing interventions should focus on increasing Latino immigrants' knowledge of TB, both in public health clinics and in the community.

Kiwuwa, Charles, and Harriet (2005) used a cross-sectional survey of 231 newly diagnosed smear-positive tuberculosis patients in a referral medical center in Kampala/Uganda in 2002. They determined the time taken for TB patients to present with symptoms to the first health provider (patient delay), the time taken between the first health care visit and initiation of tuberculosis treatment (health service delay), and the factors relating to these delays.

Demographic and socio-economic variables measured included age, sex, occupation, education level, and family size. Physical factors, such as symptoms and their duration, sputum results, chest radiographic findings, and psychological factors, such as patient beliefs, perceptions, attitudes, and knowledge about tuberculosis were also examined. In addition, the study examined institutional or health service factors, such as distance to health facilities, costs of travel, and medical expenditure on treatment of TB-related symptoms.

Odds ratios with 95% confidence intervals (CI) including multivariate logistic regression were employed and revealed that 50% of patients were not aware of any possible causes of TB, and only 7.4% mentioned that germs cause TB reflecting a low level of awareness of TB symptoms and its causes. A low level of clinical suspicion of TB by health providers and failure to order proper investigations or refer patients to higher level health units contributed in a major way to health service delay. Moreover, this study found that patients who required hospitalization prior to TB diagnosis had shorter delays to treatment and less advanced disease, compared to outpatients. Illness severity as measured by chest radiography and sputum smear grades was found to be associated with the duration of delay to treatment. Advanced disease has been found to correlate with mortality and chronic morbidity. Patient and health service delays contributed significantly to delays in patients accessing treatment. These results indicate the importance of public awareness and knowledge about TB, as well as the need for access to health care services to treat the disease and to minimize complications.

Although the number of TB cases is slowly decreasing in the United States, the proportion of cases occurring among foreign-born persons is increasing. These immigrants are more likely to be uninsured and less likely to have access to health services. These facts are well known to the American people and may motivate them to identify this issue as a top priority in their health concerns, especially in a border county like San Diego. It was expected that with more knowledge regarding TB, public opinion would have been influenced positively towards expanding health care insurance coverage. TB knowledge was used as an indicator of public opinion for this study.

Conclusion

Expanding health care services to include the uninsured is a big decision to make at macro and micro levels. It entails a major reform in public health policy and the health care delivery system. Governmental financial hardship and budgeting arrangements are expected to exacerbate the current shortage of national resources. Opponents of universal health care coverage will continue to take all measures to stop this reform. Public opinion becomes a vital tool to support or weaken such decisions. Thus, academic research and community polls would assist in understanding the public opinion variables influencing such important changes in core American health system practices. Public support for such a major decision would certainly add to the normative legitimacy of the public agency and its decision making processes. Studying the moderating variables that affect individuals' attitudes, including awareness of TB, may assist scholars and researchers to identify the most influential factors that affect the public's support for universal health care coverage. Such an understanding could contribute to effective strategies to influence public opinion to create policies that promote the public's health.

Chapter 3

Methodology

This chapter provides a description of the research design, sample and sampling, instrumentation, data collection procedures, and data analysis techniques. The protection of human subjects is also discussed.

Research Design

A quantitative descriptive cross-sectional research design was used to address the study aims. The reason behind the selection of this research design was its appropriateness to the study questions, its ability to assess the effect of several variables, and the ability to accurately measure participants' attitudes and perceptions (Gillis & Jackson, 2002).

Data were collected through a self-administered mailed questionnaire. Survey design is frequently used as a relatively inexpensive method of gathering data from a large sample. Moreover, surveys can be administered from remote locations by mail, email, or telephone. Consequently, larger samples are feasible, increasing the potential for statistical significance even when analyzing multiple variables. In addition, a mailed self-administered questionnaire has the advantages of being less time-consuming and more flexible for the participants when compared to individual interviews (Colorado State University, 2008; Presser et al., 2004).

According to Couper (2002), self-administration improves the reporting of socially sensitive information relative to interviewer administration. However, mailed

self-administered surveys are sometimes criticized for the slow and low response rate (Colorado State University, 2008; Creative Research Systems, 2009).

Although e-mail and Web page surveys are the least expensive modes of data collection for large samples (Colorado State University, 2008), they were not employed in this study because their use might limit generalizability of the results because not all registered voters have access to the internet and email addresses were not readily available. All registered voters do, however, have an accessible residential mailing address.

Procedures

Sample and sampling. This research was carried out in San Diego County, California, and voters registered in the county in 2009 constituted the study population. The most recently updated list of registered voters (September 1, 2009) included 1,447,644 voters after removal of 158 duplicates. The final sample size for this study was calculated in accordance with conventional sample size tables presented by Cohen (1988). To achieve a desired power of .80, an alpha significance level at 0.05, and a moderate effect size of .50, a total sample of 170 usable questionnaires was required. Estimating a typical 15% return rate on mailed questionnaires (Fowler, 1993), a minimum sample of 1,133 registered voters in San Diego County needed to be randomly selected. Over sampling to 2,000 voters was used to guarantee the desired number of responses in the time available.

The San Diego County Registrar of Voters was contacted to obtain a complete list of the county's registered voters. The list, obtained on a CD, was entered into a computer

for random sampling purposes. The Health and Human Services Agency (HHS) regions classification of San Diego County was adopted to stratify the county into six areas, based on zip code, as follows: Central, East, North Central, North Coastal, North Inland, and South. This method of stratification was used to achieve a sample representative of all socioeconomic levels in the county. A single-stage sampling procedure was run within each region, based on that region's proportion of all voters, to obtain the desired total sample of 2,000 voters. For example, the Central region accounts for 13.8% of the total number of voters, so 276 voters were randomly sampled from the Central region (13.8% of 2,000). Samples from each region were then combined to result in a total sample of 2,002 voters.

This sample was then processed using the United States Postal Services (USPS) software (Postal Soft) for address verification and sorting according to USPS requirements, resulting in a final sample of 1,971 voters, due to 32 invalid addresses. A sequential identification number was assigned to each voter record for the purposes of preparing the packets, addressing, and mailing them through regular mail.

Data collection. Following approval to conduct the study by the University of San Diego Institutional Review Board (IRB), data collection started on October 29, 2009 and continued through December 29, 2009. Packets containing a cover letter (Appendix A), questionnaire (Appendices B, C, and D), and a pre-stamped pre-addressed return envelope were mailed to the randomly selected participants' addresses. The cover letter included information about the study, including the topic, purpose, aims, and time frame,

in addition to an explanation of the advantages and disadvantages of participation and participants' rights.

According to (Creswell, 2003), who recommended two strategies for improving survey responses, reminders should be sent to participants four to eight days after initial mailing of the packets. Then, a second packet should be mailed to all non-respondents three weeks after the initial mailing. In this study, due to time constraints, expense, and the anonymity of participants, no secondary mailing was done, but over sampling was used instead to achieve the desired sample size. The number of respondents was watched carefully over the first three weeks of data collection, and a sufficient number of completed surveys eliminated the need for re-mailing. Several strategies, such as hand written addresses, a very short survey (15 minutes to complete), and use of special envelopes with the University of San Diego logo were used to improve the response rate and were believed to be primary factors in the rate of return achieved.

Another important factor associated with data collection was the great change that was taking place in American health care. Reform of health care was a momentous issue highlighted in newspapers, televised media, and many family discussions. In addition, the U.S. House of Representatives approved the Affordable Health Care for America Act on November 6, 2009, just one week after the surveys were mailed to participants. It is believed that this period in time strongly influenced voters to share their opinions, regardless of age, race, sex, or socioeconomic status. Consequently, it is believed that this environment positively affected the survey response rate.

Instrumentation and measures. A questionnaire comprising three sections was used to measure the independent and dependent variables. The first section of the questionnaire measured the main independent variable of interest in this study, personal awareness of tuberculosis as a communicable disease. Awareness was generally defined by the Merriam-Webster dictionary as "having or showing realization, perception, or knowledge" (Aware, 2008).

Personal awareness of tuberculosis was defined in the study as knowledge and information a person holds about modes of transmission, ease of contagion, and susceptibility to tuberculosis. Tuberculosis-related knowledge was measured by a modified 13-item tool originally created by Morisky et al. (Nyamafhi, Sands, Pattatucci-Arago'n, Berg, & Leake, 2004). The 13 items have a two-response set (true or false). The number of correct responses was summed to form a TB knowledge score with values ranging from 0 to 13 (Appendix B). Two additional investigator-developed questions were added to this tool to assess participants' perceptions of risk of and concerns about contracting TB.

The reading level for the initial instrument, as indicated by the author, was the sixth grade. Given that nearly 20% of the American public reads at a 5th grade level or lower (Doak & Doak, n.d.), this was considered too high a level for the study population. For that reason, the language of the instruments used in this study was modified to a more basic reading level, which was double checked by dissertation committee members.

Personal opinion regarding expansion of health coverage was the dependent variable in the study and was addressed in the second section of the questionnaire. Opinion was defined as "a belief or conclusion held with confidence but not substantiated

by positive knowledge or proof and "something believed or accepted as true by a person" (Opinion, n.d.). Moreover, Wikipedia (Opinion, 2010) defined an opinion as a person's ideas and thoughts about something. An opinion is an assessment, judgment, or evaluation of something. An opinion is not a fact because opinions are not falsifiable or have not been proven or verified. If an opinion later becomes proven or verified, it is no longer an opinion, but a fact.

Personal opinion, in this study, was defined as the level of support a person evinced in regard to expanding health coverage to include everyone residing in San Diego County, regardless of immigration status. This opinion was measured by a single-item created by the researcher. Five levels of support for expansion of health coverage were provided as options, ranging from support for full coverage of all county residents to the lowest level of support reflecting a desire to maintain the current level of health care coverage. The intermediate levels of support included limited coverage options that voters could select. Participants were asked to select the highest level of coverage they would be willing to support (Appendix C).

The final section of the questionnaire elicited participants' demographic information and consisted of 14 questions. Areas addressed included participants' age, gender, ethnicity, marital status, country of birth, political party affiliation, current employment, type of employer, level of education, area of residence, years lived in San Diego, current and recent past health insurance status, and source of health insurance (Appendix D).

Protection of Human Subjects

Approval for the study was obtained from the Institutional Review Board of the University of San Diego. A cover letter was attached to every questionnaire indicating the voluntary nature of participation. Moreover, the letter included information about the importance of this research, the benefits of participation for the general public, and the implications of the findings for policy makers in San Diego County. The cover letter also discussed the participants' potential fatigue and time spent. No names were printed on the questionnaire forms and only code numbers were used. Written informed consent is not necessary prior to filling out a questionnaire.

All of the study data were kept in a locked file cabinet and only the researcher and the research advisor had access to it. Collected data will be kept at least five years before being destroyed. There were no anticipated risks to participants. Based on the potential public benefits resulting from exploring relationships among the study variables and the lack of foreseeable risks to participants, benefits outweighed potential risks. Approval for the study is included in Appendix E

Data Analysis

The Statistical Package for Social Sciences (SPSS, version 15.0) was used to analyze the data. Descriptive statistics were used to determine levels of TB awareness and respondents' support for expansion of health insurance coverage and to summarize the demographic characteristics of the sample. The statistical methods used to analyze the data included descriptive and inferential statistics. Planned analysis included frequencies,

means, standard deviations, chi square, analyses of variance (ANOVA), and regression analysis. A significance level of $p < .05$ was used.

Frequencies, means, and standard deviations were used to answer research question one describing the current status of the San Diego County public's awareness of the prevalence of tuberculosis. Similar statistics were used to describe the extent of voter support for expanding health coverage through federally and state financed programs to all county residents, including undocumented immigrants. For research question three, analysis of variance (ANOVA) and chi square procedures were used to examine relationships between the independent variables (TB awareness and personal characteristics) and the dependent variable (level of support for expanding health coverage) among San Diego voters. Regression analysis was planned to identify the relative contribution of study variables to voter opinion.

Summary

The appropriateness of the design for examining multiple variables and its previous extensive use to study attitudes and perceptions of the public determined its adoption for this study. Both advantages and disadvantages were considered before the final decision was made. Recommendations for future research using different designs will be addressed at the end of this study.

Chapter 4

Findings

This chapter presents the results of the data analysis. It includes sections on response rate, demographic characteristics of the respondents, findings relevant to each research question, and a summary. The purpose of this study was to explore the impact of San Diego County voters' awareness of tuberculosis on their attitudes toward expanding publicly funded health insurance coverage to all county residents. The study also examined the relationships among TB awareness, levels of support for expanding health coverage, and personal characteristics (age, gender, marital status, political party affiliation, current employment, annual income, education, area of residence, ethnicity, years lived in California, health insurance status, and source of health insurance) among San Diego County voters.

Response Rate and Data Collection Measures

The sample selected for this study included 1,971 registered voters in San Diego County in southern California. Voters were randomly selected from six regions of the county in numbers proportionate to the number of registered voters in each region to assure representative sampling from each socioeconomic level in the county. A survey was mailed to the participants by October 29, 2009 and the last completed surveys included in the data analysis (N = 310) were received by December 29, 2009 for an overall response rate of approximately 16%. Some participants did not respond to all of the survey questions and/or indicated support for more than one level of health coverage

expansion on the opinion question. If more than one response was marked for that question, the survey was not analyzed. Consequently, 17 participants with at least one missing item on the TB awareness scale were deleted from the analysis; an additional 12 participants with no response on the opinion scale were also deleted. The final number of participants used in the analysis was 281.

The first part of the survey included 13 items with a two-response set (true or false) to measure knowledge about tuberculosis. The number of correct responses was summed to form a TB knowledge score with values ranging from 0 to 13. Two additional questions measured perceived risk of and concern about getting TB. In the second part of the questionnaire, respondents selected one of five options indicating their personal level of support for expanding of health coverage, ranging from support for full coverage of all county residents, the highest level of support, to the lowest level reflecting a desire to maintain the current level of health care coverage.

Demographic Characteristics

A total of 310 surveys were received, and 281 respondents were included in the analysis. Of these 281 respondents, 158 (56%) were female and 123 (44%) were male. This information and other demographic characteristics are summarized in Table 1.

Respondents' ages were examined by intervals; more than half (55%) of the respondents were 50 years of age or older, and only 10% of the respondents were younger than 30 years. Only 9% of participants were foreign-born. The majority of participants (64%) identified themselves as married.

Political party affiliation was reported by 273 participants. Of these participants, 47% were registered Democrats, 32% were Republicans, and 22% were affiliated with other political parties. This split was generally representative of political party affiliation throughout the county.

Table 1. Demographic Characteristics of Respondents

Characteristic	Frequency	Valid Percent
Gender (n = 281)		
Male	123	44
Female	158	56
Age (n = 280)		
18-29 years	29	10
30-39 years	44	16
40-49 years	53	19
50-59 years	63	23
60 years and older	91	33
Country of birth (n = 278)		
United States	253	91
Other	25	9
Marital status (n = 281)		
Married	180	64
Single	54	19
Divorced / separated	36	13
Widowed	11	4
Political party affiliation (n = 273)		
Republican	86	32
Democrat	127	47
Other	60	22
Employment status (n = 280)		
Employed full time	140	50
Employed part time	34	12
Self-employed	25	9
Unemployed	16	6
Retired	65	23
Education (n = 280)		
Less than high school	2	1
High school	22	8
Some college	65	23
College degree	112	40
Graduate level	79	28

Table 1 (cont.). Demographic Characteristics of Respondents

Characteristic	Frequency	Valid Percent
Ethnicity (n = 275)		
Native American	1	0.4
White American	212	77
Hispanic American	29	11
African American	8	3
Asian American	17	6
Native Hawaiians and Other Pacific Islanders	3	1
Middle Eastern American	3	1
Other	2	1
Health insurance status (n = 279)		
Currently insured	264	94
Not insured	15	5
Source of health insurance (n = 261)		
Personal insurance	32	12
Through employer	115	44
Through spouse's employer	57	22
Medi-Cal	7	3
Medicare	46	18
Other	4	2
Type of employer (n = 244)		
Government agency	75	31
Private company	145	59
Military	5	2
Health care organization	19	8

Study respondents were fairly representative of the demographic characteristics of the registered voter population in San Diego County with respect to gender, age, and political party affiliation, as presented in Table 2. Democrats and older voters were slightly over-represented in the sample. The sample did not, however, include adequate ethnic minority representation based on the ethnic composition of the county. Nor were marital status and educational level within the sample comparable to county figures.

Table 2. Comparison of the Registered Voter Population in San Diego County with the Study Sample

Characteristic	Category	Population (Voters)	Sample
Gender	Male	43.5%	43.8%
	Female	56.5%	56.2%
Age	18-29	20%	10.3%
	30-39	16.1%	15.7%
	40-49	18.7%	18.9%
	50-59	9.2%	22.4%
	>60	26%	32.5%
Political party affiliation	Republicans	36.0%	30.6%
	Democrats	36.3%	45.2%
	Other/Independents	27.7%	21.4%

Exactly half of the San Diego voters who participated in this study were employed full-time, 23%) were retired, 12% were part-time workers, and 9% were self-employed. Unemployed respondents included only 16 persons (6%). More than half of the participants (59%) identified their current employer or former employer as a private company. Roughly a third of them worked or were still working for government agencies, and a few were employed in the military or in health care organizations.

A large majority (94%) of respondents reported current health insurance coverage, most through their own or a spouse's employer. Only 20% of the sample voters were insured through Medi-Cal or Medicare.

Most of the respondents (91%) indicated some college or higher degree education, while 9% were high school prepared or less. The sample over represented whites, with 11% Hispanic Americans. Other ethnicities were not well represented as indicated in Table 1.

Research Question One

The first research question in this study examined the San Diego County public's awareness of tuberculosis. Survey items 1-13 related to actual knowledge about tuberculosis. A knowledge score was calculated by adding the number of correct responses. The survey responses were analyzed for item means, a composite mean, and standard deviations.

The composite mean for tuberculosis knowledge was 10.86, as indicated in Table 3. This indicated that, overall, San Diego registered voters participating in this study had a high level of knowledge about tuberculosis. Table 4 presents results related to perceived risk of TB. Most respondents (87%) perceived low or no risk. Consequently, most participants (66%) were not worried at all about getting TB, and another 29% expressed a little concern.

Table 3. Knowledge of Tuberculosis

	N	Minimum	Maximum	Mean	SD
TB knowledge scores	281	6	13	10.86	1.467

Table 4. Perceived Risk of Tuberculosis

Risk Question Responses	Frequency	Percent
TB risk question 1		
none	31	11
low	213	76
medium	32	11
high	5	2
TB risk question 2		
not at all	184	66
a little	80	29
some	12	4
a lot	4	1

Research Question Two

The second research question addressed in this study examined the extent of voters support for expanding health coverage through federally and state financed programs to all county residents, including undocumented immigrants. Results related to personal opinion on expanding health care insurance coverage are summarized in Table 5. The majority of respondents (83%) supported either some change or radical change in health care coverage as it currently exists, while only (17%) did not see any need to change these arrangements. These results can be interpreted in many ways; first, only 19% of San Diego County voters supported the universal coverage option, while 82% of them did not. Second, 181 (64%) were in favor of some reform/change, although not a fundamental reform.

Table 5. Personal Opinion Scores

Opinion Option	Frequency	Valid Percent
Stay as is	48	17
Cover all citizens	65	23
Cover citizens and legal immigrants	72	26
Cover citizens, legal immigrants and children	44	16
Coverall	52	19

Research Question Three

The third research question examined relationships among TB awareness, level of support for expanding health coverage, and personal characteristics of respondents. One-way ANOVAs were conducted to examine the relationship of personal opinion to TB knowledge, perceived risk of TB, and each demographic variable. Levene's test was used to examine the homogeneity of variance assumption. Where Levene's test suggested the homogeneity of variance assumption was violated, the Welch F was reported. (The Welch F is robust when the assumption of homogeneity of variance has been violated [Huck, 2008]).

Once differences were identified among the means, post hoc pairwise multiple comparisons were used to test the differences between each pair of means. Next, one - way ANOVAs were conducted to examine TB awareness by all demographic variables in order to explore how they interrelated.

Personal opinion and demographic variables. Results of ANOVA tests indicated that personal opinion was only found to be significantly associated with the

political party affiliation and education variables in the initial analysis ($p = .000$ and $.035$, respectively). With respect to political party, Republicans were most often in favor of not introducing any change in existing health care coverage arrangements (40%), compared to Democrats (3%) and Independents (13%). Democrats, on the other hand, were the most likely to support fundamental health care reform to cover everyone in the county (35%), followed by Independents (8%) and, finally, Republicans (2%).

The education level of the participants was also found to be significantly associated with the opinion variable, with higher education level related to greater support for expanding health insurance coverage. Further analysis using a Tukey's post hoc test was performed to determine where the differences lay. The significant differences in opinion levels were found between respondents with a college degree and those with a graduate degree. Participants who had a graduate level education held significantly more positive attitudes toward expansion of health insurance coverage than college educated participants. Despite the fact that this finding achieved at $.05$ level of significance, this result necessitates further examination of differences between the two groups and their characteristics. Separate cross tabulations between these two groups by demographic characteristics and chi-square tests were run to look into their similarities and differences. Table 6 provides frequencies and Table 7 shows the cross tabulations by demographic characteristic.

Table 6. Graduate and College Education Frequencies and Percentages

Education Level	Frequency	Percent
College degree	112	59
Graduate level	''	41
Total	191	100

Table 7. Crosstabulation by Demographic Characteristic for College and Graduate Education Levels

Characteristic	College degree	Graduate degree
Gender		
Male	61	39
Female	56	44
Political party affiliation		
Republican	60	40
Democrat	57	43
Other	59	41
Marital status		
Married	62	38
Single	56	44
Divorced, separated, widowed	44	56
Employment status		
Employed	58	42
Not employed	61	39
Ethnicity		
White	58	42
Non-white	62	38
Age		
18-49 yrs	56	44
50 and older	61	39
Health insurance		
Yes	58	42
No	71	29

Chi-square analyses for differences in demographic variables between college and graduate degree educated participants are presented in Table 8. None of the analyses indicated a significant difference between the two groups.

Table 8. Chi-Square Analysis of College and Graduate Education Levels by Demographic Characteristics

Characteristic	Value	df	Asymp. Sig. (2-sided)
Gender	.500	1	.480
Political party affiliation	.129	2	.938
Marital status	2.978	2	.226
Employment status	.190	1	.663
Ethnicity	.253	1	.615
Age	.446	1	.504
Health insurance *	.506	1	.447

For all chi-square analyses none of the cells had an expected count less than 5 except for health insurance * 1 cell (12.5%) had an expected count less than 5.

None of the other demographic variables was found to be related to opinions on expanding health insurance coverage (see Table 9). The opinion variable did not vary significantly among different age groups, despite the fact that frequency results showed that younger (less than 29 years of age) and older (over 60 years) participants more often supported major change in insurance coverage than middle-aged adults.

Similarly, men and women participants did not differ significantly in their opinion about expanding health insurance coverage. Country of birth and marital status of participants were not found to be associated with any differences in opinion. The limited number of non-U.S.-born participants was not unexpected because relatively few registered voters are naturalized citizens. The small number of foreign-born voters in the sample, however, made it inappropriate to seriously consider the effect of this variable on opinions related to coverage expansion. Current employment status, which was re-coded

into two categories (employed and not employed) to ensure sufficient respondents to establish inferences, was found not to affect the opinion variable.

Table 9. Relationships of Demographic Variables to Opinion on Expanding Insurance Coverage

Characteristic	df	F	P
Political party affiliation	2,270	51.811	.000
Education	3,276	2.916	.035
Age	4,275	1.051	.202
Gender	1,279	.175	.676
Country of birth	1,276	2.891	.090
Marital status	2,278	.604	.547
Employment status	1,278	2.297	.131
Ethnicity	1,273	.011	.918
Insurance status	1,277	.832	.362

The limited number of ethnic minority group members in the sample was not expected. Whites comprised 75% and Hispanics 10%, of the sample. The small numbers of remaining ethnicities, however, made it inappropriate to examine the ethnicity variable using the categories originally established. For this reason, ethnicity was re-coded into two categories (white and non-white) to ensure sufficient respondents to establish inferences. ANOVA results showed that ethnicity, as recoded, was not associated with differences in the opinion variable. Finally, current health insurance status was not related to the opinion variable among participants.

Personal opinion and tuberculosis awareness. ANOVA tests indicated that personal opinion was not associated with awareness of tuberculosis. This result was not congruent with the theoretical framework for the study, in which self-interest theory suggests that a person's preferences are shaped in accordance with his or her own best interest. Tuberculosis knowledge and risk perception were expected to be related to willingness to extend health insurance coverage to persons who might potentially expose one to tuberculosis. In this study, however, participants had a high level of knowledge about tuberculosis, but a low level of perceived risk for or concern about contracting the disease, and there was no relationship between the awareness variables and the opinion variable. The absence of a relationship raises questions about the appropriateness of tuberculosis awareness as a proxy variable for self-interest.

For the two questions that measured participants' perceived risk of TB, there was very little variability in responses, with the vast majority of participants reporting "low" or "no risk" on the first question (about 90%) and "little" or "not at all" on the question related to concerns for contracting TB (more than 90%). Accordingly, there were low frequencies in several of the response categories. Further, the distributions were extremely positively skewed when perceived risk questions were considered as continuous variables. As a result, these variables were not utilized in the bivariate analyses.

Tuberculosis awareness and demographic variables. As indicated in Table 10, the results of ANOVA tests indicated TB awareness was significantly associated with the education level of the participants ($p = .004$), with higher education understandably

related to greater awareness and knowledge. Further analysis using a Tukey's post hoc test was performed to determine where the differences existed. Significant differences in awareness levels were found between high school education and less and the graduate degree level. Participants who had a graduate degree had significantly higher knowledge scores ($x = 11.27$, $SD = 1.466$) than participants with a high school education or less ($x = 1.69$, $SD = 1.252$).

Ethnicity was also associated with TB awareness ($p = .003$). White respondents scored higher than non-whites on the TB knowledge scale ($x = 11.02$, $SD = 1.390$ and $x = 10.40$, $SD = 1.612$, respectively). In addition, a moderate association between current health insurance status and TB awareness was found among participants ($p = .067$). Insured participants were slightly more knowledgeable about tuberculosis ($x = 10.91$, $SD = 1.469$) than their uninsured counterparts ($x = 10.20$, $SD = 1.146$).

No significant relationships were found between TB awareness and the remaining demographic variables. TB awareness did not vary by age, gender, marital status, or country of birth. Similarly, current employment status, after being re-coded into two categories (employed and not employed), was not associated with the awareness variable, nor was political party affiliation.

Table 10. Relationship of Tuberculosis Awareness to Demographic Variables

Characteristic	df	F	P
Political party affiliation	2,270	1.892	.153
Education	3,276	4.556	.004
Age	4,275	1.736	.142
Gender	1,279	.088	.766
Country of birth	1,276	1.764	.185
Marital status	2,278	.338	.713
Employment status	1,278	1.319	.252
Ethnicity	1,273	9.016	.003
Insurance status	1,277	3.372	.067

To address the skewness of TB awareness scores, a square root transformation of TB scores procedure was used. Next, ANOVA tests between the new variable (square root of TB awareness) and all other study variables were performed. Results, presented in Table 11, indicated no difference from any of the prior statistical tests. Only education and ethnicity were found to be associated with TB awareness under this procedure. Given the low perceived risk of getting TB reported among the sample, TB awareness was probably not the most appropriate variable to represent self-interest as an influence on attitudes toward expanding health insurance coverage in San Diego County.

Table 11. Square Root of Tuberculosis Awareness by Independent Variables

Characteristic	df	F	P
Political party affiliation	2,270	2.012	.136
Education	3,276	3.972	.009
Age	4,275	1.565	.184
Gender	1,279	.017	.897
Country of birth	1,276	1.837	.176
Marital status	2,278	.399	.672
Employment status	1,278	1.729	.190
Ethnicity	1,273	8.800	.003
Opinion	4,276	1.336	.257

Personal opinion as a dichotomous variable. Since no relationship was found between the opinion variable and the main independent variable (TB awareness) in the preplanned data analysis, other perspectives were examined looking for possible relationships between the variables. The personal opinion variable was re-coded as a dichotomous variable of support for change in health insurance coverage versus no support. This was done to increase the number of responses within each category and, in turn, enhance statistical significance, if any existed. Chi-square analyses were conducted to determine whether there were any significant relationships between demographic characteristics and opinion about health insurance expansion as recoded.

As indicated in Table 12, there was a statistically significant relationship between gender and personal opinion ($p = .056$). This result differs from the previous analysis in

which the opinion variable was considered as continuous. Women were more supportive (87%) than men (78%) of at least some expansion of current health insurance coverage.

Data indicated no relationships between marital status or employment status and personal opinion. Similarly, non-significant relationships were noted between education and personal opinion. This finding contradicts the association between education and opinion indicated by ANOVA test results using the continuous variable. Similarly, neither ethnicity nor age of the participants was found to be associated with willingness to expand health insurance coverage. However, the prior significant relationship between political party affiliation and support for health insurance coverage expansion remained. Almost all (97%) of the Democrats supported some or total change in current coverage, compared to only 83% of Independents and 61% of Republicans.

Table 12. Chi-Square Analyses for Demographic Characteristics and Opinion as a Dichotomous Variable

Characteristic	Value	df	(2-sided) ^{xy}
Gender	3.662	1	.056
Marital status	.758	2	.684
Employment status	.152	1	.697
Age	.260	1	.610
Ethnicity	.570	1	.450
Political party affiliation	49.131	2	.000
Education*	1.632	3	.652

For all chi-square analyses none of the cells had an expected count less than 5 except for education.

* 1 cell (12.5%) had an expected count less than 5.

Finally, ANOVA was conducted to examine the relationship between the dichotomous personal opinion variable and TB awareness. No significant relationship was noted [$F(1,279) = .142, p = .707$]. This result is similar to the previous analysis in which personal opinion was treated as a continuous variable.

Personal opinion as a trichotomous variable. In a subsequent analysis, the personal opinion variable was recoded a second time to provide a better understanding of the relationships between the dependent variable and each of the independent variables included in the study. Opinion was categorized into three levels: no change to existing arrangements, some change, and, finally, radical change to extend coverage to all residents in the county.

The ANOVA test result continued to indicate no association between opinion and TB awareness [$F(2,278) = .264, p = .768$]. This finding supports the first two levels of analysis and suggests again that TB awareness is not an appropriate indicator of self-interest in decisions related to the issue of expanding health insurance coverage.

Chi-square results, on the other hand, indicated that the gender, employment status, age, and political party affiliation of participants were significantly associated with differences in the trichotomous opinion variable, as shown in Table 13. Women were more supportive (71.5%) than men (55.3%) of introducing some change to existing health coverage. Men, on the other hand, were more supportive than women of either radical change or no change.

Table 13. Chi-Square Analyses for Demographic Characteristics and Opinion as a Trichotomous Variable

Characteristic	Value	df	χ^2 , p, (2-sided)
Gender	8.010	2	.018
Political party affiliation	77.510	4	.000
Age	6.289	2	.043
Employment status	6.413	2	.040
Marital status	2.039	4	.729
Ethnicity	.677	2	.713
Education *	7.477	6	.279

For all chi-square analyses none of the cells had an expected count less than 5 except for education.

* 2 cells (16.7%) had an expected count less than 5.

Political party affiliation remained the independent variable most consistently associated with opinion regardless of the type of analysis conducted. Table 13 shows the strength of relationship between the two variables. Also, age of respondents was found to be related to their opinion. Participants fifty years of age and older more often favored reform (23%) than those under 50 years of age (13%). This finding may explain Holahan and Kenney's (2008) conclusion that very high uninsured rates among young adults are due to their relatively low incomes, low employer-sponsored insurance (ESI) offer rates, and low rates of Medicaid/ SCHIP eligibility. In addition, younger adults tend to be in very good to excellent health, placing a lower value on health insurance coverage relative to older adults.

This is the first time that the age of the participants was significantly related to their opinion in this analysis. More than half of the participants (64%) supported some

change in health insurance coverage. These participants were evenly divided between the two age groups (50% each). Similarly, the two age groups were almost equal in denying a need for change (16% for those under age 50 and 18% for elders).

Employment status was the last variable associated with opinion in this level of analysis. Table 13 indicates a significance level of .040. Not surprisingly, 27% of unemployed participants supported full coverage compared to only 15% of employed respondents.

Research Question Four

The fourth research question was intended to identify which independent variables (TB awareness and personal characteristics) had the greatest influence on the dependent variable (level of support to expand health coverage) among San Diego County voters. Regression analysis (multivariate analysis) was planned to achieve this goal; however, due to the paucity of significant relationships found among the variables, the regression analysis was not conducted and this question was unable to be answered.

Summary

This chapter presented the study results. Three research questions were examined in this study: What is San Diego County registered voters' level of awareness of tuberculosis and to what extent do they support expanding health coverage through federally and state financed programs to all county residents? What are the relationships among TB awareness, level of support for expanding health coverage, and personal characteristics? The fourth question, "What variables are important in predicting opinion

about expanding health coverage?" was not able to be answered due to an absence of multiple identified relationships between independent and dependent variables.

Multiple analysis procedures were carried out to answer two of the three questions. Their results indicated that political party affiliation and other demographic characteristics were associated with San Diego registered voters' opinions regarding expanding health insurance coverage. The next chapter will discuss the findings' implications, study limitations, and recommendations for future research.

Chapter Five

Discussion, Conclusions, and Implications

This chapter provides a discussion of the study, including findings, conclusions, and implications for practice and further research. Study limitations are also presented. The purpose of this study was to explore the impact of San Diego County voters' awareness of tuberculosis on their attitudes toward expanding publicly funded health insurance coverage to all county residents. The study also examined the relationships among TB awareness, levels of support for expanding health coverage, and personal characteristics (age, gender, marital status, political party affiliation, current employment, annual income, education, area of residence, ethnicity, years lived in California, health insurance status, and source of health insurance) among San Diego County voters.

Discussion of Findings

Participants' exhibited a relatively high level of knowledge about tuberculosis ($x = 10.86$), but indicated a low perception of personal risk for or concern about the disease. Knowledge results are not unexpected given that the majority of participants were educated above high school level. Their low level of perceived risk for TB and minimal worry about getting the disease were not expected.

Respondents varied considerably in their support for expanding health insurance coverage. Only 17% of participants favored no change in current coverage. A similar percentage (18.5%) of the voters favored radical reform for American health insurance coverage, while the majority (64%) supported some level of expansion of coverage.

These findings are not congruent with a recent New York Times/CBS News poll, in which 85% of respondents said the health care system needed to be fundamentally changed or completely rebuilt (Sack & Connelly, 2009).

Study results also indicated that personal opinion was strongly associated with the political party affiliation variable ($p < .001$), and somewhat associated with education ($p < .05$). In the analysis of opinion as a trichotomous variable, age, gender, and employment status were also significantly associated with willingness to expand health insurance coverage, although these variables were not significant in the prior analyses. The remaining demographic variables were not found to be related to participants' opinions about health insurance expansion.

More importantly, personal opinion was not related to TB knowledge or perceptions of risks as measured in this study. This result was not expected given the underlying assumptions, based on the theoretical framework for the study, that personal self-interest is more important than political affiliation in formulating policy preferences. Given the low perceived risk and concern for TB, it seems likely that TB awareness was not an appropriate indicator of self-interest. Another indicator that more accurately reflected self-interest might have shown a relationship to the opinion variable.

The impact of political party affiliation in this study was consistent with previous survey work on American public opinion related to health care coverage. Republicans are typically business-oriented individuals from an upper middle to upper class background. They tend to resist measures that promote government interference with market economy to maintain stability. Democrats are traditionally more in favor of meeting the public's and individual's needs (International Encyclopedia of the Social Sciences, 2008).

In this study, Republicans rejected the universal health coverage option more often than Democrats, who more often supported it. More than 50% of Republicans supported some change, although 40% preferred no change. Democrats strongly supported universal health care coverage. A recent poll by Newport (2009) showed a gap between the two parties in their opinions about health care reform, in which 70% of Democrats considered the positive effect of health care reform on Americans lives compared to only 18% of Republicans.

In conclusion, the political party affiliation variable was most consistently associated with willingness to expand health care coverage. This finding is consistent with symbolic politics theory, which posits that symbolic predispositions, such as party identification, political ideology, and racial prejudice, influence adult policy attitudes on the basis of cognitive consistency. The concept of cognitive consistency suggests that similarity of symbols posed by policy issues evokes longstanding affective responses rather than rational self-interested calculations.

The findings of this study suggest that campaigns to influence public opinion in support of expanded health care coverage should be differentiated along party lines. Understanding legitimate arguments against health care reform by political parties, especially Republicans, would help determine appropriate campaign strategies. Republicans primarily oppose Democratic proposals to mandated purchase of health insurance by employers and individuals, prohibitions on denial of coverage of, or even risk-based pricing for, pre-existing conditions, and elimination of coverage caps. Elder et al. (2004), in a systemic review of mass media campaigns for reducing alcohol-impaired driving (AID) and alcohol-related crashes, concluded that use of mass media to influence

social policies offers much larger potential benefits than attempting to change individual behavior. Therefore, it is recommended that future mass media campaigns should explicitly focus on the broader goals, such as hidden benefits of universal health care coverage. Campaigns must be sustained if they are to be effective. Campaigns have typically used a variety of printed, electronic, and broadcast media to reach the target populations (Goossens et al, 2006).

Hidden benefits of universal health program are not clearly stated in the media, but are often lost among piles of unread papers. Citizens' opinions on health care reforms might be influenced when the strategy utilized is directly related to their health needs, decrease in the cost of health care and health care premiums, potential decrease in taxes, and reduction of their out-of-pocket expenses. These aspects of self-interest can be particularly achieved through illustrating those benefits using special creative telecommunication programs.

ANOVA results indicated that education was significantly related to opinion, such that highly educated participants were more supportive of expanding health care coverage. A significant difference existed between college educated and graduate prepared participants. Exploration of the characteristics of graduate participants showed that other variables could have been influencing participants' opinions on expanding health care coverage. Graduate prepared participants were more often women, Democrats or Independents, non-married, employed, white, younger, and health insured, which might have fostered positive attitudes toward change. College educated participants, on the other hand, tended to be men, Republican, married, unemployed, non-white, older, and uninsured. Logically, the findings that college educated respondents tended to be

unemployed and uninsured might have been thought to promote more positive attitudes toward expanded coverage. Men, in general, however, tend to be less concerned about health care than women, which may help to explain the differential opinion results. More research is needed to determine factors that contribute to the educational differences in opinion found in this study.

The study showed a significant association between the age of registered voters and their opinions on expanding health care coverage. Voters aged 50 years and older were more supportive of radical health care reform (universal coverage) which may be justified by their inability to cope with increasing health care costs, limited income, and increased risk of health deterioration. These results were somewhat unexpected in light of the findings of previous surveys. Newport and Mendes (2009), for example, found a significant relationship between age, income, and health insurance coverage, with people aged 18 to 29 years as the most uninsured population. In addition, Patchias and Waxman (2007) concluded that uninsured men and women were more likely to be younger, single, have a low-income, work in small businesses, and belong to a racial or ethnic minority than those who were insured. Based on these results, one might expect younger people to be more supportive of expanding health insurance coverage, but that was not the case in this study. Younger voters, however, were underrepresented in the current study, at only 10% of the total sample, suggesting further attention to the influence of age in the future. In addition, younger people tend to be in better health and may be less concerned about access to care and insurance coverage.

The study showed a lack of association between ethnicity and expanding health insurance coverage which could be related to the underrepresentation of ethnic minority

groups in the sample. Hispanics, for example, are the most uninsured sector of the population (National Council of La Raza [NCLR], 2010) comprising 41.5% of uninsured Americans (Newport & Mendes, 2009). This suggests that different results might have been obtained in a more ethnically representative sample.

Gender was found to be significantly related to opinion in this study. Although men were more supportive of radical change to current arrangements, women were more supportive of introducing some change to health insurance coverage (72% for women compared to 55% for men) and less supportive of maintaining the current situation. This is consistent with findings by Patchias and Waxman (2007), who argued that women face greater difficulties in being insured than men related to their low income and greater difficulty paying insurance premiums. Women also tend to be more frequent users of health care services and, consequently, may be more supportive of expanded care coverage.

Similarly, employment status was associated with opinion about health coverage expansion. Unemployed participants were found to be more supportive of universal health coverage. Prior research has shown consistent findings that unemployed individuals are less likely to have health coverage (McAndrew, 2009; Patchias & Waxman, 2007). It is not surprising that employed individuals in this study preferred some change in health care coverage over radical reform. This finding is consistent with the results of a study by Sack and Connelly (2009) in which 6 in 10 people stated that they preferred to pay higher taxes to ensure that all Americans are covered.

The marital status of this study sample failed to show a significant relationship to opinions about expansion of health coverage. Although married and previously married

participants showed higher support for universal coverage than single people, the three groups were similar in regard to other options offered in this study. This finding could be explained by the overrepresentation of married participants (64%) relative to single and previously married people (19% and 17%, respectively).

The influence of participants' health insurance could not be determined in this analysis due to the highly skewed distribution of this variable. Unexpectedly, about 95% of the sample was insured. Insurance status was expected to demonstrate the impact of perceived benefits and/or costs, based on self-interest theory, and their influence on an individual's policy attitudes. Since the majority of participants were insured, the relationship of this variable to voter opinion could not be determined.

Similarly participants' place of birth also failed to show any relationship to opinions on expanding health insurance coverage. The small percentage of foreign-born participants in the sample (9%) probably explains this lack of a demonstrable relationship.

The participants of this study presented homogeneous scores on their level of TB awareness, which may have contributed to the non-significant associations with opinions on expanding health care coverage. In other words, scores on tuberculosis awareness scale did not vary sufficiently to examine the influence of this variable on public opinion. The theoretical framework for this study predicted that an individual's policy attitudes would be those that maximized benefits and minimized costs to him or herself. A very low perception of risk of getting the disease suggests the inappropriateness of using TB awareness as a proxy variable for self-interest. Had we chosen another proxy self-interest measure, an association might have been found. It also may be that TB awareness might

be a viable indicator of self-interest in parts of the world where TB incidence is high and people are more conscious of their risk for infection.

Conclusions and Implications for Policy Formation

The majority of San Diego County voters participating in the study supported at least some expansion of health insurance coverage. Political party affiliation was the variable most strongly associated with opinions on expansion. Republicans were least supportive of new proposals. Highly educated participants supported health care reform and were more likely to be women, Democrats or Independents, non-married, insured, and younger than 50 years of age.

More women than men were supportive of changing current health insurance coverage. Participants' age above 50 years was significantly associated with the dichotomized opinion variable. Unemployed participants supported radical change when the opinion variable was trichotomized. Marital status, health insurance status, and ethnicity were not associated with opinion. Interestingly, awareness of TB as a major influencing factor was not associated with participants' attitude toward expanding health insurance coverage in San Diego County.

Together these findings suggest that efforts to promote public opinion in favor of expanded health insurance coverage need to be differentially targeted. For example, campaigns might target Republicans, men, middle-aged persons, and those with lower education levels, who were found, in this study, to be less likely to support expansion of coverage. Nurses can help to design campaigns to influence voters with messages that are differentially targeted to different groups in the population.

Unique programs targeting persons least likely to favor insurance coverage expansion could be helpful in motivating the public to shift to a more supportive attitude.

Campaigns might also focus on specific elements of self-interest, such access to smoking cessation programs, annual physical screening, improved quality of health services (rather than the opposite), and improved access to health care.

Implications for Future Research

San Diego County is a border area affected by high rates of immigration, which is perceived to have negative economic effects. Examining public opinion about expanding health insurance coverage to immigrants might result in different findings in different parts of the country, especially non-border areas.

The study findings suggest that special attention should be given to the underrepresentation of certain groups that occurred in this study. Future studies should be stratified by age and ethnicity as well as socioeconomic status so as to improve the representativeness of the sample. Further research is also needed to clarify the relationship of education level to willingness to expand health care coverage given the unusual differences noted between college prepared and graduate educated persons in this study.

Limitations of the study

Study findings are affected by the following limitations:

- There was a lack of variability in TB awareness and low perceived risk related to the disease. This suggests that TB awareness was not an effective proxy measure

for individuals' self-interest and so limited the study's capacity to capture and predict differences in participants' attitudes toward health care coverage expansion.

- Generalizability of the results extends only to registered voters in San Diego County, and then only to older, more highly educated, white voters, given the lack of representativeness of the sample with respect to younger, less educated voters and ethnic minority group members.
- Timing of data collection coincidentally occurred at the same time the U.S. House of Representatives approved the Affordable Health Care for America Act on November 6, 2009, one week after the surveys were mailed. This event may have positively influenced participation in the survey, but may have also served to modify personal opinions about health insurance coverage.
- San Diego is located close to an international border, and immigration is often seen as problematic. This may have led to less favorable attitudes toward health care coverage expansion than might be found in less highly affected areas of the country.

Implications for Nursing Practice

The results of this study may contribute to nursing practice and public policy formation through:

- Informing the curriculum of nursing education programs through incorporating health policy strategies in nursing education. Nurses need to be prepared to

identify and employ strategies to effectively influence public opinion on health policy issues.

Promoting the use of differential strategies to influence specific elements of the population (e.g., Republicans or men) to support health policy changes that benefit the overall health of the nation.

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Appendix A

Cover Letter

Hello,

Belal Saadeh is a registered nurse and a doctoral student in nursing at the Hahn School of Nursing and Health Science at the University of San Diego. You are invited to participate in a dissertation study he is conducting for the purpose of exploring the impact of San Diego County voters' awareness of tuberculosis on their attitudes toward expanding publicly funded health insurance coverage to all county residents. While you were randomly selected from a list of registered voters in San Diego County to participate in this study, you do not have to participate, and nothing about your status as a voter- or anything else- will change if you decide not to do this.

The study involves filling out 3 forms and then returning them to Belal in the pre-stamped envelope.

Your participation is **completely voluntary. You do not have to participate. If you decide this is not for you, simply mail the blank forms back in the enclosed envelope.**

All of your information will be kept confidential and no further attempts will be made to try to contact you except for a possible reminder to fill out the survey. Each form is coded with a number for confidentiality. ***Please do not put your name on any of the forms.*** When Belal receives your materials, he will keep them in a locked secure storage area. No one else will have access to these materials.

By completing the surveys you will be helping nurses and doctors learn better ways of understanding the influence of tuberculosis awareness on public attitudes to expanding health insurance coverage. If you have additional questions or would like to discuss the study with Belal, please e-mail him at bsaadeh-10@sandiego.edu or phone him at 714-362-6826. Or you can call the professor who is supervising his research, Dr. Mary Jo Clark, at 619-260-4574 or e-mail her at clark@sandiego.edu.

Thank you for considering being in this study.

Sincerely,

Belal A. Saadeh, RN

Appendix B

Awareness of Tuberculosis and Perceived Risk

Code number: _____

Please answer the following questions by indicating true or false, based on your knowledge about tuberculosis:

- | | | |
|------------------------------------------------------------------------------------------|------|-------|
| 1. TB cannot be spread by coughing, sneezing or spitting | True | False |
| 2. If you live or work with someone with TB, you can be infected | True | False |
| 3. You do not need to be exposed many times to someone with TB
to be infected with TB | True | False |
| 4. The homeless are more likely to have TB | True | False |
| 5. Minorities are less likely to have TB | True | False |
| 6. A poor immune system makes it is easier to get TB | True | False |
| 7. If you have HIV/AIDS, it is easier to get TB | True | False |
| 8. TB is hard to treat | True | False |
| 9. TB can become resistant to medication | True | False |
| 10. TB can severely damage a person's lungs | True | False |
| 11. You cannot tell if someone has TB by simply looking at her | True | False |
| 12. TB is caused by a germ | True | False |
| 13. People can die from TB if it is not treated | True | False |

Perceived Risk of TB

Please check the best response you have for the following two questions:

14. Do you think your chances of getting tuberculosis are?
 High _____ medium _____ low _____ none _____
15. Are you worried about getting TB?
 A lot some A little not at all

Appendix C

Personal Opinion about Expanding Health Insurance Coverage

Please place (X) beside the statement that best describes your opinion about the level of health insurance coverage funded by tax dollars (Medicare and Medicaid).

- Public health insurance coverage should stay as it is and not be expanded to include any other groups of people
- Public health insurance should cover U.S. citizens who don't have health insurance
- Public health insurance coverage should cover U.S. citizens or legal immigrants who don't have health insurance
- Public health insurance coverage should cover citizens, legal immigrants, and children of undocumented immigrants who don't have health insurance
- Public health insurance coverage should cover everyone who doesn't have health insurance

Appendix D

Demographic Data Questionnaire

Please check the box that best describes you:

<p>Age:</p> <ol style="list-style-type: none"> 1. 18-29 years 2. 30-39 years 3. 40-49 years 4. 50-59 years 5. 60 years and older <p>Gender:</p> <p>D Male</p> <ul style="list-style-type: none"> • Female <p>Country of birth:</p> <ul style="list-style-type: none"> • United States • Other <p>Marital status:</p> <ul style="list-style-type: none"> • Married <p>D Single</p> <ul style="list-style-type: none"> • Divorced / separated <p>D Widowed</p>	<p>Political party affiliation:</p> <ul style="list-style-type: none"> • Republican • Democrat <p>D Other</p> <p>Current work status:</p> <ul style="list-style-type: none"> • Work full time <p>D Work part time</p> <ul style="list-style-type: none"> • Work for myself • Not working, but looking for work • Retired <p>Highest education:</p> <ul style="list-style-type: none"> • Less than high school • High school <p>D Some college</p> <ul style="list-style-type: none"> • College degree <p>D Graduate degree</p>
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>Zip Code: 92_____</p> <p>Ethnicity: (Please check one box)</p> <p><input type="checkbox"/> Native American</p> <ul style="list-style-type: none"> <input type="checkbox"/> White American <input type="checkbox"/> Hispanic American <input type="checkbox"/> African American <input type="checkbox"/> Asian American <input type="checkbox"/> Native Hawaiians and Other Pacific Islanders <input type="checkbox"/> Middle Eastern American <input type="checkbox"/> Other_____ <p>Years lived in San Diego County</p>	<p>If you are insured, how did you get insurance:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Pay for it myself <input type="checkbox"/> Through my work <input type="checkbox"/> Through a family member's work <input type="checkbox"/> Medi-Cal <input type="checkbox"/> Medicare <input type="checkbox"/> D other_____
<p>Health insurance status during 2009:</p> <p>Are you currently insured?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Yes <input type="checkbox"/> DNo <p>Has this been true all year?</p> <p><input type="checkbox"/> D Yes <input type="checkbox"/> DNo</p>	<p>Type of employer: (check all that apply)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Government agency <input type="checkbox"/> Private company <input type="checkbox"/> Military <input type="checkbox"/> Health care organization