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# Differentiating beliefs of insured and uninsured, insurance-eligible state employees: a new application of the Health Belief Model

Jill Elizabeth Murray

*Louisiana State University and Agricultural and Mechanical College*

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DIFFERENTIATING BELIEFS OF INSURED AND UNINSURED,  
INSURANCE-ELIGIBLE STATE EMPLOYEES:  
A NEW APPLICATION OF THE HEALTH BELIEF MODEL

A Dissertation

Submitted to the Graduate Faculty of the  
Louisiana State University and  
Agricultural and Mechanical College  
in partial fulfillment of the  
requirements for the degree of  
Doctor of Philosophy

in

The School of Social Work

by  
Jill Elizabeth Murray  
B.A., Loyola University, 1985  
M.S.W., Tulane University, 1986  
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## DEDICATION

This dissertation is dedicated to  
the 43.6 million Americans who are uninsured  
and the countless others who are underinsured.

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## ABSTRACT

The increasing number of uninsured Americans is a crucial policy issue for the United States; however, there is a paucity of empirical social science research on the uninsured with which to guide the development of policy. Previous research indicates that when insurance is voluntary, whether offered through a state-initiated reform to reduce uninsurance or offered through an employer as a benefit, some people choose to remain uninsured. The literature calls for research to increase understanding of the factors that affect whether people offered insurance accept or decline that insurance. Research on the uninsured is lacking a theoretical framework to help researchers and policymakers understand, predict, and explain why some people decline insurance and remain uninsured. Previous research suggests that while cost is a primary factor, there are other, unknown factors that contribute to uninsurance. The current research seeks to fill the gaps in the literature by using the Health Belief Model as a framework to explore relationships between insurance status and beliefs about insurance. Five constructs are of focus in the Health Belief Model: susceptibility, severity, benefits, barriers, and cues to action.

This study, employing cross-sectional survey methods, is an observational, descriptive, and exploratory study seeking to establish relationships between demographic characteristics, health beliefs, and insurance status. The population under study is insurance-eligible, insured and uninsured employees of a large, state university, where 24% of insurance-eligible employees decline to participate in employer-offered voluntary health insurance benefits. Data were collected through a telephone survey of employees (n=140) selected through a stratified random sample.

A Pearson's correlation coefficient was calculated to examine the relationship between insurance status and various dimensions of beliefs as framed by the health belief model. Findings show a significant positive correlation between insurance status and cues to action and significant negative relationships between insurance status and barriers and insurance status and benefits. This study provides insights into the social barriers to health insurance participation. The results of this study suggest that the Health Belief Model is a useful framework with which to study the uninsured.

## CHAPTER I

### INTRODUCTION

#### Area of Concern

The United States is the only industrialized nation in the world that does not guarantee universal access to basic health care services. In 2002, 43.6 million Americans, or 15.2% of the nation's population, were without health insurance according to U. S Census Bureau Current Population Reports (Mills & Bhandari, 2003). This is an increase from 41.2 million uninsured (14.6%) in 2001 (Mills, 2002). Those who can least afford to pay for health care out-of-pocket are the most likely to be uninsured; the proportion of poor Americans who are uninsured is 30.7%. Within the current United States health care system, lack of health insurance is related to lack of access to health care. The increasing number of uninsured Americans is a crucial policy issue for the United States.

Why does the United States maintain a health care system that excludes so many Americans from equal access to even basic health care services? To fully understand the origins and maintenance of any social policy, one must investigate and understand the values that underlie and help to shape the policy. The United States holds dear the

values of pluralism and choice, individualism, self-sufficiency, ambivalence toward government, prioritization of progress and new technology, volunteerism, paranoia about monopoly, and competition. Given the inadequate and unjust nature of the health care system, it is clear that United States health care policy is value-driven.

These same American values also shape an ideology that frequently leads to a view of the uninsured as undeserving. A commonly held myth is that the uninsured are also unemployed (and therefore undeserving). The U. S. Census Bureau, however, reports that 58% of uninsured workers work full-time for the full year. Over 61% of insured Americans obtain health insurance through an employer but many companies do not offer insurance as a benefit. Companies with low paid workers are less likely to offer insurance as a benefit than are companies with highly paid workers. Insurance benefits also vary by occupation. Twenty percent of the uninsured workers are blue-collar workers, 37% are white-collar workers, and 42% are in service industries. Even health care personnel are not exempt from rising rates of uninsurance; the proportion of uninsured health care workers rose from 8.4% in 1988 to 12.2% in 1998 (Case, Himmelstein, & Woolhandler, 2002).

At Louisiana State University (LSU), all full-time employees are offered the opportunity to purchase health insurance, however, of the 4,552 employees who are full-time and insurance-eligible, 1105 or approximately 24% do not purchase insurance through the university. Some of these employees purchase health insurance privately while others are insured through a spouse's health insurance plan. However, many of these employees do not make private arrangements for health insurance and are thus uninsured. Within the context of the current United States health care system, that means that many full-time employees of LSU do not have adequate access to health care. The LSU System administration does not have data on the percentage of insurance-eligible employees who are uninsured.

#### Purpose of the Study

The broad purpose of this study is to examine insured and uninsured, insurance-eligible employees of a large, land grant state university to measure characteristics related to health insurance acquisition status. The proposed study seeks to explore the differences between insured and uninsured insurance-eligible employees, to assess and describe these differences, to establish predictive relationships with insurance status, and to gain a greater understanding of the differences between

employees who choose to purchase health insurance and those who do not. Utilizing the Health Belief Model as a theoretical framework, this study seeks to provide insights into the value placed on health insurance by those who decline to participate in health insurance benefits offered through an employer.

The goal of this dissertation is to address two research questions:

- 1: For insurance-eligible, state university employees what characteristics are related to health insurance status?
- 2: For insurance-eligible, state university employees, what beliefs concerning health insurance and health insurance acquisition are related to health insurance status?

The Health Belief Model (Rosenstock, 1990) is a framework used extensively for understanding the choices well people make concerning health behaviors. Five constructs are of focus in the Health Belief Model: perceived susceptibility, perceived severity, benefits, barriers, and cues to action. The Health Belief Model guided the development of the questionnaire to be used in this study.



This study is the first use of the Health Belief Model as a framework to investigate the uninsured. This study is also the first to utilize any theoretical framework to guide the analysis and exploration of the uninsured. The results of this study expand knowledge about the uninsured and specifically about why some insurance-eligible employees enroll in health insurance offered as a benefit by an employer while some insurance-eligible employees decline coverage and remain uninsured. The data for this study were obtained through the analysis of cross-sectional data collected through a telephone survey of insured and uninsured, insurance-eligible LSU employees.

#### Relevance of the Study to Social Work

The preamble of the *Code of Ethics* of the National Association of Social Workers, approved by the 1996 NASW Delegate Assembly and revised by the 1999 NASW Delegate Assembly, begins, "The primary mission of the social work profession is to enhance human well-being and help meet the basic human needs of all people with particular attention to the needs and empowerment of people who are vulnerable, oppressed, and living in poverty." The preamble continues, "Fundamental to social work is attention to the environmental forces that create, contribute to, and address problems in living." The code lists six core

values which are described as the foundation of social work's unique purpose and upon which six ethical principals are based. The value pertinent to this study is "Social Justice" upon which is based the principle, "Social workers challenge social injustice." About this principle, the code states, "Social workers pursue social change, particularly with and on behalf of vulnerable and oppressed individuals and groups of people. Social workers' social change efforts are focused primarily on issues of poverty, unemployment, discrimination, and other forms of social injustice. These activities seek to promote sensitivity to and knowledge about oppression and cultural and ethnic diversity. *Social workers strive to ensure access to needed information, services, and resources; equality of opportunity; and meaningful participation in decision making for all people.*" (Italics added.)

The problems in living for the uninsured, created by both the direct consequences of a lack of health insurance as well as by our current capital-driven, insurance-based health care system, are well documented, as the literature review to follow will show. The results of this research will expand knowledge about people who do not have health insurance and will provide insights into choices about insurance acquisition. By expanding knowledge of the

uninsured, this study will also reveal the injustices of the United States health care system. Thus, this study is relevant to social work at both the micro and the macro levels. At the micro level, social workers need to have an understanding of the uninsured to work effectively in direct practice with clients who do not have health insurance. For example, being knowledgeable about research on the barriers to obtaining insurance that the uninsured perceive or about research on the effects of cues to action on insurance enrollment can guide social workers in the interventions they utilize with clients. At the macro-level, social workers and other policy-makers need sound empirical research on the uninsured to guide the development of effective policy. Social injustice is best addressed at the macro level. Currently the uninsured are largely invisible. More empirical research on the uninsured can lead to increased visibility, to greater understanding of the uninsured, and to the development of research-driven policy reform initiatives.

#### Importance of the Study

The results of this dissertation will expand knowledge about differences between insurance-eligible employees with and without health insurance. This dissertation investigates an important policy issue for LSU as well as

for the state university system. The current researcher is coordinating with Human Resource Management of the LSU System. The state university system administration has identified the high number of uninsured employees as a concern. The administration is interested in knowing more about employees who do not purchase health insurance through the university so the university can better address the needs of all of its employees. The results of this research will provide a description of the university's uninsured employees and will be used to make recommendations to as administrator of Human Resource Management of the state university system. The results of this study will also have implications for other large employers, including the State of Louisiana and private industries. The results of this study will also address questions raised by studies on state-initiated health care reforms and thus will have implications for state- or federally-initiated voluntary insurance aimed at universal coverage. Finally, this study has the potential to expand the use of the Health Belief Model.

## CHAPTER II

### REVIEW OF THE LITERATURE

Most of the empirical research on the uninsured has been conducted by medical science and has examined issues related to access to care, utilization of services and outcomes. There is a paucity of social science research on the uninsured. This section will begin with some descriptive statistics on the uninsured and will include a review of empirical studies on the uninsured including research from both medical and social sciences. The lack of both social science research and research utilizing a theoretical framework will be demonstrated. A case will be made for utilizing the Health Belief Model to better understand the value placed on health insurance by the uninsured. This chapter will include a review of the history of the Health Belief Model and applications of the model across diverse populations. The chapter will conclude with the rationale for using the Health Belief Model in the current study.

#### Who are the Uninsured?

The U.S. Census Bureau is the most widely used source of descriptive statistics on the uninsured. The data come from The Current Population Survey (CPS), a monthly survey of about 50,000 households representing the civilian

noninstitutional population of the United States. The Census Bureau conducts the survey for the Bureau of Labor Statistics and reports on the resulting data in the Current Population Reports. The most recently issued report on health insurance coverage was released in September 2003, which reports on data collected in 2002 (Mills & Bhandari, 2003).

In 2002, 43.6 million Americans, or 15.2%, did not have health insurance. This represents an increase from 42.2 million in 2001, and an increase from 39.8 million in 2000 (Mills, 2002). The U.S. Census Bureau attributes this decline in insurance coverage rates to the decline in employment-based insurance; in 2000, 63.6% of Americans were covered by employment-based insurance (their own or a relative's employer), while in 2001, only 62.6% were covered by insurance provided through their employer (Mills, 2002), and only 61.3 percent of Americans were covered by employment-based health insurance in 2002 (Mills & Bhandari, 2003). See Table 1, beginning on the next page, for a further description of the uninsured by selected characteristics.

Table 1

People Without Health Insurance for the Entire Year by  
Selected Characteristics: 2002

Characteristic	Total	Uninsured		
		Number	Percent	Percent 90-percent confidence interval (±)
People				
Total	285,933	43,574	15.2	0.2
Sex				
Male	139,876	23,327	16.7	0.3
Female	146,057	20,246	13.9	0.2
Age				
Under 18 years	73,312	8,531	11.6	0.3
18 to 24 years	27,438	8,128	29.6	0.7
25 to 34 years	39,243	9,769	24.9	0.7
35 to 44 years	44,074	7,781	17.7	0.5
45 to 64 years	67,633	9,106	13.5	0.3
65 years and over	34,234	258	0.8	0.2
Nativity				
Native	252,463	32,388	12.8	0.2
Foreign born	33,471	11,186	33.4	0.8
Naturalized citizen	12,837	2,251	17.5	1
Not a citizen	20,634	8,935	43.3	1
Region				
Northeast	54,139	7,057	13	0.3
Midwest	64,581	7,533	11.7	0.3
South	101,800	17,773	17.5	0.3
West	65,413	11,210	17.1	0.5

(table continues)

Household					
Income					
Less than					
\$25,000	62,979	14,776	23.5	0.5	
\$25,000 to					
\$49,999	75,927	14,638	19.3	0.3	
\$50,000 to					
\$74,999	58,622	6,904	11.8	0.3	
\$75,000 or					
more	88,406	7,256	8.2	0.3	
Education (18					
years and					
older)					
Total	212,622	35,042	16.5	0.2	
No high school					
diploma	34,829	9,768	28	0.7	
High school					
graduate only	67,512	12,671	18.8	0.3	
Some college,					
no degree	41,319	6,214	15	0.5	
Associate					
degree	16,350	1,981	12.1	0.7	
Bachelor's					
degree or					
higher	52,612	4,408	8.4	0.3	
Work					
Experience (18					
to 64 years					
old)					
Total	178,388	34,785	19.5	0.3	
Worked during					
year	142,918	25,679	18	0.3	
Worked full-					
time	118,411	19,911	16.8	0.3	
Worked part-					
time	24,506	5,767	23.5	0.7	
Did not work	35,470	9,106	25.7	0.7	

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Notes. Numbers are presented in thousands. Source: U.S. Census Bureau, Current Population Survey, 2002 and 2003 Annual Social and Economic Supplements.

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## What Does Medical Science Tell Us About the Uninsured?

The findings of empirical medical science research consistently demonstrate that the uninsured have less access to care, lower level of utilization of medical services, and more negative outcomes when ill. The following pages review literature pertaining to insured and uninsured adults, including studies on outcomes, studies on treatment, studies on access to services.

Two studies examined access to cancer screening services for uninsured women. Kirkman-Liff and Kronenfeld (1992) conducted a survey of randomly selected adults in Arizona (n=3100) and examined the impact of insurance status on measures of access to cancer screening services. Insurance status was significantly related to having a Pap smear and to having a mammogram. Uninsured women were much less likely to have had either cancer screening within two years of the survey. Hewitt, Devesa, and Breen (2002) examined the relationship between risk factors for cervical cancer (including insurance status) and having had a Pap smear in the previous year through an analysis of the 1995 National Survey of Family Growth, a demographic and reproductive health survey of women aged 15-44 years (n=10,847). They found that, when compared to insured women, uninsured women had significantly lower rates of

having Pap smears. Both of these studies point to the greater risk of undiagnosed cancer for uninsured women.

When an uninsured woman is diagnosed with breast cancer, she is more likely to have adverse outcomes than a woman with private insurance. Ayanian, Kohler, Toshi, and Epstein (1993) studied women diagnosed with breast cancer (n=4675) comparing the stage of the disease and stage specific survival among women with Medicaid, private insurance, or no insurance. They found that, in keeping with the findings of the previously discussed cancer screening research, uninsured patients and Medicaid patients presented in more advanced stages of cancer than did insured patients. Compared to insured patients, the risk of death was 49% higher for uninsured patients and 40% higher for Medicaid patients.

Likewise, uninsured trauma patients are more likely to die than insured trauma patients. Haas and Goldman (1994) reviewed the discharge abstracts for all patients hospitalized with acute trauma in Massachusetts in 1990 (N=15,008). Compared to insured patients, uninsured patients were more likely to die in the hospital while Medicaid patients were no more likely to die. Uninsured patients and Medicaid patients were both less likely to undergo surgery than the insured patients. Uninsured

patients were less likely than Medicaid and insured patients to receive physical therapy. All three groups were as likely to receive care in an intensive care unit. The researchers make the following alarming suggestion, "Because of the high costs associated with trauma care, some hospitals may treat the uninsured less aggressively...The observed differences may reflect an effort to conserve costs among patients who potentially cannot pay" (p. 1608). Haas and Goldman do caution, however, that from an observational study, such as theirs, one cannot conclude a causal relationship between insurance and better care.

Similar findings have resulted from research on uninsured heart attack patients. Shen, Wan, and Perlin (2001) conducted a study of the relationship between patients' socioeconomic status, including health insurance status, and the death rate of patients hospitalized for acute myocardial infarction (heart attacks). They examined the discharge records of patients (n=95,971) from hospitals in 11 states. The uninsured patients had the highest mortality odds. In addition, patients who lived in a low-income zip-code area, and who were either uninsured or covered by Medicaid were more likely to die, were sicker, stayed in the hospital longer, received fewer specialized

procedures, and had higher hospital bills than patients with private insurance who lived in high-income areas.

Hadley, Steinberg, and Feder (1991) obtained data from 592,598 discharge abstracts and compared the condition on admission, use of resources in the hospital, and in-hospital mortality for uninsured and privately insured patients hospitalized in a national sample of approximately 1200 hospitals. Using the Risk-Adjusted Mortality Index (RAMI) as a measure of expected in-hospital mortality, uninsured patients had a higher risk of in-hospital death on admission than insured patients. This finding, along with the finding that uninsured patients are more likely to be admitted on a weekend than insured patients, suggests that uninsured patients are more likely to be admitted under urgent circumstances. Results also suggest that insurance status has an effect on hospital resource use by patients with a wide variety of medical diagnoses, with uninsured patients less likely to undergo high-cost or high-discretion procedures. Insured patients were twice as likely as uninsured patients to have normal results on tissue biopsies suggesting that physicians are more likely to perform biopsies on insured patients than on uninsured patients. Controlling for severity of condition and expected risk of death on admission, results indicate that

the uninsured have a statistically significant higher risk of actual death in ten of sixteen age-sex-race specific cohorts.

Insurance status has also been found to be associated with length of stay in psychiatric hospitals. Fisher, Barreira, Lincoln, Simon, White, Roy-Bujnowski, and Sudders (2001) investigated the relationship of insurance status with length of stay by reviewing the medical records of involuntarily committed psychiatric patients (n=299) in 25 hospitals in Massachusetts. Medicare patients had the longest length of stays, while uninsured patients had the shortest length of stays. The researchers discuss the civil liberty concerns inherent in cases of involuntary commitment and urge hospital administrators and mental health advocates to ensure that admission and discharge decisions be made based on what is clinically indicated for the patient and not on insurance status.

Ayanian, Weissman, Schneider, Ginsburg, and Zaslavsky (2000) investigated unmet health needs of a national sample of insured and uninsured adults (n=105,764 in 1997 and n=117,364 in 1998). Participants were selected for this telephone survey through random-digit dialing. Both short-term and long-term uninsured adults were significantly more likely than insured adults to report not having seen a

physician in the previous year. Long-term uninsured adults were significantly less likely to have gotten check-ups than insured adults. Short-term uninsured adults were significantly less likely to have gotten check-ups when they were also smokers, obese, or binge drinkers. Both long-term and short-term uninsured adults were more likely to have unmet needs for a variety of preventative services. A limitation of this study is that only access was investigated. Other studies (Schoen, Lyons, Saleanicoff, & Long, 1997) have shown qualitative differences when treatment and outcomes are investigated.

Schoen, Lyons, Saleanicoff, and Long (1997) investigated differences between uninsured low-income adults, low-income adults with Medicaid and low-income adults with private insurance in a telephone survey in five states. Compared to both insured groups, the uninsured were less likely to have a source of primary care or a regular provider and among respondents who received any care in the previous year, more uninsured respondents rated services as fair or poor. The researchers also looked at differences across states to investigate how Medicaid expansions have affected insurance coverage patterns and found that the proportion of uninsured adults is higher in states that have more limits on Medicaid eligibility.

These findings suggest that expanding Medicaid eligibility would reduce the number of uninsured adults and would increase both access to care and quality of care.

In a recent study with concurring recommendations, Thorpe and Howard (2003) conducted a secondary analysis of the Medical Expenditure Panel Survey data to investigate uninsured cancer patients and the impact of uninsurance on treatment. Uninsured cancer patients had fewer hospitalizations, fewer office visits, were billed less money for services but paid more out of pocket than insured cancer patients. The researchers report that some cancer patients are Medicaid eligible but recommend further expansions of health coverage for those with a diagnosis of cancer as the best way to improve cancer treatment.

Shapiro, Morton, McCaffrey, Senterfitt, Fleishman, Perlman, Athey, Keeseey, Goldman, Berry, and Bozzette (1999) investigated the differences in care received by HIV-infected adults in a nation-wide sample of the US population. The researchers conducted a series of 3 interviews from January 1996 to January 1998 in a cohort study (n=2864) of adults receiving medical care for HIV infection. For the three measures of service utilization and the three measures of pharmaceutical utilization under

study, blacks, Latinos, women, the uninsured, and Medicaid-insured all received care inferior to other groups.

Hafner-Eaton (1993) conducted a secondary analysis of cross-sectional data from the 1989 National Health Interview Survey, conducted by the National Center for Health Statistics, to analyze the associations between insurance status and physician utilization for chronically ill, acutely ill and well populations. Physician utilization was a dichotomous variable defined as any physician visit in the previous 12 months. Using a correlational, two-group design (n=102,055), analytic models were tested to predict the likelihood of physician utilization. Results indicate that the uninsured were much less likely than the insured to have visited a physician. Results also indicate that the uninsured are not a homogeneous group in terms of access to care; the chronically ill population exhibited the greatest disparity in physician utilization, followed by the well population, with the least disparity in access evident in the acutely ill population. Limitations in this study stem from the dichotomous measure of physician utilization and the lack of investigation into differences in the quality of care received by insured and uninsured that might have revealed even greater disparities in care.



In contrast, Becker (2001) conducted a qualitative study to compare the effectiveness with which insured and uninsured persons with chronic illnesses (including diabetes, asthma, heart disease, and hypertension) manage their health care. She interviewed volunteers (n=297) recruited through flyers, referrals, and face-to-face contacts from health clinics, senior centers, acute care hospitals, and home care services in urban California counties. Qualitative analysis reveals that the uninsured respondents (14% of sample) were much less effective at managing their illnesses than the insured respondents. The uninsured respondents had frequent health crises, difficulty getting medication and using it correctly, poor understanding of their illness, and little knowledge of self-care and risk awareness.

In a natural experiment by Haas, Udvarhelyi, Morris, and Epstein (1993), the researchers investigated the effect of Healthy Start, a program instituted in 1985 to provide health insurance to uninsured pregnant women who have incomes below 185% of the federal poverty level and who do not meet Medicaid eligibility. The researchers studied the discharge abstracts of all in-hospital, single, live births in Massachusetts in 1984 (N=57,257) and 1987 (N=64,346). Outcome measures included rates of satisfactory prenatal

care and adverse infant outcome for uninsured women and for two control groups, women with Medicaid and women with private insurance. Results indicate that between 1984 and 1987, access to prenatal care declined for all women in Massachusetts and the Healthy Start program was not associated with any increase in access or outcomes. The researchers conclude that providing health insurance does not remove other barriers that prevent access to prenatal care and they recommend interventions that address broader societal problems. This research points to the importance of better understanding the values and beliefs, including perceptions of barriers and benefits of health insurance, held by the uninsured. This also helps to illustrate the importance of more social work research on the uninsured.

The findings of empirical medical science research on children and adolescents without health insurance are consistent with that on adults and will be briefly reviewed. In a secondary analysis of the 1987 National Medical Expenditure Survey sponsored by the Agency for Health Care Policy and Research, findings indicate that uninsured children are less likely than insured children to receive medical care from a physician when such care is indicated for pharyngitis, acute earache, recurrent ear infections, or asthma (Stoddard, St. Peter, & Newacheck,

1994). In a study examining factors predictive of tympanostomy tube insertion, children with continuous health insurance coverage were found to be almost twice as likely to be treated with this procedure than children who had experienced a gap in coverage of 7 months or more (Kogan, Overpeck, Hoffman, & Casselbrant, 2000). In a secondary analysis of the 1993 and 1994 National Health Interview Surveys, uninsured, State Children's Health Insurance Program-eligible children were found to be different from privately insured but State Children's Health Insurance Program-eligible children, Medicaid-enrolled children, and privately insured children in terms of socioeconomic and health status characteristics (Byck, 2000). In a study investigating the relationships between health insurance and welfare status and medical care of children with asthma, uninsured children were found to have more barriers to asthma care and fewer medical visits than do insured children, while children whose parents recently applied for TANF were more likely to be uninsured and were more likely to have more severe asthma symptoms (Wood et al., 2002). In one misleadingly hopeful study, insured children were found to be similar to uninsured children in the prevalence of psychosocial problems and both groups were found to be treated similarly by clinicians (McInerny,

Szilagyi, Childs, Wasserman, & Kelleher, 2000). This study, however, only examined children who were served in primary care practices, thus, children with more limited access to care were not considered. As another study demonstrated, uninsured children of the working poor were found to be much less likely than insured children of the working poor to have a source of primary care or preventative care (Guendelman, Wyn, & Tsai, 2002). Likewise, uninsured adolescents have been found to be more likely than insured adolescents to lack a regular source of health care, to have unmet medical needs, and to not see a physician at any time over a one-year period (Newacheck, Brindis, Cart, Marchi, & Irwin, 1999). Even a gap of any time period of being without health insurance coverage has been found to have a significant effect on continuity of care for preschool-aged children (Kogan et al., 1995).

#### What Does Social Science Tell Us About the Uninsured?

Empirical social science research on the uninsured is very limited. Franks, Clancy, Gold, and Nutting (1993) analyzed data from the Household Survey component of the National Medical Expenditure Survey, a year-long panel survey of about 35,000 individuals in 14,000 households representative of the civilian, noninstitutionalized US population. Data were collected in 4 interviews over a

one-year period. Respondents were asked the question, "In general, would you say your health is excellent, good, fair, or poor?" Respondents were also asked ten health attitude questions to measure attitudes toward health insurance and health care. The researchers compared adults without insurance for a year to adults with insurance throughout the year. Those without health insurance had lower levels of subjective health status and their attitude toward the value of health insurance was more negative. They were also younger, and more likely to be male and to have a family income 200% below poverty level. They were less likely to be white and to have a high school diploma.

Some states have initiated reforms aimed at reducing levels of uninsurance at the state level. Washington State's Basic Health Plan is a state insurance plan initiated in 1989 to provide subsidized health insurance for low-income people by contracting with managed care systems. The average monthly cost per family was \$34. Most of the eligible people who did not enroll in the plan were insured through other means, however, some eligible people who did not enroll were not otherwise insured and were therefore uninsured. Deihl, Madden, Cheadle, Martin, Patrick, and Skillman (1996) compared uninsured people who were eligible to enroll in the plan who did and did not

enroll. The researchers analyzed survey data that had been collected in 1989 and 1991 for an evaluation of the plan. Telephone interviews had been done on people who had enrolled. Data had been collected through random-digit dialing on people who were eligible but did not enroll. The researchers used these existing data to compare the enrollees with the eligibles. Family type was found to be significantly related to being enrolled; married couples with dependents were most likely to enroll and female headed families less likely. Health status was also found to be significantly related to being enrolled; people in fair or poor health were significantly less likely to enroll. Enrollees had significantly more car problems, pregnant family members, and high blood pressure and significantly less chronic stomach problems and mental health problems. The strongest predictors of not being enrolled were being a single male and never having had health insurance. There was no significant difference on age, gender, or race. The researchers point out that since this plan was a pilot plan, the results of the study might not be generalizable to more established health insurance programs. Also, they explain that preexisting conditions were excluded from coverage in the plan and they speculate that sicker people might be less likely to enroll for that

reason. The researchers conclude that the findings suggest that a voluntary national health care plan would have to be aggressively marketed especially to those who have never had health insurance. An implication of this study is that "volunteer bias" seems to apply to decisions about voluntary health insurance.

Another state to initiate reform at the state level is Minnesota, which initiated its effort to reduce uninsurance in 1992. MinnesotaCare is a voluntary state-subsidized health care plan. Call, Lurie, Jonk, Feldman, and Finck (1997) investigated the effectiveness of MinnesotaCare. They wanted to document the rate of uninsurance in 1990 and 1995, and to describe and better understand the uninsured. They conducted two telephone surveys of a random sample of all Minnesotans in 1990 (n=10,310) and 1995 (n=11,519). In these surveys, the uninsured were asked detailed questions about their reasons for not having insurance, their knowledge about public programs, and sociodemographic data. They also conducted a third telephone survey of MinnesotaCare participants in 1994 (n=800) to better understand those who enrolled in the state-subsidized health insurance. Results indicate that MinnesotaCare has been effective in reducing the proportion of uninsured children while the proportion of uninsured single adults

remained stable. Further results are of particular interest in the current study; the uninsured cited cost as the primary reason for being uninsured in both the 1990 and 1995 surveys. Of those who worked for an employer who offered insurance as a benefit, most of the uninsured reported that the employer contributed to the cost, but over half reported they were not eligible for insurance and about 20% reported that cost was a barrier to enrolling in employer-based health insurance. Of the uninsured who had heard of MinnesotaCare, 14% of the continuously uninsured and 10.4% of the intermittently uninsured said they could not afford the state-subsidized insurance. The survey of MinnesotaCare participants revealed that about 3% gave up insurance through an employer and 4% gave up privately purchased health insurance. Of MinnesotaCare participants, 26% reported at least some difficulty paying their premiums. Results suggest that MinnesotaCare's eligibility requirements, developed largely to prevent "gaming the system," create barriers to access to health insurance for those who remain uninsured due to the cost of insurance. The researchers conclude that MinnesotaCare has been and will continue to be an effective incremental reform.



Cooper and Schone (1997) note that researchers have not adequately described the characteristics of workers who decline and accept employer-based insurance. They investigated how the availability of employer-based health insurance has changed over time and whether workers were accepting coverage at the same rate in 1996 as in 1987. They analyzed data from the 1996 panel of the Medical Expenditure Panel Survey (MEPS) and the 1987 National Medical Expenditure Survey (NMES). Findings indicate that while there has been an increase in employer-based insurance offer rates, employee participation or "take-up rates" has decreased. The researchers conclude that, "Since take-up rates appear to be the driving force behind decreases in employment-based insurance coverage, understanding the factors that affect the demand for employment-based insurance is crucial." They note that proposals aimed at increasing take-up rates are important in decreasing the number of uninsured.

Thorpe and Florence (1999) report, "...we know relatively little about why workers reject coverage when eligible" (p.214). They utilized data from the Current Population Survey to examine this issue. Results indicate that 11.4 million workers declined health insurance when it was offered as an employment benefit. Only 2.5 million of

those were actually uninsured. Sixty-eight percent of those reported the high cost of insurance as the reason for declining coverage. Only 1% reported that they prefer to trade insurance for higher wages and only 4.1% said they did not need insurance. More than 25% reported some other reason for declining insurance. A major weakness of this study is that these responses were all coded as "other." The researchers conclude that these results have policy implications for employers and other policymakers who want to increase employee participation in health insurance as an employment benefit.

Yelgian, Pockell, Smith, and Murray (2000) investigated characteristics, including attitudes, of nonpoor uninsured adults. They conducted a random-digit-dial sampling to identify uninsured, Californian adults with household incomes of at least 200% of the federal poverty level. Telephone interviews were conducted in English and Spanish to collect information on attitudes, utilization and charges, perception of the cost of health insurance premiums and willingness to pay for health insurance from a sample (n = 1,009) that was predominantly male, white, and under age forty. Analysis was limited to descriptive statistics. Sixty percent of respondents indicated that they worried a lot about health and

finances, but 57% disagreed with the statement, "Health insurance ranks very high on my list of priorities for where to spend my money. The researches offer the following outcome as an explanation for this apparent contradiction: 43% agreed with the statement, "Health insurance is not a very good value for the money." Respondents' perceptions of cost exceeded actual cost, they believed the cost to be about twice as much as they were willing to pay, and they were not aware of the range of options of health insurance available. The researchers recommend education and marketing and conclude that any health care system that relies on individuals to voluntarily purchase health insurance will never achieve universal health coverage. While this study offers insights into attitudes about health insurance purchasing by the uninsured, the single-group design, the lack of a theoretical framework guiding the construction of the attitude questionnaire, and the descriptive statistics utilized offer limited predictive understanding of the decision to purchase or decline health insurance.

In a qualitative study, Vuckovic (2000) conducted a fifteen-month ethnographic study of purposefully sampled uninsured mothers of small children (n=18) recruited from county health immunization clinics in southern Arizona.

She conducted multiple interviews, which were audio taped and transcribed for analysis. Results showed that the women used creative strategies for self-care. Social networks provided information, advice, and prescription medications. The women also used prescription medications stockpiled from previous illnesses when symptoms for any family member were similar to those experienced by the original patient. Additionally, the women made trips into Mexico where the medications could be obtained at a fraction of the cost in the United States and without a prescription. Results also showed that inappropriate health care and treating conditions in insufficient ways, however well intentioned, placed the women and their families at risk for drug interactions and other detrimental effects on health. The researcher concluded that illnesses do not have to be life threatening to create health and financial problems for the uninsured. This study offers rich data on the consequences of being uninsured along with coping strategies of uninsured families, but the study's location in southern Arizona and the resulting ease of access to resources in Mexico limits the generalization of results to the larger U.S. population.

### What is Missing?

None of the previous research utilizes a theoretical framework to guide analysis and exploration of the uninsured. In the current study, all of the uninsured will be “voluntarily” uninsured, but is the choice really voluntary? What are some of the underlying differences between the uninsured and the insured besides the very clear differences in health care access, health care utilization and health outcomes? In a population where each individual is offered health insurance as an employment benefit, what characteristics and beliefs are related to being uninsured? What is the value placed on health insurance by those who decline to participate in health insurance benefits offered through an employer and how does that value differ from those who do participate? Why do employees decline health insurance when it is offered as an employment benefit?

### Health Belief Model

In the current study, the Health Belief Model is used to address these questions. The Health Belief Model is used as a framework for better understanding insurance-eligible uninsured employees and to fill some of the gaps in the existing literature.

## What is the Health Belief Model?

The Health Belief Model is the oldest theory specifically developed to explain the health related behaviors of well people and after fifty years, it continues to be the most widely used theory for this purpose (Rosenstock, 1990). The Health Belief Model developed in the 1950's out of research problems facing a group of Public Health Service researchers, Drs. Godfrey M. Hochbaum, S. Stephen Kegeles, Howard Leventhal, and Irwin M. Rosenstock. In the 1950's the Public Health Service was oriented toward the prevention of disease in well people, not the treatment of disease in ill people. The problems facing the researchers were related to issues around the failure of people to engage in preventative behaviors including screening tests. These preventative measures were usually offered free of charge or at very low cost. The theory developed as a way to understand and explain why some people engage in these preventative health behaviors and some people do not (Rosenstock, 1974b).

The Health Belief Model says that for a well person to engage in preventative behaviors or to take action to avoid an illness, that person would need to believe he or she is susceptible to the illness and that the occurrence of the illness would have at least some negative impact on

his or her life. When the person feels susceptible, and feels at risk for at least somewhat serious consequences, he or she will take action. The direction of the action taken is influenced by beliefs about the effectiveness of the action and the individual's assessment of the costs of that action. Additionally, the model takes into account triggers for the individual to act (Rosenstock, 1974b).

The specific beliefs or constructs of focus in the Health Belief Model are as follows:

Susceptibility. The construct of susceptibility is concerned with the individual's perceived susceptibility to the condition or illness under study. It is the individual's subjective assessment of personal risk.

Severity. The construct of severity addresses the individual's perception of the seriousness of the illness under study in the event that the individual would receive such a diagnosis. Severity relates to not just the medical severity of the problem, but also the severity of financial, psychological, or other consequences of the illness or condition.

Benefits. The construct of benefits is concerned with the individual's perceptions of the benefits and efficacy of engaging in a health behavior.

Barriers. The construct of barriers is concerned with the individual's perception of barriers to engaging in a health behavior. These barriers include psychological, financial, and any other perceived barriers to the behavior.

Cues to Action. Cues to action are the external and internal triggers that encourage the individual to engage in a health behavior. Examples are physical pain, emotional worry, television advertisement, reminder from a doctor, or a comment by a family member. Cues to action can help the individual resolve internal conflicts regarding benefits and barriers, such as when the benefits and barriers are both assessed as high (a very painful procedure that is also very likely to be successful, for example).

#### Applications of the Health Belief Model

Since the 1950's, the Health Belief Model has been used to extensively to study preventative dental behavior (Haefner, 1974), behavior related to chronic illness (Kasl, 1974), and behaviors related to various cancer screenings, including Pap smear tests (Burak, 1997), mammograms (Aiken, West, Woodward, & Reno, 1994), and breast self-examination (Champion, 1997). In fact, the model has been called the most influential theoretical approach in understanding



performance of breast self-examination (Millar, 1997). Recently, the Health Belief Model has been applied to predicting condom usage and risky sexual practices in university students (Lollis, Johnson, & Antoni, 1997), to predicting perceived and actual dietary quality (Sapp & Jensen, 1998), and even to understanding predictors of recycling behaviors (Lindsay & Strathman, 1997). The Health Belief Model has been praised for its potential for application to a wide range of health behaviors (Kirscht, 1974).

#### Use of Health Belief Model Across Diverse Populations

The Health Belief Model has been used across diverse populations. The Health Belief Model has been used as a foundation for developing a video to promote condom usage among urban adolescent women taking oral contraceptives and as a framework for understanding why some of these young women ask their partners to use condoms and some do not (Royce & Hudson, 2003). It has been used to predict use of mammogram-screening across a population both racially and socioeconomically diverse (Champion et al., 2002). It has been used to explore behaviors around sickle cell disease in African-Americans (Reese & Smith, 1997), and in Blacks in Great Britain (McInnis, 2002). The Health Belief Model has been used to explore behavioral management of HIV

infection of French and Flemish speaking Belgian men and women (Vincke & Bolton, 2002). A breast self-examination scale based on the Heath Belief Model has been translated into Arabic and has been used with success with Jordanian women (Petro-Nustus & Mikhail, 2002). It has been used to study the impact of a television program promoting general healthy behavior in Poland (Chew, Palmer, Slonska, & Subbiah, 2002). It has been used to examine behaviors around pesticide safety among farm workers in North Carolina (Arcury, Quandt, & Russell, 2002). It has been used with rural women as a framework for a focus group discussion guide in a qualitative study to examine the women's perceptions about cardiovascular disease prevention (Krummel, Humpries, & Tessaro, 2002). Finally, the Health Belief Model has been used to investigate and predict safe food-handling behaviors among older adults (Hanson & Benedict, 2002).

#### Rationale for Using the Health Belief Model in The Current Study

Several gaps have been identified in the literature concerned with the uninsured. The literature calls for research to increase understanding of the factors that effect whether people offered insurance accept or decline that insurance. A greater understanding is needed of the

values and beliefs, including the perceptions of susceptibility to needing health insurance and severity of that need, and the perceptions of barriers and benefits of health insurance, held by the uninsured. Previous research on the uninsured is lacking a theoretical framework to help researchers and policymakers understand, predict, and explain why some people decline insurance and remain uninsured. The current research seeks to fill these gaps in the literature by using the Health Belief Model as a framework to explore relationships between insurance status and beliefs about insurance held by insurance-eligible employees.

## CHAPTER III

### METHODOLOGY

The current study examines insured and uninsured employees of a large, land grant, state university to measure variables related to health insurance acquisition status. The purpose of the study is to explore the differences between insured and uninsured insurance-eligible employees, to assess and describe these differences, to establish predictive relationships with insurance status, and to gain a greater understanding of the differences between employees who choose to purchase health insurance and those who do not. Utilizing the Health Belief Model as a theoretical framework, this study provides insights into the value placed on health insurance by those who decline to participate in health insurance benefits offered through an employer. This chapter describes the research methods to be utilized in the study including design, definitions of key concepts, hypotheses, descriptions of variables under investigation, participants, procedures, and plan of analysis.

#### Design

This study, employing cross-sectional survey methods, is an observational, descriptive, and exploratory study seeking to establish relationships between demographic

characteristics, health beliefs, and actual insurance status. Data were collected through a telephone survey of randomly selected LSU employees. Telephone surveys offer a number of advantages including a response rate of 60-90% when repeated callbacks are used, a short data collection period, and the possibility for interviewers to develop rapport with respondents and to encourage respondents to complete the questionnaire (Czaja & Blair, 1996). Many of the employees of interest in this study are predicted to have low levels of literacy and a telephone survey affords an advantage over the self-administered approach of a mail survey in that it does not rely on the reading and writing skills of the respondent (Fowler, 2002). The telephone survey was conducted daily over a 12-day period beginning at the end of September 2003 and continuing into the beginning of October 2003.

#### Definition of Key Concepts

The following are definitions of concepts relevant to the current research.

- Insurance-eligible: any employee of who qualifies for enrollment in a health insurance plan as a benefit. In the Louisiana State University System, an employee is considered full-time, and insurance-eligible if he or she works at 75% effort or greater for 121 days or greater.

Insurance-eligible employees are offered the opportunity to enroll in a health insurance plan within the first 30 days of employment.

- University insurance status: whether the employee is enrolled in a health insurance plan through the university. An employee might be “university uninsured” while being actually insured through an alternate source (through a spouse’s employer, for example).

- Actual insurance status: refers to whether an employee is enrolled in any health insurance plan through any source, public or private, including through the university.

### Research Hypotheses

This dissertation investigates the characteristics and health beliefs related to actual insurance status of insurance-eligible employees. The null hypothesis in this research is that no relationships exist between characteristics and health beliefs and actual insurance status. Tested against this hypothesis are possible effects of characteristics and beliefs on insurance status as specified below. The following two research questions and the corresponding hypotheses address differences between insured and uninsured, insurance-eligible employees.

### Research Question 1

For insurance-eligible state university employees, what characteristics are related to insurance status?

- Hypothesis 1: For insurance-eligible employees, there is a relationship between insurance status and the following characteristics: a) family history of health insurance, b) health status, c) age, d) gender, e) race, f) marital status, g) education, and h) household income.

### Research Question 2

For insurance-eligible state university employees, what beliefs concerning health insurance are related to insurance status?

- Hypothesis 2: For insurance-eligible employees, there is no relationship between actual insurance status and perceived susceptibility to needing health insurance.

- Hypothesis 3: For insurance-eligible employees, there is no relationship between actual insurance status and employees' estimation of the seriousness of the consequences should the need for health insurance arise.

- Hypothesis 4: For insurance-eligible employees, there is no relationship between actual insurance status and employees' perception of the benefits of health insurance.

- Hypothesis 5: For insurance-eligible employees, there is a relationship between actual insurance status and employees' perception of barriers to obtaining health insurance

- Hypothesis 6: For insurance-eligible employees, there is a relationship between actual insurance status and employees' report of exposure to cues to action related to health insurance than insured employees will report.

Description of Variables

A questionnaire was developed to solicit information on actual insurance status, characteristics, and health belief variables as discussed below. The questionnaire used in the study is located in Appendix A. See Table 2 below for a description of each variable under study along with the expected relationship between the dependent variable and each independent variable.

Table 2

Description of Variables Under Study

Variable	Description
Actual Insurance Status (DV)	1 = Insured 0 = Uninsured
Family History of Health Insurance [+]	1 = Family of origin was insured 0 = Family of origin was uninsured 9 = Respondent does not know

(table continues)



Self-Assessment of Health Status [+]	4 = Excellent 3 = Good 2 = Fair 1 = Poor
Age [+]	Age in years at time surveyed
Gender [+]	1 = Male 0 = Female
Race Recoded To Minority [-]	1 = Minority 0 = Non-minority
Marital Status [+]	1 = Married 0 = Not married
Education [+]	0 = Less than high school 1 = High school diploma or equivalency 2 = Some college, professional or trade school 3 = Bachelor's degree 4 = Some graduate school 5 = Completed Master's degree 6 = Completed Doctorate
Annual Household Income [+]	1 = Under \$10,000 2 = \$10,000 - \$14,999 3 = \$15,000 - \$19,999 4 = \$20,000 - \$24,999 5 = \$25,000 - \$29,999 6 = \$30,000 - \$34,999 7 = \$35,000 - \$49,999 8 = \$50,000 - \$64,999 9 = \$65,000 and over
Health Belief Model: Susceptibility [0]	Assessment of susceptibility to needing health insurance 1 = Not at all 2 = A little 3 = Somewhat 4 = Quite a bit 5 = Very much

(table continues)

Health Belief Model: Severity [0]	Assessment of severity, should health insurance be needed 1 = Not at all 2 = A little 3 = Somewhat 4 = Quite a bit 5 = Very much
Health Belief Model: Benefits [0]	Perception of benefits of having health insurance 1 = Not at all 2 = A little 3 = Somewhat 4 = Quite a bit 5 = Very much
Health Belief Model: Barriers [-]	Perception of barriers to obtaining health insurance 1 = Not at all 2 = A little 3 = Somewhat 4 = Quite a bit 5 = Very much
Health Belief Model: Cues to Action [+]	Perception of cues to obtain health insurance 1 = Not at all 2 = A little 3 = Somewhat 4 = Quite a bit 5 = Very much

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Note. The symbols in brackets indicate the expected direction of the relationship between each independent variable and actual insurance status.

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In addition to the information provided in Table 2 above, clarification and further description is necessary for race and the Health Belief Model variables.

## Race

Respondents are asked to indicate specific race. Race was recoded to minority for the purpose of analysis. The dichotomous variable, minority (as indicated in Table 2 above), rather than race, is an independent variable in the current study.

## Health Belief Model Variables

When a computed Cronbach's coefficient alpha indicates that the items within a Health Belief Model construct are intercorrelated, the items for that construct were summed and the variable was measured by the sum of the items. This sum was then treated as an index for that construct. When internal consistency of the items within a construct was not indicated by Cronbach's coefficient alpha, the individual items within that construct were used as separate variables in the analysis.

## Participants

### Population Under Study

The population under investigation is insurance-eligible employees of LSU (N=4552). A complete list of full-time, insurance-eligible employees was obtained from an LSU System administrator in Human Resource Management. The list includes each employee's name, home and work phone numbers, and employee's university insurance status

(insured through the university or not insured through the university). Approximately 24% (n=1105) of insurance-eligible employees are not insured through the university. The university does not collect information regarding employee's alternative arrangements for insurance. It was therefore unknown, prior to the current study, how many of the employees not insured through the university are alternately insured. In this study, "university insurance status" is defined as whether the employee is insured through the university (university insured or university uninsured), while the variable "actual insurance status" takes into account so-called uninsured employees who are actually insured because they have obtained alternative sources of insurance (insured - including alternately insured, and uninsured).

### Sampling

Sampling method utilized in this study is a stratified random sample by university insurance status (university insured, university uninsured). A stratified random sample allows meaningful comparisons to be made when two groups not equally represented in the population are under study (Maisel & Persell, 1996). In this case, the university uninsured group comprises 24% of the insurance-eligible employee population. Because actual insurance status is

the variable of interest and because the number of employees not insured through the university who are insured through alternative means was unknown (alternately insured actual insurance status), the university uninsured group was over-sampled to compensate for drawing alternately insured employees from the university uninsured group.

Employees were divided into two groups by university insurance status. Using Statistical Package for Social Science (SPSS, version 11.5), university insured employees (n=600) and university uninsured employees (n=700) were randomly selected. Code numbers were assigned to each selected employee. A call disposition sheet, discussed further in the Procedure section below, was developed for this study and was pre-coded to correspond to the codes assigned to selected employees. The call disposition sheets were shuffled to further randomize the sample. Call disposition sheets were drawn one at a time and the code on the sheet determined the corresponding employee to be contacted. It was anticipated that employees would be contacted until approximately 200 questionnaires were completed, including approximately 100 completed by each of the two groups under study (the actually insured and actually uninsured employees). This plan was modified

after data collection began in response to unanticipated findings and will be explained in the "Procedures" section below. Total number of participants in the study is 450. The final sample used the analysis for this dissertation consists of 100 insured and 40 uninsured employees (n=140). In addition, an abbreviated form of the questionnaire was completed by 310 participants who were university uninsured but actually insured.

#### Human Subjects Review

The Louisiana State University Institutional Review Board granted the current study an exemption from institutional review. Participants' responses are anonymous and confidential; in order to ensure the confidentiality of subject data, no identifying information was connected to the survey data collected. Because the call disposition sheets have codes that can be matched to the two lists of randomly selected employee names and phone numbers, the lists were kept in a separate, locked location away from the call disposition sheets. The questionnaire used in this study begins with a consent script in compliance with the requirements of the Institutional Review Board. Participants were informed that they could discontinue participation in this study at any time with no negative consequences. Participants were informed that

there were no known risks involved in employees' participation in this project and that their participation would have no effect on their employment at LSU. Participants were given the name of the researcher, contact information for the researcher, the name of the study, the purpose of the study, anticipated number of participants, and the name and role of the interviewer. Participants were given the opportunity to ask questions about the procedures until they were satisfied and were given the opportunity to speak with the researcher if desired.

The researcher and the student volunteers are held to the standards of the Code of Ethics of the National Association of Social Workers. The code includes imperatives for ethical behavior of social workers conducting research. The student volunteers participated in training led by the researcher that included a review of the code and these imperatives along with training on conducting the survey.

### Procedures

#### Instrumentation

Data were collected via a questionnaire that was developed for this study. The questionnaire is located in Appendix A. Because the Health Belief Model has never been applied to health insurance related behaviors, previously

utilized versions of Health Belief Model scales would not address the unique constructs under investigation in the proposed study. Items designed to measure Health Belief Model variables were developed based on previous research as discussed below. After reviewing previous research on the recommended format and construction of Health Belief Model questionnaire items, the researcher participated in two brainstorming sessions to generate items and develop the questionnaire. In the first brainstorming session, the current researcher met with a sociology doctoral candidate with considerable experience in attitude scale development. In the second session, the current researcher met with a professor knowledgeable on the Health Belief Model and with expertise in research with diverse populations. The items on the newly developed questionnaire were pilot-tested with a sample of two custodial employees of LSU. The questionnaire was modified based on feedback received during pilot testing and after review by three additional professors.

The questionnaire was developed to solicit the following information:

- Actual Insurance Status

The dependent variable in this study is actual insurance status. Respondents were asked if they were



enrolled in any health insurance plan at the time of the survey.

- Source of Insurance

For insured participants, data were collected to explore source of insurance.

- Length of Time Uninsured

For uninsured participants, data was collected on length of time uninsured.

- Characteristics

Demographic data and other characteristics collected includes source of insurance if insured, length of time uninsured if uninsured, family history of health insurance, self-assessment of current state of health, gender, age, race, level of education, and household income.

Demographic data was solicited through close-ended questions each with a list of provided responses. While "don't know" was available as a possible response to several of these questions, "don't know" was not offered by the interviewer and was only available to respondents who volunteered a "don't know" response to encourage respondents to give substantive responses (Schuman & Presser, 1996).

- Health Belief Model

As can be seen by referring to Appendix A, most of the questionnaire is concerned with soliciting responses within the framework of the Health Belief Model, which is the focus of the current research. All of the Health Belief Model items analyzed in this study are statements utilizing a likert-scale. Respondents were read the statements and asked to indicate the extent to which they agreed with the statement on a five-point scale from 1 (not at all) to 5 (very much). Exceptions to this format are addressed in the discussion that follows. Items on the questionnaire were developed to address five constructs of the Health Belief Model. Each Health Belief Model construct is discussed below.

Susceptibility. The Health Belief Model construct of susceptibility is concerned with the individual's perceived susceptibility to the condition or illness under study. In the current study, susceptibility items address the individual's perceived susceptibility to needing to use health insurance. Susceptibility is measured through six likert-scale items. Items in this section include "I think I am the type of person who is likely to get sick," "I am worried that I will be in a serious accident in the next 12 months," and "I am worried that I will have problems due to

a major accident in the next 12 months." The development of these items was guided by the work of Rosenstock (Rosenstock, 1974a).

Severity. The construct of severity addresses the individual's perception of the seriousness of the consequences of the illness under study in the event that the individual would receive such a diagnosis. In the current study, the items in this section address the individual's perception of the severity of the consequences of any illness that might require medical attention. Five likert scale items measure the construct of severity. Items in this section include "If I get sick in the next year, I would probably get sick enough that I would need prescription medication" and "If I get sick in the next year, it would probably have a severe financial impact on me and my family." The development of these items was also guided by the work of Rosenstock (Rosenstock, 1974a).

Benefits. The construct of benefits is concerned with the individual's perceptions of the benefit and efficacy of engaging in a health behavior, in this case, the benefit of having health insurance. Six likert scale items measure the construct of benefits. Items in this section include "Health insurance allows a person to see a doctor whenever they want" and "People who don't have health insurance have

a hard time getting proper medical care and treatment.”

The development of these items was also guided by the work of Rosenstock (Rosenstock, 1974a).

Barriers. The construct of barriers is concerned with the individual's perceived psychological barriers and other costs of engaging in a health behavior. Eleven likert scale items measure the construct of barriers related to health insurance. Items in this section include “Health insurance does not cover the kind of care that I need,” “Getting signed up for health insurance is confusing and complicated,” and “When a person gets health insurance, they are more likely to get sick.” The development of the first eight of these items was guided by the work of Rosenstock (Rosenstock, 1974a). Three items in this section deal with new patterns of behavior as a barrier (M. H. Becker, 1974) and include “When I was growing up, my family used Earl K. Long Hospital or another public hospital in the Charity Hospital System” and “Using Earl K. Long Hospital or another public hospital in the Charity Hospital System is just fine with me.” The Charity Hospital System of Louisiana is unique from the public health systems of other states. The system provides state of the art medical services to the medically underserved and indigent of Louisiana. Of interest in this study are

participants' attitudes about and histories of using this specific hospital system and whether familiarity with using this system might be a barrier to enrolling in insurance coverage through an employer in the State of Louisiana where this unique system is available.

Cues to Action. Cues to action are internal and external triggers that encourage the individual to engage in a health behavior. Items in this section include "I have seen health insurance ads on TV," "I have received memos and literature about health insurance from LSU (regarding benefits, enrollment period, etc.)," and "Most people I know have health insurance."

Final Health Belief Model Series. An additional series of items further address the following 3 constructs: susceptibility, severity, and benefits. This final series of items includes two open-ended questions with four follow-up items each, the structure of which was guided by the work of Haefner (Haefner, 1974). The two open-ended questions are "What is the worst medical problem you can imagine?" and "If you were to someday need medical care, what do you think it would be for?" Following each of these two questions is an identical series of 4 follow-up questions. The first, "How worried are you that (illness above) will happen to you?" is concerned with

susceptibility, while the last statement, "If (illness above) happened to you, how helpful would health insurance be?" is concerned with benefits. Two of the 4 follow-up questions address the construct of severity. As recommended by Haefner, the first item concerns severity of a general nature and is followed by an item that addresses the severity of a specific consequence. In the case of health insurance, a specific consequence would be financial. The two items that address severity are "If (illness above) happened to you, how serious would you estimate it to be?" and "If (illness above) happened to you, how serious would you estimate the financial consequences to be?" This alternate, second series of Health Belief Model questions is not analyzed in the current study.

After the questionnaire items were generated, the questionnaire was converted into a scan-able form by LSU Testing and Evaluation services. Scanning data reduces errors in data entry. The scan-able questionnaires were printed with serial numbers. These numbers were only used to trace electronic data back to the paper questionnaire; completed questionnaires were anonymous and could not be traced back to the individual employee.

## Data Collection

Phone calls. Data was collected via telephone calls made to employees' home and work numbers over a twelve-day period beginning at the end of September 2003. Initially, phone calls were made between the hours of 5:00 pm and 9:00 pm Monday through Friday and between the hours of 10:00 am and 4:00 pm on Saturdays and Sundays. In response to an unexpected low number of uninsured respondents, on the fifth day of the survey, calls were made daily from 9:00 am until 9:00 pm in an effort to contact employees who work evening shifts. Phone numbers were available for home and work. Calls were made primarily to home numbers. When the employees' home phone number was not functioning, when an employee requested it during a call made to the employee's home, or after repeated unsuccessful calls to the home number, calls were made to the employee's work phone number. When an employee requested a callback at a certain hour, a return call to that employee was made at the time the employee requested. All initial phone calls were made from telephones in offices at the School of Social Work. When a participant requested a callback outside the scheduled calling hours, the interviewer could choose to call the participant at the appointed time from a phone convenient to the interviewer. In such cases, the

interviewer informed the participant that the phone call is being made from a location outside of the school (from the interviewer's home, for example).

At the end of each data collection shift, the researcher reviewed the disposition rate of the calls made by each of the interviewers. No problems were noted with interviewers. The researcher also tallied the completed questionnaires and kept a daily log of number of completed by actual insurance status.

Initially, participants were drawn from both the university insured and the university uninsured groups. By the third day of the survey, 100 actually uninsured employees had completed the survey, but only 5 actually uninsured people had completed the survey, even though beginning on the second day, respondents were overdrawn from the university uninsured group. At the end of the third day, a decision was made to give only an abbreviated form of the survey to actually insured employees, collecting only data needed to estimate the total number of uninsured LSU employees and to provide LSU administration with a description of university uninsured employees' alternate insurance source. Beginning on the fourth day of the survey, respondents were drawn only from the university uninsured group and the complete survey was given only to



those respondents who indicated they were actually uninsured. As described above, calling hours were expanded on the fifth day as an additional effort to reach actually uninsured employees

Interviewers. The survey was conducted by the researcher assisted by Master of Social Work student volunteers working under the supervision of the researcher. The student volunteers were recruited from two sections of the advanced year social work research course and were offered extra credit points toward their final grade in the course in exchange for their participation in the proposed project. In addition, one sociology doctoral candidate and one undergraduate senior psychology major enrolled in a social work course with the researcher also volunteered.

There were sixteen interviewers. Fourteen of the interviewers were female. Thirteen of the interviewers were white and three were African-American. The mean age of the interviewers was 26.8 years (SD=6.2) with a minimum age of 20 years and a maximum age of 40 years.

A number of steps were taken to help insure consistency among interviewers in the data collection process. Student volunteers were required to work a minimum of 20 hours in four-hour shifts to receive the extra credit points. On the first day of data collection,

the researcher led a one-hour training session for the student volunteers. Any volunteers that did not participate in that training were trained one-on-one before being allowed to collect data. The researcher was present during all data collection shifts and was available at all times to go to the phone to speak with participants and to answer any questions when requested.

#### Conclusion of Data Collection

By the twelfth day of data collection, repeated callbacks to the university uninsured sample had become increasingly non-productive. On the twelfth day, two to four interviewers worked all day beginning at 9:00 am. Only two actually uninsured employees were contacted that day. When the second was contacted at approximately 7:00 pm, data collection concluded with this 40<sup>th</sup> actually uninsured respondent.

#### Participation Ratio Data

Data were collected on the response rate of telephone calls made by interviewers. A call disposition form was developed for this study and was pre-coded to correspond to the codes assigned to selected employees. The call disposition form can be found in Appendix B. The information collected on the sheet was modeled after the data collected during telephone surveys conducted by the

LSU Public Policy Research Lab. Because the software used by the Research Lab was not available to the researcher, the form was developed to both prompt and track calls to employees. The forms, which can be scanned for data input, were developed through the LSU Office of Testing and Evaluation services. They were serially pre-coded to correspond to codes assigned to individual employees. The forms were both color-coded and serially coded to indicate the university insurance status of the employee. Calls were made to employees based on the code of the contact form drawn. Initially, the forms were developed to allow 1 to 5 call attempts to an employee, but as an attempt to contact more uninsured employees, a second form was developed to extend the first page of the form and to allow for up to 9 attempts. Each interviewer kept track of the disposition of each phone call they made including such information as whether the employee consented to complete the questionnaire, asked for a callback at another time, or refused to participate.

Several steps were taken to increase response rate. Calls were initially made on evenings and weekends to reduce nonresponse resulting from unavailability of participants, but beginning on the fifth day, calls were also made during weekdays in an attempt to reach employees

who work evenings. Three to nine callbacks were made to each employee's home (Czaja & Blair, 1996). Interviewers made appointments for any time that was convenient for participants when the employee indicated that they would prefer to complete the survey at another time. Since the calls were all made from LSU School of Social Work, caller identification indicated to the employees that the call came from LSU in an attempt to reduce the number of screened out calls. Students received training in effective interviewing techniques. Finally, calls were made to two employees who indicated that they only speak Spanish and the researcher contacted a master of social work student fluent in Spanish who agreed to interview these two employees.

Calls were made to 848 employees. Surveys were completed by 450 employees who responded to the full survey used in the current study (n=140) or to the abbreviated survey focusing on source of insurance (n=310). Rates are calculated for response and cooperation based on final disposition of contacts. Response rate for the survey was 58.4%. Cooperation rate was 89.3%. See Table 3 on the next page for an accounting of final disposition of contacts upon which these rates are based.

Table 3

Call Disposition for Last Contact

Last Contact Disposition	Total Number Attempted	Percent
Hard Refusal	38	4%
Business	2	0%
Busy	5	1%
No Answer	217	26%
Call Back	46	5%
Disconnected	31	4%
Fax	0	0%
Soft Refusal	14	2%
Not Qualified	45	5%
Complete	450	54%
Total	848	100%

Note. Complete includes 140 respondents who answered the full survey and 350 respondents who answered the abbreviated form of the survey.

Analysis

Statistical analyses for this dissertation were computed using Statistical Package for Social Sciences (SPSS, version 11.5).

Descriptive Statistics

The results of this study include an estimate of the number of actually uninsured LSU employees. A description of the uninsured employees is provided, including data on length of time uninsured.

Descriptive statistics for all variables under study were computed and are reported as distributions,

frequencies, percentages, and means, depending on the level of measurement of the variable.

### Correlations

Pearson's correlation coefficient (or Pearson  $r$ ) was computed with actual insurance status for each of the variables under study and was used to test each of the hypotheses.

Pearson  $r$  is an indication of strength and direction of linear association and ranges from -1.0 to +1.0 (Babbie, Halley, & Zaino, 2003). A coefficient of 0 indicates no linear relationship between the two variables under analysis.

Pearson's  $r$  is appropriate for interval or ratio level variables. Dichotomous variables (two categories) are an exception to this criteria; nominal data represented by dichotomous variables behave like ratio variables for most statistical calculations including Pearson's  $r$  (Sapsford, 1999). All nominal variables under investigation in this study are dichotomous, coded as 0 and 1 with "don't know" and refusals coded as missing data to allow the use of Pearson's  $r$ . Additionally, Pearson's  $r$  is commonly used to report relationships in survey research with ordinal, likert-scale items with five to seven (or more) categories.

In addition to relationships to test the hypotheses in this study, a correlation matrix of all study variables will be presented.

A significance level of .05 was used as the standard for significance to be reached in the analyses for the Pearson's r calculations.

### Cronbach's Alpha

Cronbach's alpha coefficients were computed to determine the degree to which a set of items designed to measure a construct of the Health Belief Model do measure a single construct. The five constructs of the Health Belief Model are represented by five sets of items:

Susceptibility, Severity, Benefits, Barriers, and Cues to action.

Cronbach's alpha measures internal consistency (Cronk, 2002). It is a coefficient of reliability and is used to measure how well a set of questionnaire items measures a single uni-dimensional construct. Multi-dimensional data will yield a low Cronbach's alpha. A Cronbach's alpha of close to 1.00 is considered to represent high internal consistency, while an alpha close to 0.00 is considered low. Cronbach's alpha is not a statistical test and there is no associated level of significance. A coefficient of around 7.00 or greater is generally considered high. It

should be noted that a low coefficient alpha does not reflect poorly on a questionnaire or set of items; it merely means that the items tested do not measure a single construct.

When Cronbach's coefficient alpha indicate interrelated items within a Health Belief Model construct, the items for that construct are summed and the variable will be measured by the sum of the items. When internal consistency of the items within a construct is not indicated by Cronbach's coefficient alpha, the individual items are used as separate variables in the analysis. It was expected that on the questionnaire used in this study, the set of questions in the Cues to Action section would have a lower Cronbach's alpha reflecting the multi-dimensional nature of the variety of unrelated cues that are addressed in that section of the questionnaire.



## CHAPTER IV

### RESULTS

Statistical analyses were conducted on data collected for the current study to determine whether relationships exist between health insurance status and employee's characteristics and beliefs concerning health insurance. The results of this research include an estimate of the number of LSU employees who are actually uninsured, frequencies and means on characteristics and beliefs to provide a description and analysis of the uninsured along with Pearson's  $r$  to test the hypotheses about health insurance status, and Cronbach's coefficient alpha for each of the Health Belief Model constructs. Refer to Appendix C for Health Belief Model items along with corresponding code names for questionnaire items.

#### The Uninsured Employees

The university reports that there are 1105 university uninsured employees. Seven hundred (700) of those employees were randomly selected. Four hundred nine (409), of the 700 randomly selected agreed to participate in the survey. This means 37% of university uninsured employees participated in the survey. Of the 409 who participated, only 40 (9.78%) were actually uninsured. Of the 1105 university uninsured employees reported by the university,

it is estimated that 108 LSU employees do not have health insurance. This is considerably fewer than was anticipated and is a surprising finding.

Mean age of the uninsured employees is 38.3 years (SD=9.9). Sixty-five percent (65%) are female. Seventy-eight percent (78%) are minorities. Highest level of education obtained was high school diploma, equivalency, or less than high school for 56%. Sixty-four percent (64%) make below \$25,000 per year. Uninsured employees were asked how long they had been uninsured. See Table 4 for frequencies of responses. Eleven percent (11%) had been uninsured for 10 years or longer.

Table 4

Length of Current Period of Uninsurance for Uninsured

	Frequency	Percent
Less than 1 year	3	8%
1 year up to 5 years	14	35%
5 years up to 10 years	7	18%
10 years or more	16	40%
Total	40	100%

#### Hypothesis Testing: Characteristics

Distribution Tables including frequencies, percentages and means for independent variables are presented below to provide further description of the uninsured. To test the

hypotheses in this study, Pearson correlation coefficients were computed and are reported below. A correlation matrix of all study variables is presented in Appendix D.

#### Family History of Health Insurance

To test Hypothesis 1(a), a Pearson correlation coefficient was computed for the relationship between actual insurance status and reported family history of health insurance. A strong positive correlation was found ( $r(138) = .25, p < .01$ ), indicating a significant linear relationship between actual insurance status and income. Uninsured employees tend to come from uninsured families of origin more often than do insured employees. This positive relationship is an expected result and is consistent with the Health Belief Model which postulates that having to make a change in behavior from what one is used to can be a barrier to a health behavior. Hypothesis 1(a) is accepted. See Table 5 below for the distribution of family insurance history in the sample along with the Pearson's  $r$ .

#### Self-assessment of Health Status

To test Hypothesis 1(b), a Pearson correlation coefficient was computed for the relationship between actual insurance status and self-assessment of health. Participants were asked, "In general, would you say that your health is

Table 5

Responses to Survey Question, "Did your family have health insurance when you were a child?"

	Overall Frequency	By Insurance Status		r	p
		Uninsured	Insured		
No	34 (24%)	16 (40%)	18 (18%)	.25	.004
Yes	98 (70%)	21 (53%)	77 (77%)		
Don't Know	8 (6%)	3 (8%)	5 (5%)		
Total	140 (100%)	40 (100%)	100 (100%)		

Note. "Don't know" responses treated as missing for statistical analysis.

excellent, good, fair, or poor?" A strong positive correlation was found ( $r(138) = .25, p < .01$ ), indicating a significant linear relationship between actual insurance status and self-assessment of health status. Uninsured employees tend to assess themselves as less healthy than do insured employees. This positive relationship is an expected result and is consistent with previous medical research that consistently shows that uninsured people are less healthy than insured people. Previous research also shows that self-assessment of health status is an accurate indicator of actual health status. Hypothesis 1(b) is accepted. See Table 6 on the next page for the distribution of self-assessment of health in the sample along with the Pearson's  $r$ .

Table 6

## Self-assessment of Health

	Overall Frequency	By Insurance Status		r	p
		Uninsured	Insured		
Poor	0 (0%)	0 (0%)	0 (0%)	.25	.003
Fair	17 (12%)	10 (25%)	7 (7%)		
Good	62 (44%)	18 (45%)	44 (44%)		
Excellent	61 (44%)	12 (30%)	49 (49%)		
Total	140 (100%)	40 (100%)	100 (100%)		

Age

To test Hypothesis 1(c), a Pearson correlation coefficient was computed for the relationship between actual insurance status and age. A strong positive correlation was found ( $r(137) = .28, p < .001$ ), indicating a significant linear relationship between actual insurance status and age. Uninsured employees tend to be younger than insured employees. Mean age of uninsured employees is 38.3 years (SD=9.9) while mean age of insured employees is 44.9 years (SD=10.8). This positive relationship is an expected result and is consistent with previous research. Hypothesis 1(c) is accepted. See Table 7 on the next page for age means along with the Pearson's r.

Gender

To test Hypothesis 1(d), a Pearson correlation coefficient was calculated to examine the relationship

Table 7

## Age of Respondent by Insurance Status

	Overall	By Insurance Status		r	p
		Uninsured	Insured		
Mean	43.2	37.9	45.3	.277	.001
SD	11.0	10.0	10.7		
N	140	40	100		

between actual insurance status and gender. A very weak positive correlation that was not significant was found ( $r(135) = .01, p > .05$ ). Actual insurance status is not related to gender for LSU employees. This is an unexpected result and is not consistent with previous research. One possible explanation is that the sample in the current study reveals a high percentage of female employees (64% and 65%) for both of the two groups. Hypothesis 1(d) is rejected. See Table 8 below for the distribution of gender in the sample and the Pearson's  $r$ .

Table 8

## Gender

	Overall Frequency	By Insurance Status		r	p
		Uninsured	Insured		
Female	90 (64%)	26 (65%)	64 (64%)	.01	.881
Male	47 (34%)	13 (33%)	34 (34%)		
Missing	3 (2%)	1 (3%)	2 (2%)		
Total	140 (100%)	40 (100%)	100 (100%)		

## Race

To test Hypothesis 1(e), a Pearson correlation coefficient was computed for the relationship between actual insurance status and race. Race had been recoded into the dichotomous variable minority. A very strong negative correlation was found ( $r(138) = -.61, p < .001$ ), indicating a significant linear relationship between actual insurance status and race. Uninsured employees tend to be minorities. This negative relationship is an expected result and is consistent with previous research. Hypothesis 1(e) is accepted. See Table 9 below for the distribution of race in the sample along with Pearson's  $r$ .

Table 9

Race (Recoded to Minority)

	Overall Frequency	By Insurance Status		$r$	$p$
		Uninsured	Insured		
Non- minority	95 (68%)	9 (23%)	86 (86%)	-.61	<.001
Minority	45 (32%)	31 (78%)	14 (14%)		
Total	140 (100%)	40 (100%)	100 (100%)		

## Marital Status

To test Hypothesis 1(f), a Pearson correlation coefficient was computed for the relationship between actual insurance status and marital status. Marital status

was coded as a dichotomous variable (1 = married, 2 = not married). A strong positive correlation was found ( $r(138) = .36, p < .001$ ), indicating a significant linear relationship between actual insurance status and marital status. Uninsured employees are less likely to be married than insured employees. This strong positive relationship is an expected result and is consistent with previous research. Fifty-five percent of the university uninsured employees who were actually insured were insured through a spouse. Hypothesis 1(f) is accepted. See Table 10 on the next page for the distribution of marital status in the sample along with the Pearson's  $r$ .

Table 10

Current Marital Status

	Overall Frequency	By Insurance Status		$r$	$p$
		Uninsured	Insured		
Married	44 (31%)	23 (58%)	21 (21%)	.36	.001
Not Married	96 (69%)	17 (43%)	79 (79%)		
Total	140 (100%)	40 (100%)	100 (100%)		

Education

To test Hypothesis 1(g), a Pearson correlation coefficient was computed for the relationship between actual insurance status and level of education. A very



strong positive correlation was found ( $r(138) = .58, p < .001$ ), indicating a significant linear relationship between actual insurance status and level of education. Uninsured employees tend to have obtained a lower level of education than do insured employees. This positive relationship is an expected result and is consistent with previous research. Hypothesis 1(g) is accepted. See Table 11 on the next page for the distribution of education level in the sample along with the Pearson's  $r$ .

#### Household Income

To test Hypothesis 1(h), a Pearson correlation coefficient was computed for the relationship between actual insurance status and total family yearly income. A very strong positive correlation was found ( $r(132) = .83, p < .001$ ), indicating a significant linear relationship between actual insurance status and income. Uninsured employees tend to make less money than do insured employees. Only 1 uninsured employee (3%) made over \$50,000 per year while 79% of insured employees made over \$50,000 per year. Conversely, 64% of uninsured employees made under \$25,000 per year while 0% of insured employees made under \$25,000 per year. This positive relationship is an expected result and is consistent with previous research. Hypothesis 1(h) is accepted. See Table 12 on page 79 for the

Table 11

Highest Level of Education Obtained		By Insurance Status			
	Overall Frequency	Uninsured	Insured	r	p
Less than high school	3 (2%)	3 (8%)	0 (0%)	.58	<.001
High school diploma or equivalency	25 (18%)	19 (48%)	6 (6%)		
Some college, professional or trade school	30 (21%)	12 (30%)	18 (18%)		
Bachelor's degree	20 (14%)	3 (8%)	17 (17%)		
Some graduate school	0 (0%)	0 (0%)	0 (0%)		
Completed Master's degree	37 (26%)	3 (8%)	34 (34%)		
Completed Doctorate	25 (18%)	0 (0%)	25 (25%)		
Total	140 (100%)	40 (100%)	100 (100%)		

distribution of income in the sample along with the Pearson's r.

Hypothesis Testing: Health Belief Model

Cronbach's alpha coefficients were computed to determine the degree to which each set of items designed to

Table 12

## Total Yearly Income

	Overall Frequency	By Insurance Status		r	p
		Uninsured	Insured		
Under \$10,000	1 (1%)	1 (3%)	0 (0%)	.83	<.001
\$10,000 - \$14,999	6 (4%)	6 (15%)	0 (0%)		
\$15,000 - \$19,999	13 (9%)	13 (33%)	0 (0%)		
\$20,000 - \$24,999	5 (4%)	5 (13%)	0 (0%)		
\$25,000 - \$29,999	5 (4%)	2 (5%)	3 (3%)		
\$30,000 - \$34,999	8 (6%)	6 (15%)	2 (2%)		
\$35,000 - \$49,999	16 (11%)	6 (15%)	10 (10%)		
\$50,000 - \$64,999	17 (12%)	1 (3%)	16 (16%)		
%65,000 and over	63 (45%)	0 (0%)	63 (63%)		
Refused	6 (4%)	0 (0%)	6 (6%)		
Total	140 (100%)	40 (100%)	100 (100%)		

measure a construct of the Health Belief Model do measure a single construct. The five constructs of the Health Belief Model are represented by five sets of items: Susceptibility, Severity, Benefits, Barriers, and Cues to action.

Cronbach's coefficient alpha revealed interrelated items within four Health Belief Model constructs, susceptibility, severity, benefits, and barriers. The items for each of these constructs were summed and the resulting variable, called an index, is measured by the sum of the items. As expected, the set of questions in the Cues to Action section have a lower Cronbach's alpha reflecting the multi-dimensional nature of the variety of unrelated cues that are addressed. Cues to Action items are treated as separate items rather than as an index. See Table 13 below for a summary of Cronbach's alpha for each of the Health Belief Model Constructs.

Table 13

Health Belief Model Constructs by Insurance Status

	Cronbach's $\alpha$	Index Mean By Insurance Status			
		Un- insured	Insured	r	p
Susceptibility	.76	12.5	12.2	-.03	.773
Severity	.78	13.9	13.1	-.09	.284
Benefits	.71	22.0	24.6	.25	.003
Barriers	.71	30.4	20.3	-.59	<.001
Cues	.51	--	--		

Note: Internal consistency measured by Cronbach's standardized item  $\alpha > 0.7$

### Health Belief Model: Susceptibility Index

To test Hypothesis 2, a Pearson correlation coefficient was computed for the relationship between actual insurance status and susceptibility index. A very weak, negative correlation was found ( $r(138) = -.03, p > .05$ ), indicating no significant linear relationship between actual insurance status and susceptibility index. Health insurance status is not related to susceptibility index. This expected result indicates that uninsured employees believe they are just as susceptible to needing health services as do insured employees. Hypothesis 2 is accepted. See Table 13 above for the Pearson's  $r$ .

### Health Belief Model: Severity Index

To test Hypothesis 3, a Pearson correlation coefficient was computed for the relationship between actual insurance status and severity index. A very weak negative correlation was found ( $r(138) = -.09, p > .05$ ), indicating no significant linear relationship between actual insurance status and severity index. Actual insurance status is not related to severity index. This expected result indicates that the uninsured employees are just as aware of and concerned about the seriousness of the consequences should they require health services.

Hypothesis 3 is accepted. See Table 13 on page 80 for the Pearson's  $r$ .

#### Health Belief Model: Benefits Index

To test Hypothesis 4, a Pearson correlation coefficient was computed for the relationship between actual insurance status and benefits index. A strong positive correlation was found ( $r(138) = .25, p < .01$ ), indicating a significant linear relationship between actual insurance status and benefits index. Uninsured employees tend to perceive less benefit to having health insurance than do insured employees. This positive relationship is an unexpected result. Hypothesis 4 is rejected. See Table 13 on page 80 for the Pearson's  $r$ .

#### Health Belief Model: Barriers Index

To test Hypothesis 5, a Pearson correlation coefficient was computed for the relationship between actual insurance status and barriers index. A very strong negative correlation was found ( $r(138) = -.59, p < .001$ ), indicating a significant linear relationship between actual insurance status and barriers index. Uninsured employees tend to perceive or experience greater barriers to obtaining insurance than do insured employees. This negative relationship is an expected result. Hypothesis 5

is accepted. See Table 13 on page 80 for the Pearson's r.

Health Belief Model: CUE 1

CUE 1 corresponds to the item, "I have seen health insurance ads on TV." To test Hypothesis 6, a Pearson correlation coefficient was computed for the relationship between actual insurance status and CUE 1. A weak negative correlation was found ( $r(138) = -.10, p > .05$ ), indicating no significant linear relationship between actual insurance status and CUE 1. Uninsured employees tend to perceive about the same number of TV ad cues to acquiring health insurance as do insured employees. See Table 14 below for the Pearson's r.

Table 14

Cues to Action Individual Survey Items by Insurance Status

	Cronbach's standardized $\alpha$ with deleted item	Item Mean By Insurance Status			
		Un- insured	Insured	r	p
Cue 1	.41	4.3	4.0	-.10	.261
Cue 2	.39	3.8	3.7	-.03	.715
Cue 3	.42	3.8	4.5	.28	.001
Cue 4	.42	4.3	4.7	.26	.002
Cue 5	.56	2.8	2.6	-.05	.555
Cue 6	.56	3.5	4.5	.43	<.001

Note: Overall Cronbach's Standardized  $\alpha = .51$

#### Health Belief Model: CUE 2

CUE 2 corresponds to the item, "I have seen billboards about health insurance." To test Hypothesis 6, a Pearson correlation coefficient was computed for the relationship between actual insurance status and CUE 2. A very weak negative correlation was found ( $r(138) = -.03, p > .05$ ), indicating no significant linear relationship between actual insurance status and CUE 2. Uninsured employees tend to perceive about the same number of billboard ad cues to acquiring health insurance as do insured employees. See Table 14 above for the Pearson's  $r$ .

#### Health Belief Model: CUE 3

CUE 3 corresponds to the item, "I have received memos and literature about health insurance from LSU (regarding benefits, enrollment period, etc.)." To test Hypothesis 6, a Pearson correlation coefficient was computed for the relationship between actual insurance status and CUE 3. A strong negative correlation was found ( $r(138) = .28, p > .01$ ), indicating a significant linear relationship between actual insurance status and CUE 3. Uninsured employees tend to report the perception of receiving fewer memos and literature health insurance than do insured employees. This is an expected finding. It was hypothesized that lower paid employees are less likely to work in offices on



campus, to be less likely to have access to campus email, and to have less access to information on campus. See Table 14 on page 83 for the Pearson's  $r$ .

Health Belief Model: CUE 4

CUE 4 corresponds to the item, "I have friends and coworkers who benefited from having health insurance." To test Hypothesis 6, a Pearson correlation coefficient was computed for the relationship between actual insurance status and CUE 4. A strong negative correlation was found ( $r(138) = .26, p > .01$ ), indicating a significant linear relationship between actual insurance status and CUE 4. Uninsured employees tend to report the perception of fewer friends and co-workers who benefited from health insurance than do insured employees. This is an expected finding. It was hypothesized that uninsured employees are more likely to have friends and co-workers who are uninsured than are insured employees. Associating with uninsured people provides fewer cues to health insurance than associating with insured people. See Table 14 on page 83 for the Pearson's  $r$ .

Health Belief Model: CUE 5

CUE 5 corresponds to the item, "I have friends and co-workers who have gotten very sick and had problems getting health care because they did not have health insurance."

To test Hypothesis 6, a Pearson correlation coefficient was computed for the relationship between actual insurance status and CUE 5. A very weak negative correlation was found ( $r(138) = -.05, p > .05$ ), indicating no significant linear relationship between actual insurance status and CUE 2. Uninsured employees tend to perceive about the same number of friends and co-workers who have had problems due to lack of health insurance. This finding is notable because, as with CUE 4, CUE 5 indicates fewer social cues to health insurance for the uninsured, even when a cue might be noticing problems others are having. See Table 14 on page 83 for the Pearson's  $r$ .

#### Health Belief Model: CUE 6

CUE 6 corresponds to the item, "Most people I know have health insurance." To test Hypothesis 6, a Pearson correlation coefficient was computed for the relationship between actual insurance status and CUE 6. A strong positive correlation was found ( $r(138) = .43, p > .01$ ), indicating a significant linear relationship between actual insurance status and CUE 6. Again, uninsured employees tend to report associating with other uninsured people. This is an expected finding. It was hypothesized that uninsured employees are more likely to have friends and co-workers who are uninsured than are insured employees.

Associating with uninsured people provides fewer cues to health insurance than associating with insured people. See Table 14 on page 83 for the Pearson's  $r$ .

#### Summary of Results

It is estimated that there are 108 uninsured LSU employees. These results indicate that there are much fewer uninsured LSU employees than believed by LSU administration and is an unexpected finding. Forty uninsured employees participated in the current study along with 100 insured employees.

Pearson correlation coefficients were calculated to test the hypothesis that certain characteristics and demographic variables are related to actual insurance status. Results indicate that the strongest relationship was with income ( $r(132) = .83, p < .001$ ), followed by race ( $r(138) = -.61, p < .001$ ), followed by education ( $r(138) = .58, p < .001$ ). An unexpected finding of no significant relationship between gender and health insurance was found ( $r(135) = .01, p > .05$ ). Of note is the finding that family history of insurance has a significant positive relationship with actual insurance status ( $r(138) = .25, p < .01$ ). This new finding is in keeping with the theoretical framework guiding this research. This finding indicates that when a person is raised without health

insurance, he or she is less likely to have health insurance as an adult than people who were raised with health insurance, thus suggesting difficulty making a change to a new behavior.

For Health Belief Model variables, the strongest relationships with actual insurance status were found with barriers index ( $r(138) = -.59, p < .001$ ) and CUE 6 ( $r(138) = .43, p > .01$ ). Of particular interest is the significant negative relationship with CUE 3 ( $r(138) = .28, p > .01$ ) indicating that uninsured employees receive less information about health insurance from LSU than do insured employees.

## CHAPTER V

### CONCLUSIONS

The current study investigated the relationship between insurance status and various employee demographic and other characteristics, and between insurance status and health beliefs as framed by the Health Belief Model. This study also sought to describe the uninsured employees and to explore their beliefs around health insurance in an effort to better understand why these employees remain uninsured.

#### Major Findings and Conclusions

Of all employee characteristics investigated, income had the strongest relationship with insurance status. Obviously, cost is a barrier to obtaining health insurance and this relationship was expected. Other significant relationships between insurance status and employee characteristics were expected findings consistent with previous research. Education and race, also found to have strong relationships with insurance status, are demographic characteristics known to be both highly correlated with each other and highly correlated to income. Marital status and age were also found to have a significant positive relationship with insurance status. Again, this is an expected finding consistent with previous research.

For the Health Belief Model variables, no significant relationship was found between insurance status and susceptibility or between insurance status and severity. This is an expected finding and indicates that uninsured and insured employees do not differ in their beliefs about susceptibility to illness and they do not differ in their beliefs about the severity of the consequences should they get sick.

An unexpected finding was the significant negative relationship between health insurance and benefits, indicating that uninsured employees view health insurance as less beneficial than do insured employees. This finding is consistent with the Health Belief Model but was unexpected to the researcher who had hypothesized that the differences between the two groups would be limited to a negative relationship between insurance status and barriers and a positive relationship between insurance status and cues to action.

Findings did reveal the expected significant negative relationship between insurance status and barriers. In addition, results show a significant positive correlation between several cues to action items and insurance status. Of particular note is the significant positive relationship between insurance status and the cues to action item, "I

have received memos and literature about health insurance from LSU (regarding benefits, enrollment period, etc.).” This could indicate that uninsured employees perceive less correspondence from LSU or it could indicate that LSU does not have effective channels of communication regarding health insurance for some employees.

#### Implications of the Findings for Theory

Five constructs are of focus in the Health Belief Model: susceptibility, severity, benefits, barriers, and cues to action. The Health Belief Model purports that for a well person to engage in preventative health behaviors, such as health insurance acquisition, that person would need to believe he or she is susceptible to the illness, or in this case, susceptible to needing health insurance (susceptibility), and that the occurrence of the illness, or need for insurance, would have at least some negative impact on his or her life (severity). When the person feels susceptible, and feels at risk for at least somewhat serious consequences, he or she will take action. The direction of the action taken is influenced by beliefs about the effectiveness of the action (benefits) and the individual's assessment of the costs of that action (barriers). Additionally, the model takes into account triggers for the individual to act (cues to action).

The findings of the current study support the use of the Health Belief Model to better understand why the uninsured are uninsured. The relationships which were uncovered in the analyses indicate that uninsured employees perceive less benefit to having health insurance, perceive a higher degree of barriers to obtaining health insurance, and perceive fewer cues to act (get health insurance).

This study is the first use of the Health Belief Model as a framework to investigate the uninsured. The results of this research support further use of the model as a framework to better understand the various levels of beliefs about health insurance held by the uninsured and to develop more responsive solutions to the high rate of uninsurance. The results of this research expand application of the Health Belief Model.

#### Implications of the Findings for Research

Several gaps have been identified in the literature. Previous research indicates that when insurance is voluntary, whether offered through a state-initiated reform to reduce uninsurance or offered through an employer as a benefit, some people choose to remain uninsured. The literature calls for research to increase understanding of the factors that affect whether people offered insurance accept or decline that insurance. Research on the



uninsured is lacking a theoretical framework to help researchers and policymakers understand, predict, and explain why some people decline insurance and remain uninsured. Previous research suggests that while cost is a primary factor, there are other, unknown factors that contribute to uninsurance. The results of the current research suggest that the Health Belief Model can be a useful framework to explore relationships between insurance status and beliefs about insurance and support utilizing the health belief model to study in uninsured in future research.

#### Implications of the Findings for Social Work

This study is relevant to social work practice at both the micro and the macro levels. At the micro level, social workers need to have an understanding of the uninsured to work effectively in direct practice with clients who do not have health insurance. For example, being knowledgeable about research on the barriers to obtaining insurance that the uninsured perceive or about research on the effects of cues to action on insurance enrollment can guide social workers in the interventions they utilize with clients. At the macro-level, social work advocates and policy-makers need sound empirical research on the uninsured to guide the development of effective policy. Currently, the high rate

of uninsurance is a crucial policy issue for the United States. While federal health care reform to provide universal health care is unlikely at this time, incremental reforms led by state initiatives to provide safety nets in our current employer-based, insurance-driven system are the most likely future health care reforms.

This study addresses questions raised in previous research on state-initiated policy reforms aimed at providing universal health insurance coverage. Similarly to the state university employees under study, many uninsured state residents decline health insurance when offered a state health insurance program and choose to remain uninsured. The reasons for this are not known. It has been suggested that any state or federal plan that attempts to achieve universal coverage will not succeed if it is voluntary. This dissertation seeks to better understand why some people turn down insurance when it is an option and choose to remain uninsured. Results suggest that in addition to cost, there are other barriers, including social barriers, to becoming insured. It will only be through better understanding these barriers that states will be successful in attempts to better address the needs of the uninsured, including state-initiated policy reforms aimed at universal coverage. There is a paucity of

research to inform these state initiatives. The current study seeks to fill this gap.

#### Limitations of this Study

The major limitation of this study is the sample size. Based upon research and university input, the current researcher anticipated a higher number of uninsured employees within the sample. The small sample size dictated the use of correlations for analysis and prohibited the use of more sophisticated, multivariate analysis such as logistic regression. Many of the variables in this study are correlated with each other. A larger sample size would allow for control of these variables to better investigate the Health Belief Model relationships of particular interest in this study. Another limitation is related to the sampling method employed in this study, a stratified random sample. This sampling method was used in an effort to better reach the uninsured employees who were known to be outnumbered by the insured employees. The results of this study suggest that the uninsured employees are even more outnumbered than was believed. Had a stratified sampling method not been used in this study, it is likely that even fewer uninsured employees would have been contacted. Another limitation is that some of the variables under investigation in the

current research are ordinal level data. Pearson's  $r$  was used to analyze these ordinal variables, violating an assumption that data must be interval or ratio level. However, Pearson's  $r$  is a robust test that can provide accurate results even when some assumptions are violated. Spearman's rho correlation coefficient assumes at least ordinal level data, however, it is a weaker statistic. Pearson's  $r$  correlation coefficient is commonly used to test relationships in surveys utilizing likert-scale instruments such as this one.

A final limitation is that a telephone survey introduces non-response bias into the study. In the current study, 26% of employees for which calls were attempted were finally disposed as "no answer."

#### Directions for Future Research

This study should be replicated on a larger sample. Conducting the study again with LSU's employees will not present a larger sample to study; it is estimated that there are only 108 uninsured LSU employees. A statewide study would be an ideal expansion of the current study. Conducting the study in a state where the cost barrier is removed though a state insurance plan would allow for further investigation into the other barriers to obtaining health insurance. A large statewide study would also allow

for better refinement of an instrument to study insurance related health beliefs.

An experiment could investigate effect of the Health Belief Model construct cues to action on insurance status. This would allow more inferences to be made about the role health beliefs play on insurance acquisition.

Also, this study did not investigate what actions the uninsured are taking. The Health Belief Model says that when a person feels at risk, he or she will act; the direction of that action is determined by beliefs about the effectiveness of that action. The uninsured in this sample did not perceive great benefit to having health insurance. Perhaps the uninsured have alternative ideas about actions that might be more beneficial than enrolling in health insurance. Given the significant negative relationship found between insurance status and health status, the uninsured are surely taking some action with regard to health care. What are they doing?

Finally, a qualitative study could be conducted to collect rich data on the constructs particularly barriers, benefits and cues, the three constructs found to have significant relationships with actual insurance status. Eighteen uninsured respondents from the current study have agreed to be contacted for a more in-depth follow-up study

to be conducted in the spring. Data for a qualitative study could be collected through in-depth interviews and focus groups to further investigate and analyze the role of barriers, benefits and cues to action on health insurance acquisition.

A final caveat regarding the results must be noted: although the estimated number of uninsured employees is not nearly as high as was thought prior to the current research, it is important not to dismiss the concerns of these employees just because there are fewer of them. Consistently, uninsured employees thanked interviewers conducting the survey. They expressed appreciation that someone was concerned about uninsured LSU employees. Some told stories about the difficulties they encounter in trying to obtain basic health care and described dire situations. Many of the 40 interviewed seemed happy to have someone to talk to about their health care concerns. The estimated 108 people who do not have health insurance represent about 2% of LSU's insurance-eligible employees. This marginalized group on LSU's campus lacks access to health care available to the remaining 98%. This researcher would argue that because there are so few, there is even more of an imperative to learn more about this

group so that effective policy solutions can be developed to address their needs.

## REFERENCES

- Aiken, L. S., West, S. G., Woodward, C. K., & Reno, R. R. (1994). Health beliefs and compliance with mammography-screening: Recommendations in asymptomatic women. *Health Psychology, 13*(2), 122-129.
- Arcury, T. A., Quandt, S. A., & Russell, G. B. (2002). Pesticide safety among farmworkers: Perceived risk and perceived control as factors reflecting environmental justice. *Environmental Health Perspectives, 110*(Supplement 2).
- Ayanian, J. Z., Kohler, B. A., Toshi, A., & Epstein, A. M. (1993). The relation between health insurance coverage and clinical outcomes among women with breast cancer. *The New England Journal of Medicine, 329*(5), 326-331.
- Ayanian, J. Z., Weissman, J. S., Schneider, E. C., Ginsburg, J. A., & Zaslavsky, A. M. (2000). Unmet health needs of uninsured adults in the United States. *Journal of the American Medical Association, 284*(16), 2061-2069.
- Babbie, E., Halley, F., & Zaino, J. (2003). *Adventures in social research: Data analysis using SPSS 11.0/11.5 for Windows* (5th ed.). Thousand Oaks, CA: Pine Forge Press.
- Becker, G. (2001). Effects of being uninsured on ethnic minorities' management of chronic illnesses. *Western Journal of Medicine, 175*(1), 19-23.
- Becker, M. H. (1974). The Health Belief Model and sick role behavior. *Health Education Monographs, 2*(4), 409-419.
- Burak, L. J. (1997). Using the Health Belief Model to examine and predict college women's cervical cancer screening beliefs and behavior. *Health Care for Women International, 18*(2), 251-262.
- Byck, G. R. (2000). A comparison of the socioeconomic and health status characteristics of uninsured, state children's health insurance program-eligible children in the United States. *Pediatrics, 106*(1), 14-21.



- Call, K. T., Lurie, N., Jonk, Y., Feldman, R., & Finck, M. D. (1997). Who is still uninsured in Minnesota? *Journal of the American Medical Association*, 278(14), 1191-1195.
- Case, B. G. S., Himmelstein, D. U., & Woolhandler, S. (2002). No care for the caregivers: Declining health insurance coverage for health care personnel and their children. *American Journal of Public Health*, 92(3), 404-408.
- Champion, V. L. (1997). Instruments for measuring breast self-examination. In M. Frank-Stromberg & S. J. Olsen (Eds.), *Instruments for Clinical Health Care Research*. Boston: Jones & Bartlett.
- Champion, V. L., Skinner, C. S., Menon, U., Seshadri, R., Ansalone, D. C., & Rawl, S. M. (2002). Comparisons of tailored mammography interventions at two months postintervention. *Annals of Behavioral Medicine*, 24(3), 211-218.
- Chew, F., Palmer, S., Slonska, Z., & Subbiah, K. (2002). Enhancing health knowledge, health beliefs, and health behavior in Poland through a health promoting television program series. *Journal of Health Communication*, 7(1), 179-196.
- Cooper, P. F., & Schone, B. S. (1997). More offers, fewer takers for employment-based health insurance: 1987 and 1996. *Health Affairs*, 16(6), 142-149.
- Cronk, B. C. (2002). *How to use SPSS: A step-by-step guide to analysis and interpretation* (2nd ed.). Los Angeles: Pyrczak Publishing.
- Czaja, R., & Blair, J. (1996). *Designing surveys: A guide to decisions and procedures*. Thousand Oaks, CA: Pine Forge Press.
- Diehr, P., Madden, C. W., Cheadle, A., Martin, D. P., Patrick, D. L., & Skillman, S. (1996). Will uninsured people volunteer for voluntary health insurance? Experience from Washington State. *American Journal of Public Health*, 86(4), 529-532.

- Fisher, W. H., Barreira, P. J., Lincoln, A. K., Simon, L. J., White, A. W., Roy-Bujnowski, K., et al. (2001). Insurance status and length of stay for involuntarily hospitalized patients. *The Journal of Behavioral Health Services and Research*, 28(3), 334-346.
- Fowler, F. J. (2002). *Survey research methods*. Thousand Oaks, CA: Sage Publications.
- Franks, P., Clancy, C. M., Gold, M. R., & Nutting, P. A. (1993). Health Insurance and subjective health status: Data fro the 1987 National Medical Expenditure Survey. *American Journal of Public Health*, 83(9), 1295-1299.
- Guendelman, S., Wyn, R., & Tsai, Y. W. (2002). Children of working poor families in California: The effects of insurance status on access and utilization of primary care. *Journal of Health and Social Policy*, 14(4), 1-20.
- Haas, J. S., & Goldman, L. (1994). Acutely injured patients with trauma in Massachusetts: Differences in care and mortality, by insurance status. *American Journal of Public Health*, 84(10), 1605-1608.
- Hadley, J., Steinberg, E. P., & Feder, J. (1991). Comparison of uninsured and privately insured hospital patients. *Journal of the American Medical Association*, 265(3), 374-379.
- Haefner, D. P. (1974). The Health Belief Model and preventative dental behavior. *Health Education Monographs*, 2(4), 420-431.
- Hafner-Eaton, C. (1993). Physician utilization disparities between the uninsured and insured. *Journal of the American Medical Association*, 269(6), 787-792.
- Hanson, J. A., & Benedict, J. (2002). Use of the Health Belief Model to examine older adults' food-handling behaviors. *Journal of Nutrition Education and Behavior*, 34(2), S25-S30.
- Hass, J. S., Udvarhelyi, I. S., Morris, C. N., & Epstein, A. M. (1993). The effect of providing helath coverage to poor uninsured pregnant women in Massachusetts.

*Journal of the American Medical Association*, 269(1), 87-91.

Hewitt, M., Devesa, S., & Breen, N. (2002). Papanicolaou test use among reproductive-age women at high risk for cervical cancer: Analyses of the 1995 National Survey of Family Growth. *American Journal of Public Health*, 92(4), 666-669.

Kasl, S. V. (1974). The health belief model and behavior related to chronic illness. *Health Education Monographs*, 2(4), 433-453.

Kirkman-Liff, B., & Kronenfeld, J. J. (1992). Access to cancer screening services for women. *American Journal of Public Health*, 82(5), 733-735.

Kirscht, J. P. (1974). Research related to the modification of health beliefs. *Health Education Monographs*, 4(2), 455-473.

Kogan, M. D., Alexander, G. R., Teitelbaum, M. A., Jack, B. W., Kotelchuck, M., & Pappas, G. (1995). The effect of gaps in health insurance on continuity of a regular source of care among preschool-aged children in the United States. *Journal of the American Medical Association*, 274(18).

Kogan, M. D., Overpeck, M. D., Hoffman, H. J., & Casselbrant, M. L. (2000). Factors associated with tympanostomy tub insertion among preschool-aged children in the United States. *American Journal of Public Health*, 90(2), 245-250.

Krummel, D. A., Humpries, D., & Tessaro, I. (2002). Focus groups on cardiovascular health in rural women: Implications for practice. *Journal of Nutrition Education and Behavior*, 34(1), 38-46.

Lindsay, J. J., & Strathman, A. (1997). Predictors of recycling behavior: An application of the Health Belief Model. *Journal of Applied Social Psychology*, 27(20), 1799-1823.

Lollis, C. M., Johnson, E. H., & Antoni, M. H. (1997). The efficacy of the Health Belief Model for predicting

condom usage and risky sexual practices in university students.

- Maisel, R., & Persell, C. H. (1996). *How sampling works*. Thousand Oaks, CA: Sage Publications.
- McInerney, T. K., Szilagyi, P. G., Childs, G. E., Wasserman, R. C., & Kelleher, K. J. (2000). Uninsured children with psychosocial problems: Primary care management. *Pediatrics, 106*(4), 930-936.
- McInnis, E. (2002). The emotional impact of sickle cell disease. *Black Theology in Britain, 4*(2), 139-149.
- Millar, M. G. (1997). The effects of emotion on breast self-examination: Another look at the Health Belief Model. *Social Behavior and Personality, 25*(3), 223-232.
- Mills, R. J. (2002). *Health insurance coverage: 2001*. Washington, DC: U. S. Census.
- Mills, R. J., & Bhandari, S. (2003). *Health insurance coverage in the United States: 2002*. Washington, DC: U. S. Census.
- Newacheck, P. W., Brindis, C. D., Cart, C. U., Marchi, K., & Irwin, C. E. (1999). Adolescent health insurance coverage: Recent changes and access to care. *Pediatrics, 104*(2), 195-202.
- Petro-Nustus, W., & Mikhail, B. I. (2002). Factors associated with breast self-examination among Jordanian women. *Public Health Nursing, 19*(4), 263-271.
- Reese, F. L., & Smith, W. R. (1997). Psychosocial determinants of health care utilization in sickle cell disease. *Annals of Behavioral Medicine, 19*(2), 171-178.
- Rosenstock, I. M. (1974a). The Health Belief Model and preventative health behavior. *Health Education Monographs, 2*(4), 354-385.

- Rosenstock, I. M. (1974b). Historical origins of the Health Belief Model. *Health Education Monographs*, 2(4), 329-335.
- Rosenstock, I. M. (1990). The health belief model: Explaining health behavior through expectancies. In K. Glanz, F. M. Lewis & B. K. Rimer (Eds.), *Health behavior and health education* (pp. 39-62). San Francisco, CA: Bass.
- Roye, C. F., & Hudson, M. (2003). Developing a culturally appropriate video to promote dual-method use by urban teens: Rationale and methodology. *AIDS Education and Awareness*, 15(2), 148-158.
- Sapp, S. G., & Jensen, H. H. (1998). An evaluation of the Health Belief Model for predicting perceived and actual dietary quality. *Journal of Applied Social Psychology*, 28(3), 235-348.
- Sapsford, R. (1999). *Survey research*. Thousand Oaks, CA: Sage Publications.
- Schoen, C., Lyons, B., Saleanicoff, A., & Long, P. (1997). Insurance matters for low income adults: Results from a five-state survey. *Health Affairs*, 16(5), 163-171.
- Schuman, H., & Presser, S. (1996). *Questions and answers in attitude surveys: Experiments on question form, wording and context*. Thousand Oaks, CA: Sage Publications.
- Shapiro, M. F., Morton, S. C., McCaffrey, D. F., Senterfitt, J. W., Fleishman, J. A., Perlman, J. F., et al. (1999). Variations in the care of HIV-infected adults in the United States. *Journal of the American Medical Association*, 281(24), 2305-2315.
- Shen, J. J., Wan, T. T., & Perlin, J. B. (2001). An exploration of the complex relationship of socioecologic factors in the treatment and outcomes of acute myocardial infarction in disadvantaged populations. *Health Services Research*, 36(4), 711-732.
- Stoddard, J. J., St. Peter, R. F., & Newacheck, P. W. (1994). Health insurance status and ambulatory care

for children. *The New England Journal of Medicine*, 330(20), 1421-1425.

Thorpe, K. E., & Florence, C. S. (1999). Why are workers uninsured? Employer-sponsored health insurance in 1997. *Health Affairs*, 18(2), 213-218.

Thorpe, K. E., & Howard, D. (2003). Health insurance and spending among cancer patients. *Health Affairs*, 22(3), 12-17.

Vincke, J., & Bolton, R. (2002). Therapy adherence and highly active antiretroviral therapy: Comparison of three sources of information. *AIDS Patient Care and STDs*, 16(10), 487-495.

Vuckovic, N. (2000). Self-care among the uninsured: 'You do what you can do'. *Health Affairs*, 19(4), 197-199.

Wood, P. R., Smith, L. D., D, R., Bradshaw, P., Wise, P. H., & Chavkin, W. (2002). Relationship between welfare status, health insurance status and health and medical care among children with asthma. *American Journal of Public Health*, 92(9), 1446-1452.

Yelgian, J., Pockell, D. G., Smith, M. D., & Murray, E. K. (2000). The nonpoor uninsured in California, 1998. *Health Affairs*, 19(4), 171-177.

## APPENDIX

A. QUESTIONNAIRE



# Health Beliefs of Insured and Uninsured, Insurance-eligible State University Employees

## Telephone Survey Questionnaire

Hi. My name is (state your name). I'm a master of social work student working with Jill Murray, who is a doctoral student completing a dissertation at LSU. We're concerned about employee health insurance and the problems faced by insured and uninsured LSU employees. We're calling full-time employees of LSU for a study called "Health Beliefs of Insured and Uninsured, Insurance-Eligible Louisiana State University Employees." We plan to talk to 200 insured LSU employees and 200 uninsured LSU employees. LSU is very concerned about the high number of uninsured employees and about health insurance issues facing both the insured and the uninsured employees. The information we collect will be summarized and given to LSU. Your participation could help LSU better serve the health insurance needs of all employees. Your answers to the survey will be completely anonymous and confidential and no one at LSU will ever know your individual opinion. Your participation is voluntary. There are no known risks to participating in this survey. The survey will only take about 5 to 7 minutes to complete. Do you have any questions about this survey? Would you agree to participate in this survey? (*Note to interviewer: Do not read aloud any italicized parts of this questionnaire.*)

- Purple 1000 Series (University uninsured)*
- Gold 2000 Series (University insured)*

**Do you have health insurance?**       Yes    No

*If YES:*

**How do you get health insurance?**

- Through LSU
- Through spouse's employment
- Purchase privately
- Public Insurance

*If NO:*

**How long have you been uninsured?**

- Less than 1 year
- 1 year to 5 years
- 5 years to 10 years
- 10 years or more

**Did your family have health insurance?**

- Yes    No    *Don't know*

**Please indicate any family members who have health insurance:**

- Spouse only                       Spouse and children                       Children only

*If the respondent has children with health insurance:*

**Are your children insured through La-CHIP?**

- Yes    No    *Don't know*

**In general, would you say your health is excellent, good, fair or poor?**

- Excellent    Good                       Fair                       Poor

What is your age in years today? \_\_\_\_\_

What is your gender?  Male  Female

What is your race?

- American Indian  Hispanic  
 Asian or Pacific Islander  White, not of Hispanic origin  
 Black, not of Hispanic origin  Other \_\_\_\_\_

What is your current marital status?  Married  Not married

Now I am going to read you a list of statements. Please tell me how much you agree with each statement: ① = Not at all; ② = A little; ③ = Somewhat; ④ = Quite a bit; ⑤ = Very much

### *Susceptibility*

- I am afraid of getting sick. ① ② ③ ④ ⑤  
I think I am the type of person who is likely to get sick. ① ② ③ ④ ⑤  
I am worried that I will be in a serious accident in the next 12 months. ① ② ③ ④ ⑤  
I am worried that I will be in a serious accident in my lifetime. ① ② ③ ④ ⑤  
I am worried that I will have problems due to a major illness in the next 12 months. ① ② ③ ④ ⑤  
I am worried that I will have problems due to a major illness in my lifetime. ① ② ③ ④ ⑤

### *Severity*

- If I get sick in the next year, I would probably get sick enough that I should visit the doctor. ① ② ③ ④ ⑤  
If I get sick in the next year, I would probably get sick enough that I would need prescription medication. ① ② ③ ④ ⑤  
If I get sick in the next year, I would probably get sick enough to need to stay in a hospital. ① ② ③ ④ ⑤  
If I get sick in the next year, I would probably be serious enough to interfere with important activities. ① ② ③ ④ ⑤  
If I get sick in the next year, it would probably have a severe financial impact on me and my family. ① ② ③ ④ ⑤

### *Benefits*

- When people do get sick, health insurance is helpful for them to have ① ② ③ ④ ⑤  
Health insurance allows a person to go see a doctor whenever they want. ① ② ③ ④ ⑤  
Health insurance helps to prevent a person from getting sick. ① ② ③ ④ ⑤  
When you have health insurance you feel protected. ① ② ③ ④ ⑤  
People who don't have health insurance have a hard time getting proper medical care and treatment. ① ② ③ ④ ⑤  
Health insurance is very high on my list of priorities for where to spend my money. ① ② ③ ④ ⑤

**Barriers**

- Health insurance is not very good value for the money. ① ② ③ ④ ⑤
- Health insurance does not cover the kind of health care I need. ① ② ③ ④ ⑤
- Getting signed up for health insurance is confusing and complicated. ① ② ③ ④ ⑤
- When a person gets health insurance they are more likely to get sick. ① ② ③ ④ ⑤
- Having health insurance is too expensive. ① ② ③ ④ ⑤
- Having health insurance is a luxury item. ① ② ③ ④ ⑤
- I do not trust the health insurance industry. ① ② ③ ④ ⑤
- I pretty much live from paycheck to paycheck. ① ② ③ ④ ⑤
- I use Earl K. Long Hospital or any public hospital in the Charity Hospital System as my main source of health care. ① ② ③ ④ ⑤
- Using Earl K. Long Hospital or any public hospital in the Charity Hospital System is just fine with me. ① ② ③ ④ ⑤
- When I was growing up, my family used Earl K. Long Hospital or any public hospital in the Charity Hospital System for our main source of health care. ① ② ③ ④ ⑤

**Cues to Action**

- I have seen health insurance ads on TV. ① ② ③ ④ ⑤
- I have seen billboards about health insurance. ① ② ③ ④ ⑤
- I have received memos and literature about health insurance from LSU (regarding benefits, enrollment period, etc.). ① ② ③ ④ ⑤
- I have friends or co-workers who benefited from having health insurance. ① ② ③ ④ ⑤
- I have friends and co-workers who have gotten very sick and had problems getting health care because they did not have health insurance ① ② ③ ④ ⑤
- Most people I know have health insurance. ① ② ③ ④ ⑤

**What is the worst medical problem you can imagine?**

- |   |                                   |
|---|-----------------------------------|
| <input type="radio"/> Cancer                | <input type="radio"/> Accident    |
| <input type="radio"/> Heart-related illness | <input type="radio"/> HIV/AIDS    |
| <input type="radio"/> Stroke                | <input type="radio"/> Other _____ |

Now I am going to read you a list of statements. Please tell me how much you agree with each statement: ① = Not at all; ② = A little; ③ = Somewhat; ④ = Quite a bit; ⑤ = Very much

- How worried are you that (*illness above*) will happen to you? ① ② ③ ④ ⑤
- If (*illness above*) happened to you, how serious would you estimate it to be? ① ② ③ ④ ⑤
- How serious would you estimate the financial consequences to be? ① ② ③ ④ ⑤
- If (*illness above*) happened to you, how helpful would health insurance be? ① ② ③ ④ ⑤

**If you were someday to need medical care, what do you think it would be for?**

- |   |                                       |
|---|---------------------------------------|
| <input type="radio"/> Cancer                | <input type="radio"/> Accident/trauma |
| <input type="radio"/> Heart-related illness | <input type="radio"/> HIV/AIDS        |
| <input type="radio"/> Stroke                | <input type="radio"/> Baby            |

- Flu
- Colds

Other \_\_\_\_\_

Now I am going to read you a list of statements. Please tell me how much you agree with each statement: ① = Not at all; ② = A little; ③ = Somewhat; ④ = Quite a bit; ⑤ = Very much

- How worried are you that (*illness above*) will happen to you? ① ② ③ ④ ⑤
- If (*illness above*) happened to you, how serious would you estimate it to be? ① ② ③ ④ ⑤
- How serious would you estimate the financial consequences to be? ① ② ③ ④ ⑤
- If (*illness above*) happened to you, how helpful would health insurance be? ① ② ③ ④ ⑤

Just three more questions!

**What is your highest level of education obtained?**

- Less than high school
- High school diploma or equivalency
- Some college, professional or trade school
- Bachelor's degree
- Some graduate school
- Completed Master's degree
- Completed Doctorate

**What is your job at LSU?**

- Accounting
- Administrative Specialist
- Clerk
- Coordinator of Academic Area
- Coordinator of Non-Academic Area
- Custodian
- Custodian supervisor
- Director of Academic Area
- Food Services
- Horticulture
- Instructor
- Library Associate
- Office Coordinator
- Professor
- Researcher
- Other \_\_\_\_\_

**What is your family's total yearly income?**

- Under \$10,000
- \$10,000-\$14,999
- \$15,000-\$19,999
- \$20,000-\$24,000
- \$25,000-\$29,999
- \$30,000-\$34,999
- \$35,000-\$49,999
- \$50,000-\$64,999
- \$65,000 and over

We are finished! Thank you very much for your time. Do you have any questions for me?  
THANK YOU!!!

Code of interviewer completing survey: \_\_\_\_\_

Signature of interviewer: \_\_\_\_\_

Date: \_\_\_\_\_

B. PHONE SURVEY CONTACT TRACKING

## Phone Survey Contact Tracking

1st	2nd	3rd	4th	5th
<input type="checkbox"/> Hard Refusal	<input type="checkbox"/> Hard Refusal	<input type="checkbox"/> Hard Refusal	<input type="checkbox"/> Hard Refusal	<input type="checkbox"/> Hard Refusal
<input type="checkbox"/> Business	<input type="checkbox"/> Business	<input type="checkbox"/> Business	<input type="checkbox"/> Business	<input type="checkbox"/> Business
<input type="checkbox"/> Busy	<input type="checkbox"/> Busy	<input type="checkbox"/> Busy	<input type="checkbox"/> Busy	<input type="checkbox"/> Busy
<input type="checkbox"/> No Answer	<input type="checkbox"/> No Answer	<input type="checkbox"/> No Answer	<input type="checkbox"/> No Answer	<input type="checkbox"/> No Answer
<input type="checkbox"/> Callback	<input type="checkbox"/> Callback	<input type="checkbox"/> Callback	<input type="checkbox"/> Callback	<input type="checkbox"/> Callback
<input type="checkbox"/> Disconnected	<input type="checkbox"/> Disconnected	<input type="checkbox"/> Disconnected	<input type="checkbox"/> Disconnected	<input type="checkbox"/> Disconnected
<input type="checkbox"/> Fax	<input type="checkbox"/> Fax	<input type="checkbox"/> Fax	<input type="checkbox"/> Fax	<input type="checkbox"/> Fax
<input type="checkbox"/> Soft Refusal	<input type="checkbox"/> Soft Refusal	<input type="checkbox"/> Soft Refusal	<input type="checkbox"/> Soft Refusal	<input type="checkbox"/> Soft Refusal
<input type="checkbox"/> Not qualified	<input type="checkbox"/> Not qualified	<input type="checkbox"/> Not qualified	<input type="checkbox"/> Not qualified	<input type="checkbox"/> Not qualified
<input type="checkbox"/> Complete	<input type="checkbox"/> Complete	<input type="checkbox"/> Complete	<input type="checkbox"/> Complete	<input type="checkbox"/> Complete
Time _____	Time _____	Time _____	Time _____	Time _____
Date _____	Date _____	Date _____	Date _____	Date _____
<b>Code</b>	<b>Code</b>	<b>Code</b>	<b>Code</b>	<b>Code</b>
□ □	□ □	□ □	□ □	□ □
⑩ ⑩ ① ① ② ② ③ ③ ④ ④ ⑤ ⑤ ⑥ ⑦ ⑧ ⑨	⑩ ⑩ ① ① ② ② ③ ③ ④ ④ ⑤ ⑤ ⑥ ⑦ ⑧ ⑨	⑩ ⑩ ① ① ② ② ③ ③ ④ ④ ⑤ ⑤ ⑥ ⑦ ⑧ ⑨	⑩ ⑩ ① ① ② ② ③ ③ ④ ④ ⑤ ⑤ ⑥ ⑦ ⑧ ⑨	⑩ ⑩ ① ① ② ② ③ ③ ④ ④ ⑤ ⑤ ⑥ ⑦ ⑧ ⑨

Is this an uninsured person who is interested in participating in a follow-up study next year?  Yes

Notes:

# Phone Survey Contact Tracking

Serial #

0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

6th	7th	8th	9th
<input type="checkbox"/> Hard Refusal	<input type="checkbox"/> Hard Refusal	<input type="checkbox"/> Hard Refusal	<input type="checkbox"/> Hard Refusal
<input type="checkbox"/> Business	<input type="checkbox"/> Business	<input type="checkbox"/> Business	<input type="checkbox"/> Business
<input type="checkbox"/> Busy	<input type="checkbox"/> Busy	<input type="checkbox"/> Busy	<input type="checkbox"/> Busy
<input type="checkbox"/> No Answer	<input type="checkbox"/> No Answer	<input type="checkbox"/> No Answer	<input type="checkbox"/> No Answer
<input type="checkbox"/> Callback	<input type="checkbox"/> Callback	<input type="checkbox"/> Callback	<input type="checkbox"/> Callback
<input type="checkbox"/> Disconnected	<input type="checkbox"/> Disconnected	<input type="checkbox"/> Disconnected	<input type="checkbox"/> Disconnected
<input type="checkbox"/> Fax	<input type="checkbox"/> Fax	<input type="checkbox"/> Fax	<input type="checkbox"/> Fax
<input type="checkbox"/> Soft Refusal	<input type="checkbox"/> Soft Refusal	<input type="checkbox"/> Soft Refusal	<input type="checkbox"/> Soft Refusal
<input type="checkbox"/> Not qualified	<input type="checkbox"/> Not qualified	<input type="checkbox"/> Not qualified	<input type="checkbox"/> Not qualified
<input type="checkbox"/> Complete	<input type="checkbox"/> Complete	<input type="checkbox"/> Complete	<input type="checkbox"/> Complete

Time _____	Time _____	Time _____	Time _____
Date _____	Date _____	Date _____	Date _____

Code

--	--

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

Code

--	--

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

Code

--	--

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

Code

--	--

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

Is this an uninsured person who is interested in participating in a follow-up study next year?  Yes

Notes:

C. HEALTH BELIEF MODEL:  
QUESTIONNAIRE ITEM CODES



HEALTH BELIEF MODEL

QUESTIONNAIRE ITEM CODES

Susceptibility

- SUS 1* I am afraid of getting sick.  
*SUS 2* I think I am the type of person who is likely to get sick.  
*SUS 3* I am worried that I will be in a serious accident in the next 12 months.  
*SUS 4* I am worried that I will be in a serious accident in my lifetime.  
*SUS 5* I am worried that I will have problems due to a major illness in the next 12 months.  
*SUS 6* I am worried that I will have problems due to a major illness in my lifetime.

Severity

- SEV 1* If I get sick in the next year, I would probably get sick enough that I should visit the doctor.  
*SEV 2* If I get sick in the next year, I would probably get sick enough that I would need prescription medication.  
*SEV 3* If I get sick in the next year, I would probably get sick enough to need to stay in a hospital.  
*SEV 4* If I get sick in the next year, I would probably be serious enough to interfere with important activities.  
*SEV 5* If I get sick in the next year, it would probably have a severe financial impact on me and my family.

Benefits

- BEN 1* When people do get sick, health insurance is helpful for them to have  
*BEN 2* Health insurance allows a person to go see a doctor whenever they want.  
*BEN 3* Health insurance helps to prevent a person from getting sick.  
*BEN 4* When you have health insurance you feel protected.  
*BEN 5* People who don't have health insurance have a hard time getting proper medical care and treatment.  
*BEN 6* Health insurance is very high on my list of priorities for where to spend my money.

## Questionnaire Item Codes Continued

### Barriers

- BAR 1* Health insurance is not very good value for the money.
- BAR 2* Health insurance does not cover the kind of health care I need.
- BAR 3* Getting signed up for health insurance is confusing and complicated.
- BAR 4* When a person gets health insurance they are more likely to get sick.
- BAR 5* Having health insurance is too expensive.
- BAR 6* Having health insurance is a luxury item.
- BAR 7* I do not trust the health insurance industry.
- BAR 8* I pretty much live from paycheck to paycheck.
- BAR 9* I use Earl K. Long Hospital or any public hospital in the Charity Hospital System as my main source of health care.
- BAR 10* Using Earl K. Long Hospital or any public hospital in the Charity Hospital System is just fine with me.
- BAR 11* When I was growing up, my family used Earl K. Long Hospital or any public hospital in the Charity Hospital System for our main source of health care.

### Cues to Action

- CUE 1* I have seen health insurance ads on TV.
- CUE 2* I have seen billboards about health insurance.
- CUE 3* I have received memos and literature about health insurance from LSU (regarding benefits, enrollment period, etc.).
- CUE 4* I have friends or co-workers who benefited from having health insurance.
- CUE 5* I have friends and co-workers who have gotten very sick and had problems getting health care because they did not have health insurance.
- CUE 6* Most people I know have health insurance.

D. PEARSON CORRELATION MATRIX FOR VARIABLES UNDER STUDY

		Actual Insurance Status	Family History	Health Status	Age
Actual Insurance Status	<i>r</i>	1	.250 (**)	.247 (**)	.277 (**)
	p-value	.	0.004	0.003	0.001
	N	140	132	140	139
Family History	<i>r</i>	.250 (**)	1	0.112	-0.019
	p-value	0.004	.	0.201	0.826
	N	132	132	132	131
Health Status	<i>r</i>	.247 (**)	0.112	1	-0.015
	p-value	0.003	0.201	.	0.857
	N	140	132	140	139
Age	<i>r</i>	.277 (**)	-0.019	-0.015	1
	p-value	0.001	0.826	0.857	.
	N	139	131	139	139
Gender	<i>r</i>	0.013	-0.116	-0.002	0.057
	p-value	0.881	0.189	0.98	0.508
	N	137	130	137	136
Race	<i>r</i>	-.614 (**)	-.193 (*)	-0.161	-0.101
	p-value	0	0.027	0.057	0.238
	N	140	132	140	139
Marital Status	<i>r</i>	.355 (**)	0.044	0.132	0.097
	p-value	0	0.617	0.119	0.258
	N	140	132	140	139
Education	<i>r</i>	.584 (**)	.189 (*)	.240 (**)	.253 (**)
	p-value	0	0.03	0.004	0.003
	N	140	132	140	139
Income	<i>r</i>	.827 (**)	.229 (**)	.288 (**)	.223 (**)
	p-value	0	0.009	0.001	0.01
	N	134	127	134	133
SUS Index	<i>r</i>	-0.025	0.04	-.398 (**)	0.013
	p-value	0.773	0.651	0	0.879
	N	140	132	140	139
SEV Index	<i>r</i>	-0.091	-0.046	-.376 (**)	-0.017
	p-value	0.284	0.6	0	0.845
	N	140	132	140	139
BEN Index	<i>r</i>	.253 (**)	0.15	.212 (*)	0.061
	p-value	0.003	0.085	0.012	0.475
	N	140	132	140	139

		Actual Insurance Status	Family History	Health Status	Age
BAR Index	<i>r</i>	-.594 (**)	-.339 (**)	-.218 (**)	-0.024
	p-value	0	0	0.01	0.776
	N	140	132	140	139
SUS 1	<i>r</i>	0.093	0.086	-.166 (*)	0.101
	p-value	0.273	0.325	0.049	0.237
	N	140	132	140	139
SUS 2	<i>r</i>	-0.048	0.013	-.393 (**)	0.009
	p-value	0.573	0.88	0	0.912
	N	140	132	140	139
SUS 3	<i>r</i>	-0.154	0.011	-.256 (**)	-0.101
	p-value	0.07	0.904	0.002	0.239
	N	140	132	140	139
SUS 4	<i>r</i>	-0.016	-0.011	-.219 (**)	-0.113
	p-value	0.854	0.899	0.009	0.185
	N	140	132	140	139
SUS 5	<i>r</i>	-0.104	-0.002	-.307 (**)	0.094
	p-value	0.219	0.984	0	0.269
	N	140	132	140	139
SUS 6	<i>r</i>	0.05	0.046	-.304 (**)	0.025
	p-value	0.559	0.601	0	0.77
	N	140	132	140	139
SEV 1	<i>r</i>	0.031	0.039	-.278 (**)	-0.065
	p-value	0.715	0.657	0.001	0.449
	N	140	132	140	139
SEV 2	<i>r</i>	0.077	0.026	-.252 (**)	0.021
	p-value	0.365	0.77	0.003	0.805
	N	140	132	140	139
SEV 3	<i>r</i>	-0.078	0.006	-.206 (*)	0.091
	p-value	0.362	0.946	0.015	0.284
	N	140	132	140	139
SEV 4	<i>r</i>	0.02	0.066	-.349 (**)	0.094
	p-value	0.817	0.455	0	0.269
	N	140	132	140	139
SEV 5	<i>r</i>	-.343 (**)	-.254 (**)	-.281 (**)	-0.145
	p-value	0	0.003	0.001	0.088
	N	140	132	140	139

		Actual Insurance Status	Family History	Health Status	Age
BEN 1	<i>r</i>	.309 (**)	0.075	0.017	0.092
	p-value	0	0.39	0.843	0.284
	N	140	132	140	139
BEN 2	<i>r</i>	-0.079	0.007	0.144	0.049
	p-value	0.355	0.936	0.089	0.565
	N	140	132	140	139
BEN 3	<i>r</i>	0.09	0.077	.205 (*)	-0.069
	p-value	0.288	0.381	0.015	0.423
	N	140	132	140	139
BEN 4	<i>r</i>	0.152	.215 (*)	.201 (*)	0.069
	p-value	0.074	0.013	0.017	0.419
	N	140	132	140	139
BEN 5	<i>r</i>	.202 (*)	0.029	0.102	-0.044
	p-value	0.016	0.744	0.232	0.609
	N	140	132	140	139
BEN 6	<i>r</i>	.367 (**)	0.171	0.074	.204 (*)
	p-value	0	0.05	0.383	0.016
	N	140	132	140	139
BAR 1	<i>r</i>	-0.138	-0.022	0.032	-0.026
	p-value	0.105	0.803	0.705	0.761
	N	140	132	140	139
BAR 2	<i>r</i>	-.273 (**)	-.300 (**)	-.211 (*)	0.13
	p-value	0.001	0	0.012	0.128
	N	140	132	140	139
BAR 3	<i>r</i>	0.034	-0.123	-0.094	0.075
	p-value	0.693	0.159	0.267	0.377
	N	140	132	140	139
BAR 4	<i>r</i>	-0.161	-.214 (*)	-0.073	0.026
	p-value	0.057	0.014	0.393	0.761
	N	140	132	140	139
BAR 5	<i>r</i>	-.310 (**)	-0.142	-.203 (*)	0.005
	p-value	0	0.104	0.016	0.953
	N	140	132	140	139
BAR 6	<i>r</i>	-.265 (**)	-0.01	0.011	-0.075
	p-value	0.002	0.913	0.899	0.379
	N	140	132	140	139

		Actual Insurance Status	Family History	Health Status	Age
BAR 7	<i>r</i>	0.113	-0.122	-0.085	0.145
	p-value	0.183	0.163	0.316	0.089
	N	140	132	140	139
BAR 8	<i>r</i>	-.477 (**)	-.285 (**)	-.251 (**)	-0.139
	p-value	0	0.001	0.003	0.102
	N	140	132	140	139
BAR 9	<i>r</i>	-.711 (**)	-.201 (*)	-.208 (*)	-0.083
	p-value	0	0.021	0.013	0.332
	N	140	132	140	139
BAR 10	<i>r</i>	-.448 (**)	-0.118	0.038	-0.092
	p-value	0	0.178	0.653	0.283
	N	140	132	140	139
BAR 11	<i>r</i>	-.565 (**)	-.381 (**)	-0.143	-0.052
	p-value	0	0	0.093	0.543
	N	140	132	140	139
CUE 1	<i>r</i>	-0.096	0.044	0.029	-0.064
	p-value	0.261	0.613	0.735	0.454
	N	140	132	140	139
CUE 2	<i>r</i>	-0.031	0.006	0.036	0.038
	p-value	0.715	0.949	0.674	0.661
	N	140	132	140	139
CUE 3	<i>r</i>	.281 (**)	0.041	0.1	0.067
	p-value	0.001	0.645	0.242	0.432
	N	140	132	140	139
CUE 4	<i>r</i>	.262 (**)	0.13	-0.033	0.061
	p-value	0.002	0.138	0.702	0.474
	N	140	132	140	139
CUE 5	<i>r</i>	-0.05	0.018	-0.102	0.007
	p-value	0.555	0.835	0.232	0.936
	N	140	132	140	139
CUE 6	<i>r</i>	.430 (**)	0.112	0.072	0.136
	p-value	0	0.202	0.395	0.11
	N	140	132	140	139

		Gender	Race Non- white	Marital Status	Education
Actual Insurance Status	<i>r</i>	0.013	-.614 (**)	.355 (**)	.584 (**)
	p-value	0.881	0	0	0
	N	137	140	140	140
Family History	<i>r</i>	-0.116	-.193 (*)	0.044	.189 (*)
	p-value	0.189	0.027	0.617	0.03
	N	130	132	132	132
Health Status	<i>r</i>	-0.002	-0.161	0.132	.240 (**)
	p-value	0.98	0.057	0.119	0.004
	N	137	140	140	140
Age	<i>r</i>	0.057	-0.101	0.097	.253 (**)
	p-value	0.508	0.238	0.258	0.003
	N	136	139	139	139
Gender	<i>r</i>	1	-0.025	-0.008	.168 (*)
	p-value	.	0.773	0.924	0.05
	N	137	137	137	137
Race Non-white	<i>r</i>	-0.025	1	-.193 (*)	-.478 (**)
	p-value	0.773	.	0.022	0
	N	137	140	140	140
Marital Status	<i>r</i>	-0.008	-.193 (*)	1	0.129
	p-value	0.924	0.022	.	0.13
	N	137	140	140	140
Education	<i>r</i>	.168 (*)	-.478 (**)	0.129	1
	p-value	0.05	0	0.13	.
	N	137	140	140	140
Income	<i>r</i>	0.033	-.623 (**)	.423 (**)	.648 (**)
	p-value	0.708	0	0	0
	N	132	134	134	134
SUS Index	<i>r</i>	-0.06	-0.107	-0.044	0.04
	p-value	0.485	0.207	0.607	0.639
	N	137	140	140	140
SEV Index	<i>r</i>	0.04	0.072	-0.08	-0.159
	p-value	0.646	0.399	0.346	0.06
	N	137	140	140	140
BEN Index	<i>r</i>	-0.045	-0.081	0.153	0.085
	p-value	0.605	0.344	0.071	0.319
	N	137	140	140	140



		Gender	Race Non- white	Marital Status	Education
BAR Index	<i>r</i>	-0.06	.384 (**)	-.193 (*)	-.564 (**)
	p-value	0.484	0	0.023	0
	N	137	140	140	140
SUS 1	<i>r</i>	0.028	0.034	0.107	0.003
	p-value	0.741	0.692	0.21	0.974
	N	137	140	140	140
SUS 2	<i>r</i>	-0.038	-0.039	-0.122	-0.016
	p-value	0.656	0.646	0.15	0.849
	N	137	140	140	140
SUS 3	<i>r</i>	-.186 (*)	-0.084	-0.056	-0.005
	p-value	0.03	0.326	0.511	0.957
	N	137	140	140	140
SUS 4	<i>r</i>	0.004	-0.092	0.026	0.107
	p-value	0.961	0.279	0.762	0.21
	N	137	140	140	140
SUS 5	<i>r</i>	-0.126	-0.04	-0.109	-0.095
	p-value	0.143	0.638	0.201	0.263
	N	137	140	140	140
SUS 6	<i>r</i>	0.001	-.220 (**)	-0.065	0.136
	p-value	0.986	0.009	0.443	0.108
	N	137	140	140	140
SEV 1	<i>r</i>	-0.003	-0.022	-0.007	-0.051
	p-value	0.97	0.795	0.937	0.546
	N	137	140	140	140
SEV 2	<i>r</i>	-0.083	-0.071	0.032	0.048
	p-value	0.333	0.401	0.705	0.576
	N	137	140	140	140
SEV 3	<i>r</i>	0.008	.166 (*)	-0.149	-.178 (*)
	p-value	0.924	0.05	0.079	0.035
	N	137	140	140	140
SEV 4	<i>r</i>	0.145	-0.041	-0.094	0.006
	p-value	0.09	0.627	0.268	0.943
	N	137	140	140	140
SEV 5	<i>r</i>	0.083	.231 (**)	-0.103	-.379 (**)
	p-value	0.335	0.006	0.227	0
	N	137	140	140	140

		Gender	Race Non- white	Marital Status	Education
BEN 1	<i>r</i>	0.031	-.179(*)	0.092	.193(*)
	p-value	0.722	0.034	0.279	0.023
	N	137	140	140	140
BEN 2	<i>r</i>	0.006	0.105	-0.051	-0.052
	p-value	0.947	0.215	0.55	0.544
	N	137	140	140	140
BEN 3	<i>r</i>	-0.099	-0.038	0.109	0.043
	p-value	0.249	0.653	0.199	0.613
	N	137	140	140	140
BEN 4	<i>r</i>	-0.063	-0.034	0.046	-0.005
	p-value	0.467	0.694	0.586	0.955
	N	137	140	140	140
BEN 5	<i>r</i>	0.055	-0.097	0.047	0.081
	p-value	0.527	0.252	0.581	0.339
	N	137	140	140	140
BEN 6	<i>r</i>	-0.047	-0.111	.327(**)	0.121
	p-value	0.585	0.192	0	0.153
	N	137	140	140	140
BAR 1	<i>r</i>	0.04	0.082	0.095	-.268(**)
	p-value	0.641	0.335	0.266	0.001
	N	137	140	140	140
BAR 2	<i>r</i>	-0.009	.210(*)	-.249(**)	-.343(**)
	p-value	0.914	0.013	0.003	0
	N	137	140	140	140
BAR 3	<i>r</i>	0.009	-0.014	.170(*)	-0.024
	p-value	0.921	0.874	0.044	0.778
	N	137	140	140	140
BAR 4	<i>r</i>	0.039	0.097	-0.147	-0.164
	p-value	0.653	0.256	0.083	0.052
	N	137	140	140	140
BAR 5	<i>r</i>	0.02	0.129	0.047	-.340(**)
	p-value	0.814	0.127	0.584	0
	N	137	140	140	140
BAR 6	<i>r</i>	-0.126	0.153	-0.119	-.391(**)
	p-value	0.143	0.071	0.16	0
	N	137	140	140	140

		Gender	Race Non- white	Marital Status	Education
BAR 7	<i>r</i>	-0.06	-.169(*)	.169(*)	0.076
	p-value	0.485	0.046	0.046	0.374
	N	137	140	140	140
BAR 8	<i>r</i>	-0.025	.183(*)	-.276(**)	-.462(**)
	p-value	0.769	0.03	0.001	0
	N	137	140	140	140
BAR 9	<i>r</i>	-0.047	.627(**)	-.266(**)	-.494(**)
	p-value	0.588	0	0.002	0
	N	137	140	140	140
BAR 10	<i>r</i>	-0.108	.290(**)	-.237(**)	-.243(**)
	p-value	0.211	0	0.005	0.004
	N	137	140	140	140
BAR 11	<i>r</i>	-0.044	.484(**)	-.251(**)	-.422(**)
	p-value	0.607	0	0.003	0
	N	137	140	140	140
CUE 1	<i>r</i>	0.067	-0.019	-0.09	-0.081
	p-value	0.435	0.825	0.288	0.342
	N	137	140	140	140
CUE 2	<i>r</i>	-0.08	0.002	-0.095	0.021
	p-value	0.351	0.979	0.266	0.801
	N	137	140	140	140
CUE 3	<i>r</i>	-0.034	-.374(**)	0.037	.326(**)
	p-value	0.693	0	0.666	0
	N	137	140	140	140
CUE 4	<i>r</i>	-0.036	-.290(**)	0.086	0.139
	p-value	0.678	0.001	0.31	0.102
	N	137	140	140	140
CUE 5	<i>r</i>	-0.047	0.036	0.11	-0.134
	p-value	0.586	0.674	0.196	0.116
	N	137	140	140	140
CUE 6	<i>r</i>	0.047	-.264(**)	-0.09	.291(**)
	p-value	0.583	0.002	0.289	0
	N	137	140	140	140

		Income	SUS Index	SEV Index	BEN Index
Actual Insurance Status	<i>r</i>	.827 (**)	-0.025	-0.091	.253 (**)
	p-value	0	0.773	0.284	0.003
	N	134	140	140	140
Family History	<i>r</i>	.229 (**)	0.04	-0.046	0.15
	p-value	0.009	0.651	0.6	0.085
	N	127	132	132	132
Health Status	<i>r</i>	.288 (**)	-.398 (**)	-.376 (**)	.212 (*)
	p-value	0.001	0	0	0.012
	N	134	140	140	140
Age	<i>r</i>	.223 (**)	0.013	-0.017	0.061
	p-value	0.01	0.879	0.845	0.475
	N	133	139	139	139
Gender	<i>r</i>	0.033	-0.06	0.04	-0.045
	p-value	0.708	0.485	0.646	0.605
	N	132	137	137	137
Race Non-white	<i>r</i>	-.623 (**)	-0.107	0.072	-0.081
	p-value	0	0.207	0.399	0.344
	N	134	140	140	140
Marital Status	<i>r</i>	.423 (**)	-0.044	-0.08	0.153
	p-value	0	0.607	0.346	0.071
	N	134	140	140	140
Education	<i>r</i>	.648 (**)	0.04	-0.159	0.085
	p-value	0	0.639	0.06	0.319
	N	134	140	140	140
Income	<i>r</i>	1	0.008	-.222 (**)	0.088
	p-value	.	0.923	0.01	0.312
	N	134	134	134	134
SUS Index	<i>r</i>	0.008	1	.513 (**)	-0.028
	p-value	0.923	.	0	0.742
	N	134	140	140	140
SEV Index	<i>r</i>	-.222 (**)	.513 (**)	1	0.145
	p-value	0.01	0	.	0.088
	N	134	140	140	140
BEN Index	<i>r</i>	0.088	-0.028	0.145	1
	p-value	0.312	0.742	0.088	.
	N	134	140	140	140

		Income	SUS Index	SEV Index	BEN Index
BAR Index	<i>r</i>	-.633 (**)	.184 (*)	.194 (*)	-0.099
	p-value	0	0.03	0.022	0.244
	N	134	140	140	140
SUS 1	<i>r</i>	0.059	.533 (**)	.341 (**)	0.033
	p-value	0.501	0	0	0.699
	N	134	140	140	140
SUS 2	<i>r</i>	-0.067	.701 (**)	.437 (**)	0.061
	p-value	0.441	0	0	0.477
	N	134	140	140	140
SUS 3	<i>r</i>	-0.05	.694 (**)	.218 (**)	-0.049
	p-value	0.564	0	0.01	0.567
	N	134	140	140	140
SUS 4	<i>r</i>	0.033	.714 (**)	.326 (**)	-0.04
	p-value	0.706	0	0	0.636
	N	134	140	140	140
SUS 5	<i>r</i>	-0.103	.686 (**)	.424 (**)	-0.019
	p-value	0.236	0	0	0.825
	N	134	140	140	140
SUS 6	<i>r</i>	0.111	.783 (**)	.331 (**)	-0.108
	p-value	0.201	0	0	0.206
	N	134	140	140	140
SEV 1	<i>r</i>	-0.079	.309 (**)	.769 (**)	0.119
	p-value	0.366	0	0	0.161
	N	134	140	140	140
SEV 2	<i>r</i>	-0.012	.361 (**)	.792 (**)	0.082
	p-value	0.892	0	0	0.337
	N	134	140	140	140
SEV 3	<i>r</i>	-.184 (*)	.361 (**)	.668 (**)	0.145
	p-value	0.034	0		0.088
	N	134	140	140	140
SEV 4	<i>r</i>	-0.076	.500 (**)	.761 (**)	0.149
	p-value	0.381	0	0	0.079
	N	134	140	140	140
SEV 5	<i>r</i>	-.424 (**)	.363 (**)	.665 (**)	0.059
	p-value	0	0	0	0.487
	N	134	140	140	140

		Income	SUS Index	SEV Index	BEN Index
BEN 1	<i>r</i>	.211 (*)	0.044	0.062	.574 (**)
	p-value	0.015	0.604	0.467	0
	N	134	140	140	140
BEN 2	<i>r</i>	-0.111	-.172 (*)	0.048	.543 (**)
	p-value	0.201	0.042	0.577	0
	N	134	140	140	140
BEN 3	<i>r</i>	-0.006	-0.03	0.066	.702 (**)
	p-value	0.941	0.726	0.439	0
	N	134	140	140	140
BEN 4	<i>r</i>	0.004	-0.043	0.064	.718 (**)
	p-value	0.965	0.614	0.453	0
	N	134	140	140	140
BEN 5	<i>r</i>	0.079	0.079	0.148	.623 (**)
	p-value	0.366	0.352	0.081	0
	N	134	140	140	140
BEN 6	<i>r</i>	.235 (**)	0.023	0.161	.647 (**)
	p-value	0.006	0.79	0.057	0
	N	134	140	140	140
BAR 1	<i>r</i>	-.175 (*)	0.117	-0.03	-0.109
	p-value	0.043	0.17	0.727	0.199
	N	134	140	140	140
BAR 2	<i>r</i>	-.346 (**)	0.118	.216 (*)	-0.031
	p-value	0	0.165	0.01	0.72
	N	134	140	140	140
BAR 3	<i>r</i>	0.029	.221 (**)	0.126	0.04
	p-value	0.742	0.009	0.137	0.643
	N	134	140	140	140
BAR 4	<i>r</i>	-.186 (*)	.214 (*)	0.124	0.056
	p-value	0.031	0.011	0.144	0.511
	N	134	140	140	140
BAR 5	<i>r</i>	-.280 (**)	0.136	0.109	-0.102
	p-value	0.001	0.109	0.198	0.228
	N	134	140	140	140
BAR 6	<i>r</i>	-.329 (**)	0.061	0.023	-0.086
	p-value	0	0.473	0.783	0.314
	N	134	140	140	140

		Income	SUS Index	SEV Index	BEN Index
BAR 7	<i>r</i>	0.134	0.095	-0.03	-0.132
	p-value	0.121	0.262	0.723	0.119
	N	134	140	140	140
BAR 8	<i>r</i>	-.572 (**)	0.157	.381 (**)	-0.014
	p-value	0	0.064	0	0.871
	N	134	140	140	140
BAR 9	<i>r</i>	-.757 (**)	0.051	.208 (*)	0.029
	p-value	0	0.553	0.014	0.735
	N	134	140	140	140
BAR 10	<i>r</i>	-.359 (**)	-0.043	-.180 (*)	-.191 (*)
	p-value	0	0.611	0.033	0.023
	N	134	140	140	140
BAR 11	<i>r</i>	-.582 (**)	-0.023	0.129	0.033
	p-value	0	0.79	0.13	0.699
	N	134	140	140	140
CUE 1	<i>r</i>	-0.039	-0.087	-0.017	-0.119
	p-value	0.655	0.307	0.841	0.163
	N	134	140	140	140
CUE 2	<i>r</i>	-0.059	-0.05	-0.011	0.119
	p-value	0.501	0.557	0.897	0.161
	N	134	140	140	140
CUE 3	<i>r</i>	.244 (**)	-0.018	0.033	0.053
	p-value	0.005	0.828	0.695	0.534
	N	134	140	140	140
CUE 4	<i>r</i>	0.162	0.043	0.082	.238 (**)
	p-value	0.061	0.612	0.338	0.005
	N	134	140	140	140
CUE 5	<i>r</i>	-0.027	0.163	.203 (*)	.250 (**)
	p-value	0.758	0.054	0.016	0.003
	N	134	140	140	140
CUE 6	<i>r</i>	.321 (**)	0.017	-0.031	.234 (**)
	p-value	0	0.84	0.715	0.005
	N	134	140	140	140

		BAR Index	SUS 1	SUS 2	SUS 3
Actual Insurance Status	<i>r</i>	-.594 (**)	0.093	-0.048	-0.154
	p-value	0	0.273	0.573	0.07
	N	140	140	140	140
Family History	<i>r</i>	-.339 (**)	0.086	0.013	0.011
	p-value	0	0.325	0.88	0.904
	N	132	132	132	132
Health Status	<i>r</i>	-.218 (**)	-.166 (*)	-.393 (**)	-.256 (**)
	p-value	0.01	0.049	0	0.002
	N	140	140	140	140
Age	<i>r</i>	-0.024	0.101	0.009	-0.101
	p-value	0.776	0.237	0.912	0.239
	N	139	139	139	139
Gender	<i>r</i>	-0.06	0.028	-0.038	-.186 (*)
	p-value	0.484	0.741	0.656	0.03
	N	137	137	137	137
Race Non-white	<i>r</i>	.384 (**)	0.034	-0.039	-0.084
	p-value	0	0.692	0.646	0.326
	N	140	140	140	140
Marital Status	<i>r</i>	-.193 (*)	0.107	-0.122	-0.056
	p-value	0.023	0.21	0.15	0.511
	N	140	140	140	140
Education	<i>r</i>	-.564 (**)	0.003	-0.016	-0.005
	p-value	0	0.974	0.849	0.957
	N	140	140	140	140
Income	<i>r</i>	-.633 (**)	0.059	-0.067	-0.05
	p-value	0	0.501	0.441	0.564
	N	134	134	134	134
SUS Index	<i>r</i>	.184 (*)	.533 (**)	.701 (**)	.694 (**)
	p-value	0.03	0	0	0
	N	140	140	140	140
SEV Index	<i>r</i>	.194 (*)	.341 (**)	.437 (**)	.218 (**)
	p-value	0.022	0	0	0.01
	N	140	140	140	140
BEN Index	<i>r</i>	-0.099	0.033	0.061	-0.049
	p-value	0.244	0.699	0.477	0.567
	N	140	140	140	140



		BAR Index	SUS 1	SUS 2	SUS 3
BAR Index	<i>r</i>	1	0.046	.223 (**)	0.163
	p-value	.	0.589	0.008	0.055
	N	140	140	140	140
SUS 1	<i>r</i>	0.046	1	.296 (**)	0.16
	p-value	0.589	.	0	0.059
	N	140	140	140	140
SUS 2	<i>r</i>	.223 (**)	.296 (**)	1	.365 (**)
	p-value	0.008	0	.	0
	N	140	140	140	140
SUS 3	<i>r</i>	0.163	0.16	.365 (**)	1
	p-value	0.055	0.059	0	.
	N	140	140	140	140
SUS 4	<i>r</i>	0.106	0.147	.325 (**)	.604 (**)
	p-value	0.211	0.084	0	0
	N	140	140	140	140
SUS 5	<i>r</i>	.216 (*)	0.151	.465 (**)	.449 (**)
	p-value	0.01	0.074	0	0
	N	140	140	140	140
SUS 6	<i>r</i>	0.044	.238 (**)	.430 (**)	.461 (**)
	p-value	0.603	0.005	0	0
	N	140	140	140	140
SEV 1	<i>r</i>	-0.024	.226 (**)	.266 (**)	0.103
	p-value	0.774	0.007	0.002	0.226
	N	140	140	140	140
SEV 2	<i>r</i>	0.012	.296 (**)	.259 (**)	0.151
	p-value	0.89	0	0.002	0.074
	N	140	140	140	140
SEV 3	<i>r</i>	0.136	.219 (**)	.312 (**)	0.163
	p-value	0.11	0.009	0	0.055
	N	140	140	140	140
SEV 4	<i>r</i>	0.15	.269 (**)	.439 (**)	.185 (*)
	p-value	0.078	0.001	0	0.029
	N	140	140	140	140
SEV 5	<i>r</i>	.404 (**)	.234 (**)	.339 (**)	.196 (*)
	p-value	0	0.005	0	0.02
	N	140	140	140	140

		BAR Index	SUS 1	SUS 2	SUS 3
BEN 1	<i>r</i>	-.238 (**)	0.066	0.064	-0.079
	p-value	0.005	0.441	0.453	0.353
	N	140	140	140	140
BEN 2	<i>r</i>	0.068	-0.11	-0.02	-.176 (*)
	p-value	0.428	0.195	0.816	0.038
	N	140	140	140	140
BEN 3	<i>r</i>	-0.027	0.049	-0.002	-0.016
	p-value	0.754	0.563	0.985	0.851
	N	140	140	140	140
BEN 4	<i>r</i>	-0.134	-0.028	-0.011	-0.025
	p-value	0.113	0.746	0.897	0.771
	N	140	140	140	140
BEN 5	<i>r</i>	0.032	0.084	0.102	0.058
	p-value	0.707	0.326	0.229	0.493
	N	140	140	140	140
BEN 6	<i>r</i>	-0.164	0.06	0.117	0
	p-value	0.053	0.484	0.168	1
	N	140	140	140	140
BAR 1	<i>r</i>	.424 (**)	0.084	0.054	0.123
	p-value	0	0.322	0.524	0.148
	N	140	140	140	140
BAR 2	<i>r</i>	.639 (**)	0.054	.221 (**)	0.028
	p-value	0	0.525	0.009	0.74
	N	140	140	140	140
BAR 3	<i>r</i>	.363 (**)	0.069	.168 (*)	0.163
	p-value	0	0.419	0.048	0.054
	N	140	140	140	140
BAR 4	<i>r</i>	.347 (**)	0.118	.251 (**)	.196 (*)
	p-value	0	0.163	0.003	0.02
	N	140	140	140	140
BAR 5	<i>r</i>	.577 (**)	0.098	0.125	0.112
	p-value	0	0.252	0.14	0.186
	N	140	140	140	140
BAR 6	<i>r</i>	.564 (**)	-0.099	0.096	0.065
	p-value	0	0.243	0.259	0.446
	N	140	140	140	140

		BAR Index	SUS 1	SUS 2	SUS 3
BAR 7	<i>r</i>	.303 (**)	0.057	0.112	0.094
	p-value	0	0.501	0.188	0.267
	N	140	140	140	140
BAR 8	<i>r</i>	.634 (**)	0.088	.216 (*)	0.066
	p-value	0	0.298	0.01	0.435
	N	140	140	140	140
BAR 9	<i>r</i>	.584 (**)	0.016	0.071	0.102
	p-value	0	0.847	0.406	0.231
	N	140	140	140	140
BAR 10	<i>r</i>	.497 (**)	-0.148	-0.001	0.037
	p-value	0	0.081	0.993	0.666
	N	140	140	140	140
BAR 11	<i>r</i>	.595 (**)	-0.033	0.016	-0.003
	p-value	0	0.695	0.852	0.974
	N	140	140	140	140
CUE 1	<i>r</i>	0.047	0.005	-0.119	-0.095
	p-value	0.582	0.954	0.163	0.263
	N	140	140	140	140
CUE 2	<i>r</i>	0.032	-0.08	0.012	-0.072
	p-value	0.708	0.345	0.885	0.401
	N	140	140	140	140
CUE 3	<i>r</i>	-.192 (*)	-0.039	-0.155	-0.004
	p-value	0.023	0.645	0.067	0.963
	N	140	140	140	140
CUE 4	<i>r</i>	-.183 (*)	-0.017	-0.096	-0.016
	p-value	0.031	0.84	0.26	0.848
	N	140	140	140	140
CUE 5	<i>r</i>	.190 (*)	0.106	0.117	0.14
	p-value	0.025	0.211	0.17	0.1
	N	140	140	140	140
CUE 6	<i>r</i>	-.307 (**)	0.103	-0.045	-0.099
	p-value	0	0.227	0.601	0.243
	N	140	140	140	140

		SUS 4	SUS 5	SUS 6	SEV 1
Actual Insurance Status	<i>r</i>	-0.016	-0.104	0.05	0.031
	p-value	0.854	0.219	0.559	0.715
	N	140	140	140	140
Family History	<i>r</i>	-0.011	-0.002	0.046	0.039
	p-value	0.899	0.984	0.601	0.657
	N	132	132	132	132
Health Status	<i>r</i>	-.219 (**)	-.307 (**)	-.304 (**)	-.278 (**)
	p-value	0.009	0	0	0.001
	N	140	140	140	140
Age	<i>r</i>	-0.113	0.094	0.025	-0.065
	p-value	0.185	0.269	0.77	0.449
	N	139	139	139	139
Gender	<i>r</i>	0.004	-0.126	0.001	-0.003
	p-value	0.961	0.143	0.986	0.97
	N	137	137	137	137
Race Non-white	<i>r</i>	-0.092	-0.04	-.220 (**)	-0.022
	p-value	0.279	0.638	0.009	0.795
	N	140	140	140	140
Marital Status	<i>r</i>	0.026	-0.109	-0.065	-0.007
	p-value	0.762	0.201	0.443	0.937
	N	140	140	140	140
Education	<i>r</i>	0.107	-0.095	0.136	-0.051
	p-value	0.21	0.263	0.108	0.546
	N	140	140	140	140
Income	<i>r</i>	0.033	-0.103	0.111	-0.079
	p-value	0.706	0.236	0.201	0.366
	N	134	134	134	134
SUS Index	<i>r</i>	.714 (**)	.686 (**)	.783 (**)	.309 (**)
	p-value	0	0	0	0
	N	140	140	140	140
SEV Index	<i>r</i>	.326 (**)	.424 (**)	.331 (**)	.769 (**)
	p-value	0	0	0	0
	N	140	140	140	140
BEN Index	<i>r</i>	-0.04	-0.019	-0.108	0.119
	p-value	0.636	0.825	0.206	0.161
	N	140	140	140	140

		SUS 4	SUS 5	SUS 6	SEV 1
BAR Index	<i>r</i>	0.106	.216(*)	0.044	-0.024
	p-value	0.211	0.01	0.603	0.774
	N	140	140	140	140
SUS 1	<i>r</i>	0.147	0.151	.238(**)	.226(**)
	p-value	0.084	0.074	0.005	0.007
	N	140	140	140	140
SUS 2	<i>r</i>	.325(**)	.465(**)	.430(**)	.266(**)
	p-value	0	0	0	0.002
	N	140	140	140	140
SUS 3	<i>r</i>	.604(**)	.449(**)	.461(**)	0.103
	p-value	0	0	0	0.226
	N	140	140	140	140
SUS 4	<i>r</i>	1	.361(**)	.550(**)	.216(*)
	p-value	.	0	0	0.01
	N	140	140	140	140
SUS 5	<i>r</i>	.361(**)	1	.499(**)	.240(**)
	p-value	0	.	0	0.004
	N	140	140	140	140
SUS 6	<i>r</i>	.550(**)	.499(**)	1	.188(*)
	p-value	0	0	.	0.026
	N	140	140	140	140
SEV 1	<i>r</i>	.216(*)	.240(**)	.188(*)	1
	p-value	0.01	0.004	0.026	.
	N	140	140	140	140
SEV 2	<i>r</i>	.271(**)	.244(**)	.219(**)	.790(**)
	p-value	0.001	0.004	0.009	0
	N	140	140	140	140
SEV 3	<i>r</i>	.209(*)	.402(**)	.182(*)	.326(**)
	p-value	0.013	0	0.032	0
	N	140	140	140	140
SEV 4	<i>r</i>	.283(**)	.444(**)	.405(**)	.411(**)
	p-value	0.001	0	0	0
	N	140	140	140	140
SEV 5	<i>r</i>	.214(*)	.271(**)	.225(**)	.244(**)
	p-value	0.011	0.001	0.008	0.004
	N	140	140	140	140

		SUS 4	SUS 5	SUS 6	SEV 1
BEN 1	<i>r</i>	-0.012	0.015	0.084	0.082
	p-value	0.885	0.864	0.325	0.336
	N	140	140	140	140
BEN 2	<i>r</i>	-.207 (*)	-0.001	-.183 (*)	0.09
	p-value	0.014	0.99	0.03	0.29
	N	140	140	140	140
BEN 3	<i>r</i>	-0.033	-0.034	-0.093	0.036
	p-value	0.698	0.694	0.277	0.67
	N	140	140	140	140
BEN 4	<i>r</i>	-0.01	-0.002	-0.089	0.074
	p-value	0.907	0.98	0.295	0.387
	N	140	140	140	140
BEN 5	<i>r</i>	0.144	-0.056	-0.019	0.067
	p-value	0.089	0.508	0.824	0.433
	N	140	140	140	140
BEN 6	<i>r</i>	-0.059	0.028	-0.054	0.131
	p-value	0.487	0.739	0.524	0.122
	N	140	140	140	140
BAR 1	<i>r</i>	0.038	0.101	0.089	-0.114
	p-value	0.652	0.234	0.294	0.182
	N	140	140	140	140
BAR 2	<i>r</i>	-0.032	.204 (*)	0.023	0.037
	p-value	0.708	0.015	0.791	0.663
	N	140	140	140	140
BAR 3	<i>r</i>	.228 (**)	.189 (*)	0.115	0.088
	p-value	0.007	0.025	0.175	0.299
	N	140	140	140	140
BAR 4	<i>r</i>	0.135	0.065	0.122	0.07
	p-value	0.112	0.447	0.15	0.412
	N	140	140	140	140
BAR 5	<i>r</i>	0.081	0.123	0.032	-0.017
	p-value	0.34	0.148	0.704	0.842
	N	140	140	140	140
BAR 6	<i>r</i>	0.125	0.128	-0.014	-0.065
	p-value	0.142	0.133	0.871	0.444
	N	140	140	140	140

		SUS 4	SUS 5	SUS 6	SEV 1
BAR 7	<i>r</i>	0.12	-0.07	0.067	-0.086
	p-value	0.157	0.413	0.429	0.312
	N	140	140	140	140
BAR 8	<i>r</i>	0.015	.167 (*)	0.094	0.141
	p-value	0.865	0.049	0.268	0.096
	N	140	140	140	140
BAR 9	<i>r</i>	0.026	0.132	-0.091	0.032
	p-value	0.763	0.12	0.287	0.711
	N	140	140	140	140
BAR 10	<i>r</i>	0.023	0.013	-0.052	-.179 (*)
	p-value	0.791	0.883	0.539	0.034
	N	140	140	140	140
BAR 11	<i>r</i>	-0.093	0.139	-0.083	-0.017
	p-value	0.275	0.101	0.33	0.838
	N	140	140	140	140
CUE 1	<i>r</i>	-0.025	-0.079	-0.067	0.014
	p-value	0.769	0.351	0.431	0.869
	N	140	140	140	140
CUE 2	<i>r</i>	0.042	-0.019	-0.082	-0.02
	p-value	0.624	0.824	0.333	0.813
	N	140	140	140	140
CUE 3	<i>r</i>	0.029	0.036	0.061	0.099
	p-value	0.731	0.675	0.473	0.246
	N	140	140	140	140
CUE 4	<i>r</i>	0.08	0.095	0.123	0.127
	p-value	0.348	0.264	0.148	0.136
	N	140	140	140	140
CUE 5	<i>r</i>	0.107	.175 (*)	0.048	0.12
	p-value	0.208	0.039	0.57	0.159
	N	140	140	140	140
CUE 6	<i>r</i>	-0.041	0.054	0.051	0.09
	p-value	0.632	0.525	0.547	0.29
	N	140	140	140	140

		SEV 2	SEV 3	SEV 4	SEV 5
Actual Insurance Status	<i>r</i>	0.077	-0.078	0.02	-.343 (**)
	p-value	0.365	0.362	0.817	0
	N	140	140	140	140
Family History	<i>r</i>	0.026	0.006	0.066	-.254 (**)
	p-value	0.77	0.946	0.455	0.003
	N	132	132	132	132
Health Status	<i>r</i>	-.252 (**)	-.206 (*)	-.349 (**)	-.281 (**)
	p-value	0.003	0.015	0	0.001
	N	140	140	140	140
Age	<i>r</i>	0.021	0.091	0.094	-0.145
	p-value	0.805	0.284	0.269	0.088
	N	139	139	139	139
Gender	<i>r</i>	-0.083	0.008	0.145	0.083
	p-value	0.333	0.924	0.09	0.335
	N	137	137	137	137
Race Non-white	<i>r</i>	-0.071	.166 (*)	-0.041	.231 (**)
	p-value	0.401	0.05	0.627	0.006
	N	140	140	140	140
Marital Status	<i>r</i>	0.032	-0.149	-0.094	-0.103
	p-value	0.705	0.079	0.268	0.227
	N	140	140	140	140
Education	<i>r</i>	0.048	-.178 (*)	0.006	-.379 (**)
	p-value	0.576	0.035	0.943	0
	N	140	140	140	140
Income	<i>r</i>	-0.012	-.184 (*)	-0.076	-.424 (**)
	p-value	0.892	0.034	0.381	0
	N	134	134	134	134
SUS Index	<i>r</i>	.361 (**)	.361 (**)	.500 (**)	.363 (**)
	p-value	0	0	0	0
	N	140	140	140	140
SEV Index	<i>r</i>	.792 (**)	.668 (**)	.761 (**)	.665 (**)
	p-value	0	0	0	0
	N	140	140	140	140
BEN Index	<i>r</i>	0.082	0.145	0.149	0.059
	p-value	0.337	0.088	0.079	0.487
	N	140	140	140	140



		SEV 2	SEV 3	SEV 4	SEV 5
BAR Index	<i>r</i>	0.012	0.136	0.15	.404 (**)
	p-value	0.89	0.11	0.078	0
	N	140	140	140	140
SUS 1	<i>r</i>	.296 (**)	.219 (**)	.269 (**)	.234 (**)
	p-value	0	0.009	0.001	0.005
	N	140	140	140	140
SUS 2	<i>r</i>	.259 (**)	.312 (**)	.439 (**)	.339 (**)
	p-value	0.002	0	0	0
	N	140	140	140	140
SUS 3	<i>r</i>	0.151	0.163	.185 (*)	.196 (*)
	p-value	0.074	0.055	0.029	0.02
	N	140	140	140	140
SUS 4	<i>r</i>	.271 (**)	.209 (*)	.283 (**)	.214 (*)
	p-value	0.001	0.013	0.001	0.011
	N	140	140	140	140
SUS 5	<i>r</i>	.244 (**)	.402 (**)	.444 (**)	.271 (**)
	p-value	0.004	0	0	0.001
	N	140	140	140	140
SUS 6	<i>r</i>	.219 (**)	.182 (*)	.405 (**)	.225 (**)
	p-value	0.009	0.032	0	0.008
	N	140	140	140	140
SEV 1	<i>r</i>	.790 (**)	.326 (**)	.411 (**)	.244 (**)
	p-value	0	0	0	0.004
	N	140	140	140	140
SEV 2	<i>r</i>	1	.340 (**)	.465 (**)	.255 (**)
	p-value	.	0	0	0.002
	N	140	140	140	140
SEV 3	<i>r</i>	.340 (**)	1	.542 (**)	.400 (**)
	p-value	0	.	0	0
	N	140	140	140	140
SEV 4	<i>r</i>	.465 (**)	.542 (**)	1	.442 (**)
	p-value	0	0	.	0
	N	140	140	140	140
SEV 5	<i>r</i>	.255 (**)	.400 (**)	.442 (**)	1
	p-value	0.002	0	0	.
	N	140	140	140	140

		SEV 2	SEV 3	SEV 4	SEV 5
BEN 1	<i>r</i>	0.066	-0.074	0.126	0.01
	p-value	0.438	0.383	0.138	0.909
	N	140	140	140	140
BEN 2	<i>r</i>	0.031	0.062	-0.027	0.021
	p-value	0.716	0.466	0.748	0.809
	N	140	140	140	140
BEN 3	<i>r</i>	0.015	0.157	0.082	-0.006
	p-value	0.861	0.065	0.335	0.943
	N	140	140	140	140
BEN 4	<i>r</i>	0.011	0.121	0.052	0.005
	p-value	0.899	0.155	0.545	0.95
	N	140	140	140	140
BEN 5	<i>r</i>	0.059	0.062	0.161	.179(*)
	p-value	0.485	0.464	0.057	0.035
	N	140	140	140	140
BEN 6	<i>r</i>	0.151	0.133	.185(*)	0.015
	p-value	0.074	0.118	0.028	0.862
	N	140	140	140	140
BAR 1	<i>r</i>	-0.138	0.062	0.057	0.05
	p-value	0.104	0.463	0.505	0.556
	N	140	140	140	140
BAR 2	<i>r</i>	0.042	.197(*)	.224(**)	.295(**)
	p-value	0.62	0.02	0.008	0
	N	140	140	140	140
BAR 3	<i>r</i>	.187(*)	0.005	0.127	0.04
	p-value	0.027	0.951	0.136	0.637
	N	140	140	140	140
BAR 4	<i>r</i>	-0.005	.197(*)	0.009	.191(*)
	p-value	0.954	0.02	0.914	0.023
	N	140	140	140	140
BAR 5	<i>r</i>	0.062	0.057	0.114	.169(*)
	p-value	0.464	0.503	0.178	0.046
	N	140	140	140	140
BAR 6	<i>r</i>	-0.07	0.007	-0.011	.197(*)
	p-value	0.409	0.933	0.901	0.02
	N	140	140	140	140

		SEV 2	SEV 3	SEV 4	SEV 5
BAR 7	<i>r</i>	0.051	-.235 (**)	0.066	0.035
	p-value	0.548	0.005	0.437	0.681
	N	140	140	140	140
BAR 8	<i>r</i>	0.138	.303 (**)	.265 (**)	.526 (**)
	p-value	0.105	0	0.002	0
	N	140	140	140	140
BAR 9	<i>r</i>	0.015	.209 (*)	0.112	.376 (**)
	p-value	0.856	0.013	0.187	0
	N	140	140	140	140
BAR 10	<i>r</i>	-.221 (**)	-0.062	-.202 (*)	0
	p-value	0.009	0.469	0.017	0.998
	N	140	140	140	140
BAR 11	<i>r</i>	-0.006	0.056	0.044	.347 (**)
	p-value	0.943	0.511	0.609	0
	N	140	140	140	140
CUE 1	<i>r</i>	-0.018	-0.081	0.024	-0.015
	p-value	0.836	0.342	0.778	0.858
	N	140	140	140	140
CUE 2	<i>r</i>	0.031	0.023	0.078	-0.119
	p-value	0.718	0.784	0.361	0.161
	N	140	140	140	140
CUE 3	<i>r</i>	.198 (*)	-0.032	0.034	-.170 (*)
	p-value	0.019	0.708	0.691	0.045
	N	140	140	140	140
CUE 4	<i>r</i>	0.105	0.024	0.149	-0.085
	p-value	0.217	0.777	0.079	0.315
	N	140	140	140	140
CUE 5	<i>r</i>	.190 (*)	0.057	.228 (**)	0.135
	p-value	0.025	0.502	0.007	0.112
	N	140	140	140	140
CUE 6	<i>r</i>	0.032	-0.014	0.013	-.205 (*)
	p-value	0.704	0.872	0.881	0.015
	N	140	140	140	140

		BEN 1	BEN 2	BEN 3	BEN 4
Actual Insurance Status	<i>r</i>	.309 (**)	-0.079	0.09	0.152
	p-value	0	0.355	0.288	0.074
	N	140	140	140	140
Family History	<i>r</i>	0.075	0.007	0.077	.215 (*)
	p-value	0.39	0.936	0.381	0.013
	N	132	132	132	132
Health Status	<i>r</i>	0.017	0.144	.205 (*)	.201 (*)
	p-value	0.843	0.089	0.015	0.017
	N	140	140	140	140
Age	<i>r</i>	0.092	0.049	-0.069	0.069
	p-value	0.284	0.565	0.423	0.419
	N	139	139	139	139
Gender	<i>r</i>	0.031	0.006	-0.099	-0.063
	p-value	0.722	0.947	0.249	0.467
	N	137	137	137	137
Race Non-white	<i>r</i>	-.179 (*)	0.105	-0.038	-0.034
	p-value	0.034	0.215	0.653	0.694
	N	140	140	140	140
Marital Status	<i>r</i>	0.092	-0.051	0.109	0.046
	p-value	0.279	0.55	0.199	0.586
	N	140	140	140	140
Education	<i>r</i>	.193 (*)	-0.052	0.043	-0.005
	p-value	0.023	0.544	0.613	0.955
	N	140	140	140	140
Income	<i>r</i>	.211 (*)	-0.111	-0.006	0.004
	p-value	0.015	0.201	0.941	0.965
	N	134	134	134	134
SUS Index	<i>r</i>	0.044	-.172 (*)	-0.03	-0.043
	p-value	0.604	0.042	0.726	0.614
	N	140	140	140	140
SEV Index	<i>r</i>	0.062	0.048	0.066	0.064
	p-value	0.467	0.577	0.439	0.453
	N	140	140	140	140
BEN Index	<i>r</i>	.574 (**)	.543 (**)	.702 (**)	.718 (**)
	p-value	0	0	0	0
	N	140	140	140	140

		BEN 1	BEN 2	BEN 3	BEN 4
BAR Index	<i>r</i>	-.238 (**)	0.068	-0.027	-0.134
	p-value	0.005	0.428	0.754	0.113
	N	140	140	140	140
SUS 1	<i>r</i>	0.066	-0.11	0.049	-0.028
	p-value	0.441	0.195	0.563	0.746
	N	140	140	140	140
SUS 2	<i>r</i>	0.064	-0.02	-0.002	-0.011
	p-value	0.453	0.816	0.985	0.897
	N	140	140	140	140
SUS 3	<i>r</i>	-0.079	-.176 (*)	-0.016	-0.025
	p-value	0.353	0.038	0.851	0.771
	N	140	140	140	140
SUS 4	<i>r</i>	-0.012	-.207 (*)	-0.033	-0.01
	p-value	0.885	0.014	0.698	0.907
	N	140	140	140	140
SUS 5	<i>r</i>	0.015	-0.001	-0.034	-0.002
	p-value	0.864	0.99	0.694	0.98
	N	140	140	140	140
SUS 6	<i>r</i>	0.084	-.183 (*)	-0.093	-0.089
	p-value	0.325	0.03	0.277	0.295
	N	140	140	140	140
SEV 1	<i>r</i>	0.082	0.09	0.036	0.074
	p-value	0.336	0.29	0.67	0.387
	N	140	140	140	140
SEV 2	<i>r</i>	0.066	0.031	0.015	0.011
	p-value	0.438	0.716	0.861	0.899
	N	140	140	140	140
SEV 3	<i>r</i>	-0.074	0.062	0.157	0.121
	p-value	0.383	0.466	0.065	0.155
	N	140	140	140	140
SEV 4	<i>r</i>	0.126	-0.027	0.082	0.052
	p-value	0.138	0.748	0.335	0.545
	N	140	140	140	140
SEV 5	<i>r</i>	0.01	0.021	-0.006	0.005
	p-value	0.909	0.809	0.943	0.95
	N	140	140	140	140

		BEN 1	BEN 2	BEN 3	BEN 4
BEN 1	<i>r</i>	1	.359 (**)	.199 (*)	.433 (**)
	p-value	.	0	0.018	0
	N	140	140	140	140
BEN 2	<i>r</i>	.359 (**)	1	.269 (**)	.337 (**)
	p-value	0	.	0.001	0
	N	140	140	140	140
BEN 3	<i>r</i>	.199 (*)	.269 (**)	1	.366 (**)
	p-value	0.018	0.001	.	0
	N	140	140	140	140
BEN 4	<i>r</i>	.433 (**)	.337 (**)	.366 (**)	1
	p-value	0	0	0	.
	N	140	140	140	140
BEN 5	<i>r</i>	.273 (**)	0.129	.287 (**)	.265 (**)
	p-value	0.001	0.129	0.001	0.002
	N	140	140	140	140
BEN 6	<i>r</i>	.303 (**)	0.125	.277 (**)	.385 (**)
	p-value	0	0.14	0.001	0
	N	140	140	140	140
BAR 1	<i>r</i>	-.325 (**)	-0.034	-0.037	-0.055
	p-value	0	0.693	0.662	0.519
	N	140	140	140	140
BAR 2	<i>r</i>	-.203 (*)	0.067	-0.072	-0.087
	p-value	0.016	0.431	0.399	0.305
	N	140	140	140	140
BAR 3	<i>r</i>	0.029	-0.069	0.029	-.167 (*)
	p-value	0.731	0.415	0.733	0.048
	N	140	140	140	140
BAR 4	<i>r</i>	-0.02	0.057	.179 (*)	-0.029
	p-value	0.815	0.504	0.035	0.732
	N	140	140	140	140
BAR 5	<i>r</i>	-0.149	-0.007	-0.06	-0.147
	p-value	0.079	0.937	0.483	0.084
	N	140	140	140	140
BAR 6	<i>r</i>	-.256 (**)	-0.007	-0.007	-0.052
	p-value	0.002	0.935	0.935	0.538
	N	140	140	140	140

		BEN 1	BEN 2	BEN 3	BEN 4
BAR 7	<i>r</i>	-0.147	-.176(*)	-0.088	-.272(**)
	p-value	0.082	0.038	0.3	0.001
	N	140	140	140	140
BAR 8	<i>r</i>	-0.046	0.06	0.021	-0.044
	p-value	0.589	0.482	0.807	0.605
	N	140	140	140	140
BAR 9	<i>r</i>	-0.061	0.156	0.03	0.115
	p-value	0.473	0.066	0.721	0.175
	N	140	140	140	140
BAR 10	<i>r</i>	-.199(*)	0.09	-0.084	-0.109
	p-value	0.018	0.291	0.324	0.2
	N	140	140	140	140
BAR 11	<i>r</i>	0.052	.222(**)	0.029	0.092
	p-value	0.541	0.008	0.734	0.278
	N	140	140	140	140
CUE 1	<i>r</i>	-0.104	-0.124	-0.095	0.023
	p-value	0.223	0.144	0.265	0.786
	N	140	140	140	140
CUE 2	<i>r</i>	-0.042	0.052	0.134	0.128
	p-value	0.619	0.538	0.115	0.133
	N	140	140	140	140
CUE 3	<i>r</i>	0.054	-0.062	0.022	0.039
	p-value	0.527	0.467	0.8	0.65
	N	140	140	140	140
CUE 4	<i>r</i>	.322(**)	0.071	0.138	.233(**)
	p-value	0	0.404	0.104	0.006
	N	140	140	140	140
CUE 5	<i>r</i>	0.097	0.083	0.133	0.136
	p-value	0.253	0.331	0.118	0.108
	N	140	140	140	140
CUE 6	<i>r</i>	.255(**)	0.164	0.091	0.112
	p-value	0.002	0.053	0.283	0.188
	N	140	140	140	140

		BEN 5	BEN 6	BAR 1	BAR 2
Actual Insurance Status	<i>r</i>	.202 (*)	.367 (**)	-0.138	-.273 (**)
	p-value	0.016	0	0.105	0.001
	N	140	140	140	140
Family History	<i>r</i>	0.029	0.171	-0.022	-.300 (**)
	p-value	0.744	0.05	0.803	0
	N	132	132	132	132
Health Status	<i>r</i>	0.102	0.074	0.032	-.211 (*)
	p-value	0.232	0.383	0.705	0.012
	N	140	140	140	140
Age	<i>r</i>	-0.044	.204 (*)	-0.026	0.13
	p-value	0.609	0.016	0.761	0.128
	N	139	139	139	139
Gender	<i>r</i>	0.055	-0.047	0.04	-0.009
	p-value	0.527	0.585	0.641	0.914
	N	137	137	137	137
Race Non-white	<i>r</i>	-0.097	-0.111	0.082	.210 (*)
	p-value	0.252	0.192	0.335	0.013
	N	140	140	140	140
Marital Status	<i>r</i>	0.047	.327 (**)	0.095	-.249 (**)
	p-value	0.581	0	0.266	0.003
	N	140	140	140	140
Education	<i>r</i>	0.081	0.121	-.268 (**)	-.343 (**)
	p-value	0.339	0.153	0.001	0
	N	140	140	140	140
Income	<i>r</i>	0.079	.235 (**)	-.175 (*)	-.346 (**)
	p-value	0.366	0.006	0.043	0
	N	134	134	134	134
SUS Index	<i>r</i>	0.079	0.023	0.117	0.118
	p-value	0.352	0.79	0.17	0.165
	N	140	140	140	140
SEV Index	<i>r</i>	0.148	0.161	-0.03	.216 (*)
	p-value	0.081	0.057	0.727	0.01
	N	140	140	140	140
BEN Index	<i>r</i>	.623 (**)	.647 (**)	-0.109	-0.031
	p-value	0	0	0.199	0.72
	N	140	140	140	140



		BEN 5	BEN 6	BAR 1	BAR 2
BAR Index	<i>r</i>	0.032	-0.164	.424 (**)	.639 (**)
	p-value	0.707	0.053	0	0
	N	140	140	140	140
SUS 1	<i>r</i>	0.084	0.06	0.084	0.054
	p-value	0.326	0.484	0.322	0.525
	N	140	140	140	140
SUS 2	<i>r</i>	0.102	0.117	0.054	.221 (**)
	p-value	0.229	0.168	0.524	0.009
	N	140	140	140	140
SUS 3	<i>r</i>	0.058	0	0.123	0.028
	p-value	0.493	1	0.148	0.74
	N	140	140	140	140
SUS 4	<i>r</i>	0.144	-0.059	0.038	-0.032
	p-value	0.089	0.487	0.652	0.708
	N	140	140	140	140
SUS 5	<i>r</i>	-0.056	0.028	0.101	.204 (*)
	p-value	0.508	0.739	0.234	0.015
	N	140	140	140	140
SUS 6	<i>r</i>	-0.019	-0.054	0.089	0.023
	p-value	0.824	0.524	0.294	0.791
	N	140	140	140	140
SEV 1	<i>r</i>	0.067	0.131	-0.114	0.037
	p-value	0.433	0.122	0.182	0.663
	N	140	140	140	140
SEV 2	<i>r</i>	0.059	0.151	-0.138	0.042
	p-value	0.485	0.074	0.104	0.62
	N	140	140	140	140
SEV 3	<i>r</i>	0.062	0.133	0.062	.197 (*)
	p-value	0.464	0.118	0.463	0.02
	N	140	140	140	140
SEV 4	<i>r</i>	0.161	.185 (*)	0.057	.224 (**)
	p-value	0.057	0.028	0.505	0.008
	N	140	140	140	140
SEV 5	<i>r</i>	.179 (*)	0.015	0.05	.295 (**)
	p-value	0.035	0.862	0.556	0
	N	140	140	140	140

		BEN 5	BEN 6	BAR 1	BAR 2
BEN 1	<i>r</i>	.273 (**)	.303 (**)	-.325 (**)	-.203 (*)
	p-value	0.001	0	0	0.016
	N	140	140	140	140
BEN 2	<i>r</i>	0.129	0.125	-0.034	0.067
	p-value	0.129	0.14	0.693	0.431
	N	140	140	140	140
BEN 3	<i>r</i>	.287 (**)	.277 (**)	-0.037	-0.072
	p-value	0.001	0.001	0.662	0.399
	N	140	140	140	140
BEN 4	<i>r</i>	.265 (**)	.385 (**)	-0.055	-0.087
	p-value	0.002	0	0.519	0.305
	N	140	140	140	140
BEN 5	<i>r</i>	1	.381 (**)	-0.071	0.125
	p-value	.	0	0.407	0.14
	N	140	140	140	140
BEN 6	<i>r</i>	.381 (**)	1	-0.025	-0.009
	p-value	0	.	0.773	0.916
	N	140	140	140	140
BAR 1	<i>r</i>	-0.071	-0.025	1	.310 (**)
	p-value	0.407	0.773	.	0
	N	140	140	140	140
BAR 2	<i>r</i>	0.125	-0.009	.310 (**)	1
	p-value	0.14	0.916	0	.
	N	140	140	140	140
BAR 3	<i>r</i>	0.144	.175 (*)	0.084	.178 (*)
	p-value	0.09	0.039	0.323	0.035
	N	140	140	140	140
BAR 4	<i>r</i>	0.054	-0.096	0.063	.196 (*)
	p-value	0.53	0.26	0.458	0.02
	N	140	140	140	140
BAR 5	<i>r</i>	0.058	-0.13	.301 (**)	.265 (**)
	p-value	0.493	0.125	0	0.002
	N	140	140	140	140
BAR 6	<i>r</i>	0.024	-0.14	.271 (**)	.311 (**)
	p-value	0.779	0.1	0.001	0
	N	140	140	140	140

		BEN 5	BEN 6	BAR 1	BAR 2
BAR 7	<i>r</i>	0.141	-0.016	0.116	0.155
	p-value	0.097	0.851	0.172	0.068
	N	140	140	140	140
BAR 8	<i>r</i>	0.094	-0.162	0.062	.415 (**)
	p-value	0.271	0.056	0.467	0
	N	140	140	140	140
BAR 9	<i>r</i>	-0.061	-0.09	0.043	.286 (**)
	p-value	0.477	0.289	0.613	0.001
	N	140	140	140	140
BAR 10	<i>r</i>	-.191 (*)	-.268 (**)	0.025	0.136
	p-value	0.024	0.001	0.765	0.108
	N	140	140	140	140
BAR 11	<i>r</i>	-0.098	-0.13	0.087	.308 (**)
	p-value	0.248	0.126	0.305	0
	N	140	140	140	140
CUE 1	<i>r</i>	-0.055	-0.118	-0.147	-0.016
	p-value	0.517	0.164	0.084	0.848
	N	140	140	140	140
CUE 2	<i>r</i>	0.097	0.014	-0.142	-0.006
	p-value	0.256	0.866	0.094	0.946
	N	140	140	140	140
CUE 3	<i>r</i>	0.115	0.036	-.265 (**)	-0.113
	p-value	0.175	0.673	0.002	0.184
	N	140	140	140	140
CUE 4	<i>r</i>	0.154	0.076	-.275 (**)	-0.135
	p-value	0.07	0.373	0.001	0.113
	N	140	140	140	140
CUE 5	<i>r</i>	.208 (*)	.280 (**)	0.041	0.043
	p-value	0.014	0.001	0.628	0.614
	N	140	140	140	140
CUE 6	<i>r</i>	0.157	.196 (*)	-0.083	-0.046
	p-value	0.064	0.02	0.327	0.587
	N	140	140	140	140

		BAR 3	BAR 4	BAR 5	BAR 6
Actual Insurance Status	<i>r</i>	0.034	-0.161	-.310 (**)	-.265 (**)
	p-value	0.693	0.057	0	0.002
	N	140	140	140	140
Family History	<i>r</i>	-0.123	-.214 (*)	-0.142	-0.01
	p-value	0.159	0.014	0.104	0.913
	N	132	132	132	132
Health Status	<i>r</i>	-0.094	-0.073	-.203 (*)	0.011
	p-value	0.267	0.393	0.016	0.899
	N	140	140	140	140
Age	<i>r</i>	0.075	0.026	0.005	-0.075
	p-value	0.377	0.761	0.953	0.379
	N	139	139	139	139
Gender	<i>r</i>	0.009	0.039	0.02	-0.126
	p-value	0.921	0.653	0.814	0.143
	N	137	137	137	137
Race Non-white	<i>r</i>	-0.014	0.097	0.129	0.153
	p-value	0.874	0.256	0.127	0.071
	N	140	140	140	140
Marital Status	<i>r</i>	.170 (*)	-0.147	0.047	-0.119
	p-value	0.044	0.083	0.584	0.16
	N	140	140	140	140
Education	<i>r</i>	-0.024	-0.164	-.340 (**)	-.391 (**)
	p-value	0.778	0.052	0	0
	N	140	140	140	140
Income	<i>r</i>	0.029	-.186 (*)	-.280 (**)	-.329 (**)
	p-value	0.742	0.031	0.001	0
	N	134	134	134	134
SUS Index	<i>r</i>	.221 (**)	.214 (*)	0.136	0.061
	p-value	0.009	0.011	0.109	0.473
	N	140	140	140	140
SEV Index	<i>r</i>	0.126	0.124	0.109	0.023
	p-value	0.137	0.144	0.198	0.783
	N	140	140	140	140
BEN Index	<i>r</i>	0.04	0.056	-0.102	-0.086
	p-value	0.643	0.511	0.228	0.314
	N	140	140	140	140

		BAR 3	BAR 4	BAR 5	BAR 6
BAR Index	<i>r</i>	.363 (**)	.347 (**)	.577 (**)	.564 (**)
	p-value	0	0	0	0
	N	140	140	140	140
SUS 1	<i>r</i>	0.069	0.118	0.098	-0.099
	p-value	0.419	0.163	0.252	0.243
	N	140	140	140	140
SUS 2	<i>r</i>	.168 (*)	.251 (**)	0.125	0.096
	p-value	0.048	0.003	0.14	0.259
	N	140	140	140	140
SUS 3	<i>r</i>	0.163	.196 (*)	0.112	0.065
	p-value	0.054	0.02	0.186	0.446
	N	140	140	140	140
SUS 4	<i>r</i>	.228 (**)	0.135	0.081	0.125
	p-value	0.007	0.112	0.34	0.142
	N	140	140	140	140
SUS 5	<i>r</i>	.189 (*)	0.065	0.123	0.128
	p-value	0.025	0.447	0.148	0.133
	N	140	140	140	140
SUS 6	<i>r</i>	0.115	0.122	0.032	-0.014
	p-value	0.175	0.15	0.704	0.871
	N	140	140	140	140
SEV 1	<i>r</i>	0.088	0.07	-0.017	-0.065
	p-value	0.299	0.412	0.842	0.444
	N	140	140	140	140
SEV 2	<i>r</i>	.187 (*)	-0.005	0.062	-0.07
	p-value	0.027	0.954	0.464	0.409
	N	140	140	140	140
SEV 3	<i>r</i>	0.005	.197 (*)	0.057	0.007
	p-value	0.951	0.02	0.503	0.933
	N	140	140	140	140
SEV 4	<i>r</i>	0.127	0.009	0.114	-0.011
	p-value	0.136	0.914	0.178	0.901
	N	140	140	140	140
SEV 5	<i>r</i>	0.04	.191 (*)	.169 (*)	.197 (*)
	p-value	0.637	0.023	0.046	0.02
	N	140	140	140	140

		BAR 3	BAR 4	BAR 5	BAR 6
BEN 1	<i>r</i>	0.029	-0.02	-0.149	-.256(**)
	p-value	0.731	0.815	0.079	0.002
	N	140	140	140	140
BEN 2	<i>r</i>	-0.069	0.057	-0.007	-0.007
	p-value	0.415	0.504	0.937	0.935
	N	140	140	140	140
BEN 3	<i>r</i>	0.029	.179(*)	-0.06	-0.007
	p-value	0.733	0.035	0.483	0.935
	N	140	140	140	140
BEN 4	<i>r</i>	-.167(*)	-0.029	-0.147	-0.052
	p-value	0.048	0.732	0.084	0.538
	N	140	140	140	140
BEN 5	<i>r</i>	0.144	0.054	0.058	0.024
	p-value	0.09	0.53	0.493	0.779
	N	140	140	140	140
BEN 6	<i>r</i>	.175(*)	-0.096	-0.13	-0.14
	p-value	0.039	0.26	0.125	0.1
	N	140	140	140	140
BAR 1	<i>r</i>	0.084	0.063	.301(**)	.271(**)
	p-value	0.323	0.458	0	0.001
	N	140	140	140	140
BAR 2	<i>r</i>	.178(*)	.196(*)	.265(**)	.311(**)
	p-value	0.035	0.02	0.002	0
	N	140	140	140	140
BAR 3	<i>r</i>	1	.221(**)	0.121	.177(*)
	p-value	.	0.009	0.154	0.036
	N	140	140	140	140
BAR 4	<i>r</i>	.221(**)	1	0.061	0.149
	p-value	0.009	.	0.474	0.08
	N	140	140	140	140
BAR 5	<i>r</i>	0.121	0.061	1	.279(**)
	p-value	0.154	0.474	.	0.001
	N	140	140	140	140
BAR 6	<i>r</i>	.177(*)	0.149	.279(**)	1
	p-value	0.036	0.08	0.001	.
	N	140	140	140	140

		BAR 3	BAR 4	BAR 5	BAR 6
BAR 7	<i>r</i>	.208 (*)	-0.019	.294 (**)	0.151
	p-value	0.014		0	0.075
	N	140		140	140
BAR 8	<i>r</i>		.212 (*)	.302 (**)	.261 (**)
	p-value	0.436		0	0.002
	N	140		140	140
BAR 9	<i>r</i>		.197 (*)	.189 (*)	0.124
	p-value	0.692		0.025	0.145
	N	140		140	140
BAR 10	<i>r</i>		0.155	0.155	.293 (**)
	p-value	0.854		0.068	0
	N	140		140	140
BAR 11	<i>r</i>		0.127	0.137	0.153
	p-value	0.858		0.107	0.07
	N	140		140	140
CUE 1	<i>r</i>		-0.03	0.105	0.025
	p-value	0.569		0.215	0.772
	N	140		140	140
CUE 2	<i>r</i>		-0.055	-0.002	-0.064
	p-value	0.753		0.977	0.451
	N	140		140	140
CUE 3	<i>r</i>		-.227 (**)	-.215 (*)	-0.012
	p-value	0.385		0.011	0.885
	N	140		140	140
CUE 4	<i>r</i>		-0.13	-0.021	0.012
	p-value	0.784		0.802	0.884
	N	140		140	140
CUE 5	<i>r</i>		0.065	0.109	0.088
	p-value	0.024		0.198	0.3
	N	140		140	140
CUE 6	<i>r</i>		-0.045	-.254 (**)	-0.109
	p-value	0.629		0.002	0.201
	N	140		140	140

		BAR 7	BAR 8	BAR 9	BAR 10
Actual Insurance Status	<i>r</i>	0.113	-.477 (**)	-.711 (**)	-.448 (**)
	p-value	0.183	0	0	0
	N	140	140	140	140
Family History	<i>r</i>	-0.122	-.285 (**)	-.201 (*)	-0.118
	p-value	0.163	0.001	0.021	0.178
	N	132	132	132	132
Health Status	<i>r</i>	-0.085	-.251 (**)	-.208 (*)	0.038
	p-value	0.316	0.003	0.013	0.653
	N	140	140	140	140
Age	<i>r</i>	0.145	-0.139	-0.083	-0.092
	p-value	0.089	0.102	0.332	0.283
	N	139	139	139	139
Gender	<i>r</i>	-0.06	-0.025	-0.047	-0.108
	p-value	0.485	0.769	0.588	0.211
	N	137	137	137	137
Race Non-white	<i>r</i>	-.169 (*)	.183 (*)	.627 (**)	.290 (**)
	p-value	0.046	0.03	0	0
	N	140	140	140	140
Marital Status	<i>r</i>	.169 (*)	-.276 (**)	-.266 (**)	-.237 (**)
	p-value	0.046	0.001	0.002	0.005
	N	140	140	140	140
Education	<i>r</i>	0.076	-.462 (**)	-.494 (**)	-.243 (**)
	p-value	0.374	0	0	0.004
	N	140	140	140	140
Income	<i>r</i>	0.134	-.572 (**)	-.757 (**)	-.359 (**)
	p-value	0.121	0	0	0
	N	134	134	134	134
SUS Index	<i>r</i>	0.095	0.157	0.051	-0.043
	p-value	0.262	0.064	0.553	0.611
	N	140	140	140	140
SEV Index	<i>r</i>	-0.03	.381 (**)	.208 (*)	-.180 (*)
	p-value	0.723	0	0.014	0.033
	N	140	140	140	140
BEN Index	<i>r</i>	-0.132	-0.014	0.029	-.191 (*)
	p-value	0.119	0.871	0.735	0.023
	N	140	140	140	140



		BAR 7	BAR 8	BAR 9	BAR 10
BAR Index	<i>r</i>	.303 (**)	.634 (**)	.584 (**)	.497 (**)
	p-value	0	0	0	0
	N	140	140	140	140
SUS 1	<i>r</i>	0.057	0.088	0.016	-0.148
	p-value	0.501	0.298	0.847	0.081
	N	140	140	140	140
SUS 2	<i>r</i>	0.112	.216 (*)	0.071	-0.001
	p-value	0.188	0.01	0.406	0.993
	N	140	140	140	140
SUS 3	<i>r</i>	0.094	0.066	0.102	0.037
	p-value	0.267	0.435	0.231	0.666
	N	140	140	140	140
SUS 4	<i>r</i>	0.12	0.015	0.026	0.023
	p-value	0.157	0.865	0.763	0.791
	N	140	140	140	140
SUS 5	<i>r</i>	-0.07	.167 (*)	0.132	0.013
	p-value	0.413	0.049	0.12	0.883
	N	140	140	140	140
SUS 6	<i>r</i>	0.067	0.094	-0.091	-0.052
	p-value	0.429	0.268	0.287	0.539
	N	140	140	140	140
SEV 1	<i>r</i>	-0.086	0.141	0.032	-.179 (*)
	p-value	0.312	0.096	0.711	0.034
	N	140	140	140	140
SEV 2	<i>r</i>	0.051	0.138	0.015	-.221 (**)
	p-value	0.548	0.105	0.856	0.009
	N	140	140	140	140
SEV 3	<i>r</i>	-.235 (**)	.303 (**)	.209 (*)	-0.062
	p-value	0.005	0	0.013	0.469
	N	140	140	140	140
SEV 4	<i>r</i>	0.066	.265 (**)	0.112	-.202 (*)
	p-value	0.437	0.002	0.187	0.017
	N	140	140	140	140
SEV 5	<i>r</i>	0.035	.526 (**)	.376 (**)	0
	p-value	0.681	0	0	0.998
	N	140	140	140	140

		BAR 7	BAR 8	BAR 9	BAR 10
BEN 1	<i>r</i>	-0.147	-0.046	-0.061	-.199(*)
	p-value	0.082	0.589	0.473	0.018
	N	140	140	140	140
BEN 2	<i>r</i>	-.176(*)	0.06	0.156	0.09
	p-value	0.038	0.482	0.066	0.291
	N	140	140	140	140
BEN 3	<i>r</i>	-0.088	0.021	0.03	-0.084
	p-value	0.3	0.807	0.721	0.324
	N	140	140	140	140
BEN 4	<i>r</i>	-.272(**)	-0.044	0.115	-0.109
	p-value	0.001	0.605	0.175	0.2
	N	140	140	140	140
BEN 5	<i>r</i>	0.141	0.094	-0.061	-.191(*)
	p-value	0.097	0.271	0.477	0.024
	N	140	140	140	140
BEN 6	<i>r</i>	-0.016	-0.162	-0.09	-.268(**)
	p-value	0.851	0.056	0.289	0.001
	N	140	140	140	140
BAR 1	<i>r</i>	0.116	0.062	0.043	0.025
	p-value	0.172	0.467	0.613	0.765
	N	140	140	140	140
BAR 2	<i>r</i>	0.155	.415(**)	.286(**)	0.136
	p-value	0.068	0	0.001	0.108
	N	140	140	140	140
BAR 3	<i>r</i>	.208(*)	0.066	0.034	0.016
	p-value	0.014	0.436	0.692	0.854
	N	140	140	140	140
BAR 4	<i>r</i>	-0.019	.212(*)	.197(*)	0.155
	p-value	0.825	0.012	0.02	0.067
	N	140	140	140	140
BAR 5	<i>r</i>	.294(**)	.302(**)	.189(*)	0.155
	p-value	0	0	0.025	0.068
	N	140	140	140	140
BAR 6	<i>r</i>	0.151	.261(**)	0.124	.293(**)
	p-value	0.075	0.002	0.145	0
	N	140	140	140	140

		BAR 7	BAR 8	BAR 9	BAR 10
BAR 7	<i>r</i>	1	0.025	-0.145	-0.033
	p-value	.	0.771	0.088	0.702
	N	140	140	140	140
BAR 8	<i>r</i>		1	.434 (**)	.229 (**)
	p-value		.	0	0.006
	N	140	140	140	140
BAR 9	<i>r</i>		.434 (**)	1	.359 (**)
	p-value		0	.	0
	N	140	140	140	140
BAR 10	<i>r</i>		.229 (**)	.359 (**)	1
	p-value		0.006	0	.
	N	140	140	140	140
BAR 11	<i>r</i>		.403 (**)	.648 (**)	.352 (**)
	p-value		0	0	0
	N	140	140	140	140
CUE 1	<i>r</i>		0.073	0.105	0.103
	p-value		0.392	0.219	0.224
	N	140	140	140	140
CUE 2	<i>r</i>		0.062	0.134	0.044
	p-value		0.47	0.113	0.608
	N	140	140	140	140
CUE 3	<i>r</i>		0.005	-0.128	-0.06
	p-value		0.951	0.131	0.481
	N	140	140	140	140
CUE 4	<i>r</i>		-0.013	-0.093	-0.133
	p-value		0.875	0.277	0.118
	N	140	140	140	140
CUE 5	<i>r</i>		0.112	0.117	0.021
	p-value		0.189	0.168	0.803
	N	140	140	140	140
CUE 6	<i>r</i>		-.200 (*)	-.334 (**)	-.188 (*)
	p-value		0.018	0	0.026
	N	140	140	140	140

		BAR 11	CUE 1	CUE 2	CUE 3
Actual Insurance Status		-.565 (**)	-0.096	-0.031	.281 (**)
	N	0	0.261	0.715	0.001
		140	140	140	140
Family History	<i>r</i>	-.381 (**)	0.044	0.006	0.041
	p-value	0	0.613	0.949	0.645
	N	132	132	132	132
Health Status	<i>r</i>	-0.143	0.029	0.036	0.1
	p-value	0.093	0.735	0.674	0.242
	N	140	140	140	140
Age	<i>r</i>	-0.052	-0.064	0.038	0.067
	p-value	0.543	0.454	0.661	0.432
	N	139	139	139	139
Gender	<i>r</i>	-0.044	0.067	-0.08	-0.034
	p-value	0.607	0.435	0.351	0.693
	N	137	137	137	137
Race Non-white	<i>r</i>	.484 (**)	-0.019	0.002	-.374 (**)
	p-value	0	0.825	0.979	0
	N	140	140	140	140
Marital Status	<i>r</i>	-.251 (**)	-0.09	-0.095	0.037
	p-value	0.003	0.288	0.266	0.666
	N	140	140	140	140
Education	<i>r</i>	-.422 (**)	-0.081	0.021	.326 (**)
	p-value	0	0.342	0.801	0
	N	140	140	140	140
Income	<i>r</i>	-.582 (**)	-0.039	-0.059	.244 (**)
	p-value	0	0.655	0.501	0.005
	N	134	134	134	134
SUS Index	<i>r</i>	-0.023	-0.087	-0.05	-0.018
	p-value	0.79	0.307	0.557	0.828
	N	140	140	140	140
SEV Index	<i>r</i>	0.129	-0.017	-0.011	0.033
	p-value	0.13	0.841	0.897	0.695
	N	140	140	140	140
BEN Index	<i>r</i>	0.033	-0.119	0.119	0.053
	p-value	0.699	0.163	0.161	0.534
	N	140	140	140	140

		BAR 11	CUE 1	CUE 2	CUE 3
BAR Index		.595 (**)	0.047	0.032	-.192 (*)
	p-value	0	0.582	0.708	0.023
	N	140	140	140	140
SUS 1	<i>r</i>	-0.033	0.005	-0.08	-0.039
	p-value	0.695	0.954	0.345	0.645
	N	140	140	140	140
SUS 2	<i>r</i>	0.016	-0.119	0.012	-0.155
	p-value	0.852	0.163	0.885	0.067
	N	140	140	140	140
SUS 3	<i>r</i>	-0.003	-0.095	-0.072	-0.004
	p-value	0.974	0.263	0.401	0.963
	N	140	140	140	140
SUS 4	<i>r</i>	-0.093	-0.025	0.042	0.029
	p-value	0.275	0.769	0.624	0.731
	N	140	140	140	140
SUS 5	<i>r</i>	0.139	-0.079	-0.019	0.036
	p-value	0.101	0.351	0.824	0.675
	N	140	140	140	140
SUS 6	<i>r</i>	-0.083	-0.067	-0.082	0.061
	p-value	0.33	0.431	0.333	0.473
	N	140	140	140	140
SEV 1	<i>r</i>	-0.017	0.014	-0.02	0.099
	p-value	0.838	0.869	0.813	0.246
	N	140	140	140	140
SEV 2	<i>r</i>	-0.006	-0.018	0.031	.198 (*)
	p-value	0.943	0.836	0.718	0.019
	N	140	140	140	140
SEV 3	<i>r</i>	0.056	-0.081	0.023	-0.032
	p-value	0.511	0.342	0.784	0.708
	N	140	140	140	140
SEV 4	<i>r</i>	0.044	0.024	0.078	0.034
	p-value	0.609	0.778	0.361	0.691
	N	140	140	140	140
SEV 5	<i>r</i>	.347 (**)	-0.015	-0.119	-.170 (*)
	p-value	0	0.858	0.161	0.045
	N	140	140	140	140

		BAR 11	CUE 1	CUE 2	CUE 3
BEN 1	<i>r</i>		-0.104	-0.042	0.054
	p-value		0.223	0.619	0.527
	N	140	140	140	140
BEN 2	<i>r</i>		-0.124	0.052	-0.062
	p-value		0.144	0.538	0.467
	N	140	140	140	140
BEN 3	<i>r</i>		-0.095	0.134	0.022
	p-value		0.265	0.115	0.8
	N	140	140	140	140
BEN 4	<i>r</i>		0.023	0.128	0.039
	p-value		0.786	0.133	0.65
	N	140	140	140	140
BEN 5	<i>r</i>		-0.055	0.097	0.115
	p-value		0.517	0.256	0.175
	N	140	140	140	140
BEN 6	<i>r</i>		-0.118	0.014	0.036
	p-value		0.164	0.866	0.673
	N	140	140	140	140
BAR 1	<i>r</i>		-0.147	-0.142	-.265 (**)
	p-value		0.084	0.094	0.002
	N	140	140	140	140
BAR 2	<i>r</i>		-0.016	-0.006	-0.113
	p-value		0.848	0.946	0.184
	N	140	140	140	140
BAR 3	<i>r</i>		-0.049	0.027	-0.074
	p-value		0.569	0.753	0.385
	N	140	140	140	140
BAR 4	<i>r</i>		-0.03	-0.055	-.227 (**)
	p-value		0.724	0.519	0.007
	N	140	140	140	140
BAR 5	<i>r</i>		0.105	-0.002	-.215 (*)
	p-value		0.215	0.977	0.011
	N	140	140	140	140
BAR 6	<i>r</i>		0.025	-0.064	-0.012
	p-value		0.772	0.451	0.885
	N	140	140	140	140

		BAR 11	CUE 1	CUE 2	CUE 3
BAR 7	<i>r</i>		0.014	0.092	0.025
	p-value		0.87	0.281	0.767
	N	140	140	140	140
BAR 8	<i>r</i>		0.073	0.062	0.005
	p-value		0.392	0.47	0.951
	N	140	140	140	140
BAR 9	<i>r</i>		0.105	0.134	-0.128
	p-value		0.219	0.113	0.131
	N	140	140	140	140
BAR 10	<i>r</i>		0.103	0.044	-0.06
	p-value		0.224	0.608	0.481
	N	140	140	140	140
BAR 11	<i>r</i>		0.032	0.043	-0.083
	p-value		0.712	0.61	0.332
	N	140	140	140	140
CUE 1	<i>r</i>		1	.525 (**)	.208 (*)
	p-value		.	0	0.013
	N	140	140	140	140
CUE 2	<i>r</i>		.525 (**)	1	.237 (**)
	p-value		0	.	0.005
	N	140	140	140	140
CUE 3	<i>r</i>		.208 (*)	.237 (**)	1
	p-value		0.013	0.005	.
	N	140	140	140	140
CUE 4	<i>r</i>		0.151	0.111	.406 (**)
	p-value		0.075	0.19	0
	N	140	140	140	140
CUE 5	<i>r</i>		0.117	.230 (**)	-0.088
	p-value		0.17	0.006	0.302
	N	140	140	140	140
CUE 6	<i>r</i>		-0.004	-0.04	.203 (*)
	p-value		0.966	0.64	0.016
	N	140	140	140	140

		CUE 4	CUE 5	CUE 6
Actual Insurance Status	<i>r</i>	.262 (**)	-0.05	.430 (**)
	p-value		0.555	0
	N	140	140	140
Family History	<i>r</i>	0.13	0.018	0.112
	p-value	0.138	0.835	0.202
	N	132	132	132
Health Status	<i>r</i>	-0.033	-0.102	0.072
	p-value	0.702	0.232	0.395
	N	140	140	140
Age	<i>r</i>	0.061	0.007	0.136
	p-value	0.474	0.936	0.11
	N	139	139	139
Gender	<i>r</i>	-0.036	-0.047	0.047
	p-value	0.678	0.586	0.583
	N	137	137	137
Race Non-white	<i>r</i>	-.290 (**)	0.036	-.264 (**)
	p-value	0.001	0.674	0.002
	N	140	140	140
Marital Status	<i>r</i>	0.086	0.11	-0.09
	p-value	0.31	0.196	0.289
	N	140	140	140
Education	<i>r</i>	0.139	-0.134	.291 (**)
	p-value	0.102	0.116	0
	N	140	140	140
Income	<i>r</i>	0.162	-0.027	.321 (**)
	p-value	0.061	0.758	0
	N	134	134	134
SUS Index	<i>r</i>	0.043	0.163	0.017
	p-value	0.612	0.054	0.84
	N	140	140	140
SEV Index	<i>r</i>	0.082	.203 (*)	-0.031
	p-value	0.338	0.016	0.715
	N	140	140	140
BEN Index	<i>r</i>	.238 (**)	.250 (**)	.234 (**)
	p-value	0.005	0.003	0.005
	N	140	140	140



		CUE 4	CUE 5	CUE 6
BAR Index	<i>r</i>	-.183 (*)	.190 (*)	-.307 (**)
	p-value	0.031	0.025	0
	N	140	140	140
SUS 1	<i>r</i>	-0.017	0.106	0.103
	p-value	0.84	0.211	0.227
	N	140	140	140
SUS 2	<i>r</i>	-0.096	0.117	-0.045
	p-value	0.26	0.17	0.601
	N	140	140	140
SUS 3	<i>r</i>	-0.016	0.14	-0.099
	p-value	0.848	0.1	0.243
	N	140	140	140
SUS 4	<i>r</i>	0.08	0.107	-0.041
	p-value	0.348	0.208	0.632
	N	140	140	140
SUS 5	<i>r</i>	0.095	.175 (*)	0.054
	p-value	0.264	0.039	0.525
	N	140	140	140
SUS 6	<i>r</i>	0.123	0.048	0.051
	p-value	0.148	0.57	0.547
	N	140	140	140
SEV 1	<i>r</i>	0.127	0.12	0.09
	p-value	0.136	0.159	0.29
	N	140	140	140
SEV 2	<i>r</i>	0.105	.190 (*)	0.032
	p-value	0.217	0.025	0.704
	N	140	140	140
SEV 3	<i>r</i>	0.024	0.057	-0.014
	p-value	0.777	0.502	0.872
	N	140	140	140
SEV 4	<i>r</i>	0.149	.228 (**)	0.013
	p-value	0.079	0.007	0.881
	N	140	140	140
SEV 5	<i>r</i>	-0.085	0.135	-.205 (*)
	p-value	0.315	0.112	0.015
	N	140	140	140

		CUE 4	CUE 5	CUE 6
BEN 1	<i>r</i>	.322 (**)	0.097	.255 (**)
	p-value	0	0.253	0.002
	N	140	140	140
BEN 2	<i>r</i>	0.071	0.083	0.164
	p-value	0.404	0.331	0.053
	N	140	140	140
BEN 3	<i>r</i>	0.138	0.133	0.091
	p-value	0.104	0.118	0.283
	N	140	140	140
BEN 4	<i>r</i>	.233 (**)	0.136	0.112
	p-value	0.006	0.108	0.188
	N	140	140	140
BEN 5	<i>r</i>	0.154		0.157
	p-value	0.07	0.014	
	N	140	140	140
BEN 6	<i>r</i>	0.076	.280 (**)	.196 (*)
	p-value	0.373	0.001	0.02
	N	140	140	140
BAR 1	<i>r</i>	-.275 (**)	0.041	-0.083
	p-value	0.001	0.628	0.327
	N	140	140	140
BAR 2	<i>r</i>	-0.135	0.043	-0.046
	p-value	0.113	0.614	0.587
	N	140	140	140
BAR 3	<i>r</i>	-0.023	.191 (*)	0.041
	p-value	0.784	0.024	0.629
	N	140	140	140
BAR 4	<i>r</i>	-0.13	0.065	-0.045
	p-value	0.127	0.444	0.601
	N	140	140	140
BAR 5	<i>r</i>	-0.021	0.109	-.254 (**)
	p-value	0.802	0.198	0.002
	N	140	140	140
BAR 6	<i>r</i>	0.012	0.088	-0.109
	p-value	0.884	0.3	0.201
	N	140	140	140

		CUE 4	CUE 5	CUE 6
BAR 7	<i>r</i>	-0.077	0.084	-0.15
	p-value	0.365	0.321	0.076
	N	140	140	140
BAR 8	<i>r</i>	-0.013	0.112	-.200 (*)
	p-value	0.875	0.189	0.018
	N	140	140	140
BAR 9	<i>r</i>	-0.093	0.117	-.334 (**)
	p-value	0.277	0.168	0
	N	140	140	140
BAR 10	<i>r</i>	-0.133	0.021	-.188 (*)
	p-value	0.118	0.803	0.026
	N	140	140	140
BAR 11	<i>r</i>	-0.162	.174 (*)	-.271 (**)
	p-value	0.056	0.039	0.001
	N	140	140	140
CUE 1	<i>r</i>	0.151	0.117	-0.004
	p-value	0.075	0.17	0.966
	N	140	140	140
CUE 2	<i>r</i>	0.111	.230 (**)	-0.04
	p-value	0.19	0.006	0.64
	N	140	140	140
CUE 3	<i>r</i>	.406 (**)	-0.088	.203 (*)
	p-value	0	0.302	0.016
	N	140	140	140
CUE 4	<i>r</i>	1	0.081	.199 (*)
	p-value	.	0.338	0.018
	N	140	140	140
CUE 5	<i>r</i>	0.081	1	-0.134
	p-value	0.338	.	0.114
	N	140	140	140
CUE 6	<i>r</i>	.199 (*)	-0.134	1
	p-value	0.018	0.114	.
	N	140	140	140

## VITA

Jill Elizabeth Murray was born in New Orleans, Louisiana. She earned a Bachelor of Arts in psychology from Loyola University in 1985. In 1986, she earned a Master of Social Work from Tulane University. She has been a Licensed Clinical Social Worker (LCSW) in Louisiana since 1989. She earned a Doctor of Philosophy in social work from Louisiana State University in 2004. Currently she lives in New Orleans and is an adjunct instructor and a research associate at Louisiana State University School of Social Work.