AFRICAN AMERICAN WOMEN'S PERSONAL INFLUENCING FACTORS ASSOCIATED WITH PAP SMEAR TESTING AND CERVICAL CANCER

by

Kelly Walters Ackerson

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Nursing)
in The University of Michigan
2008

Doctoral Committee:

Professor Joanne M. Pohl, Chair
Professor Laura P. Kohn-Wood
Professor Lisa Kane Low
Professor Julia S. Seng

Dedication

This dissertation work is dedicated to my husband Craig, my daughter Megan, son-in-law Tom, and my sons, Trevor and Justin who have stood by my side without complaint. These last couple of years our family has gone through a lot of pain and joy, with the birth of my grandson Brett, making us a stronger, closer family. My husband and children have given me more support than they will ever know. I could not have accomplished this work without them, nor would I have wanted to.

Acknowledgements

I would like to thank the members of my dissertation committee for their guidance during the dissertation process. Each member of my committee made valuable contributions to my growth and development. As chair of my committee, Dr. Pohl has been invaluable to me because of her knowledge and guidance. She has been very patient and generous with her time, providing support and encouragement throughout my doctoral program. Dr. Seng's questions and suggestions helped me to develop my program of research and a better understanding of qualitative research, and to look beyond the spoken words to reach a deeper understanding of what is being said. Dr. Low challenged me to write professionally, and her questions made me reflect in directions I would not have gone. Dr. Kohn-Wood was important in helping me with the language of the women in my research to make sure that their words and meanings came through in a respectful and thoughtful manner.

Throughout the doctoral program, my classmates have been an important source of support. They stimulated my thinking in different directions that I would not have taken had they not asked me difficult questions or presented different ideas to stimulate further thought.

I want to thank the staff at the Calhoun County Health Department, the domestic assault shelter, and the emergency shelter in Calhoun County, in allowing me to recruit participants from their facilities. Recruitment of participants would have been made much more difficult had it not been for the supportive staff at these institutions who believed in my research.

I want to thank my friends Holly and Alberta for their support these past few years. Our get-togethers hold a special memory for me because I enjoyed them and needed them so much. These two people listened to me talk about my research without showing boredom or irritation.

Finally, the support that my mom and dad have given me through all of my schooling has been so important to me. Little attention was given to my mom and dad through this dissertation process. Yet their understanding and patience has been instrumental in helping me through the final phases of this degree. I am proud and honored to be their daughter, and I know that they are proud of me.

Table of Contents

List of Figures

Figure

List of Tables

Tables

List of Appendices

Appendices

CHAPTER I

Introduction

Cervical cancer is the second most common cancer among women worldwide possibly in part due to changes in sexual behavior (Parkin & Bray, 2006), and in part due to inadequate cervical cancer screening programs and poor quality cytology in developing countries (Cuzick, Mayrand, Ronco, Snijders, & Wardle, 2006; and Parkin & Bray). Prior to the development of the Papanicolaou test (Pap smear) in the 1950's, cervical cancer was the leading cause of death in women in the United States (U.S.) because there was no method for screening for high grade precursors (Saslow et al., 2002). Women often presented with symptoms of invasive cervical cancer in advanced stages, resulting in high death rates (American Society for Colposcopy & Cervical Pathology (ASCCP) 2006). Cervical cancer in the U.S. is now the 10th leading cause of cancer death in women, in part due to organized cervical cancer screening programs developed during the 1950's and 1960's. These screening programs contributed to decreasing cervical cancer incidence and mortality (Parkin & Bray; and U.S. Preventive Services Task Force (USPSTF), 2003). The Pap smear has been beneficial in detecting precursor lesions before the cells can advance to cancer. Yet, despite the benefits that have been achieved with the Pap smear, women are still dying from cervical cancer. It is estimated that in the

U.S. 13 women die every day from cervical cancer (American Cancer Society (ACS), 2006); many unnecessary deaths preventable by routine Pap smears.

Background and Significance

The Healthy People 2010 goal for cervical cancer mortality is 2.0/100,000 population. Cervical cancer mortality for African American women is greater than all other groups of women (Centers for Disease Control and Prevention (CDC), 2006). The mortality rate for African American women is 4.9/100,000, American Indiana/Alaska Native is 4.0/100,000, for Hispanic women is 3.3/100,000, Asian/Pacific Islander is 2.4/100,000, and Non-Hispanic White women is 2.3/100,000 population (National Cancer Institute (NCI), 2006). Following the 2005 midcourse review of the Healthy People 2010, little progress was observed in reducing cervical cancer death disparities among the African American women and among women with a high school education or less. Improvement in cervical cancer death rates, however, was noted among Asian/Pacific Islander women (CDC, 2006).

Cervical cancer is caused by certain types of high risk strains of the human papillomavirus (HPV), a sexually transmitted virus contracted by skin-to-skin contact from an infected partner (Munoz, Castellsague, de Gonzalez, & Gissmann, 2006). There are approximately 12 to 18 strains of HPV that are oncogenic that affect the cervical epithelium (Cuzick et al., 2006; and Parkin & Bray, 2006). Sexually active women are being exposed to HPV that contributes to cervical cell changes and places them at risk for cervical cancer. If cervical cancer is caught in its early stages, the five-year survival rate for these women is approximately 92% (Saslow et al., 2002). The Pap smear test has been a cancer screening test since the 1950's and has proven to be beneficial in detecting precursor lesions on the cervix before they can advance to cancer. These precursor lesions can take up to 10 years to advance to invasive cervical cancer (Munoz et al., 2006). But, unfortunately, not all women obtain routine cervical cancer screening and the opportunity to detect these precursor lesions is lost.

Studies of screening practices and barriers have frequently focused on specific race/ethnic groups because of their observed differences in survival, presumably due to less frequent screening. Although African American women have a greater rate of screening compared to all other groups of women, as they age, they tend to obtain fewer screenings then all other groups, just as the risk of cervical cancer increases (ACS, 2006). As a result, African American women are at risk for health disparities from cervical cancer (ACS).

According to the American Cancer Society (Saslow et al., 2002), and the U.S. Preventive Services Task Force (2003), screening for cervical cancer can be delayed until three years after becoming sexually active or age 21, whichever comes first. Many organizations in the U.S., however, recommend routine cervical cancer screening by age 18 or 21 for all women due to the high prevalence of vaginal intercourse at an early age (Saslow et al.). Routine screening can detect changes that occur early in the disease process and allow initiation of treatment, and prevention of the advancement of dysplastic cells to cancer. Pap smears remain an important screening test to evaluate for abnormal cervical cells even with the administration of the HPV vaccine, a preventive vaccine covering four strains of HPV (6, 11, 16, 18). HPV 16 and 18 are most commonly found in cervical cancers (Cuzick et al., 2006). The survival rate for women, who are diagnosed with a pre-invasive lesion, is almost 100% (Saslow et al.). The U.S. Department of Health and Human Services (2002) reviewed histories of women who were diagnosed with invasive cervical cancer and found that between 50% and 70% of the women had not obtained screening within the previous 5 years or had never received the screening test.

Interrelated deterrents for cervical cancer screening among some African American women include: lack of any type of health insurance coverage (private or public); low educational attainment (high school education or less), and having no usual source of health care (ACS, 2006; Bazargan, Bazargan, Garooq, & Baker, 2004; CDC, 2006; Datta et al., 2005; Hiatt et al., 2001; Hoyo et al., 2005; Jennings-Dozier & Lawrence, 2000; Sambamoorthi & McAlpine, 2003; and Sung, Alema-Mensah, & Blumenthal, 2002). Even when medical care or insurance coverage is available (e.g. Title XV programs), African American women have lower rates of cervical cancer screening than non-Hispanic white women (CDC, 2005).

Little is known about the personal factors that are influencing routine cervical cancer screening in African American women. Possible influences that are personal to women include culture, religion, peers, social network, and social support. Also, previous personal health care experiences associated with Pap smear testing may negatively affect behavior in routine testing. Personal influencing factors associated with the Pap smear test and cervical cancer may deter African American women from taking health preventive actions to screen for cervical cancer, thereby increasing their risk.

Study Purpose and Objective

The purpose of this study is to explore African American women's personal influencing factors that contribute to Pap smear testing. The population of interest is low income African American women with low educational attainment. The conceptual framework utilized for this study is based on Cox's (1984) Interaction Model of Client Health Behavior (IMCHB). This model was chosen because it emphasizes the uniqueness of each person and can be used to explain variance in individual health outcomes. The model will also help to make this work more congruent with other research investigating health disparities. It will facilitate future quantitative work where the concepts that are the focus of this qualitative study can be operationalized systematically by using a well-established, empirically supported, pertinent framework (Abel & Chambers, 2004; Abel & Miller 1997; Corbett, 2003; Cox, McLaughlin, Steen, & Hudson, 2006; and Marion & Cox, 1996). In this study we identify the influencing factors, operationalized from Cox's model, including women's Background Variables of *social influences* and *previous health care experience* that affect the Dynamic Variables of *cognitive appraisal* to the behavior of cervical cancer screening, i.e., seeking Pap smear testing.

This project proposes to examine personal influencing factors, such as motivating factors, sociocultural factors, and experiences that influence African American women who are adherent and non-adherent for Pap smear testing.

The relationship between motivating factors to perception of vulnerability to cervical cancer will be explored. The specific aims of the research are:

1. Explore African American women’s motivation for Pap smear testing using Cox;s (1984) Interaction Model of Client Health Behavior (IMCHB) Background Variables to guide the study through:
    - Examining the social influences that affect motivation for Pap smear testing.
    - Examining the cultural influences that affect motivation for Pap smear testing.
    - Understanding the past experiences with Pap smear testing that affect motivation.
2. Consider the Dynamic Variables (cognitive appraisal) in Cox’s model (1984) and their influences on Pap smear testing in low income African American women through:
    - Examining the influence of beliefs about Pap smears and motivation in cervical cancer screening.
    - Examining the influence of beliefs about vulnerability to cervical cancer and motivation in Pap smear testing.
    - Understanding the influence of perceptions about being vulnerable to cervical cancer and motivation in Pap smear testing.

CHAPTER II

Review of the Literature

Theoretical Framework

The theoretical framework that guides this study is the Interaction Model of Client Health Behavior (IMCHB) (Cox, 1982), a comprehensive, multidimensional health behavior model, which includes broad conceptual variables that can be operationalized to address specific health care problems or situations (Abel & Chambers, 2004; and Cox & Roghmann, 1984). The IMCHB has three basic assumptions (1) individuals as clients are not reducible to component parts; (2) clients have the ability to make choices about their behavior; and (3) each client is unique (Cox, 1984). The working hypothesis of the IMCHB is that "the potential for positive patient health outcomes increases as the provider intervention or interaction is tailored to the uniqueness of each patient (i.e., background and cognitive, affective, and motivational manifestations)" (Cox, 2003, p. 94).

Seeking or not seeking cervical cancer screening is a health behavior that may be influenced by many factors that are interrelated, such as lack of insurance, socioeconomic status, and low educational attainment. These are concepts recognized in the IMCHB. Other researchers have found this model to be useful for quantitative research (Abel, & Miller, 1997; Lee & Laffrey, 2006; and

Robinson & Thomas, 2004). Although qualitative research can be done for the purpose of inductively generating new theory, for this study and the quantitative research that will follow, attention to this existing model has numerous advantages. The IMCHB was designed for application to a variety of health care decisions and behaviors (Cox & Roghmann, 1984). This preliminary study is proposed with a theoretical framework in mind. The IMCHB was selected because its ecological components are appropriate for health disparity studies where socio-environmental factors are especially important to consider. The following discussion will describe the major elements of the IMCHB, the variables that are associated with the elements, and then will describe the variables of interest for this research project that guide the literature review.

Major elements of the IMCHB*.* The IMCHB (Figure 1) consists of three major elements: Client Singularity (an individual's unique characteristics), Client-Professional Interaction, and Client Health Outcomes (Cox, 1984). The model's objective is to identify and suggest an explanation of the relationships between these three major elements. The relationship involves a "continuous reciprocal interaction between aspects of the client's singularity, the interaction, and the health care outcomes" (Cox, 1982, p. 51).

Client singularity. The first element of the model Client Singularity is defined as the unique characteristics of an individual and includes Background Variables and Dynamic Variables.

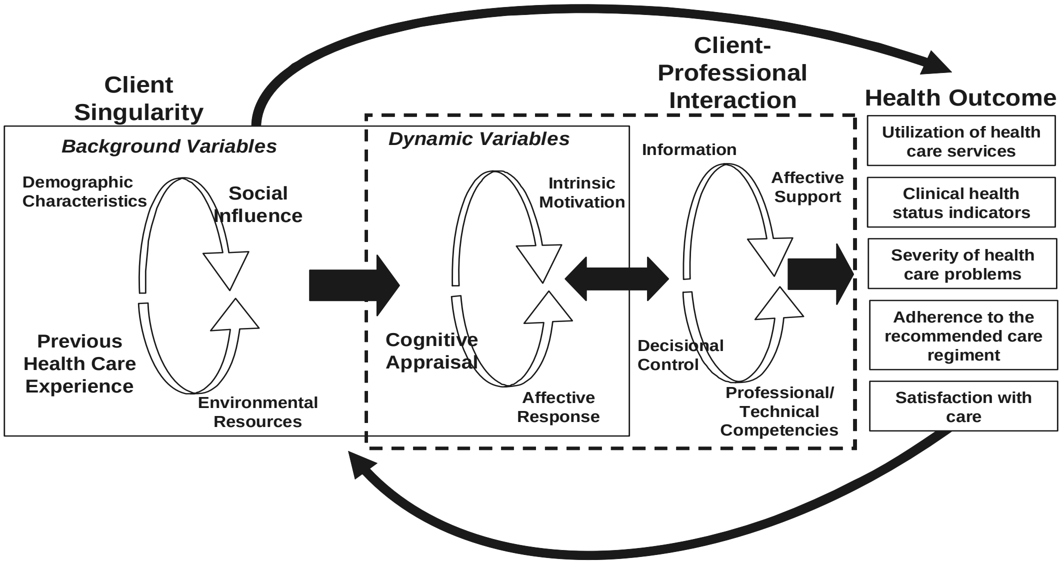


Figure 1. Interaction Model of Client Health Behavior (Cox, 1984)

Background variables*.* The Background Variables include the client's demographic characteristics, the influence of the client's social group, previous health care experiences, and environmental resources, such as financial resources for health care. All of the background variables interact "cumulatively, simultaneously, and often interdependently with each other to produce a specific health behavior" (Cox, 1984, p. 149). Understanding the client's socioeconomic status, the influence of social values or group norms on the client in regards to a health care issue, and the financial and accessibility of health care, is more likely to predict a certain set of health behaviors than evaluating each variable independently. These variables operate over time to produce a specific health behavior. The Background Variables are considered antecedents that are relatively static and influence or affect the Dynamic Variables over a period of time and results in a certain health behavior (Cox, 1982, 1984).

Dynamic variables. The Dynamic Variables are more active variables than the Background variables and include *intrinsic motivation, cognitive appraisal,* and *affective response.*

Intrinsic motivation. Motivation is the “primary element” within the IMCHB (Cox, 1982). Motivation is an energized state where one has the ability to direct their behavior toward a specific goal. Motivation varies based on the degree and type. Each person is influenced to act by different motivational factors, internally (self-determined) or externally (outside force) (Ryan & Deci, 2000). Intrinsic motivation is influenced by a person’s need to be competent and autonomous (Deci & Ryan). Factors that affect the degree and expression of motivation can be related to the client’s sociocultural variables, such as ethnicity, socioeconomic status, environmental resources, cognitive appraisal and affective responses (Cox, 1984)

Cognitive appraisal. A client’s cognitive appraisal, such as beliefs, knowledge, values, and risk appraisal, is responsible for their interpretation or perceptions of a health issue and their choice in behavior. Therefore, cognitive appraisal influences their health state and the quality of the relationship with a health care provider (Cox 1982, 1984). The IMCHB suggests that there is an interrelationship between the background variables and the client's cognitive appraisal (Abel & Miller, 1997; and Cox, 1982). For example, a woman without a family history of cervical cancer may not perceive herself as at risk for cervical cancer, and thus that she does not think she needs to obtain a Pap smear test. There also exists a relationship between cognitive appraisal and affective response. An affective (emotional) response, such as fear, can affect the way a client processes information, thereby affecting behavior (Nabi, 2002).

Affective response. Emotional responses to events influence the interpretation of events and subsequent behavior (Cox, 1982). Fear has a particularly pronounced ability to inhibit action – it is evoked by uncertainty such as not knowing whether the screening test will find cancer (Dawes, 1998). For example, the cognitive appraisal of cancer screening by a woman can elicit the emotion of fear, which in turn may result in failure to obtain cancer screening (Nabi, 2002). Cox (1984) posits that the background variables and the cognitive appraisal of a health issue contribute to and mediate the affective response to a health issue. As a result, differences in health behavior would be better viewed as interrelationships between these factors and their combined effects on the health outcome.

Client-professional interaction. The second element of the model is Client-Professional Interaction, involving four factors: *information; affective support; decisional control; and professional/technical competencies*. These factors identify the interaction between the client and the provider as a major influence on health care behavior (Cox, 1982). The four factors will vary depending upon the client's singularity and their health care needs.

Information. Information can improve a client's knowledge regarding a certain health issue including details of what can and cannot be done to deal with this health issue (Cox, 1984). The knowledge then can be used to develop "goals for action, reduce negative arousal, and provide feedback about one's sense of competency and self-determinism" (Cox, 1982, p. 51). The information must be provided at a level where the client can understand it, not be overwhelming or too simplistic and most importantly, have meaning to the client. Information and knowledge are necessary to affect positive health behaviors, however they are not sufficient by themselves (Cox, 1984). The relationship between the client and health care provider, the amount of control the client perceives they have, and aspects of the client's singularity, all affect what information is processed and how the client will use that information (Cox 1982).

Affective support. Affective support refers to the health care provider attending to the client's level of emotional response to a health care concern. The client's need for affective support must be considered by the provider in keeping with the client's singularity (Cox, 1982). If a client's affective response is the primary influence over the cognitive appraisal of a health concern, the provider must address the affective response to reduce the emotional arousal to a level where the cognitive appraisal might be altered (Cox, 1982, 1984). For example, an emotional response such as fear affects the way women process information regarding cancer screening, and prevents them from processing information and imparting knowledge about its benefits, which, paradoxically, is the very thing that can ameliorate their fear (Ackerson & Preston, 2007). Lack of attention to a woman's level of emotional response perpetuates the fear and knowledge deficit and does nothing to alter the cognitive appraisal which can help the woman develop a more accurate perception of cancer screening. Addressing the emotional response will serve to further reduce the degree of emotional arousal, increase the woman's potential for cognitive and decisional control over the health care concern, and increase her satisfaction (Cox, 1982, 1984).

Decisional control. Decisional control refers to the client's expectation of having the power to participate in making health care decisions in order to obtain “desirable consequences” (Cox 1982, 1984). Cox’s (1984) model postulates that there are interrelated relationships between decisional control, other interaction factors, and aspects of client’s singularity. A sense of self-efficacy is increased by decisional control and influences commitment to health behaviors, i.e., being given the choice to pick between treatment alternatives, enhances the client’s sense of commitment and behavior is viewed as self-determined (Cox, 1982). Alternatively, if the health care provider provides limited information or does not give the client a choice in treatment when a choice exists, the health care provider is limiting the client’s decisional control in health care decisions. This affects self-efficacy and may possibly reduce commitment to health-relevant behaviors.

Professional-technical competencies. Depending upon the client’s needs, such as technical skills of the health care provider (IV therapy, blood pressure monitoring, wound dressings, and Pap smear testing, pelvic exam technique), the need for decisional control by the client will be less, and the possible need for affective support will be increased. The need for information will depend upon the client’s health and ability to process information (Cox, 1982, 1984). Once the technical skills of the health care provider are reduced or no longer needed, the client’s decision making abilities should be part of the health care decision process, thereby increasing the client's sense of control, feelings of competency and self-determinism (Cox, 1982). The technical skills of the professional could also affect decisions, possibly decreasing a woman's decision to have a Pap smear.

Elements of health outcome. The implied health care outcome measure throughout the IMCHB has been referred to as health behavior or a health behavior that results in a health state (Cox, 1984). The model describes five health care outcomes; broad concepts that will accommodate multiple outcome measures which are both operational and sensitive to interventions: (1) *utilization of health care services, (2) clinical health status indicators, (3) severity of health care problems, (4) adherence to the recommended-care regimen, and (5) satisfaction with care.* The meaning of each of these outcomes can vary depending upon the issue being addressed. For example, the utilization of health care services may be considered positive in health prevention, but a negative health behavior when the goal is to increase one's capabilities to care for self (Cox, 1984). In most instances, only one of these variables will be of interest depending upon the focus of the client's singularity health care needs and the interaction between the client and the health care provider (Cox, 1982). Within this model, positive health behaviors are considered activities that maintain or promote positive health and negative health behaviors, such as having multiple sexual partners or not following through with routine Pap smears.

Prior to selecting the IMCHB as a framework for this study, an alternative conceptual framework was considered, the Health Belief Model (HBM). In the HBM, the central construct is motivation. The HBM examines behavior in response to diagnosed illness and has been characterized as a value-expectancy model because it includes the desire to get well or to avoid illness (Beech & Goodman, 2004). This theory overlooks cultural, social, and economic influences and barriers (Beech & Goodman). The HBM also does not address the client-provider interaction explicitly and fails to attend to the role of the professional in effecting client behavior (Cox, 1982). As a result, behavioral change based on the HBM tends to be focused at the individual level only. Intervention targeting changes in the cultural and social environment are also not addressed (Beech & Goodman). The IMCHB was chosen because it is a multidimensional health behavior model that looks at the unique characteristics of a woman from within her personal, cultural, social, and environmental contexts (Cox) considered with a nursing perspective. This model emphasizes the process by which the singular position of each client on the variables can be translated into health care behavior. Paramount in this model is the interaction between the client and provider in effecting a positive health behavior change.

Use of the IMCHB in Other Studies*.*

The IMCHB has served as the basis for a variety of health behavior studies in which the uniqueness of each client was used to explain variances in health outcomes. Studies have focused on adult health behaviors, such as condom usage to prevent STD/HIV (Abel & Chambers, 2004; Abel & Miller 1997; and Marion & Cox, 1996), and physical activity (Lee & Laffrey, 2006).

The IMCHB has been used to conduct studies in pediatric and adolescent health behavior, such as adolescent aggression (DiNapoli, 2003), cancer survivors (Cox et al., 2006), and health promotion behaviors (Robinson & Thomas, 2004). The IMCHB has also been used in intervention studies to examine enhancement of the health and well being of adults with chronic health issues (Corbett, 2003) and maintenance of an at-home walking program for middle age women (Wilbur, Chandler, & Miller, 2001). The model has also been used to guide secondary data analyses in decision making with regard to amniocentesis (Cox & Roghmann, 1984), to identify factors that predict or modify substance use in childhood cancer survivors, and to describe how a risk counseling intervention reduced young survivors' substance use (Cox et al.).

A number of instruments have been developed to measure specific concepts characterized by the IMCHB: client satisfaction in the elderly (Bear, Brunell, & Covelli, 1997); measurement of client-practitioner interaction that occur during a primary care visit (Bear & Holcomb, 1999); measurement of intrinsic motivation for sexual health (Abel, Marion & Seraphine, 1998); self-determination in the health behaviors of adults (Cox, 1985); and children (Cox, Cowell, Marion, & Miller, 1990). The previously reviewed studies include differing age groups, genders, race and ethnicities.

The use of the model by the researchers in the above referenced studies, eight (53%) (Bear et al., 1997; Corbett, 2003; Cox, 1985; Cox, 2003; Cox et al., 2006; Cox & Roghmann, 1984; Lee & Laffrey, 2006; and Marion & Cox, 1996),used all three elements; three (20%) (Abel & Chambers, 2004; Abel & Miller 1997; and Robinson & Thomas, 2004) used the elements of Client Singularity and Health Outcome; two (13%) (Abel et al., 1998; and Wilbur et al., 2001), evaluated the element of Client Singularity; one (06%) (DiNapoli, 2003) evaluated the element of Client Singularity and Client/Professional Interaction; and one (06%) (Bear & Holcomb, 1999) evaluated the Client/Professional Interaction.

Cox and colleagues (2006) used all three elements of the IMCHB to guide a secondary data analysis. The purpose of this study was to identify factors that predict or modify substance use in childhood cancer survivors and to describe how a risk counseling intervention reduced young survivors' substance use. They found that three factors directly predicted substance use at baseline: current grade level in school, perceptions of susceptibility to late effects of cancer treatment, and worry. Post intervention findings were that grade level and worry were found to predict increased substance use, and wanting to change health behavior predicted decreased substance use.

The aim of the study conducted by Abel & Miller (1997) was to understand and describe client singularity and health outcomes associated with sexual risk behaviors among rural women of childbearing age. The Health Self-Determinism Index-Sexual (HSDI-S) a questionnaire that was developed based on the elements of the IMCHB and modified from Cox's original HSDI to measure intrinsic motivation for sexual health was used. The findings were that African

American women compared to white women were more extrinsically motivated in protecting themselves against sexually transmitted diseases (STD). It was postulated that the African American women in this study had more education resulting in greater knowledge about the benefits of condom use compared to the white women in the study.

A Client Encounter Form (CEF) was developed based on the IMCHB element of client-professional interaction that occurs during a clinical visit (Bear & Holcomb, 1999). The CEF had high interrater reliability and was found to be usable in a primary care clinic. Analysis of the CEF revealed different interactions between the client and professional depending upon whether the visit was preventative or problem-oriented. Preventive visits had higher levels of health information, psychological affective support, and health promotion goal-setting behaviors. Problem visits involved more information regarding the client's diagnosis, medications, and treatments, and a greater need for affective support.

Qualitative Approach and Use of a Framework

Qualitative research is a scientific approach that is generally used to generate new theory inductively by investigating a phenomenon. It involves the collection of rich narrative material for the purpose of discovering important underlying dimensions and patterns of relationships (Polit & Beck, 2004). Qualitative research can be approached both inductively and deductively. Deductive research means that the research is being approached with predetermined categories based on some theory or criteria (Patton, 2002). The goal is to find the most relevant information which "outweighs concern" about maintaining purity in regards to the approach (Patton). Qualitative studies can be conducted with a theoretical framework in mind and analyzed using a content analysis approach, a qualitative method often employed when the interview data are considered in relation to extant theory (Harvey & Bird, 2004; Morgan, 1993; Patton; and Seng, Low, Sparbel & Killion, 2004). Sometimes existing theory or prior research exists about a phenomenon that is incomplete (Hsieh & Shannon, 2005; Morgan, 1993; and Patton). A content analysis approach can be used to support or extend conceptually a theoretical framework or theory when predetermined categories exist regarding important variables or variable relationships. This approach looks at the data for "undiscovered patterns and emergent understandings" (Patton).

Using a content analysis approach is relevant for this project since a theoretical framework is guiding this study and information will be obtained deductively. By using a content analysis approach, the interview data can be analyzed for recurring words or themes that predominate in order to reduce the volume of material to identify consistencies and meanings (Patton, 2002). A content analysis can also be used to compare differences or similarities in words or themes between two groups, such as comparing the responses between the younger women and the older women in regards to their personal influences associated with Pap smear testing.

Cervical Cancer

Cervical cancer is a preventable disease, and women who present with invasive cervical cancer should be considered a failure of screening (Garner, 2003). Cervical cancer screening can prevent cervical cancer altogether (ACS, 2006). Even though cervical cancer is preventable, the incidence of new cervical cancer cases in 2007 in the U.S. is expected to be 11,150 women with 3,670 deaths (NCI, 2006). Despite the number of health care resources in the U.S., older women, women of low income, low educational attainment, and uninsured or underinsured have not benefited from cervical cancer screening (ACS, 2006; Datta et al., 2005; Garner, 2003; and Saslow et al., 2002).

Racial and socioeconomic disparities in cervical cancer exist in incidence and mortality rates. Cervical cancer tends to be diagnosed more often in later stages and has a higher mortality rate in women who are of low income and minority status (ACS, 2006; and Garner, 2003). Survival rate from cervical cancer depends upon the stage of diagnosis. Women diagnosed with a localized (primary site) stage have a 92% 5 year survival rate, whereas women diagnosed at a regional stage have a 5 year survival rate of 55.7%. At a distant stage, the 5 year survival rate is 16%. Fifty-one percent of cervical cancers are diagnosed while the cancer is confined to the primary site (NCI, 2006). According to the Surveillance, Epidemiology, and End Results (SEER) statistics, the five-year survival rates by race for 1996-2003 were 72.9% for white women and 62.2% for African American women (NCI, 2006).

Currently, Hispanic and African American women are more likely to be diagnosed with cervical cancer compared to all other groups of women (NCI, 2006). The incidence rate for cervical cancer is highest for Hispanic women at 13.8/100,000, followed by African American women 11.4/100,000, White women

8.5/100,000, Asian/Pacific Islander women 8.0/100,000, and American Indiana/Alaska Native women 6.6/100,000. Yet, African American women have a greater mortality rate from cervical cancer than all other racial and ethnic groups of women (NCI), in part due to a decrease in screening rates in African American women as they age (Garner, 2003). The mortality rate among African American women is 4.9/100,000, followed by American Indian/Alaska Native women 4.0/100,000, Hispanic women 3.3/100,000, Asian/Pacific Islander women 2.4/100,000, and White women 2.3/100,000 (CDC, 2007b). In fact, when all cancers are combined, death rates are highest among African American women (188.2/100,000), followed by white women (159.7/100,000), American Indians/Alaska Native women (106.8/100,000), Hispanic women (106.3/100,000) and Asians/Pacific Islander women (97.3/100,000) (CDC, 2007b).

At the Healthy People 2010 Midcourse Review (CDC, 2006), cervical cancer death rates decreased slightly, but Pap smear tests within the previous 3 years showed no improvement. Routine cervical cancer screening with Pap tests is important to detect precursor lesions before advancing to cancer (ASCCP). According to the CDC, Pap smear screening rates among women with a high school education were 79.6% and among women with less than a high school education were 73.8%, well below the goal of Healthy People 2010 to have Pap testing within the previous 3 years at 90%.

Decreasing incidence and mortality from cervical cancer depends upon the collaborative efforts of State and Federal partnerships, local health departments, primary care associations, and programs such as the National

Breast and Cervical Cancer Control Program (NBCCCP). The NBCCCP is currently in 50 States, the District of Columbia, 13 Tribal organizations, and 4 Territories (CDC, 2006). Unfortunately, this program reaches only a small portion of women needing the services (CDC). CDC is currently exploring this. As previously noted, it is well known that women without insurance coverage, those who are underinsured, of low income and have low educational attainment do not obtain routine testing (ACS, 2006; Datta et al., 2005; Garner, 2003; and Saslow et al., 2002). The personal influencing factors that motivate Pap smear testing among African American women are not well known. The focus of this literature review is African American women's personal influencing factors that are associated with Pap smear testing.

The IMCHB Mediating Variables of Interest

The variables of interest from the IMCHB that will be examined in this study (in black boxes Figure 2) the Background Variables of *social influence* and *previous health care experience* and their contributing effects on the Dynamic Variables of the *cognitive appraisal* in cervical cancer screening. Well known throughout the literature are the external influencing factors that affect health care behavior, which are the availability of insurance, access to care, level of education, and income status. Although these are important factors that affect behavior, it is also important to understand the personal influencing factors that promote negative health behaviors in African American women, who are low income having a high school education or less, in their cervical cancer screening practices. The selection of these variables were based on the gap in the literature regarding the personal influencing factors, such as a woman's social influence and previous health care experience that affects her cognitive appraisal regarding Pap smear testing and cervical cancer and their contributing effects on her affective response and motivation to obtain routine screening.

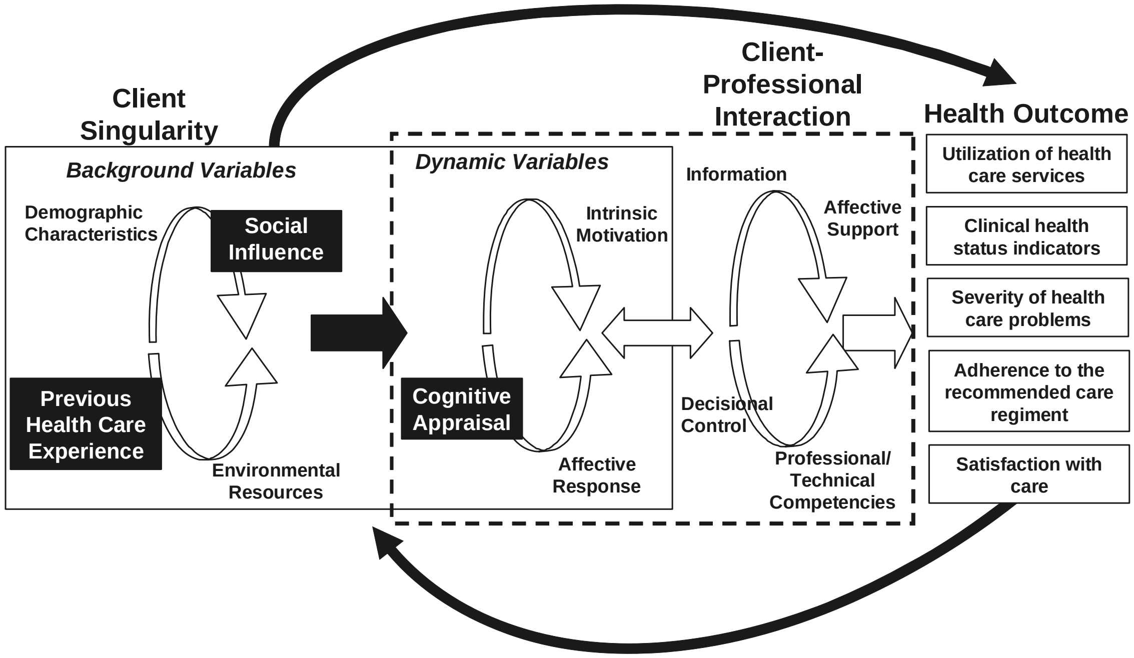


Figure 2. Interaction Model of Client Health Behavior Variables of Interest

---

Client singularity: background variables.

Social influences. Factors that are associated with women utilizing cancer screening services can be related to the social influence of a woman's culture (socially transmitted knowledge of values, beliefs, norms, and ways of life of a particular group that guides their thoughts and behaviors), religion, peer influences, social network, and social support (Cox, 2003). Support from individuals who are important to the woman and/or trusted by her can influence or facilitate the intrinsic motivation in women in obtaining Pap smear testing (Jennings-Dozier, 1999; Ogedegbe et al., 2005). There is a strong association between acceptance and approval of others for motivating one to perform. Research has indicated that the stronger the woman's perception of support from important others, such as mother, friends, health care providers, the stronger her social norm was with regard to obtaining an annual Pap smear (Jennings-Dozier, 1999; Jennings, 1997; and Ogedegbe et al., 2005). Ogedegbe and colleagues found that advice from health care professionals was more important than advice from family and friends as encouragement to undergo cancer screening.

In the Jennings study (1997), few differences were noted among the African American and Latina women as to important individuals who would approve of Pap smear testing. Both the African American (34%) and Latina (5%) women identified the family structure as important individuals; where friends were the most often mentioned for both ethnic groups (34% African American; 15% Latina), followed by spouses/significant others (22% African American; 15% Latina). The younger women (25% African American; 5% of Latinas) identified their mothers as individuals who would disapprove of annual Pap smear testing for suspicion of being sexually active. *Social influences*, a component of the model, was addressed in only three of the reviewed studies (Jennings-Dozier, 1999; Jennings, 1997; and Ogedegbe et al., 2005). These studies included African American women participants.

Previous health care experience. Information about women's *previous health care experiences* is the component of the model where there is also very little data available. Only three studies touch on this topic. African American women who perceived the Pap test as painful were more likely to be non-adherent to screening (Hoyo et al., 2005) Embarrassment due to physical exposure and the gender of the provider was found to be predictive in obtaining Pap smear testing. Women preferred a female provider, citing increased levels of comfort, and less embarrassment (Boyer, Williams, Callister, & Marshall, 2001; Jennings, 1997). Of the three articles that addressed previous health care experience, only one (Hoyo et al.) specifically addressed African American women.

Client Singularity – Dynamic Variable.

Cognitive appraisal - beliefs. What is in the forefront of women's thinking about cervical cancer, their cultural perspective affecting the screening behavior? Beliefs can be based on incomplete or inaccurate information which may lead to health behaviors that are not beneficial. Beliefs held by the women related to Pap smear testing may be negative predictors for Pap smear testing (Behbakht, Lynch, Teal, Degeest, & Massad, 2004; Boyer et al., 2001; Carter, Park, Moadel, Clearly, & Morgan, 2002; Gregg & Curry, 1994; Jennings-Dozier, 1999; Jennings, 1997; Nelson, Geiger, & Mangione, 2002; and Ogedegbe et al., 2005). Beliefs held about screening for cancer were influencing factors that contributed to women not being up-to-date on Pap smear testing. Believing that one cannot influence the future, such as preventing illness (so why try and change it), resulted in women not seeking preventive health care (Boyer et al., 2001; Jennings, 1997). Women who were unscreened were found to believe that cancer is bad luck, and they would rather not know if they had cancer (Behbakht et al., 2004). Gregg and Curry (1994) found that the women believed that the Pap smear is a test for cancer. The Pap was not considered a viable method for the detection of precancerous cervical cells. Many believed that cancer cannot be detected early; therefore the Pap smear was useless as a screening test. Older African American and Latina women believed that only younger women who were sexually promiscuous needed Pap smear tests and that cervical cancer was a problem only for these younger women (Jennings, 1997).

Women who held beliefs that Pap smears are painful and embarrassing compared to women who did not hold these beliefs, were found not to have had regular Pap smear testing (Jennings-Dozier, 1999). In the study conducted by Carter et al. (2002) consisting of 1,280 African American and Hispanic women, the African American women were found to have less knowledge about cancer screening tests and the importance of early detection compared to the Hispanic women.

Cognitive appraisal - vulnerability. Some women believe they are not vulnerable to cervical cancer. This lack of understanding as to their personal risks and exposure to factors that contribute to cervical cell changes places them at risk for non-adherence to Pap smear testing (Behbakht et al., 2004; Carter et al., 2002; and Nelson et al., 2002). When there is an absence of symptoms; cervical cancer screening was perceived as not necessary (Boyer et al., 2001; and Ogedegbe et al., 2005). A woman must feel that a Pap smear is important to her health and she must value her health to be intrinsically motivated to seek preventive care (Cox, 1984).

The proposed study is different from previous studies reviewed regarding African American women and cancer screening. Only three of the reviewed studies examined specifically African American women (Gregg & Curry, 1994; Hoyo et al., 2005; and Sung et al., 2002). The reviewed studies cited in this proposal, obtained information from secondary analysis (Jennings-Dozier & Lawrence 2000); surveys (Bazargan et al., 2004; Carter et al., 2002; Hiatt et al., 2001; Jennings-Dozier, 1999; Nelson et al., 2002; Sambamoorthi & McAlpine, 2003; and Sung et al., 2002); and questionnaires that focused on social and cultural barriers (Behbakht et al., 2004) and pain predicting non-adherence (Hoyo et al., 2005). Sung and colleagues’ (2002) research with African American women focused only on availability of insurance and its association with screening practices. Limitations of the above reviewed studies are that the quantitative methodology gave participants limited opportunities to qualify their responses or to explain their underlying meaning.

Four of the reviewed studies were qualitative (Boyer et al., 2001; Gregg & Curry, 1994; Jennings, 1997; and Ogedegbe et al., 2005). Only two studies explored general cancer attitudes and beliefs about cervical cancer and advantages and disadvantages of Pap smear testing (Gregg & Curry; and Jennings). Jennings included Hispanic and African American women and Gregg and Curry African American women. The Ogedegbe et al. study included older Latina and African American women between the ages of 50 and 69. According to their interview guide, once it was determined that a participant had received at least one Pap smear test, the participant was not asked about their attitudes and beliefs as barriers to having a test and were only asked about facilitators. The percentage of participants not asked about their attitudes and beliefs as barriers was over 90% of 187 women. It was not evident if the participants who were excluded from being asked about their attitudes and beliefs as barriers had a history of routine cervical cancer screening nor was it evident if they were up-to-date on screening practices. It has been found in previous studies (Bazargan et al., 2004; Carter et al., 2002; Gorin & Heck, 2004; Jennings-Dozier & Lawrence, 2000; and Otero-Sabogal, Stewart, Sabogal, Brown, & Perez-Stable, 2003) as well as indicated by the ACS (2006) that as women age, cervical cancer screening practices decrease. Lockwood-Rayermann (2004) found that women between the ages of 18 and 44 did not obtain routine Pap smear tests as recommended compared to the women 45 and older.

Limitations of the studies included the study population and methods used for data collection. Targeting low income women living in public housing in specific geographical areas in the U.S. decreases the generalizability of the findings to women of the same ethnic group living in other unrepresented areas of the country (Bazargan et al., 2004; Behbakht et al., 2004; and Hiatt et al., 2001). Reliance on self-report data can lead to under or over-reporting of Pap smear screening as well as personal barriers which may be a result of answering the questions in a socially acceptable manner (Carter et al., 2002; Gorin & Heck, 2004; Sambamoorthi & McAlpine, 2003). In addition, data collected via the telephone may not represent minority women who do not have telephones, possibly missing women who are at the greatest risk (Nelson et al., 2002). Not addressed in any of the studies were advanced practice nurses (APN) as providers of care. This is an important issue because APNs represent a rising number of preventive health care providers. Clients are more likely to be satisfied with clinician interaction on visits attended by an APN than when compared to visits attended by physicians (Roblin, Becker, Adams, Howard, & Roberts, 2004).

Culture is defined as the totality of socially transmitted knowledge of values, beliefs, norms, and ways of life of a particular group that guides their thoughts and behaviors (Potter & Perry, 2005). Only two studies explored general cancer attitudes and beliefs about cervical cancer and advantages and disadvantages of Pap smear testing (Gregg & Curry, 1994; and Jennings, 1997), but only one specifically addressed these variables with African American women (Gregg & Curry). Culture evolves as a way of life by a group of people, and it is important to explore how this group of people deals with similar issues such as preventive health care over time in their environment. It is also important to understand the client’s culture in order for APNs and physicians to provide care “that fits a particular group’s valued life patterns and set of meanings generated from the people themselves, rather than based on predetermined criteria” (Potter & Perry, p. 120).

Limitations in the research on Pap smear screening included few studies published that addressed solely African American women. Therefore, this research proposal will contribute to the knowledge and research by conducting culturally relevant studies interviewing African American women regarding their personal influences in Pap smear testing. The knowledge of what contributes to African American women’s motivation and how motivation can be influenced can be applied to nursing interventions to support adherence and reduce non-adherence to Pap smear testing, thereby reducing the health disparity of cervical cancer incidence and mortality.

Summary

More information is needed about predictors of African American women’s decisions to obtain health care screening, specifically cervical cancer screening. Understanding the interconnection of social influence and previous health care experience on African American women’s cognitive appraisal in regard to their beliefs regarding Pap smear testing and cervical cancer and their perceptions of vulnerability to cervical cancer will help fill this gap in the literature and address health disparities related to cervical cancer screening among African American women. Understanding factors that are associated with adherence to Pap smear testing is key to addressing the lower rate of cervical cancer screening among African American women.

In exploring African American women's motivating factors in adherence and non-adherence to Pap smear testing, it is postulated that the external motivators of social influences (mother, friends, health care providers) and previous health care experience in regards to the Pap and pelvic, affect the cognitive appraisal (beliefs and vulnerability) and the affective (emotional) response that ultimately stimulates motivational behavior in Pap smear screening. Thus, the priority gaps to fill are (1) social influences, (2) previous health care experience, and (3) cognitive appraisal, because no previous specific research studies have focused on these topics directly with African American women.

The findings from this study will help inform APNs and physicians about the personal influences that are associated with African American women's cervical cancer screening practices. Advanced practice nurses and physicians can influence decision-making to help promote long-term screening practices. By understanding the client's social influence and previous health care experience that affects her cognitive appraisal for Pap smear testing, interventions can then be tailored to meet the individual needs based on these variables.

CHAPTER III

Methodology

Specific Aims and Design Overview

This project proposes to examine the motivating factors, sociocultural factors, and experiences that influence African American women who are adherent and non-adherent for Pap smear testing to better understand their motivation factors. The relationship of motivating factors to perception of vulnerability to cervical cancer will be explored. The specific aims of the research are to:

1. Explore African American women's motivation for Pap smear testing using Cox;s (1984) Interaction Model of Client Health Behavior (IMCHB) Background Variables to guide the study through:
    - Examining the social influences that affect motivation for Pap smear testing.
    - Examining the cultural influences that affect motivation for Pap smear testing.
    - Understanding the past experiences with Pap smear testing that affect motivation.
2. Consider the Dynamic Variables (cognitive appraisal) in Cox's model (1984) and their influences on Pap smear testing in low income African American women through:

  - Examining the influence of beliefs about Pap smears and motivation in cervical cancer screening.
  - Examining the influence of beliefs about vulnerability to cervical cancer and motivation in Pap smear testing.
  - Understanding the influence of perceptions about being vulnerable to cervical cancer and motivation in Pap smear testing.

The theoretical framework for this study is the Interaction Model of Client Health Behavior (Cox, 1984). This framework is a useful guide because it considers the unique characteristics of an individual from within their personal, social, cultural, and environmental contexts, and is useful in identifying the complex process in which interrelated variables influence health behaviors (Abel & Chambers, 2004). A flexible model where the researcher can select all or portions of the model depending on the research question (Cox, 1984). Therefore, this qualitative interview study will use a content analysis approach (Morgan, 1993; and Patton, 2002) and constant comparison analysis procedure (Glaser, 1978, 1992) to understand African American women's motivation in Pap smear testing and relate these data to the IMCHB, a conceptual framework used in health disparities research (Abel & Chambers, 2004; Abel & Miller, 1997; Cox et al., 2006; Lee & Laffrey, 2006; and Marion & Cox, 1996). Using a content analysis approach (Morgan; and Patton) the interview data can be analyzed for recurring words or themes that predominate, as well as to consider the interview data in relation to the elements of the IMCHB. Constant comparison is an analysis used in grounded theory. In using this method of analysis, the data are closely examined, discovering patterns, themes, and categories of information (open coding), positioning one of the categories into a theoretical model (axial coding), and then describing the meaning or concepts that emerge (selective coding) (Creswell, 2003; and Patton, 2002).

African American women, 18-65 years old (N=24) who do and do not obtain regular Pap smear testing were recruited from health care clinics associated with Calhoun County Health Department, local churches, programs, and services for minorities. I explored with the African American women the (A) Background Variables and (B) Dynamic Variables in Cox's model as they related to motivation in Pap smear testing. I conducted audio taped interviews that were analyzed in two phases.

- Iterative constant comparison procedure during discovery;
- A qualitative content analysis after discovery was complete. All of the transcripts were read several times, systematically gleaning implicit and coding explicit reference to the components of the Background Variables and Dynamic Variables, and considered any other behavior themes that went beyond or contradicted this theory were considered.

Results of these analyses will inform content and word choice for a future research study in African American women's motivation in Pap smear testing. Results of the descriptive analyses will be disseminated to clinicians in a qualitative health research manuscript published to fill this gap in the literature regarding African American women's beliefs.

Preliminary Study

In December 2006, a preliminary pilot study was conducted using face-to-face interviews and open-ended questions based on the literature review and Cox's IMCHB. Seven African American women between the ages of 21 and 37 participated. Recruitment of African American women was from the Calhoun County Health Department Sexually Transmitted Disease Clinic and the Women, Infant, and Children Clinic located in Battle Creek and Albion, Michigan. Flyers were placed at the Battle Creek and Albion Health Department sites as well as the Nursing Clinic where people who are uninsured and of lower socioeconomic status are able to obtain free health care services located in Battle Creek, Michigan. Only one participant responded to the flyer, contacting me and scheduling an interview. The other women were recruited by me at the clinics at varying times. The women were compensated with a $10.00 gift card.

The participants ranged in age from 21 to 37.5; four had Medicaid insurance and three had no insurance; five earned less than $20,000 per year; all had at least a high school education. Two of the participants obtained routine Pap smear testing; four obtained irregular Pap smear testing; and one never obtained a Pap smear test. Review of the demographic characteristics did not reveal any related pattern that made the women different as to who did or did not obtain routine screening, including age, insurance status, and income level. Only one participant mentioned that routine screening was not obtained due to lack of insurance coverage.

All interviewed participants had heard of the Pap smear test. Two reported knowing that the Pap smear evaluated the cervix for abnormal cells and that the human papillomavirus (HPV) was somehow associated with cervical cancer. All of the participants believed that the Pap smear was a test for sexually transmitted diseases (STDs) and other diseases.

The findings from the preliminary study demonstrated that the IMCHB provided a useful guiding framework for the analysis of women's perceptions regarding their behaviors related to cervical cancer screening. Their discussion mapped well onto this model. With regard to *social influence factors*, two women were influenced by family and physician, one losing a grandmother to cervical cancer, believing that she needs Pap smear tests because cervical cancer runs in her family. Most of the women's *previous health care experience* with having a Pap smear test and pelvic exam was that it is not pleasant, with one participant having to clear her mind during the exam, "to not think". Regarding *cognitive appraisal,* women reported that Pap smear tests are a test for STDs, including HIV. Three women believed vulnerability to cervical cancer runs in your family, and two women believed that "if you take good care of yourself, you are not at risk for cervical cancer". For the participants who did not obtain routine Pap smear testing, it is possible that information from family, friends, health care providers, and previous health care experiences, may have been synthesized in a way that the women believed cervical cancer screening was not a health care concern, so therefore no action was taken to obtain routine screening.

The lessons learned from the pilot study were that the majority of women were recruited by me being present in the clinics at varying times. Only one participant responded to the flyer and then contacted me for an interview. Several attempts were made to schedule focus group interviews, but this was unsuccessful so it was determined that individual face-to-face interviews were needed to collect the data. It was also found that if the women left the clinic without conducting individual interviews while they were present in the clinic, the women did not return to the scheduled interview time. This held true for scheduling by phone—the women would not commit themselves. Conducting interviews while the women were present at the clinic was critical to completing this study.

Sample and Setting

Sample. Purposive sampling was used to recruit African American women from health care clinics associated with Calhoun County Health Department, as well as churches and local programs and services for minorities. According to sampling techniques, the sample size is dependent upon saturation of information and is based on the judgment of the researcher in evaluating the information collected (Sandelowski, 1995). Twenty-four African American women were recruited until saturation was reached. The planned sampling was to obtain a sample of ages in at least each decade between the ages of 18 and 65, who may or may not obtain routine Pap smears. It was expected that information may differ across the age groups and between the women who do and do not obtain routine Pap smear tests. Representative samplings of key characteristics of this ethnic group included women of low income, and low educational attainment (high school education or less). The eligibility criteria included women who: 1) are African American; 2) read and speak English; 3) were born in the United States; 4) obtained regular Pap smear testing, never screened by the Pap test, or had not received the test within the last three years; 5) were between 18-65 years of age; 6) were 18-21 years old, sexually active for three or more years; and 7) resided in Calhoun County, Michigan. Those excluded were African American women who: 1) had a complete hysterectomy; 2) had a history of cervical cancer; 3) were under the age of 18 (low risk for cervical cancer, and would need parental permission) and older than 65 (when Pap smear testing may no longer be recommended), and 4) were 18 to 21 years old but not sexually active for at least three years and or never had vaginal intercourse (Pap smear tests are not recommended). Women between the ages of 18 and 26 who had received the HPV vaccine were not excluded from participation in the study, as Pap smear testing remains a vital screening.

Study sites. Women were recruited from the Calhoun County Health Department's Sexually Transmitted Disease Clinic and the Women, Infant, and Children Clinic in Battle Creek and Albion, Michigan (where the pilot study was conducted), local churches and local programs and services for minorities, such as the Minority Program Services located in Battle Creek and Albion, Michigan. A collaboration letter from the Calhoun County Health Department was obtained (Appendix A). Although the primary research question was addressing African American women who do not adhere to Pap smear testing recommendations, it was important to understand African American women who are adherent, in order to address factors that influence adherence. African American women from Calhoun County, Michigan, (population 134,628 U.S. Census Bureau, 2005), have the third highest incidence of cervical cancer in Michigan, at a rate of 11.1 per 100,000 population (NCI, 2006). According to the U.S. Census Bureau (2000), in Calhoun County 52.4% of the population had a high school education or less; 44.8% of families made less than $35,000 per year; 37% of the families with children were below poverty level; and 92.7% of families with a female as the primary provider were below poverty level.

Recruitment. Recruitment of women was conducted by the Principal Investigator (PI). The PI was present at the Calhoun County Health Department STD and WIC clinics during regular business hours to recruit women. The PI also attended scheduled events at churches, local programs, and services for minorities. Approval from the church leader(s) and program director(s) were obtained prior to attending programs and services. Flyers were also posted (see sample flyer in Appendix B). The PI explained the study to interested women and obtained informed consent. Prior to the interview, the participant was reminded of the audio tape and her right to stop the tape at any time during the interview. If the woman was not able to interview at the time of recruitment, an interview was scheduled or limited contact information assessed so that the interview could be arranged at another time. The flyers included contact information with a phone number for the researcher. Flyers were approved through the IRB process at the University of Michigan.

Data Collection

The PI, after explaining the purpose of the study and answering any and all questions the woman had, collected the informed consent (Appendix C) and then the descriptive data. The PI set up audio recording equipment in a private room and conducted all interviews.

Measures

Elements of Client Singularity

Descriptive data. Descriptive data were obtained to cover the more objective Background Variables (*demographic characteristics* and *environmental resources)* by having the women fill out a questionnaire (Appendix D) asking first name, age, income, level of education, and insurance/insurance type, as well as Pap smear history. This information identified characteristics of the woman being interviewed as well as in relation to the other women interviewed (Patton, 2002).

Interview guide. Guided by the IMCHB, the variables of *social influence, previous health care experience*, and *cognitive appraisal* were explored by using open ended questions following an interview guide. An interview guide focusing on African American women's perceptions of Pap smear screening was used to conduct each interview. The use of the interview guide ensured that the same basic "lines of inquiry" were used for each woman interviewed (Patton, 2002). The following are open-ended questions that were developed as a result of the preliminary study, and asked to elicit the women's perceptions of Pap smear screening and cervical cancer:

1. Who or what has influenced you the most about Pap smear tests (re: *social influence)*?
2. Tell me about your past experiences of having a Pap smear test (re: *previous experience)*?
3. What do you know about Pap smear tests (re: *cognitive appraisal)*?
4. What do you know about cervical cancer (re: *cognitive appraisal)*?
5. What is your sense of the chances that you might get cervical cancer (re: *cognitive appraisal)?*

Although the above were examples of questions asked of the participants, it was anticipated that if these above questions did not elicit broad enough responses by the participants, additional questions (Appendix E) were developed and utilized to further explore or probe into an area being discussed.

Data Analysis

Qualitative data from the open-ended questions of the women's perceptions were analyzed using a constant comparison analysis and content analysis approach (Glaser, 1978, 1992; and Morgan, 1993). Transcripts were read on paper as a compiled volume, and the verbatim interview text was also read and coded, analyzing codes to identify themes.

Data analysis proceeded in two phases. The first phase was an on-going analysis as each interview was completed. Upon leaving the interview, the investigator made post-meeting notes, writing down anything not captured on tape that might have been relevant, including strong affect. The interview was transcribed, read, and coded openly, looking inductively for unexpected ideas that should be further explored in future interviews. This technique involved careful scrutiny of the data to identify patterns or themes, including strong emotions, and documenting the analysis after each coding session with an analytic memo. The focus in this phase was listening to what the women said about the research question, “What are motivating influences that affect African American women in Pap smear testing?” Based on post-interview analysis, new questions were added to the interview guide as the study progressed. As new data from each subsequent interview was added, open coding continued, along with thematic analysis, memoing, and the addition of new questions in an iterative process. Data collection was tentatively stopped when no additional unexpected responses emerged, and the most common themes had numerous, rich quotations as exemplars. At this point, the second analysis phase, the content analysis, to consider the value of the framework in relation to this inductively obtained data was begun. The data was re-read and re-coded for the purpose of comparing it with the IMCHB framework. The relative “match” between statements in the interviews that seemed to belong within the focal components was evaluated. Important themes identified in the first phase that did not map well onto the IMCHB were evaluated to determine if they seemed critical to consider in relation to the phenomenon in this population. An adaptation to the framework was called for when an important factor was identified. Major questions about the completeness or usefulness of the IMCHB arose in the content analysis, and additional interviews focusing on specific questions were worthwhile.

Summary

The results of this study added to the body of knowledge on African American women’s personal motivating factors that contribute to Pap smear testing. Social influences, previous health care experience, cognitive appraisal as to beliefs, and vulnerability have not been greatly studied as to their contributing influences in Pap smear testing with African American women. African American women in Calhoun County, Michigan are at higher risk for cervical cancer because of a lack of screening due to unknown influences. In addition, this study offered potential support as well as theory adaptation in terms of the data findings from the interviews regarding the interaction of a woman’s social influence and previous health care experience on her cognitive appraisal (beliefs and vulnerability) associated with Pap smear testing.

In addition to the dissertation, the contribution of this study helped inform the next step, the development of a questionnaire that evaluates African American women’s social influence and previous health care experience on their cognitive appraisal in Pap smear testing. The questionnaire can then be tested on a broader range of African American women to make sure that it is culturally sensitive to this group, valid, and reliable. This questionnaire can then be administered to African American women who present themselves in a health care facility. Dependent upon the results of the questionnaire, for example, having inaccurate beliefs regarding Pap smear testing and misperceptions of vulnerability to cervical cancer, the findings from the questionnaire will help the APN and/or physician in directing their intervention. An interaction between the client and professional, the second element of the IMCHB, can then take place. This interaction may provide information and/or affective support, resulting in a health outcome (the third element of the IMCHB) in routine cervical cancer screening.

Focusing on one geographical area is at once both a strength and a limitation. The strength is that Calhoun County, Michigan has a higher incidence of cervical cancer. Exploring what influences are associated with Pap smear testing and cervical cancer screening helps inform health disparities researchers and health care providers. The limitation is that only one geographic area was explored and that qualitative work is not usually generalizable. Further research will need to be conducted with other groups of African American women and women of color to obtain a better understanding of the personal motivational influences in Pap smear testing. This research was important to inform and refine future inquiry.

CHAPTER IV

Constant Comparison

Introduction

Cervical cancer is the tenth leading cause of cancer related deaths among women in the United States, and the second leading cause of death worldwide. African American women have a lower incidence of cervical cancer; however, they have a higher mortality rate when compared to all other groups of women. Recent data have indicated that the five-year survival rate for cervical cancer among African American women is 62.2% compared to 72.9% among white women (NCI, 2006). Of the women diagnosed with cervical cancer, between 50% and 70% of them had not received the Pap smear test within the previous five years or had never obtained the screening test (USDHHS, 2002). One of the reasons for the disparity in the mortality rate among African American women is that they tend to have less screening done compared to all other groups of women, as they age (ACS, 2006).

Common factors that serve as barriers to women seeking preventative health care services include availability of insurance, level of income, level of education, and access to care (ACS, 2006; Bazargan et al., 2004; CDC, 2006; Datta et al., 2005; Hiatt et al., 2001; Hoyo et al., 2005; Jennings-Dozier & Lawrence, 2000; Sambamoorthi & McAlpine, 2003; and Sung et al., 2002). Beyond these structural factors, little is known about potential personal factors that influence African American women's decisions about obtaining the cervical cancer screening test. To address the significant disparity in mortality for African Americans related to cervical cancer, researching the barriers to seeking preventative health care screening, like the Pap smear, is necessary. The purpose of this chapter is to describe the factors that may serve as barriers to obtaining Pap smears for a population of African American women.

For this study, African American women who had limited resources and resided in a county in South Central Michigan were the population of interest. The women were of low income, low educational attainment, and between the ages of 18 and 65. This study explored the personal influencing factors that contribute to Pap smear testing to better understand the motivating factors behind why lower resourced African American women are not tested. In order to address these factors, women who obtained routine Pap smears (every 1-3 years) as well as women who did not obtain Pap smears were included. Beyond an identification of the potential positive or negative factors influencing this group of women in their preventative health seeking behavior, the interactions between the women's personal motivating factors, social influences and previous health care experiences are also explored to determine what affects their cognitive appraisals (beliefs and perceptions of vulnerability) regarding the importance of cervical cancer screening.

While the significance of preventative health care screening is well stated throughout the literature, the more complex factors that influence behavior are often not well understood. Why someone does or does not visit a health care provider for services is much more complex than simply thinking that doing the behavior is important. As a women's health nurse practitioner, I observed this complexity multiple times which influenced my research interest in understanding barriers for under-resourced African American women with whom I have extensive experience working within a family planning clinic. The client population was primarily uninsured and underinsured from lower and middle socioeconomic groups and consisted of approximately 40% African American women. In this clinic 4,000 Pap smears were done yearly and I oversaw all of the cytology Pap smear reports and was responsible for following all abnormal reports. Over the 12 years working with this population, I provided strong leadership as a women's health nurse practitioner, performing cervical cancer screening as well as cervical cancer testing through colposcopy and the treatment of LEEP (loop electrosurgical excision procedure) and cryosurgery of the cervix. I also worked as a colposcopist in two other clinics, one of the two clinics being located in a county where 92.4% of the population was African American (U.S. Census Bureau, 2005). As a colposcopist, I have extensive experience dealing with cervical cancer first hand. I treated cervical cancer at a certain level of diagnosis. In addition, I directed the CDC's Breast & Cervical Cancer Control Program at a health department located in the same county where this study was conducted.

A life changing event for me as a person and as a nurse practitioner that spurred my interest in advancing my education in nursing research was because of a 38 year old African American woman. This woman walked into the clinic one day for an examination. She stated that she had not had a Pap smear in at least five years and at the time denied any health concerns. One look at her cervix and there was no question in my mind that she had cervical cancer. She died eight months later, just three months after her 39th birthday. The cervical cancer had metastasized, negating any surgical intervention, and she received only palliative care. Her death was unnecessary and preventable! I never found out her personal reasons why she did not obtain routine Pap smear testing. She will always remain in my thoughts and because of her and my dedication to the importance of routine cervical cancer screening, my program of research in preventative health care is directed towards understanding the personal influences that contribute to women's motivation in seeking cervical cancer screening.   As health care providers, it is not enough to be present to provide the care, we have to understand all the complex barriers women experience in seeking care from us. As such, my emphasis in this study is on asking women about those factors.

Methods

A qualitative descriptive study using purposeful sampling was utilized to explore the motivating factors, sociocultural factors and experiences that influence low resourced African American women who are adherent and non-adherent for Pap smear testing. The relationship of motivating factors to perception of vulnerability to cervical cancer was also explored. The conceptual framework that guided this study was the Interaction Model of Client Health

Behavior (IMCHB), a model that considers the uniqueness of each person and can be used to explain variance in individual health outcomes (Cox, 1984). Individual face-to-face audio taped interviews were conducted with 24 African American women between the ages of 18 and 65 who are of low socioeconomic status and reside in a county in South Central Michigan. The data were analyzed in two phases using constant comparison, a procedure often applied in a grounded theory approach, also useful for this purpose, to collect and evaluate data inductively and arrive at an understanding of major themes and comparisons across groups (Glaser, 1978). A content analysis was then conducted as a second level of analysis (Morgan, 1993), where the interview data were considered in relation to the elements of the IMCHB. This chapter presents the findings of the first, thematic analysis.

Instruments

Instruments used in this study included a demographic data sheet and a semi-structured interview guide. The demographic data sheet included background variables (*demographic characteristics* and *environmental resources)* and all women filled out the questionnaire (Appendix D).The semi-structured interview guide was designed to elicit the participants' descriptions of their personal influencing factors associated with Pap smear testing. The guide was developed to assess specific content areas of the Interaction Model of Client Health Behavior (IMCHB), from a literature review based on personal experience and influences of African American women in Pap smear testing, and based on the researcher's previously conducted pilot study (see Chapter III). After completing the first four interviews, the interview guide was modified. The first few participants experienced difficulty in responding to certain questions such as "What do you know about Pap smear tests?" and "What is your sense of the chances that you might get cervical cancer?" To more clearly explore experiences, feelings and beliefs regarding the Pap smear test, all remaining participants were interviewed using the second interview guide (Appendix F). Late in the data collection process, new information emerged that warranted "member checking" (Polit & Beck, 2004) as a means to determine if it was idiosyncratic or possibly a more widespread phenomenon that had not been elicited by the earlier questions. Member-checking, a method of validating the credibility of qualitative data through discussions with informants (Polit & Beck) was conducted by taking specific descriptions back to the participants to confirm a theory of trauma, such as sexual abuse discovered through the constant comparison analysis. Member-checking was not planned at the onset of this study, but was determined to be an important factor to determine the accuracy of the qualitative findings in relation to one of the themes that emerged near the end of data collection.

Recruitment

The sampling plan was to recruit participants with a sample of ages in at least each decade between the ages of 18 and 65, who may or may not obtain routine Pap smear testing. For participants who were between the ages of 18 and 21, they had to have been sexually active for at least three years to be eligible to participate. It was planned that the researcher would recruit personally and by recruitment flyers from the clinics at the local health department, churches, local programs, and services for minorities. The recruitment flyers did not elicit any participants. Only one phone call was received from a flyer, but the woman only wanted information as to when she could stop having Pap smear tests. She was 56 years old, and she stated to me that her last Pap smear was so uncomfortable that the physician could not obtain the test, and she did not want to go back. I answered her question regarding what the American Cancer Society's recommended age is to discontinue cervical cancer screening and based on history, encouraged her to call her health care provider's office to discuss her concerns. No other phone calls were received from the posted flyers.

The recruitment strategy was then changed. I recruited women personally by being present at differing times at the heath department clinic, domestic assault shelter, emergency shelter, and church functions. Since the shelters housed women for a certain length of time, I placed bi-weekly phone calls to staff to find out if there were new residents. The staff at both shelters were extremely helpful and did not discuss the study with the women, although the flyers were posted in each of the lobbies at the shelters. Recruitment at both shelters was conducted in the evening hours, since most women were gone during the day and curfew was at 8:00 p.m. Most women in both shelters who met the eligibility criteria were very willing to participate. Only one woman, from all of the women approached, and who were eligible, refused to participate. This woman was residing at the domestic assault shelter. She did not want to tell me if she had routine Pap smears and did not want to be audio taped.

After obtaining permission from the Reverends from two different churches, I attended two Bible study meetings, one on a Saturday morning and the other on a Monday evening where my study was introduced. If the women were interested, they wrote their name and phone number down on a sign-up sheet. Eligibility for the study was not assessed until I contacted them by phone at a latter time. Interviews were set for women who met eligibility criteria, and conducted at a place and time of their choice.

Sample and Setting

I used a purposive sampling technique to recruit participants and provide a rich description of the personal influencing factors associated with Pap smear testing. To be included in the study, participants had to (1) be African American; (2) read and speak English; (3) be born in the United States; (4) obtain regular Pap smear testing, have never been screened by the Pap test, or who have not received the test within the last three years; (5) be between 18-65 years of age; (6) be sexually active for three or more years if between 18-21 years of age, and (7) reside in a certain county in South Central Michigan. The number of participants interviewed was based on data saturation that was achieved through repetition of information obtained by participants (Polit & Beck, 2004). The face-to-face interviews were held at the local health department, churches, women's homes, domestic assault shelter, and an emergency shelter that housed individual women, women with children, and families consisting of both parents for up to 30 days.

Procedures

Approval to conduct this study was obtained from the University's Institutional Review Board. Prior to each face-to-face interview, participants signed an informed consent after all questions and concerns were answered and the demographic information form was completed. All face-to-face interviews were tape recorded and transcribed verbatim. The participants were informed that they were free to leave the interview at any time if they became uncomfortable with the questions. The demographic information form took less than a minute to complete and each interview took approximately 10 minutes, and the participants were given a $10.00 gift card for their participation. After each interview, the researcher wrote down notes about any affect that was not captured on tape, such as facial expressions, tear-filled eyes, eye contact with the researcher, and body movements. Details of the researcher's thoughts regarding the interviews were written down so that the specifics of the interviews would not be forgotten. The participants were placed in one of the two groups based on their self-report of obtaining the Pap smear test routinely or non-routinely.

Data Analysis

The data were analyzed using two different approaches, constant comparison to identify patterns or themes, and a content analysis considering the value of the framework in relation to the inductively obtained data. The constant comparison method data collection and data analysis began with interpretation of the first audio taped interview that was transcribed verbatim by the researcher, along with the post-meeting notes and memos capturing information that was not on the tape, especially any affective response. Following the procedure of transcribing verbatim, I read and listened to the entire transcript several times to achieve an overall understanding of the emergent data, writing key ideas in the margins. As each subsequent interview was added, the process was repeated. The transcripts were read reflecting on the overall meaning and ideas of what the participants were saying, the general tone of the ideas, as well as the recording of the researcher's impression about the data generating themes. Detailed analysis using open coding was conducted, clustering the data into categories, and labeling the categories with a term that was gleaned by the researcher but also trying to use the participant's language. The researcher used different colors of highlighters and colored note cards to categorize the data. The categories were analyzed for each individual case and across cases. Data collection was stopped when no additional unexpected responses emerged and the data contained numerous rich quotations. At this point, the second analysis phase using content analysis was conducted.

To ensure that the analysis process was systematic and verifiable, I met with my mentors, who are experienced in qualitative research and in women's studies. We discussed perceptions expressed by the participants and reviewed transcripts as a means to increase rigor and glean any additional impressions of the data and ideas for further interviews. In these meetings, additional suggestions regarding research questions and member checking to validate the findings were discussed.

Influence of the Framework

This research was approached with predetermined categories based on the IMCHB theoretical framework variables of *social influence*, *previous health care experience*, and *cognitive appraisal.* These categories were then applied to the transcripts to identify the participants' beliefs and perceptions of vulnerability. These same variables of the IMCHB also guided the literature review and the development of the semi-structured questions that were asked of the participants (see Chapter III). The use of predetermined categories guided by the theoretical framework informed the thematic process, as well as naming of the themes, since the additional purpose of the project was to do a content analysis to assess the fit of the model for this phenomenon (see Chapter V). I was, however, open to other ideas that emerged during the analysis of the interview data that did not appear to fit with the framework.

The data were re-read and re-coded for purposes of comparing it with the IMCHB framework. The statements in the interviews that belonged within the focal components of the framework were evaluated. The routine-use participant's (obtain Pap tests every 1 to 3 years) data mapped well onto the IMCHB. One important theme identified in the constant comparison method of analysis among the non-routine-use participants (obtain Pap tests greater than every 3 years) did not map well onto the IMCHB, and was critical to consider in relation to the phenomenon in this population. To protect the confidentiality of the participants, the participants' names have been changed in the reporting of the data.

Results

Sample - Introduction to the two groups

The participants were divided into two groups for the purpose of the initial analysis, those who did and those who did not get routine Pap smears (Table I). The two groups of women consisted of a wide range of ages between 19 and 60 years. The participants were recruited from an emergency shelter (n=9), domestic assault shelter (n=8), health department (n=4), personal residences (n=2), and churches (n=1). Two participants were employees of the domestic assault shelter. Eleven women obtain routine testing; every 1 to 3 years, and 13 obtain the test irregularly. Seven of the non-routine-use women's last Pap smear test was greater than 3 years but less than 5 years (ages 19, 19, 23, 24, 24, 25, and 36); three were greater than 5 years but less than 10 years (ages 31, 51, and 57); and three of the non-routine-use women were unable to recollect the last time they had a Pap smear test, but thought it had been greater than 10 years (ages 43, 47, and 49).

Table I

Sample Demographics

Variable	**Routine Pap**	**Non-routine-use Pap**
Age:		
18-29	2	6
30-39	2	2
40-49	4	3
50-59	2	2
60-65	1	
Yearly Income:		
≤ $10,000	8	9
$10,000 to $20,000	3	2
$20,001 to $30,000		1
$30,001 to $35,000		1
Education:		
Less than High School	1	2
High School	9	9
GED	1	2
Insurance:		
No Health Insurance	5	7
State Health Insurance (Medicaid)	4	4

Variable	Routine Pap	Non-routine-use Pap
Insurance Through Employer	2	1
County Health Insurance		1

Results of the Constant Comparison Thematic Analysis

This first analysis resulted in two inter-woven findings: a set of themes, and their different manifestations within the two subgroups of women. In the following sections, I will briefly provide an orientation to the themes in general, then to the themes as they related to the two subgroups of women. I will take a more detailed look at each theme by comparing how the two distinct groups describe it for themselves. Quotes are used from the data to illustrate the themes. The statements of the women are reported verbatim in their language. No corrections for grammatical correctness were made.

Orientation to the Themes

The major findings in this first analysis were themes presented to reflect the most common influencing factors associated with Pap smear testing expressed by the participants. Major findings from the analyses were that there were interconnecting factors associated with the participants' motivation in obtaining the screening test. *Social influence* as to the health preventative behavior had strong or weak ties. The *health care experience* of having the screening test and pelvic was perceived as an experience made better because of the health care provider. The feedback from the provider and knowing that they were taking action to evaluate their health was also important in ongoing preventative health care. An experience that elicited a strong emotional response from a previous life experience or from the exam itself that contributed to some of the participants negative perceptions seemed to impact future preventative behavior.   It was believed that the Pap smear is a diagnostic test of health. The results of the Pap smear provide much information on a woman's status of her body. Cervical cancer affects reproduction; and one's perceived vulnerability to cervical cancer was connected to being safe from risk or hoping the odds were in their favor. The affective response to the Pap smear procedure was either positive or negative.

In the following section, I provide a brief overview of the themes as an orientation to the more detailed data presentation that follows. Although the IMCHB dynamic variables of affective response and intrinsic motivation were not a focus of the variables of interest for this study, it was anticipated that these variables would be distinguishable in the data as well as from the memos made on any affect responses not caught on the audio tape.

Background Variables

Social influence*.* According to the social support and social network research literature, social influence in preventative health care can have a profound effect on a woman's motivation (Israel, 1982). Having the perception that one has acceptance and approval of important individuals in their lives, whether it be a family member or a health care provider, can affect screening behavior (Cox, 1984). The elements of social influence appear in the words of Rose (49) "…they [health care provider] just telling me that this is something that women is supposed to be getten on a regular basis…" and Carmon (50):

> She [mother] influenced me by seeing her life as being healthy…and taking care of every issue in life…just seeing her…it's a beautiful thing to me…

Health care experience*.* The health experience of having a Pap smear test and pelvic exam and how it is presented or performed to the woman can be an event in her life that affects perception as indicated by Lois (51), and Julia's (24) statements: "…the nurse talked to me and told me what was going to be done and how it was going to be done…that made it easier for me…"; "…in truth, it's kind of invading…it can be uncomfortable the tools that they use can be uncomfortable if you're not used to it, it can be scary…"

An emotional response to an event has the ability to affect a woman's behavior in seeking health preventative care, such as the experience of having a Pap smear test and pelvic exam. Discussing the experience of a Pap smear test indicated it gave some of the participants a positive emotional response of putting one's mind at ease as reported by Kenya (23): "…it feels good afterwards to get the results back that you were normal"; but for some of the participants the emotional response was not positive, such as reported by Ladon (23) "...it scared me and I don't want to go back and get another test done."

Dynamic Variables

Cognitive Appraisal - Beliefs*.* What a woman believes about the Pap smear test can be based on incomplete or inaccurate information which can lead to health behaviors that are not deemed beneficial. The participants believed that the Pap smear test is a diagnostic test of health, testing for cancer and STDs and that the results gave the participants information about the status of their body. Also some participants believed that cervical cancer affects reproduction, is a death sentence, or can be prevented. For example: “Just to check your health…in…case you have cancer or something you can detect it early…or any other problems before it gets out of hand….it [cervical cancer] can cause you not to be able to have kids or death” (Kenya 23); “to detect if you have something wrong...with your reproductive organs…I know cancer is something that is not too good possibly you can die from it” (Brenda 19); “…they [Pap smear] tell you a lot about yourself, your body, you know what’s going on with you…it will tell you if you got disease or you got cervical cancer” (Eunice 34). .

Cognitive Appraisal - Vulnerability*.* Perceived vulnerability to cervical cancer was connected to health behavior and family history. Participants hoped the odds were in their favor or believed they were safe: “Hoping slim to none…hopefully I will never get it” (Carol 23); “…any women can get it, but I don’t think I’m doing anything that puts me at high risk for it” (Kenya 23).

Differences Between the Groups

Analysis revealed that there were differences among the participants who obtain and do not obtain routine Pap smear testing. The difference between the two groups’ perceptions were that in the routine-use group, factors of *social influences* were supportive and influential and the *health care experience* of the Pap smear test and pelvic exam was positive, having an impact on their cognitive interpretation that the procedure was “painless” and “easy”. In comparison, the non-routine-use groups’ *social influence* was weak and less influential and the *health care experience* of the Pap smear test and pelvic exam was negative, impacting their cognitive interpretation that the procedure was painful, uncomfortable, and embarrassing. Similarities between the two groups were associated with their cognitive appraisal as to their beliefs regarding what a Pap smear is and tests for and their beliefs about cervical cancer. Perceived vulnerability was also similar in both groups, but how the perceptions were applied to the screening test was different. These differences will be reviewed in detail in the next section.

Social Influence

Routine-use participants. The routine-use participants were influenced in regards to the importance of routine care by their mother and through contact with their health care provider. Mothers were influencing individuals to the women through their encouragement of routine health care and by the exposure of watching their mother take care of herself; therefore routine health care were developed as part of their culture and norms and became a value:

> …she influenced me by seeing her life, as being healthy…and taking care of every issue in life…just seeing her…she takes care of herself, her body, and it’s a beautiful thing to me (Carmon 50).

Where some participants were taught by their mothers to take care of themselves: “She always taught me…to take care of myself…that’s the main word, take care of yourself…your health…” (Donna 42); “She just always kept up her hygiene and told me about taking care of my body…” (Kenya 23).

The health care providers were influencing through the encouragement and/or reinforcement of routine care to maintain health through cancer screening or by the giving of information regarding the importance of the screening test:

> …you're supposed to have one…every year or so, that influenced me in trying to have it done just in case…something do come up and I can find out early enough, something can be done… (Lois 51);
>
> They [physicians] just said it's something a woman…should keep up on, health reasons. Make sure nothing going on because you might not know…but on the Pap smear it would (Jenny 47).

Where another participant believed that health care providers were more important in influencing her to obtain the routine test:

> …the doctors is more influencing…because they know…how long it takes before it spreads...how soon you can get help…to keep it from spreading…They talked to me about it, how…important it is because if you can go ahead of time…before it spreads or gets worse…like once a year is really good…to stay on top of it before it comes to cancer (Debbie 43).

Some of the participants also perceived that the health care provider showed concern about their health: "…when you go to the doctor, the doctor will ask you when you had your Pap smear, they be concerned too, a regular routine that every woman should have…" (Eunice 34).

Non-routine-use participants. Linkages, which are the connections between individuals that the participants interact with (social network) (Israel, 1982), were weak among the non-routine-use participants, in that family was mentioned by only two participants (Clara 25 and Sharon 19) and only a few of the non-routine-use participants mentioned physicians. There did not appear to be strong linkages between the participant and the physician in that the relationship was not interactional, it appeared to be unidirectional. The concept that emerges out of the responses by the non-routine-use participants to the question “who or what has influenced you the most about Pap smear tests?” was that of directing the non-routine participant to do something. They were “told” to obtain health care or the screening test “They told me that it’s very important that a female should have a Pap smear done” (Ladon 23); “My mom told me that a lady…who get herself checked out, is…clean…” (Sharon 19); “He told my mom I needed one and she scheduled it” (Nicky 36); “…she’s [sister]…always telling me to go and get checked out and everything. I don’t listen…” (Clara 25). Some of the non-routine-use participants’ contact with a health care provider was when there was something wrong, such as an STD, and at that time were “told” by the health care provider that routine check-ups are important “when I first caught a transmitted disease and… basically you know when I first started birth control they used to tell me about it…” (Renee 24). Being told to “do something” and obtaining accurate information and being shown concern on why it is important to “do something” are two different issues that can influence one’s valuing health preventative care such as routine Pap smear testing.

Three of the non-routine-use participants stated that they were not influenced by anyone (Brenda 31, Kimberly 43, and Rose 49). Two of them (Kimberly 43 and Rose 49) did not know what the Pap smear was for and stated that they never had any particular person say to them that a Pap smear was needed:

> I never had that specific somebody as a role model to say you need to go have a Pap smear done once a year or twice or however many times it should be done (Kimberly 43).

The only time that Brenda (31) thinks about the Pap smear test is when she sees it advertised in the local newspaper or in magazines. She knows that there are free breast and cervical cancer screening services available for women 40 and older, but since it does not relate to her, she just does not think about it.

Previous Health Care Experience

Routine-use participants. Most of the participants who obtain routine Pap smears and pelvic exams said their experiences were positive in having a Pap smear test and did not express any feelings of unpleasantness towards the exam. The Pap smear test and pelvic exam has become routine for these participants because of frequent contact with health care providers and/or because it is normal behavior that is expected of them to maintain health.

What made the experience good for some of the participants was having the belief that they were being taken care of "…you know they [doctors] try to make sure that you come on a regular basis. They let you know how important it is" (Carol 23); being comfortable with the provider was also an important factor that affected the experience: "I was comfortable with the doctor, it was not painful, it was a very painless procedure…The main thing is the conformability with the doctor" (Carmon 50). The provider's expressed care for the participant and being informed during the exam about what was being done, in other words, being forewarned on what they would be experiencing was important: "the nurse talked to me and told me what was going to be done and how it was going to be done, that made it easier for me to go have it done" (Lois 51).

Having an understanding of the importance of routine cancer screening decreased the fear of the exam due to the health care provider explaining the importance of the test:

> I was kind of scared at first but…I felt the doctor explained to me that is just something simple, and only takes a few seconds, nothing painful. Then after that, I felt comfortable getting them every year…what made it good is being able to understand how important it is, you know, that you know cancer is something that you don't play with...something you should take very serious (Debbie 43).

What made the experience better for three of the women (Kenya 23, Carmon 50, and Lois 53) was getting normal (negative) results back, making them feel good about themselves, knowing they were "healthy": Obtaining normal results put the routine-use participant's mind at ease:

> At first when I went, it's kind of like…'I wonder if they're going to find something, Oh my God'…but after you get the results saying you're healthy, they did not find nothing abnormal, it felt good, like something you should keep up every year, because it feels good to know that everything's okay with your body (Kenya 23).

Knowing that they were taking action to obtain a test that they believed evaluated their health, that they were doing something right, and because they received favorable results, affected the emotional response: "The only part of it was the outcome of what the answer would be, what's going on…I don't want no surprises later (Carmon 50); "…for me to have it done and just to see, you know, the follow-up of what's going on in my life before you know it get too far gone, I can have something done, don't have to worry about it" (Lois 51).

But, there were two women, Jenny (47) and Carol (23), whose experiences with the procedure were not pleasant, Jenny (47) stating:

> …it's a horrible degrading thing to do to a woman…nothing pleasant about it…It was horrible at first but now it's come routine…so it's not so bad if you get with the program.

It seemed that what this participant meant by "getting with the program", that if one continues to see a health care provider on a regular basis and obtains Pap smears on a regular basis, it becomes routine, and you become more comfortable with having them. The exam was also not pleasant for Carol (23) but just like Jenny (47), the procedure has become routine for her because she values her health to make sure everything is all right:

> Oh, I'm not going to sit up here and lie to you, I just enjoy having somebody inject things into me. I know it needs to be done…it's needed to make sure everything is working well, no infection…I guess you have to deal with it…you're supposed to get one to make sure everything is all right…so get tested, go get checked and all that.

The participants who get regular Pap smears do so because they value their health, it is an expected health preventative behavior of them and has become routine.

Non-routine-use participants. The non-routine-use participants' responses to the same question asked of the routine-use participants "how would you describe how it was for you to have a Pap smear" elicited important distinctions between the two groups. The gynecological examination; having a Pap smear test and pelvic was perceived as an aversive procedure. The negative experiences reported by most of the non-routine-use participants of having a Pap smear test was connected to the gender of the provider, one's relationship with the provider, that it was a painful experience, and contributed to anxiety. Only one non-routine-use participant stated that she has not had a Pap smear in so long that she did not remember the experience, but thinks that it was okay, that it was painless (Kimberly 43).

Some of the non-routine-use participants made statements that the experience of having a Pap smear test was connected to the gender of the provider and contributed to feelings of embarrassment. It was not the Pap smear itself that seemed to be the issue, but it was who was performing the procedure and being uncomfortable with the provider's gender, that brought out the emotional feelings of embarrassment. One participant who reported a history of domestic violence stated:

> I do feel uncomfortable every time I get it, the Pap smear. I feel uncomfortable…I really don't enjoy them at all. If there's a different method that I could choose to help to figure out if I was having an infection, I think I would choose that over a Pap smear, because it makes me feel uncomfortable for a complete stranger to come and check you out…I would prefer a woman than a man…I've been physically abused by males and I don't like, I really don't agree with males like that (Bonnie 19).

Not all of these participants believed that a female provider would be their choice. One participant made a comment that having a female provider made the exam more difficult.

> …I don't know…other than a man being down there I…really don't want anybody looking at you and your sex…just the fact that it was another woman down there opening me up, looking at me…that was…uncomfortable (Clara 25).

The others had never had a female provider and believed that would make it easier if they had:

> I think if I had a regular doctor and a female, I'm not real strong about getting tested and things like that by a male…that probably make it a little more easier…having a female doctor… (Brenda 31).

Maintaining some semblance of control during the exam was important to this non-routine-use participant who reported that the procedure was mentally uncomfortable for her because of not liking to be touched in the wrong spots by a man:

> …it's uncomfortable for me. I just don't like to be touched in the wrong spots by a man…I know he's a man, he's not my man…but he's a doctor and that's his job and I believe he's doing the right thing…and when I feel uncomfortable…I tell him to get out…that's enough… (Mary 57).

What made the experience bad for Julie (24) was the fact that the importance of the exam and its purpose was not explained to her, believing that if she had a relationship with her doctor, she would feel more comfortable asking questions and her doctor would be more forthcoming and sensitive:

> …the fact that my doctor did not communicate with me a great deal…just the fact of knowing what could happen, or the possibilities…all of our bodies are important…when you have a very good rapport with your doctor that makes it a lot easier. You feel more comfortable asking them questions, you know that they will give you answers and they will be sensitive to your needs and your wishes…it's just a job for the doctor and they're doing their job, you're just another patient…this is very personal…my body if my temple.

A general mistrust of health care providers contributed to fear of the screening test, having to be accompanied by someone she trusts:

> …I was scared…having a total stranger down there just doing stuff like that, that's kinda crazy to me. I watch Lifetime all the time and stuff happens…but I did it with my sister, and she helped me through it…I don't understand, you don't leave your patient in there, the nurse is suppose to be in there, that's why I know you don't go there by yourself, because you can't trust people… (Sharon 19).

The Pap smear test was perceived as painful by some of the non-routine-use participants, but for some participants, procedures such as colposcopy with cervical biopsies were also factors that were connected to the reporting of negative experiences in regards to the screening test. Two of the non-routine-use participants had health care experiences with cervical biopsies (Ladon 23 and Anna 47), reporting that the biopsies were painful. One participant reported that the health care provider told her during the procedure to just “take a deep breath in…deep breath out and relax” (Ladon 23). This comment and the experience of the colposcopy and cervical biopsies may have affected her perceptions:

> …sticking this metal thing in your vagina to open it up and that’s very uncomfortable to me…depending upon what they’re scraping…they might scrape something off…that’s abnormal, that’s kind of painful…you know depending upon what the situation is…what they see down there…it scared me and I don’t want to go back and get another test done to say ‘ah, it’s really actually is that or something’…it’s really scary…scared my vagina will fall off…ever since then I haven’t been back or got one done (Ladon 23).

Not only were the biopsies reported as painful, it also seemed that not knowing what they would find contributed to her feelings about the procedure. This participant also reported what made the experience worse was that the health care provider never explained to her the importance of the colposcopy procedure and what was going to be done. Where another participant also having to go through the same procedure perceiving the exam as painful did not return because of the experience:

> I’ve had a biopsy before and that’s clipping of the tissue down there and to me that was more than a discomfort, that hurted…they said…the biopsy was abnormal, but I didn’t like the biopsy, so I did not return for another visit…I felt that I did not have cervical cancer so therefore I did not go back (Anna 47).

The procedure of obtaining cervical biopsies and the pain experienced contributed to the avoidance of obtaining further Pap smear tests, the very reason why she was referred for a colposcopy. Her explanation of not obtaining routine screening was she believed that because she never had problems with her “vagina” before or after the colposcopy, she didn’t need to return. This participant did not know what a Pap smear test is for and why it is important to obtain the screening test, so to undergo testing for something that one does not understand, may affect her behavior in seeking cervical cancer screening.

Some of the participants who also perceived the experience of a Pap smear test and pelvic as painful reported a history of abuse (Bonnie 19, Nicky 36, and Rose 49). Others who did not report such a history, used words that described their experience as in the same reflective voice as the participants who had. One participant who reported a history of sexual abuse (Nicky 36), stated:

> I am generally traumatized by the experience of laying on the table and it is so gross….I don’t really know why, I mean, I have a sexual abuse thing from my childhood, but I am more or less over that, I think I kind of moved on. But that Pap smear just feels like a violation every single time. It’s horrible, absolutely horrible.

She also reported that her first Pap and pelvic was “rolled up as the punishment, and it hurt…it was painful”. She had been physically abused by her boyfriend at the time and was taken to the emergency room where the physician told her mother that if a boyfriend could do this to her, that she was probably having sex and needed to have a Pap smear. She was not given a choice by the physician or her mother and felt additionally violated by this experience. Although this participant reported that her present health care provider is a female and is gentle, informing the participant of what she will be doing, the attitude of the participant towards the exam continues to be negative. She reported that her last exam caused an overall feeling of discomfort:

> it…absolutely horrible. I vowed never to have another Pap smear…I'm not doing it…it was horrible. She added…some kind of rectal exam to the component…made it 50 times worse.

Although the health care provider informed the participant that she would be doing a rectal exam, the participant stated she did not process the information quick enough to understand what the provider would be doing. For Nicky, the examination is traumatizing. Believing that she is healthy and having had a history of normal Pap smear results, she reported that she just does not think that she needs to keep putting herself through the exam just to be told she is okay, it is just too much:

> I am generally traumatized by the experience of laying on the table and it is so gross…A Pap smear feels like a violation every single time. It's horrible, absolutely horrible…I have had regular…Pap smears…I'm thinking 'okay, I shouldn't have to keep going through this for you all to tell me I'm okay'.

Mary (57) who reported that the exam was painful gives the physician a limited amount of time to get the exam done and get out:

> It's uncomfortable for me…like an invasion. I'm wide awake, it's like an invasion for me…I don't like the test period. Because I don't like anyone probing, you know, inside me…I'll let him go up there and do what he got to do, but I just don't like for him to be up there too long.

Anxiety towards the gynecological examination brought on by feelings of vulnerability of how the procedure is done affected these non-routine-use participants. Just the thought of having instruments put inside of this participant elicited an emotional response: "…I've had a traumatic experience in my life through incest; therefore, just the fear of anybody trying to put some instrument up me is scary…" (Rose 49). Where another participant reported that she has to talk herself into going:

> …something…I dread doing…I really have to talk myself into it, like going to get it done, which I haven't done that…I just don't like it…being exposed, I just don't like the way it's done…(Lynette 51).

Cognitive Appraisal - Beliefs

Routine-use participants. Beliefs were held by the routine-use participants that the Pap smear is a relatively easy and painless procedure that is a diagnostic test for sexually transmitted diseases and cancer, and by getting this test, is an evaluation of their health. The Pap smear is a test "to see in case…you have cancer or something…Just to check your health" (Kenya 23); "…see if you have any kind of venereal diseases…you can see if you have cervical cancer…it's good to know what's going on with your body…" (Donna 42) "…we can't see what's going on in the inside…it's just…a health reason…" (Jenny 47). Although the routine-use participants did not state that the Pap smear's main purpose is a screening test to evaluate for abnormal cervical cells, before the abnormal cells progress to cancer, most of the routine-use participants knew that the Pap smear test can "catch things early" before it spreads when something could be done about it: "…it's an early indication and it let's you know what is going on early…" (Carmon 50); "it's most important you know to catch cancer before it spreads…if they caught it in time…keep it from turning to cancer…" (Debbie 43).

Knowledge about cervical cancer and its contributing factors was limited in most of the routine-use participants' statements. The participants in the routine-use group said that cervical cancer is caused by many things, such as food, lack of exercise, smoking, and is associated with having a family risk factor. All but one of the routine-use participants had no idea what the causes or contributing factors were for cervical cancer, except for smoking, a contributing factor for many cancers. Only one of the routine-use participants (Kenya 23) had knowledge regarding a major contributor to cervical cancer. She stated that cervical cancer is caused by a virus (HPV) and that many people don't know that they have it and it can be easily passed on. She learned about the virus from reading magazines and stated that she keeps up on statistics, and this in part influences her to continue preventive health care behavior. One participant (Debbie 43) mentioned the new injection (vaccine) and that the injection will prevent cervical cancer. Although when asked if she knew what caused cervical cancer her reply was "not going for our yearly check-ups" and believed that cervical cancer can "…spread real quick, real fast" she also knew that "if they caught it in time…" it could be treated.

Non-routine-use participants. The non-routine-use participants held similar beliefs as the routine-use participants that the Pap smear is a test that evaluates one's health: "For our safety to make sure that we're healthy…" (Ladon 23); "…to better our health, check us out to see if anything is wrong" (Rose 49); "To make sure, we as women, are safe and everything is all right…" (Clara 25). The screening test was also believed to be a test for cancer, STDs, with some believing that it is a test for HIV: "…Pap smears are just to make sure that we don't have any cancer or something going on with your body…that's irregular

(Mary 57); “…it tests for cancer, for AIDS…STDs…” (Sharon 19); “…like STDs, cancers on the cervix…any kind of bacteria infections, all type of stuff” (Renee 24). Only two of the 13 non-routine-use participants mentioned a possibility that that if cervical cancer is diagnosed, it can be treated: ”It saves peoples lives…because if you get in there just in time, if you really have something terrible…the Pap smear probably saved your life” (Sharon 19); “I know that if…you could…catch your cervical cancer before it spreads there is a good chance…it could be treated…” (Kimberly 43). She also stated that she was not sure if cervical cancer was treatable “It is a treatable cure isn’t it? See, I’m not educated on it at all”.

When asked the question “there is a kind of cancer called cervical cancer, what do you know about it” the general response by most of the non-routine-use participants was that they did not know anything or very little: “I have no idea…I have no idea what could cause cervical cancer” (Brenda 31); “I don’t know a lot about it, but I know it’s probably the reasons for the Pap smears” (Renee 24). Some of the participants believed that cervical cancer spreads quickly and affects ability to have children: “I believe the cervical cancer is the one that spreads; I believe that’s the one…that can kill you… (Mary 57); I’m thinking it…keeps you from having babies or it comes after you’ve had a baby or something like that, but I don’t know” (Clara 25); “I know that it’s found in most women after children or having kids, that’s the basic thing I know about it. That’s what the doctors told me…” (Ladon 23)

Only one non-routine-use participant knew the major contributor for cervical cancer:

> I know that you can get a disease called HPV or something, that if it's not treated correctly that you can…get cervical cancer latter on through the years…I know that HPV is one of the main…causes. I don't know how much, but I know that…I…never had any problems, but I don't know my risks as far as statistics go (Bonnie 19).

Cognitive Appraisal - Perceived Vulnerability

Having personal knowledge regarding the importance of the Pap smear test and of one's risk factors for cervical cancer is important in order for a woman to take action to help prevent an adverse outcome (Saslow et al., 2002). The most common response among the two groups to the question regarding what they thought were their personal risks were for cervical cancer was, "I don't know". Although the participants in both groups did not know what their personal risks were for cervical cancer, two concepts were evident across both groups in their responses, one of being safe from risk and one of hope that they were not at risk.

Routine-use participants. All but one of the routine-use participants made statements that they were not vulnerable or at very low risk to cervical cancer, although there were differing beliefs regarding what made them vulnerable. One routine-use participant who believed that she was vulnerable to cervical cancer felt this was because she smokes and cancer is in her family (Veena 47). Some of the routine-use participants believed their vulnerability was connected to having a family history of cancer, present health status, and not doing anything that makes them vulnerable (even though they didn’t know their risks that make them vulnerable).

Safe from vulnerability. The routine-use participants believed they were not at risk or had a very low risk of cervical cancer. The reasons stated were that it is not in their family history; they take good care of themselves by eating healthy; obtain routine Pap smear tests; and are careful with choosing sexual partners. One of the participants (Carmon 50) stated that she was at very low risk because it is not in her family history, gets herself checked out [Pap smears] and because she takes good care of herself, and because “what needs to be done will be done…if you start eating the right things, your body heals itself…”. Kenya, a 23 year old participant, believed she was at not risk because she was not doing anything at present that put her at risk: “I don’t know of anything that I’m doing that can make me more apt to it”. Risk factors for this participant are situational, in that risk is dependent upon choice of behavior at a certain point in time. Another participant felt she was not at risk at all, believing sexual practices protected her, stating: “…being careful with my sexual partners, you know, it’s more of being very careful on who you’re with, who you’re involved with” (Debbie 43). When asked by the researcher if she believed she was at risk, her response was “no, because I use protection”, also believing that not having Pap smears, i.e., not getting checked, is a cause of cervical cancer.

Hope. Four of the routine-use participants (Carol 23, Eunice 34, Donna 42, and Lois 51) did not know what caused cervical cancer, did not know risk factors, and therefore did not know their personal risks. They just "hoped" that they would not get cervical cancer:

> …I really don't know my chances of getting it…I tries not to know because that's why I go to the hospital…to get me a Pap smear. So that way I won't get it. I won't have to worry about, you know, trying to prevent me from getting it…that's why I go to the hospital every year to take one…I hope I don't. I don't think I could deal with that...(Donna 42)

The unknown risk factors in part affected perceptions of vulnerability. These women obtain routine Pap smear testing without knowing causes and risks for cervical cancer "I don't know where it comes from and what it is caused by. Hopefully I will never get it" (Carol 23); I don't know. I hope there ain't no chances…I just want to get checked out regular" (Eunice 34); …I hope I never get it, but you never know…" (Lois 51).

Non-routine-use participants. The perceived vulnerability among these participants was similar to the routine-use participants in that the non-routine-use participants also had perceptions of being safe and having hope. While routine-use participants' perception of being safe and having hope was related to obtaining the screening test, non-routine-use participants believed that they were safe if they took care of themselves and didn't experience any signs or symptoms of a problem.

Safe from vulnerability. Being safe was connected to having a family history and/or taking care of oneself. "…cancer runs in my family, but no cervical cancer…" (Mary 57). This participant also believed that her chance of getting cervical cancer was: “1 out of 10…I try to keep my body pretty…clean and I watch what I be doing, and who I am with…I don’t think I’m at risk for that.” Another participant who had cancer in her family stated that she thought she might be at risk for “lung cancer” because she drinks alcohol and smokes, but did not think she was at risk for cervical cancer. “I know that I’m fine down there; I’m thinking that I know I’m fine down there, that’s all I can say” (Clara 25). Lack of family history of cervical cancer also lead to the perception of not being at risk - “I don’t think it’s a high risk for myself, only because I don’t know that there’s a woman in my family before me who has had it” (Nicky 36). One participant stated her risk for cervical cancer was “Zero! I don’t think that’s something I’ll have to worry about” (Lynette 50). When asked why, she stated:, “I’m just not at risk. I do not believe that I will get cervical cancer. I have faith”.

A factor that intersected with some participants’ perceptions that they were not vulnerable was acknowledging that they did not know what caused cervical cancer and simply did not think about it:

> I guess because I am ignorant to it, I never gave it a second thought…You don’t stop to think if I don’t get this checked out that I can possibly have this… (Julie 24).

Kimberly (43) cannot remember the last time that she had a Pap smear and does not know her chances of getting cervical cancer, believing that if there are no signs or symptoms of a health problem, then seeing a health care provider is not an issue:

> I don’t know …what would make it occur…not having Pap smears? Fibroids? Cysts? I don’t know…I never really…thought of it…I guess what I’m trying to say it’s like a sore…if you have a pain we might self medicate ourselves, ‘let me take a Tylenol’, ‘let me take an aspirin’ and then if that pain goes away, you don’t think about it anymore. If you have a scratch on your arm and you’re looking at this scratch every single day…and…the scratch goes through different phases…puffiness and swelling, then you’re going to pay more attention to it. So that’s probably why with a Pap smear if I don’t see it… not conscience of it…

Hope. Some of the non-routine-use participants hoped that based on their family history, the odds were in their favor of not getting cervical cancer: “Cancer runs through my family…there might be a possibility that I may have it, and there might be a possibility that I don’t have it…is it something you can take care of? Is it something you can get rid of?...I need to know questions like that” (Ladon 23). Another participant (Rose 49) hoped she wasn’t at risk but thought she could be due to not having a Pap smear: “Considering I haven’t taken any Pap smears like I should, it [cancer] could be high…I didn’t know what it consists of”. One participant responded, that health care providers don’t look for health problems unless there are signs and symptoms, “they [providers] don’t really look for things like that unless its popped up and it’s really terrible…I just hope the odds are against it…” (Sharon 19).

Synthesis Throughout the Groups

The routine-use participants, as long as they maintain motivation for routine testing, are not a critical focus of the clinical practice. These women obtained the Pap smear test because they have been socially influenced to value health by important individuals in their lives, such as their mother and/or health care provider. For most of the routine-use participants, the health care experience of having a Pap smear test and pelvic exam was positive, and the experience was made better because of the relationship with the health care provider. They believed that they were being taken care of, and what made it even better, was obtaining a normal test result. They also believed that the Pap smear is a test for cancer and evaluates health. Most of the interviewed participants do not understand causes of cervical cancer. Their perceptions of vulnerability were connected to having a family history, being safe from risk, or just having hope that they were not at risk.   Their previous health care experience and beliefs regarding Pap smears and perceptions of vulnerability contributed to their positive emotional response. A negative result gave them information that they are doing something right because they are taking care of themselves.

The non-routine-use participants are a focus because there is the potential to change behavior if we can better understand the nature of their behavior in not having Pap smears. These women did not obtain the Pap smear test because they may have not been socially influenced to value health by an important individual in their lives as it relates to cervical cancer screening. For most of the non-routine-use participants, the previous health care experience of having a Pap smear and pelvic exam was not positive. The negative experience was compounded by the provider's gender, the belief that the test is painful and it increased anxiety. Also contributing to these negative perceptions was having a trauma history (childhood sexual abuse and intimate partner violence), and traumatic encounters with medical procedures (colposcopy and cervical biopsies). Having a history of trauma seemed to affect their perceptions regarding their previous health care experience with the gynecological procedure. Other reasons that their beliefs may contribute to the avoidance of the gynecological exam include, beliefs that the screening test is an evaluation of their health that tests for cervical cancer and STDs, not understanding the causes of cervical cancer, and having the perceptions of not being vulnerable to cervical cancer.

Conclusion

Twenty-four face-to-face interviews were conducted with a group of low resourced African American women exploring their personal influencing factors that affect Pap smear testing. Two groups of women, one group who obtained routine testing (n=11), and another group who did not obtain routine testing (n=13) were included to explain the factors that affected their motivation.

Differences between the two groups of women in regards to *social influence* were evaluated. The routine-use group had a stronger social influence from important individuals in their lives through which they obtained knowledge and were taught the value of preventative health care. The non-routine-use groups social influence was weak. They lack important ties to individuals with whom they trusted or had consistency of contact where information could be obtained to influence the women in routine screening behavior so they value preventative health care.

The *health care experience* of having the Pap smear test and pelvic exam for the routine-use participants was that the experience was good in part because of the health care provider and obtaining normal results. The non-routine-use participants' experience with the Pap smear test and pelvic exam was not pleasant. This was in part due to the providers' gender, their perception that the Pap smear test was painful, and having a history of trauma (childhood sexual abuse, intimate partner violence, and medical procedures), bringing out emotions that were negative such as anxiety and fear. Both groups believed (*cognitive appraisal*) the Pap smear to be a diagnostic test for cancer and STDs and an evaluation of health. There was a general lack of knowledge regarding the causes of cervical cancer. The routine-use group perceived the Pap smear test as being a painless, easy procedure, where the non-routine-use group regarded the test with anxiety and fear; that the procedure was painful, associating the discomfort not only with the test itself and how it was done, but also based on the provider's gender.

In both groups, *cognitive appraisal* of vulnerability to cervical cancer was perceived as being situational such as connected to one's family history of cervical cancer, or if taking care of oneself, makes one less vulnerable or not vulnerable at all.

Chapter V will address the value of the IMCHB framework in relation to the inductively obtained data. By conducting a content analysis, data were used to support or extend conceptually the theoretical framework with predetermined categories regarding variable relationships and their effects on motivation to obtain routine Pap smear tests.

CHAPTER V

Content Analysis

Introduction

The Pap smear has been a screening test for precursor lesions (abnormal cervical cells) for over 50 years. Prior to this time, cervical cancer was the leading cause of death in women in the U.S. because there was no test available to screen for the high grade precursors (Saslow et al., 2002). Cervical cancer does not usually manifest signs or symptoms that a health problem exists until the cancer has advanced when treatment may be less effective (Saslow et al.). Beneficial in detecting precursor lesions before they can advance to cancer, the Pap smear has been effective in decreasing the incidence and mortality from cervical cancer. Yet it is estimated that 13 women die every day in the U.S. from cervical cancer (ACS, 2006), in part because they do not obtain routine Pap smear tests (every 1 to 3 years). Screening decreases the incidence of most mortality and morbidity from cervical cancer. African American women have the highest mortality rate compared to all other groups of women because they tend to decrease their rate of Pap smear testing as they age (NCI, 2006). African American women have limited testing and/or apprehensions to routine Pap smear testing and require talking to about their experience. The significance of the content analysis is to consider the interview data in relation to the elements of the Interaction Model of Client Health Behavior (IMCHB). This chapter presents the findings of the second thematic analysis.

The purpose of this project has been two-fold, first, to learn about African American women's personal factors affecting adherence to Pap smear testing (see Chapter IV), and secondly, to consider how well the interview data affirms or not the usefulness of Cox's model for future research on this topic, as well as for other health promotion research where repeated health seeking behavior is required.

My prior analysis noted differences between the two groups of participants; therefore, there is a need to do a content analysis to learn why these differences persisted. Having learned from the first analysis that there were differences between the routine-use group and non-routine-use group in regards to their social influence and previous health care experiences which affects their cognitive appraisal regarding the Pap test and cervical cancer, we take several specific questions into the second analysis. The purpose of the second analysis is to evaluate the suitability of the Cox model (Figure 3) for framing cervical cancer screening health behavior research. Content analysis, and mapping women's statements to the components of the model, is the method used.

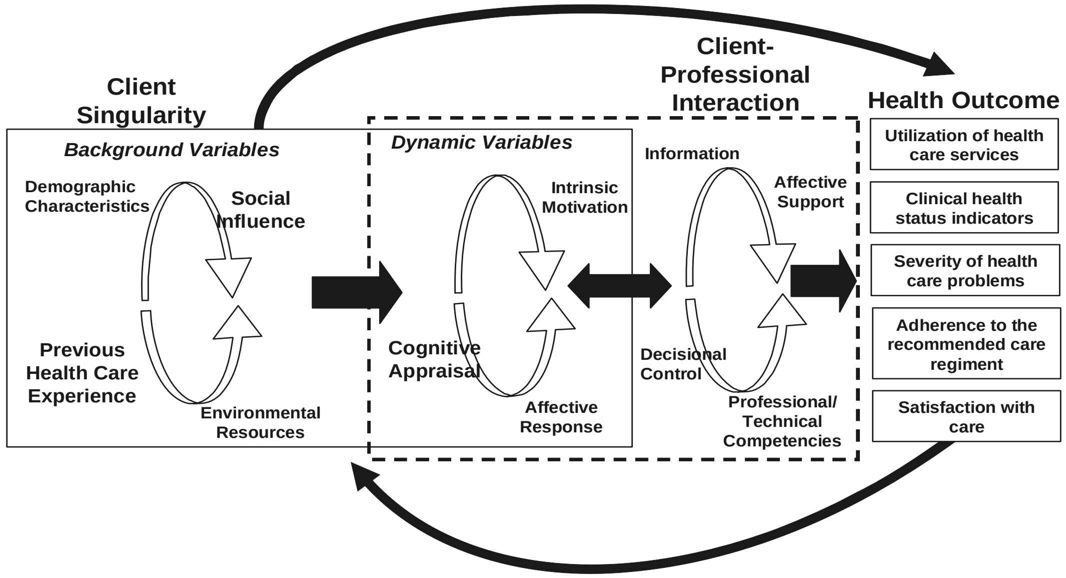


Figure 3. Interaction Model of Client Health Behavior

In addition to this systematic process, we also need to give consideration to three questions that arise from the first part of this study. These extra considerations are: (1) do the data of those who do and do not routinely obtain Pap testing fit the model equally well; (2) to what extent is the theme that emerged about trauma history and traumatic encounters contained or accounted for in the model; (3) the data suggest that a repeated behavior, such as obtaining a routine screening test, may be influenced by a previous encounter. This raises the question of the model's suitability for an outcome of a routine or repeated process.

Methods

A qualitative approach was used to explore personal influencing factors that contribute to Pap smear testing using purposeful sampling. The conceptual framework that guided this study was the IMCHB. Content analysis of the interviews was analyzed for thematic purpose and to determine support for this research using Cox’s (1984) IMCHB. The interview data were analyzed according to the IMCHB. The first process was inductive to develop a codebook figuring out possible “categories, patterns, and themes” (Patton, 2002, p. 453). This process of open-coding (Strauss & Corbin, 1998) was the first analysis described in Chapter IV, constant comparison, where the interview data was explored for themes that did not fit onto the framework (Patton). Once the themes were identified, the second stage of analysis examined the interview data in terms of the framework and applying the interview data onto the framework (Patton). What was also considered for possible adaptation/inclusion in the framework were important themes that were identified in the first analysis that did not map well on to the IMCHB. This research project was approved by the Institutional Review Board of the University of Michigan. The sample is described in Chapter IV.

Analysis

A content analysis as described by Morgan (1993) was used to analyze the interview data. All of the face-to-face interviews were transcribed verbatim. After each interview was completed, memos were written capturing what transpired during the interview that might not have been captured on tape, such as level of affect and reflective notes from the interviewer. Each interview was critically reviewed several times to check the accuracy of the transcribed data. All transcripts were read multiple times to identify major themes, assessing for redundancy and saturation in the interviews, along with writing analytical notes in the margin of the transcripts as they were reviewed. A coding scheme was then developed to organize the data according to the IMCHB variables of *social influence*, *previous health care experience* and *cognitive appraisal*, and to identify any emerging themes that did not map onto the framework. Once initial themes were identified, supporting statements were delineated and reviewed through joint meetings with my mentors, experts in the area to minimize bias, and to discuss the data and emerging themes to ensure thematic accuracy, as reflected the experience of the participants. Finally, the interview data were condensed into descriptive categories of the women's personal influences according to their *social influence, previous health care experience* and *cognitive appraisal* regarding Pap smear testing, as well as themes that did not map well onto these variables. After the analytic process was completed, accuracy of the findings was continued by member-checking (Polit & Beck, 2004) by taking specific themes back to additional recruited participants and determining if the themes accurately reflected their experiences. To protect the confidentiality of the participants, names have been changed in the reporting of the results.

A background information form was completed by each participant covering the IMCHB element of client singularity Background Variables of Demographics and Environmental Resources (Appendix D). The interview questions (Appendix F), focused on the IMCHB element of client singularity Background Variables of *social influence*, *previous health care experience* and the Dynamic Variables of *cognitive appraisal* (Figure 4); the variables considered in the content analysis.

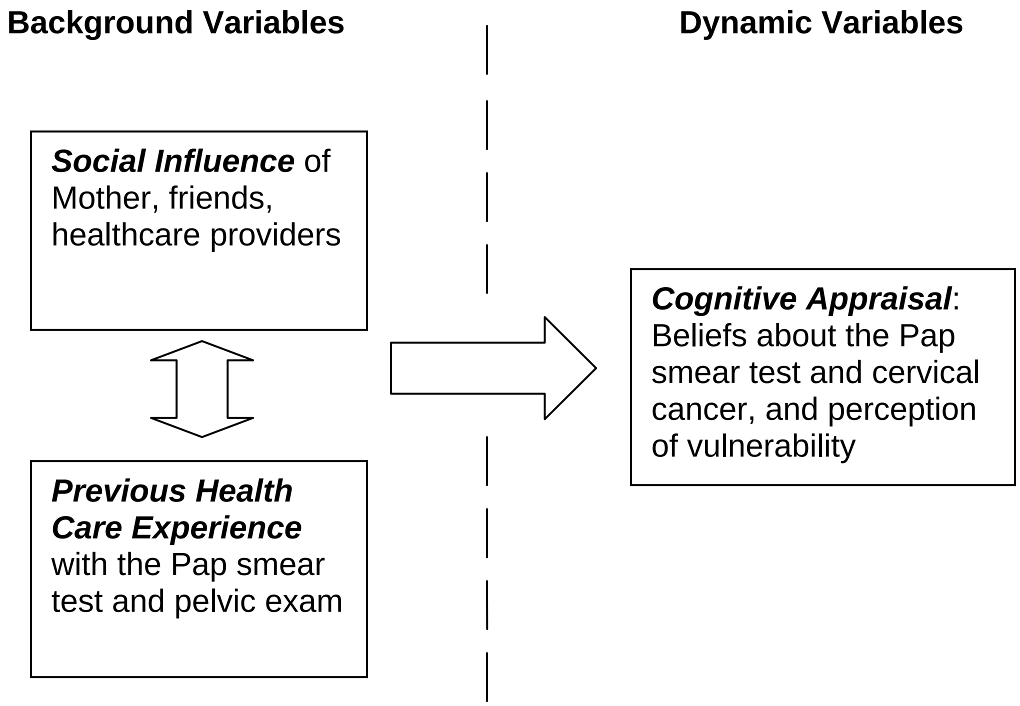


Figure 4. Element of Client Singularity Variables of Interest

---

It is important to note the variables that personally influence women in health preventive behavior. The Background Variables of *social influence* and *previous health care experience* are considered antecedent variables which contribute to the later variables in the IMCHB (Cox, 1982), such as the woman's *cognitive appraisal* regarding Pap smear testing. For example, a woman's *social influence* and *previous health care experience* interact with each other, contributing to the *cognitive appraisal* (what a woman believes or knows about Pap smear testing). Cognitive appraisal may be a function of her previous experience with having a

Pap smear test and pelvic exam or the social value placed on the importance of Pap smear testing by her cultural group.

Results

Major Findings – Routine-use group

The major findings (Table II) of the routine-use group of women were that the themes were consistent with the existing framework. Their results mapped well onto the existing framework. Their *social influence* as to who or what most influenced them about Pap smear testing were connected predominately to their mother. Their *previous health care experience* with Pap smear testing was that it was a positive experience made better by the care of the physician. The routine-use groups' *cognitive appraisal* of their beliefs about Pap smears was that it is a test to evaluate health. Their perceptions of vulnerability to cervical cancer were that they are safe from risk or have hope that the odds are in their favor and they will not get cervical cancer.

Table II

Major Findings of the Element of Client Singularity Routine-use group

Themes	Exemplar Statements	
Influences about Pap smear testing	I would just say an older woman in my life which is my mom about taking care of myself…she influenced me by seeing her life as being healthy…taking care of every issue in life…just seeing her…take care of herself, her body, and it's a beautiful thing to me.	First my mom was telling me about Pap smears. She always taught me to go take one, she always tell me to, you know, take care of myself and, that's the main word, take care of yourself. So I go every year and take one.
Previous health care experience with Pap smear tests	I was comfortable with the doctor, it was not painful, it was a very painless procedure, very quick…The doctor made me feel comfortable with my decision of wanting it done.	I was kind of scared at first but then, you know, I felt the doctor explained to me that it's just something simple, and only take a few seconds, nothing painful, then after that I felt comfortable getting them every year. What made it good is being able to understand how important it is…it's something simple, it's not painful…and it's more simple than it would be to get cancer.
Beliefs about Pap smear tests	Let a woman know…what's going on with her body, what's going on the inside of her, telling her about her body…Like it will tell you if you got disease or you got cervical cancer…Everyone should check on their body once a year to see what's going on with her, because you never know what's going on inside of you.	…It will tell you if you got disease or you got cervical cancer…telling her about…her body…a regular routine that every woman should have, it's just normal.
Personal perceptions of vulnerability to cervical cancer	I think it's very low, because for one thing, I'm kinda going by my family tree. I would say my chances would really be slim because I'm taking care of myself, and what needs to be done will be done.	I don't know, I hope there ain't no chances. So, you know, I just want to get checked out regular.

Major Findings – Non-Routine-use group

The major findings (Table III) of the non-routine-use group of women were that their results also mapped well to the existing framework. Their *social influence* as to who or what most influenced them about Pap smear testing were connected to a general lack of influence, being somewhat exposed to the media. Their *previous health care experience* with Pap smear testing was that it was not a pleasant experience, and it was made worse by the gender of the provider and how the procedure was performed. The non-routine-use group's beliefs about Pap smear testing were that it is a test to evaluate health, STDS and cervical cancer. Their perceptions of vulnerability to cervical cancer were that they are also safe from risk or have hope that the odds are in their favor that they will not get cervical cancer.

Table III

Major Findings of the Element of Client Singularity Non-Routine-use group

Themes	Exemplar Statements	
Influences about Pap smear testing	No one! I grew up in a single household and…basically my dad raised me, so you know a lot of the feminine issues which should be important to me…I never had that specific somebody as a role model to say you need to go have a Pap smear done once a year or twice or however many times it should be done.	I guess, like the public, like the commercials you see on TV that you should regularly, get tested for doing a Pap smear and the breasts exam and things like that.
Previous health care experience with Pap smear testing	I do feel uncomfortable every time I get it, the Pap smear, I feel uncomfortable…If there's a different method that I could choose to help to figure out if I was having an infection, I think I would choose that over a Pap smear because it makes me feel uncomfortable for a complete stranger to come and check you out. I think it makes it completely harder when they have a male do it, because I just don't feel right. That's my whole thing about it. I just really don't feel right about it.	I am generally traumatized by the experience of laying on the table and it is too gross. I don't really know why, I mean I have a sexual abuse thing from my childhood, but I am more or less over that. I think I kind of moved on but that Pap smear just feels like a violation every single time. It's horrible, absolutely horrible. I don't think its worth…hearing, I knew I was okay.
Beliefs about Pap smear testing	I think it's for our own protection because…there are things you can avoid I guess if you get a Pap smear done, if you catch things soon enough…cancers, and I guess if you were a busy lady, venereal diseases and those type of things.	For our health I believe. Pap smears are just to make sure that we don't have any cancer or something going on with your body that's, you know, that's irregular.
Perceptions of vulnerability to cervical cancer	…on a scale of 1 to 10, I would say a 2. A 2 I say, I'm just a person that really don't get sick, have pain…	I never thought about it. I guess because I am ignorant to it, I never gave it a second thought…I think that I do take good care of myself. So you just never stop to think about you know, well, what if. You just always hope for the best, I guess.

Iterative Behavior – Feedback Loop

Cox's model (1984) is congruent with both groups of women, and there is an iterative loop as to their behavior in obtaining routine Pap smear tests. The differences are in the two groups as to how the iterative behavior is congruent in the model.

Routine-use Group

The routine-use group above is congruent with the entire model with no missing pieces. The routine-use group of women has been socially influenced to value preventative health care and their previous health care experience with the Pap smear test has been positive, in part, because of their relationships with the health care provider. These background variables were interrelated and antecedents to the dynamic variable of their cognitive appraisal. Although most did not fully understand the purpose of the Pap smear test and believed that they were not vulnerable to cervical cancer or hoped they would not get cervical cancer, they reported that they were adherent to the recommended screening test. The model's iterative loop and directional arrows (Figure 5) as to the routine-use group of women, connects all three elements of the model.

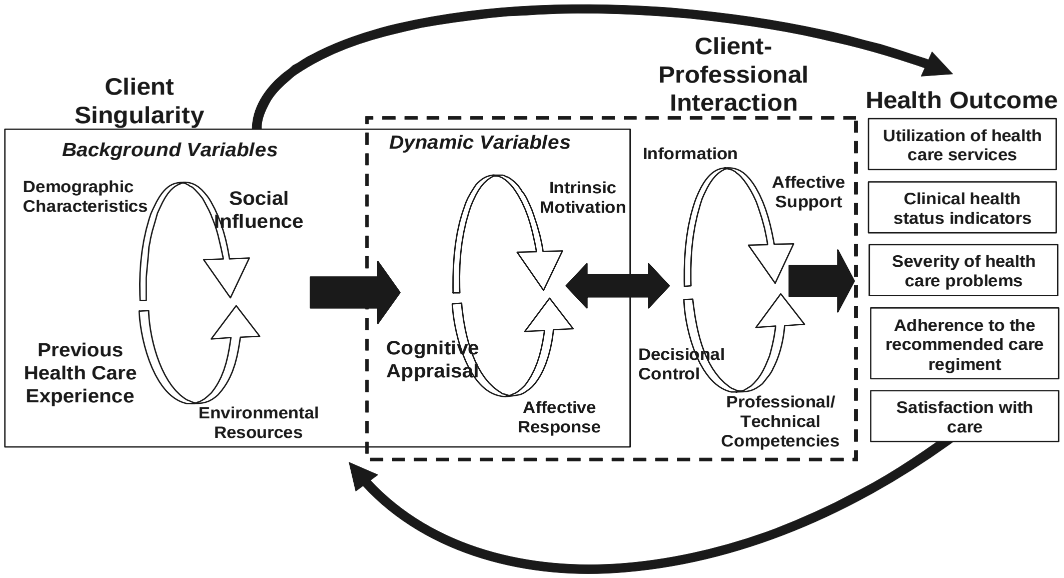


Figure 5. Routine-Use Participants' Iterative Loop

Non-Routine-use Group

The non-routine-use group of women also mapped onto Cox's model with an iterative loop, but there was a missing element in the model (Figure 6). As indicated in Table III, *social influence* to Pap smear testing was weak in the non-routine-use group. Their *previous health care experience* with the Pap smear test was negative or unpleasant and elicited a strong emotional response. For some, this emotional response was strongly related to the gender of the health care provider and the process of the exam. These two background variables are interconnected and are antecedents to the dynamic variable of *cognitive appraisal* as beliefs and perceptions of vulnerability, which are very similar to the routine-use group of women. There are also educational limitations in the non-routine-use group related to the purpose of the Pap smear test. The participants' perceptions of vulnerability were also one of being safe and having hope.

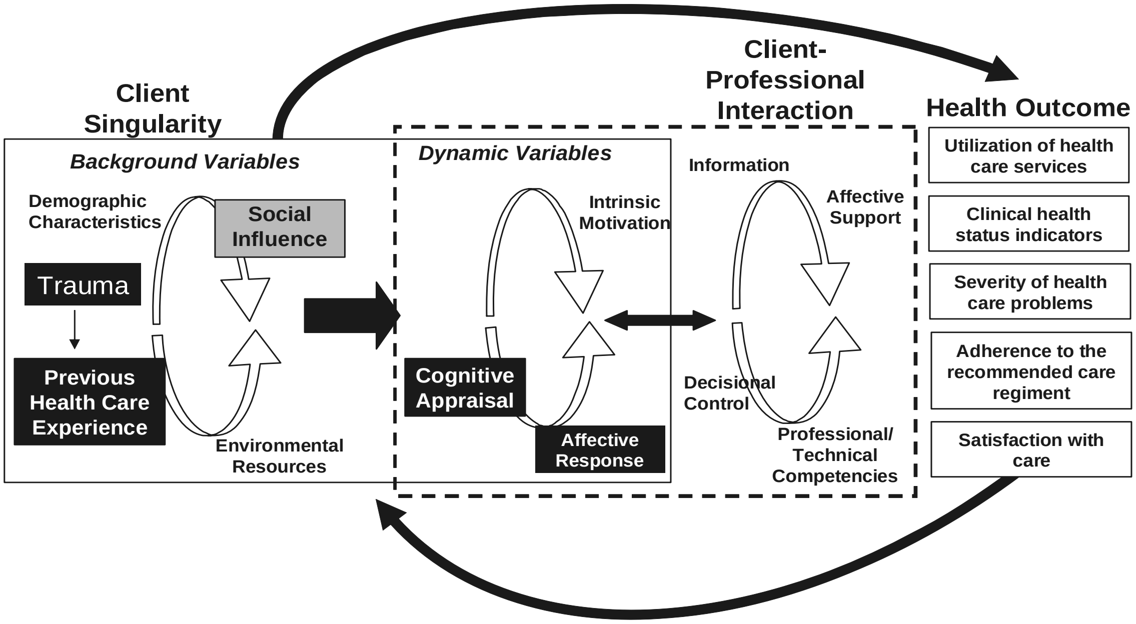


Figure 6. Non-Routine-Use Participants' Iterative Loop

Additional factors not mentioned in the model

Feedback on Trauma

The missing component for the non-routine-use group was in the Client Singularity Background Variables. The missing component of a history of trauma that evolved late from the participants' responses is connected to or influences the non-routine-use group's perceptions regarding their *previous health care experience* of having a Pap smear test as indicated in the above model (Figure 6). The gender of the provider and how the Pap smear procedure was done is an important factor in this group of women.

Feedback related to trauma with the non-routine-use group is limited to seven of the women who acknowledged or alluded to a history of abuse. Two additional women made statements regarding bad experiences with cervical biopsies. The level of affect that was not caught on tape is these women's facial expressions, lack of eye contact, body movements, tone of voice, and the emphasis placed on certain words. This gave credence and support to the trauma theme along with the support of member checking. All of these issues may be contributing factors towards the participants' perceptions regarding their experience of Pap smear testing that may influence their beliefs about the need for screening and/or that they are not vulnerable. Assessing for a history of trauma, whether through abuse or medical procedures, should be explicitly included in the Background Variables as an interrelated factor that affects perceptions of the *health care experience* with Pap smear testing. This missing history was salient for the non-routine-use group. The history of trauma is an important factor that may have a strong influence on their affect which can interfere with their cognitive activity (Cox, 1984; Nabi, 2002). Their beliefs and perceptions of vulnerability ultimately affect their behavior in obtaining routine cervical cancer screenings.

Additional Findings Related to the Model

Additional findings related to the IMCHB were also evident in the women's narratives that mapped onto Client Singularity and Client-Professional Interaction. The Client Singularity Dynamic Variables of *intrinsic motivation* and *affective response* evolved from the narratives of the participants as important factors connected to the behavior of obtaining routine Pap smear testing. Table IV provides side-by-side comparison of participants' statements for the routine and non-routine-use groups.

Table IV

Findings Related to the Model – Intrinsic Motivation and Affective Response Exemplar Statements

	Routine-use	Non-Routine-use
Intrinsic Motivation	At first when I went, it's kind of like…'I wonder if they're going to find something, Oh my God'…but after you get the results saying you're healthy, they did not find nothing abnormal, it felt good, like something you should keep up every year, because it feels good to know that everything's okay with your body. …I don't want no surprises later. I think that [Pap smear] does give you a lot of information about where you are in your body, especially us Black women, because we have more chances of things.	I think if I had a regular doctor and a female, I'm not real strong about getting tested and things like that by a male so…that probably make it a little more easier you know having a female doctor… I don't intend to go back soon because I don't believe it's worth the drama. It's not something I'm going to schedule because that to me would be like….signing up for some abuse.
Affective Response	…I thought you get cancer…and spreads all over your body, that's what I thought. They say that sometimes when you cut on people…that's how it spreads…its scary…that's why I go to the hospital…to get me a Pap smear. So that way I won't get it [cancer], I won't have to worry about you know trying to prevent me from getting it… For me to have it done and just to see you know the follow-up of what's going on in my life before you know it get too far gone, I can have something done, don't have to worry about it.	…I've had traumatic experience in my life through incest; therefore, just the fear of anybody trying to put some instrument up me is scary. …afraid of them calling me with some bad results, or just thinking that you know, I'm okay I don't need one. I know that I'm fine down there; I'm thinking that I know I'm fine down there. I just don't like to be touched in the wrong spots by a man…I know he's a man, he's not my man… when I feel uncomfortable…I tell him to get out…that's enough. You don't have what you looking for, that's too bad…that's what I tell him.

Client-Professional Interaction was an important factor in the women's responses to a question regarding what made their Pap smear experience a positive or negative one. According to the model (Cox, 1984), this element identifies the interaction between a client and health care provider as a major influence on health behavior. This element was seen as playing an important role in the health behavior of adhering to routine screening in both groups of women. Table V gives a side-by-side comparison of exemplar statements made by both groups of women for this element.

Table V

Findings Related to the Model – Element of Client-Professional Interaction Exemplar Statements

Routine-use group	Non-Routine-use group
I felt the doctor explained to me that it's just something simple, and only take a few seconds, nothing painful, then after that I felt comfortable getting them every year.	I was 18…it was male doctor and…he wasn't welcome and he was harsh, I mean he was a smart-aleck, I didn't like him…
I was comfortable with the doctor…the whole environment of the doctor. The doctor made me feel comfortable. My decision of wanting it done…the main thing is the comfortability with the doctor…I think it has to do with the relationship of you and the doctor and the doctor care about you…that he would put it in a way that you would want to get it done, but in a very caring way…	I don't have a regular doctor that I can say I feel comfortable with going in and undressing…
…well, for the last 31 years, I've been with the same doctor. And he usually talks, asked me about my job and before I know it, it's over.	…that fact that my doctor did not communicate with me a great deal…when you have a very good rapport with your doctor that makes it a lot easier…there are some places out there where…it's a job for the doctor and their doing their job, you're just another patient.
The nurse for one reason, the nurse talked to me and told me that was going to be done and how it was going to be done, performed. That made it easer for me to have it done…I think they make it easier if they tell you…what they're going to do, how they're going to do it, and the procedure that needs to be done.	…right now I say that they [doctors] are making it harder because most women don't get it [Pap smears] and why they don't get it is because doctors probably don't take the time out to tell them or explain more things why it should be done on them.
	I think in my case it's because of the physician at this time. And that's a real bad excuse cause there is nothing wrong with him…the lady I had, the nurse, or the doctor I had before him, she was, I just really liked her and then this one I went to, he's not, I guess, I just, he's not, I don't know, it's not really him.

There was not a positive relationship between the non-routine-use group of women and their health care provider. The influence on the non-routine-use groups reporting was negative and not considered a strong reciprocal relationship compared to the routine-use group. The client-professional interaction is related to health outcome. The health outcome according to Cox (1984) is the outcome measure of health behavior. Not obtaining routine Pap smear testing is a negative health behavior that places women at risk for adverse health outcomes.

An iterative loop exists for the non-routine-use group of women, but it is an intermittent loop. It is not that the participants have never obtained a Pap smear; they obtain the test irregularly, greater than every 3 years, some not having had the test for greater than 10 years. The directional arrows between the Dynamic Variables and Client-Professional Interaction to Health Outcome are not as powerful as they are in the model that represents the routine-use group. Figure 7 represents the model for the non-routine-use group of women that evolved from this research project.

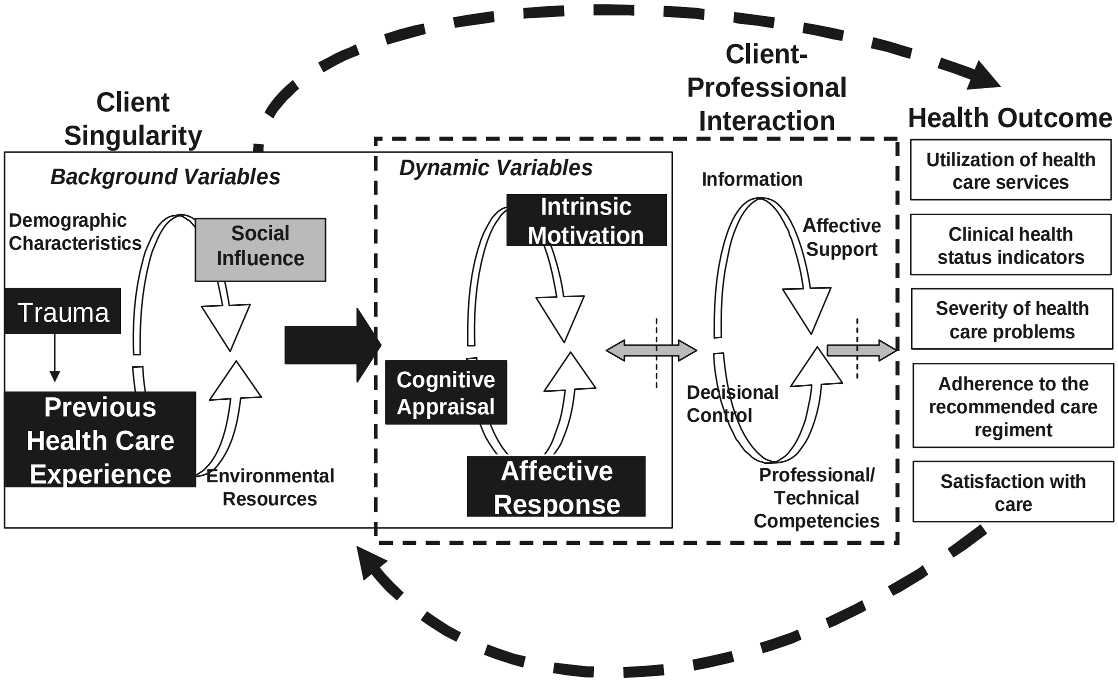


Figure 7. Modified Non-Routine-Use Participants' Iterative Loop

---

Conclusion

There is a difference in personal influences among the participants in this study who do and do not obtain routine Pap smear testing. The differences are in Client's Singularity, which are the unique characteristics of an individual, including their background variables, expression of motivation, appraisal of the health care concern regarding cervical cancer screening, and the affective response to that concern. The routine-use group of women obtained routine Pap smear testing and mapped consistently onto the IMCHB. The non-routine-use participants represented a potential group for intervention. This group of women did map onto the IMCHB, but their trauma history, which was a negative influence, is not included in the background variables. Trauma is a background variable that affects other background variables such as *health care experience*. The interconnected and interrelated Background Variables contributed to the Dynamic Variable of their *affective response,* which affected their motivation to adhere or not adhere to routine Pap smear testing. The non-routine participants' *cognitive appraisal* of their beliefs about Pap smear tests and perceptions of vulnerability have been affected by their emotional responses, inhibiting information processing. However, the differences between the two groups on their *cognitive appraisal* were relatively small.

Summary

The process of the content analysis revealed that Cox's (1984) IMCHB was a reasonably useful framework to identify explanatory relationships between the Background Variables of *social influence* and *previous health care experience* which contribute to and affect the Dynamic Variable of the women's *cognitive appraisal*. However, the framework seems to be missing a component for the non-routine-use group. The non-routine-use group's data analyses revealed a certain theme that did not map well onto the existing framework. This theme includes a history of trauma that evolved from some of the participant's responses to their personal influences regarding their *previous health care experiences* with the Pap smear test.

The following chapter will synthesize the themes that resulted from the two analyses of constant comparison and content analysis. Personal influencing factors that affect motivation in routine cervical cancer screening in low-resourced African American women were discovered to have similarities and differences that contributed to adherence and non-adherence in the health preventative behavior. The differences discovered between these two groups of women and how they relate to routine Pap smear testing have important implications for future research.

CHAPTER VI

Discussion

In this study, guided by Cox's (1984) Interaction Model of Client Health Behavior (IMCHB), I explored the perceptions of 24 low-income African American women concerning Pap smear testing, focusing on personal influences that contribute to obtaining this screening test. The two groups of women studied were those who obtained routine testing (routine-use) and those who did not (non-routine-use). The interview data were analyzed in two different ways. A constant comparison (Chapter IV) approach was used to identify patterns or themes, and a content analysis (Chapter V) to consider the value of the framework in relation to the inductively-obtained data.

The data analyzed by constant comparison (Glaser, 1978) identified differences between these two groups. The differences were found to be in the element of client singularity Background Variables of *social influence* and *previous health care experience* with the Pap smear test and pelvic exam. Similarities were found between the two groups in the Dynamic Variables of their *cognitive appraisal* as to their beliefs about Pap tests and perceptions of vulnerability to cervical cancer.

The process of the content analysis (Morgan, 1993) revealed that Cox's (1984) model is a useful framework for framing cervical cancer screening health behavior research. The routine-use group and the non-routine-use group's results mapped quite well onto the framework. However, there was an iterative loop as to their behavior in the routine-use group. That is, in the non-routine-use group the iterative behavior in the model was missing a piece. That piece was a history of trauma, i.e., childhood sexual abuse, intimate partner violence, and traumatic encounters associated with colposcopy and cervical biopsies. A history of trauma may have affected the non-routine-use group in their perception of the health care experience, possibly contributing to barriers in the health preventative behavior of cervical cancer screening. Other findings that were related to the IMCHB element of client singularity among the routine-use and non-routine-use groups were in the dynamic variables of their *intrinsic motivation* and *affective response,* as well as in the relationship between client singularity and the client-professional interaction.

The following paragraphs will analyze findings according to specific content areas of the IMCHB, i.e., *social influence, previous health care experience, cognitive appraisal, intrinsic motivation*, *affective response*, and *client-professional interaction* based on the routine-use and non-routine-use groups' personal influences that affect motivation for Pap smear testing. The unexpected finding regarding trauma that emerged late in the data collection among the non-routine-use group will be discussed and a recommendation made that Cox's model be modified to include trauma as a possible unique characteristic of an individual.

Social Influence

It is not surprising perhaps that social influence (social support) through the giving of information and perceptions of caring provided by an informal network (family, friends, and relatives) and a formal network (health care providers) were found to be different between the two groups. Research has indicated that there is some relationship between social support and compliance to medical regimens (Israel, 1982). Social support is defined as “information that leads people to believe they are cared for, loved, esteemed, and valued and that they belong to a network of communication and mutual obligation” (Cobb, 1976). The social influence as to Pap smear testing was found to have divergent themes among the routine-use and non-routine-use group as to who or what they believed most influenced them regarding Pap smear testing. The routine-use group regarded their mothers as the greatest source of information and encouragement. Physicians were the second most mentioned source of support among this group, with the women reporting that their physicians showed a caring, reciprocal relationship. These findings were similar in other studies reporting that family and friends were the greatest source of encouragement, but the most important encouragement was found to be from medical advice from health care professionals (Jennings-Dozier, 1999; Jennings, 1997, Ogedegbe et al., 2005).

Social influence among the non-routine-use group consisted of divergent themes in comparison to the routine-use group. Several of the non-routine-use group interviews contained statements in response to whom or what most influenced them about Pap smear testing. They were “told” to obtain a Pap test by a family member or health care provider. It seems that for these non-routine-use women, being “told” to obtain a Pap smear test was not a motivator for them to obtain routine screening. The trusted provider-patient (or client) relationship was key for these women in terms of their ongoing decision to obtain a Pap smear, and when that is not there, being “told” to do something may actually deter following the advice. For women to obtain routine cervical cancer screening, the decision to obtain the test should be self-determined and/or based on trusted information and a positive relationship with a provider. To fully understand the importance of cervical cancer screening, women must be provided with the proper information as to the benefits of routine screening as well as being informed of personal risk factors associated with cervical cancer in order to motivate women to obtain routine Pap smear testing. However, information alone is not sufficient--it is an accumulation of knowledge, having trust, and a relationship that encourages motivation to adhere to routine screening. The non-routine-use group of women did not seem to value preventative health care as it relates to cervical cancer screening, possibly because they received very little social influence in regards to the screening test from important individuals in their lives (mothers, peers, social network, and social support). It could also be that the value of preventative health care was not a part of their family for very complex reasons dating back several generations, leaving some women without reliable sources of health information. Access to relevant and reliable sources of health education may also be an issue with this group of African American women. As to routine cervical cancer screening, women who have had a fragmented primary care experience may receive messages in bits and pieces about the need for testing and screening. Research indicates that women who are motivated to obtain routine screening have been found to have important individuals in their lives such as family as well as a trusted health care provider, who provides them with information and guidance (Jennings-Dozier, 1999; Jennings, 1997; and Ogedegbe et al., 2005). These two groups of women were socially influenced, but the outcomes of the influence were different between the two groups. The differences can affect their perceptions of the health care experience associated with having a Pap smear test and pelvic exam and have an iterative effect.

Previous Health Care Experience

Content from participants in the routine-use group and the non-routine-use group contained statements that indicated important distinctions between the groups as to their *previous health care experience* with the Pap test and pelvic exam. Previous research has supported those women who perceived the Pap smear testing process as painful and embarrassing, related that perception to the provider's gender, which resulted in lower levels of routine cervical cancer screening (Boyer et al., 2001; Hoyo et al., 2005; and Jennings, 1997). Several of the interviews in the non-routine-use group in the current study had similar findings. The non-routine-use group's perception that their experience was unpleasant likely contributed to an emotional response that may be affecting their judgment regarding the benefits of adhering to routine cervical cancer screening.

On the other hand, several of the interviews among the routine-use group contained statements indicating their experience with the Pap test and pelvic exam was positive and what contributed to that perception was the care of the physician.

Perceptions toward the Pap smear test and pelvic exam in the non-routine-use group did not seem to be caused necessarily by the procedure itself, but from other external influences that were causal factors contributing to their perceptions. The external factors that appeared to play a part in their negative perceptions were a previous history of trauma, such as victims of abuse and from traumatic encounters from gynecological procedures of colposcopy and cervical biopsies. Prior research in exploring African American women's personal influences regarding Pap smear testing and cervical cancer did not indicate a connection to a history of trauma or traumatic encounters that affected screening behavior. This particular finding of a trauma history was an unexpected finding that emerged late in the interview analyses.

The gynecological procedures of a Pap test and pelvic exam involves exposure of intimate parts and places a woman in a vulnerable situation possibly triggering an emotional response that may affect future motivation to obtain the screening test (Hilden, Sidenius, Langhoff-Roos, Wijma, & Schei, 2003). A gynecologic examination may arouse memories of an abuse and cause anxiety, distress and consequently an overall feeling of discomfort (Hilden et al.; and Robohm & Buttenheim, 1996).

Another important factor that may have played a role in contributing to the negative emotional response was connected to gender of the provider. Women who experience abuse have primarily been abused by males (Black & Breiding, 2008). This in part could be why gender of the provider elicited negative emotions that contributed to these women's perceptions that the exam was uncomfortable. Several of the interviews among the non-routine-use group contained statements in which gender of the provider was an important factor relating to their experience. Although in the study conducted by Hilden and colleagues (2003) with women who had experienced sexual abuse, the experience of discomfort with the procedure was found to be independent of the provider's gender. What was found in this study by Hilden and colleagues to be important was age, younger than 26, associated with discomfort during the exam, and a negative emotional contact with the examiner also affected their comfort level. In the present study, age did not appear to be a factor in the negative responses. The age range of women reporting that their previous health care experience was uncomfortable ranged between 19 to 57 years old. It also seemed that the non-routine-use group's responses as to the health care provider were not positive in part because they may not have had a good emotional contact or relationship with the provider. Some of the non-routine-use group interviews contained statements where they recognized that a relationship with the provider would have made the experience better. Research has indicated that a negative contact between a patient and health care provider was found to be strongly associated with experiencing discomfort during the gynecological examination (Hilden et al.; Jennings, 1997; Juraskova, Butow, Sharpe, & Campion, 2007). A woman's social influence and previous health care experience are interrelated and affect her cognitive appraisal as to what she believes about the importance of routine screening.

Cognitive Appraisal

All participants in these interviews said that the Pap smear test evaluates one's health, with some participants stating that the Pap smear evaluates their body, and through this evaluation it can be determined if one has cervical cancer and sexually transmitted diseases (STD). Believing that a Pap test evaluates health by testing for STDs has health implications for both groups of women. Although it is partially true, there are real flaws in that belief. Believing that a Pap test is a test for STDs may affect their health behavior in obtaining STD testing. Actual STD infections and cervical cancer could go undetected and untreated. For example, Chlamydia is the most commonly reported STD in the U.S. In 2006, African American women were diagnosed with Chlamydia seven times greater than that of white women who were tested (CDC, 2007a). A woman who has Chlamydia may not have any signs or symptoms, and can lead to pelvic inflammatory disease, contribute to ectopic pregnancies, and cause infertility (CDC). The CDC further states that many men with Chlamydia go undetected because their female partners are not being tested either because the woman is not seeking screening or their health care provider does not perform the screening test (CDC). It is recommended by the CDC that all women under the age of 26 obtain yearly Chlamydia screening. This yearly screening recommendation is closely related to the recommendations of Pap testing within this same age group. This may be a reason why women associate Pap testing with STD testing. Another factor is that women who believe that they are not at risk for an STD and have the belief that the Pap test is a test for STDs, may decide not to obtain the Pap test, therefore putting herself at risk for missing an early detection of cervical cancer.

The differences between the two groups were that regardless of their beliefs associated with the Pap smear testing, some women obtained routine testing and some did not. The participants' statements regarding their beliefs were inconsistent with earlier research where women who were unscreened were found to believe that cancer is bad luck and that not knowing if one had cancer was better than knowing (Behbakht et al., 2004), and that one cannot influence the future so why try and change it by obtaining the screening test (Boyer et al., 2001). What was found to be consistent with the participants' statements in these interviews with previous research (Hoyo et al., 2005; and Jennings-Dozier, 1999) was that the non-routine-use group's statements when compared to the routine-use group's statements, contained beliefs that Pap smears are painful and embarrassing. Other differences were also noted between the two groups' statements. The routine-use group had greater knowledge regarding the importance of early detection. Prior studies also reported that women who were adherent compared to those who were not adherent to the screening test had greater knowledge regarding the importance of early detection (Bazargan et al., 2004; Gorin & Heck, 2004; and Ogedegbe et al., 2005). Even though the routine-use group held some misperceptions regarding the causes of cervical cancer, they understood the importance of early detection to prevent the spread of cancer and possible loss of life. The findings from this study support previous findings (Carter et al., 2002) that the greater the lack of knowledge regarding the importance of early detection, the less likely the women would have had routine screening.

Neither group had important distinctions in their *perceptions of vulnerability* to cervical cancer. Actual risk factors for cervical cancer are connected to having persistent HPV infection, a weakened immune system, lack of routine Pap testing, sexual behavior, smoking, use of oral contraceptives consistently for 10 or more years, high parity, and age (Munoz et al., 2006). The participants in these interviews made statements indicating they did not perceive they were at risk for cervical cancer, or believed their risks were low. Only one routine-use participant reported believing that she was at risk for cervical cancer because of smoking, which is a known risk factor for many cancers, as well as associating her risk with having a family history of cancer—not a risk factor for cervical cancer. Women in both groups made statements that they were either safe from risk or hoped they were not at risk. Misconceptions about risks for cervical cancer in these participants were prevalent. That is, most of the women thought being safe from risk was associated to not having a family history, being healthy presently, and maintaining health preventative behaviors. Having hope was connected to a lack of knowledge of what causes cervical cancer, not knowing their personal risks, and associating their risks with having a family history of cancer.

The participants in both groups reported that their risk for cervical cancer was associated with a family history and taking care of themselves. The women in the routine-use group who believed that their risk was connected to a family history are obtaining routine Pap smear testing in part because of this belief. The non-routine-use group who believe that they are not at risk because of a negative family history, are in part not obtaining the Pap smear test, which has health implications. Associating one’s risk for cervical cancer with not having a family history of cancer can contribute to women’s non-adherence. The belief in connecting family history to one’s risk for cervical cancer can lead a woman to believe that cervical cancer screening is not required. This misunderstanding can result in not pursuing Pap smear testing and unhealthy behaviors.

Believing that taking care of yourself prevents cervical cancer is in part true, but it is how you take care of yourself. Preventing cervical cancer is not necessarily associated with eating healthy and exercising, except that these actions are known health preventative behaviors. Eating healthy and exercising is associated with helping to prevent other cancers, such as breast and colon cancer for example (ACS, 2008). Using protection such as condoms with intercourse is a way to prevent transmission of most STDs, but does not always prevent transmission of HPV, which is transmitted by skin-to-skin contact (ASCCP, 2006). These participants made statements that they are not at risk because of condom usage and being careful as to who they are with. Women who believe that condoms protect them against STDs may not go in for testing, or believe that she does not need cervical cancer screening because of using condoms.

The non-routine-use group acknowledged that they did not know what caused cervical cancer and were not aware of their risks. If there is a lack of understanding of what causes cervical cancer and one's personal risk for cervical cancer, this lack of information may be a contributing factor in non-adherence to the screening test (Ackerson, Pohl & Low, in press; Behbakht et al., 2004; Carter et al., 2002; and Nelson et al., 2002). These same women who acknowledged not knowing about the causes and the risks also reported that they were not vulnerable because they did not have any signs or symptoms of a health problem; so therefore, there was no need for testing. The findings from this current study were similar to findings in other research studies that found that if there are no signs or symptoms, the women were more likely to be non-adherent (Boyer et al., 2001; and Ogedegbe et al., 2005). Cervical cancer does not usually have any early warning signs or symptoms to indicate that disease is present (NCI, 2008). African American women are diagnosed more often in later stages, experiencing greater mortality rates when compared to all other groups of women in part because they tend to decrease the rate of obtaining Pap smear tests as they age (ACS, 2006). The routine-use and the non-routine-use groups' cognitive appraisal as to their beliefs regarding the Pap smear tests and perceptions of vulnerability to cervical cancer can affect motivation positively or negatively in health behavior activities.

Intrinsic Motivation

It seems that motivation to obtain cervical cancer screening in the routine-use group was greater because they have been socially influenced to value their health. Their experiences with the Pap smear test and pelvic exam has been positive and they believe that the Pap test is an evaluation of health. This is due in part to a belief that their risk is connected to a family history of cancer, and they want to maintain health, and the Pap test affirms health. By obtaining negative results, this is a favorable outcome providing piece of mind, and contributing to a positive affective response. Although the routine-use group obtains Pap smear tests based on misperceptions, they are obtaining routine screening according to what they believe to be true.

The non-routine-use group motivation to participate in routine screening may have been decreased because of their social influence as to the benefits of routine preventative health care. Their experiences with the Pap smear test and pelvic exam were often negative; some believe they are not at risk for cervical cancer based on family history, and others lack the knowledge of personal risk factors for cervical cancer. It is also possible that motivation is due to their negative affective response from previous health care experience with the gynecological procedure. Therefore, when women do not understand the risks and causes of cancer, they believe that their risk is not high and/or they do not fear that they are personally at risk for cancer. As such, they do not perceive “routine exams” as part of expected behavior, but rather that they are healthy unless they have a family history or experience physical symptoms (Ackerson et al., in press; Behbakht et al., 2004; and Ogedegbe et al., 2005). The non-routine-use group's health behavior of avoiding the screening test seems to have many contributing factors influencing their non-adherence, and it appears that the negative affective response is a primary variable among this group.

Affective Response

An *affective response* (emotional response) can have a pronounced effect on behavior (Cox, 1982). Emotions such as fear and anxiety, may interfere with a woman's cognitive activity affecting her ability to make a rational decision (Slovic et al., 2004). The responses to exploring what their previous health care experience was like with the Pap smear test and pelvic exam elicited different statements between the two groups. An important distinction between the two groups was in what they said about their experience, their emotional responses that were not caught on tape, such as facial expressions, body movements, and lack of eye contact.

Several of the interviews among both groups as to their cognitive appraisal contained statements that they believed the Pap smear test evaluates health. Differences between the two groups were in the background variables of *previous health care experiences* that contributed to their *affective response.* The affective responses, which were positive in the routine-use group and negative in the non-routine-use group, drove their motivation to obtain routine cervical cancer screening. The routine-use group's motivation to obtain routine testing was based on positive affective responses that were influenced by their positive health care experience and obtaining negative Pap smear test results which affirmed their health. For the non-routine-use group, their negative affective response to an unpleasant health care experience motivated their actions to avoid reoccurrence of the feelings. Although the non-routine-use group of women wanted to maintain their health as did the routine-use group, the non-routine-use group seemed to believe they were maintaining their health by avoiding feelings that were just too unpleasant. For this non-routine-use group of women, it would be important for the health care provider to address the emotional arousal that the gynecological exam elicits. This could be accomplished by designing an intervention directed at reducing the level of emotional arousal to a place where cognitive appraisal might be altered.

Client-Professional Interaction

Health care providers are an important factor in women adhering to cancer screening tests (Bazargan et al., 2004; Gorin & Heck, 2004; Jennings, 1997; and Ogedege et al., 2005). According to IMCHB theoretical framework, this element of the model is considered to be a major influence on health behavior (Cox, 1982). This factor was apparent and supportive in some of the routine-use and non-routine-use groups' responses to what made the previous health care experience good for some and bad for others. For the routine-use group it was the health care providers' encouragement, education, and care that contributed to motivation to adhere to the routine screening test, as found in prior research (Bazargan et al.; and Ogedegbe et al.). For the non-routine-use group, health care providers were also an important factor, but the health care provider seemed to contribute to making the experience worse. The experience was perceived to be worse because the provider did not offer proper information, the provider was just doing their job, not having a relationship with the provider, and the provider's gender. These perceptions of the interaction seemed to play a part in affecting motivation to obtain the screening test.   Another explanation for the non-routine-use group's more negative perceptions of their interaction with the health care provider might be that they had existing internal (psychological) and external personal (history of trauma) factors that affected the interaction. How a provider approaches women with a history of sexual abuse can determine women's perceptions of future visits (Leeners et al., 2007). In a study conducted with survivors of childhood sexual abuse, 82% of the women were never asked by the provider about a history of sexual abuse or assault (Robohm & Buttenheim, 1996). This could possibly lead a woman with a history of childhood abuse to perceive that a provider who does not ask about a history of abuse may not understand their experience or possibly not be prepared to hear their answer (Robohm & Buttenheim). The negative affective response several of the non-routine-use group had in response to their perceptions regarding their health care experience with the Pap smear test and pelvic examination could likely be influenced by a history of trauma. As such, since a trauma layer was missing from the existing framework, the framework may need to be modified and trauma added to the element of client singularity background variables, which consist of unique characteristics of an individual.

History of Trauma

In this present study with a population of African American women of lower socioeconomic status, a history of trauma was an unexpected finding and emerged late in the study. It was verified to a small extent and seems consistent with literature on sexual abuse and avoidance of gynecological care (Leeners et al., 2007). A history of trauma will be important to verify in future work with this population in relation to Pap smear testing in particular. It is estimated that 20% of females are sexually abused during childhood (Leeners et al.) and 24% of women in the United States experience intimate partner violence defined as “threatened, attempted, or completed physical or sexual violence or emotional abuse by a current or former intimate partner” (Black & Breiding, 2008, p. 113). Women who have been sexually abused during childhood and women who have suffered from intimate partner violence may experience greater adverse health conditions and health risk behaviors, such as an increased risk of sexually transmitted diseases (Black & Breiding; Johnston, 2006; and Leeners et al.). Sexual violence is also associated with posttraumatic stress disorder (PTSD) (Farley, Golding & Minkoff, 2002; Johnston; Seng, Sparbel, Low, & Killion, 2002). A woman who has a history of sexual violence may experience PTSD symptoms during the gynecological exam, having to separate her mind from her body to prevent recurrent and distressing recollections of the abuse (Seng et al.). As such, women with a trauma history may find the gynecological examination, having a Pap smear test and pelvic exam as an aversive procedure and avoid the exam altogether, placing them at risk for adverse health outcomes (Leeners et al.).

Two of the non-routine-use women experienced traumatic encounters with colposcopy and cervical biopsies. The experience of having a gynecological medical procedure can elicit a negative affective response such as anxiety and fear, especially if the woman does not understand the reasons for the procedure (Juraskova et al., 2007). If women do not understand the purpose of the Pap smear test and the meaning of abnormal Pap smear test results, how are they expected to understand the reasons for colposcopy and cervical biopsies? The degree of psychological distress to which this procedure seemed to contribute, possibly hindered adherence to screening procedures and adequate follow-up. When an individual is provided with the proper support and information to improve knowledge, this can decrease one’s fear (Juraskova et al.). Important in this process is the provider themselves. A provider who communicates positively and who has interpersonal skills can be effective in reducing a woman’s affective response, allowing her cognitive appraisal to be altered. By reducing her affective response, a woman is more able to develop an accurate perception of the problem and/or procedure and more likely to adhere to routine screening and follow-up care (Cox, 1984).

Framework Modifications

A history of trauma is considered to be a component of demographics, which include “characteristics” of an individual, for example one’s gender, age, race, ethnicity, marriage status, number of children, and educational attainment.

Demographics, therefore, can be operationalized to include personal characteristics of a history of trauma, such as childhood sexual abuse and/or abuse as an adult, either from intimate partner violence or sexual assault (rape). The original framework for this study did not include as a component under the background variable of demographics a history of trauma. Therefore, the framework for future research will include a history of trauma as part of the evaluation of demographics. A history of trauma is interrelated and connected to a woman's social influence and previous health care experiences that contribute to the dynamic variables of her cognitive appraisal regarding what she believes and perceives about the screening test that may contribute to her affective response that the experience of having a Pap smear test and pelvic exam elicits that ultimately directs her motivation to obtain routine cervical cancer screening.

Cox's Model – Every Encounter Affects the Next Encounter

The Interaction Model of Client Health Behavior has an iterative loop as discussed in Chapter V, where each encounter between a woman and her health care provider affects the next encounter. How each encounter is approached by the woman and her health care provider affects the next encounter. For women who obtain routine cervical cancer screening, this behavior is established in part because of their reciprocal relationship with their health care provider. A relationship also exists between the three major elements of Cox's (1984) model. The iterative loop for the behavior of routine cervical cancer screening is affected by a woman's singularity (the unique characteristics of an individual), the interaction that occurs between the woman and her health care provider that is based on the woman's singularity, and the health outcome, i.e., obtaining routine cervical cancer screening. The implications for the iterative loop for women who do not obtain routine cervical cancer screening are among the factors that exist in the element of client singularity, the unique characteristics of that woman that affects the encounter with the health care provider. Encounters with health care providers can positively or negatively affect health outcomes, i.e., obtaining routine Pap smear testing. Several of the statements made by the non-routine-use participants to their experience of having a Pap smear test and pelvic exam were negative and what may have made the visit worse was the interaction with the health care provider. The second element of Cox's model, client-professional interaction, seems to be an important factor that may affect the iterative loop of the model. Factors for health care providers to address include, women's singularity issues found in this study to be important, such as social influence, previous health care experience, trauma, cognitive appraisal, and affective response spurring motivation, so women change the risky behavior of avoidance of routine screening and seek routine care.

Research indicates that health care providers are important individuals who influence women to obtain routine Pap smear testing (Bazargan et al., 2004; Gorin & Heck, 2004; Jennings, 1997; and Ogedegbe et al., 2005). A negative perception regarding previous health care experiences with the Pap smear test and pelvic exam can be approached by a health care provider in a sensitive manner to help alleviate anxiety and fear and change a negative perception to a positive one (Leeners et al., 2007). Education with proper and accurate information as to what a Pap smear test entails and potential personal risk factors associated with cervical cancer will help promote routine screening (Juraskova et al., 2007). An important factor that a health care provider must address is an affective response that the gynecological exam elicits in some women. If the health care provider does not address this emotional response by offering affective support to help alter the emotional response, it may result in a woman's dissatisfaction and withdrawal from routine cervical cancer screening. If health care providers do not assess for trauma history, the woman may not self-identify with this history, resulting in negative experiences for women and affecting their health-seeking behavior. It may also be a barrier to future testing.

Strengths and Limitations

The strengths of this study were that only African American women were interviewed, and participants from every decade of life between 18 and 65 participated in face-to-face interviews regarding their personal influencing factors associated with Pap smear testing. The data were analyzed using a constant comparison and content analysis approach. In the previous reviewed research, only three studies specifically addressed African American women. Thus this study contributes new information regarding personal influencing factors that contribute to non-adherence to cervical cancer screening among African American women, helping to fill the gap. The sample demographics were similar between the two groups. The non-routine-use (larger sample of participants), was the group of interest for this study to determine personal barriers that influence routine screening. A constant comparison analysis was conducted to discover patterns and themes that did not fit into the existing theoretical framework and may have not been discovered if only analyzing the data through content analysis. Themes were identified using a constant comparison approach, analyzing each case individually and then across cases for emerging themes. Through this iterative process, relevant information was discovered. To enhance credibility of the data, meetings were held with experts in the field regarding participants' perceptions and to review transcripts regarding emerging themes. Member checking, provided feedback to newly recruited study participants regarding the emerging data and my interpretations. The second analysis using content analysis was done where the women's results were mapped onto the components of the model, confirming the usefulness of Cox's model (1982) as to the behavior of routine Pap smear testing.

Limitations of this study include issues related to the sample sites, self-report findings, interviewing the participants only one time, and the PI is not of the same race as the participants. A limitation of this study is the potential bias in selecting some of the sample from a domestic assault shelter and an emergency shelter because researchers might expect these participants to report more negative experiences with the Pap smear test and pelvic exam. African American women selected from the shelters may have differed in characteristics, such as attitude toward Pap smear testing, from African American women who did not seek residence at these shelters. Thus, the findings may not be applicable to African American women who have never had to seek shelter from abuse or loss of living arrangements. An additional limitation includes self-reporting of adherence or non-adherence to routine Pap smear testing versus using medical records. Because women were interviewed only once, confirmation or denial of interpretations of results was not possible. Finally, the PI is not of the same race as the participants interviewed and this could have affected responses by the participants.

Implications for Research Use of the Framework

The IMCHB provided an organizing framework that identified personal influences contributing to Pap smear testing for participants in this study. The object of the IMCHB is to identify and suggest explanatory relationships between the individual client characteristics, the interactions with health care providers, and subsequent health outcomes. How the model is structured, it's content and flexible context make it suitable to explore and document potential nursing interventions that may affect client behavior (Cox, 1984). This model can provide a focus to the delivery of gynecological care that is based on a client's singularity variables that can be addressed with individualized nursing interventions promoting a positive health outcome.

Implications for Practice

Because personal influences have been linked to avoidance of cervical cancer screening, nurses must be able to assess the personal influences and how they affect African American women in the uptake of routine Pap smear testing. Nurses, especially advanced practice nurses, must educate themselves (first) and then educate others. Education should be focused on what the health care experience of having a Pap smear test and pelvic exam means to African

American women, women’s beliefs and perceptions of vulnerability associated with the test, the emotional reaction elicited from the examination due to a previous experience with trauma, and how the exam is approached and performed. It is important to address the psychosocial and educational needs of African American women at every gynecological visit. What interactions occur at that visit may influence the woman’s decision to return for future cervical cancer screening. Research is needed to explore the impact of cervical cancer screening experience for African American women so that nurses can design sensitive interventions to address these issues and assist them through the experience. As a women’s health nurse practitioner working in the clinical setting, I have changed my approach to the gynecological exam. Because of this study and the literature reviewed on trauma as it relates to childhood sexual abuse and intimate partner violence, I no longer have the women place their feet in stirrups to perform the exam. The use of stirrups takes away the control of a woman, who has a history of trauma, increasing her vulnerability and loss of control, similar to the abuse.

There are also implications for patient education materials that address the misperceptions regarding Pap smear tests. The educational material can differentiate between what a Pap smear tests for, and what tests are available that are used to determine if a woman has an STD. It is important that women know that STD testing involves several different types of tests to detect for example gonorrhea and Chlamydia, herpes, and HIV. Since these participants believed that a Pap smear is a test for STDs, the importance of addressing these misperceptions in educational materials is critical. The desired outcome of the patient educational material would be to increase actual routine cervical cancer screening and, if needed, STD testing.

Implications for Research

Although some of the participants expressed differences in their personal influences that affected routine cervical cancer screening, further research is needed to explore these similarities and differences because they may contribute to the reason that African American women have a higher cervical cancer mortality rate when compared to all other groups of women. Health care providers dealing with gynecologic care are potentially important factors connected to the behavior of routine cervical cancer screening. Therefore, further research is needed to identify personal influences that inhibit or promote routine cervical cancer screening in African American women.

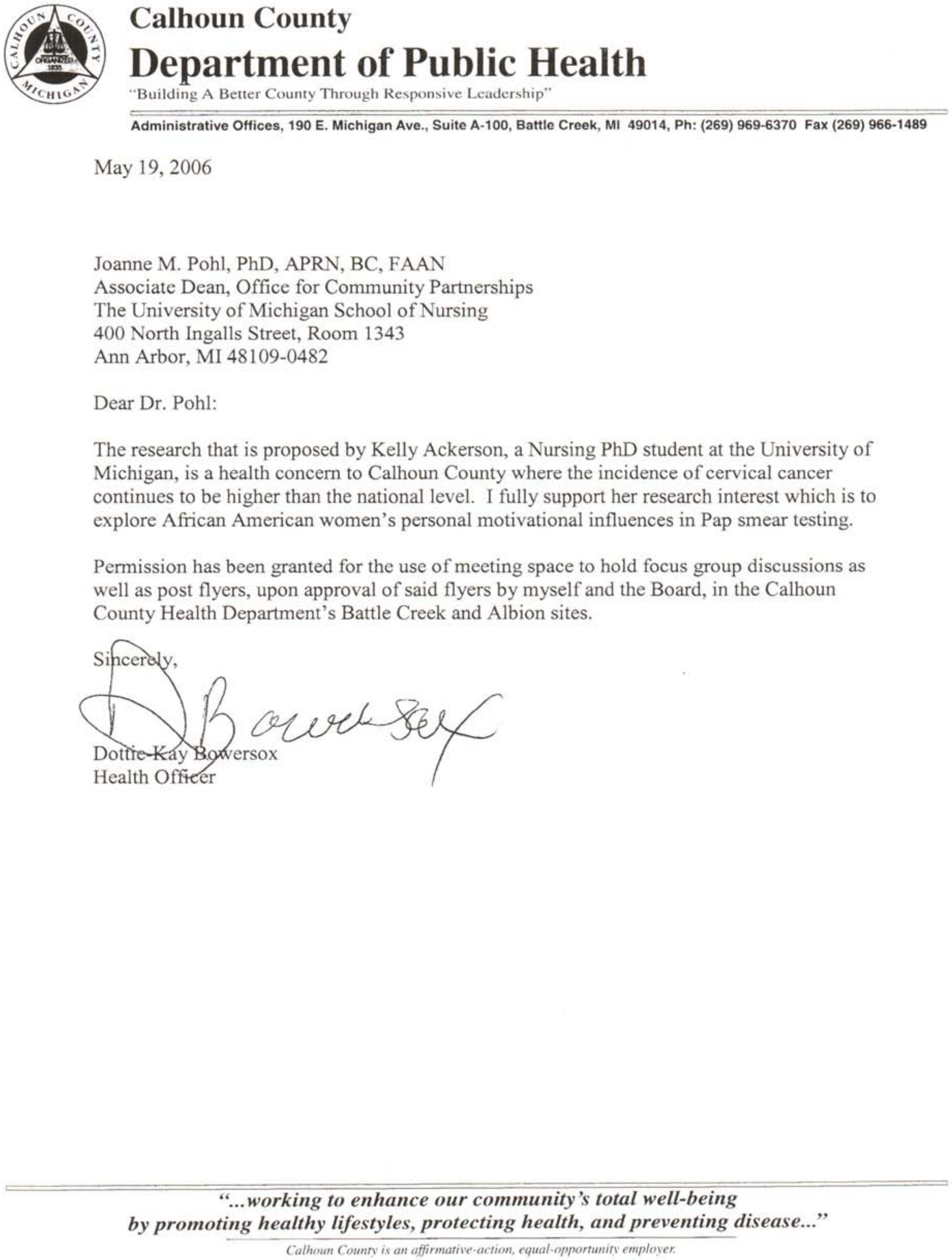
There are two priority questions that need further investigation based on the findings of this research. The first question is what are the relationships between women with a history of trauma and the health preventative behavior of routine cervical cancer screening? The second question is how can health care providers best address these issues with women who have a history of trauma to make that gynecological visit positive and potentiate iterative health behavior in cervical cancer screening.

Conclusion

In conclusion, there are differences between the personal influences that contribute to women obtaining routine cervical cancer screening for the non-routine-use group in this study and what has been reported in prior research. This study provides new information as to the personal influences that are associated with a population of African American women's uptake of routine cervical cancer screening. Most of the differences appear to be psychosocial in relationship to having a history of trauma that contributes to how they react to and perceive their previous health care experience with the gynecological exam. The psychosocial issues also affect their cognitive interpretations regarding what they believe about the Pap smear test and pelvic exam as well as their perceptions of vulnerability to cervical cancer. These personal influences also contributed to their negative emotional response that seemed to be a major influence in their motivation to avoid routine cervical cancer screening. The association of a history of trauma and its relation to routine cervical cancer screening is a barrier to health-seeking behavior, and challenges health care providers to consider their approach with women who have these experiences. How a provider approaches the woman who has a history of trauma, and how a provider performs the exam, may possibly determine iterative behavior in the uptake of routine cervical cancer screening. Further work is needed with a greater number of women who have experienced a history of trauma and its connection to the gynecological exam of the Pap smear test and pelvic exam. Obtaining this information will provide health care providers with a better understanding of how to approach this issue with a woman in order to build a trusting relationship that will motivate the woman to utilize routine health care services and to adhere to the recommended care regiment of cervical cancer screening.

Appendices

Appendix A



Calhoun County
Department of Public Health
"Building A Better County Through Responsive Leadership"

Administrative Offices, 190 E. Michigan Ave., Suite A-100, Battle Creek, MI 49014, Ph: (269) 969-6370 Fax (269) 966-1489

May 19, 2006

Joanne M. Pohl, PhD, APRN, BC, FAAN
Associate Dean, Office for Community Partnerships
The University of Michigan School of Nursing
400 North Ingalls Street, Room 1343
Ann Arbor, MI 48109-0482

Dear Dr. Pohl:

The research that is proposed by Kelly Ackerson, a Nursing PhD student at the University of Michigan, is a health concern to Calhoun County where the incidence of cervical cancer continues to be higher than the national level. I fully support her research interest which is to explore African American women's personal motivational influences in Pap smear testing.

Permission has been granted for the use of meeting space to hold focus group discussions as well as post flyers, upon approval of said flyers by myself and the Board, in the Calhoun County Health Department's Battle Creek and Albion sites.

Sincerely,

Dottie-Kay Bowersox
Health Officer

"...working to enhance our community's total well-being
by promoting healthy lifestyles, protecting health, and preventing disease..."

Appendix B

Recruitment Flyer

Would You Like to Talk About an Important Health Issue Regarding PAP SMEAR TESTING?

Did you know that Calhoun County has the third highest rate of cervical cancer in the State of Michigan? Did you know that African American women die from cervical cancer at a greater rate than other groups of women?

If you are an African American woman between the ages of 18 and 65 living in Calhoun County, Michigan and if you:

1. Read and speak English;
2. Were born in the United States and;
3. * receive regular Pap smear tests; or
   * have never had a Pap smear test; or
   * have had no Pap smear test within the last three years;
4. Have a high school education or less; and
5. Make $35,000 a year or less.

You are invited to talk about your decisions in taking care of yourself.

Please call 1-800-___-____ for more information regarding this study.

Appendix C

Informed Consent Document

UNIVERSITY OF MICHIGAN
CONSENT TO BE PART OF A RESEARCH STUDY

1. Information About THIS form

You may be eligible to take part in a research study. This form gives you important information about the study. It describes the purpose of the study, and the risks and possible benefits of participating in the study.

Please take time to review this information carefully. After you have finished, you should talk to the researchers about the study and ask them any questions you have. You may also wish to talk to others (for example, your friends, family, or other doctors) about your participation in this study. If you decide to take part in the study, you will be asked to sign this form. *Before you sign this form, be sure you understand what the study is about, including the risks and possible benefits to you.*

2. 1. General Information About This Study AND the RESEARCHERS

1.1 Study title:

Influencing Factors Associated with Pap Smear Testing in African American Women

1.2 Company or agency sponsoring the study:

None

1.3 Names, degrees, and affiliations of the researchers conducting the study:

Kelly Ackerson, WHNP, MSN. PhD Nursing student, University of Michigan working with Dr. Joanne Pohl, Ph.D., A.P.R.N., B.C., FAAN and Dr. Julia S. Seng, PhD, CNM, RN, my faculty advisors and mentors for this study.

3. 2. PURPOSE OF THIS STUDY

2.1 Study purpose:

To understand the personal reasons why women do and do not get regular Pap smear testing.

4. 3. Information About STUDY participants (SUBJECTS)

Taking part in this study is completely **voluntary**. You do not have to participate if you don't want to. You may also leave the study at any time. If you leave the study before it is finished, there will be no penalty to you, and you will not lose any benefits to which you are otherwise entitled.

3.1 Who can take part in this study?

African American women between the ages of 18 and 65, who read and speak English, were born in the United States, and receive regular Pap smears; OR those women who have never been screened by the Papanicolaou (Pap) test, OR who have not receive the test within the last three years, live in Calhoun County, Michigan, and make $35,000 a year or less.

3.2 How many people (subjects) are expected to take part in this study?

20 to 30 subjects are expected to participate.

5. 4. information about study procedures

4.1 What exactly will be done to me in this study? What kinds of research procedures will I receive if I agree to take part in this study?

This research project is to explore your feelings and experiences regarding Pap smear testing. You will not receive any procedures. You will be interviewed and the discussion will be taped by a tape recorder and anything that you say will be confidential. The tape recording of the interview will contribute to the purpose of study by recording your exact words regarding your personal motivating influences in obtaining or not obtaining Pap smear testing.

4.2 How much of my time will be needed to take part in this study? When will my participation in the study be over?

You will meet with the research only once for about 30 minutes to an 1 hour. The researcher may contact you at another time to clarify information you have given that was tape recorded, that may have been unclear on the tape.

.

6. 5. information about RISKS and benefits

5.1 What risks will I face by taking part in the study? What will the researchers do to protect me against these risks?

There are no expected risks. You will be asked to share feelings which may cause emotional or psychological discomfort. The researcher will offer emotional support and appropriate referral.

5.2 What happens if I get hurt, become sick, or have other problems as a result of this research?

This is a face-to-face interview; there are no known illness-related problems with this study.

5.3 If I take part in this study, can I also participate in other studies?

There is no reason why you cannot take part in another study.

5.4 How could I benefit if I take part in this study? How could others benefit?

Conducting this interview will help us gain better understanding of why women do or do not get Pap smears.

7. 6. Other options

6.1 If I decide not to take part in this study, what other options do I have?

At this time there are no other opportunities to participate in future interviews.

8. 7. ENDING THE STUDY

7.1 If I want to stop participating in the study, what should I do?

You are free to leave the study at any time. If you are participating in this study and then decide you no longer want to do so, you are free to leave. If you choose to tell the researcher why you are leaving the study, your reasons for leaving may be kept as part of the study record. If you decide to leave the study before it is finished, please notify one of the persons listed in Section 10 "Contact Information" (below).

7.2 Could there be any harm to me if I decide to leave the study before it is finished?

There will be no harm to you if you decide to leave the discussion group.

7.3 Could the researchers take me out of the study even if I want to continue to participate?

Yes. There may be reasons why the researchers may need to end your participation in the study. Some examples are:

- ✓ The researcher believes that it is not in your best interest to stay in the study.
- ✓ You do not follow instructions from the researchers.
- ✓ The study is suspended or canceled.

9. 8. Financial Information

8.1 Will taking part in this study cost me anything? Will I or my insurance company be billed for any costs of the study? If so, which costs? What happens if my insurance does not cover these costs?

There is no cost to you.

8.2 Will I be paid or given anything for taking part in this study?

No

8.3 Who could profit or financially benefit from the study results?

No person or organization has a financial interest in the findings from the interview.

10. 9. Confidentiality of subject records

University of Michigan policies require that private information about you be protected. This is especially true for your personal information.

On the other hand, sometimes the law allows or requires others to see your information. The information given below describes how your privacy and the confidentiality of your research records will be protected in this study.

9.1 How will the researchers protect my privacy?

Your information will be protected in a locked filing cabinet and password-protected computer, and stored on a secure network file server. No one except the researcher will have access to the office, have the key to the filing cabinet, or access to files on the server.

9.2 What information about me could be seen by the researchers or by other people? Why? Who might see it?

There are many reasons why information about you may be used or seen by the researchers or others during this study. Examples include:

- The researchers may need the information to make sure you can take part in the study.
- University, Food and Drug Administration [FDA], and other government officials may need the information to make sure that the study is done properly.
- If you receive any payments for taking part in this study, the University of Michigan accounting department may need your name, address, social security number, payment amount, and related information for tax reporting purposes.

The results of this study could be published in an article, but would not include any information that would let others know who you are.

9.3 What happens to information about me after the study is over or if I leave the discussion before it is finished?

As a rule, the researcher will not continue to use or disclose information about you, but will keep it secure until it is destroyed. Sometimes, it may be necessary for information about you to continue to be used or disclosed, even after you have left the discussion before it is finished or the study is over. Examples of reasons for this include:

- To avoid losing study results that have already included your information.
- To provide limited information for research, education, or other activities (This information would not include your name, social security number, or anything else that could let others know who you are).
- To help University and government officials make sure that the study was conducted properly.

11. 10. Contact Information

10.1 Who can I contact about this study?

Please contact the researchers listed below to:

- Obtain more information about the study
- Ask a question about the study procedures or treatments
- Report an illness, injury, or other problem (you may also need to tell your regular doctors)
- Leave the study before it is finished
- Express a concern about the study

Principal Investigator: Kelly Ackerson, MSN, WHNP
Mailing Address: 10726 W. KL Avenue, Kalamazoo, Michigan 49009
Telephone: 734-936-3631

Study Coordinator: Joanne Pohl, PhD, APRN, BC, FAAN
Mailing Address: The University of Michigan School of Nursing
400 North Ingalls Street, Room 1343
Ann Arbor, MI 48109-0482
Telephone: 734-936-3631

Co-Sponsor: Julia S. Seng, PhD, CNM, RN
Mailing Address: The University of Michigan School of Nursing
G120 Lane Hall
Ann Arbor, MI 48109-1290
Telephone: 734.615.0253

You may also express a concern about a study by contacting the Institutional Review Board listed below, or by calling the University of Michigan Compliance Help Line at 1-888-296-2481.

University of Michigan Medical School Institutional Review Board (IRBMED)
Argus I
517 W. William
Ann Arbor, MI 48103-4943

Telephone: 734-763-4768
Fax: 734-615-1622
E-mail: irbmed@umich.edu

If you are concerned about a possible violation of your privacy, contact the University of Michigan Health System Privacy Officer at 1-888-296-2481.

When you call or write about a concern, please provide as much information as possible, including the name of the researcher, the IRBMED number (at the top of this form), and details about the problem. This will help University officials to look into your concern. When reporting a concern, you do not have to give your name unless you want to.

12. 11. record of Information provided

11.1 What documents will be given to me?

Your signature in the next section means that you have received copies of all of the following documents:

- ☐ This "Consent to be Part of a Research Study" document. (*Note: In addition to the copy you receive, copies of this document will be stored in a separate confidential research file.*

13. 12. SIGNATURES

Research Subject:

I understand the information printed on this form. I have discussed this study, its risks and potential benefits, and my other choices with ______________________________. *My questions so far have been answered. I understand that if I have more questions or concerns about the study or my participation as a research subject, I may contact one of the people listed in Section 10 (above). I understand that I will receive a copy of this form at the time I sign it and later upon request. I understand that if my ability to consent for myself changes, either I or my legal representative may be asked to re-consent prior to my continued participation in this study.*

Signature of Subject: ______________________ Date: ______________________

Name (Print legal name): ______________________ Date of Birth: _____________

Legal Representative (if applicable):

Signature of Person Legally
Authorized to Give Consent__________________ Date: _____________________

Name (Print legal name): ___________________ Phone: ___________________

Address: _______________________________ Check Relationship to Subject:

☐ Parent ☐ Spouse ☐ Child ☐ Sibling ☐ Legal Guardian ☐ Other:

Principal Investigator (or Designee):

I have given this research subject (or his/her legally authorized representative, if applicable) information about this study that I believe is accurate and complete. The subject has indicated that he or she understands the nature of the study and the risks and benefits of participating.

Name: _________________________________ Title: Principal Investigator

Signature: ______________________________ Date of Signature: ________________

Appendix D

Background Information

1. Please write your first name only: ______________________

2. What is your age? _______

3. Yearly income level:

   ☐ Less than $10,000

   ☐ $10,000 to $20,000

   ☐ $20,001 to $30,000

   ☐ $30,001 to $35,000

4. Education:

   ☐ Less than high school

   ☐ High school

   ☐ GED

5. Insurance:

   ☐ No health insurance

   ☐ State health insurance (Medicaid)

   ☐ Insurance through employer

6. When was your last Pap smear test?

   ☐ Within the last 3 years

   ☐ More than 3 years ago

   ☐ I have never had a Pap smear test

7. Do you have a history of obtaining regular Pap smear tests?

   ☐ Yes

☐ No

Appendix E

Additional Probing Questions to Elicit Information (if needed)

1. What do you think a Pap smear test is for?
2. Why do you think you need a Pap smear test?
3. What are your feelings about Pap smears?
4. What do you think causes cervical cancer?
5. What do you think your chances of getting cervical cancer are?
6. What are you feelings about the experience of having a pelvic and Pap smear test:
7. Who has influenced you about Pap smears?
8. What are your decisions about getting regular Pap smears? (Reasons get or don’t get).
9. What experiences have influenced what you think about getting cervical cancer?
10. Is there anything else you would like to share about Pap smears and cervical cancer screening that you think is important?

Appendix F

Revised Questionnaire

1. Who or what has influenced you the most about Pap smear tests?
2. If you have to describe to a friend what a Pap smear test is, how would you describe it?
3. We are all told to get Pap smears, why do you think we are told to do that?
4. Like some women don't get Pap smears, why do you think that is?
5. How would you describe how it is/was for you to have a Pap smear?
6. It seems like for you it's been [okay, good, bad] to go through the visit to have a pap smear done. Tell me about what made that visit good/bad.
7. Do you think there's anything doctors or clinics do that makes it easier or harder for women to get this test?
8. There is a kind of cancer called cervical cancer, what do you know about it?
9. Some people may have more risks for cervical cancer, what do you think your chances are for cervical cancer?

References

References

Abel, E., & Chambers, K. B. (2004). Factors that influence vulnerability to STDs and HIV/AIDS among Hispanic women. *Health Care for Women International, 25*(8), 761-780.

Abel, E., Marion, L., & Seraphine, A. (1998). The evaluation of motivation for sexual health among women. *Western Journal of Nursing Research, 20,* 166-179*.*

Abel, E., & Miller, I. (1997). Sexual risk behaviors among rural women of childbearing age. *Journal of Holistic Nursing, 15(3),* 282-303*.*

Ackerson, K., Pohl, J., & Low, L. (in press). Personal influencing factors associated with pap smear testing and cervical cancer. *Policy, Politics & Nursing Practice.*

Ackerson, K., & Preston, S. (2007). Why don't some women obtain routine cancer screening? Answers from decision theory that describe existing data and propose novel solutions. Unpublished manuscript.

American Cancer Society (2006). Cancer facts and figures 2006. Atlanta, GA: Author.

American Cancer Society (2008). Retrieved March 19, 2008, from http://www.cancer.org/docroot/home/index.asp?level=0

American Society for Colposcopy & Cervical Cancer Pathology (2006). Patient education. Retrieved April 11, 2007, from http://www.asccp.org/

Bazargan, M., Bazargan, S. H., Garooq, M., & Baker, R. S. (2004). Correlates of cervical cancer screening among underserved Hispanic and African-American women. *Preventive Medicine 39*, 465-473

Bear, M. Brunell, J. L., & Covelli, M. (1997). Using a nursing framework to establish a nurse-managed senior health clinic. *Journal of Community Health Nursing 14(4),* 225-235*.*

Bear, M. & Holcomb, L. (1999). The client encounter form: conceptual development, reliability analysis, and clinical applications. *Public Health Nursing, 16(2),* 79-86*.*

Beech, B. M. & Goodman, M. (2004). Race & research: Perspectives on minority participating in health studies. Washington, DC: American Public Health Association.

Behbakht, K., Lynch, A., Teal, S., Degeest, K., & Massad, S. (2004). Social and cultural barriers to Papanicolaou test screening in an urban population. *The American College of Obstetricians and Gynecologists, 104(6),* 1355-1361.

Black, M. C. & Breiding, M. J. (2008). Adverse health conditions and health risk behaviors associated with intimate partner violence – United States, 2005. *MMWR. Morbidity and Mortality Weekly Report; 57(5),* 113-117

Boyer, L. E., Williams, M., Callister, L. C., & Marshall, E. S. (2001). Hispanic women's perceptions regarding cervical cancer screening. *JOGNN Clinical Issues, 30(2),* 240-245.

Carter, J., Park, E. R., Moadel, A., Clearly, S. D., & Morgan, C. (2002). Cancer knowledge, attitudes, beliefs, and practices (KABP) of disadvantaged women in the south Bronx. *Journal of Cancer Education, 17(3),* 142-149*.*

Centers for Disease Control and Prevention (2007a). Diseases and conditions. Retrieved March 1, 2008, from http://www.cdc.gov/hiv/topics/aa/index.htm

Centers for Disease Control and Prevention (2007b). Health disparities in cancer: racial or ethnic variations. Retrieved June 20, 2007, from http://www.cdc.gov/cancer/healthdisparities/statistics/ethnic.htm

Centers for Disease Control and Prevention (2006). Healthy People 2010: Midcourse Review. Retrieved May 5, 2007, from http://www.healthypeople.gov/

Centers for Disease Control and Prevention (2005). National Breast and Cervical Cancer Early Detection Program. Atlanta, GA: Author.

Cobb, S. (1976). Social support as a moderator of life stress. *Psychosom Med, 38*, 300-314.

Corbett, C. F. (2003). A randomized pilot study of improving foot care in home health patients with diabetes. *Diabetes Educator, 29*(2), 273-282.

Cox, C. L. (1982). An interaction model of client health behavior: theoretical prescription for nursing. *Advances in Nursing Science 5,* 41-56.

Cox, C. L. (1984). Individual as a client. In J.A. Sullivan (Eds.). Directions in community health nursing (pp. 127-172). Boston, MA: Mosby.

Cox, C. L. (1985). The health self-determinism index. *Nursing Research, 34(3),* 177-183*.*

Cox, C. L. (2003). A model of health behavior to guide studies of childhood cancer survivors. *Oncology nursing forum, 30*(5): Online Exclusive), E92-9.

Cox, C. L., Cowell, J. M., Marion, L. N., & Miller E. H. (1990). The health self-determinism index for children. *Research in Nursing & Health, 13(4),* 237-246*.*

Cox, C. L., McLaughlin, R. A., Steen, B. D., & Hudson, M. M. (2006). Predicting and modifying substance use in childhood cancer survivors: Application of a conceptual model. *Oncology nursing forum, 33*(1), 51-60.

Cox, C. L., & Roghmann, K. J. (1984). Empirical test of the interaction model of client health behavior. *Research in Nursing and Health, 7,* 275-285.

Creswell, J. W. (2003). Research design: Qualitative, quantitative, and mixed methods approaches (2nd ed.).Thousand Oaks, CA: Sage.

Cuzick, J., Mayrand, M. H., Ronco, G., Snijders, P., & Wardle, J. (2006). Chapter 10: New dimensions in cervical cancer screening. In F.X. Bosch, J. Cuzick, J.T. Schiller, G.P. Garnett, A. Meheus, E.L. Franco, & T.C. Wright (Vol. Ed.) *HPV Vaccines and Screening in the Prevention of Cervical Cancer: Vol. 24(3), pp.* 90-97.

Datta, G. D., Colditz, G. A., Kawachi, I., Subramanian, S. V., Palmer, J. R., & Rosenberg, L. (2005). Individual-neighborhood-, and state-level socioeconomic predictors of cervical carcinoma screening among U.S. black women. *Cancer, 106(3),* 664-669.

Dawes, R. (1998). Behavioral decision making and judgment. In D. T. Gilbert, S. T. Riske, & G. Lindzey (eds), *The Handbook of Social Psychology (Vol. 1,* pp. 497-548*)*. New York: Oxford University Press

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: human needs and the self-determination of behavior. *Psychological Inquiry, 11(4),* 227-268.

DiNapoli, P. P. (2003). The utility of Cox's interaction model to direct the assessment and prevention of adolescent aggression. *Journal of Pediatric Nursing: Nursing Care of Children and Families, 18*(1), 30-35.

Farley, M., Golding, J. M., & Minkoff, J. R. (2002). Is a history of trauma associated with a reduced likelihood of cervical cancer screening? *The Journal of Family Practice, 51(10),* 827-831.

Garner, E. I. O. (2003). Cervical cancer: disparities in screening, treatment, and survival. *Cancer Epidemiology, Biomarkers & Prevention, 12,* 242-247.

Glaser, B. G. (1978). *Advances in the methodology of grounded theory: Theoretical sensitivity.* Mill Valley, CA: Sociology Press.

Glaser, B. G. (1992). *Basics of grounded theory analysis.* Mill Valley, CA: Sociology Press.

Gorin, S. S. & Heck, J. E. (2004). Cancer screening among Latino subgroups in the United States. *Preventive Medicine,* 40, 515-526.

Gregg, J. & Curry, R. H. (1994). Explanatory models for cancer among African American women at two Atlanta neighborhood health centers: the implications for a cancer screening program. *Social Science Medicine, 39(4),* 519-256.

Harvey, S. M & Bird, S. T. (2004). What makes women feel powerful? An exploratory study of relationships power and sexual decision-making with African Americans at risk for HIV/STDs. *Women & Health, 39(3)*, 1-18.

Hiatt, R. A., Pasick, R. J., Steward, S., Bloom, J., Davis, P., & Gardiner, P., et al. (2001). Community-based cancer screening for underserved women: design and baseline findings from the breast and cervical cancer intervention study. *Preventive Medicine 33*, 190-203.

Hilden, M., Sidenius, K., Langhoff-Roos, J., Wijma, B., & Schei, B. (2003). Women's experiences of the gynecologic examination: faxctors associated with discomfort. *Acta Obstet gynecol Scand 82,* 1030-1036.

Hoyo, C., Yarnall, K. S. H., Skinner, C. S., Moorman, P. G., Sellers, D., & Reid, L. (2005). Pain predicts non-adherence to Pap smear screening among middle-aged African American women. *Preventive Medicine 41*, 439-445.

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15(9),* 1277-1286.

Israel, B. A. (1982). Social networks and health status: Linking theory, research, and practice. *Patient Counseling and Health Education, 4(2),* 65-79.

Jennings-Dozier, K. (1999). Predicting intentions to obtain a pap smear among African American and lantana women: testing the theory of planned behavior. *Nursing Research, 48(4),* 198-205.

Jennings-Dozier, K., & Lawrence, D. (2000). Sociodemographic predictors of adherence to annual cervical cancer screening in minority women. *Cancer Nursing, 23(5)*, 350-356.

Jennings, K. (1997). Getting a pap smear: focus group responses of African American and Latina women. *Oncology Nursing Forum, 24(5*), 827-835.

Johnston, B. J. (2006). Intimate partner violence screening and treatment: the importance of nursing caring behaviors. *Journal of Forensic Nursing, 2(4),* 184-188.

Juraskova, I., Butow, P., Sharpe, L., & Campion, M. (2007). What does it mean? Uncertainty, trust and communication following treatment for pre-cancerous cervical abnormalities. *Pscho-Oncology, 16,* 525-533.

Lee, Y. S., & Laffrey, S. C. (2006). Predictors of physical activity in older adults with borderline hypertension. *Nursing research, 55*(2), 110-120.

Leeners, B., Stiller, R., Block, E., Gorres, G., Imthurn, B., & Werner, R. (2007). Effect of childhood sexual abuse on gynecologic care as an adult. *Psychosomatics, 48(5),* 385-393.

Lockwood-Rayermann, S. (2004). Characteristics of participation in cervical cancer screening. *Cancer Nursing, 27(5*), 353-363.

Marion, L. N., & Cox, C. L. (1996). Condom use and fertility among divorced and separated women. *Nursing Research, 45*(2), 110-115.

Morgan, D. L. (1993). Pearls, pith, and provocation: qualitative content analysis: a guide to paths not taken. *Qualitative Health Research 3(1),* 112-121*.*

Munoz, N., Castellsague, X., de Gonzalez, A. B., & Gissmann, L. (2006). Chapter 1: HPV in the etiology of human cancer. In F.X. Bosch, J. Cuzick, J.T. Schiller, G.P. Garnett, A. Meheus, E.L. Franco, & T.C. Wright (Vol. Ed.) *HPV Vaccines and Screening in the Prevention of Cervical Cancer: Vol. 24(3), pp. 1-10.*

Nabi, R. L. (2002). Anger, fear, uncertainty, and attitudes: a test of the cognitive-functional model. *Communication Monographs*, *69(3),* 204-216*.*

National Cancer Institute (2006). Surveillance, epidemiology, and end results. SEER cancer statistics. Incidence of cervix uteri cancer. Retrieved May 17, 2006, from http://www.seer.cancer.gov/statfacts.html/cervix_print.html

National Cancer Institute (2008). U.S. National Institutes of Health. Types of cancer. Retrieved March 19, 2008, from http://www.cancer.gov/

Nelson, K., Geiger, A. M., & Mangione, C. M. (2002). Effect of health beliefs on delays in care for abnormal cervical cytology in a multi-ethnic population. *Journal of General Internal Medicine, 17(9),* 709-716.

Ogedegbe, G., Cassells, A. N., Robinson, C. M., DuHamel, K., Tobin, J. N., Sox, C. H. et al., (2005). Perceptions of barriers and facilitators of cancer early detection among low-income minority women in community health centers. *Journal of the National Medical Association, 97(2),* 162-170.

Otero-Sabogal, R., Stewart, S., Sabogal, F., Brown B., & Perez-Stable, E. J. (2003). Access and altitudinal factors related to breast and cervical cancer rescreening: why are Latinas still underscreened? *Health Education and Behavior,* 30(3), 337-359.

Parkin, D. M., & Bray, F. (2006). The burden of HPV-related cancers. In F.X. Bosch, J. Cuzick, J.T. Schiller, G.P. Garnett, A. Meheus, E.L. Franco, & T.C. Wright (Vol. Ed.) *HPV Vaccines and Screening in the Prevention of Cervical Cancer: Vol. 24(3), pp. 11-25.*

Patton, M. Q. (2002). Qualitative research & evaluation methods (3rd ed.). Thousand Oaks, CA: Sage.

Polit, D. F., & Beck, C. T. (2004). Nursing research: Principles and methods (7th ed.). Philadelphia: Lippincott Williams & Wilkins.

Potter, P. A., & Perry, A. G. (2005). Fundamentals of nursing (6th ed). St. Louis, MO: Mosby.

Robinson, C. H., & Thomas, S. P. (2004). The interaction model of client health behavior as a conceptual guide in the explanation of children's health behaviors. *Public Health Nursing, 21(1), 73-84.*

Roblin, D. W., Becker, E. R., Adams, E. K., Howard, D. H., & Roberts, M. H. (2004). Patient satisfaction with primary care: Does type of practitioner matter? *Medical Care, 42(6*), 579-590*.*

Robohm, J. S. & Buttenheim, M. (1996). The gynecological care experience of adult survivors of childhood sexual abuse: a preliminary investigation. *Women & Health, 24(3),* 59-75.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist,* 55(1), 68-78.

Sambamoorthi, U., & McAlpine, D. D. (2003). Racial, ethnic, socioeconomic, and access disparities in the use of preventive services among women. *Preventive Medicine, 37,* 475-484.

Sandelowski, M. (1995). Focus on qualitative methods sample size in qualitative research. *Research In Nursing & Health, 18,* 179-183*.*

Saslow, D., Runowicz, C. D., Solomon, D., Moscicki, A. B., Smith, R. A., Eyre, H. J., et al., (2002). American cancer society guideline for the early detection of cervical neoplasia and cancer. *A Cancer Journal for Clinicians, 52(6*), 341-362.

Seng, J. S., Low, L K., Sparbel, K. J., & Killion, C. (2004). Abuse-related post-traumatic stress during the childbearing year. *Journal of Advanced Nursing, 46(6),* 604-613.

Seng, J. S., Sparbel, K. J. H., Low, L. K., & Killion, C. (2002). Abuse-related posttraumatic stress and desired maternity care practices: women's perspectives. *Journal of Midwifery & Women's Health, 47(5)*, 360-370.

Slovic, P., Finucane, M. L., Peters, E., & MacGregor, D. G., (2004). Risk as analysis and risk as feelings: Some thoughts about affect, reason, risk and rationality. *Risk Analysis, 24(2)*, 311-322*.*

Strauss, A. & Corbin, J. (1998). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (2nd ed.). Thousand Oaks, CA: Sage.

Sung, J. F. C., Alema-Mensah, E., & Blumenthal, D. S. (2002). Inner-city African American women who failed to receive cancer screening following a culturally-appropriate intervention: the role of health insurance. *Cancer Detection and Prevention 26,* 28-32.

Surveillance, Epidemiology, and End Results. National Cancer Institute. Cancer of the cervix uteri. Retrieved June 19, 2007, from http://seer.cancer.gov/statfacts/html/cervix.html?statfacts_page=cervix.html&x=16&y=18

U.S. Census Bureau (2005). American FactFinder. Retrieved January 8, 2007, from http://factfinder.census.gov/servlet/SAFFPopulation?_event=Search&geo_id=05000US26025&_geoContext=01000US%7C04000US26%7C05000US26025&_street=&_county=saginaw+county&_cityTown=saginaw+county&_state=04000US26&_zip=&_lang=en&_sse=on&ActiveGeoDiv=geoSelect&_useEV=&pctxt=fph&pgsl=050&_submenuId=population_0&ds_name=null&_ci_nbr=null&qr_name=null&reg=null%3Anull&_keyword=&_industry=

U.S. Census Bureau (2000). American FactFinder. Retrieved March 23, 2006 from http://factfinder.census.gov/servlet/QTTable?_bm=y&-geo_id=05000US26025&-qr_name=DEC_2000_SF3_U_DP3&-ds_name=DEC_2000_SF3_U&-_lang=en&-redoLog=false&-_sse=on

U.S. Department of Health and Human Services (2002). Excess cervical cancer mortality. A marker for low access to health care in poor communities. Center to Reduce Cancer Health Disparities. Retrieved April 7, 2005, from http://crchd.cancer.gov/attachments/excess-cervcanmort.pdf

U.S. Preventive Services Task Force (2003). Screening for cervical cancer. Agency for Healthcare Research and Quality. Rockville, MD. Retrieved March 1, 2007, from http://www.ahrq.gov/clinic/uspstfix.htm.

Wilbur, J., Chandler, P., & Miller, A. M. (2001). Measuring adherence to a women's walking program. *Western Journal of Nursing Research, 23(1),* 8-32.