BARRIERS TO HEALTH PROMOTION AND DISEASE PREVENTION WITHIN THE MILITARY HEALTHCARE SYSTEM

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ABSTRACT

Traditionally, healthcare has been focused on illness and disease. Many researchers have described barriers in accessing care during illness. The purpose of this nonexperimental descriptive study was to determine if similar barriers were experienced in a managed-care system when people sought care for wellness activities in a military setting in the United States. The theoretical framework for this study is Pender s Health Promotion Model. According to Pender s Model, cognitive-perceptual factors such as perceived barriers determine participation in health promotion. The more barriers a person encounters in health promotion activities, the less likely that person will participate in health promotion activities. Data was collected from a large city with several military installations in the south central United States. The convenience sample consisted of active duty Air Force men and women currently enrolled in TriCare, the military s managed-care system. A modified version of a tool developed by K.A. Melnyk was used for data collection in this study. The survey tool had questions related to demographics and barriers which might have affected an individual s preventive care practices. More specifically, it included 33-items rated on a 4 point Likert scale related to five categories of barriers: fear, inconvenience, provider-consumer relationship, cost, and site-related factors. Modifications to the original Barriers Scale were made

since the tool had not been used on military populations. A panel of experts currently working in primary care clinics and knowledgeable regarding preventive services facilitated determination of content validity. The Content Validity Index (CVI) was 0.98. Test-retest reliability to determine the stability of responses on the instrument was done prior to data collection and resulted in 68% agreement on the two testing occasions. Data was collected over a two-month period from 93 participants. Data was analyzed and reported using descriptive statistics for the demographic data, each item in the Modified Barrier Scale, and each category subscale. Survey participants ranked the barriers in descending order of Provider-consumer relationship, Site-related factors, Cost, Inconvenience, and Fear. Thirty-two participants included written comments that provided additional support for the Modified Barriers Scale. The importance of this study lies in the military s need for a large healthy fighting force that is capable of rapid deployment. This goal can be met through health prevention activities and identifying factors that may be barriers to health care.

Key Words: access, barriers, promotion, prevention, military healthcare.

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PREFACE

This research was conducted to provide information on barriers encountered by active-duty Air Force personnel in accessing care for health promotion and disease prevention. It was designed to increase awareness of barriers among primary care providers

DEDICATION

I dedicate the creation of this thesis to my family who taught me the value of health, education, and hard work.

ACKNOWLEDGEMENT

The assistance, guidance, and support of my thesis committee members have made this thesis possible. I am grateful to Dr. Barbara M. Sylvia, Col Quannetta Edwards, LtCol Joe Schmelz, and Mrs. Diane Seibert. Their knowledge and expertise was invaluable.

I would also like to acknowledge Dr. K. A. Melnyk who gave me permission to use her tool, the Barriers Scale.

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CHAPTER I — INTRODUCTION

The purpose of this study was to describe barriers encountered by active-duty patients in accessing appointments for health promotion and disease prevention. By ensuring that active-duty members have access to health visits for these purposes, military readiness will be enhanced.

Background

The Department of Defense established the TriCare system to comply with the mandate by Congress to improve health care in the military by improving access to care, assuring high quality, providing choices, and containing costs. Maintaining a healthy population is critical to achieving these goals. Health promotion and disease prevention is a focus of the new TriCare system (Wells & Murray, 1997). Aspects of health promotion, disease prevention, and access are echoed in the Healthy People 2000 objectives and the campaign Putting Prevention into Practice (Public Health Service, 1990; Public Health Service, 1994).

Nurse Practitioners have taken active roles in health promotion since their role developed (Lindberg, 1987). Activity by nurse practitioners in areas of health promotion and disease prevention continues in both the development and spread of information about preventive services (Rains & Erickson, 1997). Health promotion and disease prevention issues are particularly important in the

military system due to the need for a large, healthy fighting force with rapid deployment capability. Health promotion activities assist in maintaining peak performance by stressing military disease prevention, early detection of medical problems, and an awareness of responsibility for one s own health.

Health care in the United States has traditionally been focused on illness behaviors. People who have acute illnesses such as chest pain or severe headaches have no difficulty in obtaining an appointment to be seen in the clinic. Patients who do not have immediate problems are often given the least amount of attention. Therefore, people who seek health care without illness may encounter obstacles in obtaining wellness-focused health care (Melnyk, 1990). This study describes perceived barriers to health promotion and disease prevention activities by the active-duty population under the TriCare system.

Purpose of the Study

The purpose of this nonexperimental, descriptive study was to describe barriers encountered by patients in accessing appointments for preventive care visits. Descriptive research is used to describe real-life events to generate a body of knowledge for future research (Burns & Grove, 1997). This was consistent with the aim of this study, as no previous studies have been done regarding access to preventative care in the military.

The variables described in this study are the barriers

in accessing health care. Barriers to health care can be divided into categories of cost, fear, inconvenience, site-related, and relationship (Melnyk, 1990).

Research Questions

The research questions for this study are:

1. What barriers were encountered in accessing healthcare with primary care providers for disease prevention activities in the military healthcare system?
2. To what extent was inconvenience cited as a barrier in accessing healthcare with primary care providers for disease prevention activities in the military healthcare system?
3. To what extent was the provider-consumer relationshipa barrier in accessing healthcare with primary care providers for disease prevention activities in the military healthcare system?
4. To what extent were site-related factors cited as barriers in accessing healthcare with primary care providers for disease prevention activities in the military healthcare system?
5. To what extent was fear a barrier in accessing healthcare with primary care providers for disease prevention activities in the military healthcare system?
6. To what extent was cost, both direct and indirect, encountered as a barrier in accessing healthcare with primary care providers for disease prevention activities in the military healthcare system?

Theoretical Framework

Pender s Health Promotion Model (1987) was the theoretical framework for this study. This theory originated from the work of a group of social psychologists attempting to explain behaviors related to free and low-cost screening programs in the 1950s. The Health Promotion Model also had its origins in Bandura s Social Learning Theory and Fishbein s Theory of Reasoned Action. Bandura s theory hypothesized that knowledge results in a behavioral change, and Fishbein s theory looked at how behavioral change is affected by personal attitudes and norms of society.

According to the Pender s Health Promotion Model, cognitive-perceptual factors determined participation in health promotion. These cognitive-perceptual factors included the following: perceived importance of health, perceived control of health, perceived self-efficacy or belief that health behaviors are attainable, the person s definition of health, the perception of health status, perception of benefit to indulge in health promoting behaviors, and the perceived barriers to such behaviors.

These cognitive-perceptual factors have a direct influence on a person s health promotion behaviors, while indirect factors such as demographic variables, situational variables, biologic factors, interpersonal influences, and behavioral factors often modify behaviors (Marriner-Tomey, 1993). Hence, for this study Pender s Model (1987) provides

the organizing framework that explains the cognitive-perceptual factors that affect health promotion and disease prevention activities. Barriers in access to disease prevention activities were the cognitive-perceptual factors studied.

Definitions — Conceptual and Operational

Major concepts of this study included active-duty members, primary care providers, health promotion and disease prevention, and barriers. These concepts were defined as follows:

Active-duty members. are males and females employed full-time by the Air Force.

Primary care providers. are defined as physicians, nurse practitioners, and physician assistants who provide care in the military healthcare system.

Health promotion and disease prevention. is any healthcare activity that is directed at maintaining wellness, decreasing risk factors, and preventing disease. Operationally, these are defined as health screenings, immunizations/prophylaxis, preventive exams, and health guidance (PHS, 1994).

Barriers. are obstacles encountered when seeking health promotion or preventive care. Operationally, these can be defined as cost, fear, inconvenience, relationship, and site-related (Melnyk, 1990).

Military Healthcare System. is the managed-care system currently used by the military to provide care to active-

duty members, dependents, and retirees. It will also be referred to as TriCare.

Provider-consumer relationship. is the relationship between the primary care provider and the active-duty member. Operationally, this will be defined by the use of the Provider-consumer relationship subscale on the Modified Barriers Scale which includes items 1-10 and 12 on the survey tool.

Site-related factors. are defined as details that are related to the specific site or clinic that the active-duty member utilizes for his or her healthcare. Operationally, this will be defined by the use of the Site-related subscale on the Modified Barriers Scale which includes items 13, 14, 15, 18, 19, 20, 21, 22, and 23 on the survey tool.

Cost. is defined as money, time, or effort that an active-duty member spent to obtain healthcare. Operationally, this will be defined by the use of the Cost subscale on the Modified Barriers Scale, which includes items 16, 17, and 25.

Inconvenience. is defined as the lack of ease an active-duty member experiences in obtaining healthcare. Operationally, this will be defined by the use of the Inconvenience subscale on the Modified Barriers Scale, which includes items 24, 29, 30, 32, and 35 on the survey tool.

Fear. was defined as a feeling of anxiety or

apprehension that may be experienced in response to seeking healthcare by an active-duty member. Operationally, this will be defined by the use of the Fear subscale of the Modified Barriers Scale, which includes items 27, 28, 31, 33, and 34 on the survey tool.

Assumptions and Limitations

The assumptions of this study were that the convenience sample was representative of the military population as a whole, sampling bias secondary to the response to a mail survey did not occur, and tools with documented validity and reliability used in civilian populations were adequate in the military healthcare environment.

The limitation of this study is that the results cannot be generalized to the entire military due to the small sample size taken from a single location. The major city from which the sample was taken has been operating under the TriCare managed care system since November 1995. Since all medical treatment facilities within the military did not implement TriCare at the same time, results can not be generalized.

Summary

In Summary, the purpose of the study, background into the problem, research questions, theoretical framework, and conceptual and operational definitions were discussed in this chapter. Chapter two provides a review of empirical research that relates to this study.

CHAPTER II — REVIEW OF LITERATURE

This chapter will provide a brief overview of the literature related to topics of barriers and access to health care. Specific barriers discussed are cost, provider-consumer relationship, site-related factors, inconvenience, and fear. Empirical research studies relating to these barriers are included in the discussion. The importance of preventive services will also be reviewed.

Barriers to Health Care

The definition of a barrier is anything that obstructs, blocks, separates, or hinders (Neufeldt & Guralnik, 1996). A healthcare barrier is the consumer s belief about the value of seeking healthcare in the presence of obstacles. Melnyk (1990) indicated five barriers to seeking healthcare: Cost, Provider-Consumer Relationship, Site-Related, Inconvenience, and Fear. Each of these factors is multi-faceted and requires further explanation.

Cost

Cost is the primary barrier to adequate health care (Koval & Dobie, 1996; Powell, 1994); although accessible and free care does not always lead to guaranteed compliance (Lopreiato & Ottolini, 1996; Riportella-Muller et al., 1996; Weese & Krauss, 1995). Therefore, money may not be the only issue. Cost is not always measured as direct payment. Indirect costs include time away from work, fuel

costs, childcare, and room and board if distant—care is needed (Dutton, 1986; Horner et al., 1994). Uninsured and underinsured individuals are at risk due to high out-of-pocket expenses. Medicare and Medicaid coverage are based on both income and assets, which excludes some rural populations who have no money but own land or farm implements (Reichenbach, Clark, Lopez, & Loschen, 1996). Legitimate concerns about the ability of insurance companies to restrict access to care in an effort to control cost exist, especially in the context of a managed care environment (Powell, 1994). Lastly, cost is often the reason cited for failure to complete preventive health measures such as cholesterol levels, diphtheria-tetanus immunization, mammography, cervical Papanicolaou smear, and physical examination (Dutton, 1986; Elnicki, Morris, & Shockcor, 1995).

Provider-Consumer Relationship

Provider-Consumer Relationship refers to the relationship that the patient has with the provider (Koval & Dobie, 1996; Melnyk, 1990). Communication problems between the client and provider are the central issue in provider-consumer relationships (York, Grant, Gibeau, Beecham, & Kessler, 1996). If the patient does not communicate his needs or the provider does not consider the patient as an integral part of the care the relationship suffers. This relationship can be influenced by many other factors. One factor that may influence provider — consumer

relationship is ethnicity. (Bartman, Moy, & D Angelo, 1997; Reigler, Takata, & Schutz, 1996; Yee & Capitman, 1996) Studies have shown that minorities have fewer diagnostic tests, receive less pain medication, and undergo less invasive procedures. Some factors may overlap. For example, minority Medicare beneficiaries, due to their race and insurance status, usually have fewer physician visits, immunizations, and procedures (Friedman, 1994; Lopreiato & Ottolini, 1996; Newacheck, Hughes, & Stoddard, 1996; Trude & Colby, 1997).

Specific medical disorders have also resulted in prejudices leading to barriers in care. Studies have shown discrimination against patients with human immunodeficiency virus, chronically ill patients, and the chronic mentally ill (Earnest, 1991; Friedman, 1994; Reigler et al., 1996). Class and cultural barriers are multi-factorial and include language, low income, low educational level, homelessness, religious beliefs, and cultural beliefs (Aday, 1975; Earnest, 1991; Elnicki et al., 1995; Friedman, 1994; Lopreiato & Ottolini, 1996; Riportella-Muller et al., 1996; Stewart et al., 1997; Trude & Colby, 1997; Yee & Capitman, 1996).

A social gulf between providers and patients has been described. Providers have difficulty identifying with the circumstances of their patients due to socioeconomic issues (Dutton, 1986). For example, the provider may want the patient to return to the clinic to discuss health

issues. The patient may not be able to schedule the appointment due to factors such as lack of transportation, lack of childcare, time away from work, or inability to pay. If a provider is not willing to work within the context of a patient s class and culture, the provider-client relationship will suffer.

Patient outcomes can be adversely affected if the provider does not give the patient or family adequate information or knowledge (Elnicki et al., 1995; Horner et al., 1994; Lopreiato & Ottolini, 1996; Yee & Capitman, 1996; York et al., 1996). Patients may not understand how they can decrease or modify their risks of developing chronic illnesses unless health care providers explain and encourage participation in health promotion and disease prevention activities.

Site-Related Factors

Site-related factors such as availability of appointments, patient-sharing between providers or physician referrals are often cited as barriers in accessing care. Inability to schedule appointments promptly, long waiting times at appointments, lack of evening and weekend appointments, inadequate physical space, and inadequate facilities for child care also impact access to clinical sites (Aday, 1975; Dutton, 1986; Weese & Krauss, 1995; York et al., 1996). Location and provider shortages have been reported in the literature. If providers are not available due to location, access is

compromised. The patient population most at risk are people who live in the inner cities and those who live in rural locations (Earnest, 1991; Friedman, 1994; Horner et al., 1994; Reichenbach et al., 1996; Reigler et al., 1996; Riportella-Muller et al., 1996; Trude & Colby, 1997; Yee & Capitman, 1996). Lack of choice in determining where to go for care is also an important site-related barrier (Reigler et al., 1996). Lack of a regular provider or a usual source of care has often been cited as a barrier to care (Aday, 1975; Bartman et al., 1997; Koval & Dobie, 1996; Moy, Bartman, & Weir, 1995; Stewart et al., 1997). However, a regular place of optimal care with different providers may improve access more than having a regular provider without optimal care (Stewart et al., 1997). This is particularly important to the military due to frequent provider turn-around and relocations.

Inconvenience

Inconvenience often relates to transportation and hours of operation in addition to long waiting times (Aday, 1975; Dutton, 1986; Earnest, 1991; Koval & Dobie, 1996; Lopreiato & Ottolini, 1996; Newacheck et al., 1996; Riportella-Muller et al., 1996). The biggest indicator of satisfaction with access to care has been found to be the ease of making appointments. Waits for routine care, office waiting time, and accessing providers after hours were areas in which patients were least satisfied according to one descriptive study involving five hundred members of a

large health maintenance organization in California. (Jatulis, Bundek, & Legorreta, 1997).

Fear

Fear encompasses many issues and may include fear of providers, fear of procedures, or fear of diagnosis (Melnyk, 1990). Fear may also play a role in the other factors of cost, relationship, site, or inconvenience. Patients have often listed specific fears. Several studies have been done that document fear in cancer screening. For example, perceived barriers to primary prevention of skin cancer have included fear of the cancer being deadly and fear of the stigma associated with cancer (Michielutte, Dignan, Sharp, Boxley, & Wells, 1996). A deterrent to colorectal screening is the fear of discomfort during the procedure (Donovan & Syngal, 1998). Cervical cancer screening barriers include fear of discomfort, fear of having abnormal results, and embarrassment in having the procedure done (Navarro et al., 1995). Some specific forms of screening may be less acceptable to patients than others. For example, a reason cited for patient refusal of mammograms includes fear of excessive radiation (Albanes, Weinberg, Boss, & Taylor, 1988). When prevention requires the use of medication, new fears emerge. Patient compliance with an immunization regimen is poor when they fear that the vaccine may make them ill (Hershey & Karuza, 1997). Barriers encountered in osteoporosis prevention are related to the fear that estrogen therapy is harmful (Salamone,

Pressman, Seeley, & Cauley, 1996). By being aware of the patient s fears, a health care provider will be better able to educate the patient if he or she has misconceptions about preventive services or to work with the patient to formulate a plan for accomplishing the preventive screenings in the best way possible.

Overview of Health Care Access

Access to healthcare has been an issue for over thirty years. By following the discussion on national health insurance, an appreciation can be gained for the need to improve access while controlling cost.

Since 1965 when Medicare/Medicaid legislation was enacted, the need for national health insurance has been discussed. Throughout the 1970 s national health insurance was discussed, but never gained support. In the 1980 s rising health care costs received much attention and measures were instituted to control them. For example, Diagnostic Related Groups (DRGs) were used as a means to control the rising costs, and the federal government imposed cutbacks and eliminated some health care programs (Schramm, 1991).

The 1980 s brought other changes as well. Contributions by employers to health insurance decreased; deductibles and out-of-pocket expenses increased; and many people had inadequate policies or were unable to get insurance. By 1990, the Pepper Commission reported that having inadequate insurance coverage leaves a person at risk for spending

more than 10% of their total income on health care in the event of a catastrophic illness. This report also estimated that 20 million Americans were uninsured in 1987. By 1992 voters ranked health care concerns as the third most important issue in the presidential election. Current estimates of the number of uninsured are 37 million people (Addy, 1996). This number is alarming because the biggest difference in people who access care and those who do not is the presence or absence of health insurance (Bartman et al., 1997; Earnest, 1991; Earnest, Norris, Eberhardt, & Sands, 1996; Moy et al., 1995; Stewart, et al., 1997; Trude & Colby, 1997).

Military Health Care

Cost in terms of money has not been a traditional concern in the military system. Active duty, dependents, and retirees have for years received free health care benefits. However, as the budget for the Department of Defense continues to shrink, the federal health care system has developed and implemented a number of cost-saving strategies. These include redefining the term health beneficiary , restructuring the military health care system, and defining the role of the reserve component of the military as it relates to military health care (Southby, 1993).

Congress mandated that the military improve their health care system to increase access, maintain high-quality care, increase choices, and control costs. In 1992,

the Department of Defense set up the TriCare system in response to the Congressional mandate. Individual military medical facilities were tasked to coordinate patient management within defined geographical regions. This was to be accomplished through a managed-care approach (Reigler et al., 1996). Implementation of TriCare began in 1995 in the states of Oregon and Washington and continues to be implemented across the continent and overseas (Wells & Murray, 1997).

The goal of TriCare is to change the behaviors of both providers and consumers to improve health care quality and access while containing cost (McGee & Hudak, 1995). Under TriCare, cost to the patient is a factor in access to care. Members, with the exception of active-duty, pay fees and cost-shares for the level of health coverage that they choose.

A military beneficiary can be disengaged from care within the military system if there is a lack of available services including appointment slots or specialty services under TriCare. By disengaging patients from the military health care system, access to care may be affected because of patient expenses such as cost-shares and membership fees. Results of a study on disengagement policies at one large military medical center revealed that the majority of patients who are disengaged from care do not obtain care within a 6-month follow-up period. The reasons given for lack of follow-up were usually financial. (Reigler et al.,

1996).

Health Promotion, Protection, and Preventive Services

Healthy People 2000 (PHS, 1991) is a move by the U.S. Department of Health and Human Services along with the Surgeon General to increase the quality of health of all Americans by the year 2000. These goals recognize that significant reductions in death and disability, as well as improvement in quality of life, can occur as a result of shifting the focus of health care from illness toward health maintenance and wellness. The priority areas of Healthy People 2000 are health promotion, health protection, and preventive services. Overall, military health care systems have been more aggressive in these areas than their civilian counterparts, recognizing that health promotion activities result in substantial cost savings by decreasing the need for clinical services (Southby, 1993).

Health promotion activities are tactics that relate to personal choices (PHS, 1991). They include physical fitness, nutritional awareness, avoidance of tobacco, alcohol and other drugs, use of family planning, awareness of mental health and mental disorders, avoidance of violent and abusive behavior, and the use of educational and community-based programs.

Health protection is the approach used in controlling the environment for optimal wellness. Strategies include prevention of unintentional injuries, maintaining

occupational health and safety, environmental health, food and drug safety, and oral health.

Preventive services include counseling, screening, and immunizations. These occur within the clinical setting. Continuity of care, defined as having a regular place of care or a regular provider, and comprehensive care have both been linked with greater use of preventive services (Stewart et al., 1997). In the past, rates of preventive care have been higher among specialists than general practitioners. Possible reasons for this include longer appointment times and the specialists reputation for giving higher quality care (Dutton, 1986). As specialist care decreases due to managed health care and more focus is placed on prevention, rates of preventive services among general practitioners should increase.

Summary

Historically, health care has meant care of the sick. By refocusing energy into health promotion and disease prevention, optimal overall health can be achieved or improved (Addy,1996). People are still more likely to seek care when they are ill than to seek preventive services (Koval & Dobie, 1996; Riportella-Muller et al., 1996). A well person seeking preventive care may have difficulty in a system that has traditionally been focused on providing care to the acutely and chronically ill (Melnyk, 1990). For these reasons, barriers to preventive services need to be explored.

CHAPTER III - METHODS

This chapter describes the research design and procedures, the sample selection and size, the measurement tool used for data collection. The procedures for protection of human subjects are also described.

Research Design and Procedures

This research was a descriptive study in which subjects answered a questionnaire they received from the researcher s designee at their unit commander s call. Descriptive research designs are used to describe situations that occur in real life for the purpose of obtaining knowledge (Burns and Grove, 1997). Data collection occurred over a two-month period in November and December 1998. The subjects were given a brief overview of the purpose for the questionnaire, information about informed consent, and then asked to complete the questionnaire and return it to the researcher s designee.

Sample

The sample was a convenience sample of active duty Air Force men and women who were currently enrolled in TRICARE in a city in the south central United States. This city was chosen because of its large population of active-duty military that have been under the TRICARE system since November 1995. New recruits were exempt from the study as their experience with preventive services was determined to be limited.

Measurement

The Barriers Scale is a tool developed by K.A. Melnyk in an effort to operationalize barriers and provide a link between behaviors of the healthcare consumer and the research on healthcare. In the original study, barriers were identified by a group of twelve people using the Delphi technique. The identified barriers were used to construct the tool, which was then administered to 800 employees of a private university. The sample included both professional and non-professional individuals with a variety of health beliefs and ethnic backgrounds. The data were used to establish estimates of reliability. Previous reliability of the original five sub-scales produced standardized alpha correlations ranging from 0.63 to 0.91 (Melnyk, 1990).

For this study, the Barriers Scale (Melnyk, 1990) was slightly modified to accommodate the military population. It contains the five sub-scales: provider-consumer relationship, site-related factors, cost, fear, and inconvenience (Appendix A). Written permission to use the Barriers Scale was granted by Dr. Melnyk (Appendix B).

Items 1 – 10 in the first section of the modified Barriers Scale tool and item 12 in the second section of the tool measured the relationship subscale. Item 3 was a modification of the original tool and assessed cultural awareness as a dimension of the provider/consumer relationship. Items 13, 14, 15, 18, 19, 20, 21, 22, and 23

measured site-related factors. Items 19 – 23 were modifications to the original instrument and assessed the specific environment of the clinic. The cost subscale was modified to include both direct and indirect costs. Although direct cost can be applicable to the military beneficiary population, direct cost as a barrier is not usually applicable to the active-duty military population, which was used in this study. Items 16, 17, and 25 on the modified Barriers Scale measured the cost subscale. Three items were deleted from the original tool because they did not apply to military healthcare. Item 25 was added to measure indirect costs, which may affect use of preventive services. The fear subscale was measured in items 27, 28, 31, 33, and 34. No modifications to this subscale were necessary. Inconvenience was measured in items 24, 29, 30, 32, and 35. Modifications to the original tool included item 24. Items 11, 26, and 36 were added so participants could provide any written comments if they chose.

The items were scored on a four-point Likert scale from three to zero, with *greatly* equal to 3, *moderately* equal to 2, *slightly* equal to 1, and *none* equal to 0. Individual item scores were summed to produce a score for the subscale. A mean for each item, subscale, and the entire scale were reported. A mean score of 0 indicated that no barriers exist; a score of 1 indicated a low level of barriers; a mean score of 2 indicated moderate levels of barriers; and finally, a mean score of 3 indicated a high

number of barriers.

Since the modified Barriers Scale had not been used for studies focusing on military populations, a pilot study was conducted to obtain estimates of reliability and validity. To obtain supporting evidence for the content validity, appropriateness, and objectivity; two experts (one physician and one Masters prepared Family Nurse Practitioner, who were currently working in primary care clinics and were considered knowledgeable by their peers regarding preventive services) reviewed the tool. The experts each rated the survey questions on a scale of 1 through 4. A rating of 4 indicated that the survey item was highly relevant, and a rating of 1 indicated low relevance to the study of barriers. Items were then given a total score as to their overall relevance to the study (Waltz, Strickland, & Lenz, 1991). The content validity index was .98.

To obtain estimates of stability or test-retest reliability a sample of 10 subjects completed the modified Barriers Scale on two separate occasions two weeks apart. A test-retest percent agreement of 0.68 was obtained. Based on the content validity and test-retest reliability estimates, further refinement of the instrument was deemed unnecessary. Additionally in the major study consisting of 93 subjects, reliability was measured by internal consistency of each item and each subscale through the use of Cronbach alpha calculations. The reliability coefficient

of the Modified Barriers Scale was 0.91. Reliability coefficients for the 5 subscales ranged from 0.35 to 0.89. The alpha coefficients as well as the number of items for each subscale are listed in the following table.

Table 1.

Alpha Coefficients for Subscales of Modified Barriers Scale

Subscale	Number of items	Alpha (N=93)
Provider-consumer	11	0.89
Site-related	9	0.81
Cost	3	0.35
Fear	5	0.49
Inconvenience	5	0.69

Protection of Human Subjects

A proposal for this study was submitted for approval to the Uniformed Services University Institutional Review Board (IRB). Permission to distribute surveys was obtained from Uniformed Services University IRB, Air Force Personnel Center (AFPC), and from the individual unit commanders.

Steps were taken to protect the rights of the participants who completed the questionnaire by eliminating identifying data. The questionnaires were distributed to the participants at unit commander s calls. There were no benefits to participants who completed the survey. There were no risks associated with either completing or failing

to complete the survey, as participation was strictly voluntary and confidential. Completion and return of the survey indicated consent.

CHAPTER IV — ANALYSIS

Presentation, Analysis, and Interpretation of Data

This chapter presents demographic data and the modified Barriers Scale results from study participants. The survey was distributed to 120 active-duty Air Force men and women. 93 of these people returned their surveys to the researcher s designee, yielding a total return rate of 77.5%. Responses to the Barriers Scale and each of its subscales are described relative to each of the 5 research questions addressed by this study. Thirty-two of the 93 participants included written comments on their surveys. Comments provided additional support for each subscale and are discussed in the context of the subscale to which each applies.

Demographic Data

The mean age of the participants was 33 (SD 7.32), ranging from 20 to 54 years. Military rank ranged from E-2 to O-5. Total enlisted participants were 46.2% and officer participants were 53.8%. The largest group was the O-3 group, which comprised 30.8% of the participants. The O-4 and E-5 groups made up 14.3% each, while the E-4 group made up 12.1 percent of participants. The mean years in the Air Force were 9.54 (SD 5.82 years) with total years ranging from less than 1 year to 23 years. Sixty-five percent of the participants were married with at least 1 child, 18.5% were married with no children, 3.5% were single with at least 1 child, and 13.0% were single. The largest ethnic

group of participants were white/Caucasian at 74.4%, followed by 15.6% Hispanic, 5.6% black/African American, and 4.4% Asian.

Primary care providers identified by participants included doctors (62.0%), physician assistants (32.6%), and nurse practitioners (5.4%). Most of the care that participants received took place in the following clinics: primary care (44.9%), family practice clinic (24.7%), active duty clinic (12.4%), OB/ women s health clinic (9.0%), flight medicine (5.6%), dermatology clinic (1.1%), cardiology (1.1%), and orthopedic clinic (1.1%). Healthcare workers comprised 60.9% of the total participants. Air Force bases represented in the sample included Lackland AFB (65.6%), Randolph AFB (26.9%), and Kelly AFB (7.5%).

Modified Barriers Scale

Barriers were identified using the cumulative sum for each of the subscales. The mean for each subscale was calculated using the mean of the individual items relating to each subscale, and the overall Barrier Scale mean was calculated from the mean of the individual subscales. Items not answered by participants were scored 0 (don t agree) on the assumption that the participant did not perceive the item to be a barrier. This is consistent with the scoring used by Dr. Melnyk (1990) in her analysis of the Barriers Scale. While scoring missing data as 0 has the potential to lower the overall mean of an item, of the 93 respondents to a tool containing 33 items, only 19 responses were missing

from a total of 3,069 possible responses (33 items x 93 respondents).

Research question one asks what barriers are encountered in accessing healthcare with primary care providers for disease prevention activities in the military healthcare system. Data regarding the means and standard deviations for each of the 5 subscales on the modified Barriers Scale are presented in Table 2. A mean score of 0 indicated that no barriers existed; a score of 1 indicated a low level of barriers; a mean score of 2 indicated moderate levels of barriers; and finally, a mean score of 3 indicated a high number of barriers.

Table 2.

Means and Standard Deviations of Modified Barriers Tool Subscales

	Mean	Std. Deviation
Relationship	1.2630	.7362
Cost	.9785	.6982
Inconvenience	.9269	.6573
Site-related	.7921	.6277
Fear	.4258	.4346

Figure 1 depicts the relative importance of each category of barriers with regard to accessing healthcare for the purpose of disease prevention.

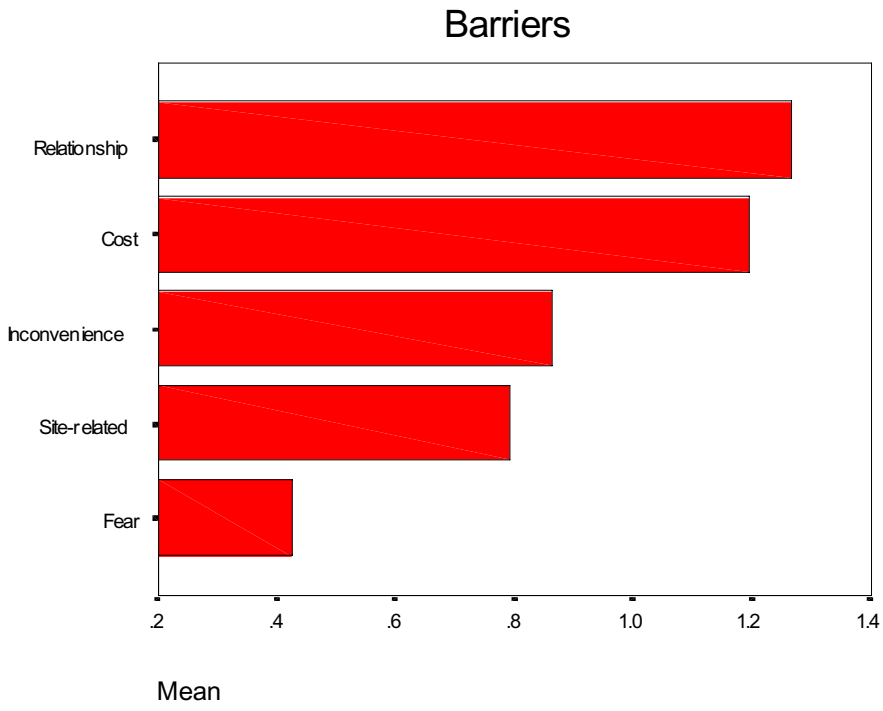

Figure 1.

Barriers in Accessing Healthcare for Health Promotion and Disease Prevention

Inconvenience

Research question two asks to what extent is inconvenience cited as a barrier in accessing healthcare with primary care providers for disease prevention activities in the military healthcare system. The Inconvenience subscale of the modified Barriers tool had a cumulative sum of 431 from its 5 items. The cumulative mean was 0.86 (SD 0.64). The sum, mean, and standard deviation for each item in the subscale is shown in Table 3.

Table 3.

Means, Standard Deviations, & Sums of Scores for Items on the Inconvenience Subscale (N=93)

	Mean	Std. Deviation	Sum
24. Scheduling labs/x-rays/procedures is inconvenient.	.98	.99	91
29. Appointments have to be scheduled too far ahead.	1.46	1.10	136
30. Parking is inconvenient.	1.19	1.18	111
32. Provider doesn't think about simple or convenient treatments.	.48	.69	45
35. Takes too long to travel to the office or clinic.	.52	.90	48

Twelve of the 32 participants provided written comments about the inconvenience that they had experienced with the healthcare system. Five of the comments targeted the military healthcare system and TriCare as sources of inconvenience. Seven of the participants cited accessing appointments as an inconvenience.

Provider-Consumer Relationship

Research question three asks to what extent is the provider-consumer relationship cited as a barrier in accessing healthcare with primary care providers for disease prevention activities in the military healthcare system. Relationship barriers had a cumulative sum of 1,292 from the eleven items in its subscale. The cumulative mean was 1.26 and the standard deviation was 0.74. Sums, means,

and standard deviations for each of the items related to provider-consumer relationship are shown in Table 4.

Table 4.

Means, Standard Deviations, & Sums of Scores for Items on the Provider-consumer Relationship Subscale (N=93)

	Mean	Std. Deviation	Sum
1. Provider may not think problems are real/important.	1.28	1.09	119
2. Provider doesn't speak (English, Spanish, etc.) very well.	.56	.99	52
3. Provider doesn't consider cultural differences.	.77	1.00	72
4. Provider is sometimes impatient and critical.	1.30	.99	121
5. I don't think I have a good provider.	.92	1.05	86
6. Provider isn't interested in worries about my health.	.90	1.00	84
7. Provider doesn't take enough time to explain treatment or answer questions.	1.06	1.10	99
8. Provider isn't interested in me unless I'm sick/injured.	1.55	1.12	144
9. I almost never see the same provider twice in a row.	2.10	1.16	195
10. Provider can't be reached by phone/will not return calls.	1.46	1.21	136
12. I don't have a choice in picking a provider.	1.98	1.04	184

Ten of the participants providing written comments stated that they saw more than one provider, and that the

consistency of seeing one provider was important to them. One participant stated that the healthcare provider has been very supportive , but 11 participants stated concerns about the knowledge and expertise of their healthcare providers. One person writes, I have for the most part received wonderful care, but it seems that overall, military personnel do not receive the high-quality care that is sometimes necessary.

Site-related Barriers

Research question four asks to what extent are site-related factors cited as a barrier in accessing healthcare with primary care providers for disease prevention activities in the military healthcare system. Site-related barriers had a cumulative sum of 663 for the nine items on the subscale. The cumulative mean was 0.79 (SD 0.63). Sums, means, and standard deviations for each of the nine items are displayed in Table 5. One participant mentioned parking as an inconvenience.

Table 5.

Means, Standard Deviations, & Sums of Scores for Items on the Inconvenience Subscale (N=93)

	Mean	Std. Deviation	Sum
24. Scheduling labs/x-rays/procedures is inconvenient.	.98	.99	91
29. Appointments have to be scheduled too far ahead.	1.46	1.10	136
30. Parking is inconvenient.	1.19	1.18	111
32. Provider doesn't think about simple or convenient treatments.	.48	.69	45
35. Takes too long to travel to the office or clinic.	.52	.90	48

Fear as a Barrier

Research question five asks to what extent is fear cited as a barrier in accessing healthcare with primary care providers for disease prevention activities in the military healthcare system. Fear had a cumulative sum of 198 for the 5 items in the subscale. The cumulative mean was 0.43 (SD 0.43). Sums, means, and standard deviations are presented in Table 6.

Table 6.

Means, Standard Deviations, & Sums of Scores for Items on the Fear Subscale (N=93)

	Mean	Std. Deviation	Sum
27. No one can take care of me like the provider I used to have.	.48	.90	45
28. I don't like to be examined or asked a lot of questions.	.48	.87	45
31. I'm afraid of providers.	.24	.58	22
33. I'm afraid to find out if I have serious problems.	.61	.79	57
34. I don't like providers.	.31	.68	29

One participant provided a written comment that related to the fear subscale. The threat to career of revealing medical/psychological problems is very real. The DoD elects to discharge, rather than treat, several medical/psych problems.

Cost Barriers

Research question six asks to what extent is cost cited as a barrier in accessing healthcare with primary care providers for disease prevention activities in the military healthcare system. Cost had a cumulative sum of 273 for the 3 items in the subscale. The cumulative mean was 1.19 (SD 0.81). Sums, means, and standard deviations for the 3 items in this subscale are presented in Table 7.

Table 7.

Means, Standard Deviations, & Sums of Scores for Items on the Cost Barriers Subscale (N=93)

	Mean	Std. Deviation	Sum
16. Cost of having preventive care is too high.	.33	.80	31
17. Healthcare system is too complicated to figure out.	0	1.12	134
25. Costs of childcare/time away from work is considered when making appointment for preventive care.	1.16	1.22	108

Two participants provided comments about indirect costs. One participant writes, Time away from work is critical.

CHAPTER V — SUMMARY

This chapter discusses the findings of the study as it relates to the review of literature, the theoretical framework, and the body of nursing knowledge. Recommendations for further research are also discussed.

Conclusions and Recommendations

The purpose of this study was to explain barriers encountered by patients in accessing appointments for preventive care visits within the military healthcare system. Study participants included 93 active-duty Air Force men and women who completed the modified Barriers Scale. The survey consisted of 33 items that addressed barriers to preventive health services. Additionally, each individual provided demographic data. The survey was distributed to a convenience sample of 120 active-duty Air Force men and women in the large city in the south central United States. Ninety-three of these people returned their surveys yielding a total return rate of 77.5%.

The first research question asked, What barriers are encountered in accessing healthcare with primary care providers for disease prevention activities in the military healthcare system? Survey participants ranked the barriers in descending order of Provider-consumer relationship, Site-related factors, Cost, Inconvenience, and Fear. These findings are consistent with Dr. Melnyk s original study (Melnyk, 1990).

The second research question asked How often is

inconvenience cited as a barrier in accessing healthcare with primary care providers for disease prevention activities in the military healthcare system? Items 24, 29, 30, 32, and 35 measured inconvenience. Items 32 (the provider doesn t think about simple or convenient treatments) and 34 (I don t like providers) had mean values of 0.48 and 0.52 respectively. This was interpreted to mean that for most participants, these were not barriers. The mean values of items 24 (scheduling labs/x-rays/procedures is inconvenient), 29 (appointments have to be scheduled too far ahead), and 30 (parking is inconvenient) ranged from 0.98 to 1.46. These values were considered to be barriers with which most participants slightly agreed. Item 29, which reads Appointments have to be scheduled too far ahead , ranked the highest with a mean of 1.46 which placed the overall score between slightly agree and moderately agree on the four-point Likert scale.

Written comments provided by survey participants indicated frustration with TriCare, the military s healthcare system. Part of the frustration was a lack of understanding about how the primary care system and managed care systems operate.

The third research question was how often is the provider-consumer relationship a barrier in accessing healthcare with primary care providers for disease prevention activities in the military healthcare system? Items 1 - 10 and Item 12 measured provider-consumer

relationship. Item 9 (I almost never see the same provider twice in a row when I make a visit) had the highest mean of 2.1, which correlates with moderately agree on the four-point Likert scale used. Item 12 (I do not have a choice in picking which provider I see for my health care) had a mean of 1.98. Ten written comments supported the need for provider continuity. This is consistent with the studies previously cited in the literature review (Aday, 1975; Moy et al., 1995; Koval & Dobie, 1996; Bartman et al., 1997; Stewart et al., 1997). Other items scoring greater than a mean of 1.0 in the provider- consumer relationship subscale included Item 1 (the provider may not think my problems are real or important), Item 4 (the provider (and his/her staff) is/are sometimes impatient and critical and act like she/he/they know everything), Item 7 (the provider doesn t take enough time to explain what she/he s doing or why, or to answer my questions), Item 8 (the provider isn t interested in me unless I m sick/injured), and Item 10 (the provider can t be reached by telephone and will not return my messages). Four of the items in the provider-consumer relationship subscale had mean scores less than 1, which was considered to be low in terms of being a barrier to most of the respondents.

The fourth research question asked, How often are site-related factors cited as barriers in accessing healthcare with primary care providers for disease prevention activities in the military healthcare system?

Items 13, 14, 15, 18, 19, 20, 21, 22, and 23 measured this aspect of barriers. Items 13, which read the wait is too long at the time of the appointment had the greatest, mean (1.58) of these items. Item 14 had a mean value of 1.19. It reads Access to transportation and/or parking is poor . A written comment confirmed that parking was inconvenient at one medical treatment facility.

The fifth research question asks How often is fear a barrier in accessing healthcare with primary care providers for disease prevention activities in the military healthcare system? The fear subscale included items 27, 28, 31, 33, and 34. Means for these items ranged from 0.24 to 0.61, all well below 1.0. Item 33 scored the highest at 0.61. The item read, I m afraid to find out if I have serious (health/dental/mental) problems. The health of active-duty members is often tied to their ability to remain in the military. One survey participant reflected this in the comment: the threat to career of revealing medical/psychological problems is very real. The DoD elects to discharge, rather than treat, several medical/psychological problems. Fear as a barrier is echoed in the literature (Melnyk, 1990). However, fear regarding the loss of one s job is an aspect that is unique to the military.

The sixth research question asked How often is cost a barrier in accessing healthcare with primary care providers for disease prevention activities in the military

healthcare system? Military healthcare systems are not traditionally concerned with the direct costs of healthcare; however, indirect costs such as time away from work, cost of transportation, or additional childcare costs may be a concern. Items pertaining to the cost subscale include items 16, 17, and 25. Item 16 (the cost of having preventive care is too great) had a mean of 0.33, which was considered low relevance. Item 17, my healthcare system is too complicated to figure out had a mean of 1.44. Item 25, costs of childcare or time away from work is a consideration when making appointments had a mean of 1.16. Two survey participants confirm that time away from work was a concern for them.

Recommendations for Clinical Practice

Recommendations to decrease the consumer s frustration include education of consumers by the primary care provider when referrals are made. Written instructions along with verbal instructions will increase the likelihood that the consumer will have a better understanding of the referral process.

While having the same provider in the military healthcare system is not possible due to changing duty stations and temporary duty assignments, clinic commanders could be encouraged to allow scheduling of patients with a small group of designated providers who are familiar with the patient and their history. Additionally, evening clinic hours are increasing in popularity and will modify indirect

cost barriers such as childcare issues and time away from work for some patients.

Recommendations for Future Research

Written comments support the modified Barriers Scale. Thirty-two of the ninety-three survey participants provided comments that expanded on questions included in the survey. Because of the large percentage of participants providing written comments, future recommendations include repeating the study using a qualitative methodology.

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APPENDICES

APPENDIX A: Modified Barriers Scale

USAF SCN 98-57

The relationships people have with their *health care provider* (doctor, dentist, nurse practitioner, or physician assistant) can affect whether or not they get the preventive care they need such as (having their blood pressure checked, teeth cleaned, getting a pap smear). Please indicate how much you think each of the following characteristics of your relationship with your *provider* affects getting (your blood pressure checked, teeth cleaned, a pap smear). Please answer all items. **Circle the word** you select as your answer.

1. The provider may not think my problems are real or important.

   3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

2. The provider doesn t speak (English, Spanish, etc.) very well.

   3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

3. The provider does not consider cultural differences when providing health care.

   3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

4. The provider (and his/her staff) is/are sometimes impatient and critical and act like she/he/they know everything.

   3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

5. I don t think I have a good provider.

   3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

6. The provider (and his/her staff) isn t/aren t interested in my worries about my health.

   3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

7. The provider doesn t take enough time to explain what she/he s doing or why, or to answer my questions.

   3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

8. The provider isn t interested in me unless I m sick/injured.

   3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

9. I almost never see the same provider twice in a row when I make a visit.

3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

10. The provider can t be reached by telephone and will not return my messages.

3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

11. Are there any concerns that you have with the relationship you have with your health care provider (doctor, dentist, nurse practitioner, or physician assistant) that are not mentioned here?

Certain characteristics of the health care system can affect whether or not people get the preventive care they need, such as (having blood pressure checked, teeth cleaned, getting a pap smear). Please indicate how much you think each of the following characteristics of the health care system affects getting (your blood pressure checked, teeth cleaned, a pap smear). Please answer all items. **Circle the word** you select as your answer.

12. I do not have a choice in picking which provider I see for my health care.

3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

13. The wait is too long at the time of the appointment.

3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

14. Access to transportation and/or parking is poor.

3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

15. The office or clinic is too far away.

3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

16. The cost of having (blood pressure checked/teeth cleaned/a pap smear) is too high.

3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

17. My healthcare system is too complicated to figure out.

3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

18. There s no transportation to the office or clinic.

    3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

19. The waiting room is inadequate.

    3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

20. The clinic is not as clean as I would like.

    3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

21. Resources for health prevention such as videos and printed materials are not available.

    3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

22. My health care is not as good as it could be because the clinic does not have modern supplies or equipment.

    3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

23. The overall appearance of my health care clinic is poor.

    3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

24. Scheduling labs/x-rays/procedures is inconvenient.

    3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

25. Costs of childcare or time away from work is a consideration when making appointments for having blood pressure checked/teeth cleaned/pap smear.

    3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

26. Are there any concerns that you have with the military health care system that are not mentioned here?

People s past experiences or personal preferences and needs can affect whether or not they get the preventive care they need, such as (having blood pressure checked, teeth cleaned, getting a pap smear). Please indicate how much you think each of the following circumstances affects getting (your blood pressure checked, your teeth cleaned, a pap smear). Answer all items. **Circle the word** you select as your answer.

27. No one can take care of me like the provider I used to have.

3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

28. I don t like to be examined or asked a lot of questions.

    3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

29. Appointments (to have my blood pressure checked, teeth cleaned, have a pap smear, etc.) have to be scheduled too far ahead.

    3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

30. Parking is inconvenient.

    3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

31. For some reason I m afraid of providers.

    3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

32. The provider doesn t think about simple or convenient treatments.

    3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

33. I m afraid to find out if I have serious (health/dental/mental) problems.

    3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

34. I don t like providers.

    3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

35. It takes too long to travel to the office or clinic.

    3-Greatly Agree 2-Moderately Agree 1-Slightly Agree 0-Don t Agree

36. Are there any concerns that you have with past experiences or personal preferences that are not mentioned here?

Please provide information about yourself:

37. What is your age in years?_____

38. What is your rank/grade?

_____E-1	_____E-6	_____O-1	_____O-6
_____E-2	_____E-7	_____O-2	_____O-7
_____E-3	_____E-8	_____O-3	_____O-8
_____E-4	_____E-9	_____O-4	_____O-9
_____E-5	_____E-10	_____O-5	_____O-10

37. How many years have you been in the Air Force? _____

38. Who provides **most** of your health care? (please choose only one)

_____Doctor _____Nurse practitioner _____Physician assistant

39. What is your ethnic background?

_____ Black/African American

_____ White/Caucasian

_____ Hispanic

_____ Asian

_____ Other (please specify): _____

40. What is your marital status?

_____Single, no children

_____Single, with at least one child

_____Married, no children

_____Married, with at least one child

41. Where is most of the care you receive provided?

_____Family practice clinic _____OB/Women s health clinic

_____Internal medicine clinic _____Primary care clinic

_____Other (please specify):_____

42. Are you a health care worker?

_____ yes

_____ no

APPENDIX B: Permission To Use Barriers Scale

STRONG HEALTH

Strong Memorial Hospital • Children's Hospital at Strong • Highland Hospital
The Highlands • Eastman Dental Center

Strong Ties
Community Support Program
Strong Memorial Hospital

July 16, 1998

Ms. Gayla D. McLaughlin
99 12-A Gable Ridge Terrace
Rockville, MD 20850

Dear Gayla:

I am pleased to grant you permission to use the Barriers Scale in your proposed study,

Enclosed is a second brief questionnaire, which I ask that you complete and return to me at the completion of your study, in exchange for permission to use the Barriers Scale. The information you provide will assist me to evaluate the usefulness and the validity and reliability of the instrument,

I hope your research project goes well, and I look forward to your findings.

Sincerely,

Kay Ann McCullock Melnyk, Ph.D., R.N., N.P.P

Enclosure

University of Rochester Medical Center
1650 Elmwood Avenue • Rochester, New York 14620 • Phone: 716/275-0300

APPENDIX C: Approval To Distribute Questionnaires

UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES
4301 JONES BRIDGE ROAD
BETHESDA, MARYLAND 20814-4799

September 14, 1998

MEMORANDUM FOR GAYLA D. McLAUGHLIN, GRADUATE SCHOOL OF NURSING

SUBJECT: IRB Review and Approval of Protocol **T06190** for Human Subject Use

Your research protocol, entitled ***"Barriers to Preventative Services within the Military Healthcare System,"*** was reviewed and approved for execution on 9/14/98 as an exempt human subject use study under the provisions of 32 CFR 2 19.10 1 (b)(2). This approval will be reported to the full IRB, scheduled to meet on October 8, 1998.

The IRB understands that the purpose of this descriptive study is to identify barriers to wellness care in a military setting. The methodology entails a survey of active duty Air Force personnel enrolled in TRICARE.

Due to the nature of the questions yo u will be asking, you must maintain adequate security for your questionnaires, both during commander's calls and after you have collected them. Although no identifying information will be collected, it may be possible to discover a subject's identity based only on the data itself (e.g., from rank age, marital status and ethnicity)

Your questionnaire should also contain an introduction explaining the purpose of the study in writing. This information can be extracted from the sheet you have submitted as a consent document. (No formal consent document is necessary, as you note in your protocol.)

Because you are recruiting volunteers at commander's calls, you should make a special effort to ensure that participation is truly voluntary. No pressure should be exerted and there should be no penalties for those who choose not to participate.

Please notify this office of any amendments or changes in the approved protocol that you might wish to make and of any untoward incidents that may occur in the conduct of this project. If you have any questions regarding human volunteers, please call me at 301-295-3303.

Richard R. Levine, Ph.D.
LTC, MS, USA
Director, Research Programs and
Executive Secretary, IRB

cc: Director, Grants Administration